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Marketing for Small Business: The Development of a Practical and Conceptual Contribution towards a new Paradigm 1986 to 2011

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University of Huddersfield

MARKETING FOR SMALL BUSINESS: THE DEVELOPMENT OF A PRACTICAL AND CONCEPTUAL CONTRIBUTION TOWARDS A NEW PARADIGM 1986 TO 2011

Paul L Reynolds

**A thesis submitted to the
UNIVERSITY OF HUDDERSFIELD
As partial fulfilment for the degree of DOCTOR OF PHILOSOPHY
PhD by published work**

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Dedication

To Jean, Matthew, Alice, father in law Alf and Dad

ABSTRACT

This thesis is about the role, nature and importance of marketing within small firms. The definition for small firms' used here is organisations' with up to 50 employees. This is the definition used by The Department for Business, Innovation and Skills (2012). There are over four million of such commercial organisations in the UK and they account for over half of the UK's GDP and over half of the UK's employment (The Department for Business Innovation and Skills November 2011 /12). Most firms' in the UK are small and yet the marketing for small firms' seems to be a neglected area in the standard text books and in the mainstream business school curriculum. Why is this and what can be done to make the subject of marketing more relevant and more appropriate to the smaller enterprise? This doctorial submission is based on published work. There are 24 individual pieces of work making up the submission. All of the works submitted are related to the subject of marketing for small business. Throughout the works' submitted the author addresses a fundamental question which has occupied his mind for many years. This question is highly pertinent to the developing subject of marketing within small firms' (Gilmore and Coviello, 1999). The question is 'is conventional marketing theory and practice from the 'classical school' applicable to all types of organisations no matter what their size'? The fundamental question this work addresses is do smaller firms need a different sort of marketing, more suited to their particular needs (Nyman, Berck, and Worsdorfer, 2006; Reynolds and Day, 2011; Hills and Hultman, 2011; Shaw, 2002; Gilmore, 2011; McAuley, 2011; Hills and LaForge, 1992)? The author can find no real evidence of any need for a totally new paradigm although some areas of the standard business school 'model' of marketing management might need some important adaptation to make it more suitable for the majority of smaller firms'. The key approach would seem to be standardisation as far as possible then necessary adaptation. The collection of papers and related materials making up this thesis submission conclude that in many cases the central core hub of marketing that has become known as the 'classicist philosophy of strategic marketing management' is appropriate in many areas (Drucker, 1954). It can often be employed to the smaller enterprise with beneficial commercial effects (see Reynolds, 2007; Brennan, Baines, and Garneau, 2003). The author has attempted to demonstrate that a body of work has developed and evolved over time in a purposeful manner and with a common theme. The material submitted here, placed into three separate but related categories, has been structured to have an overall thematic shape. The 'grand theme' interwoven into this account is marketing for small business. The author does not claim to have investigated every vestige of the subject but does feel that over the years he has made a contribution to the knowledge in this area. Each of the three sub - themes used in this work are related and can be integrated into a 'grand narrative' or 'story line'. This 'grand narrative' is encapsulated in the title of this thesis which is; *'Marketing for small business: The development of a practical and conceptual contribution towards a new paradigm 1986 to 2011'.*

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Code

J = JOURNAL
C = CONFERENCE
B = BOOK
R = REPORT

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"Editorial", where the author's contribution to the marketing/ entrepreneurship community is cited by Professor Gerald Hills of the Institute for Entrepreneurial Studies, University of Illinois at Chicago. Hills, G.E. (1999), Inaugural Commentary for the *Journal of Research in Marketing and Entrepreneurship*, Journal of Research in Marketing and Entrepreneurship: Vol.1: Fall 1999, pp. 5-7.
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APPENDIX 9:

Citation network and topic clusters. It can be seen from Figure 5 on page 14 that the authors work is included in an entrepreneurial marketing/ marketing – entrepreneurship net work and cluster diagram. The author's work has been linked to clusters 1 and 2. Kraus, S., Filser, M., Eggers, F., Hills, G.E. and Hultman, C.M. (2012), "The entrepreneurial marketing domain: a citation and co-citation analysis", *Journal of Research in Marketing and Entrepreneurship*, Vol. 14, No. 1, pp. 6-26.
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MARKETING FOR SMALL BUSINESS: THE DEVELOPMENT OF A PRACTICAL AND CONCEPTUAL CONTRIBUTION TOWARDS A NEW PARADIGM 1986 TO 2011

Paul L Reynolds

**A thesis submitted to the
UNIVERSITY OF HUDDERSFIELD
As partial fulfilment for the degree of DOCTOR OF PHILOSOPHY
PhD by published work**

SECTION 1: INRODUCTION

The material submitted for this thesis has been placed into three thematic sections which are listed below. It consists of 15 peer reviewed journal papers, 7 peer reviewed conference papers, one book chapter relevant to one of the three thematic sections discussed below (see Lancaster and Reynolds, 2001); and a section of one DTI sponsored report into small firms (Reynolds, 1986-b), again relevant to a thematic section. All of the submitted papers and other materials have a focus on the marketing of small business and have been chosen from a larger portfolio of works because of their thematic coherence and cohesive qualities. The author has produced other conference and working papers in this area in addition to other reports and eight other co-authored books in the general field of marketing in addition to the one cited above, in which some sections and cases are on small business marketing specifically. At the time of writing three other joint authored papers in this field are under review indicating that the author's interest in this research area is on-going. This on-going work is briefly discussed in the 'Suggestions for Future Research' Section 2.10 page 66 towards the end of this thesis. A full list of the author's publications, not just those included for this submission but including the papers submitted for this thesis, is presented in Appendix 1 so that the reader may refer to them. Some of this other work may have a bearing on the papers submitted for consideration and may be earlier versions of them. For example other work not submitted here but listed in Appendix 1 may be a University internal conference paper, a refereed paper at an official conference or symposium or a contribution to a University Working Paper series of which the author has a number at his own university and other institutions (Day and Reynolds, 2011; Reynolds, Lancaster and Day, 2003 a, b, c, d see reference section). The author has attempted to demonstrate that a body of work has developed and evolved over time in a purposeful manner and with a common theme. Some of the work evolved from a working paper into a conference paper and then to a journal submission. The author attempts to show that over a number of years there has been a continuation of purpose in the work conducted along a general unified theme. This unified theme has been adapted slightly for the title of this thesis which is: *'Marketing for small business: The development of a practical and conceptual contribution towards a new paradigm 1986 to 2011'*.

1.1. AIM AND OBJECTIVES

1.1.1. Aim

The overall aim of the thesis is to demonstrate to the reader that a cohesive, themed body of work, externally recognised as being valuable to the subject at hand (see Appendix 2 'Distinguished Research and Leadership Award' in the area of the marketing – entrepreneurship interface), has been produced which, when taken as a whole, represents a contribution to knowledge in a number of areas. This includes both conceptual and applied knowledge, a novel application of certain methodologies not used in this field before and a consideration of the managerial implications of the findings and recommendation made, which in a similar vein, have not been made before. It is the author's intention that these contributions satisfy the criteria of the University of Huddersfield research degrees' regulations for the award of the degree of PhD by published works.

1.1.2. Objectives

The objectives listed below can be viewed as 'sub-aims' in that each of the objectives stated will have to be achieved in order for the overall aim of the thesis stated above to be achieved. The specific objectives set out by the author for this thesis are as follows:

- To conceptualise the submitted works and to justify their appropriateness for submission.

- To outline the distinctive contribution to knowledge of the published works included in this thesis.

- To establish the thematic cohesion of the works submitted for this thesis in line with the criteria of the University of Huddersfield research degrees' regulations for the award of the degree of PhD by published works.

1.1.3. Purpose

The purpose of the submission is to demonstrate to the reader that the author has created a body of work which has evolved over time in the field of marketing for small business, and that this work satisfies the requirements of the University of Huddersfield as part fulfilment for the award of PhD by published works. In order to achieve this purpose the author has taken material he has worked on over time and presented it in a structured thematic manner in this submission to produce an overall 'story line'. The author aims to show that a thematic and cohesive body of work has been produced during the period alluded to above (1986 to 2011) and that taken as a whole this thematically linked body of work has made a contribution to knowledge in number of areas and more generally to the on-going debate in the literature as to the applicability of conventional, standard marketing thought, theory and

practice to small firms (Day and Reynolds, 2011; McAuley, 2011; Gilmore and Coviello, 1999; Husband and Mandal, 1999; Siu, 2000).

1.1.4. Themes

To aid discussion and evaluation the overall body of work submitted in the field of small business marketing has been deconstructed into three separate but related themes. All of the works submitted are really all in the same area of *marketing for small business;* hence the three categories or themes form an integrated 'triad' and have considerable overlap because they are concerned with different aspects of the same subject. However it is this 'overlap' that enables the author to claim with some confidence that the three 'sub-themes' when viewed together have thematic unity and form a unified body of knowledge when integrated into a cohesive whole. The three main themes used for the selected papers and other materials submitted as part fulfilment for this thesis are listed and briefly discussed below:

1. **A new approach to the marketing of small business** – *consisting of six journal articles and one conference paper.* This section is the crux of the submission and the other two themes discussed below have grown out of this section and are technical offshoots of it. This set of papers examines the conventional marketing orthodoxy, as set out in the standard texts and taught at educational institutions, as to its applicability to the small firm specifically. The author then proposes and tests some alternative marketing approaches or at least attempts in some of the work to adapt existing orthodoxy and conventional wisdom to try and achieve a better fit between the specific needs of the smaller firm and more applicable marketing approaches. The intention of the work is to make a contribution to the improvement of the future marketing performance of small firms. Indeed this is the author's intention for all of the works submitted.

2. **Forecasting, information monitoring and control** - *consisting of five journal articles, one book chapter and three conference papers.* This category of work is also concerned with the marketing of small business but focuses on two important areas. The first is forecasting in small firms' per se and this is set in the context of different planning time horizons. The second area involves the use of forecasting techniques in conjunction with a tracking signal device to monitor key commercial parameters in small firms'. The work examines forecasting practices in small firms', especially the forecasting of sales which form the bedrock of planning and budgetary control. The author also attempts to apply forecasting methods in a novel and innovative manner in order to predict the future values of other relevant commercial variables in addition to sales to create a commercial health

monitoring and control device for small firms' (Reynolds and Lancaster, 2007). Forecasting tracking signal methods have been adapted from process control studies and applied in an innovative and novel manner within a commercial health monitoring setting for small firms. Bayesian forecasting techniques are also tested for their efficiency and applicability for the smaller enterprise as many entrepreneurs running small firms appear to be inherently 'Bayesian' in their thinking patterns. This work on Bayesian 'thinking patterns' is on-going and is briefly discussed further in the 'Suggestions for Future Research' Section 2.10 page 66 towards the end of this thesis.

3. **Pedagogic aspects - Advisors and counsellors** – *consisting of four journal articles, three conference papers and one report.* As mentioned, this group of papers is again concerned specifically with the marketing for small business. This work links marketing with entrepreneurship more strongly than work presented in the other two sections above and examines the interface between the two. It is also concerned more with the role of advisors to small firms' as well as training and the teaching of marketing for small business in a university environment. Some of the papers here discuss the psychological traits of entrepreneurs many of whom start up and run small firms. It does this because often the people advising them such as advisors in banks, accountants and other professionals might think rather differently. These advisors are also considered because they are likely to have a different and more convergent 'mindset' compared to the entrepreneur and this has both advisory and training implications. Other work in this section examines the perceived needs of small firms' in terms of marketing competences and the teaching and training implications of this. Finally the author examines how the marketing for small firms' or what has come to be known as the 'marketing – entrepreneurship interface' can be taught effectively in universities and other teaching and training settings.

Please note that the author has used the term 'entrepreneur' in this section in its 'everyday' context. He is aware that there are measures of entrepreneurial orientation and that not all people who start or run small firms are classified as 'entrepreneurs' in the strict academic sense of the term. This point is discussed further in the 'Critical Review' section of this thesis (Section 2) and in the papers and other materials submitted.

1.1.5. Specific research questions the author seeks to address in the work submitted

The specific research questions to be addressed in the body of work submitted for this thesis are related to the three themes that the work has been divided into to aid clarity of discussion. These are as follows:

1. Is conventional marketing theory and practice, found in its more general form in texts such as Kotler (2012) and taught as a general course at universities at the introductory undergraduate level as 'Introduction to Marketing', at the intermediate undergraduate level as 'Principles of Marketing' and at advanced undergraduate and postgraduate level as 'Marketing Management' or 'Strategic Marketing Management' appropriate for small firms'? If not, why are such academic programs not appropriate or effective and what methods might be more appropriate and effective?

2. How can small firms' reduce the probability of failure, particularly within the first five years since start up which is a particularly perilous time for the smaller enterprise? What methods of forecasting, planning and control might be suitable for small firms' to help them forecast certain key commercial 'risk' variables, that might include sales, to aid them in planning, control and budgetary decisions. Monitoring these variables and other factors as well may provide an effective 'early warning signal' or 'commercial health monitoring procedure'. Such a procedure might provide a greater chance of nascent firms' particularly, or at least those advising them, in avoiding trouble or at least providing them with the information and time to do something constructive to try and overcome or at least mitigate the potential risk or problems in time to save them from administration.

3. How can more suitable and appropriate methods of marketing, including methods of forecasting monitoring and control and the commercial health monitoring procedure discussed above, be taught to students of small business and entrepreneurship at college and university level and be disseminated into the world of training occupied by small business advisors and counsellors at agencies such as Business Link, Chamber of Commerce, university incubators and the small business advisory division in banks? In order to make a positive difference the work needs to be disseminated. How can findings and recommendations emanating from the author's work be passed on to the owners, advisors or managers of small firms so that they can improve future marketing performance and reduce the probability of failure?

SECTION 2: CRITICAL REVIEW

2.1.0. Introduction

This Critical Review seeks to accomplish six main tasks:

1. To discuss the methodological aspects of the works submitted and to place this discussion within the context of the historical and evolving methodologies used in this field of research.

2. To list and summarise the published works submitted for this thesis and to show they fall into three distinct but related themes and can therefore be viewed in their entirety as a cohesive whole.

3. To conceptualise the submitted works and to justify their appropriateness for submission by embedding the overall topic of the thesis and the three specific thematic categories used in it within the general literature.

4. To outline the distinctive contribution to knowledge of the published works included in this thesis.

5. To establish the overall 'story line' of the thesis and the unity and thematic cohesion of the works submitted.

6. To discuss any limitations to the body of work submitted and to suggest areas for future research in this area.

The author has listed the papers and other materials submitted as part of this thesis separately in full in Section 3. For completeness a full list of the author's work, which includes the published works submitted here and other material is listed in chronological order in Appendix 1. The published works presented in full in Section 3 have been placed into the three themed categories or 'sub themes' listed earlier above. The author attempts to show that there is a natural thematic unity within each of the categories and then goes on to show that the categories themselves make up an overall thematic, coherent unity or main 'story line' for the body of work as a whole. This, as the title of the thesis suggests, is that a contribution has been made in certain areas towards the construction of a new 'paradigm' for small business marketing. This contribution may be more relevant to the pedagogic aspects of the subject at university level as well as to the more practical application and andragogic approach used in the training or advising of small business management. It may also be of practical, operational, tactical and strategic relevance and value to small firms and their advisors and counsellors such as Business Link, Chamber of Commerce and various bank small business advisors in that they be able to use some of the ideas and concepts discussed to improve the future marketing performance of small firms (Reynolds, 2008; Reynolds and Lancaster, 2007).

Before moving on to a listing and consideration of the actual papers and other materials submitted here and then to embed this work within the general literature relevant to the area under consideration, the author considers it appropriate to first of all discuss methodological aspects pertinent to the ongoing discussion. This area too requires a critical review in order to be fully appreciated. In the same way as the general literature is discussed later under each of the three thematic headings, the author also attempts here to embed the methodology used in his works within the wider methodological conventional wisdom for this subject area found in the literature. The methodological evolution and development in the field of marketing for small business during the time period being considered in this thesis is examined.

2.2.0. Methodological considerations

2.2.1 Research design

There are many definitions of research design in the literature presented in this Critical Review (see: Boruch, 1975; Reynolds and Lancaster, 2007; Alpkan, Yilmaz and Kaya 2007; Bowey and Easton, 2007; Cope, Jack and Rose, 2007; Campbell and Fiske, 1959; Nyman, Berck, and Worsdorfer, 2006; Thompson and Doherty, 2006; Tajeddini, Trueman and Larsen, 2006; Stokes, 2000; Bowey and Easton, 2007; Campbell and Stanley, 1963, 1966). The research design provides the 'glue' that holds the research project together (Bowey and Easton, 2007; Boruch, 1975; Campbell and Fiske, 1959; Campbell and Stanley, 1963, 1966). A design is used to structure the research and to show how all of the major parts of the research project, the samples or groups, measures, treatments or programs, and methods of assignment, work together to try to address the central research questions (Task, 1993; Trochim, 2006). A straightforward definition is given by Creswell, 1994 who states that, "*A research design is a detailed outline of how an investigation will take place including how data is to be collected, what instruments will be used and the means of analysing the data*" (p. 1).

The quality of any research project, including a PhD thesis such as this, will be enhanced by a good understanding of the research design used in its production (Reynolds and Lancaster, 2007; Aldas - Manzano, Küster and Vila, 2005; Deacon and Harris, 2011; Nyman, Berck, and Worsdorfer, 2006; Stokes, 2000; Reynolds, 2008; Cook and Campbell, 1979; Judd and Kenny, 1981; Jurs and Glass, 1971; Trochim, 1982). The research problem will largely determine the type of design used (Kotler, 2012; Bowey and Easton, 2007; Cope, Jack and Rose, 2007; Nyman, Berck, and Worsdorfer, 2006; Thompson and Doherty, 2006; Saura, Contri, Taulet and Velazquez, 2005; Creswell, 1994). This has certainly been the case for the papers in this submission. Other factors may include time and cost constraints (Bowey and Easton, 2007). The most appropriate research design may be too expensive or

take too long to implement and so a compromise may have to be reached due to these constraints (Reynolds and Lancaster, 2007; Kotler, 2012; Bowey and Easton, 2007; Deacon and Harris, 2011; Thompson and Doherty, 2006; Tajeddini, Trueman and Larsen, 2006; Boruch, 1975). Again there is an element of this in the papers submitted here. The research design sometimes referred to as a research paradigm (see Creswell, 1994 quoted in Section 2.2.2 below), covers the overall strategy that is chosen to integrate the different components of the study in a coherent and logical manner (Miles and Darroch, 2006). The purpose of the research design is to ensure the researcher will address the identified research problem as precisely as possible (Reynolds and Lancaster, 2007; Deacon and Harris, 2011; Nyman, Berck, and Worsdorfer, 2006; Saura, Contri, Taulet and Velazquez, 2005; Reynolds, 2008). It is a plan for the collection, measurement, and analysis of data. The function of a research design is to ensure that the evidence obtained enables the researcher to effectively address the research problem as unambiguously as possible (Creswell, 1994; Aldas -Manzano, Küster and Vila, 2005; Cope, Jack and Rose, 2007; Thompson and Doherty, 2006; Tajeddini, Trueman and Larsen, 2006; Stokes, 2000; Reynolds, 2008; Boruch, 1975; Campbell and Fiske, 1959; Campbell and Stanley, 1963, 1966).

This section gives a description and a rationale for the research designs used in the works submitted. Because this thesis submission includes 24 related but separate pieces of work it is not surprising that there is more than one research design used in the body of work. It is a case of research 'designs' in the plural rather than research design in the singular. For each of the submitted papers the researcher had set a specific research aim and related objective or objectives. Consequently taking the body of work submitted there is 24 research aims and related objectives. Some of the papers use the same or similar research design e.g. a questionnaire based survey and stratified (random) probability sampling. Others use a different design e.g. computer simulation. Hence overall a range of designs have been used in the work submitted. For a comprehensive coverage of the research design used for each of the works' submitted the reader is referred to the methodology section given in each of the individual papers'.

In social sciences research, which includes marketing, obtaining evidence relevant to the research problem generally entails specifying the type of evidence needed to test a theory, to evaluate a program, or to accurately describe a phenomenon (Creswell, 1994; Tajeddini, Trueman and Larsen, 2006; Kotler, 2012; Deacon and Harris, 2011; Cope, Jack and Rose, 2007; Nyman, Berck, and Worsdorfer, 2006; Thompson and Doherty, 2006; Reynolds and Lancaster, 2007; Stokes, 2000; Saura, Contri, Taulet and Velazquez, 2005; Bowey and Easton, 2007; Boruch, 1975; Cook and Campbell, 1979; Judd and Kenny, 1981; Jurs and Glass, 1971; Trochim, 1982). This thesis is for a PhD by publication and is based on the submission of 24 items. The items submitted are all related to the subject and title of this thesis. However the collection of material has been published over a number

of years with each piece scrutinised by at least two academics (including the book chapter submitted, see Lancaster and Reynolds, 2001). There is no research design that is common to all of the submitted material. However the research designs used for each piece of work was considered the most appropriate by the author at the time of writing the paper. The research design used for each piece of work submitted has been given a clear rationale and a full justification within the paper. The fact that these works have been accepted for publication and are now in the public domain demonstrates that the choice of research design used was considered rational, appropriate and acceptable by the reviewers of conference papers and book chapters or the editorial boards of journals.

In most of the works the author has used a 'mixed method' or mixed design approach. This choice has been entirely pragmatic. For each of the works submitted the author used a research design that was deemed most suitable to the individual research situation at hand (Boruch, 1975; Deacon and Harris, 2011; Nyman, Berck, and Worsdorfer, 2006; Thompson and Doherty, 2006; Tajeddini, Trueman and Larsen, 2006; Reynolds and Lancaster, 2007; Stokes, 2000; Reynolds, 2008; Creswell, 1994). Time and cost constraints also played a significant part in the choice of research design for each individual piece of work. Much of the work was conducted with a limited budget although funding was available for some pieces of work (Reynolds, 1986b). Some of the research conducted needed to meet a publication deadline (Reynolds, 1986b; Lancaster and Reynolds, 2001; Reynolds and Lancaster, 2007; Saura, Contri, Taulet and Velazquez, 2005). This was so for the book chapter and report sample submitted but also for some of the articles and conference papers.

2.2.2 Paradigm

There are a number of definitions of the word paradigm. A person can approach the term from different perspectives. It can be defined from a grammatical point of view. For example for nearly 400 years *paradigm* has also been applied to the patterns of inflections that are used to sort the verbs, nouns, and other parts of speech of a language into groups that are more easily studied (Task, 1993). The term is more commonly used to describe a research model reflecting the research methodology used, or a way of thinking about a particular issue, especially a scientific model or 'world view' (Task, 1993; Dictionary.com, 2013). When considered from a research 'model' or approach point of view the term paradigm is often used interchangeably with research design. For example Creswell (1994) states that; "*the design of a study begins with the selection and a paradigm. Paradigm in the human and social sciences help us understand phenomena. They advance assumptions about the social world, how science should be conducted, and what constitutes legitimate problems, solutions, and criteria of proof*" (p. 34). In a scientific context scientists' look at the universe using the 'classical' model or 'paradigm'. It is not complete but represents the accepted wisdom at the present time. The recently discovered Higgs Boson particle was predicted by cosmologists using the accepted

classical paradigm as a mechanism for providing mass to particles. Einstein's Theory of Relativity is also an accepted paradigm. When the accepted view of the universe moved from Newtonian mechanics to Einsteinien relativity people talked of a 'paradigm shift' in physics. The term is also used in business and economics. For example the Keynesian view of the economy and the importance attached to the management of aggregate demand was seen by economists' at the time as a paradigm shift (Keynes, 1936). Up until the time of Keynes and the publication of his theory in 1936, Say's Law had been the accepted wisdom for over a century. Economists' presenting for a PhD viva who disagreed with Say's Law, which basically stated that underinvestment coupled with underemployment and over saving was impossible, risked not being awarded their doctorates (Galbraith, 1975, p.223). Keynesian macroeconomics was regarded as a revolutionary paradigm shift. The term 'paradigm shift' is thought to be used far too much these days and without the accuracy required. It has become part of modern speech, especially in the marketing literature. It is used so much it has become virtually meaningless (Task, 1993).

2.2.3. Paradigm in a 'world view' context.

It is the second and third approach to defining the term that is used in this thesis. The researcher discusses the methodological paradigm used in each of the articles and other papers submitted. This is very similar to the concept of research design discussed in the previous paragraph (Miles and Darroch, 2006). The author also refers to the development of a research paradigm for the marketing of small business that has evolved from the positivistic quantitative, deductive approach to a more interpretive, qualitative inductive approach over the last 20 years. The author also uses the term to describe the manner in which many academics view marketing applicable to the smaller firm or what is sometimes referred to as 'entrepreneurial marketing'. In reiterating the title of this thesis, *'Marketing for small business: The development of a practical and conceptual contribution towards a new paradigm 1986 to* 2011' one can see that the term paradigm forms an intrinsic part of the title. The term paradigm here is intended to mean a new approach to a consideration of marketing suitable to the smaller firm. It is a stepping back from and a move away from the standard orthodoxy of what has come to be known as the 'strategic marketing management standard model' so commonly found in the standard text and taught in the business curricular at universities. It is an attempt to question the status quo and the established prevailing conventional wisdom and try and formulate a new and more relevant way to apply marketing principles to small firms'.

A paradigm, in the most basic sense of the word, is a framework containing all of the commonly accepted views about a subject, a structure of what direction research should take and how it should be performed (Task, 1993; Armstrong, 2009). The term 'paradigm' has been defined by Creswell (1994) as "*the generally accepted perspective of a particular discipline at a given time*" (p. 122). The

philosopher, Thomas Kuhn (1962) was the first to use the term for science, suggesting that scientific research does not progress towards truths, but is subject to dogma and clinging to old theories (Armstrong, 2009). Kuhn made several claims concerning the progress of scientific knowledge: that scientific fields undergo periodic "paradigm shifts" rather than solely progressing in a linear and continuous way; that these paradigm shifts open up new approaches to understanding that scientists would never have considered valid before; and that the notion of scientific truth, at any given moment, cannot be established solely by objective criteria but is defined by a consensus of a scientific community (Kuhn, 1957). Competing paradigms are frequently incommensurable; that is, they are competing accounts of reality which cannot be coherently reconciled. Thus, our comprehension of science can never rely on full "objectivity"; we must account for subjective perspectives as well. The word, like many scientific terms, comes from Greek, and means example. He came up with four basic ways in which a paradigm indirectly influences the scientific process. According to Kuhn, (1962) a paradigm dictates:

- What is studied and researched.

- The type of questions that are asked.

- The exact structure and nature of the questions.

- How the results of any research are interpreted.

(See also Boruch, 1975)

Kuhn believed that science had periods of patiently gathering data, in a paradigm, and then revolution occurred as the paradigm matured (Armstrong, 2009). The word 'Paradigm' first appeared in English in the 15th century, meaning "an example or pattern," and it still bears this meaning today. For example one might say that '*Their company is a paradigm of the small high-tech firms that have recently sprung up in this area'*. Since the 1960s, *paradigm* has been used in science to refer to a theoretical framework, as when Nobel Laureate David Baltimore (1970) cited the work of two colleagues that *"really established a new paradigm for our understanding of the causation of cancer* (p.1210)." Thereafter, researchers in many different fields, including sociology and literary criticism, often saw themselves as working in or trying to break out of paradigms. Applications of the term in other contexts show that it can be used more loosely to mean "the prevailing view of things." (The Free Dictionary, 2012). Generally an investigation of the literature produces four general classes of definition for the term paradigm from a scientific 'model' or 'world view' perspective, these are:

1. One that serves as a pattern or model (Miles and Darroch, 2006; Reynolds, 2008).

2. A set of assumptions, concepts, values, and practices that constitutes a way of viewing reality for the community that shares them, especially in an intellectual discipline (Dictionary.com, 2013; Cook and Campbell, 1979; Reynolds and Day, 1996).

3. A framework containing the basic assumptions, ways of thinking, and methodology that are commonly accepted by members of a scientific community (Judd and Kenny, 1981).

4. A cognitive framework shared by members of any discipline or group: *the company's business paradigm* (Jurs and Glass, 1971; Trochim, 1982).

In other words, the researcher's epistemological, ontological, and methodological premises may be termed a paradigm. The paradigm selected guides the researcher in identifying the philosophical assumptions about the research and in the selection of tools, instruments, participants, and methods used in the study (Nyman, Berck, and Worsdorfer, 2006; Kotler, 2012; Tajeddini, Trueman and Larsen, 2006; Reynolds and Lancaster, 2007; Stokes, 2000; Saura, Contri, Taulet and Velazquez, 2005; Reynolds, 2008).

2.2.4. Paradigm in a research model context.

When conducting research in the physical and social sciences' it is important to determine the approach adopted. Babbie, (2010) states that; "scientific inquiry in practice typically involves alternating between deduction and induction. Both methods involve interplay of logic and observation. And both are routes to the construction of social theories (p. 53)." According to Saunders et al. (2007), "a research approach can be divided into two categories: deductive approach and inductive approach (p. 17)." Kotler, 2012 states that; "A deductive approach is concerned with developing a hypothesis (or hypotheses) based on existing theory, and then designing a research strategy to test the hypothesis" (p. 87). An inductive approach starts with the observations and theories are formulated towards the end of the research and as a result of observations (Goddard and Melville, 2004). Inductive research "involves the search for pattern from observation and the development of explanations – theories – for those patterns through series of hypotheses" (Bernard, 2011, p.7). In other words, no theories would apply in inductive studies at the beginning of the research. The researcher is free in terms of altering the direction for the study after the research process had commenced.

There are numerous paradigms used to guide research, and authors' incorporate different paradigmatic schemas to conceptualize and classify their research (Kotler, 2012; Nyman, Berck, and Worsdorfer, 2006; Kotler, 2012; Bowey and Easton, 2007; Tajeddini, Trueman and Larsen, 2006; Reynolds and Lancaster, 2007). However, there are two main research paradigms which are discussed widely in the literature. For example Kotler, 2012; Day and Reynolds, 2011; Grant, Gilmore, Carson, Laney and

Pickett, 2001, labelled the two paradigms as quantitative (positivistic, traditional, experimental, empiricist) and qualitative (phenomenological). While some writers (Thompson and Doherty, 2006; Deacon and Harris, 2011; Nyman, Berck, and Worsdorfer, 2006; Saura, Contri, Taulet and Velazquez, 2005) refer to qualitative paradigms in different terms such as constructionism, interpretative, constructivist and naturalistic. Kotler, 2012; Stokes, 2000; Cook and Campbell, 1979; Judd and Kenny, 1981; Jurs and Glass, 1971; Trochim, 1982 and Reynolds, 2008 summarises some of the common terms that refers to the two paradigms: positivistic and phenomenological. This summary is presented in Table 2.1 below:

Table 1. Alternative Terms for the Main Research Paradigms

Positivism paradigm	Phenomenological paradigm
Quantitative	Qualitative
Objectivist	Subjectivist
Scientific	Humanistic
Experimentalist	Interpretive

Source: Kotler, (2012) page 143.

Debate on using quantitative or qualitative or a mixed approach is ongoing between philosophers (Reynolds and Lancaster, 2007; Saura, Contri, Taulet and Velazquez, 2005). However, McAuley, 2011 and Day and Reynolds 2011; Stokes, 2000, noted that there has been a great shift away from quantitative to qualitative in management research since the 1980s. A positivistic position and therefore quantitative research studies have been established over the last one and half centuries. Such a positivistic approach has been used in the natural science such as physics, botany, biology which are based on quantifying and the measurement of the variable under study using primarily statistical analysis. It tends to use deductive, theory testing approaches (Reynolds and Lancaster, 2007; Hill, 2001; Saura, Contri, Taulet and Velazquez, 2005). On the other hand, a phenomenological position has developed in the last 50 years. It is concerned with examining the social or human problems/behaviours of the phenomena, mainly formed with texts and words, from the respondents' view in a descriptive or narrative way. It tends to use an inductive, theory building approach (Murray, O'Driscoll and Torres, 2002; Hill, 2001).

2.2.5. Conventional methodological approaches

A plethora of research studies has been conducted into almost every aspect of small firms' activities (Day and Reynolds, 2011; Grant, Gilmore, Carson, Laney and Pickett, 2001; Hills and LaForge, 1992; Hill, McGowan and Carson, 1997; Bygrave, 1989; Day and Reynolds, 1997; Covelo, Broody and Munro, l995). There has been a steady but slowly accelerating change in the research methodologies of management research, including research into marketing (McAuley, 2011; Cope, Jack and Rose,

2007; O'Regan and Ghobadian, 2005; Milliken, 2001; Stokes, 1995; Shaw, 1999; Remedy, Williams and Money, 1998). Traditional research approaches in marketing management have largely been grounded in predominantly positivist/quantitative methodologies usually testing hypotheses using quantitative survey analysis involving probability sampling or using experimental designs and parametric techniques such as correlation and analysis of variance to test such specific hypotheses (Murray, O'Driscoll and Torres, 2002; Hair, Anderson, Tatham and Black, 1995; Hill, 2001; Kotler, 2012).

The most obvious possible reason for this is that many researchers have entered the management arena or have approached management research from a background in the traditional sciences or quantitatively based social sciences such as economics particularly but also psychology, sociology and other areas of study which have become more quantitatively based (Hill, 2001). These are disciplines with a historical attachment to positivistic, so called 'single reality' philosophical orientations manifest in the use of quantitative approaches (Hill, 2001; Hill, McGowan and Carson, 1997). Second, these researchers have in turn nurtured student researchers in these traditions (Churchill and Lewis 1986; Hill, 2001). Hence the approach is passed down the line and perpetuated to the next generation of academics. Third, the self-perpetuation of positivistic/ quantitative methodologies is largely being driven by government funding agencies. Such agencies seem to prefer the positivistic quantitative approach and researchers' always want financial grants so this is the method used by many academics when biding for research funds. A series of research studies, for example, Sexton (1987), Hills (1987), Churchill and Lewis (1986), Romano and Ratnatunga (1995), Carson and Coviello (1995), note the strong predominance of positivistic methods in the field of management, historically the singular most popular method. Using the Churchill and Lewis (1986) methodological classification system the survey method and variations based on this method have historically been the most widely used in the field of management which includes marketing (Kotler, 2012).

2.2.6. Evolving methodology in the field of small firms research

Since its UK beginnings as an academic subject in the early 1960's marketing had evolved slowly largely depending on American academic innovations to drive the subject forward (Barksdale and Darden, 1971; Zaltnian et al.,1973). The 1970's was a period of consolidation of what became the establishment conventional wisdom of academic marketing orthodoxy (Brooksbank et al. 1992; Wind and Robertson, 1983). More work was done on the conventional, and now established lexicon of marketing wisdom but the contents of a conventional marketing syllabus were little questioned by those delivering them in the universities, polytechnics and colleges, particularly in the UK as many

had a vested interest in maintaining the status quo in which they had an intellectual investment (Brown, 1995, 1996; Carson, 1985, Miller and Friesen, 1983).

Academics who had studied marketing or, more likely because so little marketing was taught in the universities, had moved into the subject from another discipline such as economics, had a vested interest in keeping the status quo because they were now making their living by teaching and in some cases contributing to the research in the area of the established, orthodox marketing paradigm (Low and MacMillan, 1988; Reynolds and Day 2011; Brown, 1995). The situation was similar to that found in the physical sciences before the early 20th century (Carson and Cromie, 1989). Since the scientific revolution of the 1920's, there has been a growing conviction that 'unknowing' is a part of our experience especially in the quantum world (Armstrong, 2009). In 1962, the American intellectual Thomas Kuhn published 'The Structure of Scientific Revolutions', which criticised Popper's (1959) theory of the systematic falsification of existing scientific theories but also undermined the older conviction that the history of science represented a linear, rationale and untrammelled progress towards an ever more accurate achievement of objective truth. Kuhn believed that the cumulative testing of hypotheses was only part of the story (Armstrong, 2009). Progress in research in science, as in the social sciences, was not smooth and linear but discrete and 'lumpy'. In many ways the same thing has happened in the study of marketing and especially marketing for small business. There is a period of 'flat lining' and then periods when a 'ramp' or 'step change' in the prevailing orthodoxy comes about, sometimes within a short period of time (Brown, 1995).

During 'normal' periods, physical scientists did indeed research and test their theories, but instead of reaching out towards' new truth', they were in fact simply seeking confirmation of the scientific paradigm of the day. For example recent work done near Geneva in Switzerland to find the Higgs boson and officially reported in June 2012 can be viewed as scientists seeking confirmation of the 'standard model' of the universe. A similar situation develops in all disciplines, including marketing during the late 1960's and 1970's (Beaver, 2001; Knight, 1995; Low and MacMillan, 1988). Lecturers and texts all worked to support the prevailing orthodoxy and generally tended to ignore anything that challenged it; they could advance no further than the current paradigm although they could work within the paradigmatic boundaries, which thus acquired a conviction and rigidity that was not unlike theological dogma (Armstrong, 2009; Carson and McCartan - Quinn 1995; Brown 1995, 1996). In the same way an economics PhD candidate recommending government deficit financing in response to an economic downturn in the early 1930's before the advent of the Keynesian 'step change' in economic thinking would have been unlikely to have been awarded the degree by a university because the views expressed would have been too far outside the accepted academic orthodoxy and conventional academic wisdom (Galbraith, 1977).

But then, as occurred in physical scientific research during the 1920's the 'normal' period was succeeded by a dramatic paradigm shift (Grant et al., 2001; Carson and Grant, 1998; Armstrong, 2009). The accumulating uncertainties and results of experiments became irresistible and scientists contended with each other to find a new paradigm. This was not a rational process; it consisted of imaginative flights into the unknown, all influenced by metaphors, imagery and assumptions drawn from other fields (Armstrong, 2009). An analogy can be made between what occurred in the physical sciences in the early part of the 20th century and the developments made in the field of marketing for small business in the 1980's, especially in the USA, where some writers feel we are now on the verge of a new paradigm for small business marketing (Hills and La Forge, 1992; Hill, 2001, Stokes, 2000; O'Donnell and Cummins, 1999). As discussed by the author in much of his work there seems to be an ongoing debate in the literature at the moment on whether there needs to be a new marketing paradigm for small and medium sized enterprises (SMEs) (see Reynolds and Day, 1998). Many question whether conventional marketing re: the standard texts such as Kotler and Armstrong (2001) or Lancaster and Reynolds (1998, 1999, 2004) i.e. the standard business school 'classicist' teaching approach, can be made to fit the needs of SMEs with some pragmatic adaptation (see Whittington, 1993). This work on methodological evolution towards a 'methodological dominant logic' within marketing for small firms' research is on-going by the author and is briefly discussed further in the 'Suggestions for Future Research' Section 2.10 page 66 towards the end of this thesis.

2.2.7. Methods adopted for research submitted

The papers presented in this submission use a range of methodological approaches. There was no dominant methodology because when the author started researching in this field there was no methodological 'dominant logic' in the field of marketing for small business. At the time the researcher chose an appropriate methodology given the nature of the data required, time and budget constraints and issues of likely compliance by firms and individuals. Generally an eclectic and pragmatic methodological approach was applied. In some projects a mixed method approach was used (for example Reynolds, 1986b). The rationale and justification for the methodology adopted is given within each of the papers submitted in Section 2 of this thesis. Methodologies adopted include:

- Sample surveys using both probability and non probability sampling procedures (Reynolds, Day, Kovalev and Kovalev, 2007; Churchill and Lewis 1986; Paulin *et al.* 1987).
- Qualitative depth interviews and group discussions (Reynolds, 2003; Reynolds, 1986; Hill, McGowan and Carson, 1997; Hills and La Forge, 1992; Hill, McGowan and Drummond, 1999; Shaw, 2002).

- Computer based statistical simulations using synthetic data to model small firms' behaviour and reactions to crisis stimuli (Reynolds, Day and Lancaster, 2001; Zott, 2003).

- Computer based applications of time series data taken from small firms (Reynolds and Day, 1996; Reynolds and Day, 1995; Lancaster and Reynolds, 2003).

- Analysis and 're-engineering' of historical company sales data (Reynolds, 2003)

- A case study approach (Day and Reynolds, 2011; Reynolds, 2003; Reynolds and Lancaster, 1990; 2006).

- Participant observational techniques (Reynolds and Lancaster, 2006; Dey, 2002).

- A multi or mixed method approach using more than one of the above approaches (Reynolds, 1986; Grant, Gilmore, Carson, Laney and Pickett, 2001; Mintzberg, 1979).

The author wishes to emphasise that the body of research presented in this thesis has been conducted over a number of years, as the title of the thesis explains, specifically from 1986 to 2011. The subject of the marketing – entrepreneurship interface was developing over this time, especially from 1986 until the present. Like the subject itself a methodological literature has developed where one favoured approach or dominant methodological logic has emerged, namely qualitative research (Miles, and Huberman, 1994; Grant, Gilmore, Carson, Laney and Pickett, 2001; Gilmore and Carson, 1996; Carson, Gilmore, Perry and Gronhaug, 2001; Lindgreen, 2000; Shaw, 2002). Many respected academics in this developing field recommend a qualitative approach rather than a positivistic experimental or sample survey approach (Hills and La Forge, 1992; O'Donnell and Cummins, 1999; Carson, Gilmore and Grant, 1997; Hill and Wright, 2001; Zontanos and Anderson 2004; Christy and Wood, 1999; Van Maanen, 1982; Carson, 1990; Blankson and Omar, 2002; Shaw, 1999; Healy and Perry, 2000). Sophisticated analytical applications available in more recent years such as 'NVivo 10' now allow for more sophisticated coding, tabulation and graphical representation of qualitative data (Catterall, 1996; Dembkowski, and Hanmer-Lloyd, 1995; Goodman, 1999). This has gone some way to improve the analytical rigor and presentation of qualitative data and has contributed to the increased popularity of the qualitative approach, especially amongst university doctorial students.

In terms of a mixed method approach the use of depth interviews with ethnographic participant observation (Reynolds, 1986; Dey, 2002; Boote, and Mathews, 1999); and/ or a case study approach has been used in many of the older seminal and more recent contributions found in the literature (Schumpeter 1947, 1949; Yin, 1994; Eisenhardt, 1989: Arnaud, 2002; Thompson, 2004; Reynolds and Lancaster, 1990; 2006; Reynolds, 2003). An emerging qualitative methodology based on grounded theory (Glaser and Strauss 1967), particularly the more flexible variant of the method referred to by Glaser as 'full conceptual description' proposed by Strauss and Corbin (1998) has also been used in

later research (Goulding, I998). Generally the recent trend in methodologies in this field, as in many other areas of management and marketing research, is towards a more qualitative approach (Gummesson, 2005; Miles, and Huberman, 1994; Guba and Lincoln, 1994; De Ruyter and Scholl, 1998; Hyde, 2000; Goulding, I998). Working in teams has also proven to be effective (Reynolds, Day, Teach, Schwartz and Geursen, 2002; Grant, Gilmore, Carson, Laney and Pickett, 2001).

Having given this account as part of the critical review of the historical methodological developments and current methodological trends within the relevant literature the author now turns to a listing and brief overview of each of the published works submitted for this thesis. The author first of all lists the submitted materials under headings for each of the thematic sections discussed. He then proceeds to give a brief overview of each of the published works listed. Finally each of the themes and the submitted materials within them are discussed in the context of the available literature both generally in the field of small business marketing and more specifically in relation to each of the thematic categories.

2.3. SUBMISSION DETAILS

2.3.1. Listing of papers / materials submitted in the thesis

Code

J = JOURNAL
C = CONFERENCE
B = BOOK
R = REPORT

2.3.2. Theme 1: (T1 MATERIALS 1 TO 7) J = 6, C = 1

A NEW APPROACH TO THE MARKETING OF SMALL FIRMS.

J (T1/1) Reynolds, P.L. (2002), "The need for a new paradigm for small business marketing - What's wrong with the old one?, "*Journal of Research in Marketing and Entrepreneurship*, 4 (3), pp. 191-205; ISSN 1471-5201.

J (T1/2) Reynolds, P.L. and Lancaster, G.A. (2006) "A scheme to increase profitability in entrepreneurial SMEs," *Journal of Small Business and Enterprise Development*, 13 (3), pp. 395-410; ISSN 1462-6004.

J (T1/3) Reynolds PL, Day J. and Dean, A. (1998), ''Relationship marketing: Its key role in entrepreneurship,'' - *Long Range Planning*, Vol.31, No.6, pp.828-831, Elsevier Science Ltd. ISSN: 0024-6301/98, December.

J (T1/4) Reynolds, PL and Lancaster, G.A. (1990), ''Three Food Multiple Superstores: Patronage and Attitudes: A Town Study'', *British Food Journal*, Vol.92, No.6, pp.14-18.

J (T1/5) Reynolds PL, and Brown, I. (1986), ''The Role of Trade Shows in Industrial Selling'', Journal *of Sales Management*, Vol.3, No.1, pp.36-47.

C (T1/6) Reynolds, P.L., Day, J., Kovalev, A; and Kovalev, V. (2008), ''Professional sales practice in small firms a UK and Russian comparison: An investigation into the relationship of sales competence with marketing and entrepreneurial orientations'', *Research at the Marketing-Entrepreneurship Interface*, 2008 UIC Research Symposium on Marketing and Entrepreneurship, University of Illinois at Chicago, Stockholm, Sweden, June 14th-16th, ISSN: 312-996-2670.

J (T1/7) Reynolds, P.L. (2009), "Is standard marketing appropriate to the smaller firm or is adaptation necessary'', *The Herald Journal of Business and Economics*, Omsk State University Dostoyevsky, No. 2; p.p. 7-11. ISBN: 978-5-7779-0852-0.

2.3.3. <u>Theme 2: (T2: MATERIALS 1 TO 9) J = 5, B = 1, C = 3.</u>

FORECASTING, INFORMATION MONITORING AND CONTROL IN SMALL FIRMS.

J (T2/1) Reynolds, P.L., Day, J. and Lancaster, G. (2001), ''Moving towards a control technique to help small firms monitor and control key marketing parameters: a survival aid'' *Management Decision*, 39 (2), pp. 113-120. ISSN 0025-1747.

J (T2/2) Reynolds, P.L. (2003), ''Sales forecasting practice in small firms: the application of Bayesian theory to strategic decisions'' *Journal of Research in Marketing and Entrepreneurship*, 5 (1), pp. 25-38. ISSN 1471-5201.

J (T2/3) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V. (2009), ''A possible Bayesian approach to forecasting decisions in small firms: A UK and Russian perspective'', *The Herald Journal of Business and Economics*, Omsk State University Dostoyevsky, No. 2; p.p. 80-92. ISBN: 978-5-7779-0852-0.

C (T2/4) Reynolds P.L. and Day, J. (1996), ''Integrating Process Control Techniques into a Marketing Monitoring and Control System to Track Key Marketing Parameters within Small Firms'', American Marketing Association Summer Educators' Conference, AMA, San Diego, 4-6 August.

B (T2/5) Chapter 14 'Sales Forecasting' in Reynolds P.L. (2001), ''Marketing: A One Semester Introduction'' - Published by Butterworth-Heinemann Ltd, Oxford, UK; February (with G Lancaster) <u>ISBN 0750643811.</u>

C (T2/6) Reynolds, P.L. (2008), *"Are Sales Forecasters in Small Firms Bayesian?"* 2008 UIC Research Symposium on Marketing and Entrepreneurship, University of Illinois at Chicago, USA, Stockholm, Sweden, June 14th-16th, ISSN: 312-996-2670.

J (T2/7) Reynolds, P.L. and Day, J. (1995), ''Commercial health Monitoring of Entrepreneurial Firms Using Process Control Techniques'', Journal of Small Business and Enterprise Development, Vol. 2 Issue: No. 1, pp.19 – 30, ISSN – 1462 - 6004

C (T2/8) Reynolds P.L. and Day, J. (1996), ''A Semi Automatic Scheme for Monitoring the Adequacy of Short Term Sales Forecasts'': Paper presented to the 1996 INFORMS Marketing Science Conference, University of Florida, Gainesville, Florida, USA, 8 -10th March.

J (T2/9) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V. (2007), ''Forecasting decisions in small firms - Competition in Regional Economics - Experience/Problems/Prospects'', *Journal of Finance and Economics*, Russian Institute of Economics and Finance, Siberia, No. 8, 8-16. ISBN: 978-5-9900-880-5-4.

2.3.4. <u>Theme 3: (T3 MATERIALS 1 TO 8) J = 4, R = 1, C = 3.</u>

<u>PEDAGOGIC ASPECTS – ADVISORS AND COUNSELLORS.</u>

J (T3/1) Reynolds, P.L., Day, J. and Lancaster, G. (2006), ''Entrepreneurship and the small to medium-sized enterprise: A divergent/convergent paradox in thinking patterns between advisers and SME owner-managers'' *Management Decision*, 44 (5), pp. 581-597. ISSN 0025-1747.

J (T3/2) Reynolds, P.L., Day, J. and Lancaster, G. (1998), ''A marketing strategy for public sector organisations compelled to operate in a compulsory competitive tendering environment'' *International Journal of Public Sector Management*, 11 (7), pp. 583-595; ISSN- 0951-3558.

J (T3/3) Reynolds, P.L., (1987), ''Professional Selling and the Art of Effective Listening'', *Journal of Sales Management*, Vol.4, No. 3, pp. 28-37.

J (T3/4) Reynolds, P.L. and Lancaster, G. (2007), ''Predictive strategic marketing management decisions in small firms: A possible Bayesian solution'' *Management Decision*, 45 (6), pp. 1038-1057. ISSN 0025-1747.

R (T3/5) Reynolds, P.L., (1986b), ''A Report Into The sales and Marketing Training Needs of Small Firms'', – *Department of Trade and Industry, Kirklees Council, Calderdale Council – Local Collaborative Project.*

C (T3/6) Reynolds, P.L. and Day, J. (1996), ''Understanding the Relationship between the Small and Medium Sized Enterprise (SME) and their Advisors and Counsellors''; *Paper presented to the 41st ICSB World Conference*, Stockholm, Sweden, 17/19 June.

C (T3/7) Reynolds, P.L. and Day, J. (1999), ''Some observations from teaching a module in entrepreneurship and marketing'' - paper submitted to *AMA/AM/University of Illinois European Symposium on Research at the Marketing-Entrepreneurship Interface*, Nice, France; 16th -17th June.

C (T3/8) Day, J. and Reynolds P.L. (2011), ''Exploring the marketing – entrepreneurship interface: Bringing an understanding of small business marketing into the curriculum'', Annual Learning and Teaching Conference, University Of Huddersfield, UK, http://eprints.hud.ac.uk/99667/

2.4.0. Brief discussion of each paper or item listed above

2.4.1. Theme 1: A new approach to the marketing of small business

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J (T1/1) Reynolds, P.L. (2002), ''The need for a new paradigm for small business marketing - What's wrong with the old one?'', *Journal of Research in Marketing and Entrepreneurship*, 4 (3), pp. 191-205; ISSN: 1471-5201.

The entrepreneurial marketing paradigm is open to several interpretations. One such is that we should consider, in particular, the behaviour of small firms, and in particular, small entrepreneurial firms. Another interpretation is to argue for the building of a completely new, and substantive, paradigm that builds upon, for example personal contact network development and focuses upon marketing activity being compressed, non-linear in outlook and application, and informal. In this article the author asks a fundamental question highly pertinent to the developing subject of marketing within small firms. Is conventional marketing theory and practice from the "classical school" applicable to all types of organisations no matter what their size, or do smaller firms need a different sort of marketing, more suited to their particular needs? The paper concludes that in many cases the central core hub of marketing that has become known as the classicist philosophy of strategic marketing management (see Brennan, Baines, and Garneau, 2003) is appropriate and can often be employed to the smaller enterprise with beneficial commercial effects. However there may be some reluctance on the part of small firms to accept the notion that conventional marketing is of particular use. The author hopes that this paper will provoke a subsequent debate about the current "state of play" concerning the entrepreneurial marketing paradigm.

J (T1/2) Reynolds, P.L. and Lancaster, G. (2006) ''A scheme to increase profitability in entrepreneurial SMEs'' *Journal of Small Business and Enterprise Development*, 13 (3), pp. 395-410; ISSN: 1462-6004.

This article aims to demonstrate how small entrepreneurial firms can employ low cost market research techniques in the area of service evaluation to prioritise the sales effort, increase sales and improve margins. "Triangulation" has been used as a methodology where the same phenomena have been investigated by the use of different methodological approaches. Secondary data included academic sources and internal company records. Primary data included exploratory depth interviews and group discussions, a questionnaire-based survey and the construction of case studies. It can be seen from the

case study results presented that a customer service appreciation survey can yield useful and actionable information, which can be used creatively by entrepreneurs to bring about significant improvements in business performance in a short space of time. Methodologically it would have been better if more extensive data were available on customers to allow for more sophisticated quota sampling controls but the data available from participating firms was limited in this respect and the researchers had to work with what was available. A model of small firm growth is discussed and the concept of crisis points in the early stages of the life cycle of small entrepreneurial firms is examined. The paper demonstrates how a low risk growth strategy, which minimises the possibility of the firm encountering a "crisis point", can be chosen. The content of the article is original in the sense that particular emphasis is placed on the concept of "leveraging." The study shows that such a "leveraged"- based scheme is particularly relevant in a customer multiple sourcing purchasing situation.

J (T1/3) Reynolds PL, Day J and Dean A (1998), ''Relationship marketing: Its key role in entrepreneurship'' - *Long Range Planning*, Vol.31, No.6, pp.828-831, Elsevier Science Ltd. ISSN: 0024-6301/98, December.

There are a number of pressures facing SMEs that often result in high business failure rates. There is a need for research to develop a framework that will increase the chances of SMEs to achieve growth with minimum risk of failure. This paper discusses the fact that the adoption of a relationship marketing approach and an entrepreneurial orientation significantly contribute to a policy of successful growth in SMEs whilst at the same time reducing the risk often associated with expansion and growth within smaller firms. The successful implementation of relationship marketing strategies by small firms requires not only well-developed marketing skills but also an entrepreneurial approach to business. Results from a small-scale study suggest that entrepreneurial SMEs employ relationship marketing more effectively than non entrepreneurial SMEs. The authors cite literature that argues entrepreneurship is not an 'absolute' and thus less entrepreneurial firms can learn from their more successful counterparts. Entrepreneurial SMEs in the sample that employ relationship marketing, inter alia, enjoy higher growth rates. This article argues that successful relationship marketing policies are related to the entrepreneurial capacity of the SME. Since marketing and entrepreneurship are not the same we must consider the entrepreneurial environment into which such marketing activity is introduced. Survey methodology in addition to qualitative interviews was employed. A mailed questionnaire containing 181 questions was sent to 102 small firms selected from a list derived from the Lotus One-Source national company database for the west Yorkshire region on a random sample basis. From the responses (60) 20 SMEs were selected for in-depth semi structured interviews to

explore further the results of the mailed questionnaires. SPSS was used for the questionnaire analysis and non parametric statistics used for the survey analysis.

J (T1/4) Reynolds PL and Lancaster GA, (1990), ''Three Food Multiple Superstores: Patronage and Attitudes: A Town Study'', *British Food Journal*, Vol.92, No.6, pp.14-18.

This paper used a mixed method approach based on a sample survey and a case study approach. The subject of the case study was a small/to medium retailing firm named Hillard's which was Yorkshire based and had small supermarkets in the West Yorkshire region, the largest store in Wakefield. The company was founded by John Wesley Hillard in 1885 in the town of Cleckheaton. Peter Hartley, a grandson of the founder, became Executive Chairman in 1983 and in May 1987, following a hostile bid; the business was acquired by Tesco for £220m. Hillards was very much a 'home grown' local Yorkshire family business that had grown and prospered over the years and was on track to be another Morrison's. The company had a desire to expand and wanted to open its first large store or 'super store' in Scunthorpe and were going to be competing with the likes of Morrison's, on which Hillard's was based, in the 'superstore' league. The study aimed at establishing attitudes towards Hillard's and the critical success factors necessary for Hillard's to be successful in this new segment. Originally Hillard's were concerned about a 50 per cent fall off in sales at another new store within six months of its opening which did not auger well for its future plans for a 'superstore'; this research includes a comparative study of two other supermarkets in the same town. Interviews were conducted with 321 store customers and 189 people at random locations elsewhere and a standard questionnaire completed to determine the store features important in attracting their patronage, including price, layout, selection and variety of goods, opening hours, parking facilities and convenience of location. It was established that there was nothing radically wrong with the client company's store and subsequent implementation of recommended "fine tuning" of a number of its features has led to its developing a comparably favourable level of popularity. However, it is concluded that marketing research should be commissioned at the initial planning stage, with particular reference to suitability of location, rather than as a means of sorting out deficiencies which become apparent only after completion and opening.

J (T1/5) Reynolds PL and Brown, I, (1986), ''The Role of Trade Shows in Industrial Selling'', *Journal of Sales Management*, Vol.3, No.1, pp. 36-47.

This early paper used a mixture of a case study approach and 'ethnographic' participant observation for its methodology and is based on a small firm in Skelmersdale, Lancashire**,** that produced industrial switchgear and related circuit relay materials. The firm had 36 employees and was turning over around £2.5 million per annum in 1985. Records show that the company is now dissolved. The paper examined the role of trade exhibitions in industrial or B2B integrated marketing communications with particular reference to small firms. Particular emphasis was placed on the evaluation of the use of trade exhibitions in comparison to other marketing communications tools bearing in mind that this small firm, like many others, had a limited marketing communications budget. Innovative methods of evaluating exhibition participation were examined and discussed. Cost comparisons were made with other communications methods. However the paper ventured past cost comparisons, as important as these are, and examined more qualitative variables such as audience quality and particularly the importance of making personal contact with high status decision making unit (DMU) members which previous research had shown was important in B2B marketing. Ian Brown was a dissertation student of the author and in 1986 the authors' were awarded the British Business Graduate Project Prize (a separate award for the supervisor and student) in the House of Lords in London with a reception at the Royal Overseas League, London.

C (T1/6) Reynolds, P.L., Day, J., Kovalev, A; and Kovalev, V., (2008), ''Professional sales practice in small firms a UK and Russian comparison: An investigation into the relationship of sales competence with marketing and entrepreneurial orientations'', Research *at the Marketing-Entrepreneurship Interface*, 2008 UIC Research Symposium on Marketing and Entrepreneurship, University of Illinois at Chicago, Stockholm, Sweden, June 14th-16th, ISSN: 312-996-2670.

The sales function is seen as particularly important by the management of many small firms. But how much investment in terms of time and money is actually spent on the sales function and how professional is the sales function in small firms? The authors have been involved in collaborative research into the marketing for small business in Russia (Siberia) and the UK (Yorkshire) with sales being one of the key areas of investigation. Sales in the context of this paper is viewed an intrinsic part of the marketing mix and as a variable in a multi variable, integrated marketing communications mix. Evidence from the literature would suggest that sales competence within many small firms is low and that the sales function is often carried out by the owner of the business who is usually not

from a sales background. Even where full time sales personnel are used there is often little or nothing by way of sales staff training or staff development. The authors are particularly interested in establishing whether general marketing orientation or entrepreneurial orientation (or indeed both) within the firm has any association with the quality and sophistication of the sales function within small firms. The sophistication of the sales function was measured using two proxy measures. One was whether the firm in question actually engaged in any form of sales training for staff and the second was, if so, were active and effective listening skills taught as part of this training. If small firms engage in any form of formal sales training then this gives an indication that management considers the sales function important and is trying to improve the quality and effectiveness of that function. In surveying the contents of sales training courses and programmes offered to small firms by quasi-government agencies and the private sector only the more serious and comprehensive programmes contain elements relating to the acquisition of 'active' and 'effective' listening skills. Hence the presence of these skill areas in a small firm's sales training programme is taken as a proxy for sales sophistication within the firm.

J (T1/7) Reynolds, P.L., (2009) ''Is standard marketing appropriate to the smaller firm or is adaptation necessary'', *The Herald Journal of Business and Economics*, Omsk State University Dostoyevsky, No. 2; p.p. 7-11. ISBN: 978-5-7779-0852-0.

This paper is a variation of others in 'Theme 1' and continues the debate on whether standard marketing can be applied to firms of any size or whether adaptation is required in certain area to make it more suitable to the small firm. In this article the author asks the question highly pertinent to research at the marketing- entrepreneurial interface. Is conventional marketing theory from the 'classical school' applicable to the smaller firm? The methodology employed involved triangulation. Firstly two exploratory group interviews were conducted with 10 members in each group. The qualitative data resulting from these interviews was then used to produce a questionnaire which was sent to a representative sample of small firms in the west Yorkshire area (1,100 firms). The response rate was 249 (22.63%). A Person Chi Square test was used for the analysis of the survey data to test for significant difference between grouped/ sectors. The work concluded that it seems that many working in small firms are little interested in formal standard marketing. However the author concluded that was no need for anything as radical as a new paradigm. However significant adaptation my be needed to make marketing theory and practice 'fit' the needs of the smaller firms. This work built on earlier work but made a further contribution to the debate in the literature as to whether standard 'business school' marketing is acceptable and appropriate to those working/ owning smaller enterprises.

2.4.2. Theme 2: Forecasting information, monitoring and control

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J (T2/1) Reynolds, P.L., Day, J. and Lancaster, G. (2001) ''Moving towards a control technique to help small firms monitor and control key marketing parameters: a survival aid'' *Management Decision*, 39 (2), pp. 113-120. ISSN 0025-1747.

This paper is concerned with the failure rates amongst small firms, particularly in the first five years of their existence. Evidence in the literature suggested that the management of small firms had a low level of competence in the area of forecasting monitoring and control. With this in mind the authors put forward a commercial health monitoring procedure that might act as a survival aid to small firms by predicting possible crisis points on their early growth path and enabling them time to try and protect themselves from predicted commercial threats. This article considers that one way to help the small- and medium-sized enterprise (SME) to survive is to offer it a robust but simple monitoring and control technique that would help it manage the business effectively and this, in turn, should help to increase its chances of survival. This technique should also be of interest to all people involved with monitoring or advising a large number of small enterprises or business units within a larger organization. For example, a bank manager or a small business consultant responsible for a portfolio of firms. The authors utilize process control techniques more often used in production and inventory control systems to demonstrate how one might monitor the marketing "health" of small firms. Methodology involves the computer generation of simulated data from pre-set parameters which is used to test the robustness of the procedure to react to artificially induced step and ramp changes in the input data.

J (T2/2) Reynolds, P.L. (2003) 'Sales forecasting practice in small firms: the application of Bayesian theory to strategic decisions ' *Journal of Research in Marketing and Entrepreneurship*, 5 (1), pp. 25-38; ISSN: 1471-5201.

This paper examines the sales forecasting practices of small firms, defined here as firms with no more than 50 employees. This paper discusses the application of Bayesian decision theory in the production of sales forecasts for small firms particularly in relation to longer term strategic decisions. A case study approach employing an 'ethnographic' style of participant observation was employed as a methodology and was deemed to be most suitable for the type of data required to answer the research question. The author was given access to commercial data in relation to an export project underway

by the firm and spent three days within the firm understanding present forecasting practices and details of the firm's main export markets. Hence a specific case study based on the author's consultancy experience is used to illustrate the application of the procedure. The management of many firms feel unable to use formal objective forecasting techniques because of lack of information to start the forecasting procedure off. For example there may not be any historical data available or even if there is management may not have any objective probabilities in relation to initial starting conditions. As discussed in this paper evidence from the author's own work suggests that the management of many small firms make no formal sales forecasts at all. Where formal forecasting procedures are used by the smaller firms they often tend to be subjective methods based on the managers own experience or the collective experience of others. A more robust procedure is available which overcomes the lack of initial starting conditions and this is based on Bayesian decision theory. Such a procedure should be well within the competence level of the majority of small business managers. A computer can carry out the calculations and the basic principles of Bayesian forecasting procedures are relatively easy to grasp and apply by small business managers.

J (T2/3) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V (2007) 'A Bayesian approach to forecasting decisions in small firms', *The Herald Journal of Business and Economics*, Omsk State University, Dostoyevsky, No. 2., p.p. 80-92. ISBN: 978-5-7779-0852-0.

This paper is another contribution to the forecasting literature and in particular the forecasting literature relating to small firms. The paper was firms presented by the author of this thesis at an annual research conference convened by the Omsk State University, Dostoyevsky in Omsk, Siberia in 2006. This conference attracts academics and practitioners from all over Russia as well as some overseas delegates. It was then accepted for publication in the 'The Herald Journal of Business and Economics' which emanates from the same university as they have a 'University Press' division similar to the Oxford University Press in the UK. Omsk State University is a conventional, classical university rather than one specialising in a single area such as agriculture or transport which is common in Russia. Publications from the Omsk State University Press are widely read throughout Russia but especially the Omsk Region which is itself very large. The methodology employed involved both qualitative interview data, quantitative survey data from both the UK and Russia and a case study approach. SPSS was used to provide the analysis for the survey data. Questionnaire used in the UK were sent to Omsk and translated into Russian and then administered by Omsk University in the region. They were then reinterpreted back into Russian and sent back to the UK by post. The data was then included onto a SPSS data base back in the UK. Non parametric statistics were used to analyse some of the data to test for any significant difference between industry sectors and between countries. The work concluded that evidence from the literature as well as the empirical evidence

collected by the authors' suggested that a Bayesian approach to forecasting which included a mixture of qualitative and quantitative procedures may well be suitable for the smaller firm because they allow the forecaster to some subjectivity in the selection of the forecast initial starting values. Entrepreneurs often arrive at their initial starting values in an intuitive and subjective manner and Bayesian forecasting allows them to use this subjectively derived data in a formal, structured forecasting procedure. In reality such an approach may be more useful to those looking after small firms such as their business advisors at banks and other organisations. Such people can still use the subjectively derived starting values given by the entrepreneur and then feed these into a probabilistic quantitative model such as Bayesian decision tree analysis. It is hoped that this paper will start a debate in the small firm field amongst those interested in forecasting and strategic planning is small firms. The fact that the paper has made use of a sample from Russia adds extra interest as the majority of commercial firms in Russia are also small.

J (T2/4) Reynolds PL and Day, J (1996), 'Integrating Process Control Techniques into a Marketing Monitoring and Control System to Track Key Marketing Parameters within Small Firms', American Marketing Association Summer Educators' Conference, AMA, San Diego, 4-6 August.

This paper is a further variation and further development of the forecasting and 'tracking signal' theme applied to small firms. This paper interfaces concepts and techniques from process control and marketing control in order to monitor the marketing "health" of small firms. It should be of interest to all people involved with monitoring or advising a large number of small enterprises or business units within a larger organization. The authors are concerned with developing a quantitative method to help SMEs manage their operations more successfully. It will be of particular use to those who provide business advice and services to the small business. The authors are particularly concerned with the growing SME but the theory and method is applicable to firms that have reached their desired size. The behaviour of the SME is described by reference to a life cycle/stages framework. The proposal is that either a single, or several, key performance indicators are monitored, and that when they fall outside of an acceptable range a warning message is generated. This requires an effective forecasting method, preferably one that utilizes and "learns" from past data and a method by which to track unexpected deviations and generate a warning message. For the former it is argued that exponential smoothing models are suitable. For the tracking signal, by which the data is monitored, a smoothed error tracking signal based on the work of Trigg, (1964) and Trigg and Leach, (1967) is employed. The generation of the exception message must be related to a particular confidence level and for this cumulative probability tables for the tracking signal are needed. A full set of such tables for a wide range of smoothing co-efficient value permutations and for use with all of the main exponential

smoothing forecasting models were generated and are available from the authors. The computer simulation of time series data and the use of the smoothed error tracking signal to recognise shocks in the input data were considered by the authors to be a novel application of such a methodological approach in the field of conducting research in the field of small business marketing.

B (T2/5) Chapter 14 'Sales Forecasting' in Reynolds PL, (2001), 'Marketing: A One Semester Introduction' - Published by Butterworth-Heinemann Ltd, Oxford, UK; February (with G Lancaster) <u>ISBN 0750643811.</u>

The author has co-authored eight text books in the general field of marketing. Chapter 14 of this text covers the need for sales forecasting within firms and the information sources that management can use to make sales forecasts. Both subjective and objective methods of forecasting are discussed along with worked examples. The worked examples have been derived from work conducted by the author in the course of his research and are hence research based. Bayesian forecasting is included again with a worked example. The worked example of Bayesian forecasting has been based on the author's research into small firms and in particular on a research case study conducted into the forecasting of carpets for export in a small carpet manufacturer based in the UK which also formed the basis of a published article. The name of the company has been altered for reasons of confidentially and the actual data has been altered for the same reason. However the principles and outcomes are genuine and based on a real small firm. Likewise the chapter covers exponential smoothing as a short term forecasting method. This data was also based on the author's research into 'commercial health monitoring' of small firms. The text is introductory but this particular chapter is research based and illustrates how the author has managed to disseminate some of his research work into a wider arena than simply small business orientated articles and conference papers and make it relevant to a wider audience.

C(T2/6) Reynolds, P.L. (2008), *'Are sales forecasters in small firms Bayesian?'*, 2008 UIC Research Symposium on Marketing and Entrepreneurship, University of Illinois at Chicago, USA, Stockholm, Sweden, June 14th-16th ;ISSN: 312-996-2670.

All individuals and purposeful organisations forecast or predict future conditions even if they do not actually call it forecasting or prediction. In businesses whether a sole trader, an SME or an established larger company it is not a question of whether to forecast or not but simply how to forecast and when. The nature of managerial decision-making involves forecasting future conditions which might be for

an important 'one-off' decision e.g. the company may be considering modernising its production processes. Such decisions tend to be long-term and strategic, rather than operational. Managerial decisions are not always strategic and much of a manager's time is taken up with day-to-day operational issues, which although not of the same magnitude as strategic decisions, are nonetheless important to the manager because of the proportion of time they occupy. Is there a sales forecasting model or process that might be particularly suitable for the decision makers in smaller firms? That is what the discussion in this paper seeks to examine and if possible, answer. All commercial enterprises need to forecast possible future conditions to be able to manage effectively. Small firms are no different in this respect. Evidence would suggest that a Bayesian approach to forecasting, particularly sales forecasting might be suitable for small firms because of the subjectivity allowed in the derivation of initial starting conditions. Bayesian statistical analysis is a paradigm quite different from traditional statistical inference. The author used a qualitative interview approach as a methodology using 15 managers from the Huddersfield region of Yorkshire. Interviewees were asked how they predicted future market conditions. Selection was purposeful in that the sample interviewees included those who were willing to be interviewed.

J (T2/7) Reynolds, P.L. and Day, J. (1995) 'Commercial health Monitoring of Entrepreneurial Firms Using Process Control Techniques', Journal of Small Business and Enterprise Development, Vol. 2 Issue: No. 1, pp.19 - 30 ISSN – 1462 – 6004.

The work of Scott, Bruce (1987) and Cooper (1981) on small firm growth and development is reviewed. It is shown that by adapting exponential smoothing forecasting procedures it is possible to monitor the commercial health of a small firm. This is achieved by 'tracking' key indicators and producing an exception message when a signal exceeds certain predetermined control limits. The procedure is equally effective for either a step or ramp change in the underlying input data. This suggested approach requires little sophistication in either data or technique and has a practical application to small firm management, while adding to our understanding of the process of growth of small businesses. The objective of this paper is to demonstrate that the Scott and Bruce (1987) and Cooper (1981) schema are possible and worthwhile frameworks from which to investigate the behaviour of small businesses and to suggest that one avenue for development is a robust and simple forecasting method containing a tracking signal that is designed to monitor and 'trip' when the variable(s) being forecast fall(s) outside desirable, pre-set parameters. Such a method would be of value to the entrepreneurs themselves, their advisers and lenders. Although small businesses could use the method as a simple forecasting and monitoring procedure, greater potential benefit would arise if academics, bankers and consultants who need to monitor several dozen, perhaps hundreds, of

businesses used the proposed technique to manage 'by exception'. The various methods, five simulated and one actual case study are reported. For the actual case the author obtained confidential historical sales data from a small firm that exhibited turbulence and a certain degree of variation over time. This was then fed into the forecasting model to see whether the model could predict when ramp or step changes in the input data would occur. For the simulated exercises computer generated time series data was used with an induced 'shock' in the input data to test the speed of response of the model being tested. This was regarded by the authors as a novel methodology in the field of researching marketing for small business.

C (T2/8) Reynolds, PL and Day, J., (1996), 'A Semi Automatic Scheme for Monitoring the Adequacy of Short Term Sales Forecasts'. Paper presented to the 1996 INFORMS Marketing Science Conference, University of Florida, Gainesville, Florida, USA, 8 -10th March.

This paper is a further development of the 1995 paper discussed above in **J** (T2/7) and has evolved from it. The procedure discussed can be used in any size organisation although this paper concentrates on its application to the small enterprise. In this paper frequency distributions are produced for the taking signal component of the model used to monitor the commercial health of small firms using computer simulation. The normal smoother error tracking signal based on the work of Trigg (1964) uses the one period ahead forecasting error in its computation. This paper investigates the use of the 2,3, ...6 period ahead forecasting errors in the tracking signal to see if it was able to improve the response rate of the smoother error tracking signal to a step or ramp change in the input data by making this simple adjustment to the way the signal is calculated. Computer simulation was used to produce frequency distributions. The 2,3, ... 6 period ahead computed tracking signals did not show any improvement in terms of the average run length (ARL) needed to recognise that a 'shock' to the input data had occurred. However the exercise taught the author a lot about the behaviour of tracking signals under more 'normal' conditions. The conclusion was the smoothed error tracking signal based on the one period ahead exponential smoothing forecast error was the most efficient. However there may be other ways to improve the response of a tracking signal to a change in input data and the author will keep experimenting to see if this is so. The work was conducted and presented at INFORMS, Florida in the context of using this system for the commercial health monitoring of small firms. The system should be able to provide an early warning system that something in the business environment is changing. It is intended that such an early warning system would prevent small firms being 'caught out' as many are by adverse changes in their commercial situation by being able to monitor a number of key commercial variables simultaneously. The author is working on using a number of and different permutations of variables to see which 'mix' of variables are the most

effective. However the mix of variables providing the best results seems to be industry specific. This is discussed further in the 'Suggestions for Future Research' section 2.10 page 66.

C (T2/9) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V. (2007), 'Forecasting decisions in small firms - Competition in Regional Economics; Experience/Problems/Prospects', *Journal of Finance and Economics*, Russian Institute of Economics and Finance, Siberia, No. 8, p.p. 8-16. ISBN: 978-5-9900-880-5-4.

This paper continues the debate as to how small firms make forecasting decisions and what kind of forecasting, especially in the forecasting of sales, is appropriate. The premise of the paper is that many entrepreneurs are inherently, but possibly unconsciously, 'Bayesian' in their predictive thinking. Hence the authors speculate that a Bayesian approach to forecasting might be particularly appropriate for smaller firms because it capitalises on the inherent strengths of entrepreneurs working in smaller firms and their subjective, intuitive approach to prediction/ forecasting. This paper has a more international dimension to it because it includes not only data from the UK but also data from small firms in Russia. The paper examines the concepts of 'crisis points' in the grow path or early stage of the 'life cycle' in small firms and particularly the work of Scott and Bruce (1987) who have looked at crisis points in small firm's particularly. For the UK sample 170 local firms were contacted and 54 in Russia. All 224 cases were coded and put onto an SPSS data base. Qualitative depth interviews were used in the exploratory stage of the research in the UK. The questionnaire was then developed from this data and administered in the two regions. The paper is similar to others but has been published in a separate journal which as the title of the journal suggests is more concerned with regional financial and economic issues rather than pure marketing.

2.4.3. Theme 3: Pedagogic aspects - Advisors and counsellors

J (T3/1) Reynolds, P.L., Day, J. and Lancaster, G. (2006) 'Entrepreneurship and the small to medium-sized enterprise: A divergent/convergent paradox in thinking patterns between advisers and SME owner-managers' *Management Decision*, 44 (5), pp. 581-597. ISSN 0025-1747.

The purpose of this paper is to suggest a framework for competing theories of entrepreneurship and to argue for transparency in one's attempts to understand this phenomenon. Then to argue that, when matching small business advisers to small business, one should consider their entrepreneurial abilities and match as appropriate. A parsimonious method is suggested to measure entrepreneurial ability –

divergent thinking as a proxy measure. A discussion of entrepreneurship and a proposed matrix that considers the relative entrepreneurial abilities of both partners and is then expanded to account for different decision scenarios. A simple test for divergent thinking is suggested to measure entrepreneurship, applied to some hypothetical scenarios, and is supported by some broad evidence on the relationship between small businesses and commercial banks. This is a conceptual article but with real implications for managing SME and adviser relationships which is intended lead to a better understanding by both the SME and their advisers of what each party needs to contribute to ensure a successful outcome. The work provides a framework for classifying entrepreneurship and a different perspective on the SME and adviser relationship; suggests a different way from, say, traditional entrepreneurial orientation scales by which to measure entrepreneurial capacity of either the adviser or the SME.

J (T3/2) Reynolds, P.L., Day, J. and Lancaster, G. (1998) 'A marketing strategy for public sector organisations compelled to operate in a compulsory competitive tendering environment' *International Journal of Public Sector Management*, 11 (7), pp. 583-595; ISSN- 0951-3558.

This was the era when councils were attempting to cut cost and increase value for money within their operations. Effectively council departments such as 'maintenance, building and construction' had to bid for their own jobs through a competitive tendering process with private sector firms. Successful providers were selected on a 'best value' basis which used costs and quality in its calculation. In effect council departments had to think of themselves as private sector small firms. In order to compete successfully these departments needed to take a commercial approach and this included marketing. Although these departments were part of larger local authority organisations they could be viewed as 'stand alone' small firms and were indeed treated as such in terms of having to engage in compulsory competitive tendering. The authors' conducted research using a mixed method approach of sample survey and in depth qualitative interviews. Individual council departments involved in the study were offered 'free' marketing advice on how they should proceed in the new compulsory competitive tendering environment as an incentive to partake in the study.

J (T3/3) Reynolds PL, (1987), 'Professional Selling and the Art of Effective Listening'; *Journal of Sales Management*, Vol.4, No.3, pp.28-37.

This early paper looked at the role of 'effective listening' in the sales process in general and small firms' in particular. The research found that professional listening skill were poorly developed within the sales industry in general but particularly poor in the smaller enterprise where the owner of the business was often also the main sales person. Generally sales skills were less developed and the role was much more 'amateur' within small firms. Listening skills especially were often missing from the list of marketing communication competences needed by small firms particularly in the B2B sector where negotiation and hence listening skills were important to achieving a successful sale (Spicket - Jones and Eng, 2006). There was little evidence that respondents had any formal knowledge of what today might be termed the 'integrated marketing communication' (IMC) approach or the role of personal selling within the communications mix. Methodology involved a mixture of in-depth interviews and participant observation. Although this is an early paper the methodology employed has become the standard methodological 'dominant logic' for much of the small business marketing work by a wide range of authors' in the years following this publication.

J (T3/4) Reynolds, P.L. and Lancaster, G. (2007) 'Predictive strategic marketing management decisions in small firms: A possible Bayesian solution' *Management Decision*, 45 (6), pp. 1038-1057. ISSN 0025-1747.

The purpose of this paper is to suggest a framework for sales forecasting more suitable for smaller firms. The authors examine the sales forecasting practices of small firms and then proceed to discuss the application of Bayesian decision theory in the production of sales forecasts, a method arguably more suited to the smaller firm. The authors' suggest that many small firm entrepreneurs are inherently "Bayesian" in their thinking approach to predicting events in that they often rely on subjective estimates at least for initial starting values. A triangulated approach which uses qualitative group discussions and thematic content analysis, a reasonably large-scale questionnaire sample survey administered by post and analysed using descriptive statistics and non-parametric tests of association and a case study approach based on the authors own consultancy activities to illustrate the practical application of the forecasting model suggested. That many small firms use no formal sales forecasting framework at all. That the majority of small firm owners and/or managers rate sales forecasting skills very low in their list of priorities when given a choice of course to attend at subsidised rates which

was the subject of the sample survey used. Results showed that there is no significant difference in the importance small firm owners and/or managers attach to formal sales forecasting skills. Information has been gained from one geographic area in the north of England although the results may have a wider application to all small firms in the UK and elsewhere. Only the region's six most important industry sectors were included as stratification variables in the sample survey. Other regions will have a different mix of industries and will be stratified differently. The article addresses the sales forecasting needs of small firms specifically within the marketing for small business context and offers a realistic option with a clear rationale.

R (T3/5) Reynolds PL, (1986b), 'A Report Into The sales and Marketing Training Needs of Small Firms',– *Department of Trade and Industry, Kirklees Council, Calderdale Council – Local Collaborative Project.*

The question as to whether conventional marketing theory and techniques are equally applicable and relevant to the marketing management of smaller enterprises is central to work in marketing and entrepreneurship because many, if by no means all, smaller firms are managed by people who may be entrepreneurial in nature (Carland, Hoy, Boulton, and Carland, 1984; Covin and Slevin, 1998; Reynolds. and Lancaster, 2003; Murray, 1981; Hills and La Forge, 1992). There seems to be an ongoing debate in the literature at the moment on whether there needs to be a new marketing paradigm for small and medium sized enterprises (SMEs) (see Shapiro, 1988; Reynolds and Day 1998; Siu and Kirby, 1996). Many question whether conventional marketing re: the standard texts such as Kotler and Armstrong (2001) or Lancaster and Reynolds (1998, 1999) i.e. the standard business school 'classicist' teaching approach (see Whittington, 1993); can be made to fit the needs of SMEs with some pragmatic adaptation (Reynolds, 2007). This was an early paper that hopefully contributed to the debate for a more relevant approach in the teaching and training for the smaller enterprise. A mixed method approach involving qualitative depth interviews with small business owners/ managers and a group of small business counsellors and advisors and a sample survey aimed at small firms in the area (1,200 responses) was used to establish the sales and marketing training needs of small firms in the area of West Yorkshire with a view to the Department of Trade and Industry funding training providers to put on subsidised or even 'free' training programmes for the management of small firms in the area which form a major sector of the West Yorkshire economy.

C (T3/6) Reynolds PL and Day, J., (1996), 'Understanding the Relationship between the Small and Medium Sized Enterprise (SME) and their Advisors and Counsellors'; *Paper presented to the 41st ICSB World Conference*, Stockholm, Sweden, 17/19 June.

This paper was presented to the International Council for Small Business (ICSB) World Conference in Sweden in 1996 and was later developed further and published as an article in 'Management Decision' (see **J** (T3/1) Reynolds, P.L., Day, J. and Lancaster, G. (2006) 'Entrepreneurship and the small to medium-sized enterprise: A divergent/convergent paradox in thinking patterns between advisers and SME owner-managers' *Management Decision*, 44 (5), pp. 581-597. ISSN 0025-1747 above). This is an example of how the authors work evolves over time, firstly as a consultancy project or projects, secondly as a conference paper, thirdly an academic journal article and then becomes integrated into the teaching syllabus of a program on small business marketing (see Appendices 3 and 4 for undergraduate and postgraduate teaching programs that have evolved out of this and other work). Finally the findings from such work is incorporated in the advice given to small firms and their advisors which again may well find its way into a further conference paper on the teaching of small business marketing (see **C** (T3/7) Reynolds PL and Day J, (1999), 'Teaching entrepreneurship on marketing courses' - paper submitted to *AMA/AM/University of Illinois European Symposium on Research at the Marketing-Entrepreneurship Interface*, Nice, France, 16-17 June below as an example of this process, and also **C** (T3/8) Reynolds PL and Day J, (2011), 'Exploring the marketing – entrepreneurship interface: Bringing an understanding of small business marketing into the curriculum', Annual Learning and Teaching Conference, University Of Huddersfield, UK, http://eprints.hud.ac.uk/99667/). SMEs will seek out information and one of their sources will be from their interaction with advisors who may be found either in the private, public or quasi private sectors of an economy. This paper argues that it is important to match advisers and SMEs by reference to their entrepreneurial capacities and a novel method for capturing this is suggested. For the SME this assesses their ability to think divergently and to articulate a vision. This was tested on 25 randomly chosen SMEs. The method whilst exhibiting operational simplicity is compatible with both behavioural and economic definitions of the entrepreneur. This paper has argued for a better understanding of the advisor / small business relationship particularly with regard to the entrepreneurial capabilities of both parties and alternative outcome scenarios are discussed. SMEs in practice seek advice from all kinds of sources both fully private, governmentally owned and governmentally supported but privately delivered and thus the notion of matching appropriate advisors to clients has a wide ranging applicability. A novel way of attempting to measure entrepreneurial capacity based upon divergent thinking ability (backed up by vision articulation) is suggested and some important consequences of such a measure are explored. The main advantage of

this approach apart from its simplicity in application is in its consistency and compatibility with mainstream economic and behavioural definitions of entrepreneurship. Given that the truly entrepreneurial business will behave in different ways to the non entrepreneurial business and thus have different needs in respect of help and advice from both public and private agencies, being able to make such a distinction is important both for governmental policy setting and in helping to ensure that their expectations for SME performance are met.

C (T3/7) Reynolds PL and Day J, (1999), 'Teaching entrepreneurship on marketing courses' - paper submitted to *AMA/AM/University of Illinois European Symposium on Research at the Marketing-Entrepreneurship Interface*, Nice, France, 16-17 June.

This paper is based on the authors' experience of developing and teaching an undergraduate final year module entitled 'Marketing for Small Business' and presented in the form of a module specification and course schedule for the readers convenience in Appendix 3. A post-graduate version of this program is presented in Appendix 4. As the author discusses later in this work he and his co-authors have tried to disseminate the findings of their research in a number of ways and to get it out into the public domain where it might do some good and be of practical relevance to those concerned with small business marketing such as advisors and councillors in banks and other organisations (see the summary of the paper above **C** (T3/6) Reynolds PL and Day, J., (1996), 'Understanding the Relationship between the Small and Medium Sized Enterprise (SME) and their Advisors and Counsellors'; *Paper presented to the 41st ICSB World Conference*, Stockholm, Sweden, 17/19 June). One of the claims made by the author for making a contribution to knowledge from both a conceptual and practical point of view is that he has attempted over the years that he has been engaged in this line of research to get the findings of the work out into the public domain through publication and to communicate findings in a practical way through teaching, training and consultancy to small firms and/ or their advisors. This is an example of this being done. Research findings are integrated into a formal taught module at final year university level and disseminated to interested academic parties at conferences. Hopefully interested academics will incorporate some of the authors work into their own curriculum by including the author's paper in their reading lists and quoting some of the author's work presented in their own lectures, training sessions and consultancy work. There is evidence that this is being done as the authors work is cited in other academic papers and is on the reading list of similar academic courses run in the UK and overseas. This paper discusses an entrepreneurial marketing course that is underpinned by the combining of marketing and entrepreneurship. This not only determines the content of the course but the way in which it assessed through students authoring

a live case study on an SME. These case studies also provide much information about the real marketing behaviour of SMEs. In this paper some broad results from these cases are discussed (subject to confidentiality). Obviously the methodological approach used is a case study approach. Under the direction of the author students interview small firm owner/ managers and also sometimes spend time with them to see how they 'market' their business, a form of ethnographic participant observation. These case studies have then been analysed by the authors' of the paper and the results of the analysis presented at conference. This is an example of how the author 'feeds' his research into the teaching curriculum and how his teaching is also incorporated into his research work.

C (T3/8) Day, J, and Reynolds PL, (2011), 'Exploring the marketing – entrepreneurship interface: Bringing an understanding of small business marketing into the curriculum', Annual Learning and Teaching Conference, University Of Huddersfield, UK, http://eprints.hud.ac.uk/99667/

This paper is another example of how the author, with his research colleague, attempts to bring research into the curriculum and integrate it into programs at the undergraduate and postgraduate levels (see Appendix 3 and 4 for examples of such programs taught at the University of Huddersfield and partly developed by the author). The success of small firms worldwide is determined by entrepreneurship and marketing (Hills, 1995). 95% of firms worldwide are small (less than 250 employees) – and often smaller than that. Marketing and entrepreneurship are not the same but they are interconnected. This paper considers the authors' experience over the last decade in teaching what can be called entrepreneurial marketing or work at the 'Marketing – Entrepreneurship Interface'. Given the authors' belief, which is surprisingly common, that entrepreneurship is to some extent learnable and thus teachable – it is both 'nature and nurture' (see the section on Babson College page 55). The authors' share their experience of the module – 'Marketing of Small Business'. The authors' research interests both feed into, and draw from, their teaching on this final year module. In this paper, the authors' hope to have shown a practical student exercise through which students learn about the real world of the SME and which both feeds into, and feeds from, the authors' research interests. This approach is not unique and certainly can be replicated. However, the authors' are pleased to have had the opportunity to share their experience. It has given us some space in which to consider our module, and it may be of interest to other colleagues. Exhibit Three of this paper to which the reader is referred, reports brief details from fourteen case studies from the 2011 academic year. The authors' have chosen to highlight the problems faced by the SMEs as this is a good example of how their knowledge informs their teaching and research in line with the HEA protocols on teaching excellence. The authors' contrast the findings from these currant case studies to an earlier data set also based on case study analysis. Also included are the techniques through which the

students chose to frame some of their work. Whilst the authors' give them a free choice, they have a methodological preferences and they can use this information to influence and direct students' in the next round of case studies. By looking at the effectiveness and richness of the data from these frameworks, the authors' can reflect on how useful these may be as research instruments and to what extent they might be incorporated into their future research.

2.5.0. Embedding the author's work in the available literature: Discussing the overall thematic 'story line'.

2.5.1. General discussion

As the title of this section suggests the author is attempting here to embed the general overall 'story line' of this thesis within a sample of the more important literature available. Note that this is a general discussion embedding the overall theme of the dissertation within the context of the literature available. In the next section the author takes each of the submitted works in turn and likewise attempts to embed the work discussed in each paper within the available literature.

A 'story line' or 'grand narrative'cannot be told with any real meaning in isolation and must be put in some kind of relevant context to be fully understood. As stated the author makes the claim that the papers submitted as the major part of this submission has made a contribution to the literature and hence to knowledge. This contribution can only be appreciated by grounding the body of work presented here in the wider body of literature. A sample of relevant literature has been used here with the author's work embedded within it. Some of the sources cited in the text have already been used in the author's own papers. Those not cited in the actual text can be found in the reference sections of the author's submitted papers shown in full in Section 3. The literature examined here is indicative of that available in each of the areas discussed but is not intended as exhaustive because of the word limitations set out in the regulations for this submission. Full copies of the material submitted in this thesis in Themes 1 to 3 above are presented in Section 3.

2.5.2. Rationale and justification for the choice of topic

The rationale and justification given for the choice of topic is the relative neglect of the 'marketing of small business' as a serious issue and serious area of study by the academic marketing profession and many of the author's papers make this point. Some writers' express this view even more strongly and state that small firms' seem to have been seriously neglected by the academic marketing profession for a very long time (Hills, 1987). One other reason why the author is particularly interested in smaller firms is his interest in the economic aspects of marketing and the importance of small firms to the

economy and especially employment, again a continuing theme in the author's work (e.g. Reynolds, 1986b).

At the time of writing the present UK coalition is hoping the small and medium firm sector will bring the economy back to growth. David Cameron (2012) the UK Prime Minister said in his Institute of Directors (IoD) speech in Manchester on May 17th that "SMEs are important to the UKs economic development". Both USA presidential candidates Barack Obama and Mitt Romney in their first television debate at the University of Colorado (3rd October 2012) stated that one of the key elements of both their plans to 'get America working again' was to release the entrepreneurial spirit of the small firms sector through cutting 'red tape' regulation, making it easier to set up a business and tax breaks. Each candidate might have had a slightly different approach on how to 'kick start' the American economy out of its torpor but both Republican and Democrat agree that small firms are central to any workable plan. This is a point that the author has made throughout his research career. Many other countries, including most of Europe and the USA are also trying to encourage their small firm sector to recruit staff, export and grow. However William Hague (2012) the UK Foreign Secretary stated in his Confederation of British Industry (CBI) speech in Park Lane, London that "In terms of exporting UK SMEs are below the European average". Lending to SMEs from UK banks is inadequate or it is too expensive (Hague, 2012). The Government is trying to address by quantitative easing and making the new money available to banks as long as they lend it rather than use it as a capital 'buffer' as they had been doing with earlier rounds of Bank of England capital injection to banks. This has culminated with the development of the UK Government's £80 billion 'Funding for Lending Scheme' (FLS) aimed specifically at encouraging banks to borrow cheap money as long as they can prove they are lending it to business and in particularly SMEs (Lynch, 2012).

In theory, if every small firm in the UK could appoint an additional 0.5 of an employee the unemployment problem could be solved. As the author has specifically stated in a number of papers, more appropriate marketing might be able to make a contribution to this economically and socially beneficial small firm growth. Nobody is saying, least of all the author, that applying more appropriate marketing to the smaller firm will solve the UKs economic malaise on its own, but it could well, along with adequate and realistically priced bank funding for small firms, make a significant contribution. This point is made in a number of the papers listed above for example **J** (T1/4) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V. (2007), **J** (T1/4) Reynolds, P.L. and Lancaster, G. (2007). At the time of writing many formally solvent small firms with good prospects and full order books have found their credit lines removed by their banks causing many to fail or to reduce their staff. This has made the UK recession worse. This is an on-going concern of the author and he has been continuing work in this area relating to pricing and cash flow in small firms. This aspect of his on-going work is discussed further in the 'Suggestions for Future Research' Section 2.10 page 66

towards the end of this thesis. The Department for Business Innovation and Skills (November2011) provide the following summary:

2.5.3. Summary statistics:

- There are 4.5 million small businesses in the UK
- SMEs account for 99 per cent of all enterprise in t he UK, 58.8 per cent of private sector employment and 48.8 per cent of private sector turnover
- SMEs employed an estimated 13.8 million people and had an estimated combined annual turnover of £1,500 billion
- Businesses with employees account for a quarter of all enterprises - a fall of 29,000 since 2010, the rest are sole proprietorships
- There are 876,000 businesses in construction - a fifth of all UK enterprises
- London has 748,000 enterprises - more than any other region
- The South East has the second largest number of enterprises with 745,000. Combined with London, a third of all businesses are based in this area
- 45.3 per cent of businesses are registered for VAT and/or PAYE
- The number of sole proprietorships increased by 87,000 in 2010 and the number of companies by 6,000.

Micro: 0-9 employees, **small**: 10-50 employees, **medium**: 50-249 employees

Figures obtained from the Department for Business Innovation and Skills (latest figures available at the time of writing, up-dated November 2011).

In many other western countries, including the USA and Germany, the small and medium firm sector in equally as important. The same is true of Russia (see **C** (T2/6) Reynolds, P.L., Day, J., Kovalev, A; and Kovalev, V., (2008); **J** (T1/3) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V., (2007) listed above in the 'SUBMISSION' section above.

There is no <u>single</u> definition of a small firm, mainly because of the wide range of different types and structures of businesses (Brooksbank, 1991; Carson, 2005; Thompson, Frederick and Mellalieu, 2004). The Bolton Report (1971) recognised that size is related to sector and stated that in some sectors a small firm could be one with up to 200 employees. What might be small in one sector might be large in another. The Department of Trade and Industry in the UK (DTI 2011) above use the definition of 1 to 49 employees for a small firm although there are other ways of classifying firms such as turnover or other financial measures (Hills and Holman, 2011; Carson, 2005; Davis, Hills and La Forge, 1985).

The importance of small firms can be appreciated by the fact that in the UK as a whole at the time of writing (June 2012), SMEs account for over half of employment (58.8 per cent). This is also true for

each region and country in the UK except London, where SMEs only account for 47 per cent, still a significant proportion. For the South West, Wales and Northern Ireland, this figure exceeds 70 per cent. For each region and country in the UK, no more than 0.2 per cent of enterprises are large (250 or more employees), and at least 99.0 per cent of enterprises are small (1 to 49 employees). The proportions of enterprises that are medium-sized (50 to 249 employees) range from 0.5 per cent (in the East of England, South East and South West) to 0.8 per cent (in the North East and Northern Ireland) (see DTI National Statistics URN 06/402 News Release 2011). If every SME in the UK could recruit the equivalent of 0.5 of an employee we would not only solve the UK unemployment problem but also reduce public expenditure on benefits, reduce the structural deficit, increase tax yields, create economic growth and improve social welfare and living standards. If more relevant marketing can contribute to this improvement, if only in a small way, then it is very important not only from an academic point of view but from an economic and social policy point of view (Thompson, 2004; Bolton and Thompson, 2004). Government is finally making headway on the financial funding front but there is still a long way to go on the marketing front for small firms'. Better small business marketing would help ensure that any money allocated through the Funding for Lending Scheme (FLS) scheme would be put to more effective use.

Napoleon Bonaparte (15 August 1769 – 5 May 1821) once said that Britain was a nation of shopkeepers. This might not be so true today in terms of actual shops because of retail concentration. However there are certainly a lot of small firms many of them are still retail 'shops' although the nature of these 'shops' may have changed with new formats and with many of them now 'virtual' shops on the Web (see Reynolds, Day, Teach, Schwartz and Germen, 2002). In terms of consulting the academic literature Simmered and Scarborough (1994) stated that this century would dawn with the greatest number of small businesses ever and, as predicted, over the past 17 + years, new small to medium-sized enterprises (SMEs) have been identified by most western governments as significant components of economic strategies for job and wealth creation (Thompson, 2007; Bolton and Thompson, 2002; Thompson, Frederick and Mellalieu, 2004). The importance of small firms in economic recovery and regeneration has been appreciated for some time in other countries as well as the UK (Hills and La Forge, 1992; Bowery and Easton, 2007; Helmond and Kick, 1998; Curator and Hodges's, 1995; Hodges's and Curator, 1995; Barley and Westhead, 1989; Muss, 1998). The SME sector and particularly the small firm sector is the largest in the UK in terms of number of firms and the most important in terms of creating employment. However there is little of the total conceptual and academic research in marketing aimed specifically at the smaller firm although it is an improving situation.

From the late 1970s and, in particular, since the publication of Birch's (1979, 1987, 1981) evidence that between 1969 and 1976, 66 per cent of the increase in employment in the USA was in firms with

fewer than 20 employees, there has been considerable interest in the role of the SME in economic regeneration in general, and the creation of employment opportunities in particular, especially for young people, first in the USA and then later in the UK and the rest of Europe (Reynolds, 1986b; Bolton and Thompson, 2002; Thompson, Frederick and Mellalieu, 2004). It has been estimated that more than half of the USA's economic growth came from industries that had not existed just over a decade ago during the 1990's (Bowey and Easton, 2007; Valry, 1999). It is imperative that, to remain competitive, governments need to accept the crucial need to nurture innovation and the entrepreneurial qualities of its firms especially small firms' (Storey, 1994).

In the UK, where unemployment resulting partly from Tory – Liberal coalition government's industrial policy, an attempt to 'rebalance' the economy towards manufacturing with less reliance on the financial services sector, and cuts in the public sector, has been particularly marked. Government assistance has been provided to encourage new firm formation in an attempt to bring about more of a 'an enterprise culture' and create more private sector jobs while at the same time 'shrinking' the public sector. Similar attempts were made by a Conservative Government during the 1980s in which the author was indirectly involved and hopefully made a contribution at least at a local level (see **R** (T3/5) Reynolds PL, (1986b), 'A Report Into The sales and Marketing Training Needs of Small Firms' DTI – listed in 'SUBMISSIONS' above. For some time, academic researchers have been concentrating more on the small to medium-sized enterprises' (SMEs) research agenda (Gilmore and Coviello, 1999; Giglierano, Miles and Munro, 1996; Carson, 1993; Kirzner, 1979). Nancarrow et al. (1999) noted that, while other industrialised countries, for example, the USA and Japan, stimulated and exploited independent inventors, often themselves sole proprietors or part of a small firm team, the UK has shown limitations in capitalising on the innovations from this source allowing other countries to 'jump in' and do so (Thompson, Frederick and Mellalieu, 2004.) Small firms in the UK are good at product innovation and invention but less good at getting these to market (Bolton and Thompson, 2004; Day and Reynolds, 2011). Generally UK small firms are strong on creativity and innovation but weak on marketing competences (Carson et al 1995; Hill 1999; Muss, 1998; Johne and Davies, 2000; Reynolds 1986b, **C** (T3/8) Day and Reynolds, (2011). Hence a better understanding of appropriate marketing by small firms, especially innovation driven start up companies, is important not only to them but to the nation as a whole.

2.5.4. Personal interest and background

Having developed an early interest in the subject of marketing as a young, hopeful 'A level' Business Studies student, the author went on to specialise in marketing at college and then at undergraduate level. Much later he developed his expertise further at postgraduate level after a gap in which he spent working in sales and marketing in both very large and very small firms. Whilst spending nearly ten

years working in various industries including fairly large firms' e.g. Robirch Ltd, Sketchley Ltd, BP Ltd, British Gas Ltd, it was his experience of the smaller firm that intrigued him the most e.g. Bywaters Ltd, Tyler and Mosely Ltd, Frice Industries Ltd., particularly the marked contrast experienced between how marketing was practiced in larger firms compared to that in smaller ones (Reynolds, 1986 b; Hills and La Forge, 1992; Huang and Brown, 1999; Doole, Grimes and Demack, 2006; Siu, 2000; Day and Reynolds 2011). Smaller firms' did not seem to pay so much attention to formal marketing but instead seemed to get by on entrepreneurial intuition (Ashford and Towers, 2001; Faulkner and Johnson, 1992; Day and Reynolds 2011; Bolton and Thompson, 2002). They also seemed to know the right people to call on for help and advice and had developed or sort of 'master mind' system through personal contact networking (Shaw, 2006; Das and He, 2006; Curran and Blackburn, 1994; McGowan and Clarke, 2001; Knight, 1992; O'Donnell, 2004). It was during this early period that his interest in marketing as an academic subject and the application of this subject to the smaller enterprise was born.

2.5.5. Personal early experience of small firms

The author not only worked in small firms but some of his relatives and friends owned small firms, and to him they appeared to be remarkably entrepreneurial and financially self sufficient. They had not been to 'college' but were still able to make an independent living and enjoyed a degree of autonomy, autarky and freedom that the author envied. They seemed to have little technical idea of formal marketing at all but still 'got by' (see Brennan, Baines, and Garneau, 2003; Bolton and Thompson, 2002). They 'got by' mainly on the strength of their 'feel' for the business and their entrepreneurial acumen rather than formal marketing skills (Reynolds, 1986; Stokes, 1998; Knight et al, 1995; Hogarth-Scott, Watson and Wilson, 1996; Gilmore and Carson, 1999; Day and Reynolds, 2011; Bolton and Thompson, 2004). The author had a part time job in a meat business from the age of thirteen, this was before supermarkets, and not only was his 'boss' reasonably prosperous but nearly every small meat business in his town was prosperous and the owners wealthy. As far as the author recalls they had not been to a business school or even 'college'. The same principle applies in many areas of life, for example we learn how to swim or dance without being able to explain precisely how it is done but we do it. Lennon and McCartney are regarded as successful composers but cannot read music and did not attend music school etc. However surely with their seemingly innate entrepreneurial skills and some formal technical application of marketing many other small firms, in a wide range of industries not just in meat, may not simply 'get by' but actually grow and prosper (Simpson, and Taylor, 2000)? But what skills did they need? (Hill, 1993; Taylor and Broderick 1999; Pearce and Michael, 1996; Spicket -Jones and Eng, 2006). What were the main marketing competences that they needed to acquire to grow their business and prosper? (Hills and Hultman, 2011; Reynolds, 1986; Herbig, Goldenand Dunphy, 1994; Rich, 2003; Hills, 1995; Reynolds and Day 2011; Carson, Cromie, McGowan, and Hill 1995; Raymond, Bergeron and Rivard, 1998; Siu, 2000).

At the beginning of his academic career the author tried to answer these questions by referring to the available literature, but to no avail as many of the academics writing the papers, and they were relatively few in this area at the time in the small firm area, seemed to be asking the same question (Hills, 1987, Miller, 1983, Covin and Slevin, 1998; Storey, 1994). Some of the author's early papers listed above are from this era for example **R** (T3/5) Reynolds PL, (1986b), **J** (T2/3) Reynolds PL, (1987), **J** (T2/5) Reynolds PL, (1986), **J** (T2/4) Reynolds PL, and Lancaster GA, (1990), (please see 'SUBMISSION DETAILS' above). The reader will hopefully be able to see from the contents of these early papers how the author's interest in the area of marketing for small firms began. By contrasting with later material they will hopefully appreciate how this interest has remained with him and evolved throughout the period up to the present day (Reynolds, 1986, Reynolds, 1986b, Reynolds and Day, 1995; Reynolds and Day, 1996; Reynolds and Lancaster, 2003; Reynolds and Lancaster, 2007; Day and Reynolds, 2011). This interest is continuing as there is further work in the 'pipeline' and under review at the time of writing. These are briefly discussed towards the end of this thesis in the section entitled 'Suggestions for Future Research' (see Section 2.10 page 66).

2.6.0. Specific discussion of submitted materials

2.6.1. Introduction

In terms of embedding his own specific research i.e. the papers submitted, within the wider on-going literature the author has attempted here to focus specifically on the small firm where possible. The general marketing literature tends to cover marketing applications or theories more applicable to larger enterprises and often use larger firms' as examples or as samples (Kotler, 1984). When examining smaller firms' the literature available usually covers the combined larger business segment of small and medium enterprises (SMEs) rather than small firms specifically (Hill and Blois, 1987; Reynolds, 2007; Brooksbank, Kirby, Taylor, and Jones-Evans, 1999; Hills and La Forge, 1992). Research into smaller firms is usually in the form of SME research rather than focused on very small or micro enterprises (Beaver, 2001; Reynolds, 2002). Marketing theory development in small firms specifically has been somewhat limited and often relies on the application of classical marketing models used in larger businesses to smaller businesses (**C** (T3/8) Day and Reynolds, (2011); Chaston and Mangles, 2002; Longenecker, Moore, and Petty, 2003). It is in this area that the author has tried to break with tradition and concentrate on work that is not in the conventional marketing literature, especially the standard texts, and produce work more specifically applicable to the smaller firm (Reynolds and Day, 1999; Reynolds and Day, 1996; Reynolds and Lancaster, 2007).

2.6.2. Embedding the specific materials submitted within the literature (1)

Theme 1: A NEW APPROACH TO THE MARKETING OF SMALL FIRMS.

Marketing in small- and medium-sized enterprises (SMEs) is often a contentious issue among both academics and practitioners (Shaw, 2002; Narver and Slater, 1990; Pelham and Wilson, I995; Cromie, 1990; Brodie et al., 1997; Gilmore et al., 2001; Reynolds. and Lancaster, 2003; Reynolds, 2002). The development of marketing theories applicable to SMEs specifically has been somewhat limited (Johne, and Davies 2000; Carson, 1990). Those theories that are available often rely on the application of classical marketing models used for large companies (Goldsmith, 1999; Hills and La Forge, 1992; Chaston and Mangles, 2002; Gilmore, Carson, and Grant, 2001; Jaworski and Kohli, 1993; Jaworski, Kohli and Sahay, 2000; Masaaki, and Scoll, 1995). There have been books written about marketing for the smaller firm but these are in essence really just traditional marketing tomes with a focus related to a limited budget and a 'do it yourself' approach rather than recommending any new marketing principles more applicable to the smaller firm (Kenny and Dyson, 1989; Hill, 1990). The implicit assumption in these and other publications is that the basic principles of marketing are universally applicable to large as well as small businesses and there is no need for a separate paradigm (Fam, 2001, Cromie, 1990; Reynolds, 2002).

In terms of schools of thought the two conceptual extremes are those that think that a good 'dose' of classical marketing is likely to suite any sized firm and those that think there is a need for a completely new approach to marketing in small firms i.e. a new paradigm (see **J** (T1/1) Reynolds, P.L. (2002), 'The need for a new paradigm for small business marketing - What's wrong with the Old One?' taken from Theme 1 and **R** (T3/5) Reynolds PL, (1986b), 'A Report Into The sales and Marketing Training Needs of Small Firms' taken from Theme 3 and both listed in the SUBMISSION section above. The inclusion of the reference in Theme 3 in a discussion of Theme 1 demonstrates the linkage between these two themes. However **R** (T3/5) is generally concerned with training and the perceived need of marketing training by small firms' management hence its inclusion in Theme 3.

There is indeed much overlap between each of the three themes discussed in this dissertation and the categories have been separated for reasons of clarity of discussion although in reality there is a strong 'thematic unity' between all three sections as the author will allude to towards the end of this dissertation. The thesis as a whole is concerned with the 'marketing for small business' and each of the three themes are intrinsically devoted to this overall storey line. As discussed earlier this first theme is central to the dissertation and is really what the project is all about, with the other thematic sections (2 and 3) growing out of this section. Firstly in all of the materials submitted the author has

investigated whether the conventional standard marketing approach is suitable for the smaller firm. The author has then also attempted to see if novel and innovative marketing tools and approaches can be beneficially applied to the small firm, and whether they may be more effective than the conventional marketing approach found in the standard texts. The author does not claim to have covered all of the marketing mix elements or all of the complexities associated with modern marketing theory and practice. However he does claim to have made a contribution to the debate and a contribution to knowledge in the specific areas discussed in the submitted materials.

The question as to whether conventional marketing theory and techniques are equally applicable and relevant to the marketing management of smaller enterprises is central to work in both marketing and entrepreneurship (Chaston, 1998; Arias-Aranda, Minguela-Rata and Rodriguez-Duarte, 2001). Many of those teaching and consulting using the conventional 'classical school' approach hold the view that it is merely a matter of standardisation verses adaptation. Others writing in the field believe a new approach or 'new paradigm' is required for the marketing of smaller firms. Many question whether conventional marketing re: the standard texts i.e. the standard business school 'classicist' teaching approach, can be made to fit the needs of SMEs. Others working in the field of SMEs in general, think that the standard marketing approach is suitable for the smaller enterprise, albeit with some minor 'adjustments'. These 'adjustments' have to take into consideration the more modest budgets available to many SMEs but consideration of budgets alone is simplistic (Day and Reynolds, 2011; Bolton and Thompson, 2004; Kenny and Dyson, 1989; Hill, 1990). More importantly is the way owners and managers in small firms think about business problems and marketing in particular and the limited technical knowledge of formal conventional marketing. Some claim that conventional marketing, usually developed for the larger firm, is not necessarily suitable to the smaller enterprise. Some go so far as to suggest that a new 'paradigm' of 'entrepreneurial marketing' is required (Gilmore, 2011; Deacon and Harris, 2011; Morrish, 2011).

The very model of classical marketing has been questioned for a number of years not only in the area of small firms but generally (Webster, 1988; Connor, 1999; Cardwell, 1994; Gronroos, 1982; Parasuraman, Zeithaml and Berry, 1985; Barksdale and Darden, 1971; Blankson and Cbeng, 2005). Some feel that the subject of marketing has lost its way and become too codified and formalised (Deacon and Harris, 2011; Brown, 1995, 1996; Reynolds, 2007). Some feel a 'post modernist' approach is required and a return to an earlier era and that basically we in the marketing profession have lost our way (Brown, 1996). Others simply feel that marketing should be 'refreshed' and looking for new directions in theory and practice (Gilmore, 2011; Wind and Robertson, 1983; Andrews and Smith, 1996; Bell and Emory, 1971; Brown, 1995; Brown, 1996).

Extensive evidence suggests a marketing orientation improves the performance of smaller firms (Hills 1987; Morrish, 2011; Stokes, 1998; Brooksbank, Kirby, and Wright, 1992; Boag and Dastmalchian, 1988; Bruno and Leidecker, 1998; Brooksbank, Kirby and Taylor, 2004; Carson, 1985; Carter and Tzokas, 1999; Reynolds, 1986b; Reynolds and Lancaster, 2007; Reynolds, 2002; Reynolds and Lancaster, 2006). However in his academic career as a marketing student at college and then later at both undergraduate postgraduate levels, the author does not recall any of his classes or assignments concentrating on small firms specifically. The author as a conscientious and motivated marketing student was widely read in terms of the relevant textbooks and the academic journal literature. But again it is difficult to recall any of the leading texts or any of the academic literature used in the study of marketing at that time i.e. early and late 1970's, being focused specifically on small firms. When considering the notion of what could be called the 'marketing - entrepreneurship interface', an area where many smaller firms seem to be operating, Hills (1987) a pioneer researching in this area whilst working at the University of Illinois at Chicago (now moved to Bradley University, also in Illinois) and often recognised as the world's leading authority in the subject of the marketing – entrepreneurship interface, stated that:

> "Given this important societal role [of small business], one might expect a significant amount of scholarly research in marketing on numerous aspects of venture creation and development. At a minimum, one would expect firm size and stage of the business life cycle to be commonly entered as variables in marketing studies. The evidence, however, suggests that marketing academicians have almost entirely neglected such investigations"
> (p 3).

There may have been slightly more academic work of this type in the entrepreneurship literature but even this was a nascent subject at this time and poorly developed in the 1970's (Arias-Aranda et al, 2001; Bolton and Thompson, 2002; Day and Reynolds, 2011; Bolton and Thompson, 2004). In fact as a business and marketing student the author was never once taught anything about entrepreneurship. Formal marketing could be viewed as a form of codified and more structured entrepreneurship (Reynolds, 2002). Some approach the subject as a branch of applied economics and entrepreneurship (Grant et al,, 2001; Hill, 2001, Carson and McCartan - Quinn, 1995; Weinrauch et al., 1991). Marketing is certainly not a pure academic subject but a pragmatic and eclectic mix of relevant aspects of other subjects (Salavou, 2004; Quinn, 2000; Doyle, 1998; Knight, 1996; Tower and Hartman, 1990). These would include applied psychology and sociology as well as statistics and research methodology adapted from other branches of the social sciences as well as elements of entrepreneurship and economics (McGowan and Rocks; 1995).

Kotler et al. (2005) believe that for small firms' 'formalized marketing techniques can be adopted and adapted to resources available with relative success' (Reynolds, 2002; Spicket -Jones and Eng, 2006). In practice, the approach SMEs have to marketing is likely to be more haphazard, informal,

unstructured, spontaneous and reactive and conform to the industry environment than in a large business context (Gilmore and Coviello, 1999; Gilmore et al., 2001; Hill, 2001; Jones, Busch and Dacin 2003). Longenecker et al. (2003) develop a marketing theory for small businesses that is almost identical to larger firm theory found in mainstream literature, again similar to other writers in the small business area (for example see Kenny and Dyson, 1989; Hill, 1990 mentioned previously). Such books acknowledge the limited budgets and lack of marketing knowledge often found within smaller firms but that is about all. There is limited adaptation from the conventional 'Kotler' style marketing orthodoxy and certainly no hint of anything such as a new paradigm.

Many working in the field of SMEs in general, think that the standard marketing approach is suitable for the smaller enterprise, albeit with some minor 'adjustments'. In his work the author has gone some way to seeing whether this is the case and contributing to the debate in the literature. These 'adjustments' if necessary, have to take into consideration the more modest budgets available to many SMEs (although there is more to small business marketing than small budgets (Day and Reynolds 2011)), and the limited technical knowledge of formal conventional marketing amongst the management of smaller enterprises and the way small business owners' think (see Herrmann and Perreault, 2000; Gardner, 1991; Gilmore and Coviello, 1999; Reynolds and Lancaster, 2006; Reynolds, Day and Lancaster, 1998). Other writers also feel that owners and managers of SMEs, who may or may not be entrepreneurs (by no means all of them are), often have a different way of thinking about business problems compared to their counterparts working in larger enterprises (Knight, 1996; Cummins, Gilmore, Carson and O'Donnell, 2000). This is fact something the author has witnessed in his personal experience of small firms and seen in the academic research work conducted and presented later (see **J** (T3/1) Reynolds, P.L., Day, J. and Lancaster, G. (2006) 'Entrepreneurship and the small to medium-sized enterprise: A divergent/convergent paradox in thinking patterns between advisers and SME owner-managers' in the SUBMISSIONS section above. Some researchers claim that conventional marketing, usually developed for the larger firm, is not necessarily suitable to the smaller enterprise (Carson et al, 1996; Hills and Muzyka, 1993; Reynolds, 2002). Some go so far as to suggest that a new 'paradigm' of 'entrepreneurial marketing' is required (Hills and La Forge, 1992; Carson and Coviello, 1997; Hills, 1996). Once again this is an on-going theme in the author's own work (Reynolds and Day, 1999). It is these issues that form the central core of this dissertation.

There are only a few potential differentiators that derive from the marketing constraints of small firms, as described by Carson (1990): limited resources, specialist expertise of the owner-managers and limited impact on the marketplace (Reynolds, Day, Kovalev and Kovalev, 2007). The first differentiator regards the importance of personal communication activities. In fact, special emphasis is given to personal communications and personal contact networks when businesses have a limited number of customers and the product or service offered has a high value for the customer (Reynolds

and Lancaster, 1990; McGowan and Rocks, 1995; Beverland and Bretherton, 2001). Personal communications by small firms frequently means communication by the owner/manager/entrepreneur himself/herself and the building of relationships (Spicket-Jones and Eng, 2006; Saxe and Weitz, 1982; Saura, Contri, Taulet and Velazquez, 2005; Fam, 2001). The second element is related to limited resources. Small firms are limited in their marketing programs by the limits of their budget. As a result of budget and market limitations, marketing by small businesses often needs to be especially focused (Goldsmith, 1999; Gilmore and Coviello, 1999; Hills, 1987; Barich and Kotler, 1991; Hills and Muzyka, 1993; Hills and La Forge, 1992; Cagliano, Blackmon and Voss, 2001; Pitt, Berthon and Morris, 1997).

In this section the author has attempted to embed the work he has listed in Theme 1 within some of the more important literature. The author hopes to demonstrate to the reader that his work is in the mainstream in terms of what has gone on and is going on in the literature in this area. The author will now turn to Theme 2 and discuss the work listed here in the context of the literature in the area.

2.6.3. Embedding the <u>specific materials</u> submitted within the literature (2)
Theme 2: FORECASTING, INFORMATION MONITORING AND CONTROL IN SMALL FIRMS.

Substantial work has been undertaken in the field of marketing as it applies to large organizations particularly in the field of strategic marketing planning. We are all familiar with the complex planning diagrams and the 22 point or 25 point strategic planning check list found in many of the standard texts and delivered in business school lectures. However, for small business these models frequently do not apply. The small business lacks adequate systems to ensure the efficient management of marketing. Further, most small businesses are the product of their owners, whose personality and personal involvement dominate (Day and Reynolds, 2011). Generally many small firms seem to be sales orientated and short term in their thinking and planning (see **C** (T1/6) Reynolds, P.L., Day, J., Kovalev, A; and Kovalev, V., (2008), 'Professional sales practice in small firms a UK and Russian comparison: An investigation into the relationship of sales competence with marketing and entrepreneurial orientations' in the submission list for Theme 1 above). This is again an indication of how the themes are linked with an item from Theme 1 having relevance to Theme 2. One of the main areas identified in much of the literature is the lack of ability within small firms to plan ahead particularly strategically (Carson et al, 1996). Small firm management tend to be short term in nature (Scott and Bruce 1987). The only time many small firms produce anything resembling a strategic plan is when they are forced to do so by their bank to justify an increased or continual line of credit Bolton and Thompson, 2002). Carson et al (1996) also identify lack of long term decision making and lack of what might be called 'strategic planning' within small firms. They list planning and the use of

information as two of the key competences small firms should have. They also state that such planning competences include an adequate capability in forecasting, particularly sales forecasting, and the use of information. Carson et al (1996) and others, for example Hill (1993), state that such 'marketing competences' are particularly important in the first five years of a firm's existence as many small firms fail in this period (Scott and Bruce 1987; Chirchill and Lewis 1993 Mazzarol, 2003). The author has not examined every aspect of strategic planning in small firms, although his work is embedded in the more general literature covering this. The author has concentrated on forecasting as an important input to the planning process whatever the time horizon under consideration including long term considerations. The main focus is on the forecasting of sales as the sales forecast in the bedrock on which other forecasts and budgets are built. However other important variables are also considered here (Reynolds and Day, 1996; Reynolds and Day, 1995; Lancaster and Reynolds, 2003; Bolton and Thompson, 2002).

The papers and book chapters presented are based along the general theme of forecasting for small firms and the use of a forecasting tracking device that can be used to track the forecasts and provide firms with an early warning signal when something might be amiss. The forecasting process is extended to include the forecasting of derivatives and composites of sales such as enquiries, orders and returns. The general idea that an 'early warning device' or 'tracking signal' could be used in conjunction with the forecasting model to give an early indication to small firms when things were not going to plan and give them time to find out what was going wrong and do something about it (Reynolds, 1997). The model could be used by the small firms' management or more realistically, by the advisors and councillors such as small business advisors or account managers in banks i.e. advisors and councillors. In this respect this section links well with and has some overlap with the section covering 'pedagogic issues' Theme 3 below which includes material on advisors and councillors. The general topic of these papers also links with Theme 1 because they represent at least a contribution towards a new approach to the marketing of small firms in the area of planning in general and forecasting and prediction specifically. The forecasting process chosen for most of the work presented is exponential smoothing which is suitable for semi-automatic application by means of computer and the 'early warning signal' is the smoothed error tracking signal taken from the field of process control.

The author had already done work in this area as a postgraduate, mainly in the automatic stock control and monitoring area for just in time (JIT) and similar stock replenishment systems in which he had worked and had an interest. The techniques had not been applied in monitoring the commercial 'health' parameters of small firms before and so this was a novel and original contribution to knowledge in this field as the method is usually employed in process control.

The forecasting and tracking signal platform provided a base on which the method was developed further with a move into more subjective and mixed forecasting approaches such as Bayesian forecasting. Basically the techniques are used in a small business context to try and predict 'crises points' in the small firm's growth path, particularly in the time horizon of the first five years from start up where firms are particularly vulnerable (see Scott and Bruce 1987). The methodologies used in the papers are largely computer simulations of artificial induced crises points (shocks) in a time series and the ability of the system to predict them. Some papers used real data taken from small firms and used in the model to test its empirical validity, other papers use simulation to introduce a step or ramp change in the input data to provide an artificial 'shock' and to test the system's ability to predict such a shock (Reynolds and Day, 1996; Reynolds and Day, 1995; Lancaster and Reynolds, 2003).

The papers on Bayesian forecasting used surveys and qualitative depth interviews. The purpose of the Bayesian forecasting papers is to suggest a framework for sales forecasting more suitable for smaller firms making use of decision trees with subjective probability starting values. The author examines the sales forecasting practices of small firms and then proceeds to discuss the application of Bayesian decision theory in the production of sales forecasts, a method arguably more suited to the smaller firm. The author suggest that many small firm entrepreneurs are inherently "Bayesian" i.e. to a large extent more intuitive and informal in their thinking approach to predicting events in that they often rely on subjective estimates at least for initial starting values. Many writers consider there is a difference between entrepreneurial thinking patterns and those found in a conventional business school environment. Entrepreneurs are more 'free spirited' and think in a less linear and more 'divergent' manner using intuition rather than a formalised, rational process that many structured quantitative forecasting models demand. The author has examined 'divergent' and 'convergent' thinking patterns in relation to small firm owner managers and their advisors in banks and other institutions (see **C** (T3/6) Reynolds PL and Day, J., (1996), 'Understanding the Relationship between the Small and Medium Sized Enterprise (SME) and their Advisors and Counsellors'). Again the reader will appreciate the interwoven links between all of the author's work as in this example a Theme 3 paper is being discussed in the context of a Theme 2 paper. This is because work conducted in one area, for example 'divergent' thinking patterns discussed in Theme 3 can find its way into a quasi subjective forecasting process such as Bayesian decision tree analysis, discussed in both Theme 2 and 3.

The methodology employed in the Bayesian work (see for example Reynolds, P.L. and Lancaster, G., 2007), was a triangulated approach which uses qualitative group discussions and thematic content analysis, a reasonably large-scale questionnaire sample survey administered by post. Data was

analysed using descriptive statistics and non-parametric tests of association and a case study approach based on the authors own consultancy activities to illustrate the practical application of the forecasting model suggested in a 'real world' business situation. The findings from this work show that many small firms use no formal sales forecasting framework at all. That the majority of small firm owners and/or managers rate sales forecasting skills very low in their list of priorities when given a choice of course to attend at subsidised rates which was used as a proxy measure (Reynolds 1986b), (see also Carson et al 1995 for perceived marketing competences of small firm managers and also Reynolds 1986b for rankings of the importance of marketing training topics amongst small firm owners and managers). The work shows that there is no significant difference in the importance small firm owners and/or managers attach to formal sales forecasting skills. The work has certain research limitations and implications. Information has been gained from one geographic area in the north of England although the results may have a wider application to all small firms in the UK and elsewhere. Only the region's six most important industry sectors were included as stratification variables in the sample survey. Other regions will have a different mix of industries and will be stratified differently. However the work has originality and value in that the articles address the sales forecasting needs of small firms specifically within the marketing for small business context and offers a realistic option with a clear rationale. Taken together the papers in this section provide a cohesive and thematic body of knowledge with each paper building on the previous papers and evolving over time (Reynolds and Day, 1996; Reynolds and Day, 1995; Lancaster and Reynolds, 2003). They also relate to other themes in this dissertation, particularly Theme 3 'Pedagogic Issues etc.' and particularly the papers dealing with 'Advisors and Counsellors' as already alluded to. Taken in their entirety it is suggested that the work provides a body of knowledge that is not only tightly thematic but is also original in its novel application and make a contribution to the literature in the area of small business marketing in general and the monitoring of the commercial health of small firms in particular. The work on the use of exponential smoothing for short term work and more econometric modelling using multiple regression, again using tracking signals as a monitoring device in small firm commercial health monitoring, and the application of Bayesian forecasting models to small firms is continuing and on-going. The author has a number of papers under review at the time of writing and very much hopes to publish more in these areas either later this year or early next year. This work is briefly discussed further in the section on Future Research towards the end of this work, Section 2.10 page 66.

2.6.4. Embedding the <u>specific materials</u> submitted within the literature (3)

Theme 3: PEDAGOGIC ASPECTS – ADVISORS AND COUNSELLORS.

One thing that differentiates Theme 3 from the other two themes discussed previously is the inclusion of 'entrepreneur' or 'entrepreneurship' into the title and particularly the content of many of the submitted works. The term 'entrepreneur' or 'entrepreneurship' has appeared in papers in Theme 1 and in the journal titles of both Themes 1 and 2 but the subject of entrepreneurship is covered in more depth in the Theme 3 papers. As alluded to previously the author is a professional academic marketer with nearly 30 years experience of teaching marketing at the tertiary level. Obviously he has a professional interest as well as personal interest in the development of marketing thought and the effective application of the subject in different areas of the economy. The subject of marketing has been taught in the UK since the 1960's. Most of the standard texts such as Kotler (2012) tend to focus on large organisations (Reynolds, 2002). This was even more pronounced back in the late 1960s and early 1970s when the author first started to take a serious interest in marketing as an academic subject and as a future career. In fact the focus of a significant proportion of the body of marketing literature has been and still is on large and more sophisticated firms rather than small firms or even medium firms i.e. SMEs (Anderson and McAuley, 1999). This is a fact that raises the issues which forms the overall focus of this thesis; the relevance of such marketing concepts for small firms (see also Dunn, Birley and Norburn, 1987).

Since starting teaching at Salford College of Technology (now part of the University of Salford) in 1981and then part time at the then Huddersfield Polytechnic (now the University of Huddersfield) in 1982, the author has always included the marketing of smaller firms in his taught modules. It has become obvious over the years that for a realistic and comprehensive coverage of the subject the subjects of marketing and entrepreneurship have to be combined. Eventually this teaching of small firm marketing evolved into a complete module (in conjunction with his research colleague and co-author John Day), specifically dedicated to the subject, entitled 'Marketing for Small Business' which has been taught to final year undergraduate students at the University of Huddersfield for the last 19 years and has proved to be both popular and successful with good module reports from external examiners. This module was unique within UK higher education at the time of introduction and as far as the author is aware at the time or writing still is. This undergraduate module in turn evolved into a postgraduate MSc variant entitled 'Entrepreneurial Marketing' which took a more adragogic approach and examined the link between marketing and entrepreneurship in more depth, a common theme in many of the authors papers. This is another example as to how the author's research work has fed into other things and made a contribution to knowledge in both a theoretical and applied manner.

This involvement with training and teaching the subject accounts for the author's interest in the pedagogic and andragogic aspects of the subject especially teaching and training at the 'marketing – entrepreneurship interface' where a significant amount of marketing for small business is positioned in the literature (Resnick, Cheng, Brindley and Foster, 2011). The papers listed in the SUBMISSION section for Theme 3 represent the author's contribution to the academic debate on a suitable pedagogic / andragogic approach for the teaching of marketing for small business. The more practical contribution comes from the actual teaching of the subject over a number of years. The final year undergraduate module mentioned earlier entitled 'Marketing for Small Business' established at the University of Huddersfield in 1993 was the first of its kind in the UK and nearly 20 years later is still unique in terms of content and the way it is taught, although other universities such as Durham, Warwick, De Montfort and Ulster also run courses containing entrepreneurship and marketing in relation to the smaller firm, usually SMEs, especially the University of Ulster which is the UKs main driver of the subject.

2.6.4.1. Innovators in teaching entrepreneurship and the marketing – entrepreneurship interface

The author has already acknowledged Professor Gerald Hills at the University of Illinois at Chicago as an innovator and pioneer in the field of research and teaching at the 'Marketing-Entrepreneurship Interface', and someone who has had a significant influence on the author's research career in terms of focus and direction. Professor David Carson of the University of Ulster has also had a tremendous influence and is highly respected by the author as an innovative thinker in this area. Another key influencer in this respect has been an institution rather than an individual. A key academic player in the field of entrepreneurship is Babson College established in the USA near Boston by a Harvard University engineering student called Roger W. Babson in 1947. The founder and first president of Babson College had a passion for entrepreneurship, education, and philanthropy. At Babson, they believe that entrepreneurship is applicable, and crucial, in organizations of all types and sizes, in established businesses as well as new ventures (Resnick, Cheng, Brindley and Foster, 2011; Bolton and Thompson, 2002; Bolton and Thompson, 2004; Day and Reynolds, 2011).

Babson College was the first to understand that thinking and acting entrepreneurially is more than just an inclination. Rather, it can be taught (Bolton and Thompson, 2002; Thompson, 2008). Babson College claims to prove that entrepreneurship can be taught and have many millionaire graduates to prove it. However candidates for their programs are screened to ensure they have the right psychological traits and temperament to succeed in this field (Thompson, 2004). It is still debatable whether it would be possible to teach entrepreneurship to someone who has no entrepreneurial 'spark', inclination or ability at all (Morris, Davis and Whitmire, 1991).

Babson College was the first higher educational institution in the world to understand that thinking and acting entrepreneurially is more than just an inclination (Cope, Jack and Rose, 2007; Stokes, 1998). Rather entrepreneurship can be taught and how it is taught makes all the difference. Harvard University Business School, London Business School, INSEAD in Fontainebleau, near Paris France, and to a certain extent Imperial College, University of London, have all tried in various ways to emulate the approach and success of Babson College and have staff exchanges with the college. The author has delivered conference papers at Babson College in the past (Reynolds and Day, 1995; Reynolds, Day and Dean, 1998). The work conducted at Babson College has been discussed here because their approach and philosophy has influenced and guided the author in the development of his own research objectives and teaching in this area and hence the institution is an integral part of the overall 'storey line' of this dissertation.

2.6.4.2. Entrepreneurship as an academic discipline

Many of those working or owning small firms are entrepreneurial in nature and so a practical consideration when considering marketing for small firms is the relationship between marketing and entrepreneurship, often referred to in the literature as the 'marketing entrepreneurship interface' or more lately by some 'entrepreneurial marketing' (Hills, 1998: Day, 2000; Reynolds, Day and Dean, 1998). Hence the two areas need to be brought together in order to achieve a comprehensive understanding of what is going on in the field of small firms (Higgins, Trehan and Hodgson, 2012). Entrepreneurship has been formally taught in the USA for some time, although some academics question whether the subject can be actually taught at all (Kuratko, 1995; Bolton and Thompson, 2004). Entrepreneurship as a subject is not restricted to small firms and has a strategic dimension in all firms of whatever size and in all countries (Shaw, 2004; Grant and Perren, 2002; Zahra, Nielsen and Bognar, 1999; Burrell and Morgan, 1979; Bjerke, 1998; Ahmed, 1998; Schumpeter, 1937; Schumpeter, 1943; Miles and Snow, 1978; Knight, 1997; Miles and Darroch, 2004; Foxall, and Minkes, 1998; Stevenson and Gumpert, 1995; Ginsberg, 1985; Miller and Friesen, 1978; Carson and Coviello, 1996; Khandwalla, 1977; Boyle, 1996; Gilmore and Coviello, 1999; Thompson, 2008).

2.6.4.3. The teaching of entrepreneurship in UK universities

As an academic subject entrepreneurship developed in the UK much later than the USA, in fact somewhere in the mid 1980s (Pelham and Wilson, 1995; Day and Reynolds, 2011; Bolton and Thompson, 2004). As Hills said back in 1988 in relation to the teaching of entrepreneurship in the context of small firms in the USA:

> "New ventures and small enterprises represent a pervasive and critically important part of American society. Recent research no longer leaves this open to debate (Armington and

Odle 1982; The State of Small Business 1983; Drucker 1984; Birch 1986). Given this important role, one might expect a great volume of university teaching and research that focuses on enterprise size and the business life cycle. In fact, academia has only recently awakened to this knowledge void. Yet even today, many universities have made only a minimal commitment" (p 110).

This aspect of size and growth stage was taken up by other writers (Mohan-Neill, 1993). At Huddersfield Polytechnic entrepreneurship as a standalone module within the Business school was introduced in 1986 by my colleague John Day, although leading European business schools had developed programs earlier than this. This is especially true of INSEAD in France which was in partnership with Babson College in the USA which today is still the only university institution in the world dedicated to conducting teaching and research in entrepreneurship. The London Business School was also a pioneer in this area mainly because they too have strong relationships with INSEAD and hence Babson where they have student and staff exchange programmes. These pioneering institutions taught marketing as a subject alongside their programs in entrepreneurship but did not formally link the two. In most other institutions entrepreneurship, if it was taught at all, was regarded as a totally separate subject to marketing and the two were often taught in different departments or even different schools within the institution (Lumpkin and Dess, 1996). The two subjects were often regarded as separate areas of study. As Day (2000) another pioneer and innovator in the field states:

"Given the world wide predominance of the small to medium sized enterprise (SME) we should consider whether we need to segment and target our marketing knowledge, practice and attitudes towards this business type. It is argued that we need to be able to develop entrepreneurship within the context of marketing, and marketing within the context of entrepreneurship in order that we are able to understand fully that most common of business forms - the small firm. This implies that we should consider how much of our existing marketing knowledge is appropriate to the SME and how much needs to be rethought and adapted. The body of work by colleagues in what could be described as the "marketing entrepreneurship interface" demonstrates both appropriate concerns and potential solutions. As such it represents a solid start to a debate in which we hope that many of our marketing colleagues will join" (p 133).

This separation of marketing and entrepreneurship within universities and colleges did not auger well for the author's growing interest in applying the relatively new discipline of marketing to small firms (Reynolds and Day, 2001; Shaw, 2002; Reynolds, Day and Dean, 1998; Resnick, Cheng, Brindley and Foster, 2011). As referred to earlier marketing function is perceived by many smaller firms to be peripheral to their requirements (Carson, 1990; Reynolds 1986b), rather narrowly relating to sales and promotions only (Stokes, 2000; Reynolds,1987; Reynolds, 1986b), a perception which has grown from the ability of SMEs to obtain sales without planning their marketing activities in anything like a

formal manner (Reynolds, Day and Lancaster, 2006; Lado and Maydeu -Olivares, 2001; Stokes, 2000; Hogarth-Scott et al., 1996; Pollard and Jemicz, 2006; Thompson, 2011).

It is not only firms that can be entrepreneurial but customers too (Omura, 1998). Generally smaller firms seem to be predominantly sales oriented (Hill, 2001; Covin and Slevin, 1998; Pelham, 1997 – see also **C** (T2/6) Reynolds, P.L., Day, J., Kovalev, A; and Kovalev, V., (2008) in the 'SUBMISSIONS' section above). Additionally marketing often has such low priority within smaller firms (Reynolds, 1986b). Even the little formal marketing activity they may have often gets cut during an economic downturn (Carson and Cromie, 1989, Hill, 2001; Reynolds and Day, 1999). Many small firm instigators and managers are entrepreneurial and so to the author the absence of entrepreneurship from the marketing curriculum, especially one specifically planned to be relevant to the smaller firm seemed to him like the 'missing link' that had to be closed (Gilmore and Coviello, 1999; Hills and La Forge, 1992; Kraus, Fink, Roessl and Reschke, 2006; Reynolds and Day, 2011; Matsuno, Mentzer and Özsomer, 2002; Miles and Arnold, 1991; Cardyn and Palacios-Rodriguez, 1997; Thompson, 2011).

2.6.4.4. Searching for the missing link

It soon became apparent that the author was not the only person around this time looking for the 'missing link'. An innovating and pioneering professor at the University of Illinois in the USA, Professor Gerald Hills, was working on this very thing. This was a revelation to the author who aspired to join this team of pioneers working in this area. This was 1986 and the author managed to write two early papers in the area of small business marketing which contained an entrepreneurial component and for completeness of the 'story line' these are included in the submission for this thesis (see **J** (T2/5) Reynolds PL and Brown, I, (1986), 'The Role of Trade Shows in Industrial Selling', *Journal of Sales Management*, Vol.3, No.1, pp.36-47.; **J** (T2/3) Reynolds PL, (1987), 'Professional Selling and the Art of Effective Listening'; *Journal of Sales Management*, Vol.4, No.3, pp.28-37.; **R** (T3/5) Reynolds PL, (1986b), 'A Report Into The sales and Marketing Training Needs of Small Firms',– *Department of Trade and Industry, Kirklees Council, Calderdale Council – Local Collaborative Project,* which are listed in the SUBMISSIONS section above.

2.6.4.5. Marketing –entrepreneurship interface

It was not until the early1980s that work joining the two separate disciplines of marketing and entrepreneurship started to come out of the University of Illinois at Chicago in the USA from a team of researchers led by Professor Gerald Hills (Hills and La Forge, 1992). In 1986 Professor Hills convened the first formal symposium on the Marketing – Entrepreneurship Interface held in Boston although earlier less formal meetings date from 1983. Professor David Carson and his research team

from the University of Ulster were regular attendees at this symposium and became the 'opinion leaders' and 'early adopters' of early 'marketing – entrepreneurship interface' thought in the UK. Of course little was known about what was going on in many of the American universities especially by the author, who by that time was a lecturer working for a polytechnic, with a limited research agenda to say the least, back in Huddersfield. Even if one had wanted to attend the symposium there was little chance in those pre university days where budgets were tight and where your job was seen as teaching not research. However thankfully things changed and all of the polytechnics acquired a university title if not full chartered university status in 1992.

Now the institution was a university at least some money became available to those staff that were prepared and interested enough to conduct research, mainly in their own time. The author does not need to be told twice and in 1993 had a paper accepted at Professor Hills's symposium and was soon travelling to Boston and in the following year to Babson College also in Boston. An international research relationship was formed with many people attending the symposium which was to last for many years. In fact in 2006 the author was honoured to be given a special award by the College of Business Administration at the University of Illinois at Chicago the **'Distinguished Research and Leadership Award'** for outstanding research and leadership in the field of the marketing-entrepreneurship interface which was awarded formally in person by Professor Gerald Hills the world's leading academic pioneer in this area of research, at the annual symposium held in Washington D.C. in 2007. A copy of this award is included in Appendix 2 of this doctorial submission again as part of the 'grand narrative' or 'story line' of this thesis. The author and his research college John Day began to feed their research output into their teaching at the university by setting up an innovative final year undergraduate program entitled 'Marketing for Small Business' in 1994 and discussed earlier (Reynolds and Day, 2001; see also Appendix 3).

Evidence from the literature suggests that the Marketing / Entrepreneurship interface is driven by interaction, dynamic growth (Miles, Crispin and Kasouf, 2011; Shaw, 2002; Miles and Bums, 1994; Rich, 2003; Morris, Schindehutte and La forge, 2002; Carson and Coviello, 1996; Hill, McGowan and Carson, 1997) and value-creating processes (Guersen, 1997; Morris and Lewis, 1995; Tidd, Bessant and Pavitt, 2001; Miller, 1983). This is evidenced through the aggressive, adaptive, and prolific rate of new product or service introduction and that entrepreneurial organisations, including social entrepreneurs, are generally innovative in nature (Thompson and Doherty, 2006; Mosey, Clare and Woodcock, 2002; McAdum, Armstrong and Kelly, 1998; Kandampolly, 2002; Verhees and Meulenberg, 2004; Masaaki, and Scoll, 1995; Grant and Perren, 2002; Gilmore and Coviello, 1999; Tower and Hartman, 1990; Naman and Slevin, 1993; Hulbert and Brown, 1998; Han, Kim and Srivastava, 1998; Veryzer, 2005; Zaltman, Duncan, and Holbek, 1973; Conrad, 1999; Zaltman, Duncan and Holbek, 1973; Day and Reynolds, 2011). Schumpeter focused mostly on individual

entrepreneurs. In later works, he also emphasized the importance of innovation in large firms (so-called "Schumpeter Mark II"), and pointed to historically oriented, qualitative research (case studies) as the way forward for research in this area (Schumpeter 1947, 1949).

A lot of work in the field is based on literature of innovation and organisation theory such as Kim, 1980; Knight, 1995; Drucker, 1985; Zairi, 1995; Buggie, 2001; Capon, Farley, Lebmann and Hulbert, 1992; Martins, and Terblanche, 2003; Doyle, 1998; Hargadon, and Sutton, 2000; Cumming, 1998. There is also an emphasis on product or service innovations in entrepreneurial firms (Thompson and Doherty, 2006; Kleindl, 1997; Nyman, Berck and Worsdorfer, 2006; Lado and Maydeu-Olivares, 2001; Danneels, and Kleinschmidt, 2001; Utterback, 1994; Zirger, 1997; Hisrich, 1990); a need for achievement flexibility in meeting market demands; change management (Hill and Wright, 2001; Reynolds, 2003), and the management of personal contact networks (O'Donnell, A., 2004; Xie and Johnston, 2004; O'Donnell and Cummins, 1999; Thomas, 2000; Shaw, 2004; Shaw, 2002; Carson, 1993).

2.7. Unification of the three themes into overall story line

The reader may recall from Section 1 that the three main themes of this thesis are:

1. **A new approach to the marketing of small business** – consisting of six journal articles and one conference paper.
2. **Forecasting information monitoring and control** - consisting of five journal articles, one book chapter and three conference papers.
3. **Pedagogic aspects - Advisors and counsellors** – consisting of four journal articles, three conference papers and one report.

The author attempts to show that there is a natural thematic unity within each of the categories and then goes on to show that the categories themselves make up a thematic, coherent unity or main 'story line' for the body of work as a whole. This, as the title of the dissertation suggests is that a contribution has been made in certain areas towards the construction of a new 'paradigm' for small business marketing (Theme 1). As a sub set of this 'paradigm' the author has examined novel applications of forecasting, monitoring and control specifically applicable to the commercial health monitoring of small firms (Theme 2). The author then proceeds to discuss the work submitted under Themes 1 and 2 in the context of the pedagogic aspects of the subject at university level as well as to the more practical application and andragogic approach used in the training of small business management (covered in Theme 3). It may also be of operational, tactical and strategic relevance and value to small firms their advisors and counsellors such as Business Link, Chamber of Commerce and bank small business advisors (Reynolds, 2008).

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In this thesis the author makes a case for the thematic unity of the categories listed above both within and between groups. That is the material placed within each category is themed. This could be seen as a thematic analysis of the material at a micro level. Looked at the macro level the author makes a case for bringing each of the three themed categories together into a unified narrative which tells a story and itself constitutes the 'grand theme' of the dissertation as a whole. In Theme 1 the author uses a number of papers to ask a fundamental question that is highly pertinent to the developing subject of marketing within small firms, that is 'Is conventional marketing theory and practice from the 'classical school' applicable to all types of organisations no matter what their size, or do smaller firms need a different sort of marketing, more suited to their particular needs'? (Shaw, 2002; Mitsui, 1998; Alpkan, Yilmaz and Kaya, 2007; Spicket-Jones and Eng, 2006; Covin and Slevin, 1989). The section concludes that in many cases the central 'core hub' of marketing that has become known as the classicist philosophy of strategic marketing management (Drucker, 1954); is appropriate in many cases and can often be employed to the smaller enterprise with beneficial commercial effects.

Theme 2 on 'Forecasting information monitoring and control', is an area identified by many writing in the area as being a key but underdeveloped marketing competence in small firms especially in relation to operational, tactical and strategic marketing planning (Carson, Cromie, McGowan and Hill, (1995). This topic 'feeds' naturally into Theme 1 'A new approach to the marketing of small business' as many of the approaches adopted in the papers presented in Theme 2 have not been applied before in the area of commercial health monitoring and prediction in small firms i.e. they are new in terms of application to this business segment. Using the same rationale both Theme 1 and Theme 2 feeds into Theme 3 'Pedagogic aspects - Advisors and counsellors' as the information is disseminated into the curriculum at teaching institutions such as universities and training programs offered by a variety of small firm advisors such as Business Link and banks.

The link between Theme 3 and other themes (T1 and 2) comes from the fact that elements of more innovative and entrepreneurial marketing approaches for small firms that have been researched and developed then, to be of any practical use, the work has to be disseminated and communicated to the people who might put such concepts into practice (Thomson, 2011). This work will hopefully feed into innovative and more appropriate training models for small firms taking the special features and culture of small firms into account (Higgins and Elliott, 2011; Higgins and Aspinall, 2011). Obviously final year business undergraduates and postgraduates who elect to take a course in 'Marketing for Small Business' have an interest in the subject and some if not all will go on to eventually become the entrepreneurs and small business marketers of the future. Some already have and it is gratifying to the author that his own work may have made a contribution to their decision to start a small firm and to

their eventual success. Similarly by contact with small firms through research and consultancy, particularly in the region of Kirklees and Calderdale in West Yorkshire where the University of Huddersfield is of course based, existing small firms may benefit from research findings especially through their advisors and counsellors. For example an early major project of the author examined the sales and marketing training needs for small firms in the area sponsored by the then DTI. The finding of this project were disseminated to small firms in the area by the means of DTI sponsored short courses put on by local colleges in the area known as a 'Local Collaborative Project'.

Finally by getting work out into the public domain through publication and conference presentations other academics working in the field may include such research findings in their own syllabi and influence further the understanding of innovative and entrepreneurial marketing practices suitable for small firms to their own students both in the UK and increasingly overseas. The reader is referred to the contents of Themes 1 to 3 submitted for this dissertation and to Appendix 1which includes a full list of publications included and not included in this formal submission. Many of the journals containing the authors work have an international readership, as do the books, and many, in fact the majority, of conference papers have been delivered overseas thereby making an international contribution to knowledge. Many academics the author has subsequently met at conferences overseas have indicated that the content of some of the author's work has been included or at least cited for further reading in their own university teaching and training programs. A leadership in research award for work in the 'Marketing-Entrepreneurship Interface' was made to the author by the University of Illinois at Chicago for this very reason in Washington D.C. in 2007 (see Appendix 2). The key speaker at the conference, Professor Gerald Hills, in his closing address cited the authors work in his paper. This fact is mentioned as further evidence that a contribution has been made by the author in this field. Professor Hills is acknowledged by all academics working in this field to be the main expert and innovator globally. To attend one of his conferences and in the United States capital and have the authors work cited in his key note address is a pleasing experience on a personal level. However more importantly in relation to this thesis it does provide evidence that the author's work has been taken seriously, has been cited and disseminated at key academic gatherings and therefore has made a contribution to the literature in the field.

2.8.0. Discussion and rationale for claims for contribution to knowledge

To reiterate the author has developed a research interest in the area of small business marketing and this research interest and the research work flowing from it is the subject of this thesis. The author aims to show that a thematic and cohesive body of work has been produced during the period alluded to above and that taken as a whole this thematically linked body of work has made a contribution to

knowledge. More generally the author considers that a contribution has been made to the on-going debate in the literature as to the applicability of conventional, standard marketing thought, theory and practice to small firms (Reynolds and Day, 2011; McAuley, 2011; Gilmore and Coviello, 1999; Husband and Mandal, 1999; Siu, 2000; Saura, Contri, Taulet and Velazquez, 2005).

The author's work and joint work has been cited by others working in this field world-wide. For example Professor Gerald Hills, of Bradley University in Peoria, Illinois, USA, the key academic in the world working in the field of the marketing – entrepreneurship interface, cited only one reference in his key note speech to the Symposium held in Washington D.C. in July 2007 and that was one of the author's (see Reynolds, 2002). Many other academics have incorporated the author's work into their own courses run at their own institutions as well as citing the work in articles and conference papers of their own. The author can claim that his work is quoted and cited in the literature, even in recent articles (see Jaafar, 2012 pp. 164-183). Other citations include Hills, G., Hultman, C.M. and Miles, M.P. (2008), Hills, G., Hultman, C.M., Kraus, S. and Schulte, R. (2010) and Martin, D.M. (2009). As the reader can see these citations are also reasonably recent and suggest that the author's work is relevant and still being used by other researchers' working in the field. The authors' of these papers all have a good scholastic reputation in the field of entrepreneurial marketing including marketing for small business.

In a recent article by Kraus et al. (2012) the authors' of the paper conducted a detailed citation and co-citation analysis of what they refer to as the 'entrepreneurial marketing domain' (p. 6). On page 14 of the paper they produce a very detailed 'citation network and topic clusters' diagram shown as Figure 5. The author's work is cited on this network diagram a number of times. The author's work is linked mainly to Cluster 1 'Foundations of Management, Entrepreneurship and Management' and Cluster 2 'The Interface of Marketing and Entrepreneurship'. There are three clusters the third one being 'Marketing in SMEs and New Ventures.' The author's work has less strong links to this cluster. Although this is not a definitive or comprehensive citation index it is the nearest thing available in this field. The authors' state that; "the citation analysis produced a network of the most influential publications, which is shown in Figure 5." Hence this is further evidence of the fact that the author's work is recognised internationally and is cited and rated by peer groups working in the field at other university institutions. The full article which shows the citation network and topic clusters on page 14 is presented in Appendix 9. The citation network and topic clusters diagram from this work is shown below as Figure 1.
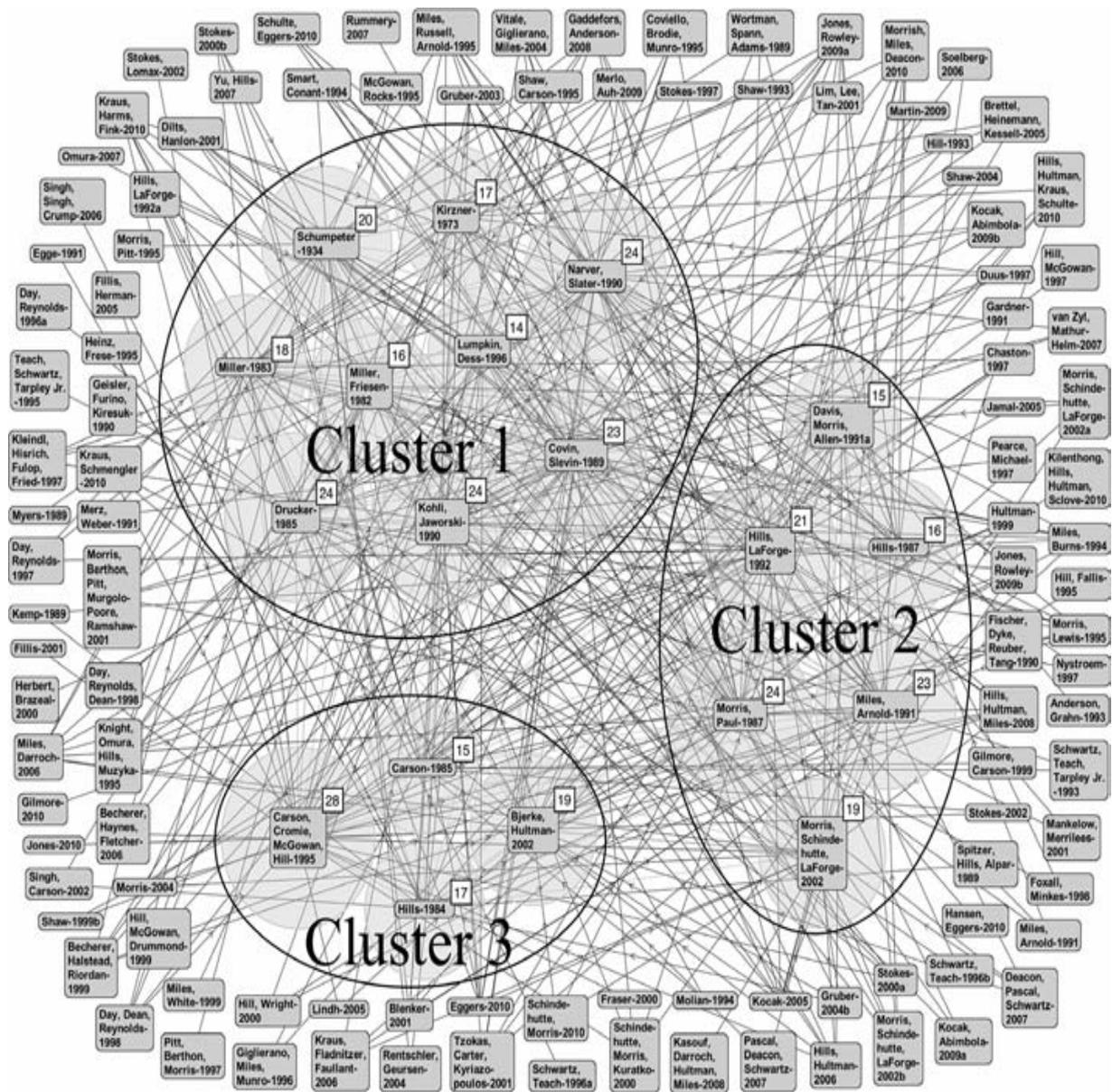
Figure 1: Detailed citation and co-citation analysis of the 'entrepreneurial marketing domain' showing the author's contribution to and place in the network. (Kraus, S., Filser, M., Eggers, F., Hills, G.E. and Hultman, C.M. (2012), "The entrepreneurial marketing domain: a citation and co-citation analysis," Journal of Research in Marketing and Entrepreneurship, Vol. 14, No. 1, pp. 6-26.

A personal award was made to the author by the University of Illinois at Chicago, the **'Distinguished Research and Leadership Award'** for research and leadership in the area of the 'Marketing – Entrepreneurship Interface' in 2006 (see Appendix 2). This was presented by Professor Gerry Hills at the Symposium held at Washington D.C. in 2007. In the citation made at the award Professor Hills specifically mentioned the 'wide spread use' of the author's work in the teaching curriculum of many of the academics attending the symposium. This is an example of a 'contribution indicator'. It

demonstrates that the author's work, some of which has been submitted as part of this thesis, is valued by peer groups and is regarded by one of the top 10 entrepreneurial course providers in the USA, The University of Illinois at Chicago (UIC), as being worthy of a special award. UIC ranks among the USA's leading research universities and is Chicago's largest university with 27,000 students, 12,000 faculty and staff, 15 colleges and one of America's 'Centers' of Excellence' in the provision of entrepreneurial education. This includes programs at the 'Marketing – Entrepreneurship Interface.'

A further area which acts as an indicator of recognition is the fact that the author has co-authored nine textbooks, seven of which are still in print. These books are general marketing texts but contain sections on small business marketing and case studies written by the author. The case studies are a direct result of consultancy or joint consultancy conducted by the author and others under the auspices of the previously named UK Department of Trade and Industry, the Enterprise Centre at the University of Huddersfield that has made some money available in the past, or private consultancy paid for under the UK 'Marketing Initiative' which provided consultancy funding contributions for small enterprises (see Reynolds, 1986). The small firm case studies from these books have been used by the author and others in the teaching of small firm marketing at the University of Huddersfield and elsewhere. Royalties from The Author's Licensing and Collection Society Ltd. (ACLS) do indicate that parts of the books are being copied including the small firm case studies.

The author is currently supervising a number of PhD students' in the area of small business marketing. These students' are taking some of the areas investigated by the author and expanding the investigation into other industries or areas. An example of this would be in the area of Bayesian sales forecasting which the author has been working on and which is the subject of some of the papers submitted for this thesis (for example see J (T3/4) Reynolds, P.L. and Lancaster, G. (2007) ''Predictive strategic marketing management decisions in small firms: A possible Bayesian solution'' *Management Decision*, 45 (6), pp. 1038-1057. ISSN 0025-1747). This paper can be found under the heading Theme 2. A further example can be found in the paper Reynolds, P.L. (2007), 'Forecasting decisions in Small firms: A possible Bayesian solution', *Research at the Marketing/Entrepreneurship Interface*, 2007 UIC Research Symposium on Marketing and Entrepreneurship, University of Illinois at Chicago, George Washington University, Washington D.C., USA, August 1-2. ISSN: 312-996-2670. The number of PhD students being supervised by the author is growing and currently stands at 10 (at Huddersfield and elsewhere). All of the students are working in the small business marketing area. As a result the author's work, some of which is submitted for this thesis, is being passed onto and is being expanded on and developed by the next generation of young academics working in this field. Hence the author's work has made a contribution in the present and is continuing to make a

contribution in the future. The author would like to think that although he was not one of the original early pioneers working in this field he joined the 'team' fairly soon after formal symposia and conference tracks had been formed in this area. Hence the personal award made to the author by the University of Illinois at Chicago, the **'Distinguished Research and Leadership Award'** for research and leadership in the area of the 'Marketing – Entrepreneurship Interface' in 2006 has been realised to a certain extent by acting as an academic leader to the next generation of researchers wishing to investigate this field of enquiry (see Appendix 2). Such researcher's do not have to start from 'scratch' but can build upon the author's work and take it further (see Deacon and Harris, 2011; Nyman, Berck, and Worsdorfer, 2006; Tajeddini, Trueman and Larsen, 2006; Saura, Contri, Taulet and Velazquez, 2005).

As a result of some of the earlier work submitted in this thesis, and as a result of presenting a paper at the American Marketing Association (AMA) Summer Educators' Conference held at San Diego, California, USA in 1996 the author was instrumental in creating the Journal of Research in Marketing and Entrepreneurship (JRME). The first edition was launched at the *Research at the Marketing/Entrepreneurship Interface*, American Marketing Association/ University of Illinois at Chicago Research Symposium on Marketing and Entrepreneurship, The University of Newcastle, Australia, June, 2000. The author was one of the two managing editors' for this journal for six years. The other managing editor was John Day, also from Huddersfield. The journal was the idea of the founding editors Professor Gerald Hills from the University of Illinois at Chicago (UIC), USA and Professor David Carson from the University of Ulster, UK. As mentioned earlier these two academics are the principle, pioneering academic innovators in the area of the marketing – entrepreneurship interface from which the field of marketing for small business, the subject of this thesis, has been derived.

Because of the author's work in this area and the submission to the AMA 1996 conference (see C (T2/4) Reynolds PL and Day, J (1996), ''Integrating Process Control Techniques into a Marketing Monitoring and Control System to Track Key Marketing Parameters within Small Firms'', American Marketing Association Summer Educators' Conference, AMA, San Diego, 4-6 August. This is listed under the thematic listing Section 2.3.3 FORECASTING, INFORMATION MONITORING AND CONTROL IN SMALL FIRMS). The author was invited to be a member of the AMA Special Interest Group (SIG) the full title of which is 'AMA Marketing and Entrepreneurship Special Interest group' (see AMA SIG Membership Directory 1996). The JRME is now published by Emerald and has reached its 15th Volume. The present editor is Dr Jonathan H. Deacon of the University of Wales, Newport (Newport Business School). However the author is still a member of the Editorial Advisory Board for this publication and reviews submissions for publication. An Inaugural Commentary for the

JRME is shown in Appendix 8 in which Professor Gerald Hills of the Institute for Entrepreneurial Studies, University of Illinois at Chicago comments that; "*David Carson and I continued to fully support the launch of this Journal, but this first issue would not exist if not for the entrepreneurial passion, extensive work, commitment and persistence of John Day and Paul Reynolds. The marketing/entrepreneurship research community must give enormous credit to them for the creation of this journal* (p.5)." Since 2008 the author is also a member of the Advisory Board of the Annual UIC International Research Symposium on Marketing and Entrepreneurship and acts as a referee for the papers submitted for this symposium. These appointments have been made as a result of the work submitted here for this thesis and elsewhere. It has been mentioned here to enforce the point that the authors work has made a contribution to knowledge and towards furthering the general debate in the area of small business marketing within the wider international academic community in this field of which he is a member.

Many of those teaching and consulting using the conventional 'classical school' approach hold the view that it is merely a matter of standardisation verses adaptation (Hogarth-Scott, Watson and Wilson, 1996; O'Regan and Ghobadian, 2005; Narver and Slater, 1990; Bowey and Easton, 2007; Tajeddini, Trueman and Larsen, 2006). That is when dealing with the smaller firm one has to take the standard classicist philosophy of strategic marketing management (Drucker,1954); as far as it can go and then make adaptations to suit the individual circumstances of the smaller firm e.g. limited budget or limited marketing sophistication (Hill and Fallis, 1995; Sexton and Arbaugh, 1992; Morris and Pin, 1995). Others writing in the field believe a new approach is required for the marketing of smaller firms and not simply the modification of the existing 'classical' approach (Hisrich, 1992; Global Entrepreneurship Monitor, 2002; McAuley and Rosa, 1993; Narver and Slater, 1990; Kirby and Travis, 1995; Hills and Muzyka, 1993; Hills and La Forge, 1992; Bowey and Easton, 2007; Deacon and Harris, 2011; Saura, Contri, Taulet and Velazquez, 2005). In writing this dissertation the author has hoped to contribute to the debate by submitting empirical evidence and conclusions relating to an important dimension of the subject area.

The collection of papers, book chapters and reports making up this submission concludes that in many cases the central core hub of marketing that has become known as the classicist philosophy of strategic marketing management (see Brennan, Baines, and Garneau, 2003; Drucker, 1954; Deacon and Harris, 2011; Nyman, Berck, and Worsdorfer, 2006; Miles and Darroch, 2006) is appropriate in many areas and can often be employed to the smaller enterprise with beneficial commercial effects. The author can find no real evidence of any need for a totally new paradigm although some adaptation of the standard business school 'model' of marketing management might need some important adaptation to make it more suitable for the majority of smaller firms. The key approach would seem to

be standardisation as far as possible then necessary adaptation. The material submitted here has been structured to have a thematic shape. The 'grand theme' interwoven into this account is marketing for small business. The author does not claim to have investigated every vestige of the subject but does feel that over the years he has made a contribution to the knowledge in this area.

The author makes a case throughout this dissertation that he has made a contribution to conceptual and applied areas of knowledge as well as to the novel application of certain methodologies used in research at the marketing- entrepreneurship interface. The findings of the research work conducted have not only made a contribution in the application of certain novel methodologies e.g. computer simulation and computer analysis and re-engineering of historical company sales data (see Theme 2 list of submissions), but has also made a contribution in terms of the managerial implications identified and explained (see Theme 3 papers T3 1-8). Hence the author makes a claim to have made a contribution to a number of areas and that the work submitted satisfies the criteria required by the University of Huddersfield for the award of PhD by publication.

2.8.1. Summary of contribution

The author makes a case throughout this dissertation that he has made a contribution to conceptual and applied areas of knowledge as well as to the novel application of certain methodologies used in research at what is today often referred the 'marketing- entrepreneurship interface'. In Theme 1 (T1 materials 1-7) the author has tested the applicability of some areas of conventional marketing's suitability to the small firm, provided a critique and suggested alternative approaches. In Theme 2 materials (T2: 1-9 list of submissions) a contribution in the application of certain novel methodologies to this subject area e.g. computer simulation and induction of commercial shocks to test the robustness of a proposed monitoring procedure, computer analysis and re-engineering of historical company sales data has also been made. The overall body of work submitted has also made a contribution elsewhere. For example in Theme 3 papers (T3 1-8) the author also believes that a contribution has been made to the literature in terms of the managerial implications identified and explained, especially from an appropriate training and teaching model for small firms' point of view (Higgins and Elliott, 2011; Higgins and Aspinall, 2011). Hence the author makes a claim to have made a contribution to a number of areas and that the work submitted satisfies the criteria required by the University of Huddersfield in terms of knowledge contribution and thematic cohesion for the award of PhD by publication.

2.9.0. Discussion and concluding remarks

Even if SMEs often use marketing differently to large enterprises, these differences appear insufficient to many working in the field to deserve separate theoretical treatment (Miles and Darroch, 2006; Hills and Hultman, 2006). This implicit assumption can also be found in analyzing the development of marketing theories (Hurley and Hult, 1998). The marketing concept is embraced by academics in response to developments in practice of multinational corporations, rather than SMEs in fact concern and interest of SMEs and small firms in particular developed fairly late in the day in the evolution of marketing thought (Deshpande, Farley and Webster, 1993; Caywood et al., 1991; Fam, 2001). The result is that the theoretical basis of marketing is developed through empirical research into the marketing practices of large organizations (Duncan and Everett, 1993; Phelps and Johnson, 1996; Kitchen and Schultz, 1999; Gilmore and Coviello, 1999).

Kotler et al. (2005) believe that for small firms' formalized marketing techniques can be adopted and adapted to resources available with relative success (Spicket -Jones and Eng, 2006). In practice, the approach SMEs have to marketing is likely to be more haphazard, informal, unstructured, spontaneous and reactive and conform to the industry environment than in a large business context (Miles, Gigilierano and Munro, 1997; Gilmore and Coviello, 1999; Gilmore et al., 2001; Hill, 2001; Jones, Busch and Dacin 2003; Reynolds, Day, Kovalev and Kovalev, 2007). Longenecker et al. (2003) develop a marketing theory for small businesses that is almost identical to larger firm theory found in mainstream literature. However many other writers, including the author believe that relevant marketing in smaller firms' is sufficiently different to warrant a separate theoretical treatment. There may not be a requirement for a totally new paradigm and we do not want to throw 'baby out with the bathwater' but significant adaptation is required to make the discipline of marketing more relevant to the small firm not least its unification with the subject of entrepreneurship which is highly pertinent.

Wynarczyk *et al*. (1993), argues that too often the large-firm model is taken as given and the small firm is assumed to be a "scaled-down'' version of a large firm (see also Cohen and Lindbore, 1972; Churchill and Lewis 1986). Moreover, today it is widely accepted that small businesses are not just "little big businesses'' (Day and Reynolds, 2011; Kleindl, Mowen and Chakraborty, 1996; Bjerke, 1997). Rather it is acknowledged that small to medium-sized businesses have their own particular characteristics which affect the way they operate and which largely determine their preoccupations and concerns (Thompson, 2002, 2004; Carson and Cromie, 1989; O'Donnell, 2004; Mosey, Clare and Woodcock, 2002). The argument is that theorists need to study the characteristics of small firms, other than size, and consider the implications of these across all of the functional areas of the business

(Mohan-Neill, 1993). Leppard and McDonald (1991) stated that the omnipresence of the owner-manager has a significant impact on every aspect of the marketing activities of SMEs (Collinson and Shaw, 2001). This reinforced the notion that any examination of the marketing activities of small firms needs to take account, not only of the inherent characteristics of such enterprises, but also of the entrepreneurial characteristics of their owner-managers (see **J** (T3/1) Reynolds, P.L., Day, J. and Lancaster, G. 2006 in the Submissions section earlier, see also Higgins, 2009, 2011). Such studies also pointed clearly to the need for further research into understanding how small firms actually go about their marketing activities (McGowan and Rocks, 1995; Cromie, 1990; Narver and Slater, 1990; Arnaud, 2002).

In conclusion it does seem true that many working in smaller firms see the conventional marketing approach as being of little interest or relevance to their firms (Reynolds, 1986b). However further evidence suggests that ordinary, standard, conventional marketing can be beneficially applied, almost without exception, to virtually any kind of small enterprise. There does not necessarily seem to be a case for something as dramatic as a new small business 'marketing paradigm', although some adjustment and alteration might be appropriate in many cases (see **J** (T1/1) Reynolds, P.L. (2002), 'The need for a new paradigm for small business marketing - What's wrong with the old one?, in the submissions section above and also Johne, and Davies, 2000). A codified body of work is required to demonstrate what adaptation might be necessary for each of the areas of the marketing mix (McAdam, Stevenson and Armstrong, 2000; Miller, 1983; Pitt, Berthon and Morris, 1997). The author hopes that he has made a contribution to this codified body of work and that his work may find its way into the curriculum of small business marketing courses and training programs.

The reader may recall that the title of this thesis is *'Marketing for small business: The development of a practical and conceptual contribution towards a new paradigm 1986 to 2011'*. Having taken the reader through the material presented in this thesis the author hopes they will agree that a contribution to such a new paradigm for the marketing of small business has been made and that the contribution made by the submitted works is adequately and accurately reflected in the title. The overall aim of the thesis (see Section 1.1. page 8) is to demonstrate to the reader that a cohesive, themed body of work, externally recognised through peer review and citations as being valuable to the subject at hand (see Appendix 2 'Distinguished Research and Leadership Award' in the area of the marketing – entrepreneurship interface as evidence of this), has been produced which, when taken as a whole, represents a contribution to knowledge in a number of areas. It is the author's opinion that these include both conceptual and applied knowledge, a novel application of certain methodologies not used in this field before and a consideration of the managerial implications of the findings and recommendation made, which in a similar vein, have not been made before. The author hopes that the reader is in agreement that not only is the title of the thesis accurate in reflecting the work done and

the contribution of this work to knowledge in the subject but also that the objective set by the author has been achieved. If this is so then it is the author's intention that the contributions made will satisfy the criteria of the University of Huddersfield research degrees' regulations for the award of the degree of PhD by published works.

2.10. Suggestions for future research

As referred to at the end of the last section the author considers that a contribution to the subject has been made in the work submitted in this thesis. The author has attempted to embed this submitted work in the context of the available academic research, including the methodological aspects, within the literature. The research conducted in this area is diverse and much has been accomplished in this field, especially over the last 25 years. It has been this long since Professor Gerald Hills started his annual symposium in the subject of 'research at the marketing / entrepreneurship interface', which over the years has contributed to the development of the subject area world - wide. However there is still a lot to do and the author intends to continue to make a further contribution to the subject area in the years to come. Hence this section on suggestions for future research in which the author indentifies areas that need further research work generally and in particular the areas that the author is engaged in and hopes to develop and publish in consequently.

In essence, 'entrepreneurial marketing' or perhaps more accurately research at the 'marketing – entrepreneurship interface' (the term' entrepreneurial marketing' is relatively new as used in this field which the author is not entirely happy with. It seems rather general and includes firms of all sizes and ages) defines the role of the entrepreneur as "fundamental'' in marketing and organisational activities. Flexibility in marketing is important in order to suitably adapt its principles and practices to the activities of SMEs (Meziou, 1991; Gardner, 1991; Romano, and Ratnatunga, 1995; Blankson and Stokes, 2002; Reynolds and Day, 1999). In contrast, the 'marketing-entrepreneurship interface' emphasises the importance of marketing and its pivotal role in helping to *transform* the entrepreneurial activities of SMEs into effective and competitive businesses (McAdam and Kelly, 2002; Knight, Omura, Hills and Muzyka, 1995; Pitt, Carauna and Berthon, 1996; Freel, 1999). In practice there are crossovers between these two emerging fields (Audretsch, Verbeul, Wennekers, and Thurik, 2002; Matsuno, Mentzer and Özsomer, 2002; Kotler, 2012)). The author is still interested in investigating the crossover between these two emerging fields as will become apparent in the suggestions for future research outlined below.

Today the key difference is an increased understanding of the importance of carrying out quality research into every aspect of small firms' activities (Alpkan, Yilmaz and Kaya, 2007; Ashford, and Towers, 2001; McAdum, Armstrong and Kelly, 1998). Given their importance to economic prosperity

and acceptance of the reality that most large firms have their beginnings in small entrepreneurial enterprises, there has been a growing demand for good quality SME research (Nyman, Berck and Worsdorfer, 2006; Shaw, 1999; Thompson, (1999, 1999b). It is Storey (1994) and Story and Westhead (1997), however, who were most instrumental amongst those who highlighted the need for such research. In particular, they are concerned with researchers making theoretical as well as empirical contributions.

Of particular interest to the author is the role of the small firm in securing economic growth within the UK economy, but also other economies in general. In the UK small firms' tend to employ local workers and as a group have a lower tendency to outsource production and employment to other countries. Some do source products from overseas but generally UK small firms involved with manufacturing tend to source both raw materials, component parts and labour from the UK. Hence with such a high level of involuntary unemployment in the UK at present an economic policy based on the stimulation of the small firm sector is likely to have a particularly beneficial effect on UK unemployment. A case needs to be made to government and other policy makers on the importance of small firms and how the sector can contribute, with the right stimulation, to the UK's economic recovery. More appropriate marketing for the small firm is not going to bring about a solution on its own but may well be able to make a contribution to the ability of small firms' to grow and to reduce unemployment. Of particular importance is international marketing for small firms'. Using the latest technology size of enterprise is no longer a barrier to international business (Reynolds, 2008; Aldas - Manzano, Küster and Vila, 2005; Deacon and Harris, 2011; Nyman, Berck, and Worsdorfer, 2006; Saura, Contri, Taulet and Velazquez, 2005). Increasingly innovative small firms' in all kinds of economic areas are gaining business from overseas markets. This not only improves export led economic growth and creates further employment within the UK but also improves the country's balance of payments situation. The author is supervising a doctorial student in this area and hopes to produce joint publications in the near future.

Making a case for small firms' in the governments stated aim of rebalancing the economy is also something the author is working on at present. Business growth in small firms will help rebalance the economy in line with present Government policy as many of them are likely to be small manufacturing firms'. A healthy small firm sector is good for the economy, good for society and good for democracy (Aldas -Manzano, Küster and Vila, 2005; Cope, Jack and Rose, 2007; Nyman, Berck, and Worsdorfer, 2006). If each small firm in the UK can grow enough to hire one extra staff member then UK unemployment can be significantly reduced and the UK can be put back to work. There are many more small firms' than there are people out of work. Concentration on improving the competitiveness and general business performance of small firms should be central to the UK

Government's plan to get back to growth, reduce unemployment and reduce the deficit. This government's focus needs to be matched by a renewed confidence in the creative capacity of enterprise starting with the small firm (Cope, Jack and Rose, 2007; Thatcher, 1993; Deacon and Harris, 2011; Nyman, Berck, and Worsdorfer, 2006; Tajeddini, Trueman and Larsen, 2006; Saura, Contri, Taulet and Velazquez, 2005; Reynolds, 2008). Academic research into the marketing of UK small firms' should be encouraged by government, the research councils and other funding agencies. Such research could turn out to be self funding if a full cost benefit of the economic and social benefits of a more productive small firm sector is taken in account (Cope, Jack and Rose, 2007; Tajeddini, Trueman and Larsen, 2006; Miles and Darroch, 2006). Such actions may reduce the dependency culture that seems so widespread within the UK and reduce the benefit bill. This in turn will help reduce the deficit and free up funds for further investment. The author is supervising a doctorial student in the economic and social benefits of a healthy small firm sector in Nigeria and hopes to publish in this area in the future.

The relationship between the successful marketing of small firms' and the benefits to democracy is another theme that the author hopes to develop further in taking the body of research discussed in this thesis to the next level. Over the last 30 years the UK has experienced periods of steady economic growth. However the benefits of this growth have been unequally distributed and have largely gone to the top 10% of earners. Hence there has been greater income inequality in this period. The gini coefficient measure of overall income inequality in the United Kingdom is now higher than at any previous time in the last thirty years (Source: Households Below Average Income, DWP (1994/95 onwards) and the Family Expenditure Survey (earlier years) obtained via data published by the IFS; UK; updated Aug 2010). In 1979 it was 26 it is now 42 with 0 being total income equality and 100 being all income concentrated in one source (see: UK: Income Inequalities – The Poverty Site at http:// www.poverty.org.uk/09/index.shtml#g6).

The overall message from the various analyses on these sites is simple: income inequalities have been increasing, both recently and over longer time periods. These inequalities have been increasing at both ends of the spectrum. In other words, the poorest have fallen further behind the average, and the richest have moved further ahead. Establishing and growing small businesses can result in greater economic democracy and greater inclusion in the wealth creation process (Hague, 2012; Cope, Jack and Rose, 2007; Nyman, Berck, and Worsdorfer, 2006; Reynolds, 2008; Saura, Contri, Taulet and Velazquez, 2005). As well creating jobs small firms' allow more people to have a greater stake in the economy and reduces income inequality and hence the gini coefficient measure. Hence a second order argument would be that the marketing of small businesses would contribute to a more stable and less polarised economy and society (Hague, 2012; Cope, Jack and Rose, 2007; Tajeddini, Trueman and Larsen, 2006; Miles and Darroch, 2006). The author would therefore like to make the point that a

further development of the work under consideration in this thesis make have implications for democracy and a more economically inclusive economy and society. One might go so far as to say that the improved marketing within small firms' increases social welfare and improves the structure of society (Hague, 2012; Cope, Jack and Rose, 2007; Reynolds, 2008; Nyman, Berck, and Worsdorfer, 2006). The author intends to explore these themes by publishing in the marketing and SME literature but also by moving into publications in economics and social policy. This opens up the small firms' marketing debate into new areas not traditionally concerned with the topic.

At the time of submission three other joint authored papers in this field are under review and a co-authored book has been accepted by a publisher in principle, indicating that the author's interest in this research area is on-going. Birley and Westhead (1989) indicate that previous research on small firms has explored the relationship between their origins and the personal characteristics of the founders (Kreiser, Marino and Weaver, 2002; Westhead, 1988), the traits of owner-managers (Brockhaus, 1982; Kets de Vries, 1977), small business growth (Parkin and Parkin, 1996; Nyman, Berck and Worsdorfer, 2006; Storey *et al.*, 1987; Mosey, Clare and Woodcock, 2002), the role of the 'incubator' organisation in the founding of growth-orientated firms (Cooper, 1989; Wolfe, 1994; Thompson, 2010); managerial characteristics and the financial performance of small businesses (Hills and La Forge, 1992; Filley and Aldag, 1988;) and price (Reynolds and Day, 1983, 1984; Carson, Gilmore, Cummins, O'Donnell and Grant, 1998; Grant and Perren, 2002; Pitt, Berthon and Morris, 1997). In the author's opinion this latter point of 'price' is under researched in the area of marketing for small business at present and requires considerable further work.

The author has worked on a number of papers on price but these have not been included in the submission for this dissertation (for example Reynolds and Day, 1983, 1984). However they are included in the author's full list of publications which include papers not submitted for this dissertation in Appendix 1. Evidence suggests that some small firm are engaged in 'suicide pricing'. This is where firm knowingly price for a job below cost in order to get work in the hope they can make up the shortfall on some other job or figure out how to do the job more cheaply. The author found evidence of this practice in the timber and joinery industry during a previous recession in 1992 - 1994. Hence this work on pricing needs to be revisited and brought up to date. It does not appear that much has changed over the last 20 years in terms of small firm's approach to pricing problems.

A related area and one that the author is working on at present and which he regards as particularly important and requiring further work is in the area of 'reputational marketing' and its possible effects on price, cash flow and profitability of small firms, especially undercapitalised firms (Barich, and Kotler, 1991). Cash flow is the bane of many entrepreneurs' lives. It causes many commercial

problems, not least running out of money (Brooksbank, Kirby, and Wright, 1992). At worse it causes bankruptcy and even relatively mild cash flow problems can result in default notices on credit reference files and making life difficult in terms of securing future loans at favourable rates. Even default or late payment notices, where a bank or finance mandate may have been breached by only a day, can cause problems with things such as vehicle rental, photocopier or business mobile rental contracts. It is a well known and reported fact that many small firms are under capitalised at the onset of their start up and usually remain so for many years if they manage to survive that long. Many firms rely, somewhat precariously, on securing business finance to provide them with the necessary level of working capital. However affordable finance is only forthcoming if the firm is viable and has a clean credit history. Even a bank's refusal to pay a direct debit payment can result in the withdrawal of credit and a cancellation of supply contracts. This latter point is particularly important in times of economic crisis when small firms are finding it difficult to secure finance of any description, reasonably priced or expensive.

Certain types of small firm are well placed to improve their cash flow and reliance on borrowed working capital, overdependence on which send many otherwise commercially healthy small firms into administration (Stokes, 1998). One model suggested by the author and discussed in outline in a forthcoming article submitted to the Journal of Business Venturing (2013), can reduce costs and improve profitability. This is a double ended strategy requiring action at both ends of the value chain. Firstly firms have to get paid earlier. They can do this through the use of advanced payment schemes where customers are given financial incentives to pay 'up front' in advance with their order. Generally price and cost reduction are areas where there is a relative paucity of academic research in the small business field.

Birley and Westhead, (1989) have indicated that traditionally research into smaller firms has tended to be part of SME research. This in turn has tended to be towards the macro-economic and policy perspectives of SME research. Since the late 1980s, however, the tenor of research work in the area of small to medium-sized enterprises has changed (Perry, Riege and Brown, 1999; McCartan -Quinn, 2003; Carson, 2005; Collinson and Shaw, 2001; Hill, McGowan and Carson,1997; Low and MacMillan, 1988). There has been for example, a growth in research at, what is now termed the marketing/entrepreneurship interface that has spawned many research studies that examine aspects of both the marketing and entrepreneurship disciplines (Longenecker, Moore and Petty, 2003; Morris and Lewis, 1995; Anwar and Stahlecker, 1990; Reynolds and Day, 2011; Zollo, 1993). These studies have also addressed how they interface in the context of the SME (McGowan and Rocks, 1995; Stokes, 2000; Hills *et al*., 1997; Hills and Mohan-Neill, 1994; Hills, 1987 Mclarty, 1998). Previous work also tended to concentrate on the characteristics of the entrepreneur (Morris and Avila, 1992; Boag and Dastmalchian, 1988 and Abdner, 1988) or on the small firm itself (Martin and Rana, 2001;

Bamberger, 1989; Scott and Bruce, 1987; Longenecker, Moore and Petty, 2003; Sweeney, 1983). Much more needs to be done to bring marketing for small firms into the main stream, particularly in the university curriculum and the area of the 'marketing – entrepreneurship interface' is a particularly important area as it goes to the very heart of what small firms often are and the way they think about marketing problems.

The author's work on Bayesian forecasting and Bayesian 'thinking patterns' is of continual interest and the author hopes to develop this area more in the future. All commercial enterprises need to forecast possible future conditions to be able to manage effectively. Small firms are no different in this respect. Evidence would suggest that a Bayesian approach to forecasting, particularly sales forecasting might be suitable for small firms because of the subjectivity allowed in the derivation of initial starting conditions. Bayesian statistical analysis is a paradigm quite different from traditional statistical inference as it allows for subjectivity in the initial starting conditions of the forecasting model. In terms of the way some owners / entrepreneurs think about business problems suggests that many seem to think in a less formally structured 'Bayesian' manner (see **C** (T2/7) Reynolds, P.L. (2008), *'Are Sales Forecasters in Small Firms Bayesian?'*; **J** (T2/2) Reynolds, P.L. (2003) 'Sales forecasting practice in small firms: the application of Bayesian theory to strategic decisions '; **J** (T2/3) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V., (2007) 'A Bayesian approach to forecasting decisions in small firms' which are included as part of the submitted material for this thesis). The author suggest that many small firm entrepreneurs are inherently "Bayesian" i.e. to a large extent more intuitive and informal in their thinking approach to predicting events in that they often rely on subjective estimates at least for initial starting values. Many writers consider there is a difference between entrepreneurial thinking patterns and those found in a conventional business school environment. Entrepreneurs are more 'free spirited' and think in a less linear and more 'divergent' manner using intuition rather than a formalised, rational process that many structured quantitative forecasting models demand. This 'Bayesian' way of thinking is likely to go beyond forecasting and may have implications for understanding how entrepreneurs in small firms make decisions in a number of other areas.

The work on methodological evolution towards a 'methodological dominant logic' within marketing for small firms' research is also of on-going interest by the author. The author has not published specifically in this area but has contributed to the debate as some of the methodological approaches used by the author in the works submitted include a qualitative element. Like the subject itself a methodological literature has developed where one favoured approach or 'dominant methodological logic' which has emerged over the past 25 years, namely qualitative research (Miles, and Huberman, 1994; Grant, Gilmore, Carson, Laney and Pickett, 2001; Gilmore and Carson, 1996; Carson, Gilmore,

Perry and Gronhaug, 2001; Lindgreen, 2000; Shaw, 2002). Many respected academics in this developing field of the 'marketing – entrepreneurship interface' recommend a qualitative approach rather than a positivistic experimental or sample survey approach (Hills and La Forge, 1992; O'Donnell and Cummins, 1999; Carson, Gilmore and Grant, 1997; Hill and Wright, 2001; Zontanos and Anderson 2004; Christy and Wood, 1999; Van Maanen, 1982; Carson, 1990; Blankson and Omar, 2002; Shaw, 1999; Healy and Perry, 2000). The author is interested in tracing this development and investigating the evidence as to why such a qualitative focus has emerged over time in this area of research as well as conducting research in other areas using the recommended qualitative approach so favoured by others working in the field.

The work on commercial health monitoring of small firms is also on-going. The author is interested in finding ways to improve the response capability of the smooth error tracking signal to a step or ramp change in input data. The author has already tried using 2,3, ...6 period ahead forecasting errors in the calculation of the tracking signal without any improvement in its response rate using average run length criteria (ARL). Other variations to the model are being investigated using computer simulation. Also the 'mix' of variables used in the monitoring process are also being investigated. One mix of variables in one industry does not necessarily translate to another.

The author is working with colleagues in Polish and Russian universities and has already published in some Russian journals and presented at conferences in Russia (see **J** (T2/3) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V., (2007) 'A Bayesian approach to forecasting decisions in small firms', *The Herald Journal of Business and Economics*, Omsk State University Dostoyevsky, No. 2., 80-92. ISBN: 978-5-7779-0852-0). The author is interested in finding whether the applicability of some of the areas researched in the papers submitted here applies more generally in these countries. The author, with his overseas colleagues, has constructed a data base from which further published work will hopefully emerge in the near future. This cross cultural work is expanding and the author recently visited universities in Jordan and hopes to expand this work to include small firms in the Jordanian economy.

Finally the author's relationship with the State University of Omsk in his capacity as visiting professor is an interesting one from a potential future research point of view. As discussed above the author works with academics' in Omsk on research on the marketing for small firms in the Omsk region of Siberia. Results from Omsk are then compared with results from the UK and Poland. However conducting a collaborative venture with a Russian university in this area of research is an interesting area of future study because of the cultural differences involved. These cultural differences

can be found in the Russian small firms' contacted in order to produce research data and also in the University itself. Having consulted with an expert in the field of securing European Union (EU) grants, in this case Professor David Carson, Emeritus Professor at the University of Ulster, the author intends to try to secure EU funding to develop this area further. Professor Carson has visited The State University of Omsk in the capacity of an External Member of a Validation Panel. He is also Europe's leading academic authority on the subject of 'marketing for small businesses and has been cited extensively in this thesis.

2.11. Limitations of research work submitted

As the title of this thesis suggests the author does feel that a contribution towards a more appropriate, though not necessarily totally new, paradigm in the small business marketing field has been made in the collection of works submitted. However the author does appreciate there may be some limitations to the work. One of the limitations of the research submitted is that many, not all, of the small firms contacted are based in the West Yorkshire area of England where the author's university is based. It may be that firms based in the South east of England operate in a more prosperous economic environment and hence face less or at least different financial pressures, especially in relation to pricing, than their more northern counterparts. However evidence from the literature (Stokes, 2000; Deacon and Harris, 2011) does not allude to any significant differences in small firms in the south compared to those in the north of England except in the most economically deprived areas and this is generally due to the business environment of the area rather than to any fundamental difference in the small firm itself. Another limitation is that the author has not researched every element of the marketing mix, for example distribution. However he does state that he has made a ***contribution*** to a new paradigm for small business marketing and not a complete new paradigm. As mentioned in the final conclusions, the author does not think that a totally new paradigm is required more an adaptation of the existing marketing paradigm. However when combining the authors work with work done by others working in the field then a new approach and to some extent a partially new paradigm is finally beginning to emerge. Some of the work is based on respondents drawn from a more international population. For example some of the papers include small firm samples from other countries e.g. Poland and Russia. Although this work makes an interesting inter- cultural comparison there is still a long way to go in this area and the samples are relatively small and localised being taken from the Rezeszow area of Poland and the Omsk region of Siberia, Russia. Small firms may again operate in a different economic environment in capital cities (Miller, 1983; Prohaska, Frank and Jackson, 1997; Pollard and Jemicz, 2006). The author is at present developing further this area of research with partners in Russian and Polish universities and future publications are planned.

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SECTION 3: SUBMITTED ARTICLES, PAPERS AND OTHER MATERIALS

<u>Theme 1 (T1 MATERIALS 1 TO 7) J = 6, C = 1</u>

A NEW APPROACH TO THE MARKETING OF SMALL FIRMS.

<u>Code</u>

J = JOURNAL

C= CONFERENCE

B = BOOK

R = REPORT

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The Need for a New Paradigm for Small Business Marketing? – What is Wrong with the Old One?

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Abstract: The entrepreneurial marketing paradigm is open to several interpretations. One such is that we should consider, in particular, the behaviour of small firms, and in particular, small entrepreneurial firms; another interpretation is to argue for the building of a completely new, and substantive, paradigm that builds upon, for example personal contact network development and focuses upon marketing activity being compressed, non-linear in outlook and application, and informal. In this article the author asks a fundamental question highly pertinent to the developing subject of marketing within small firms. Is conventional marketing theory and practice from the 'classical school' applicable to all types of organisations no matter what their size, or do smaller firms need a different sort of marketing, more suited to their particular needs? The paper concludes that in many cases the central core hub of marketing that has become known as the classicist philosophy of strategic marketing management (see Brennan, Baines, and Garneau, 2003) is appropriate and can often be employed to the smaller enterprise with beneficial commercial effects. However there may be some reluctance on the part of small firms to accept the notion that conventional marketing is of particular use. The author hopes that this short paper will provoke a subsequent debate about the current 'state of play' concerning the entrepreneurial marketing paradigm.

INTRODUCTION

Many of those teaching and consulting using the conventional 'classical school' approach hold the view that it is merely a matter of standardisation verses adaptation. That is when dealing with the smaller firm one has to take the standard classicist philosophy of strategic marketing management as far as it can go and then make adaptations to suit the individual circumstances of the smaller firm such as a limited budget or limited marketing sophistication. Others writing in the field believe a new approach is required for the marketing of smaller firms and not simply the modification of the existing 'classical' approach. In writing this short article the author is hoping to contribute to the debate by submitting empirical evidence and conclusions relating to an important dimension of the subject area. The methodology of the work presented here is based on a form of triangulation. That is the research methodology employed uses four

separate approaches arriving at a set of results that when taken independently arrive at similar conclusions. When taken collectively the results present a strong case for the general applicability of many standard marketing principles to the smaller firm. Basically this paper attempts to demonstrate that conventional standard marketing approach is relevant to the smaller firm. Although a number of individuals and groups feel that conventional marketing is not really appropriate for the smaller enterprise, often because of the entrepreneurial and less conventional nature of many of the owners and /or managers in some cases (Miller, 1983), evidence from the author's own work suggest otherwise.

The question as to whether conventional marketing theory and techniques are equally applicable and relevant to the marketing management of smaller enterprises is central to work in marketing and entrepreneurship because many, if by no means all, smaller firms are managed by people who may be entrepreneurial in nature (Covin and Slevin, 1998). There seems to be an ongoing debate in the literature at the moment on whether there needs to be a new marketing paradigm for small and medium sized enterprises (SMEs) (see Reynolds and Day, 1998). Many question whether conventional marketing re: the standard texts such as Kotler and Armstrong (2001) or Lancaster and Reynolds (1998, 1999) i.e. the standard business school 'classicist' teaching approach (see Whittington, 1993), can be made to fit the needs of SMEs with some pragmatic adaptation. Many working in the field of SMEs in general, think that the standard marketing approach is suitable for the smaller enterprise, albeit with some minor 'adjustments'. These 'adjustments' have to take into consideration the more modest budgets available to many SMEs and the limited technical knowledge of formal conventional marketing amongst the management of smaller enterprises (see Herrmann and Perreault, 2000). Other writers feel that owners and managers of SMEs, who may or may not be entrepreneurs, often have a different way of thinking about business problems compared to their counterparts working in larger enterprises. They claim that conventional marketing, usually developed for the larger firm, is not necessarily suitable to the smaller enterprise (Carson et al, 1996). Some go so far as to suggest that a new 'paradigm' of 'entrepreneurial marketing' is required (Hills, 1996). It is these issues that the author will discuss in this paper and in doing so will draw on the results of empirical work carried out in this field. In this paper the author is primarily concerned with small firms, however most of the literature in this area concerns SMEs and so literature covering medium sized firms is also considered.

METHODOLOGY

The methodology employed relates to four separate projects. The results are then consolidated i.e. a triangulation approach, in order to gain a better insight as to whether small firms do need a radically new marketing paradigm. Triangulation is a key tenet of the 'anthropological' approach to data gathering (and therefore, education and training research, which is the subject of a large part of this paper). Most of this research has been based on studies conducted by the author into the sales and marketing training needs of small firms and into educational programmes into marketing for small firms. Hence an 'anthropological', triangulation approach was judged appropriate. In using this approach the researcher should gather a wide variety of evidence for the purposes of triangulation (Jacob, 1990; O'Malley & Valdez Pierce, 1996; Wiggins, 1998). As opposed to relying on one single form of evidence or perspective as the basis for findings, multiple forms of diverse types of evidence are used (in the case of this paper four types) to check the validity and reliability of the findings (Jacob, 1990; O'Malley & Valdez Pierce, 1996; Maxwell, 1996; Wiggins, 1998). Over-relying on any one form of evidence may impact validity of the findings. By using multiple forms of evidence and perspectives, a truer portrait of the subjects being studied can be developed (Wiggins, 1998). While the same biases in evidence collection still come into play, because more types of evidence are being used to form one's opinion about the subject under study, there are more cross checks on the accuracy of the conclusions inferred.

Research Approach One

The first piece of work involved exploratory group discussions that were then followed up by the postal survey which is discussed below in Research Approach Two. The methodology involved exploratory, qualitative research based on three group discussions with people involved in running or advising people who run small firms. Carson and Gilmore (1999) consider qualitative research the most appropriate when examining SME phenomena generally and particularly the interface between marketing and entrepreneurship. Gibb and Davis (1990); and Hofer and Bygrave (1992) further support this position. The group members included entrepreneurs running their own small firms, counsellors from various organisations involved with advising or supporting enterprise, small business advisors from the commercial banks, consultants and trainers to small firms from both the private sector and such bodies as the (then) Training Enterprise Council (TEC). The latter have now been replaced by the learning and Skills Council. Each group discussion contained eight participants plus a moderator. Conversations within the group discussions were recorded and a

content analysis carried out.   Transcripts were examined and various common themes identified and colour coded for classification and analysis. The information gained from this analysis was used to design a questionnaire.

Research Approach Two

The questionnaire discussed above was subsequently sent out by post to a representative sample consisting of 1,200 small firms in the Kirklees and Calderdale area of West Yorkshire, England. A combination of lists were used as a sampling frame including the local Chamber of Commerce small firms registry, local trade directories and a database held by the University of Huddersfield.   The sample was stratified by the six broad types of industry found in the area: textile manufacturing; chemical processing and related industries; transport and distribution services; construction; light engineering; and other financial/ business services; and, in proportion to the importance of a particular sector to the local economy in terms of contribution to local GDP (see Alreck and Settle, 1995), (Everitt, 1995). Three hundred and twenty respondents mailed back the questionnaire in the pre-paid envelope provided. In order to ensure the sample of respondents matched the initial stratification design final post stratification of the marginals was conducted. Where a particular sector was under represented follow up calls encouraging response or if necessary a second copy of the questionnaire was sent to respondents. These were also selected randomly from the non-respondents on the original sampling list. Questionnaires were sent out in waves and so it was possible to 'fine tune' the eventual sample to bring it into an acceptable approximation to the composition of the local small firm population.

The questionnaire contained questions asking respondents to rate the importance, as they perceived it, of various marketing and sales topics which could, if selected and rated highly enough by a sufficient number of respondents, be incorporated into a training course, which they would be invited to attend at subsidised rates. The rationale for conducting this research in the first place was twofold. Firstly, it has been widely recognised for some years that there is an urgent national need within the UK to improve the marketing performance of British firms in general, and smaller firms in particular, especially those in the industrial sector. Secondly, poor marketing performance has often been cited as one of the main reasons for the often lacklustre industrial and business performance in the UK. Unlike many areas of functional training, marketing training can be a complex matter. There are a large number of specific areas of marketing,

which could represent specific training needs for different companies. For example even a basic course in marketing management could require a completely different orientation for an industrial company or a service company compared to say a producer of consumer items. Marketing training can therefore come in many forms, and thus investigation of marketing training needs is a very complex area of research. Few would dispute the need for many companies to improve their marketing performance. There would also be widespread agreement that training has a significant role to play in helping to improve the performance of marketing managers, or the owners of small companies. However it is only with the possession of detailed information on the specific training needs of smaller firms that training providers can have any realistic hope of offering programmes that are meaningful and appropriate for the management of smaller firms.

Research Approach Three

The third piece of work relates to consultancy activities carried out by the author (with others) over many years, in which a standard 'classical' marketing approach was employed. Basically the author has from time to time acted as a paid consultant to small firms in the Yorkshire area of the UK. These firms have generally managed to secure a grant from one of the government schemes to help pay for business consultancy, in this case marketing consultancy. Such work tended to follow a fairly standard format provided by the Department of Trade and Industry (DTI), a Government organisation overseeing the allocation of resources and evaluating the quality of the work carried out. Approved marketing consultancy generally involved a detailed analysis of the current situation, SWOT, PESTLE, segmentation, forecasting, portfolio analysis, market research etc., i.e. the application of general 'classicist' marketing principles and techniques based on strategic marketing management (Brennan et. al., 2003). Such work usually results in some form of marketing plan for the short, medium and longer term, which is then implemented by management with the help of the consultants. The DTI monitored progress and obtained evaluative feedback from the owner / manager of the small firm.

Research Approach Four

The final piece of work relates to work carried out on small firms by final year undergraduate business and marketing students studying 'Small Business Marketing' at the University of Huddersfield in the UK. Their work involved acting as consultants to small firms in the surrounding areas

(see Reynolds and Day 1999). The successful / unsuccessful application of basic marketing principles was then evaluated by the firm owners, the students themselves and the author acting as an assessor. The students had already taken at least one, often more, marketing courses as part of their degree studies. They were asked to purchase a copy of Carson et al. (1996) to use as a standard text. Student were also provided with additional material in the form of conference papers from Marketing / Entrepreneurship Interface symposia run by Professor Hills from the University of Illinois at Chicago; the Babson College Frontiers of Entrepreneurship Research conferences; ICSB conferences; and other entrepreneurial marketing texts such as Chaston (20030). They were asked to apply their marketing expertise to a range of small business case studies and eventually to act as consultants to local SMEs. The appropriateness of applying fundamental marketing principles re: the standard texts such as Kotler and Armstrong (2001) were then appraised.

Results

This research needs to identify for the reader why and how the analyses and interpretations were made and the way key concepts in the analyses evolved. In addition, ideally any researcher needs to "inform the reader of any unexpected findings or patterns that emerged from the data and report a range of evidence to support assertions or interpretations presented." (Stainback and Stainback, 1988:80-81). The author has attempted to do this in the discussion of results presented below.

EMPIRICAL EVIDENCE: GROUP DISCUSSIONS AND POSTAL QUESTIONNAIRE SURVEY.

(a) Group Discussions.

The make-up of the groups was discussed in the methodology section and included small firm owners as well as advisors and counsellors. The results of the three qualitative, exploratory group discussions showed that it was generally agreed amongst the group participants that small firms in the Kirklees and Calderdale area could benefit from a more professional approach to marketing. The group discussions were semi structured with the moderator making use of an interview schedule. No specific direct questions were asked to avoid influencing the group's opinions as to what type of sales and marketing training small firms in the area most needed. At no time was it suggested by any member of any of the groups that anything other than standard marketing courses would be appropriate. It was also

agreed that improvements could be brought about by the use of subsidised marketing training provided by University Business School academics and other private sector-training providers. The three groups produced a number of suggestions as to what would constitute the most useful marketing training programmes and other suggestions as to timing, duration, location, cost etc. The group discussion proceedings were analysed and the analysis formed the basis for a questionnaire, which was pilot tested and refined and eventually sent out to 1200 small firms in the area. The questionnaire contained a list of a number of what would be considered 'standard' marketing courses. Respondents were asked whether they would be interested in attending any of the courses if provision were made locally.

(b) Postal Sample Survey.

A list of various marketing and sales programmes were listed on the questionnaire and respondents were asked to express their interest and rate the perceived usefulness of each of the items listed to their particular organisation. Basically the survey results supported the view taken by many working in the area of the marketing/ entrepreneurship interface and SMEs generally. That is conventional 'classicist' marketing re: the standard texts are not necessarily appropriate for use in smaller firms. Few of the small firm owners/ managers surveyed expressed strong interest in what might be called 'conventional marketing courses' and did not see the courses listed as being of particular relevance to their needs.

Summary of survey findings.

85%	of respondents thought their firm could benefit from a more professional approach to marketing.
84%	considered marketing training would be useful
48%	considered a 1-day marketing course of no value.
53%	considered a more in-depth course over several weeks of no value to them.
45%	thought a 1-day practical market research course of no value.
65%	expressed the feeling that a more in depth marketing research course, spread over several weeks would be of no value.
53%	thought a new product-planning course of no value.
56%	thought a one-day course on writing a marketing plan of no value.
53%	thought a three-day course on planning and strategy of no value.
64%	thought an in depth marketing communications course of no value.
60%	thought a more extensive course on practical selling of no value.
55%	thought a short course on telephone sales of no value.
62%	thought a course on sales management of no value.
57%	thought a short course on direct mail of no value.
58%	thought a short course on exhibition planning of no value.
60%	thought a short course on exporting of no value.

The most highly valued courses were 'Importance of the Customer' course - 62% rating as very or quite useful. A short course on practical selling - 64% rating very useful or quite useful. A one-day course on publicity and advertising - 63% expressed a rating of very or quite useful. As can be seen from the above summary of survey results, for most of the courses listed between 50% and 60% of respondents rated the course as having NO use to them at all. Some of their opinion was due to the duration and timing of the course listed. But even allowing for this there still seems to be a strong perception amongst the owners and managers of smaller enterprises that conventional, mainstream marketing courses are of little or no value to them. This is somewhat surprising because evidence from the author's personal experience of working with or being involved with small firms, some of which is discussed below, seems to indicate that smaller firms can benefit immensely by the application of quite basic marketing principles and techniques. In summary, the group discussions suggested that the participants felt that small firms in the area could benefit from standard sales and marketing training course. Many of the participants were 'experts' such as small business advisors and bank managers. Some participants were the owners of small firms. However when a representative sample of small firms were asked to rate the perceived usefulness of a range of 'standard' introductory and intermediate level sales and marketing course the majority of those responding thought such courses would be of little or no use to them. Given the variance of potential need across the sample and to see whether the SMEs views were related to the sector in which they were trading, the following hypothesis test was carried out.

Given that respondents had been asked to rate each of the eighteen courses specified (covering sales and marketing) in the postal questionnaire as either (1) Very useful, (2) Quite useful or (3) No use at all; it was possible to derive a simple consolidated rating. The 'highest' score across all 18 possibilities would be $18 \times 1 = 18$ whilst the 'lowest' score would be $18 \times 3 = 54$. Hence the lowest numerical score was actually the most positive overall score in relation to the perception of respondents to the importance of marketing courses to help them achieve marketing improvements in the future. Thus the respondent's selection and rating of various sales and marketing topics gave the author a proxy measure of how respondents perceived the importance and usefulness of conventional sales and marketing topics to the running of their businesses. As a proxy measure this was taken as an indirect indication of respondent's attitude toward the importance of marketing to their business. In a sense using eighteen different dimensions is very much like the general approach used in commercial marketing research to measure attitudes (Waugh, 2000).

Because of the idiosyncratic component in peoples attitude set a multi dimensional approach is usually used (Amiel et al., 1999).

A Pearson Chi Square test was used to test whether there were any significant difference between the different commercial/ industry sectors, textile manufacturing, chemical processing and related industries, transport and distribution services, construction, light engineering and other financial/ and their perception of the importance of marketing to their firm. The Contingency Coefficient was used to test the strength of any statistical association. The Null Hypothesis (Ho) was that there was no significant difference between the groups in relation to the expressed interest in attending a course in marketing. The alternative hypothesis (H1) was that there was a difference. The data used was nominally scaled and hence a non-parametric test was considered appropriate. The frequency distribution of rating scores i.e. 1,2 or 3 were cross tabulated by industry sector codes nominally as 1 to 6 and a Chi square test carried out. The total score for each respondent in each of the sectors were totalled and averaged. Column One below represents a total average score of 1 to 1.5 representing 'very useful', none of the averages came to exactly 1 or 2 etc, and it seemed reasonable for an average total score around 1 to 1.5 to represent this response category. Likewise a score of 1.6 to 2.4 was deemed to represent a 'quite useful' category following the same logic i.e. none of the averages was exactly 2. Column Two represents this score category. Column Three represents 'not useful at all' which was categorised as a score anywhere between 2.6 to 3.

No difference was evident between the sectors and this is shown as Exhibit One.

EXHIBIT ONE:
AVERAGE SCORES: MARKETING PROGRAMMES BY SECTOR

	Column 1	Column 2	Column 3	Total
	Very Useful	Quite Useful	Not Very useful At All	
Row 1	08	15	22	45
Row 2	12	15	28	55
Row 3	13	14	23	50
Row 4	14	17	24	55
Row 5	21	25	19	65
Row 6	11	15	24	50
Total	79	101	140	320

Degrees of freedom: 10; Chi-square = 8.68199002401283; None of the cells had expected frequencies less than 5.

For significance at the 0.05% level, chi-square should be greater than or equal to 18.31.

The distribution is not significant; p is less than or equal to 1.

The contingency coefficient and Cramer's V were not calculated as their significance would be the same as for the Pearson Chi-square test i.e. not statistically significant.

EMPIRICAL EVIDENCE: AUTHOR AND STUDENT CONSULTANCY WORK

(c) Consultancy work.

The author has been involved, with other colleagues, over the years in a number of consultancy projects for small firms. Some of these were subsidised by the Government (DTI) as part of their 'Enterprise Initiative', basically paying up to 70% of the consultancy charge. Firms have ranged from small electrical wholesalers; a family owned variety store, a small group of privately owned supermarkets and an engineering business. All of these projects were successful in that the general marketing competency and professionalism of the firms were improved in both the short and long run. The management / owners of all of the small firms concerned expressed satisfaction with the analysis and advice offered by the consultants of which the author was one. For each of the consultancy projects only basic, classical marketing principles were applied and fundamental strategic marketing analytical frameworks were employed e.g. Product Life Cycle, SWOT, PEST, Boston Grid, Ansoff Matrix etc. The consultancy work employing these basic marketing tools were also evaluated by the Department of Trade in the UK, to see how well their money had been spent. In each case their appraisal was positive. Hence offering consultancy advice to small firms on how they can improve their marketing and general commercial performance using standard, so called 'classical' marketing principles seems to work. The firms themselves benefit and the advice is also rated as appropriate and satisfactory by Government (DTI) appointed appraisal experts.

(d) Student based projects and related work.

The author has been teaching a final year undergraduate course in 'Small Business Marketing' over the past six years with another colleague. The course is a mixture of academic studies, including reading much of the published research work carried out at the marketing / entrepreneurship interface, and applied work. The applied work takes the form of students attempting to apply regular, formal marketing to a small business case study and having done this, finding a 'volunteer' small firm and offering the management 'free' consultancy. The students are in no way 'guided' as to what form of marketing to use when carrying out this work. The students work in small groups and attempt to apply what they have learnt in the case study work to an actual small firm with the object of showing the small firms management how they may improve various marketing aspects of

their business. Over the last six years the author has jointly assessed approximately three-hundred pieces of case work in which students attempted to apply what they had learnt earlier on standard marketing courses to a small business situation presented in the form of a case study. The case studies represented a wide range of businesses and industries. They were records of real small firms not simulations. In addition to the case study work the author has jointly assessed approximately one-hundred and twenty group projects carried out by final year undergraduate business students. Students went to local small firms in the Kirklees and Calderdale region and attempted to apply the lessons they had learnt in their case study work, basically trying to apply standard, formal marketing principles to small enterprises in the regions and offering advice on how their marketing performance could be improved in the future. In all cases conventional marketing principles could be applied perfectly well to all of the small business situations. Some adaptation was usually necessary to take into account limited budgets and limited levels of marketing and business sophistication often exhibited in small, local companies.

An evaluation the appropriateness of conventional marketing to smaller firms came from four sources. Firstly the author evaluated all of the pieces of work mentioned above in terms of how well students could apply marketing principles (whether conventional or unconventional) to the case studies and small business 'consultancies'. Secondly the students asked the management of the small firms used in the student consultancy exercises for 'feedback' in order to evaluate the perceived usefulness of the work carried out and recommendations made. Thirdly all students participating on the 'Small Business Marketing' course were asked to rate the appropriateness of conventional marketing to the case studies and real firms they had seen. Finally students were asked to evaluate the value of the Small Business Marketing Course by questionnaire. Each of the four separate evaluations were positive, in the opinion of the small business managers / owners concerned, the students and the author of this paper that conventional marketing can be usefully applied to a wide range of small firms.

CONCLUSIONS

Evidence from the group discussions with managers of small enterprises, advisors, counsellors and others suggest that those people actively involved in advising and dealing with the problems of small business clients think that sales and marketing 'training' would be a good thing. In their opinion the management of many smaller firms, at least in the local Kirklees and Calderdale region, are generally poor in terms of their ability to apply sales

and marketing principles in a professional and effective manner. Although the groups could not be specific as to what they thought these training needs were, they were at least able to list possibilities, and all agreed that some form of formal training in marketing would be likely to improve the competitive position and business performance of small firms in their region.

However evidence from the survey carried out amongst the owners and or managers of actual small enterprises in the regions gives a different picture. When presented with a specific list of sales and marketing topics and asked to evaluate the usefulness of attending a course (of different lengths, times, types etc. to suit the respondent and for a very small fee) on each of the specific subject areas, many of the respondents showed little or no interest. On average, for all of the marketing topics presented for evaluation approximately 50% to 60% of respondents said that attending such a course would have no perceived benefit at all to their business. Basically the group discussions with the advisors etc. demonstrated that those professionals dealing with small firms on a day to day basis felt that many of them would benefit from formal training in sales and marketing. Whereas when questioned, the owners and managers of small enterprises in the region were less convinced with the majority of them expressing no interest in taking the opportunity to learn formal sales and marketing techniques and methods. Many of them (around 60% on average) considering that attendance on such a programme was of no value at all to their particular business.

Evidence gained from the authors own consultancy experience with smaller firm over many years and reported elsewhere (see Reynolds and Day, 1995), suggests that conventional, formal marketing principles and techniques can be applied with beneficial effect to a wide variety of smaller firms. The author has been involved in offering marketing consultancy to small firms under the subsidised Department of Trade and Industry scheme. After the consultancy period the small firm is 'followed up' by the consultants and the DTI assessors in order to evaluate the effectiveness of the consultancy advice and the implementations of the recommendations resulting from the consultancy. Further DTI work is dependent on a good assessment. In all of the small business DTI sponsored work carried out by the author all of the firms involved received a positive assessment and feedback from the management of the firms up to two years post consultancy was also positive. In all cases conventional marketing principles and techniques as found in many standard texts such as Blythe (2001), Palmer (2000) and Davies (1998), were applied directly to smaller firms with positive, beneficial effects on performance both in the short and longer terms.

Finally the author's experience in developing and teaching / assessing a 'Small Business Marketing' course at Huddersfield University suggests that basic conventional marketing has a positive role to play in enhancing the performance of a wide range of smaller firms. This conclusion was based on the personal assessment of many pieces of work based on real firm case studies or real firm student consultancy exercises in the University region. The firms participating in the students' 'consultancy' exercises and of course by the students themselves have also provided assessment as to the appropriateness of standard marketing to the smaller firm. Nearly all the members of both these groups believe that conventional marketing with some adjustments is appropriate when applied to the marketing situation found in smaller enterprises.

In conclusion, in the author's own experience, it does seem true that many working in smaller firms see the conventional marketing approach as being of little interest or relevance to their firms. However other evidence cited suggests that ordinary, standard, conventional marketing can be beneficially applied, almost without exception, to virtually any kind of small enterprise. There does not necessarily seem to be a case for a new small business 'marketing paradigm', although some adjustment and alteration might be appropriate in many cases. Thus the issue of standardisation versus adaptation (either marginal or radical) remains a topic central to the entrepreneurial marketing debate.

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A scheme to increase profitability in entrepreneurial SMEs

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Abstract

Purpose – This article aims to demonstrate how small entrepreneurial firms can employ low cost market research techniques in the area of service evaluation to prioritise the sales effort, increase sales and improve margins.

Design/methodology/approach – "Triangulation" has been used. Secondary data included academic sources and internal company records. Primary data included exploratory depth interviews and group discussions, a questionnaire-based survey and the construction of case studies.

Findings – It can be seen from the case study results presented that a customer service appreciation survey can yield useful and actionable information, which can be used creatively by entrepreneurs to bring about significant improvements in business performance in a short space of time.

Research limitations/implications – It would have been better if more extensive data were available on customers to allow for more sophisticated quota sampling controls.

Practical implications – A model of small firm growth is discussed and the concept of crisis points in the early stages of the life cycle of small entrepreneurial firms is examined. The paper demonstrates how a low risk growth strategy, which minimises the possibility of the firm encountering a "crisis point", can be chosen.

Originality/value – The content of the article is original in the sense that particular emphasis is placed on the concept of "leveraging." The study shows that such a "leveraged"-based scheme is particularly relevant in a customer multiple sourcing purchasing situation.

Keywords Entrepreneurialism, Companies, Customer service management, Sales income

Paper type Research paper

Introduction

In this article the authors discuss methodological details and post research implementation of the resulting recommendations from two applied "customer service appreciation" exercises. In particular they show how data from such relatively low cost surveys can be used to increase sales from a small firm's existing customer base. It is also shown how a public relations and relationship marketing dimension can be incorporated into such surveys by careful design at little cost. It is shown how the information from such surveys can provide entrepreneurs with a plethora of information enabling them to evaluate existing policies and to help stimulate new ideas for future business activities. Some of this information can be put to practical use immediately by the individual small firm. This information also assists in the building and maintenance of long-term customer relationships and provides data from which smaller firms can start to develop a fully integrated customer relationship management

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programme (Reynolds, 2002). Large firms such as Bass plc and Thomas Cook Group Ltd, using professional specialist firms are today increasingly using customer service evaluation programmes. However, the authors show that evaluating customer service does not have to be expensive. The authors demonstrate how low cost customer service appreciation surveys can be an effective tool in the small firm marketer's repertoire.

A model of small firm growth and development is discussed and the concept of crisis points in the early stages of the life cycle of small entrepreneurial firms is examined. The authors demonstrate how a low risk growth strategy, which minimises the possibility of the firm encountering a "crisis point" can be chosen and executed with the information provided from relatively simple and inexpensive "customer service appreciation" surveys.

It is then discussed and finally demonstrated through the practical application of specific illustrations drawn from the case studies, how the major problems facing small entrepreneurial firms seeking growth are marketing problems and that many of these problems can be at least partially solved through marketing activity.

The proposition

This paper suggests that small to medium-sized enterprises (SMEs) intent on growing their business should consider carefully their portfolio of existing customers. Before attempting to attract new customers they should "leverage" as much sales volume from existing customers as possible. The authors define "leveraging" as the process of increasing the proportion of total spend by a customer on a given class of product or service with your company (i.e. your company being the supplier company). The authors contend that application of this simple proposition would add markedly to the survival, and subsequent growth potential, of the SME. Evidence from the literature suggests that a high proportion of small firms perish in the first five years of business, and often this is caused by over trading and being financially stretched to breaking point (see Berger and Udell, 2002; Webster, 1992). Many studies, and statistical evidence (see for example, Cook, 2003; Bank of England, 2001, 1998; Eggers *et al.*, 1995; Hanks *et al.*, 1993; Scott and Bruce, 1987) illustrate the obvious dangers. Whilst it is not elemental to the argument developed here, we speculate that paradoxically it is those SMEs that are most entrepreneurial that are in the greatest danger; their zeal for growth might well outrun their capacity to manage the SME effectively with a resulting "overtrading" scenario emerging.

The advantages of the authors' suggestion are:

- It is relatively low cost since it requires the SME to concentrate on its existing customers and improve the relationship with them.
- It is relatively low risk as the proposition is to increase sales to existing customers.
- It can be seen as a precursor to, and not a replacement for, a relationship marketing culture; this will help the SME to consider further relationship marketing programmes, which may well be more expensive.

However, the message is not devoid of danger. If pushed to the extreme it could result in the SME being over dependent on too few customers. If a potential, or existing, customer seeks a preferred relationship with the supplier through a total quality management (TQM) approach, reinforced by compliance to current ISO standards,

then the SME may be able to leverage very little extra custom (see Stankard, 2002). Yet, on balance, we believe our suggestion plays to one strength of the typical SME – the high concern that they have for customer relationships (Day *et al.*, 1998). It is, the authors believe, both relatively low risk and low cost.

Background
The most valuable asset a small firm has is its portfolio of existing customers (see Karr and Blohowiak, 2003; Spekman, 1988; Van de Ven, 1976; Anderson and Soderland, 1988; Grönroos, 1991; Gummesson, 1987; Turnbull and Wilson, 1989). The management of small firms are, by their general nature as entrepreneurs, often preoccupied with developing and expanding into new business areas. These strategies involve a high level of risk and uncertainty and in the case of product development often a high level of financial investment. Entrepreneurial firms often pursue such ambitious and high-risk strategies when the plain fact is that many of them are not fully exploiting their existing customer base with their existing range of products or services.

Unfortunately, evidence from the literature suggests that many do not survive the first five years of trading (see, for example, Bank of England, 2001). Those finding themselves able to survive often turn their minds to loftier ambitions that include growth.

How can entrepreneurial managers of small enterprises formulate a successful strategy, which will enable them to capitalise on and exploit their existing customer base fully? How can this strategy be put into practice on a tight budget and with limited expertise? What tools can they use to provide them with the necessary information on which to base such a strategy? One method, supported by case studies discussed later, is to use relatively low cost customer service appreciation surveys. The information obtained can be employed by the entrepreneur to bring about improvements in the following areas: increased customer spend and profit; evaluation of marketing programmes, e.g. direct mail; evaluating sales force effectiveness; appraisal of the quality of technical backup; assessment of stock availability and delivery reliability; evaluation of customer service levels with an opportunity to create a beneficial public relations "spin off" (see Granered, 2005).

A theoretical perspective
Scott and Bruce (1987) developed a growth model consisting of discrete stages separated by crisis boundaries. To progress from one stage to another, SMEs would have to encounter and successfully address internal and external problems at these boundaries. While some authors are critical of stage models (for example, Ardishvilli and Cardozo, 1995), later work by Churchill *et al.* (1995), whose earlier work provided some of the lineage for Scott and Bruce, and Hanks *et al.* (1993) is supportive of the notion of a stage model of growth. Returning to Scott and Bruce, their model suggests that growth will take place at one of two points: between crisis points/periods and through crisis points/periods. Day and Reynolds (1993) have suggested that the firm may be particularly vulnerable at the crisis points if there is additional external pressure, such as poor trading conditions in that particular industry or a general recession. Equally, the speed at which the firm is able, or willing, to progress is conditioned by their entrepreneurial capacity. The way in which the firm addresses, or even considers the growth opportunity can be a reflection of their entrepreneurial

ability or a direct cause of trading problems perhaps leading to failure. Most business advisors have anecdotal evidence of small businesses overtrading or selecting unsuitable growth strategies (see Reynolds and Day, 1993a, b). In the authors context the Ansoff Growth Matrix is sufficient to distinguish between the most obvious growth strategies (Ansoff, 1957). The authors' suggestion, of course, argues that the SME should initially only consider one of the four Ansoff outcomes, namely, the most conservative one, i.e. existing products into existing markets.

The importance of existing customers

Opinions expounded in the literature suggest that the most important asset any firm can possess (not just small firms) is their existing customer base (see Cook, 2003). Literature in the important areas of relationship marketing and internal marketing all discuss the importance of present customers (see Barnes, 1989; Flipo, 1986; Grönroos, 1981; Gummesson, 1987; Piercy and Morgan, 1991; Richardson and Robinson, 1986). In their rush for growth do many small firms appreciate this importance? The majority of small firms can achieve most of the growth they can financially handle without over-trading and running into financial difficulties by properly exploiting the potential of their existing customer base.

As Grönroos (1991) explains, during the 1980s a new concept, "Relationship Marketing" emerged in the marketing literature. As competition increases, it becomes more and more important for a firm to protect its existing customer base (Cook, 2003). Hence, focusing on increasing short-term business through new customer introductions can become an expensive strategy. It would be far better to "cement" relationships with the existing customer base, and in that way foster substantial long-term business.

Chaston and Mangles (1997, p. 51) discuss the appropriate combination of transactional and relationship marketing and contends that not all customers want a "relationship". The importance of managing buyer-seller relationships have been recognised in the marketing literature since the 1980s (see Webster, 1984; Jackson, 1985). However, even in organisational markets where buyer-seller relationships typically involve relatively long-term contractual commitments (see Turnbull and Wilson, 1989) even these relationships were often at arms-length and adversarial (Mjller, 2003), putting the customer against the vendor in a battle focused on low price (Jenster, 2005; Corey, 1978; Spekman, 1988; Webster, 1992). Thus, SMEs having recognised the need to mix relationship and transactional marketing, need to play on their marketing strengths, and move appropriate/amenable customers away from just the price element of the marketing mix, or avoid adversarial price reductions.

Multiple sourcing and growth through leveraging

Many customers, particularly larger customers tend to "multiple source" as a risk reduction policy (see Blackmon *et al.*, 2001; Stadtler and Kilger, 2004), especially when they are dealing with small firms whom they perceive to be higher than average risk in terms of survival (Sako, 2003; Paquette, 2004; Schoensleben, 2004; Wannenwetsch, 2004). This means such large firms often purchase only a relatively small proportion of their requirements of a particular good or service from one supplier (Knolmayer *et al.*, 2002; Seaver, 2003; Ryall and Sadler, 2003). By capitalising on the information gained from relatively low cost customer service appreciation surveys entrepreneurs can

increase business from their existing customer base using the principle of leveraging. This principle can be demonstrated by considering a hypothetical medium or large sized customer spending 20 per cent of their total annual spend on a particular product or service with a small firm. If the entrepreneur can persuade the customer to increase spend with them to 30 per cent of annual total spend this has the effect of increasing the entrepreneur's business from that particular customer by 50 per cent. This is the simple principle of leveraging. Information gained through the application of a simple "customer service appreciation survey" allows a firm to build and increase the proportion of total spend with the supplying firm (see Van Bennekam, 2002; Schneider and White, 2004).

Customer service and satisfaction

Customer service has traditionally been viewed as a low priority activity usually given to junior staff and was effectively a complaints department (Gray *et al.*, 2001). In the 1990s customer service was seen by many as providing a competitive edge (Tschohl, 1991; Semon, 1993; Jones, 1993). Today, the evaluation of customer service and satisfaction has become a major monitoring and control tool (Hill *et al.*, 2005; Freemantle, 2004 (see also Schneider and White, 2004)). An effective customer service strategy can be a significant strategic weapon, which, if used with imagination, can lead to a sustainable competitive advantage (Zeithaml and Bitner, 2003). As Parasuraman *et al.* (1990, p. 9) state:

> In the long-run, the most important single factor affecting a business unit's performance is the quality of these products and services, relative to those of the competitor.

Whether the firm is engaged in supplying products or services, high levels of quality customer service helps create repeat customers, i.e. those who come back again and, who often "pass on the good word" to others (Shillito, 2001). Parasuraman *et al.* (1990) have expounded both tenets of service quality and the "GAPS" model that help companies understand the concept of service quality, the measurement of service quality and the diagnosing of problems (see also Varey and Ballantyne, 2004). Variation on the GAPS model and SERVQUAL instruments are used today by specialist firms, e.g. The Leadership Factor which has taken the work of Parasuraman (1990) and others to a more sophisticated level (Hill *et al.*, 2004).

Customer satisfaction is a subjective measure of a company's performance (Brown, 2003) and encompasses both customer expectations and an apposite level of product of service delivery (Gray *et al.*, 2004). An integral part of any measurement programme is the inclusion of key elements of customer service and satisfaction (see Garrett and Gray, 2004) and guidance on these can be obtained from customer service appreciation surveys (Hill and Alexander, 2005, Ford *et al.*, 2001).

Methodology: exploratory group discussions, questionnaire survey and a case study approach

Triangulation

The authors have used a form of "triangulation" to reach conclusions for the research discussed in this paper. In social science methodology it is used to describe a framework where the researcher uses multiple (or at least two) data sources to reach a conclusion (see Wikipedia, n.d.). Triangulation is used extensively in all kinds of

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management research. For example Love *et al.* (2000) discuss the merits of triangulation in construction management.

Blaikie (1991) gives a detailed description of the original concept of triangulation in surveying, navigation and military strategy. Essentially, the aim is to establish the position of a point, which can be achieved several ways:

- A point can be located from two others of known distance apart, given the angles of the triangle formed by the three points (see also Opperman, 2000).
- A topographical feature can be plotted by observing it "from a number of known positions, thus forming a triangle in which one side and the adjacent angles are known" (Blaikie, 1991 p. 118).
- An unknown position can be fixed by measuring, from it, the angles to at least two other known positions (resection).

The epistemological assumption is that the set positions are not open to interpretation, but can be established through a direct correspondence between the positions and sensory experience of them (Massey, 2006).

1. Exploratory qualitative depth and group discussions

Exploratory depth and group discussions were conducted for both of the cases presented. For case 1 (Wholesale Elecro Ltd) group discussions were conducted with four members of the senior management team. Team members were also interviewed individually. The firm was a family-owned business and so all four of the team members were family members. One was the founder of the business and chairman; one of the sons was the chief executive, one the procurement manager and the other operations manager. Group discussions were spread over five sessions with each session lasting approximately 90 minutes. One individual depth interview was conducted for each member of the group as well as with four additional branch managers each lasting approximately 45 minutes. Every aspect of the business was discussed and investigated. The discussions were taped and transcribed. Thematic content analysis was conducted on both the tapes and the typed script and the salient points highlighted and prioritised. This information was then used in the construction of a questionnaire to be used in stage two of the research exercise.

A similar exercise was undertaken for case 2 (a regional department store (RDS)). Again this was a family-owned business with the chairman and some members of the senior management team part of the family. The managing director of the business was a non-family professional manager. Group discussions were held on four occasions with between four and six members of the senior management team. The chairman and two of the family members were present at all four sessions whereas different management personnel including the managing director were present at some and not others. Group discussions lasted approximately 90 minutes. A single individual depth interview was conducted with each of the family members and the non-family managing director. These lasted approximately 45 minutes each. An additional group discussion was also carried out with a range of staff. Again the present situation of the business and perceived problems were discussed in some detail and the conversations taped for further thematic content analysis. The interviews were transcribed and content analysis conducted on the script and tapes. The main areas were identified and

prioritised. From these questions were formed and included on a questionnaire to form the second stage of the research exercise.

2. Questionnaire-based survey

The survey approach used a census of all of the "clients" customers in the case of case 1 so that choice of sample or sampling technique was not an issue as there was no sampling involved. The company in case 1 had approximately 1,250 existing customers on their books. A questionnaire was designed, partly using the results of the group discussions with senior management described above, and sent by post along with a covering explanatory letter and pre-paid envelope to all 1,250 customers. In total, 359 usable questionnaires were returned. Analysis was conducted using mainly frequency analysis and cross tabulations comparing respondent's answers to questions and cross tabulating by the classification questions included on the questionnaire. These included type of industry, size of firm, amount spent on electrical goods and equipment in a year, amount spent with organisation, location, etc.

In terms of case 2 a non- interlocking quota sample was used. The quota control used was "area of the store" i.e. department. A questionnaire was designed for use in an interviewer face-to-face survey from the interviews conducted with management and described above. The organisation surveyed in case 2 was a family-owned department store based in the centre of a northern city. The store had a regular "core" group of shoppers of around 2,000 customers although many other less regular customers visited the store from the city and surrounding areas. The store had ten main shopping departments such as clothing, household goods etc. It was decided to sample from each of the departments on an equal basis. Consequently 50 customers were interviewed (50 successfully completed interviews) on a face-to-face basis in each of the sampling points over a five-day period using interviewers trained and briefed for the exercise. Analysis was conducted using mainly frequency analysis and cross tabulations comparing respondent's answers to questions and cross tabulating by the classification questions included on the questionnaire. These included age, gender, postcode, etc.

3. Case-study approach

In the final stage of the methodology the authors have used a case study approach to consolidate the internal secondary data from the firms, the exploratory depth interview and group discussion data and the census/sample survey data. This was considered to be the most appropriate methodology to demonstrate the effectiveness of the "leveraging" framework suggested earlier (see also Yin and Campbell, 2003). It is recommended that the researcher determines what approaches to use in selecting single or multiple cases to look at in depth and which instruments and data gathering methods to use (Emory and Cooper, 1991; Lancaster, 2005). These authors have used multiple (two) cases and questionnaire surveys and qualitative interviews as data gathering methods. When using multiple cases, it is recommended that each case be treated as a single case (Eisenhardt, 1989). The conclusions from each case can then be used as data contributing to the study as a whole, but each case remains a single case and can also be considered individually (Robson, 2005; Lancaster, 2005; Schmidt, 2003). The two cases in this paper are discussed individually and drawn together to show similarities and to produce a final conclusion (see Capehart and Capehart, 2005;

Blaze-Corcoran and Wals, 2004). The authors have used SMEs because it is from this perspective that this paper has been written (see Yin, 1984; Robson, 2005; Stake, 1995). Yorkshire has been used as the sampling area of the UK because this is where the authors were practising as consultants and from whence the data originated (see Hamel *et al.*, 1993).

Case 1: Wholesale Electro Ltd (WEL), West Yorkshire
Background. WEL is a small family-owned electrical wholesaler (called a factor in the UK) based in West Yorkshire, UK, with four branches in the region and annual turnover is approximately £3 million (US$5.1 million). It is a private limited company. Customers include independent (jobbing) electricians, small electrical contractors (two to five employees) and the maintenance departments of medium, and sometimes, quite large firms in the area. Their product range covers tools and testing equipment, safety wear and general electrical equipment and fittings. Such a range constitutes most of that which electricians or maintenance engineers would need on a regular basis. Particularly expensive equipment or out of the ordinary products can be ordered from the firm's own catalogue or from a range of manufacturers' brochures which the firm supplies. Orders can be placed in person by calling at the trade counter or by telephone or mail. A technical telephone advisory service is available.

Scenario. The company has been trading for six years (at case date) and in that time had grown from a total turnover of £250,000 ($425,000) in the first year. The management of the company, a family comprising of four equity (stake) holders, had felt that they had spent so much time growing the business and finding new customers that it had lost touch with them. Management thought that it was doing the "right thing" since in their opinion the firm had achieved quite spectacular growth, but evidence was circumstantial and intuitive. They decided to commission a customer service appreciation survey which authors conducted.

Method. The survey involved the use of a postal questionnaire, which was administered to all of their existing 1,250 customers. Its purpose was to establish the degree of satisfaction or dissatisfaction of various elements of the business. The postal questionnaire, the covering letter, the return envelope and the outgoing envelope were designed and selected to be of the highest quality. The questionnaire, letter and envelope had the firm's name and logo incorporated and all documents were professionally produced and printed. Particular attention was paid to the wording of the covering letter, principally to maximise the response rate of the survey, but also to deliberately convey the impression of concern and care for customer needs. The intention was to demonstrate to the customer that WEL was a highly customer-oriented, market-driven firm that regarded customer care and customer satisfaction with utmost importance. After two weeks, a further letter along with all the original material was sent to non-respondents and after a further two weeks the survey was closed.

Results. In the first two weeks the company received 265 completed questionnaires, the second wave of responses produced another 94 making a total of 359 replies. Questionnaires had been pre-coded to provide the following classification variables: Size of firm, type of customer, geographic, location, brand used normally and total spend category with WEL. In order to provide the information to classify respondents in this way, management had to "clean" and reclassify their customers' database,

which in itself was highly beneficial exercise. Many of the non-respondents were "returned to sender" (150 firms) because they had ceased trading or moved. Management themselves were unaware of these changes and once again had to update and "clean" the database. This exercise was in itself of significant value to the company and would yield future value when they came to use it for direct marketing using direct mail and telephone marketing. The questionnaires had been constructed on the basis of depth interviews and group discussions with all four partners and each of the four branch managers. The interviews were taped with transcripts produced for analysis. Thematic content analysis was applied to the interview transcripts to identify salient issues for future study using the questionnaire survey. Once again, this additional "in-company" qualitative research was of significant value to management as it provided a consolidation of views from "key" internal staff. Important areas of concern were identified and incorporated into the questionnaire as questions and rating scales. The returned questionnaires were analysed in terms of frequencies and cross tabulations using SPSS. Results indicated a number of shortcomings, which needed to be addressed. Since these could be related to specific customers who were "listed off" during the analysis, particular actions could be undertaken for specifically identified firms. We offer four examples from the wealth of information obtained.

(1) Since both total spend and the proportion of that spend with WEL were obtained, customers could be prioritised and targeted appropriately. This part of the exercise was fundamental in providing information to enable management to formulate strategies to "leverage" sales from customers spending a relatively low percentage of their total spend with WEL.

(2) Companies who had not received a sales brochure, price list or received a personal sales call were noted and sent such next week.

(3) Consumer interface covering attitude of staff, queuing, availability of parking, technical help was again revealed specifically by client company.

(4) Information was provided on the performance of individual field sales staff.

By relating the analysis of the questionnaires to specific companies, the authors were able to prepare highly operational action plans for the short, medium or long term. These plans, being customer specific, formed the basis for targeted future marketing improvements and acted as criteria for future evaluation. Generally the firm was able to bring about improvements in the following areas:

· Increased customer spend and profit margins through leveraging.

· Evaluation of internal marketing efficiency, particularly that of delivery staff.

· counter staff and sales force effectiveness.

· Quality of technical backup and advice and usefulness of catalogues and price lists.

· Monitoring and evaluating customer appreciation and service, e.g. stock availability, delivery reliability and speed of order processing.

As a result of carrying out this survey, WEL was able to address a number of key marketing weaknesses in a customer specific manner. They were able to improve dramatically the overall level of service to their existing customer base. Additionally,

they were able to increase significantly both total sales and profitability. Overall, they were able to increase sales by approximately 27 per cent from existing customers within 12 months. This is an average figure since they were able to leverage some customer's spend by 100 per cent or even more. The information provided by the survey enables management to carry out remedial, internal and external marketing actions. A follow up telephone sample survey based on a representative selection of 100 firms carried out 12 months after the postal survey indicated a significant improvement in the perceived level of service offered to customers. The total cost of the consulting was £1,500 (US$2,550) with the follow up telephone survey costing £700 (US$1,190). The firm chose to use consultants, but could have done the work themselves. A final point is the achievement of a public relations outcome from the exercise, which in itself was of considerable value in money terms. Because the covering letter had been drafted with great care with good quality print, the inclusion of a pre-paid envelope and the use of high quality stationery, the telephone sample follow-up study indicated that the company was perceived as more "caring", and customer oriented as a result of carrying out the research exercise.

Case 2: a regional departmental store (RDS), England
Background. RDS (the actual name has not been disclosed at the request of the owners) is one of a few family-owned department stores in the UK and is located in the centre of a traditional Northern industrial town. The firm started as a small shop situated in the city outskirts some 90 years ago, selling textile products such as curtains and towels often bought in bulk as "seconds" and heavily "stunted" (frequent use of below the line sales promotions). Today there is still only a single store, but this extends over three floors of a fully-owned building in the middle of the city, comprising some 750,000 square feet of retail selling space and 500,000 square feet shared parking facility. The firm offers a range of products, which are mainly textile-based and they have introduced recently a number of concessions into the store. On the ground floor is clothing and accessories; on the first floor is fabric both made up and unmade, and a made-to-measure curtain service is offered; the second floor comprises furniture and accessories including beds and bedroom furniture, living room furniture, carpets and rugs, etc.

A national retailer owns the two other similar well-established department stores both in type and product range in the city centre. In terms of market positioning, one of these stores is slightly "down market" from RDS, is keener on price and uses "stunting" (promotions) more aggressively. The other store is positioned slightly "up market" in terms of product range, quality, etc. and consequently charges a higher market price in some areas and tends to use "stunting" less aggressively. There is a great deal of overlap in product range amongst the three stores and they are continually vying for position. All three are actively "stunting" in this overlap area. All three are well established and have been in the city centre for three generations. Each has its own core of loyal customers, some of whom visit with their children, and other family members. People from this city are traditional in values and culture like many people who have lived in "working class" Northern Britain, and not only reside in the same area from one generation to another, but often tend to follow in their parents' footsteps in terms of shopping habit and loyalty.

Scenario. The store's problem was to retain customers, whilst not wanting to change their market positioning. The threat to their existing market position came not only from the other two stores, but also from an indoor shopping complex on the outskirts of the City. They did not know what their customers thought of them, e.g. was their patronage due to traditional inertia or because they were offering good value and competent customer care? The family that owned the store virtually thought of their customers as "part of the family". The company chairman took a caring attitude towards customers and was often to be found floor walking and talking to customers.

Methodology. Individual depth interviews were undertaken with each of the family members and the store manager. These senior staff were then grouped together for a series of group discussions. A group discussion was also carried out with a range of staff. Both depth and group interviews were taped and transcribed and provided valuable data, particularly about staff attitudes, even in their raw form. The results enabled areas for further investigation through a customer appreciation survey. Questionnaires were used and the survey was carried out on a sample basis and administered by personal interviews in the store. A minor beverage/food incentive was given for participation. Six female interviewers were briefed and positioned in key areas of the store and they wore official store security badges (ten areas were covered in all). Information about the survey and participation incentive was posted at the store entrances. The quota sample of 500 questionnaires were analysed by age, sex, frequency of visit, degree of store loyalty and in particular their residential area by postcode (zip code).

Results. Once again, results indicated a number of areas that needed to be addressed and illustrative examples are:

- Certain floor layouts needed to be changed along with the quality of fittings.
- Dissatisfaction with certain product ranges.
- Operational improvements to the store in its day-to-day management routines.
- The recognition and exploitation of areas of strength such as the restaurant.
- Corporate work-wear worn by sales staff was perceived to be a decade out of date.
- A postcode analysis enabled them to design locally targeted communications via "through-the-door" coupons and careful selection of various "free" local newspapers. Local radio advertising was used and well focused.

Because of the labour intensive nature of data collection the cost was £2,500 ($4,250), which was about 1 per cent of the cost of improvement measures subsequently undertaken. A follow up survey of 100 customers six months later cost an additional £500 ($850). Two years after the survey, the store has suffered some decrease in sales as a result of out-of-town developments, but this was so for all of the city centre shops. Nevertheless, the follow up survey did indicate that customer satisfaction has improved. Once again, as in the case of the previous example, the follow-up survey seemed to indicate that customers who were surveyed thought the exercise to have been largely for their benefit and consequently viewed the company as more "caring" and as taking the trouble actively to seek out customer opinions. Hence, by careful design, the research exercise was also able to deliver an additional public relations dimension.

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Conclusions

This paper has argued both from theoretical and practical viewpoints the need for growing entrepreneurial firms to maximise returns from a particular approach to managing growth before contemplating more risky and resource intensive strategies. This article demonstrates how small entrepreneurial firms, many of, which have only limited resources to devote to market research activities, can profitably employ relatively low cost techniques in the area of customer service evaluation to "leverage" extra business and increase profitability from their existing customer base. Particular emphasis is placed on the concept of "leveraging" which the authors define in this context as the process of increasing the proportion of total spend from a particular customer on a given class of product or service with a particular supplier.

In many areas of commerce and industry products and services are increasingly taking on the characteristics of undifferentiated commodities. SMEs in particular must offer something different; something that adds value to the customer's experience of trying them out or using them regularly, so as to draw such customers away from using more proven and well established larger firms. Small firms can rarely compete on matters such as price, but they can compete on service. They can use service to enhance their perceived value in the eyes of potential and existing customers. They can also use service to compensate for their lack of potential price competitiveness when compared to larger firms and use it as a tool to cement relationships with a view to building long-term repeat, sustainable business. An important first step is the use of customer appreciation surveys.

Both research exercises discussed here demonstrate that many of the problems facing small entrepreneurial firms who are seeking ways of either growing or just protecting their existing market position, can be addressed by the use of inexpensive and straightforward marketing solutions that are well within the capabilities of an entrepreneur who may well be a non-marketing specialist. Using this framework there is a real possibility for small firms to significantly improve sales and profitability from their existing customer base, thereby fully exploiting their most important asset: their existing customers. This approach represents a more measured, controlled, less expensive and less risky approach to growth than a policy of new customer acquisition. The simple methods recommended here have been proven to be effective and cost effective.

Finally, it can be seen from the examples presented that a customer service appreciation survey can yield operationally useful and actionable, customer specific information which can be used creatively by entrepreneurs to bring about improvements in business performance in a short space of time. Such surveys can also deliver a significant public relations dimension, which is valued by customers at little or no additional cost to the main survey.

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Relationship Marketing: Its Key Role in Entrepreneurship

John Day, Aftab Ahmed Dean and Paul L. Reynolds

MARKETING AND ENTREPRENEURSHIP ARE RELATED ideas, good entrepreneurs practice marketing, and some of the best marketing behaviour is entrepreneurial—but they are not the same. This article considers one aspect of marketing—relationship marketing. Much of the current literature suggests that the creation of a sympathetic internal culture is an important factor in the success of relationship marketing but we argue that a more important variable is the entrepreneurial orientation of the SME. Thus the more appropriate consideration is the link between relationship marketing and the entrepreneurial capacity of the SME.

To give structure to our argument we have used the emerging marketing entrepreneurship paradigm as a framework. This has two advantages: firstly, it does not assume that marketing and entrepreneurship are the same; secondly, it allows us to consider appropriate definitions of entrepreneurship and marketing, and, their relationship—in this case the link between relationship marketing and entrepreneurship.

This article proceeds by discussing some general notions about entrepreneurship prior to discussing the contemporary relationship marketing literature which underpinned the questionnaire used. We then consider why marketing and entrepreneurship are not one and the same; the link between relationship marketing and entrepreneurship; and the measurement of the entrepreneurial capacity or orientation of the SME. In order for our "best practice" ideas to be of use we need to persuade the reader that entrepreneurship can be learned, so that less entrepreneurially inclined SMEs can not only recognise good practice but can implement it. Finally, we invite the reader to consider the relevance of our findings to their particular business.

The authors argue that relationship marketing can readily be adopted by a small entrepreneurial business but it will need to be adapted to the entrepreneurial environment into which it is introduced. Results from initial research suggest that entrepreneurial enterprises employ relationship marketing more effectively than less entrepreneurial organisations and they derive commercial benefits such as higher growth rates and fewer customer defections. The authors argue that entrepreneurship can be learned and so less entrepreneurial firms have the potential to learn from more successful entrepreneurs. They offer some specific recommendations but they recognise that the task is not easy because the SME has to create an internal culture that is capable of both embracing relationship marketing and being alert to opportunity. © 1998 Elsevier Science Ltd. All rights reserved

Entrepreneurship

One objective of this article is not to deliver a history of the study of entrepreneurship but we need to offer three cautions. Firstly, we still have little overall consistency in the defining of the term 'entrepreneur', perhaps given the nature of the entrepreneurial act that is not in itself surprising. The whimsical use of Winnie the Pooh by Kilby[1] still serves as a good general warning to us all!

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"The search for the source of dynamic entrepreneurial performance has much in common with hunting the Heffalump. The Heffalump is a large and rather important animal. He has been hunted by many individuals using various ingenious trapping devices, but no one so far has succeeded in capturing him. All who claim to have caught sight of him report that he is enormous, but they disagree on his particularities. Not having explored his current habitat with sufficient care, some hunters have used as bait their own favourite dishes and have then tried to persuade people that what they have caught was a Heffalump. However very few are convinced, and the search goes on".

Secondly, that search has been long and is still continuing. Cantillon[2] in 1751, was probably the first western economist to have recognised the unique attributes of the entrepreneur. He argued that the entrepreneur, in essence, bought at certain prices and sold at uncertain prices and therefore assumed the role of risk taker. This search has involved, and is likely to continue to do so, several academic disciplines. For example those readers and strategists preferring to quote from Sun Tzu[3] 'The Art of War' might select the epigram:

"All men can see the tactics whereby I conquer—but what none can see is the strategy out of which victory is evolved".

The third caution is that if entrepreneurship is considered to be a unique attribute, and one in scarce supply, then we would truly endorse the Sun Tzu quotation, and this article could only report the good but not transferable practices of the successful SME. So we would have no practical advice to offer to those who do not practise such behaviour, and, presumably offer nothing of interest to those already practising this behaviour.

Fortunately we take the view proposed by authors such as Drucker[4] that entrepreneurial behaviour, at least to some degree, can be practised by all—thus we can offer sensible managerial lessons that can in full, or part, be adopted by SMEs. We discuss this more seriously below but for the moment assert that our opinion is not along the lines of Bryson ...[5]

"Among the many thousands of things that I have never been able to understand, one in particular stands out. That is the question of who was the first person who stood by a pile of sand and said, 'You know, I bet if we took some of this and mixed it

with a little potash and heated it, we could make a material that would be solid and yet transparent. We could call it glass'. Call me obtuse, but you could stand me on a beach till the end of time and never would it occur to me to try to make it into windows".

Relationship Marketing

Relationship marketing as a concept, and practice, has become well established in recent years and involves the company in assessing and modifying their corporate culture. So we have both moved away from transactional models and developed the sophistication of the approach. For instance, in 1995 Gummesson[6] was writing about the thirty tenets of relationship marketing rather than the more often used and conventional '4P' or '7P' models. The success of relationship marketing might also be measured by the small but discernible academic backlash whereby some authors, for example, Chaston,[7] feel compelled to remind us, and correctly so, that sometimes the customer is happy with simple transactional exchanges.

Gummesson[8,9] Gronroos,[10] Houston and Gassenheimer,[11] and Peppers and Rodgers[12] levelled the following, but not atypical, criticisms against traditional marketing: the inability to discriminate and differentiate between appropriate service levels and customers; a focus that is synonymous with the expensive process of customer acquisition; the use of incentives and/or promotions that do not differentiate between loyal and/or profitable customers and casual transactions; incentives and/or promotions which do not always reach the most valuable customers, and finally, displaying limited respect for internal marketing. Christopher et al.[13] encapsulate much of the debate as shown in Table 1 and our definition of relationship marketing is the adoption by SMEs of those practices as detailed in the right hand column of this Table.

Some authors such as Cardwell[14] further argue that a company's very survival in the 1990s will depend upon their moving closer to the customer, fully under-

TABLE 1. The marketing strategy continuum

Transaction focus	Relationship focus
• Single sale	• Customer retention
• Discontinuous customer contact	• Continuous contact
• Focus on product features	• Focus on product benefits
• Short term scale	• Long term scale
• Little emphasis on customer service	• High emphasis on customer service
• Limited commitment to meeting customer expectations	• High commitment to meeting customer expectations
• Quality is the concern of production staff	• Quality is the concern of all staff

Source: Christopher et al.[13]

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TABLE 2. The advantages of a relationship marketing strategy	
	References
(1) Close relationship with customers	
The company develops over time tighter ties with its customers. These may be technological, knowledge-related, information-related or social in nature. This knowledge gives the company an immense competitive advantage.	Craig,[21] Gronroos[10, 16]
The more that customers educate the company about their individual tastes, the more reluctant they will be to repeat the process with another supplier.	Clark and Payne,[22] Peppers and Rodgers[20]
(2) Improvements in customer satisfaction	
The company can monitor customer satisfaction as the company has direct knowledge of how satisfied its customers are with the offering.	Gronroos[16]
The dialogue with each customer allows the company to find additional (or to tailor) products/services for the customer.	Clark and Payne,[22] Palmer[23]
The company will be able to anticipate and meet the needs of their customers.	Craig,[21] Peppers and Rodgers[12]
(3) Financial benefits	
Long term relationships, where both parties over time learn how to interact with each other, lead to decreasing relationship costs.	Congram,[24] Gronroos[10]
The customer will pay a price premium for the product/service.	Clark and Payne,[22] Fay,[25] Gronroos,[22] Peppers and Rodgers[20]
Loyal customers are more profitable.	Fay,[25] Reichheld and Sasser[26]
Customers will refer new prospects.	Clark and Payne,[22] Fay[25]
Acquiring a new customer costs more than retaining an existing one.	Clark and Payne,[22] Desatnick[27]
Losing one customer not only loses the revenue from that sale, but also the expected cash flow that could have been generated over the lifetime of the relationship.	Reichheld and Kenny[28]
Improved customer retention also leads to increased employee retention.	Clark and Payne,[22] Reichheld[29]

standing customer needs and wants, building a relationship and thus creating consistent customer dedication. Therefore, companies need to pursue a policy for retaining existing customers (Dwek),[15] although, this is not to deny that sometimes a one-deal-at-a-time approach may be a good strategy (Gronroos).[16]

One might argue also that the 1990s have seen the acceptance of the relationship concept because of the growth of perceived product parity, increasing competition, increasing customer sophistication and price sensitivity, plus the reduced cost-effectiveness of traditional promotional media (see Marketing Guide).[17] Authors such as Gummesson[18] and Christopher et al.[13] have suggested that relationship marketing is a new paradigm, whilst practitioners such as Bain et al. (see Reichheld)[19] and Peppers and Rodgers[20] recommend that companies focus their efforts on customer retention and development to increase their sales. The assumed advantages gained by the adoption of such a marketing approach are summarised in Table 2.

Marketing and Entrepreneurship

The notion that marketing and entrepreneurship are not one and the same is found in the work emanating from the University of Illinois at Chicago/American Marketing Association, and latterly the Academy of Marketing, Symposia.[30] In this article we introduce three of these approaches. The first is to note that some authors distinguish between an entrepreneurial orientation and a marketing orientation. Miles, Russell and Arnold[31] take this a stage further and compare those two orientations to a quality orientation. Their preliminary findings conclude that:

"a quality orientation appears to augment the customer satisfaction, needs focus, integrative approach of a marketing orientation with the innovative, proactive, risk accepting tendencies of the entrepreneurial orientation".

Connected clearly but not the same, as Carson[32] argues:

"There are similarities and dissimilarities between entrepreneurial decision making and formal marketing planning and management competencies and contact networks".

He then discusses those competencies that should be shared by both the entrepreneur and the successful marketing manager such as the development and use of personal contact networks, the need for good analytical and judgmental decision skills, and innovation and creativity. However, he does feel that entrepreneurial decision making is much more informal,

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MARKET SITUATION

	Continuous	Discontinuous
Perceived needs	Traditional Marketing (A)	Strategic Interface (B)
Unperceived needs	Opportunistic Interface (C)	Pure Entrepreneurism (D)

DISCOVERY OF NEEDS

Note: This grid was developed by Omura *et al.*, the dimensions used are Schumpeter (*Market Situation*) and Kirzer (*Discovery of Needs*)
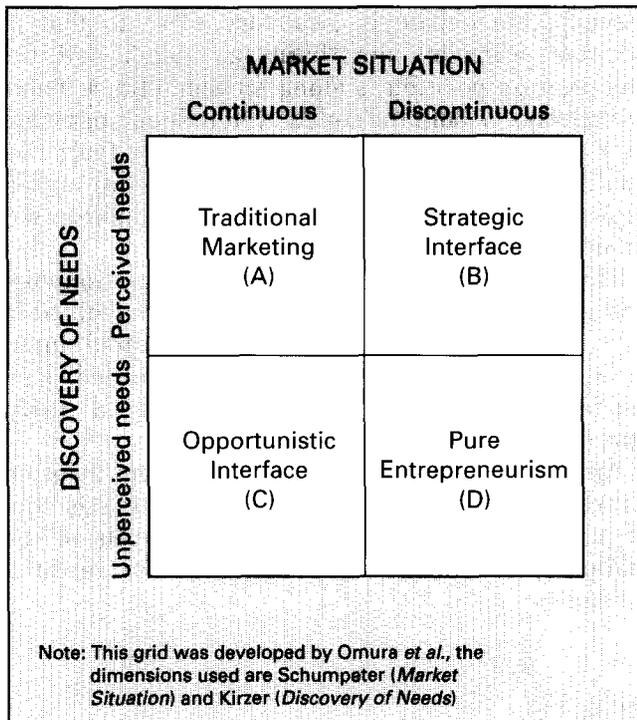
FIGURE 1. The marketing/entrepreneurship matrix.

haphazard and opportunistic than a more formal, sequential and system-orientated marketing decision making process.

Finally, we might argue for an approach where entrepreneurship is defined rigorously and marketing takes on a different role depending upon market conditions. This is the work of Omura *et al.*[33] The dimensions of the grid in Figure 1 are Schumpeterian[34] and Kirznerian[35] definitions of entrepreneurship. In the former the entrepreneur exploits large 'fractures' in economic life and carries out at least one of the following strategic acts:

- produces new goods
- utilises new production methods
- creates and exploits new markets
- uses new sources of supply
- is responsible for the reorganisation of industry practice.

Henry Ford and the Model T is a good encompassing example. He needed to build a mass production system in order to deliver the vehicle at a price that would change the car from a middle class indulgence to a working tool. The Kirznerian entrepreneur works in markets that are not initially in equilibrium and is ascribed the role of bringing together the buyer and the seller whom would not previously have been com-

mercially aware of each other, and thus, have been unable to conduct a beneficial exchange. Alternatively, it is the Kirznerian entrepreneur who realises the unperceived needs of the consumer by exposing them to new opportunities and products. A contemporary example being the current state of the Internet—with relatively low UK household personal computer ownership and connections to the net, the potential is still to be captured by entrepreneurs. The current competition between two incompatible connection devices (via the standard PC or via a dedicated decoder connected to a TV set) showing that the market has not yet settled down to an equilibrium, and so, a whole range of mutually beneficial exchanges still awaits the marketplace.

As Figure 1 shows in Quadrant (A) there is no entrepreneurial activity given that consumer demands are well articulated and known and the economy is not in turmoil. Marketing becomes fairly impotent and is reduced to gathering information about known preferences. In Quadrant (D) there is great flux and turmoil, consumer needs are not well articulated, or if they are, change rapidly. Opportunities abound for the company able to recognise and exploit them. Marketing has a far more proactive and aggressive role to play. Referring back to Miles *et al.*,[31] they argued that there would be a greater need in turbulent environments for any one of the three orientations that they discussed. The notion of the entrepreneur discussed by Carson fits perfectly into Quadrant (D).

Given the above debate the authors felt that a study which looked at relationship marketing in the context of an SME's entrepreneurial behaviour would yield interesting insights for the relationship marketing debate. Thus our research focuses on both the marketing and the entrepreneurial behaviour of the SME. The marketing strategy adopted by an SME will be shaped and influenced to a large degree by the nature and competence of the entrepreneur and Narvin and Slater[36] showed that companies with a strong marketing focus performed better. Thus we argue that the entrepreneurial SME will have a greater (relationship) marketing orientation than their less entrepreneurial counterpart. This will be seen through the key components of any relationship marketing strategy—customer retention and development.

Assessing the Entrepreneurial Orientation

As we have suggested previously, there has been, and still is, a wide diversity of definitions of both the individual and the act (see, for example, Chell and Haworth;[37] Ginsberg and Buchholtz).[38] Some authors see the act of creating the organisation as the defining moment whilst other argue for the recognition and exploitation of serial opportunity. In team managed

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SMEs we need to consider the transmission mechanism by which the entrepreneurial behaviour of the owner is permeated throughout the SME. Most contemporary authors would accept that a behavioural definition of the entrepreneur "they are what they do" rather than a trait approach "they are as we describe them", for instance—male or female; energetic, etc. is the more meaningful. Several authors argue that it is possible to use psychometric testing to measure entrepreneurial attributes, indeed, several general entrepreneurial scales do exist, and additionally one sometimes sees standard personality tests such as Myer-Briggs used. Impartiality on behalf of both the practitioner and the investigator however can be clouded by the social role that entrepreneurs are often expected to play, crudely that of a hero. An opposite view is that at worst, 'entrepreneur' can be a pejorative description of certain business behaviour.

Covin and Slevin[39] consider an entrepreneurial orientation having three dimensions—risk taking, innovation and proactiveness, and the attendant entrepreneurial behaviour being reflected in management style and process. For example, a conservative management style would be reactive to market changes, as opposed to the proactive stance taken by an entrepreneurial management style. Chell et al.[40,41] classify the business owner along a spectrum from entrepreneur through to caretaker with quasi-administrator and administrator as intervening hybrid positions. Entrepreneurs are seen as being alert to opportunities and proactive in taking the initiative and trying to control events, whereas, caretakers would be much more concerned with effective management but well within their perceived comfort zone. Hence in our study we categorised SMEs entrepreneurial orientation by the nature of their planning activity, and to cross-check this classification we used the Schumpeterian criteria discussed previously.

Returning to the consideration of whether our results can be used by SMEs to improve their relationship marketing performance, there are two issues: firstly, the extent to which our results can be generalised away from the particular industry we have studied— this we leave for the reader to consider in the light of their own experience; secondly, the extent to which entrepreneurship is seen as an inherited characteristic, the old nature versus nurture debate. We would agree with the view taken by Drucker[4] that entrepreneurial behaviour is not confined to a select group of individuals. He argues that entrepreneurs act as innovators and through numerous case studies drawn from the private and public sector demonstrates that such behaviour can be found throughout the United States economy. Other authors, such as Casson,[42] argue that it is the entrepreneur alone who possesses intuition and foresight, and because of that entrepreneurial decisions cannot be delegated to professional managers within that organisation. In essence, the debate is also very close to that of whether managers are 'born or made', and the compromise position is along the same lines. There will always be both the stellar entrepreneur and manager but there is scope also for raising the (variable) quality of managers and entrepreneurs—we are all probably capable of behaving with a little more enterprise given the right stimulus.

The authors decided to use a mailed questionnaire and to draw from that twenty SMEs to be involved in a more detailed qualitative semi-structured interview, all the interviews were tape recorded, subsequently transcribed and then analysed using appropriate qualitative techniques.

Apart from some sample quotations from the semi structured interviews in Table 3, this article is concerned only with the quantitative analysis of the mailed questionnaire. (See appendix for research method)

Results

Table 3 is an introductory generalisation of the results that does not distinguish between the entrepreneurial and non-entrepreneurial SMEs. The left hand column concerns the bedrock of relationship marketing, the retention and development of a customer base. The responses being the answers most cited by the respondents to the mailed questionnaire. The brief quotations in the right hand column, are taken from our first general look at the results from the qualitative data (the twenty interviews), are the only part of the qualitative data reported in this article, and are included simply to impart some humanity to that data!

Analysis of the data in the mailed questionnaires suggested that all participants acknowledged and claimed to use relationship marketing to some extent. However, further analysis of the data through comparing the entrepreneurial to non-entrepreneurial SMEs, showed significant (statistical) differences. We have reported this in Table 4 by showing those categories where the entrepreneurial sub sample exhibited a statistically significant difference to their non-entrepreneurial competitors.

Not unsurprisingly, the return on their behaviour is that they are larger (by employee numbers), experienced greater growth and the group as a whole had, on average, fewer customer defections. This defection figure is calculated from the mean values reported in the Appendix (Table 5). Cross-checking our measure of entrepreneurial behaviour, they behave like the Schumpeterian entrepreneur discussed earlier. This is both reassuring in respect of how we have measured entrepreneurial orientation, as well as giving an insight into their actual behaviour in practice—they are more adventurous and do innovate.

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TABLE 3. Customer retention and development programmes—some typical responses

Characteristics discussed and responses	Sample quotation
(1) **Factors significant to creating a loyal customer:** consistent service, reliable delivery, offering extra service, empowering employees	"... I would say pre-sales consultancy and post sales service, which I would bundle together as a whole service area"
(2) **Improvements gained from developing close relationships with customers:** product quality, service quality, market awareness, profitability	"We continue to meet them, whether or not the customer has a problem, so that we can proactively say to them ..."
(3) **Frequently observed qualities in a loyal customer:** purchases at standard price, regularly purchases, doesn't make risky decisions, customers business is growing, older managing director	"A truly loyal customer will not even look anywhere else, they would trust us to give them the best price, and the best deal without having to question us".
(4) **Importance of communicating with customers:** determine state of relationship, determine customer needs, solicit other business, ask for referrals	"The bottom line is opportunities to sell. We make sure that the client is happy, if they are happy, we will get referrals, if they are not happy we need to know about it, and keep our name in their thoughts".
(5) **Opportunity to create new products/services:** customers business is growing, market awareness on our part	"Certain customers demonstrate more ability, and have more emphasis on planning than others, and customers that plan ahead tend to be able to predict what is going to happen".
(6) **Opportunity to leverage more business:** determine state of relationship, offer extra service	"Once we have created a relationship we try to be more involved ... so that when they commit to buying from us that is the beginning of the relationship rather than the end of it".
(7) **Greatest cost of acquiring a new customer:** administration, discount pricing	"We try to make it a quality (offering) and we spend a lot of in-house hours designing the mailer ... a lot of time researching that market, then designing something we feel would hit home to the market".

Importantly for the thrust of this article, these entrepreneurial SMEs are practising relationship marketing more thoughtfully and competently as shown in the last section of the table. All the SMEs in the sample may proclaim the virtues of relationship marketing but the entrepreneurial SMEs use and employ it more effectively. They are more likely to ask existing customers for referrals, less likely to use discount pricing as a crude promotional strategy and pay more attention to crucial aspects of internal culture. Hence our assertion that the key relationship to consider is the one between relationship marketing and entrepreneurial orientation.

Because our industry sector contained growth SMEs, we were able to carry out cross-tabulations to determine the strength between SME growth and the individual relationship marketing variables. One significant result of particular interest was that exit interviews with all employees exhibited the strongest direct association with SME growth.

Exit interviews are where the company is concerned enough to interview departing employees on their reasons for leaving the company. At first this might seem counter-intuitive; for example, as a consultant, would this be the only advice you would give to the SME keen to grow? However, on further thought this behaviour is presumably just signalling the presence of constructive and effective relationship marketing policies.

This factor has been cited by several authors as one critical element of a relationship marketing strategy. As one writer put it "... to have satisfied customers, the firm must also have satisfied employees" (George)[43] ... and ... "the exit interviews carried out with employees can provide an ideal opportunity to determine any areas of improvement in the service levels. This in turn will improve customer retention because of job pride and satisfaction" (Reichheld).[29]

Implications for Management

Managers of smaller businesses should consider the following implications for their businesses:

❏ It is difficult to create a competitive edge by using relationship marketing alone, since both the entrepreneurial and the non-entrepreneurial SMEs claim to use relationship marketing.

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TABLE 4. Differences between entrepreneurial and non-entrepreneurial companies

	Entrepreneurial Responses
General profile of the SMEs	• have a greater relationship marketing focus • have almost twice as many full time employees • experienced greater growth in the last 3 years
Defection analysis[2]	• lose anywhere between 2–30% fewer customers from their customer base compared to their competitors
Entrepreneurial orientation (as demonstrated by Schumpeterian behaviour)	• have been more focused on innovative behaviour in the last year and appear to wish to continue to be so in the future • are significantly more innovative and adventurous
Relationship marketing dimensions	
Importance of communicating with customers	• communicate to determine customer needs • communicate to ask for referrals
Awareness of customer needs	• are more aware of customer needs • informing and training employees on customer requirements
Improvement from close relationships	• achieved improvements by developing other business opportunities
Internal incentives	• reward their employees with both monetary and non-monetary schemes • promoting employees based on performance and experience
Cost associated with acquiring a new customer	• do not use discount pricing as a promotional strategy to gain new customers

[1] Significance is at least 0.05 probability level.
[2] The difference between proactive and reactive is 2%, and between, proactive and informal 30%. Calculated by taking the percentage difference from the lowest mean loss to customer base as reported by the proactive SMEs; see Table 5.

❑ However entrepreneurial firms appear to use relationship marketing in a more appropriate and effective way; and

❑ ... this does result in performance differences that are worth striving to obtain.

❑ Accepting the explanation about the exit interviews should serve as a reminder that employee defection and customer defection rates are inter-linked and both need to be minimised. Entrepreneurial SMEs also use internal employee incentives more effectively.

❑ Continuous personal contact with customers is one of the key features of Table 4, and in our current analysis of the qualitative data is coming out as a key factor.

Conclusions

The findings of the research have contributed to our understanding of entrepreneurship and relationship marketing in SMEs and their inter-linking. The main conclusion drawn is that *entrepreneurial SMEs*

engage in a much more measured, calculated and effective approach to what is at the heart of the relationship marketing concept—customer retention and development.

We are not offering a simple panacea, we are arguing that not only does the SME have to adopt all the internal cultural aspects of relationship marketing, but that without a creative, innovative and entrepreneurial management culture as well, success will be limited. Successful and growing SMEs have to practise relationship marketing fully in order to make that competitive difference.

However, provided that entrepreneurial behaviour is not seen simply as an inherited ability then the successful behaviour of these entrepreneurial SMEs can be emulated to some degree by their less entrepreneurial competitors.

Appendix on Research Method

As resources were limited, a single industry study was decided upon and in the locality of the authors' university! We decided to sacrifice breadth for depth and so con-

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| TABLE 5. Entrepreneurial orientation and company background |||||

| [ ] Median value | Entrepreneurial orientation Proactive | Less entrepreneurial orientation |||
		Reactive	Informal	n
Number of years trading (mean value)	[14] 23	[14] 20	[15] 17	57
Principal market for main product/service line	UK	Regional/UK	Regional	60
Number of different products/service lines offered (number and range of response)	6–10	6–10	11–20	55
Stated % market share for main product/service line (mean value)	4.58	3.26	3.33	
Annual turnover (£m) (range)	1–6	0.5–1	0.5–1	59
Number of full time employees	[55] 74	[30] 35	[21] 34	59
Number of part time employees	[3] 6	[2] 7	[1] 2	39
Customer defections reported as % loss to customer base (mean response)	5.74	5.83	7.45	50

The majority of the SMEs had multiple owners and were first generation businesses still run by the founders (rather than inherited or purchased as a going concern).
In the sample the number of proactive SMEs was 26, reactive—24, and informal—10.
Proactive are the most entrepreneurial, informal the least entrepreneurial and reactive an intermediate case.
Not all respondents answered all questions, nor were all questions equally relevant, i.e., number of part time employees, so sample size *n* varies.

centrated on one local industry sector and included within the sample frame independently owned SMEs with between 10–99 employees who had been trading for more than three years. Business services were chosen partly because we surmised that they would have, or should have, strong and continuous links with their customers, and partly because on the data base that we were using (Lotus One-Source) this sector had experienced the highest growth over the last decade. Our reasoning here was that it might be a sector more predisposed to exhibiting entrepreneurial behaviour. In the main this sector covered printing, marketing services and computer services, and so would be offering clients both a pure service and a product/service mix. We did not include financial services as we felt that they might in the main, for example, be offering only an annual insurance contract—thus minimising customer contact.

Using the Lotus One-Source national company database, 102 SMEs located in West Yorkshire (our local area) met the selection criteria. Sixty responses were received, from which a random sample of 20 SMEs were selected for in-depth semi-structured interviews to explore further the results of the mailed questionnaire. The postal questionnaire and the semi- structured interview schedule were piloted with four SMEs. Additionally it was tested for its structure and layout with a group of marketing and sales personnel on a part time Masters programme at the University. It was sent out in 1996 to marketing managers. We telephoned all potential respondents prior to the mail out to explain the project and to encourage participation.

Table 5 profiles the data set and shows the breakdown between entrepreneurial and non-entrepreneurial SMEs. By using both a quantitative and qualitative instrument we hope to reinforce and complement the findings from each instrument. Equally it would encourage the maximum utilisation of the data at our disposal by producing the greatest density of coverage of the area. In this sense, the question of density overlaps the question of validity. The mailed questionnaire contained 181 questions categorised into eight sections. The questions were informed by the litera-

ture search into relationship marketing (Table 2) and our choice of measures for entrepreneurial orientation discussed previously. The first section involved eliciting general information on the profile of the SME: number of years trading, number of employees, number of product/service lines, geographical coverage of sales, etc. and their planning style. This was followed by a section to determine their entrepreneurial behaviour and growth performance. The final six sections of the questionnaire concentrated on relationship marketing, and sought to identify the extent to which the SME pursued key relationship marketing activity, namely: competitor, customer, segmentation, profitability, loyal staff and customer defection analysis.

To capture the entrepreneurial dimension, the SMEs were asked firstly in the mailed questionnaire to categorise their planning style. They were requested initially to select one response from: ad hoc/informal, conservative, reactive, proactive, adapting to circumstances, taking advantage of circumstances and other. Taking the planning behaviour as paramount, SMEs were classified into proactive (entrepreneurial) and two non-entrepreneurial categories . . . reactive and informal. Proactive can be considered as seeking and exploiting opportunity and being alert to possibilities.

To cross-check this classification, we used the Schumpeterian criteria discussed in a previous section. In the next stage of the research, which is not reported in this article, we are using respondents' reactions to self chosen critical incidents in their business history to further consider their entrepreneurial or non-entrepreneurial behaviour.

The data was analysed using SPSS. As most of the questions were either of a Likert scale dimension (ordinal data) or categorical responses (nominal data) non-parametric statistics were used. Chi-square (Cramers V) was used to test for the strength of association between categories and Kruskal–Wallis to determine the significant difference between the entrepreneurial and non-entrepreneurial SMEs. The reliability of the responses was verified by using Cronbach's Alpha. The correlation coefficients for variables within each section revealed an acceptable level of Cronbach's Alpha greater than 0.6.

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Emerald Article: Three Food Multiple Superstores: Patronage and Attitudes: A Town Study

Geoff Lancaster, Paul Reynolds

Three Food Multiple Superstores:

Patronage and Attitudes: A Town Study

Geoff Lancaster and Paul Reynolds

Much marketing research is commissioned to discover "What went wrong?" rather than being brought in at the initial planning stage.

Introduction

This piece of research was done as a consultancy project in 1986. The client (a national multiple food retailing chain) has now allowed us to publish it, but has specifically requested that store names are not quoted, nor the town in which the piece of work was done (as it would then be possible to deduce the identities of the key players!).

The above caveat is frustrating, but since the report is the property of the client, we are grateful that we have been allowed to publish this material which at least gives an insight into reasons why people shop or do not shop at certain stores.

Background

The client had opened a superstore about six months prior to the research. A good "deal" had been struck with the local authority in relation to rent, rates and other facilities. It was hoped that because this store was setting up in an out-of-town site, other retailers would be attracted to this particular new commercial estate.

Although the client had struck a good deal, no scientific distribution research of a site locational nature had been carried out to assess the site's viability in commercial terms. A deal had also been agreed with a local bus company to provide free regular transport, with agreed pick-up and drop-down points, to the client's superstore, which was about three miles from the centre of town.

We were called in to discover why sales had quickly risen and then stabilised, only to fall off to about half of what they were at their peak, and the remainder of this article seeks to address these issues.

Methodology and Sample

We agreed that the best research instrument would be a standard questionnaire and an on-site survey. We were able to pre-code most of the questions as they had a limited response format, but some questions had to be post-coded.

The computer analysis generated a huge amount of data. Because of its prolific output it would be impracticable to include all of it in this paper, so only the salient points are included.

The total number of respondents interviewed was 510 using a simple form of quota sampling. The quota was taken from three fixed locations (the car parks of each of the superstores) and a number from the town centre, broken down as follows:

Fixed location:	Store 1	=	125 respondents
	Store 2	=	86 respondents
	Host store 3	=	110 respondents
Random location		=	189 respondents
	Total	=	510 respondents

An interesting aside at this point was the fact that store 1 owned its own car park (as did host store 3). Needless to say the manager of store 1 was not too pleased about having a market research survey undertaken on his premises relating to information that might be useful for a competitive store, and we must praise the ingenuity of the interviewers for being able to collect such a respectably-sized sample, despite his adversarial attitude. It transpired that the trolley collection personnel were instructed to report any interviewing activity in the car park, and in the end interviewers had to resort to hiding on the "blind" side of cars and canvass shoppers as they were about to drive off, at the same time attempting to ensure that they were not "spotted". Once they were "spotted" they had to make a hasty retreat and move to one of the other locations and be replaced by another interviewer who could then claim that she "did not know that she was not supposed to interview". The socio-economic breakdown of the sample is shown in Table I,

Table I. *Socio-economic Classification of Interviewees*

Social Grade	Frequency	Percentage
A	11	2.2
B	57	11.2
C1	93	18.3
C2	145	28.4
D	135	26.5
E	0	0
Housewife	15	2.9
Unemployed	26	5.1
Retired	22	4.3
No answer	6	1.2
Total	510	100.1

Note: Out of the total sample of 510 interviewed, 83 per cent were female and 17 per cent were male.

Table II. *Reasons for Visiting Last Store*

Store 1		*Store 2*		*Host Store 3*	
First reason given					
Convenient	103	Convenient	50	Convenient	50
Buy everything at one	22	Close to town	10	Just to look around	22
Good value	20	Good value	7	Cheaper	18
Second reason given					
Convenient	30	Nice layout	14	Nice layout	16
Good selection	14	Cheaper	12	Convenient	13
Good value	13	Good value	9	Good value	13
Third reason given					
Cheaper	14	Good value	11	More variety	11
Buy everything at once	10	Nice layout	5	Convenient	5
Good value	7	More variety	4	Nice layout	4

although three extra categories are stated — housewife, unemployed or retired and these are classified separately. These categories were not deliberate, but quite often the interview was rushed (for reasons mentioned earlier) and it was only possible to obtain the most sparse of information, especially as this classification data was at the end of the questionnaire.

Reasons for Visiting Last Store

This was an open-ended question that asked respondents to name three (if possible) reasons for going to the store *last visited. It generated 30 categories of response* including:

- cheaper
- nice layout
- clean/tidy
- convenient
- just to browse
- buy everything at once
- good parking
- good selection
- good value
- more variety
- good quality
- received voucher
- good opening hours
- like certain departments or lines in that store.

It is felt that it would be tedious to reproduce a matrix of all criteria store by store, so the main criteria have been highlighted. Table II cites the relative frequencies of the first, second and third reasons given for each individual store. Some respondents were unable to vote any reason and only a small number were able to vote three reasons,

but no attempt was made to "pressurise" or prompt them into an answer at this stage.

It should, of course, be remembered that the numbers to a certain extent are a function of the sample interviewed at specific store locations (as well as respondents interviewed at random locations). Again, fixed location interviews were as follows:

Store 1 = 125 respondents;
Store 2 = 86 respondents;
Host store 3 = 110 respondents.

Tables I and II perhaps lend credence to the well-known quotation concerning store siting that the three most important criteria are: location, location and location!

Attitudes to Stores Visited

Each respondent was asked to comment on various aspects of each of the stores under study. They were prompted with an attitudinal dimensional card that contained the following criteria: excellent, good, average, poor, very poor, don't know, never visited.

In Table III, "don't know" and "never visited" categories have been omitted, so the percentages refer to respondents who actually expressed an opinion about a particular store in relation to a particular question (for certain questions, some respondents were unable to express an opinion, even though they shopped at that store). The number responding to the particular question in relation to each store is quoted under the "valid cases" heading. An inspection of the table will quickly reveal that Store 1 contains most valid cases (a function, it is felt, of its popularity and relatively long-established position in the town). Store 2 has less valid cases, although it has

been established longer (a function, it is felt, of its more traditional/old fashioned image). Store 3 (the host store) has the least valid cases (a function of being relatively newly established, and the intervening period has established that this store is now as popular as Store 1 which validates this contention).

The left hand column cites the criteria asked and the results are shown in Table III.

For the fixed location respondents, the last store they had visited was clearly the one outside which they were interviewed. All respondents (including the random

Table III. *Attitudes to Stores Visited*

Criterion	Store No.	Excellent	Good	Average	Poor	Very Poor	Valid Cases
Value for money	1	15.5	52.4	28.9	1.4	1.8	439
	2	4.8	45.2	39.9	7.1	3.0	336
	3	15.7	45.4	29.9	6.2	2.8	324
Perception of staff (helpful, friendly, etc)	1	16.9	49.5	28.7	3.5	1.4	432
	2	16.0	50.6	25.8	6.7	0.9	326
	3	18.5	51.5	24.2	4.7	1.0	297
Clean/neat/tidy place to shop in	1	27.1	53.3	15.4	3.5	0.7	454
	2	25.6	53.5	18.6	1.7	0.6	344
	3	48.4	45.7	4.5	1.2	0.3	335
Range and quality of goods	1	34.2	54.4	10.0	0.4	0.9	450
	2	11.2	51.2	32.1	3.8	1.8	340
	3	23.3	51.9	20.5	4.0	0.3	322
Provisions (cooked meat, cheese, etc)	1	24.9	55.6	15.7	2.8	1.0	374
	2	15.1	60.6	18.8	4.5	1.0	292
	3	29.1	52.6	16.3	1.7	0.3	289
Produce (fruit, vegetables, etc)	1	15.8	46.1	33.0	3.4	1.7	349
	2	14.6	51.2	28.8	3.8	1.5	260
	3	21.8	54.4	21.0	2.0	0.8	252
Meat and poultry	1	20.4	54.0	20.8	3.8	1.0	313
	2	16.0	50.9	27.8	3.8	1.4	212
	3	25.5	48.6	24.1	1.8	0.0	220
Non-foods	1	22.4	61.8	14.2	1.7	0.0	353
	2	4.3	34.1	40.9	18.3	2.4	208
	3	18.1	38.4	38.0	4.6	0.9	216
Cheapest	1	13.3	44.2	39.7	2.6	0.2	428
	2	3.2	39.7	50.3	7.0	1.6	314
	3	13.3	37.0	45.6	3.5	0.6	316
Waiting at checkouts	1	6.9	42.2	24.4	17.8	8.7	450
	2	8.7	45.5	34.4	8.5	2.9	343
	3	23.9	45.3	20.2	7.6	3.0	331
Convenient location of store	1	19.6	42.4	24.8	11.2	2.0	448
	2	19.2	33.0	27.3	18.9	1.6	370
	3	16.0	27.2	26.9	23.8	6.0	349

location respondents) were then asked which store was their usual or most regular store, and the results were as follows:

Valid responses = 509

	Percentage
Store 1	50.5
Store 2	23.4
Store 3	22.0
None of these	4.1

Having established respondents' regular store, they were then canvassed about their opinions in relation to up to three of their main dislikes of each of the stores. Most were able to cite at least one dislike, although the number of respondents able to voice an opinion differed between stores (416 for store 1, 268 for store 2 and 328 for store 3). However, such numbers were also a function of the numbers shopping there and store 1 scored highest because it was the most popular store and not because respondents necessarily had more to complain about! The listings that follow in relation to each store are the significant ones in descending order in relation to all respondents (whether it is their regular store or not). Absolute frequencies are quoted (not percentages). Low frequencies are not quoted because of their relative insignificance.

Clearly the above information gave some insights into dislikes which might not always be self-evident to store management.

Store 1 was perhaps a victim of its own success in that it scored low on cluttered aisles, slow checkout and overcrowding.

Store 2 clearly has a problem in relation to its range of merchandise.

Table   **IV.**   *Dislikes Cited in Relation to Individual Stores (absolute frequencies)*

Dislike Criterion	Store 1	Store 2	Store 3
Aisles cluttered	88	4	8
Slow checkout	63	12	32
Too crowded	83	0	3
Too far away	31	8	40
Constant change of merchandise location	18	9	4
Poor selection of merchandise	11	40	21
Dislike conveyor system at checkout	0	0	31
Trolley hard to push on carpet	0	0	11
Dislike sloping car park	0	0	32

Store 3 (the host store) had locational problems (perhaps the result of accepting a site that had been "imposed", rather than one that had been chosen through researched criteria). A further problem for this store was its car park, which was on a sloping site. Although trolley bays were in place around the car park, not everybody used them once they had loaded their car. The slightest gust of wind would then set the empty trolley moving down the car park into a parked car (with the usual damage disclaimer from the company of "Cars parked at owner's risk"). Needless to say, customers worried about the fact that their car might be the next one to be hit by a runaway trolley. Another problem with this store was the "trolley to belt" system of payment: other stores in this town had a trolley to trolley system in operation at their checkouts, so this was a matter of the store "imposing" something new on customers. The final problem was one of the actual trolleys, which had wheels designed to fit on a travelator (a plastic wheel with a groove in the middle). This made it especially difficult to push around the store in the carpeted areas.

Conclusion

This article has not pretended to be an academic paper; it has merely been the result of a piece of marketing research that has attempted to sort out deficiencies at a store.

The corollary was that no single thing was radically wrong with the store; it was simply a matter of fine tuning. In the event, more trolley bays were made available in the car park, plastic matting was placed over the carpeted areas, some checkouts were changed to trolley to trolley. Certain minor changes were made which came out in the subsequent finer tuning — like putting a glass window behind the butchery counter to show meat being cut up on the premises (as it was perceived that the meat was pre-packed at some remote premises). A person in a butcher's uniform was also brought to the front of the butchery counter in order to give a more personal touch to this aspect of the business.

Perhaps the best lesson that can be learned from this piece of research is that it is an example of the classic saying: "It is too late closing the stable door after the horse has bolted!" In other words, appropriate marketing research should have been done *before* the site was chosen to establish that the site chosen was the optimum one, rather than attempting to sort out problems after the store had been established. The problem is that much marketing research is commissioned to sort out similar "What went wrong?" problems, rather than bringing it in at the beginning of the planning process.

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The Role of Trade Exhibitions in Industrial Selling

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Introduction

In the UK there are hundreds of exhibitions of interest to industrial companies and, if overseas opportunities are taken into account, the number extends into thousands. They vary considerably in scope from a small show with perhaps 20 or 30 modest stands to vast international fairs with 1,000 or more exhibitors, covering a product range across the entire industrial market.

Although trade exhibitions appear to have a permanent place in the marketing communications mix of many firms, there appears to be a paucity of research on trade shows. As a direct response to the need for more information about trade shows, this article outlines the research findings of a study carried out at the Promecon Control and Instrumentation exhibition held at the National Hall, Olympia on the 19—22 June 1984. The article concentrates on the role of trade shows from an exhibitor's viewpoint. A further article is planned discussing trade shows from a visitor's viewpoint.

Information Sources Used During the Buying Process

An essential guide to forming a communications mix is deciding what the various elements of the mix are supposed to accomplish[1]. Setting clear, operationally relevant communication objectives provides the basis for selecting how advertising, sponsorship, direct mail, exhibitions, personal selling and other communication tools will be used in the sales programme.

An exhibition is just one medium by which a company may choose to communicate with its target markets; generally, exhibitions are used to complement other communications media. All the elements in the communications mix reinforce each other, producing a synergistic effect, with each element having its own part to play in the overall scheme of things[2].

Purchasing agents and other executives involved in the buying decision will often have their own preference for various information sources at different stages in the buying process[3]. An understanding of the stages in the buying decision process is useful in selecting communications objectives and the appropriate communicationss tools to achieve them. In relation to new products, Rogers[4] describes the buying decision process by the following model:

Figure 1. Innovation-Adoption Model

Awareness → Interest → Evaluation → Trial → Adoption
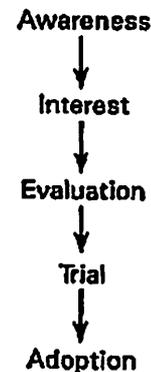
Webster[3] makes use of the Innovation-Adoption Model in investigating the importance of informal communications in the industrial purchasing process. Webster's results are shown in Table I and give an indication of the importance of various sources of information in the different stages of the buying process.

Table I. Information Sources Used during Buying Process

	Awareness %	Interest %	Evaluation %	Trial %	Adoption %
Manufacturers Salesmen	81	90	61	70	56
Trade journals	90	38	22	16	8
Buyers in other companies	18	22	28	16	8
Engineers in other companies	26	34	44	20	18
Trade associations	42	24	14	4	8
Exhibitions	76	38	16	12	4

Source: Webster, F. E.[3].

Choice of target audience will usually include those people who either decide or can influence the buying decision. These individuals will be of varying status, etc, and will be situated at varying stages of the decision-making process;

it will thus be necessary to reach them through different communications channels.

Communications tools differ in their cost-effectiveness in accomplishing objectives. For example, although industrial marketers will generally spend far more on personal selling than on advertising, it would be inefficient to use the sales force for all communications purposes.

Exhibitor's Viewpoint

As pressures on the marketing budget become greater, there is a need to show direct results, and an exhibition is a way of doing just that. Undoubtedly, a lot of businessmen see exhibitions as an alternative to heavy advertising campaigns. Increases in the cost of most media have exceeded that of both exhibition rental and stand construction, making it an attractive marketing tool for anyone looking for ways to cut outgoings (see Crofts[5]).

> Exhibits should be an integral part of any media plan, since they communicate to the prospective buyer...

The common perception of an exhibition is as a display, a presentation to view or a showing off, but its main purpose is to enable the exhibitor to meet people of value to his business. All reasons for exhibiting are related to this fundamental purpose. They give the seller an opportunity to meet on neutral territory, face to face with his customers who have made the effort to attend[6, 7].

Exhibition Objectives

The most important question to ask when selecting a trade show is what do you hope to accomplish with an exhibit? Exhibits should be an integral part of any media plan, since they communicate to the prospective buyer, via that exhibit structure, graphic images, sales personnel and collateral support materials.

The cost of exhibiting has forced today's management to set objectives and to evaluate the effectiveness of their objectives. If the exhibit is not effectively planned by a thorough analysis of objectives, the exhibit will not prove cost-justifiable and will not provide the necessary return on investment. Cunningham and White[8] ascertained the objectives of a large holding group of machine tool manufacturers who regularly participated in an international exhibition held every four years at London's Olympia. Interviews were conducted with senior executives in the company and the objectives which emerged were collated and agreed by the company as representing their intentions. The objectives ascertained were:

(1) to match the presence of competition;

(2) to create customer interest, implanting ideas and knowledge which may later be used by customers;

(3) to meet potential customers — a large number of business and social customer contacts can be made by company executives in one location in a short time;

(4) to allow discussions to take place with potential customers on technical and related matters in the presence of products under demonstration, and

(5) to introduce new products.

Exhibition Evaluation

In order to evaluate the effectiveness of exhibitions and to plan for future exhibits, certain quantitative and qualitative data must be collected and analysed. The target show audit should verify the projected target audience. Sales personnel should have maintained accurate records of sales leads, if that was an objective, to verify what percentage of the projected target audience were contacted at the exhibition. A simple analysis of cost per contact can be conducted by dividing the total cost of participation at the show by the target audience actually contacted. If sales were an objective, an evaluation of the effectiveness of the show would be an ongoing project.

An Evaluation of a Company's Participation in the Promecon 84 Exhibition

The purpose of this study was to try and ascertain some sort of measure of cost-effectiveness for exhibiting. Obviously this is extremely difficult since many of the benefits derived from exhibitions are intangible. It would be difficult to record exactly how many people saw a stand during an exhibition. Even if this were possible, it would be difficult to establish how many of those people were of particular interest to the exhibiting firm.

One of the present authors was involved in all aspects of organising an exhibition stand for a company. It will be this company's participation in the Promecon 84 exhibition which will be the subject of this case study.

Measures of Cost-effectiveness

As a first step, it was necessary to decide what measures of cost-effectiveness to use for evaluation. The following proxy measures are often used in practice:

(1) audience size;

(2) audience quality, and

(3) media impact[8].

One of the more meaningful measures of the above is audience quality. However, it was inappropriate for this particular case, since the exhibition organiser did not analyse or publish any information on the industry background of the visitors. The only details given were the total number of visitors. Measurement of media impact involves pre-publication copy setting, reader recall, attitudinal change or resultant purchase activity. Again, the information required for this was unavailable or impractical to calculate.

The authors, therefore, used audience size as a measure of cost-effectiveness. This in turn can be broken into different categories. The categories looked at were:

(1) $\text{Cost per Visitor} = \dfrac{\text{Total Cost of Exhibition}}{\text{Total Number of Visitors}}$

This gives an indication of the potential audience size which might be exposed to the company's promotional activities at the exhibition.

(2) Cost per Contact $= \dfrac{\text{Total Cost of Exhibition}}{\text{Total Number of Visitors to Stand}}$

This shows the ability of the company to attract visitors to its stand. It reflects the extent of real interest and the contacts made with potential customers, and is therefore related to one of the objectives of exhibiting.

(3) Cost per Enquiry $= \dfrac{\text{Total Cost of Exhibition}}{\text{Total Number of Enquiries}}$

This gives an indication of the cost per number of enquiries.

Table II shows a complete itemised cost breakdown of exhibiting at Promecon 84 for the company under study.

Table III. Comparison of Cost-effectiveness with Other Media

Media	Cost per Contact
Personal selling	£16.66 (1)
Advert in technical press (single reader of journal)	£00.013 (2)
Direct mail shot (single recipient)	£00.16 (3)
Exhibition	£14.89

(1) Computed for a salesman earning £15,000 with additional £5,000 overhead costs, making five calls a day.

(2) Calculated for a trade journal with a circulation of 15,376 (verified by the Audit Bureau of Circulation) and a quarter page insert at £200.

(3) Based on a single mailing shot costing £500 to a mailing list of 300.

Table II Total Cost of Company Exhibiting at Promecon 84

	£
Space rental	1,865
Stand rental	298
Additional items	180
Van rental	172
Promotional material	310
Salaries	700
Miscellaneous	200
Total	£3,723

These figures are used to calculate the measures of cost-effectiveness discussed earlier as follows:

Total number of visitors to Promecon 84 = 10,025

Total number of visitors to stand = 250

Total number of enquiries on stand = 44

(1) Cost per Visitor $= \dfrac{£3,723}{10,025} = £0.37$

(2) Cost per Contact $= \dfrac{£3,723}{250} = £14.89$

(3) Cost per Enquiry $= \dfrac{£3,723}{44} = £84.60$

Comparison of Cost-effectiveness with Other Media

A study of the costs of personal selling through sales representatives, by adverts in the technical press and by direct mail was made and is presented in Table III for comparison with the exhibition data.

Results of Exhibitor Survey

A questionnaire was mailed to all 283 exhibitors at the Promecom 84 exhibition two weeks after the close. The questionnaire initiated a response of 137 replies. Of the 137 replies, three regretted they were unable/unwilling to complete the questionnaire. This left 134 satisfactorily completed, a response rate of 47 per cent with which to analyse the results. The answers to the following questions were thought to be of particular interest:

Question 1. Which of the following promotional activities are used by your company as part of their marketing communications? Please indicate the relative importance attached to each activity.

Table IV. Perceived Importance of Promotional Activities

	Very Important %	Important %	Fairly Important %	Not so Important %	Not Important %
Sales reps.	89.4	7.5	0.8	0.8	1.5
Advertising	19.7	21.2	37.1	18.9	3.0
Direct mail	7.5	18.0	23.3	34.6	16.5
Exhibitions	15.7	34.6	41.4	7.6	0.8

It can be seen from the results shown in Table IV that sales representatives are still considered the most important communications medium. Direct mail is significantly lagging in its perceived importance and its actual use, although there is no doubt that it can, and does, play an important part in achieving certain objectives. The high perceived importance of sales representatives can be accounted for partially by the fact that they actually "close the sale" and bring in the orders, whereas advertising, exhibitions and direct mail play more of an awareness-building role, and their effectiveness cannot always be measured.

Question 2. Why does your company attend exhibitions?

Table V. Reasons Given for Attending Exhibitions					
	Very Important %	Important %	Fairly Important %	Not so Important %	Not Important %
Exhibit new products and developments	46.2	32.6	15.9	5.3	—
Create awareness	59.1	22.0	17.4	1.5	—
Produce sales leads	40.9	18.9	29.5	6.8	3.8
Because competitors exhibit	3.8	9.8	29.6	39.4	17.4
Attract immediate sales	11.4	7.6	14.4	37.9	28.7

The reason for a company's participation in exhibitions gives one a clearer idea of their perceived role. Creating awareness and exhibiting new products are the two most popular reasons. The authors found that the first ranked benefit, creating awareness, had greater importance among smaller companies. The larger firm, whose name is probably well established, sees the exhibition as a chance to reinforce its image and to keep its name well known. On the other hand, the smaller and probably less well known company sees the exhibition as an opportunity to promote the company's name and create awareness of the company and its offerings. Results indicate that attracting immediate sales, although desirable, is not considered to be one of the benefits derived from exhibiting. These results affirm past research on industrial buyer behaviour such as that by Webster[3] who indicated that exhibitions have a greater role to play in the awareness and interest stage of the industrial buying process.

Perceived Usefulness of Exhibition

In this particular study, 60 per cent of the respondents felt that their exhibition participation over the last five years had been either successful or very successful. Only eight per cent said it had not been so successful. Although it is difficult to assess the success of an exhibition, the majority of respondents felt their participation had been worthwhile, though not spectacular. This apparent success is reflected in the fact that 41.6 per cent of the respondents attended more exhibitions in 1984 compared with five years earlier, with only 17.6 per cent attending fewer.

The authors believe that although many respondents claimed that their exhibition participation was worthwhile, there is little evidence of this success being objectively based. It appears that very few companies enter an exhibition with established objectives. This is partially accounted for by the fact that the role exhibitions play is not well understood. The importance of establishing objectives cannot be stressed too strongly when considering exhibiting. A post-exhibition evaluation can then be made to see how successful the company was at achieving its objectives. If it was unsuccessful, perhaps its objectives were wrong or it went about achieving them in the wrong way, or it chose the wrong exhibition. Whichever, establishing objectives will prevent exhibition participation from becoming just an annual routine. It is also felt that organisers could do more to help exhibitors to evaluate the exhibition; they should provide the exhibitors with a complete breakdown of the visitors to the exhibition.

The Promecon 84 exhibition appears to have been more successful than the average, with 32 per cent of exhibitors

finding it very useful. However, one needs to be careful in interpreting these results since they were taken only two weeks after the exhibition, and as such, the respondents had no time to assess its long-term success.

Audience Quality

As far as the audience quality of the visitors is concerned, this is obviously dependent on a number of factors. The exhibitor wishes to attract the visitors who have a significant say in the purchasing decision process, and are from the appropriate market segments. Those perceived to be most important as visitors in the study were engineers, followed by senior managers and directors. The exhibition as a whole attracted a large number of engineers and senior executives. Actual buyers, as distinct from those who influence or take part in the purchasing decision, were not much in evidence (see also Bellizzi and Walker[9]). Therefore, the exhibition was successful in attracting the personnel the exhibitors wished to see. The authors' results help to confirm past research, such as that by Cunningham and White[8].

Shown in Table VI are their observations from a machine tool exhibition.

Table VI. Status of Visitors to an Exhibition			
Status	Visitors to Exhibition %	Contacts on Stands %	Enquiries Passed %
Company Director	11.2	16.3	21.4
Works Manager	10.9	16.7	16.9
Production Engineer	26.3	42.2	31.3
Foreman	14.4	8.1	3.3
Buyer	1.1	0.1	1.6
Others	37.1	16.6	25.5
Source: Cunningham, M. T. and White, J. G.[8].			

What is interesting from Cunningham and White's results is that directors accounted for 11.2 per cent of the visitors, but initiated 21.4 per cent of the enquiries. It appears that directors use their status to initiate enquiries whilst at exhibitions. The results also show that almost 33 per cent of enquiries came from production engineers. This seems to emphasise the necessity to direct the selling, advertising and promotional effort at these and similar groups of influential

personnel in the customer companies. Buckner's *How Industry Buys* study[10] showed that 44 per cent of company directors never see a salesman. This is because the salesmen are often misdirected by the gatekeepers in a company. Thus, an exhibition offers the ideal opportunity for companies and their salesmen to make contact with directors.

Summary

When comparing the cost-effectiveness of exhibitions with other media, it would be unfair to argue that the contacts made by different communications media are of similar value. The trade journal advert may not be seen by the intended reader and, if it is, its impact may be slight or short lasting. Direct mail shots frequently fail to make contact with more than ten per cent of those on the mailing list and a response rate by reply card of more than five per cent is considered to be successful. The cost of personal contact by salesmen at £16.66 per call presupposes that the contact is to the right person, yet this is not the case in 64 per cent of calls to industrial customers[10]. However, it is still useful to have some form of comparison between the different communications activities. The difficulty in making this comparison indicates that the cost-effectiveness of each activity needs to be made in the light of the objectives it is designed to achieve. Some objectives cost more to achieve and so this needs to be taken into consideration.

> ...the most important benefit of exhibitions is the opportunity to introduce new products and create awareness

In conclusion, it appears the industrial trade exhibition has an important part to play in the industrial selling process. It still ranks behind sales representatives, but is quite often viewed on a par with advertising. It can be seen how the synergistic function of all the communications activities works. For instance, a direct mail shot could let the visitor know about a forthcoming exhibition and a particular company's involvement in it. This could be reinforced by an advert about a company or its product(s), together with a message that they can be seen at the exhibition. The visitor will hopefully then go to the exhibition and the interest expressed may be followed up by a call from a sales representative.

Although sales may arise as a result of an exhibition, it is felt by the authors that the most important benefit of exhibitions is the opportunity to introduce new products and to create awareness. Thus, exhibitions will be a vital source of information to the visitor in helping him to collect information to evaluate the alternative offerings to help solve his buying needs. Since many visitors come to exhibitions with a specific purpose in mind, it may be advisable that any new products to be shown at an exhibition should first be publicised through advertising to gain initial awareness. Exhibitors need to be aware of the presence of high-status executives at the exhibition and use the opportunity to establish contact. The exhibition organisers need to offer a better service to the exhibitor in terms of supplying information on the composition of the audience. They also need to ensure that the surroundings and facilities available are of a satisfactory standard.

Finally, it can be concluded that the role of the industrial trade exhibition is a very important one, which offers unique opportunities for both the exhibitor and the visitor. It is felt that the importance and use of exhibitions will increase over the next few years. However, there has been a recent trend in rising costs of exhibition participation. This appears to be a "cashing in" on the popularity of exhibitions. If this can be kept to a reasonable level, the industrial trade exhibition should remain profitable for all concerned.

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Professional sales practice in small firms a UK and Russian comparison: An investigation into the relationship of sales competence with marketing and entrepreneurial orientations.

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Proposal

Introduction

The sales function is seen as particularly important by the management of many small firms. But how much investment in terms of time and money is actually spent on the sales function and how professional is the sales function in small firms? The authors have been involved in collaborative research into the marketing for small business in Russia (Siberia) and the UK (Yorkshire) with sales being one of the key areas of research. Sales in the context of this paper is viewed an intrinsic part of the marketing mix and as a variable in a multi variable, integrated marketing communications mix. Evidence from the literature would suggest that sales competence within many small firms is low and that the sales function is often carried out by the owner of the business who is usually not from a sales background. Even where full time sales personnel are used there is often little or nothing by way of sales staff training or staff development. The authors are particularly interested in establishing whether general marketing orientation or entrepreneurial orientation (or indeed both) within the firm has any association with the quality of the sales function within small firms.

THE IMPORTANCE OF THE SMALLER FIRM.

SMEs make an invaluable contribution to the wider economy in both Russia and the UK (but which is often overlooked) including increasing competition, creating jobs, building effective networks, sharing knowledge and making a positive contribution towards social inclusion. The importance of small firms and entrepreneurship generally in achieving economic growth in contemporary

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economies is widely recognised both by policy makers and economists (Van Stel, Carree and Thurik (2005), Wennekers, Van Stel, Thurik and Reynolds (2005), Acs (2006), Acs and Armington (2006)), Audretsch, Keilbach and Lehmann (2006), Lundstrom and Stevenson (2005)). Small firms are big business: they contribute significantly to employment, turnover and the number of businesses in the UK.

In the UK as a whole, SMEs account for over half of employment (58.7 per cent). This is also true for each region and country in the UK except London, where SMEs only account for 47 per cent. For the South West, Wales and Northern Ireland, this figure exceeds 70 per cent. For each region and country in the UK, no more than 0.2 per cent of enterprises are large (250 or more employees), and at least 99.0 per cent of enterprises are small (0 to 49 employees). The proportions of enterprises that are medium-sized (50 to 249 employees) range from 0.5 per cent (in the East of England, South East and South West) to 0.8 per cent (in the North East and Northern Ireland) see DTI National Statistics URN 06/402 News Release 2006.

The development of small business in Russia since 1998 has been affected by crucial decisions of central government by which the taxes have been cut and 'red tape' reduced. As a result the registration of new enterprises has become both simpler and cheaper and consequently the number of small businesses has grown. The situation in Omsk region is indicative of Russia as a whole.

However, where Omsk does differ is that for many years it used to be one of the most important industrial centres in Soviet Union producing electronics, engines for aircraft, agricultural equipment and many other engineered goods. However after perestroika Omsk industry has collapsed. Five years ago small businesses in Omsk mostly represented trade services. However since 2000 positive changes have come to life and industrial enterprises have started up. Our research shows that in parallel to this, the number of small businesses in industry is increasing.

Year	1995*	2001*	2002*	2003*	2004*	2005**
Number of small enterprises in Omsk region	6519	10856	10973	10864	12460	14435

*   Omsk region annual statistics 2005 (Омский областной статистический ежегодник – Омск, 2005).

** Omsk region annual statistics 2006 (Омский областной статистический ежегодник – Омск, 2006).

Year	1995*	2001*	2002*	2003*	2004*	2005**
Number of industrial small enterprises in Omsk region	989	1504	1327	1242	1543	1816
Sales (Roubles)	289,6	1494,7	2087,7	2963,9	4648,0	9529,1

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* Omsk region annual statistics'2005 (Омский областной статистический ежегодник – Омск, 2005).
** Omsk region annual statistics"2006 (Омский областной статистический ежегодник – Омск, 2006).

Alongside the positive trends mentioned above, Russian small business are experiencing some particular obstacles at the moment. Research and monitoring at the Omsk State University in (2002-2006) show that these obstacles as a whole are quite similar to these in Omsk region and can be summarized as:

- the lack of professional and political integration of businessmen. It means that there is no small business lobby in Russia which could influence some real official decisions;

- the lack of trust to the state and its representatives. Central and local government provide some assistance for small business but in practice businessmen either are not ready or don not want to get it.

We do believe that the successful development of small enterprises both in Russia as a whole and in Omsk region depends on cooperation and communication between businessmen themselves and between them and the state.

Before the economic changes in Russia (Perestroyka 1990), the main objective of industrial companies was not sales but output. A company would be regarded by the government as successful if their planned output had been achieved in certain period. Sales used to be seen as the "second responsibility", and companies were guaranteed financial compensation from the state for the unsold products and services. So the importance of the sales function in our companies was close to zero, and some companies (e.g. in Omsk) did not have a specialized sales department in their structure. Now the situation has changed dramatically. Sales are the key point of production and therefore sales departments have been organized in the established Omsk industrial companies. At present Omsk State University offers special programmes in sales management.

Methodology

The authors' use a post stratified probability sample of small firms from the UK (171) and Russia (63) although not every questionnaire contained valid responses and there were some non responses for some of the questions. Respondents were given an identical questionnaire (translated and re-translated responses for the Russian survey) incorporating questions on professional selling and sales training and marketing and entrepreneurial orientations. A summary descriptive statistical presentation is provided using tables and charts. In addition a statistical test of association is used (Chi Square with the summary statistics for the strength of any association Cramer's 'V' and the Contingency Co-efficient) to test for significant differences in sales competence for small firms scoring differently on marketing orientation/ entrepreneurial orientation ratings (a number of appropriate questions are used to obtain the rating scores shown in the appendix of the paper). Tests are also conducted using the same statistical framework to test for significant differences between the Russian and UK small firm samples.

Entrepreneurial and Marketing Orientation

Reynolds, P.L, Day, J., Kovalev, A. and Kovalev, V., (2008), 'Professional sales practice in small firms a UK and Russian comparison: An investigation into the relationship of sales competence with marketing and entrepreneurial orientations.', 2008 UIC Research Symposium on Marketing and Entrepreneurship, University of Illinois at Chicago, USA, Stockholm, Sweden, June 14th-16th, ISSN: 312-996-2670.

We wanted to use scales that have been used successfully elsewhere but not to involve our participants in the completion of an over long research instrument consisting of very detailed scales. We sought a balance between effectiveness and efficiency.

Rather than seek to use an integrated entrepreneurial marketing scale (see, for example Hills and Hultman, 2005) we chose to use two separate scales. The choice of scales was conservative – we employed the scale from Miller and Friesen (1982) that covers innovation, pro-activeness and risk taking. The scale was simplified very slightly to twelve key questions.

The questions are framed such that it is the entrepreneurial behaviour of the organization that is being questioned and not that of the individual entrepreneur. The main argument for this approach would be

"measures" of entrepreneurship which focus on organizational activities may be particularly essential for gathering information on successfully employing entrepreneurship in business organizations. Entrepreneurship is a process which is often not confined to the actions of one individual, but may involve norms, cultures, and entire organizations. Therefore the study of entrepreneurship as an individual trait may be less productive and stable than an examination of organizational entrepreneurial behaviour" (Covin and Slevin, 1986:637).

Offsetting this is that the questions may be framed inappropriately for one-person and very small businesses that do not have sophisticated organizational structures. However whilst this was a research on small business, our immediate focus was not on one-person businesses.

The scale that we have adopted has been used in many studies particularly in the later modified *entrescale* form and has been proven to have some cross-cultural validity and reliability. Given that entrescale actually employs less questions, one might consider why we did not adopt that from the outset for this paper. The answer is simple and pragmatic – we had already used the earlier scale on our English sample, and we wanted to draw comparisons from a common research instrument. Future extensions of this project will consider whether to substitute scales (Knight, 1997).

Kreiser, Marino and Weaver (2002) raise the issue of whether to measure the three sub dimensions (innovativeness, risk, pro-activeness) independently or together. One of their arguments for making that decision is the trade off of simplicity over accuracy, where researchers 'desire a high level of measurement precision' then they should consider measuring EO as unique sub-dimensions. In this paper we have not sought such a high level of precision and report an aggregate measure.

The EO scale: In this organisation we have		
Innovativeness	A high rate of new product/service introduction, compared to our competitors	
Innovativeness	Continuous improvement in the methods of service delivery.	
Innovativeness	A tendency towards seeking unusual, novel solutions by senior executives to problems via the use of idea people and brainstorming etc.	
Risk Taking	A risk-taking tendency by all key executives in seizing and exploring chancy growth opportunities.	
Risk Taking	A 'Live and let live' philosophy in dealing with competition	
Risk Taking	A top management philosophy that emphasises proven products and services, and the avoidance of heavy new product development costs.	

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Risk Taking	Large, bold decisions despite uncertainties of the outcomes.
Risk Taking	Compromises among the conflicting demands of owners, government, management, customers employees, suppliers etc.
Proactive	A charismatic leadership at the top.
Proactive	A cautious, pragmatic, step-at-a-time adjustments to problems.
Proactive	An active search for big opportunities
Proactive	Steady growth and stability as a primary concern

Marketing Orientation Scale

We chose to use MARKOR (Kohli and Jaworski, 1993) as the measure for marketing orientation, again whilst aware of the debate about whether MARKOR or MKTOR provided the better measure, we had previously had a good experience with this scale (Al-Mohammad, 2002). However to ask the full question set seemed to expect too much of the participants, and a shorter nine question approach was adopted. Given that one key distinguishing feature of good marketing, and good entrepreneurial marketing, is the collection of market intelligence, five *intelligence generation* questions; two *intelligence dissemination* questions; and two *responsiveness* questions were selected. Blankson et al (2005) present an interesting application of marketing orientation to small firms. The question set is detailed below:

Intelligence Gathering	In this organisation we meet with customers at least once a year to find out what products or services they will need in the future.
Intelligence Gathering	In this organisation we do a lot of in house market research.
Intelligence Gathering	We are slow to detect changes in our customers' product reference.
Intelligence Gathering	We survey end users at least once a year to assess the quality of our products and services.
Intelligence Gathering	We periodically review the likely effect of changes in our business environment on customers. (E. g. regulations)
Intelligence Dissemination	We have interdepartmental meetings at least once a quarter to discuss market trends and developments.
Intelligence Dissemination	Marketing personnel in our organization spend time discussing customers' future needs with other functional departments
Responsiveness	Several departments get together periodically to plan a response to changes taking place in our business environment
Responsiveness	If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.

Key results

SURVEY QUESTIONS

QUESTION: DO YOU HAVE SALES TRAINING?

- ENG (125 valid) YES (53) NO (72)
- OMSK (62 valid) YES (41) NO (21)
- PERSON'S CHI 30.435 d.f. 4 SIG .000

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- *2 (20%) CELLS LESS THAN 5*
- PHI .337 SIG .000
- CRAMER'S V .337 SIG .000
- CONTINGENCY COEFFICIENT .353 SIG .000

QUESTION: EFFECTIVE LISTENING SKILLS INCLUDED?

- ENG (53 valid) YES (50) NO (2)
- OMSK (41valid) YES (19) NO (22)
- *1 CELL (12.5%) EXPECTED FREQUENCY LESS THAN 5*
- PERSON CHI 37.610 D.F. 3 SIG .000
- PHI .436
- CRAMER'S V .436
- CONTINGENCY COEFFICIENT .400

Interpretation

- A greater proportion of Omsk small firms have sales training.
- However the sub sample is smaller.
- Of those small firms that do employ sales training a greater proportion of English firms include effective listening and negotiation skills.

Does different levels of marketing orientation make a difference to sales training or content?

- Answer NO
- Chi square test shows no significant difference
- Not even close

Does different levels of entrepreneurial orientation make any difference to sales training or content?

- Answer NO
- The Chi Square results show no significant difference
- Not even close!

Entrepreneurial orientation England/ Omsk

- England 160 / Omsk 63
- Chi 16. 817 d.f. 3 Sig: .001
- Phi: .257 Sig: .001
- Cramer's V: .257 Sig: .001
- Contingency Coefficient: .265 Sig: .001

Marketing orientation England/ Omsk

- England 160 / Omsk 63
- Chi 32.658 d.f. 3 Sig: .000

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- Phi: .39 Sig: .000
- Cramer's V: .39 Sig: .000
- Contingency Coefficient: .363 Sig: .000

Discussion of findings

Preliminary interim results do appear interesting and relevant to the theme of the symposium. The authors discuss the survey findings and the implications for small firms in terms of sales practice and sales training for both the UK and Russian sectors. Particular aspects of sales training are discussed especially the acquisition of negotiation and 'active listening' skills which are considered by many to be central to effective selling. Attendance on sales training courses both internally provided and externally are examined. Recommendations are made as to how the sales function in smaller firms might be made more effective and professional thereby improving commercial competence.

In terms of sales training it would seem that small firms in Omsk regard it as more important and have a greater proportion of small firms engaged in it than in England. However the English small firms using sales training have a greater sophistication of content with more including active listening skills and negotiation methods.

In terms of measures of entrepreneurial orientation and marketing orientation there appears to be no significant association between high and low MO or EO and whether small firms use sales training or the sophistication re: content of that training.

There are a large proportion of small firms in Omsk and England employing no sales training at all.

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to commence the forecasting process (Bolfarine, et al, 2005). Bayesian statisticians differ from 'purist' statisticians in the respect that 'purists' view the concept of probability as the relative frequency with which an event might occur (Iglesias, et al, 2004). The Bayesian view is that probability is a measure of our belief and that we can always express our degree of belief in terms of probability (Buck et al 1996). Although the initial probabilities are derived subjectively (the figures are based on judgmental opinion, rather than on objective calculation) proponents of Bayesian theory believe that such probabilities are perfectly valid and hence perfectly acceptable as initial starting points in an extensive quantitative forecasting process (Müller et al 2005). It is this subjective nature of arriving at the initial probabilities that makes the Bayesian approach useful in solving business problems for which initial probabilities are often unknown and are difficult or impossible to calculate using objective methods (Faria and Smith, 1997a, Finucane et al 2003, Gaglio and Katz, 2001).

To use the Bayesian approach, the decision-maker must be able to assign a probability to each specific event (Pole et al, 1994). The sum of the probabilities of all such events considered must be unity (one). These probabilities represent the magnitude of the decision maker's belief that a particular event will take place (Faria and Souza, 1995; Faria and Smith, 1997b). In business situations such decisions should be delegated to personnel who have the knowledge and experience to assign valid initial subjective probabilities to the occurrences of various business events. These initial probabilities are based on previous experience of information (such as published secondary data or simply the manager's own subjective judgement based on experience) acquired prior to the decision-making process. For this reason, the initial subjective probabilities are referred to as 'prior probabilities' (West and Harrison, 1997).

When making business decisions, the financial implications of actions must be taken into account. For example, when a manager is considering investing a firm's surplus cash, they must consider the probability of making a profit (or loss) under different economic scenarios and also assess the probability of such scenarios or events occurring (Pole et al., 1994). Applying Bayesian decision theory involves selecting an option and having a reasonable idea of the economic consequences of choosing a particular course of action. Once the relevant future events have been identified, the decision-maker assigns prior subjective probabilities to them (West and Harrison, 1997; Huerta and West, 1999). The expected pay-off for each act is then computed and the act with the most attractive pay-off is then chosen. If pay-offs represent income or profit, the decision-maker usually chooses the act with the highest expected pay-off (Lopes et al., 2003; Singh and Valtorta, 1995).

Methodology

The author has used a quantitative exploratory approach. Mini depth interviews have been conducted with 15 managers/ owners of small firms in the Huddersfield region of West Yorkshire, UK. Interviewees were asked how they predicted future market conditions and in particular future sales conditions. Sampling for the interviews was non-probability and exploratory based on purposeful sampling i.e. those that were prepared to offer an opinion. Other areas of decision making were also discussed for example planning and planning methods. However only the results relevant to predicting future market conditions are presented here. A survey of small firms has also been conducted but the processing of the data is not yet complete. This is a draft paper and the survey findings may be included in the final paper for inclusion in the proceedings.

Sample of results qualitative interviews

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"We use past sales data and look at the level of customer enquiries compared to last year" – Small hotel and restaurant business (24 employees)

"We use charts and averages to work out trends but also use our own experience for the business" – Distribution Company (45 employees)

"We do not do any forecasting" – Hairdressing Company (13 employees)

"We are a franchise so all of that is done for us" – Retail Footwear Company (10 employees)

"We use our own 'feel' for the market and past data" – Contract Cleaning small firm (30 employees)

"We know the market and we know what our competitors are doing" – Construction Company (12 employees)

"We know when the market turns before official forecasts and publications although we look at these as well"- (Software Company 18 employees)

"We have an instinctive understanding of the way the market is going but also look at industry publications such as Campaign" – Marketing and PR Company (10 employees)

"I have been in business more years than I remember and I can feel the changes and other people in our business are always talking about business conditions" – Timber and Joinery Company (10 employees)

"We just know!" – Transport Company (12 employees)

"We get wind of changes from our enquiries and from what our suppliers and customers are saying to use" –Engineering Company (12 employees)

The interviewees from the other four firms had difficulty answering this question so it assumed that they did not conduct sales forecasting or predict market conditions. It may be that a different member of staff might have given a different response, for example an owner rather than a manager.

Conclusions

This is an exploratory study based on a limited number of mini depth interviews and does not claim to be conclusive. A further survey has been conducted but the results are not as yet ready for this paper. These additional results may form part of the final paper. The Bayesian approach to learning is based on the subjective interpretation of probability. This is a different way of thinking about probability. The empirical evidence presented in this paper would suggest that many owners / managers responsible for sales forecasting in smaller enterprises exhibit Bayesian tendencies. Evidence suggest that whilst some of the managers/ owners interviewed do use some form of quantitatively based model, albeit rather simplistic ones, many of them arrive at the starting values for such 'models' by purely subjective means largely based on intuition and experience. This might be considered a typically Bayesian trait. It is not only in the area of sales forecasting that the owners and entrepreneurs in small firms use subjective probabilities. Evidence from the author's research would suggest that such entrepreneurial managers and / or owners are predominantly 'Bayesian' in their thinking and reasoning patterns in general across a

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range of decision making areas where they need to understand the probability of risk or of a specific event occurring e.g. planning. This may form the basis of another paper. In fact it would be fair to say that evidence might suggest that entrepreneurs generally tend to be Bayesian in their thinking patterns. It might be that Bayesian thinking is an additional 'trait' to add to the entrepreneur's repertoire of traits. Could it be that one of the distinguishing features of an entrepreneur is this tendency to think in a Bayesian fashion in a number of business decision making settings, particularly sales forecasting situations?

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Раздел 1. АКТУАЛЬНЫЕ ПРОБЛЕМЫ МАРКЕТИНГА

IS STANDARD MARKETING APPROPRIATE TO THE SMALLER FIRM OR IS ADAPTATION NECESSARY?

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Abstract

In this article the author asks a fundamental question highly pertinent to the developing subject of marketing within small firms. Is conventional marketing theory and practice from the 'classical school' applicable to all types of organisations no matter what their size, or do smaller firms need a different sort of marketing, more suited to their particular needs? The paper concludes that in many cases the central core hub of marketing that has become known as the classicist philosophy of strategic marketing management [1] is appropriate and can often be employed to the smaller enterprise with beneficial commercial effects.

INTRODUCTION

The question as to whether conventional marketing theory and techniques are equally applicable and relevant to the marketing management of smaller enterprises is central to work in marketing and entrepreneurship because many, if by no means all, smaller firms are managed by people who may be entrepreneurial in nature [2]. Many of those teaching and consulting using the conventional 'classical school' approach hold the view that it is merely a matter of standardisation verses adaptation. That is when dealing with the smaller firm one has to take the standard classicist philosophy of strategic marketing management as far as it can go and then make adaptations to suit the individual circumstances of the smaller firm e.g. limited budget or limited marketing sophistication. Others writing in the field believe a new approach or 'new paradigm' is required for the marketing of smaller firms and not simply the modification of the existing 'classical' approach. There seems to be an on going debate in the literature at the moment on whether there needs to be a new marketing paradigm for small and medium sized enterprises (SMEs) [3].

Many question whether conventional marketing re: the standard texts [4, 5, 6] i.e. the standard business school 'classicist' teaching approach [7], can be made to fit the needs of SMEs with some pragmatic adaptation. Many working in the field of SMEs in general, think that the standard marketing approach is suitable for the smaller enterprise, albeit with some minor 'adjustments'. These 'adjustments' have to take into consideration the more modest budgets available to many SMEs and the limited technical knowledge of formal conventional marketing amongst the management of smaller enterprises [8]. Other writers feel that owners and managers of SMEs, who may or may not be entrepreneurs, often have a different way of thinking about business problems compared to their counterparts working in larger enterprises. They claim that conventional marketing, usually developed for the larger firm, is not necessarily suitable to the smaller enterprise [9]. Some go so far as to suggest that a new 'paradigm' of 'entrepreneurial marketing' is required [10].

METHODOLOGY

The methodology employed relates to two separate projects. The results are then consolidated i.e. a triangulation approach, in order to gain a better insight as to whether small firms do need a radically new marketing paradigm. Triangulation is a key tenant of the 'anthropological' approach to data gathering (and therefore, education and training research, which is the subject of a large part of this paper). In using

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this approach the researcher should gather a wide variety of evidence for the purposes of triangulation [11, 12, 13]. As opposed to relying on one single form of evidence or perspective as the basis for findings, multiple forms of diverse types of evidence are used (in the case of this paper four types) to check the validity and reliability of the findings [14]. Over-relying on any one form of evidence may impact validity of the findings. By using more than one form of evidence and perspectives, a truer portrait of the subjects being studied can be developed [15].

Research Approach 1.

The first piece of work involves exploratory group interviews these are then followed by a survey discussed below in Research Approach 2. The methodology involves exploratory, qualitative research based on two group discussions with people involved in running or advising people who run small firms. Many academics working in this field [16] consider qualitative research the most appropriate when examining SME phenomena generally and particularly the interface between marketing and entrepreneurship [17, 18]. The group members included entrepreneurs running their own small firms, counsellors from various organisations involved with advising or supporting enterprise, small business advisors from the commercial banks, consultants and trainers to small firms. The information gained from this analysis was used to design a questionnaire, which was sent to 1,100 small firms in the West Yorkshire area of the UK.

Research Approach 2.

The 1,100 questionnaires were sent out by post to a representative sample of small firms in the area of West Yorkshire, England. A combination of lists were used as a sampling frame. The sample was stratified by the type of industry found in the area e.g. textile manufacturing, chemical processing, transport and distribution services, and in proportion to the importance of a particular sector to the local economy in terms of contribution to local GDP [19, 20]. 249 respondents mailed back the questionnaire in the pre-paid envelope provided, some needed reminder letters.

Results.

This research needs to identify for the reader why and how the analyses and interpretations were made and the way key concepts in the analyses evolved. In addition, ideally any researcher needs to «inform the reader of any unexpected findings or patterns that emerged from the data and report a range of evidence to support assertions or interpretations presented.» [21]. The author has attempted to do this in the discussion of results presented below.

EMPIRICAL EVIDENCE GROUP DISCUSSIONS AND QUESTIONNAIRE SURVEY.

(a) Group Discussions.

The results of the two qualitative, exploratory group discussions showed that it was generally agreed amongst the group participants that small firms in the area of West Yorkshire could benefit from a more professional approach to marketing. The group discussions were semi structured with the moderator making use of an interview schedule. It was also agreed that improvements could be brought about by the use of subsidised marketing training provided by University Business School academics and other private sector-training providers. The three groups produced a number of suggestions (put into 10 main categories) as to what would constitute the most useful marketing training programmes and other suggestions as to timing, duration, location, cost etc. The group discussion proceedings were analysed and the analysis formed the basis for a questionnaire, which was pilot, tested and refined and eventually sent out to 1,100 small firms in the area by post. The response rate was 249 (22.63 %).

(b) Sample Survey.

A list of various marketing and sales programmes were listed on the questionnaire and respondents were asked to express their interest and rate the perceived usefulness of each of the items listed to their particular organisation. Basically the survey results supported the view taken by many working in the area of the marketing/ entrepreneurship interface and SMEs generally. That is conventional 'classicist' marketing re: the standard texts are not necessarily appropriate for use in smaller firms. Few of the small firm owners/ managers surveyed expressed strong interest in what might be called 'conventional marketing courses' and did not see the courses listed as being of particular relevance to their needs.

Summary of survey findings.

The most highly valued courses were 'Importance of the Customer' course – 66 % rating as very or quite useful. A short course on 'practical selling' with 62 % rating very useful or quite useful. A 1-day course on 'publicity and advertising' – 65 % expressed a rating of very or quite useful. However for most

of the courses listed which included marketing planning, pricing, sales forecasting and other key skill areas, between 55 and 62 % of respondents rated the course as having NO use to them at all. Some of their opinion was due to the duration and timing of the course listed. But even allowing for this there still seems to be a strong perception amongst the owners and managers of smaller enterprises that conventional, mainstream marketing courses are of little or no value to them.

Hypothesis test.

Respondents were asked to rate each of the courses mentions as either (1) Very useful, (2) Quite useful or (3) No use at all. There were 10 potential courses listed on the questionnaire. This would mean that the 'highest' score across all 10 possibilities would be 10x1=10 whilst the 'lowest' score would be 10x3=30. Hence the lowest numerical score was actually the most positive overall score in relation to the perception of respondents to the importance of marketing courses to help them achieve marketing improvements in the future. Respondent's selection and rating of various sales and marketing topics gave the author a proxy measure of how respondents perceive the importance and usefulness of conventional sales and marketing topics to the running of their businesses. As a proxy measure this was taken as an indirect indication of respondent's attitude toward the importance of marketing to their business. In a sense using 10 different dimensions is very much like the general approach used in commercial marketing research to measure attitudes [22]. Because of the idiosyncratic component in peoples attitude set a multi dimensional approach is usually used resulting in a research instrument with a 'battery' of attitude dimensions[23].

A Person Chi Square test was used to test whether there were any significant difference between the different commercial/ industry sectors, textile manufacturing (Coded as 1), chemical processing and related industries (Code 2), transport and distribution services (Code 3), construction, light engineering (Code 4) and other financial/ business services (Code 5). In this paper the area of 'sales forecasting' is used as an example and to illustrate the general point. Results for other training and skill areas were similar to this but because of the length restrictions of this paper comprehensive results are not presented here. However the results for sales forecasting are indicative of the results of the whole study. This was taken as a proxy measure of the respondents' perception of the importance of sales forecasting to their firm. The Null Hypothesis (Ho) was that there was no significant difference between the groups in relation to the expressed interest in attending a course in sales forecasting. The alternative hypothesis (H1) was that there was a difference. The data used was nominally scaled and hence a non parametric test was considered appropriate. Persons' Chi-Square was used to test Ho against H1 and the Contingency Coefficient was used to test the strength of any statistical association. The frequency distribution of rating scores i.e. 1,2 or 3 were cross tabulated by industry sector codes nominally as 1 to 6 and a Chi square test carried out. The total score for each respondent in each of the sectors were totalled and averaged. Column 1 below represents a total average score of 1 to 1.5 representing 'very useful', none of the averages came to exactly 1 or 2 etc, and it seemed reasonable for an average total score around 1 to 1.5 to represent this response category. Likewise a score of 1.6 to 2.4 was deemed to represent a 'quite useful' category following the same logic i.e. none of the averages was exactly 2. Column 2 represents this score category. Column 3 represents 'not useful at all' which was categorised as a score anywhere between 2.6 to 3.

Rating score by industry sector (Sales forecasting)			
	Very useful	Quite useful	Not useful	Total
Industry code 1	6	13	21	40
Industry code 2	10	13	24	47
Industry code 3	12	12	22	46
Industry code 4	13	13	25	51
Industry code 5	19	24	22	65
Total	60	75	114	249

Degrees of freedom: 8

Chi-square = 6.99837102107993

For significance at the .05 level, chi-square should be greater than or equal to 15.51.

The distribution is not significant.

p is less than or equal to 1.

9

The above Chi –square results shows no significant association between the average total scores on the response categories and industry sector. None of the cells had expected frequencies less than 5. The contingency coefficient and Cramer's V were not calculated as their significance would be the same as for the person Chi-square test i.e. not statistically significant. None of the other nine training subject areas showed significant results when Chi square tested against the same industry categories.

CONCLUSIONS

Evidence from the group discussions suggest respondents think that sales and marketing 'training' would be a good thing. In their opinion the management of many smaller firms, at least in the region of West Yorkshire, are generally poor in terms of their ability to apply sales and marketing principles in a professional and effective manner.

However evidence from the survey carried out amongst the owners and or managers of actual small enterprises in the regions gives a different picture. When presented with a specific list of sales and marketing topics and asked to evaluate the usefulness of attending a course (of different lengths, times, types etc. to suit the respondent and for a very small fee) on each of the specific subject areas, many of the respondents showed little or no interest. On average, for all of the marketing topics presented for evaluation approximately 55 to 62 % of respondents said that attending such a course would have no perceived benefit at all to their business.

Evidence gained from the author's own consultancy experience with smaller firm over many years and reported elsewhere [24, 25, 26] suggests that conventional, formal marketing principles and techniques can be applied with beneficial effect to a wide variety of smaller firms.

In conclusion it does seem true that many working in smaller firms see the conventional marketing approach as being of little interest or relevance to their firms. However further evidence suggests that ordinary, standard, conventional marketing can be beneficially applied, almost without exception, to virtually any kind of small enterprise. There does not necessarily seem to be a case for a new small business 'marketing paradigm', although some adjustment and alteration might be appropriate in many cases [27]. A codified body of work is required to demonstrate what adaptation might be necessary for each of the areas of the marketing mix.

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Theme 2 (T2: MATERIALS 1 TO 9) J = 5, B = 1, C = 3.

FORECASTING, INFORMATION MONITORING AND CONTROL IN SMALL FIRMS.

Code

J = JOURNAL

C= CONFERENCE

B = BOOK

R = REPORT

J (T2/1) Reynolds, P.L., Day, J. and Lancaster, G. (2001), ''Moving towards a control technique to help small firms monitor and control key marketing parameters: a survival aid'', *Management Decision*, 39 (2), pp. 113-120. ISSN 0025-1747. **209**

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C (T2/6) Reynolds, P.L. (2008), "Are Sales Forecasters in Small Firms Bayesian?*", Research at the Marketing-Entrepreneurship Interface*, 2008 UIC Research Symposium on Marketing and Entrepreneurship, University of Illinois at Chicago, USA, Stockholm, Sweden, June 14th-16th, ISSN: 312-996-2670. **286**

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J (T2/1) Reynolds, P.L., Day, J. and Lancaster, G. (2001), ''Moving towards a control technique to help small firms monitor and control key marketing parameters: a survival aid'', *Management Decision*, 39 (2), pp. 113-120. ISSN 0025-1747.

Moving towards a control technique to help small firms monitor and control key marketing parameters: a survival aid

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Abstract
This article considers that one way to help the small- and medium-sized enterprise (SME) to survive is to offer it a robust but simple monitoring and control technique that would help it manage the business effectively and this, in turn, should help to increase its chances of survival. This technique should also be of interest to all people involved with monitoring or advising a large number of small enterprises or business units within a larger organization. For example, a bank manager or a small business consultant responsible for a portfolio of firms. The authors utilize process control techniques more often used in production and inventory control systems to demonstrate how one might monitor the marketing "health" of small firms.

Introduction

The authors are concerned with developing a quantitative method to help SMEs manage their operations more successfully, and thus hopefully increase their survival rate. It will also be of particular use to those who provide business advice and services to the small business. The behaviour of the SME is described by reference to a life cycle/stages framework. The proposal is that either a single, or several, key performance indicator(s) are monitored and that, when they fall outside an acceptable range, a warning message is generated. This requires an effective forecasting method, preferably one that utilises and "learns" from past data and a method by which to track unexpected deviations and generate a warning message. For the former it is argued that exponential smoothing models are suitable. For the tracking signal through which the data are monitored, a smoothed error tracking signal based on the work of Trigg *et al.* (Trigg, 1964; Trigg and Leach, 1967) is employed. The generation of the exception message must be related to a particular confidence level and for this cumulative probability tables for the tracking signal are needed.

Stage models

Most SMEs in the UK do not grow and thrive but fail within five years (Department of Trade and Industry, 1999). In trying to understand the dynamics behind such a performance then the adoption of a life-cycle model approach to the firm is appropriate. Such a framework encompasses the riskiest situation – the survival of the growing firm as it moves through its life-cycle. Equally this article has relevance for the SME in the "static" situation in which it remains at a

particular stage but still has to address those problems peculiar to that stage. Many life-cycle models assume that the firm proceeds in a somewhat orderly fashion through defined stages: however, some variants of this approach introduce "crisis points" which delineate the stages. Such episodes have to be successfully addressed for the firm to move to the next stage of development (see, for example, Scott and Bruce, 1987). As shown by Hanks *et al.* (1993), whilst different authors subscribe to a different number of stages in their respective models, in general they can be reduced down to the generic stages of start-up, expansion, maturity, diversification, and decline. Critics of the life-cycle approach argue that these models are too restrictive due to their implicit assumptions, one of which is that the firm carries out functions concurrently rather than consecutively (Storey, 1994). This issue was addressed by Eggers *et al.* (1994), who, whilst still retaining the stages approach of the original Churchill and Lewis (1983) model, allowed for an organisation to develop in a more "organic" fashion – they can "hypergrow" (skip stages) or "backslide" to previous stages. This revisited and reworked model considered six stages: conception, survival, stabilisation, growth orientation, rapid growth, and resource maturity.

However, we suggest that if the models are treated as a general schema then they do serve to remind us of the practical problems that the firm needs to address and, roughly, when to expect such problems to manifest themselves. The attraction of the Scott and Bruce (1987) approach is that it is quite specific in suggesting what such managerial problems might be and their location in the life cycle. At worst such an approach serves to remind us that young, pioneering firms in respect of their behavior and, hence, their needs are very different from their maturer counterpart. Hanks *et al.* (1993) have demonstrated through statistical analysis of data patterns for their chosen industry sector

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Paul L. Reynolds,
John Day and
Geoff Lancaster
*Moving towards a control
technique to help small firms
monitor and control key
marketing parameters:
a survival aid*

(high technology ventures in Utah) that one can infer from actual data, rather than have to speculate upon, the existence of identifiable life cycle stages. They identified four such stages – start-up, expansion, maturity, and early diversification.

The factors that cause small business failure are depressingly familiar. They probably can be subsumed under the categories of any, or all, of the deficiencies in human capital, financial capital or external trading conditions (Cressy, 1996). Whilst the typical problems facing the SME need not manifest themselves in failure, the top three consistent problems faced by UK SMEs, as reported in the *NatWest SBRT Quarterly Survey of Small Business in Britain* (1999), are: low turnover/lack of business; governmental regulations and paper work, and cashflow/payments and debtors. The proposition in this article is that one might be able to increase its life expectancy if a simple but robust model could be found that would help the SME identify potential crisis points. The type of approach that we are proposing either could be used by the SME itself to monitor its key commercial variables or could be used by advisers and other interested parties who have responsibility for monitoring a large number of SMEs – for example, commercial bank small business advisers. Certainly the approach could help to track two of the aforementioned problem areas through the provision of more timely and accurate data or, perhaps, helping the SME to react more quickly, or to partly mitigate some of the consequences that would be caused by such problems.

The proposed method

The advantages of this proposed method are that it is easy to apply, can be calculated on a fairly simple Excel spreadsheet package (Greatorex) and the underlying statistical framework is well proven, as demonstrated by the age of our technical citations. What has made the model accessible to the SME is the calculation by one of the authors (Reynolds, 1986) of confidence limits for the smoothed error tracking signal, which then allows a tracking signal to be applied in practice. The disadvantages of the model are that it is data hungry in the sense that the more past data that are available, the more accurately the models predicts, and that to run the procedure some statistical knowledge and ability to "fine tune" the model are required. However, the former problem may not be insurmountable if the SME has, say, daily sales figures, and in the latter case

some limited contact with an adviser would help with the fine tuning. The authors believe that the following criteria, which are necessary for the technique to be useful and valid, are met to a sufficient degree either in theory or in practice:

1 That the concept of identifiable stages and their concomitant and unique commercial problems and challenges within a life cycle schema is acceptable and realistic.
2 That exponential smoothing forecasting models are reliable and suitable for predicting future values of the appropriate data. At this stage the authors are concerned only with producing one period ahead forecasts. Indeed tracking the errors of the "n" period ahead forecasts produces a less sensitive tracking signal (Reynolds and Day, 1996).
3 That the monitoring scheme is accurate, simple to understand, economises on the storage of data and is robust to whatever data series is employed.
4 That Trigg's tracking signal is a reliable tracking device, capable of picking up both unexpected step (large) and ramp (gradual) changes in the underlying data pattern, and reporting such unexpected deviations as quickly as possible. Additionally cumulative probability values are available for the tracking signal which can be used to set control limits for a wide choice of sensitivity.
5 Suitable data are available to use as a leading indicator. For the purpose of illustration we have used sales turnover but realise that this may not be the best indicator, and that a combination of indicators may well be needed – particularly to capture more subtle effects such as entrepreneurial ability.

The main concern of this article is to establish the validity of items 2, 3 and 4 above.

The forecasting procedure

In monitoring the key marketing parameters of small firms the authors have made use of exponential smoothing to produce one period ahead forecasts of the parameter values. If the input data used in the forecasts are behaving as expected, then the forecasting errors will be normally distributed and will lie within certain bounds. These forecasting errors can be tracked with a tracking signal in order to identify as quickly as possible any unexpected patterns in the errors, which in turn could indicate possible unexpected changes in the underlying input data. If the tracking signal is computed as a derivative of

the one period ahead forecast error, then it will be normally distributed. It should lie within certain cumulative probability boundaries, provided that the underlying input data are "well behaved" and within certain expected limits of variation, given the specific model used. The authors are not using this forecasting procedure with the intention of producing forecasts *per se* but as part of their process to enable the monitoring of selected performance variables. Exponential smoothing has been adopted to provide these forecasts, because: exponential smoothing has replaced moving averages as the predominant method used in short-term forecasting (Montgomery and Johnson, 1976; Makridakis and Hibon, 1979); second, evidence from the literature strongly suggests also that quantitative techniques are generally superior in accuracy to qualitative techniques (Hogarth, 1975; Sarbin, 1943; Slovic, 1972; Mabert, 1975).

Other studies by Bauman (1965), Geurts and Ibrahim (1975) and Newbould (1974) have concluded as well that simpler methods such as exponential smoothing in terms of accuracy do as well as or better than more sophisticated models. Both Geurts and Ibrahim (1975) and Makridakis and Hibon (1979) show that exponential smoothing outperforms the more sophisticated Box-Jenkins models. Interestingly, the comprehensive study by Witt and Witt (1992) on modelling and forecasting demand in tourism concluded, *inter alia*, that more complicated econometric models do not necessarily outperform more naïve models.

The tracking signal

The first tracking signal designed specifically for forecast control was used in inventory control and proposed by Brown (1962). This is defined as the sum of forecast errors divided by the mean absolute deviation (MAD) and is known as the Simple CUSUM technique. The smoothed error tracking signal, the procedure used in this article, was developed by Trigg (1964) and based on the earlier work of Brown (1962). The real difference in his method is that he uses a "smoothed error" in the numerator of the tracking signal instead of the sum of errors. In the simple CUSUM, Brown applied exponential smoothing to the modulus of the error to produce a smoothed MAD, and the sum of errors was calculated by summing the plus and minus values of successive errors. Trigg retains the smoothing of MAD but in addition applies simple exponential smoothing to the plus and minus errors to

produce a smoothed error as the numerator of the tracking signal instead of the sum of errors. These variants are explained and discussed in the Appendix.

Tracking signal control limits

In this article the authors are using a forecasting procedure, not with the intention of producing forecasts for planning purposes, but as a means of monitoring performance and comparing it with an expected outcome. SMEs need to know as soon as possible when a forecast has gone '"out of control" in order to avoid the mistake of basing important decisions on poor information and, if necessary, to carry out corrective action. The tables of confidence limits have been produced for use with the smoothed error tracking signal for each of the main exponential smoothing models. That is Simple Exponential Smoothing, Brown's One-Parameter Linear Exponential Smoothing, Holt's Two-Parameter Linear Exponential Smoothing and Winter's (1960) Seasonal Method. Since Holt's method is more frequently used than Brown's method, the authors have only discussed the use of Holt's method. These cumulative probability tables contain many hundreds of individual confidence limit values that could be integrated into a computerised monitoring and control system. Their advantage is that they impart greater accuracy to the technique because they allow a greater permutation of smoothing coefficient values to be used. In essence the coefficient for the forecasting level equations can now be different from the coefficient used in the tracking signal equation. The first published report of a study using different values of smoothing coefficients in the forecasting equations from that used in the tracking signal ($\alpha > \alpha_1$ or $\alpha < \alpha_1$) was by McKenzie (1978). He showed that the performance of the smoothed error tracking signal (T) may be significantly improved by such a simple alteration in its application.

Methodology used to obtain control limits

Cumulative frequency tables were produced for the smoothed error tracking signal using "well behaved" data produced by simulation. The method involved setting the parameters for a particular model, e.g. Holt's (1957), and then generating random errors drawn from a normal distribution and adding these to the time series. Tables were produced using the forecasting models of Simple Exponential

Smoothing, Holt's Two-Parameter Linear Exponential Smoothing and Winter's Seasonal Method. Many possible permutations of smoothing coefficient values were used for level component, trend component, seasonal index (for Winter's (1960) Model) and tracking signal. These tables are able to serve as "tracking signal confident limit tables" when smoothed error tracking signal values from "real" one period ahead forecasting runs are compared to the theoretical, simulated values. If the value of the smoothed error tracking signal (T_t) in the forecast procedure exceeds the value given in the table (the modulus of T_t is shown in the tables) for a given permutation of smoothing coefficient values, i.e. trend component, seasonal components etc. – then the tracking signal T_t would be said to have "tripped" at a certain level of confidence, i.e. 95 per cent level, 99 per cent level etc. The tracking signal "critical value" produced using this simulation exercise agrees with the limited range of values reported by Batty (1969), Trigg (1964) and Gardner (1983) for simple exponential smoothing and agrees with the theoretical values produced from equations derived by McKenzie (1978) for Holt's Two-Parameter model of linear exponential smoothing. Critical values were produced for the Winter seasonal model, although there is nothing in the literature of either a theoretical or an empirical nature for this model to compare these critical values with. A detailed account of this methodology is reported by Reynolds (1986) and discussed by Reynolds and Greatorex (1988). Readers are referred to these for a more detailed coverage of the procedures used. It is not possible to show the comprehensive cumulative probability tables derived for T_t in this article, as, for example, the tables for Winter's method alone extend to some 20 pages. A full comprehensive set of cumulative probability tables for a wide range of smoothing coefficient value permutations and for use with all the exponential smoothing forecasting models discussed in this article is available on request from the authors.

Trialling the model

Figure 1 reports six runs of the model – five of these (a to e) are using hypothetical data and one (f) is using actual reported quarterly sales data from a local company for a ten-year period. The one set of actual data is reported from an exercise that applied this technique to four case study companies. Case (f) is a company in the authors' local economy with data being obtained from secondary published sources, the selection parameters being companies with a turnover of fewer than £2m per annum, who were employing fewer than 50 people, and were not a subsidiary of another company. The final criterion was that they had exhibited some variation in their financial performance over the last ten years, as indicated by their "ICC score" (a composite financial score of financial soundness). This case is presented also as Figure 2. This example demonstrates very well how difficult it is to identify unusual changes in the underlying data by merely looking at a plot of the data. The other three case study companies were located in the North East of England and had between 20 and 200 employees. The authors discuss them in the next section of this article. Standard forecasting models (those of Holt (1957) and Winter (1960) and simple exponential smoothing) were used to test the ability of the tracking signal to monitor step and ramp changes (shocks) in underlying input data for both the hypothetical simulated time series and real time series obtained from small firms. These forecasting and tracking signal programs, in conjunction with the tables of tracking signal "critical values" discussed earlier, were then used to test the reaction of T_t to a step or ramp shock for both the simulated and real time series data. In this sense the forecasting methodology is used as a marketing monitoring and control procedure.

Discussion of results

As discussed above, the technique has been applied to four case study firms, only one of which is reported in Figure 1 (result f) and graphed as Figure 2. Results obtained from using the procedure look promising at present in cases where the input data exhibit some predictable pattern, and appear to be robust and suitable for a range of data patterns including data exhibiting seasonal or cyclical patterns. However, when the input data exhibit extreme variability, as in the case of the other three case study firms drawn from the North East of England, the method performs less well (Reynolds *et al.,* 1995). Because the data are virtually impossible to predict with any of the exponential smoothing forecasting models available, tracking the one period forecasting errors is a pointless exercise. The one period errors are so large that the resulting tracking signal exceeds its predetermined control limit virtually every time period. This is the one very serious drawback and limitation of

Figure 1
Six runs of the model using hypothetical (simulated) data and real data

Type		Data 'displays'	Model	Step change	Ramp change	Trips within (number of time periods)
(a)	Simulated	Linear trend	Holt's Linear Trend	yes, 5%		one
(b)	Simulated	Linear trend	Holt's Linear Trend		yes, 2%	two
(c)	Simulated	Stationarity	Simple Exponential Smoothing	yes, 5%		one
(d)	Simulated	Stationarity	Simple Exponential Smoothing		yes, 2%	two
(e)	Simulated	Seasonality	Winter's	yes, 5-8%		two
(f)	Real	Seasonality	Winter's		yes	two

Figure 2
Figure 1 in graph form
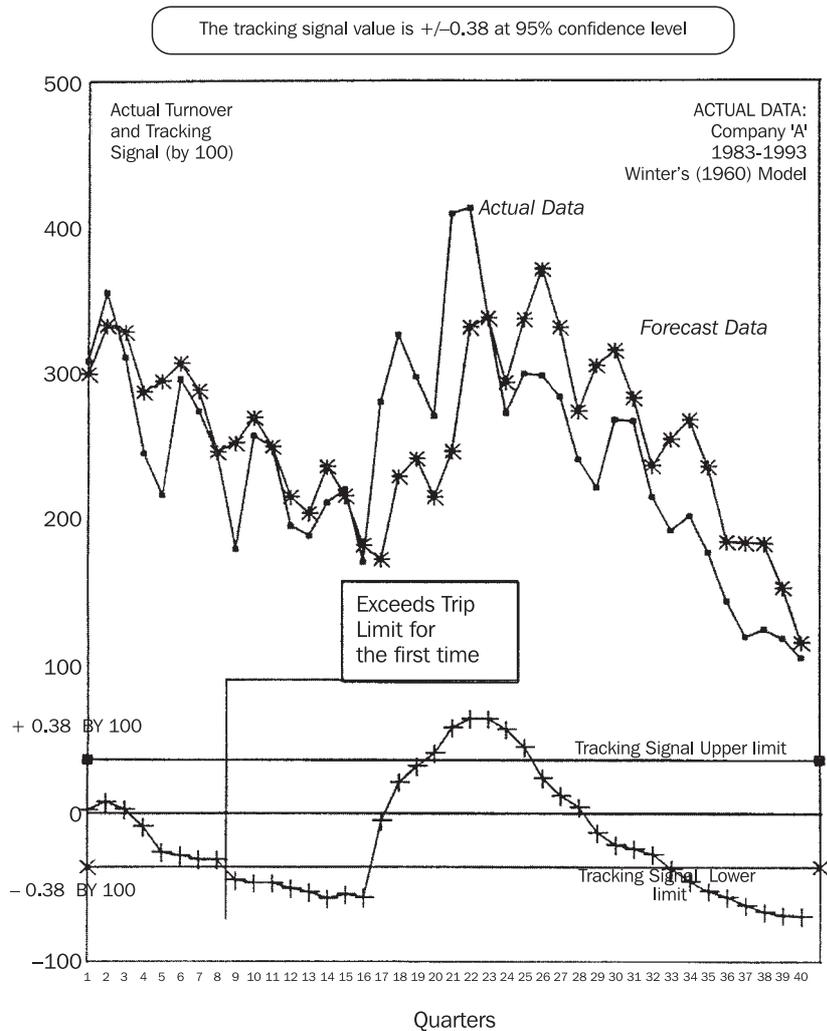
The tracking signal value is +/–0.38 at 95% confidence level

Actual Turnover and Tracking Signal (by 100)

ACTUAL DATA: Company 'A' 1983-1993 Winter's (1960) Model

Actual Data

Forecast Data

Exceeds Trip Limit for the first time

+ 0.38 BY 100

Tracking Signal Upper limit

– 0.38 BY 100

Tracking Signal Lower limit

Quarters

the proposed scheme. Of course the authors are simply using sales as input data; it may be possible to find, or even derive, a more stable leading indicator to use as input data and hence improve the general applicability of the procedure under a wider range of more volatile conditions.

In those cases where the underlying input data were predictable with an exponential smoothing forecasting model, the smoothed

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error tracking signal T_t was found to be extremely responsive. For example, when the simulated data reported in Figure 1 were subject to a step change of approximately 5 per cent of the mean level in the cases where the underlying mean level of the data was stationary or displaying a linear trend, the tracking signal "tripped" within one time period of the introduction of the step "shock." When, again, simulated data were subject to a "ramp" change of approximately 2 per cent in the underlying mean input data, the tracking signal "tripped" within two time periods, usually within one time period. When the real small firm data from the author's own area were used, the method proved to be highly robust and "tripped" within two time periods (Figure 2). These data were exhibiting a ramp change and were the most predictable of the four cases mentioned.

The idea of monitoring the commercial marketing health of small firms using some form of monitoring device or "tracking signal" seems to work well in principle for a wide range of situations where the underlying input data are time-dependent enough to be predicted by an established exponential forecasting model. In cases where predictability is impossible with such a model because of the chaotic nature of the underlying input data, the procedure fails and this is its main limitation. However, some derivative or composite of sales, or wider parameters, would probably provide more valuable and more responsive input data.

Given the importance of being able to monitor the commercial health of the SME so that crisis points can be identified before they occur, and thus remedial action can be considered and taken, we argue that our proposal merits further attention and development. Despite the limitations this method does have two strong points in its favour, namely:

1 An exponential smoothing forecasting system, coupled with a monitoring procedure in the form of the smoothed error tracking signal, is a suitable and robust procedure and one suited to the range of data characteristics found in commercial data.

2 The use of more sophisticated performance measures by potentially reducing the variability of the chosen leading indicator should reduce the main limitation of the procedure discussed above. The potential benefits in terms of improved survival and growth for the SME are sufficiently enticing to continue the search.

Conclusion

This article has suggested that a relatively simple but robust procedure is available to help the typical SME manage and interpret key performance data. Given that SMEs are vulnerable to failure, pressured by external market forces, and may well have to contend with turbulent and dangerous life cycles, we hope that such a procedure could help to contribute to a longer life span. The method we have chosen, and discussed, is not without problems but results so far are encouraging enough for further refinement to be undertaken.

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Appendix. Technical details

For *Simple Exponential Smoothing* the one step ahead forecast produced in current time is denoted by F_{t+1} and the actual current demand value X_t. Using this we get:

$$F_{t+1} = \alpha X_t + \alpha(1-\alpha)X_{t-1} + \alpha(1-\alpha)^2 X_{t-2} + \alpha(1-\alpha)^3 X_{t-3} \text{ etc.} \tag{1}$$

Transcribing the equation for F_{t+1} into F_t by subtracting 1 from all the subscripts, we obtain:

$$F_{t+1} = \alpha X_{t-1} + \alpha(1-\alpha)X_{t-2} + \alpha(1-\alpha)^2 X_{t-3} + \alpha(1-\alpha)^3 X_{t-4} \text{ etc.} \tag{2}$$

If the equation is rewritten as:

$$F_{t+1} = \alpha X_t + (1-\alpha)[\alpha X_{t-1} + \alpha(1-\alpha)X_{t-2} + \alpha(1-\alpha)^2 X_{t-3} \text{ etc.} \tag{3}$$

It can be seen then that the equation for F_t is exactly the same as that which appears in brackets in the equation for F_{t+1}.

Substituting F_t for this we obtain:

$$F_{t+1} = \alpha X_t + (1-\alpha)f_T \tag{4}$$

This is the basic equation defining a simple exponentially weighted moving average given by Holt (1957), and from which all other models of exponential smoothing derive. More correctly, the process is a geometrically weighted moving average, the exponentially weighted moving average being its analogue in continuous time (see Reid, 1969).

For *Holt's Two-Parameter Linear Exponential Smoothing* the forecast is formed by using two smoothing coefficients, $0 \leq \alpha \leq 1$ for the original series, and $0 \leq \beta \leq 1$ for the trend. The updating equations for Holt's (1957) method are:

$$\text{LEVEL} \quad S_t = \alpha X + (1-\alpha)(S_{t-1} + Z_{t-1}) \tag{1}$$

$$\text{TREND} \quad Z_t = \beta(S_t - S_{t-1}) + (1-\beta)Z_{t-1} \tag{2}$$

$$\text{FORECAST} \quad F_{t+m} = S_t + mZ_t \tag{3}$$

where S_t is the level in time "t", Z_t is the trend component and F_{t+m} is the forecast

produced in time "t" for "m" periods ahead of current time. Basically the trend Z_t is multiplied by the number of periods ahead to be forecast m, and added to the value of the level S_t.

Winter's (1960) Three-Parameter Linear and Seasonal Exponential Smoothing model is an extension of Holt's (1957) linear model, in that it includes an extra equation that is used to estimate seasonality. The updating equations for the Winter model are given by Makridakis and Wheelwright (1989, p. 98) as follows:

OVERALL SMOOTHING $S_t =$
$$\alpha(X_t/I_{t-L}) + (1-\alpha)(S_{t-1} + Z_{t-1}) \qquad (1)$$

TREND $Z_t = \varepsilon(S_t - S_{t-1}) + (1-\varepsilon)Z_{t-1} \qquad (2)$

SEASONALITY $I_t =$
$$\beta(X_t/S_t) + (1-\beta)I_{t-L} \qquad (3)$$

FORECAST $F_{t+m} = (S_t + mZ_t)I_{t-L+m} \qquad (4)$

where L is the length of seasonality (e.g. number of months or quarters in the year etc.), Z_t is the trend component, I_t is the seasonal adjustment factor, and F_{t+m} is the forecast for m periods ahead: α, ε, and β are the smoothing coefficients for overall smoothing, trend and seasonal components respectively.

The overall smoothing equation (1) differs slightly from Holt's equation (1) in that the first term is divided by the seasonal number I_{t-L} which adjusts X_t for seasonality by reviewing the seasonal effects which may exist in X_t. The estimate of seasonality, calculated with equation (3), is given as an index fluctuating around 1. The seasonal index is a ratio of the current value of the series X_t divided by the current single smoothed value for the series S_t. If X_t is greater than S_t, the ratio will be greater than 1, while if X_t is less than S_t the ratio will be less than 1. S_t is a smoothed average value of the series that does not include any seasonality, the values of X_t contain both seasonality and any randomness in the series. To smooth out this randomness, equation (3) weighs the newly computed seasonal factor X_t/S_t, with β and the most recent seasonal number corresponding to the

same season with $(1-\beta)$. This prior seasonal factor was computed in period $_{t-L}$, where L is the length of seasonality.

The form of equation (3), used to calculate the seasonal component, is similar to that of other smoothing equations; there is a value, in this case the ratio X_t/S_t, which is multiplied by a smoothing coefficient β and is then added to its previous smoothed estimate which has been multiplied by $(1-\beta)$. Equation (2) used for the smoothing the trend is exactly the same as Holt's trend equation (2) discussed earlier. Equation (4), used to produce the forecast in Winter's model, is the same as the corresponding formula used to produce a forecast in Holt's (1957) model (equation (3) for Holt), except that the estimate for the future period $_{t+m}$ is multiplied by I_{t-L+m}. In the equation for overall smoothing (1) X_t was divided by I_{t-L} to remove any seasonal effects that may exist in X_t. Multiplying the value of $(S_t + mZ_t)$ by I_{t-L+m} in equation (4) readjusts the forecast for seasonality by reintroducing seasonal effects into the forecast. The updating equations for the smoothed error tracking signal are given by Trigg (1964, p. 272) as follows:

Smoothed Error = $(1-\alpha)$ previous smoothed error + α latest error.
Mean Absolute Deviation (MAD) = $(1-\alpha)$ previous MAD + α latest absolute error.
Tracking Signal = Smoothed Error/MAD.

These updating equations are expressed in a more concise form by Gardner (1983, p. 10) as:

$$E_t = (\alpha e_t + (1-\alpha)E_{t-1} \qquad (1)$$

$$\text{MAD}_t = \alpha|e_t| + (1-\alpha)\text{MAD}_{t-1} \qquad (2)$$

$$T_t = E_t/\text{MAD}_t \qquad (3)$$

where t represents current time, E_t is the smoothed error, e_t is the present error, MAD_t is the mean absolute deviation, $|e_t|$ is the modulus or absolute value of the forecast error, T_t is the smoothed error tracking signal, and α is the smoothing coefficient $0 \le \alpha \le 1$.

Application questions

1 What are the particular crises, at different stages of its life, that a small firm must most critically deal with?

2 How effective would this procedure be for autonomous business units in a larger organization?

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Sales forecasting practice in small firms: the application of Bayesian theory to strategic decisions.

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Abstract

This paper examines the sales forecasting practices of small firms, defined here as firms with no more than 50 employees. This paper discusses the application of Bayesian decision theory in the production of sales forecasts for small firms particularly in relation to longer term strategic decisions. A specific case study based on the author's consultancy experience is used to illustrate the application of the procedure. The management of many firms feel unable to use formal objective forecasting techniques because of lack of information to start the forecasting procedure off. For example there may not be any historical data available or even if there is management may not have any objective probabilities in relation to initial starting conditions. As discussed in this paper evidence from the authors own work suggests that the management of many small firms make no formal sales forecasts at all. Where formal forecasting procedures are used by the smaller firm they often tend to be subjective methods based on the managers own experience or the collective experience of others. A more robust procedure is available which overcomes the lack of initial starting conditions and this is based on Bayesian decision theory. Such a procedure should be well within the competence level of the majority of small business managers. A computer can carry out the calculations and the basic principles of Bayesian forecasting procedures are relatively easy to grasp and apply by small business managers.

Sales forecasting practice in small firms: the application of Bayesian theory to strategic decisions.

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Abstract

This paper examines the sales forecasting practices of small firms, defined here as firms with no more than 50 employees. This paper discusses the application of Bayesian decision theory in the production of sales forecasts for small firms particularly in relation to longer term strategic decisions. A specific case study based on the author's consultancy experience is used to illustrate the application of the procedure. The management of many firms feel unable to use formal objective forecasting techniques because of lack of information to start the forecasting procedure off. For example there may not be any historical data available or even if there is management may not have any objective probabilities in relation to initial starting conditions. As discussed in this paper evidence from the authors own work suggests that the management of many small firms make no formal sales forecasts at all. Where formal forecasting procedures are used by the smaller firm they often tend to be subjective methods based on the managers own experience or the collective experience of others. A more robust procedure is available which overcomes the lack of initial starting conditions and this is based on Bayesian decision theory. Such a procedure should be well within the competence level of the majority of small business managers. A computer can carry out the calculations and the basic principles of Bayesian forecasting procedures are relatively easy to grasp and apply by small business managers.

The need for sales forecasting within small firms.

The management of all firms are involved in making decisions about the future in the present. In a sense that is what the job of management is really all about at least at the more strategic level. The act of preparing for the future whether in business or any other area of our lives implies forecasting, consciously or subconsciously, of tomorrow's condition. In our personal lives, such predictions are usually made on an informal, subjective basis (Reynolds, PL, and Greatorex, M, 1988 pp 578 –586). If they turn out to be wrong we can usually adjust our personal circumstances. However, we rarely enjoy the same degree of flexibility in our working lives, particularly if we are the owner manager of a small firm (Reynolds, PL and Day, J, 1994, pp 210-211). There, decisions are usually of a more formal nature and of greater consequence. The very nature of managerial decision-making involves forecasting future conditions. This fact applies to organisations of whatever size. And whatever industry. Small firms are often considered to lack formal marketing skills Carson, D et al, 1995). Sales forecasting is fundamental to management's ability to plan, budget and control. The sales forecast is the bedrock of all other management forecasts which are usually in some way based on it.

All firms, of whatever size, need to make predictions or forecasts about future conditions. The term 'prediction' is often reserved for subjective 'qualitatively' based forecasts e.g. sales force composite technique. Whereas the term 'forecasting' is often used for objective 'quantitatively' based forecasting procedures e.g. exponential smoothing. Forecasts may be required for an important 'one-off' decision e.g. the company may be considering expanding by acquisition, diversifying into a totally new market or modernising its production processes. Such decisions tend to be long-term and strategic, rather than operational. In such situations, because of the

importance of the decisions being made, it is important that forecasting receives careful consideration, meaning an investment of time and money in the forecasting process.

Importance of the smaller firm.

SMEs make an invaluable contribution to the wider economy, which is often overlooked, including increasing competition, creating jobs, building effective networks, sharing knowledge and making a positive contribution towards social inclusion. Small firms are big business: they contribute significantly to employment, turnover and the number of businesses in the UK. There are 3.7 million active businesses in the Akin recent years this figure has remained relatively constant since the sharp rise in the number of businesses in the late 1980s. Small and medium-sized businesses, including those without employees, accounted for over 99% of UK businesses, and account for 50% of total UK turnover (£1 trillion), compared with 49% of turnover from the 7000 largest businesses. Only 30% of all businesses are employers Of the 3.7 million businesses trading, nearly 2.6 million are sole proprietorships and partnerships comprising only the self-employed owner-manager(s), and companies comprising only an employee director. Only 1.1 million enterprises are employers. (DTI figures 2002 published for 2001 period).
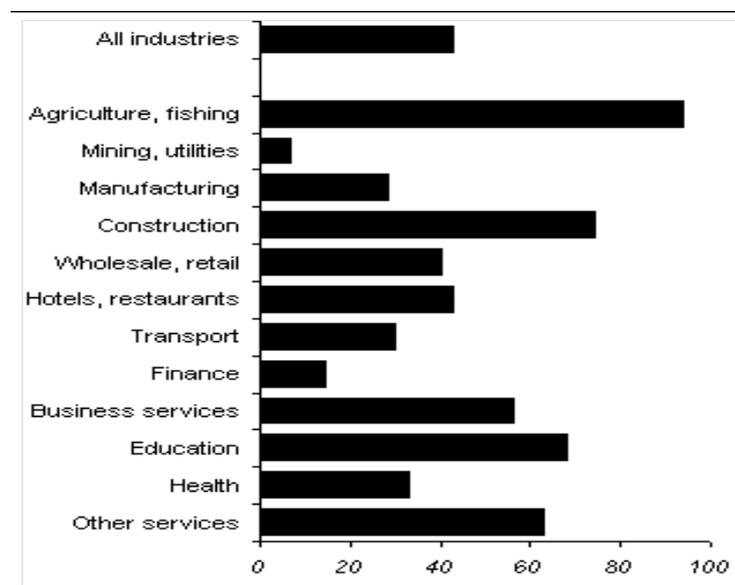
Share of employment in small businesses (less than 50 employees) by industry sector, UK

Source: Small Business Service 2002 relating to the 2001 period

Operational decisions.

Managerial decisions are not always strategic and much of a busy manager's time is taken up with day-to-day operational issues which, although not of the same magnitude as strategic decisions, are nonetheless important to the manager because of the proportion of time they occupy. Management requires forecasting information to assist them in making operational decisions, although the required time horizon for such forecasts is shorter than for strategic decisions. For example, for the marketing manager to set monthly sales targets, operational expense or advertising budgets, he or she may require regular short-term forecasts for each product, broken down according to product type, size, colour, salesperson's territory, channel of distribution and even by individual customer. Whatever type of decision is being made, forecasting is required. Forecasting can make a contribution to the successful management of the small enterprise, whereas poor forecasting can lead to high inventories and associated stockholding costs which must be paid for out of working capital, or under-production and unrealised market potential. Stanton et al contend: 'The cornerstone of successful marketing planning is forecasting the demand for a product.' This quote would apply to all firms including the smaller firm.

Choice of forecasting procedure.

The recognition of the importance of forecasting was first illustrated by the results of a major research exercise carried out in the United States by Ledbetter and Cox in 1977. They found that forecasting techniques were used by 88 per cent of the 500 largest industrial companies in the USA. It was also established that no other class of planning techniques was used as much as forecasting. Although forecasting is important in most functional areas of a firm, the forecasting of sales is particularly important. The sales forecast is the bedrock on which company plans are built and for this to be sound, the forecast must be built on a firm scientific foundation. The central issue facing businesses is not whether to forecast, but how to forecast. The forecaster can choose 'subjective' or 'objective' methods or a mixture of each.

Forecasting terminology

The terminology used in the literature to describe forecasts can be confusing. Many writers make a distinction between prediction and forecasting, using 'forecast' to refer to objective, quantitative techniques and 'predict' to denote subjective estimates. This distinction is pedantic and the debate is a matter of semantics. 'Forecast' is of Saxon origin, meaning 'to throw ahead' implying that there is something in hand. In the context of this discussion, it would be historical data that can be extrapolated into the future. 'Predict' is of Latin origin, literally meaning 'to say beforehand' and no empirical basis is indicated. Dictionary definitions are unhelpful, a forecast being defined as 'a prophecy or prediction' and prediction, in turn, is defined as 'something predicted, a forecast'. Consequently, the use of the terms subjective and objective forecast is recommended and these terms are used throughout. The availability of appropriate data is of central importance to the development of a forecasting system. Depending on the degree of accuracy required, most forecasting techniques require a considerable amount of data to be collected and analysed in terms of usefulness and validity before it can be used in the forecasting process. Selection of the most suitable forecasting method from the choice of techniques available depends on the availability of existing data and/or company's ability to acquire relevant data. For example, a technique requiring a long historical time series would be of little use if data was only available for the past year. If the accuracy or validity of data were questionable, it would not be worthwhile or cost-effective to spend time and effort using a sophisticated technique known for its precision. In forecasting, the principle of 'garbage in/garbage out' applies; a forecast will only be as good as the data used in its compilation.

Sales forecasting practices in small firms.

Research methodology

Phase 1.

The first piece of work involves exploratory group interviews these are then followed by a survey discussed below. This research is derived from a larger research project discussed previously by Reynolds (2002). The methodology involves exploratory, qualitative research based on three group discussions with people involved in running or advising people who run small firms. Carson and Gilmore (1999) consider qualitative research the most appropriate when examining SME phenomena generally and particularly the interface between marketing and entrepreneurship. Gibb and Davis (1990); and Hofer and Bygrave (1992) further support this position. The group members included entrepreneurs/ managers running their own small firms, counsellors from various organisations involved with advising or supporting enterprise, small business advisors from the commercial banks, consultants and trainers to small firms from both the private sector and such bodies as the Training Enterprise Council (TEC). Each group discussion contained eight participants plus a moderator. Conversations within the group discussions were recorded and a content analysis carried out. Transcripts were examined and various common themes identified and colour coded for classification and analysis. The information gained from this analysis was used to design a questionnaire, which was sent to 700 small firms in the Kirklees and Calderdale, West Yorkshire area of the UK. This area was chosen because the author's university is in Kirklees. Using the Department of Trade and Industry national statistics for the start up and failure

rates of small firms and modelling down to the sub regional level of Kirklees and Calderdale it would seem that approximately 34% of small business start ups fail within four years of trading (see DTI figures 2003).

Phase 2.

The 700 questionnaires were sent out by post to a representative sample of small firms in the Kirklees and Calderdale area of West Yorkshire, England. A combination of lists were used as a sampling frame including the local Chamber of Commerce small firms registry, local trade directories and a database held by the University of Huddersfield.

The sample was stratified by the type of industry found in the area e.g. textile manufacturing, chemical processing, transport and distribution services, and in proportion to the importance of a particular sector to the local economy in terms of contribution to local GDP (see Alreck, PL and Settle, RB, 1995), (Everitt BS 1995). 330 respondents mailed back the questionnaire in the pre-paid envelope provided. In order to ensure the sample of respondents matched the initial stratification design final post stratification of the marginals was conducted. Where a particular sector was under represented follow up calls encouraging response or if necessary a second copy of the questionnaire was sent to respondents. These were also selected randomly from the non-respondents on the original sampling list. Questionnaires were sent out in waves and so it was possible to 'fine tune' the eventual sample to bring it into an acceptable approximation to the composition of the local small firm population.

The questionnaire contained questions asking respondents to rate the importance, as they perceived it, of various marketing and sales topics which could, if selected and rated highly enough by a sufficient number of respondents, be incorporated into a training course, which they would be invited to attend at subsidised rates. Respondent's selection and rating of various sales and marketing topics gave the author a proxy measure of how respondents perceive the importance and usefulness of conventional sales and marketing topics to the running of their businesses.

Discussion of empirical results

Qualitative group discussions.

Results from the three group discussions (eight members in each of the groups) were somewhat alarming if not particularly surprising. Each group was made up of small business owners/ managers and small business advisors (see above). All agreed that in general small firms do not make use of formal sales forecasting techniques or procedures on an on going or regular basis. The only time such forecasting procedures were used was part of an 'official' business plan that small firm management had to complete in order to get a bank loan or government grant. Even under these conditions subjective predictions rather than quantitative objective sales forecasts were the norm.

Sample survey results.

The survey questionnaire was designed using the information gained from the group discussions. The survey results supported the general conclusions of the group discussions. Sales forecasting was very low down on the list of priorities reported by the survey respondents in fact it was not formally rated per se by any of the respondents although some mentioned subject areas that might contain sales forecasting subjects such as marketing research. When asked to rank the three most important sales or marketing areas to the success of their business none entered sales forecasting. When respondents were asked to list any other courses or subject areas not already discussed none of the 330 respondents mentioned sales forecasting. Even subject areas that might have contained elements of sales forecasting in them such as marketing research and marketing planning received very low ratings. In fact only 5.6% of respondents rated marketing research as the area they would find most interesting if attending a course and only 1.9% of respondent rated marketing planning as the area they would be most interested in.

Overall the data from the three group discussions and the survey results seemed to indicate that very few small firms engaged in formal sales forecasting procedures. When the were used, in order to complete a business plan to raise finance for example, simple subjective forecasts or predictions were usually used. Outside of these special circumstance (filling in an 'official' plan etc) formally constituted sales forecasts are rarely made for strategic or operational decision making. Data from the sample survey confirmed that sales forecasting is not regarded as important by the managers of small firms and if they were given the opportunity to attend a free business course none of the 330 respondents expressed any interest in attending a course of sales forecasting.

Hypothesis test re: perceived importance of sales forecasting.

A Person Chi Square test was used to test whether there were any significant difference between the different commercial/ industry sectors, textile manufacturing, chemical processing and related industries, transport and distribution services, construction, light engineering and other financial/ business services. This was taken as a proxy measure of the respondents' perception of the importance of sales forecasting to their firm. The Null Hypothesis (Ho) was that there was no significant difference between the groups in relation to the expressed interest in attending a course in sales forecasting. The alternative hypothesis (H1) was that there was a difference. The data used was nominally scaled and hence a non parametric test was considered appropriate. Persons' Chi-Square was used to test Ho against H1 and the Contingency Coefficient was used to test the strength of any statistical association. Chi-Square is a non-parametric test of statistical significance. Any appropriately performed test of statistical significance lets you know the degree of confidence you can have in accepting or rejecting a hypothesis. Typically, the hypothesis tested with chi square is whether or not different samples (of people, texts, whatever) are different enough in some characteristic or aspect of their behaviour that we can generalize from our samples that the populations from which our samples are drawn are also different in the behaviour or characteristic (Agresti, A.1996). A non-parametric test, like chi square, is a rough estimate of confidence; it accepts weaker, less accurate data as input than parametric tests (like t-tests and analysis of variance (ANOVA), for example (Levin, Irwin P.1999). Nonetheless, its limitations are also its strengths; because Chi-Square is more 'forgiving' in the data it will accept, it can be used in a wide variety of research contexts particularly where the data collected is categorical or nominally scaled (Lieberman, B., ed. 1971). Normal distribution of deviations (observed minus expected values) is assumed. Chi-Square is a *nonparametric test* in the sense that is does not assume the parameter of normal distribution for the data, only for the deviations.

Calculating probability (P)
Looking up critical values for Chi at degrees of freedom = 10:
Significant levels: 0.20 0.10 **0.05** 0.025 0.01 0.001
Critical values: 13.44 15.99 **18.31** 20.48 23.21 29.59

Degrees of freedom: 10
Chi-square = 3.97360949739827
For significance at the 0.05 level, chi-square should be greater than or equal to 18.31.
The distribution is not significant accept Ho.
p is less than or equal to 1.

The calculated Person's Chi Square value was 3.973 and the level of significance was 0.5653 which is of no statistical interest or significance. The Contingency Coefficient was 0.433 with a significance value the same as that for the Chi Square statistic at 0.5653, again showing nothing statistically significant. For Chi-Square to be significant at the 0.05 level the calculated value needed to be 18.31. No expected frequencies in any of the cells were less than 5. Hence Ho was accepted, there was no evidence of statistical association between groups in terms of firms; perceived importance of sales forecasting to their organisations. There was an equal degree of disinterest and perceived importance amongst all of the commercial/ industrial sectors surveyed.

Bayesian decision theory.

Probability theory studies the possible outcomes of given events together with their relative likelihoods and distributions. In fact there is considerable debate about exactly what probability means in practice. Some mathematicians regard it as simply a component of abstract theory, while others give it an interpretation based on the frequencies of certain outcomes. Bayesian decision theory that is a mixture of qualitative and quantitative techniques. The method is named after Reverend Thomas Bayes (1702-61), a statistician (see Buck, CE and Sahu, SK, 2000 p 423; Singh, M and Provan, G, 1996 p 453; Lin, H., Mayers, R. and Ye, K, 2000, pp 209 – 231) . Despite the fact that it was developed in the 18th century, it has only recently been widely adopted (Buck, CE 2001, p 695). The method incorporates the firm's guesses at data inputs for the statistical calculation of sales forecasts. It uses network diagrams showing the probable outcome of each decision alternative considered. These are shown together with expected values and associated probabilities, initially derived on a subjective basis (see Smith, JQ and Faria, AE, 2000, p 528). Bayesian statistical forecasting, like all Bayesian statistics is based on two basic concepts. First, uncertainty about unknown quantities is expressed using the language of subjective probability, and, given new information or data, probabilities are updated using Bayes rule or procedure.

Bayes set out his theory of probability in *Essay towards solving a problem in the doctrine of chances* published in the *Philosophical Transactions of the Royal Society of London* in 1764. The paper was sent to the Royal Society by Richard Price, a friend of Bayes', who wrote:-

I now send you an essay which I have found among the papers of our deceased friend Mr Bayes, and which, in my opinion, has great merit... In an introduction which he has writ to this Essay, he says, that his design at first in thinking on the subject of it was, to find out a method by which we might judge concerning the probability that an event has to happen, in given circumstances, upon supposition that we know nothing concerning it but that, under the same circumstances, it has happened a certain number of times, and failed a certain other number of times.

Bayes's conclusions were accepted by Laplace (1781) in a memoir, rediscovered by Condorcet, M., (1785), (as Laplace mentions), and remained unchallenged until Boole,G., (1854) questioned them in the *Laws of Thought*. Since then Bayes' techniques have been subject to controversy.

Bayes also wrote an article *An Introduction to the Doctrine of Fluxions, and a Defence of the Mathematicians Against the Objections of the Author of The Analyst* (1736) attacking Berkeley (1734) for his attack on the logical foundations of the calculus. Bayes writes that Berkeley:-

...represents the disputes and controverversies among mathematicians as disparaging the evidence of their methods: and ... he represents Logics and Metaphysics as proper to open their eyes, and extricate them from their difficulties. ... If the disputes of the professors of any science disparage the science itself, Logics and Metaphysics are much more disparaged than Mathematics, why, therefore, if I am half blind, must I take for my guide one that cannot see at all?

Bayes was elected a Fellow of the Royal Society in 1742 despite the fact that at that time he had no published works on mathematics, indeed none were published in his lifetime under his own name, the article on fluxions referred to above was published anonymously. Another mathematical publication on asymptotic series appeared after his death.

Reverend Thomas Bayes (1702-61),

Born: 1702 in London, England Died: 17 April 1761 in Tunbridge Wells, Kent, England

Many statisticians and forecasters believe that Bayesian inferential methods have advantages over classical statistical procedures for a wide range of inferential problems mainly because the initial stating probabilities are arrived at subjectively opening up the potential of statistical inference, including sales forecasting applications, to a much wider range of problems, particularly those sorts of problems often found in marketing (Albert, J, 1996, pp5-10).

One of the problems of using probabilities in statistical model is in ascertaining initial probabilities to commence the forecasting process. Bayesian statisticians differ from 'purist' statisticians in the respect that 'purists' view the concept of probability as the relative frequency with which an event might occur. The Bayesian view is that probability is a measure of our belief and that we can always express our degree of belief in terms of probability (Buck, CE, 1996 p 24-28). Although the initial probabilities are derived subjectively (i.e. the figures are based on judgmental opinion, rather than on objective calculation) proponents of Bayesian theory believe that such probabilities are perfectly valid and hence perfectly acceptable as initial starting points in an extensive quantitative forecasting process. It is the subjective nature of arriving at the initial probabilities that makes the Bayesian approach useful in solving business problems for which initial probabilities are often unknown and are difficult or impossible to calculate using objective methods (Faria, AE and Smith, JQ, 1997, p 1750).

To use the Bayesian approach, the decision-maker must be able to assign a probability to each specific event. The sum of the probabilities of all events considered must be unity (one). These probabilities represent the magnitude of the decision maker's belief that a particular event will take place (Farina, AE and Souza, RC, 1995, p533, Faria, AE and Smith, JQ, 1997 p551).

In business situations such decisions should be delegated to personnel who have the knowledge and experience to assign valid initial subjective probabilities to the occurrences of various business events. These initial probabilities are based on previous experience of information (such as published secondary data) acquired prior to the decision-making process. For this reason, the initial subjective probabilities are referred to as 'prior probabilities' (West, M and Harrison, PJ, 1997 p 24 - 35).

When making business decisions, the financial implications of actions must be taken into account. For example, when a manager is considering investing a firm's surplus cash, he or she must

consider the probability of making a profit (or loss) under different economic scenarios and also assess the probability of such scenarios or events occurring (Pole, A, West, M and Harrison, PJ, 1994 p 40 -52). Applying Bayesian decision theory involves selecting an option and having a reasonable idea of the economic consequences of choosing a particular course of action. Once the relevant future events have been identified, the decision-maker assigns prior subjective probabilities to them (West, M and Harrison pp, 1997 p 37 – 44; Huerta, G and West, M, 1999, p401 -416). The expected pay-off for each act is then computed and the act with the most attractive pay-off is then chosen. If pay-offs represent income or profit, the decision-maker usually chooses the act with the highest expected pay-off (Lopes, H., Muller, P and Rosner, G.L., 2003 pp 66-75; Singh, M and Valtorta, M, 1995 p 111).

Phase 3 - Case study: Quality Wilton Ltd**.**

To illustrate the theory just described, a practical example is now discussed. For commercial confidentiality reasons the name of the firm used has been altered as has the country of export although the location of the company within the UK is accurate. However the industry discussed is the original one and the figures used in the calculations are the original figures collected as part of a consultancy project under the auspices of the Department of Trade and Industry (DTI) UK 'Marketing Initiative' programme. The figures shown have been rounded up to the nearest £500 for convenience.

Quality Wilton Ltd, Worcestershire produce high quality Wilton carpets. Such carpets are made from 80 per cent wool and 20 per cent nylon (for strength). In the UK the product retails for approximately £32 per square metre. Wilton carpets are very popular among the higher income households in the United Arab Emirates (UAE) where only small quantities are produced. The product is perceived by UAE higher social groups as being a luxury purchase. For Quality Wilton Ltd to gain economies in freight charges export consignments need to be relatively large and it is planned that the first consignment will be worth £3,000,000. Because of its high-status image in the UAE, the carpet can command a premium price (about £56 per square metre sterling equivalent). However, such a product is a deferrable purchase and demand is only likely to remain high if the UAE economy remains strong. Management foresee a possible decline of the UAE economy as the main risk factor in this venture. The first 12 months are particularly important, as this is the time when the first consignment is expected to be sold, given the present economic climate. Economists have predicted an economic downturn over this period if monetary conditions tighten in response to rising domestic inflation and poor trade figures.

The decision facing Quality Wilton Ltd management is whether to risk going ahead with the UAE centre now, when present demand for their product is likely to be high, or to postpone the decision, waiting for the economic outlook in UEA to become more stable. If the decision is postponed, fashion tastes may change away from this type of product in the interim. The management of Quality Wilton Ltd assesses the UEA economy is likely to go in one of three directions over the next 12 months:

(a)   stay the same
(b)   slight deterioration
(c)   significant deterioration

Management assigns subjective initial probabilities to each of the possible economic scenarios (Figure 1). (Note that the sum of the probabilities of the three possibilities considered is unity [1]).

Event	Probability
Economic conditions remain the same	0.4
Slight deterioration in the economy	0.3
Significant deterioration in the economy	0.3
Sum of probabilities	1.0

Figure 1. Quality Wilton Ltd: Subjective prior probabilities of alternative future economic scenarios

The direction of the UEA economy is an event (E) that is outside the control of the company. Management decides on three possible courses of action (A):

1   Export now while conditions are relatively good
2   Delay six months, in which time the direction of the UEA Government's economic strategy is likely to become clearer
3   Delay one year to observe the longer-term economic trends

Management then forecasts expected profit (in Pounds Stirling £) for each course of action under different economic conditions (Figure 2).

	Actions (A)		
	1	**2**	**3**
	Export	Delay	Delay
Events (E)	now	6 months	1 year
(a) Economic conditions remain the same	£2,726,000	2,357,000	2,100,000
(b) Slight deterioration in economy	£1,870,000	1,694,500	1,425,000
(c) Significant deterioration in economy	£-711,000	900,500	766,000

Figure 2 Expected pay-offs for Quality Wilton Ltd for different decisions under different economic conditions (figures are approximate and rounded up to the nearest £500)

The prior probabilities are now incorporated into a decision tree (Figure 3). This is made up of 'nodes' and 'branches', with the decision point represented by square and chance events by circles.
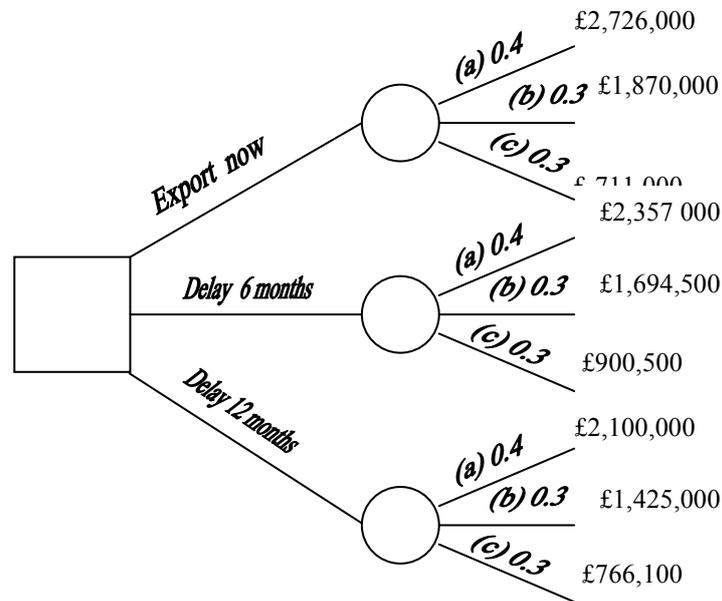
Figure 3 Decision tree for Quality Wilton Ltd:
(a) economy remains same; (b) slight deterioration; (c) significant deterioration

The expected value (EV) is now calculated for each forecast and then totalled for each alternative course of action (A). This is done using pay-off tables where the expected profit for each event is multiplied by its assigned probability and the resulting products summed (See Figure 4):

A1 - Export now

Event (E)	Probability	Expected Profit (£)	Expected Value (£)
(a)	0.4	2,726,000	1,094,400
(b)	0.3	1,870,000	561,000
(c)	0.3	-711,000	-213,300
		Total EV:	1,442,100

A2 – Delay 6 months

Event (E)	Probability	Expected Profit (£)	Expected Value (£)
(a)	0.4	2,357,000	942,800
(b)	0.3	1,694,500	508,350
(c)	0.3	900,500	270,150
		Total EV:	1,721,300

A3 – Delay 12 months

Event (E)	Probability	Expected Profit (£)	Expected Value (£)
(a)	0.4	2,100,000	840,000
(b)	0.3	1,425,000	427,500
(c)	0.3	766,100	229,830
		Total EV:	1,497,330

Figure 4 Expected Value (EV)

By examining the total values for each of three possible actions management sees that A2 (i.e. delay action for 6 months) gives the maximum expected pay-off (£1,721,300). Since the action is selected under conditions of uncertainty, the EV is referred to as the 'EV under uncertainty' and the action chosen as the 'optimal action' for Quality Wilton Ltd. In this example, the probabilities assigned to events were prior probabilities. They were subjective, largely based on the decision-makers' beliefs in the probability that certain events will occur. Such an analysis, carried out using prior probabilities, is called a prior analysis.

After prior analysis, the decision maker, Quality Wilton Ltd, has two choices - to go ahead with the optimal action indicated by the prior analysis or to collect additional primary data, re-evaluate the probabilities in the light of further information and carry out new calculations. Additional information may be obtained by carrying out a market research survey or some other form of primary data collection procedure. If additional information is gathered and another analysis carried out, the term for these new calculations is 'posterior analysis'. Clearly, it is going to cost the decision-maker time and money to collect further information. A decision must be made as to whether the better-informed decision will be worth the extra cost or not.

Conclusion.

Managerial decision-making involves forecasting future conditions and these tend to be long-term and strategic in nature rather than operational. Forecasting information helps management to make operational decisions that take up a lot of time. It is frequently said that forecasting is the key to success, and poor forecasting can lead to high inventories and associated costs that use up working capital, or result in under-production and unrealised market potential. Forecasting is important in most areas of the firm, but forecasting of sales is particularly important since predicted sales are the base on which all company plans are built. There are several methods available to the forecaster: subjective or objective methods or a combination of the two (e.g. Bayesian forecasting).

Evidence from the empirical work suggested that the majority of small firms, at least in the area of west Yorkshire do not use sales forecasting procedures in any meaningful way. Qualitative group discussion results indicate that very few small firms are likely to use any kind of objective, quantitatively based sales forecasting procedures at all. Where sales forecasting is carried out it seems to be qualitative methods that are used. Even here however there is little evidence that the qualitative procedure being used is of a formally planned nature, for example a Sales Force Composite method or a Consensus of Executive Opinion method. It would seem that were qualitative predictions/ forecasts are made they are informal and simply based on the subjective opinion of the manager making the forecast.

Results from the sample survey support the above qualitative findings. Sales forecasting procedures and techniques were hardly mentioned at all by respondents when asked what additional marketing or sales skills they would like to learn or what areas they felt would help the manage their businesses more professionally.

Evidence from the literature reveals that many small firms under perform or even fail completely because of poor planning skills, especially longer tem planning skills. Sales forecasting is needed at all time horizons if a business is to be managed properly. Short term, medium term and long term sales forecasts are required for different types of decisions.

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Раздел 2. МЕНЕДЖМЕНТ ОРГАНИЗАЦИИ

A POSSIBLE BAYESIAN SOLUTION TO SALES FORECASTING DECISIONS IN SMALL FIRMS: A UK AND RUSSIAN PERSPECTIVE

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ABSTRACT

The authors are interested in how SMEs forecast sales. We suggest as a working proposition that many entrepreneurs are inherently, but unconsciously, 'Bayesian' in their predictive thinking. Thus we speculate that such a forecasting procedure would fit well with their skills, particularly where they value subjective judgement. A possible perceived barrier to using objective forecasting techniques, namely, the lack of information to start off the procedure can be overcome by using a Bayesian approach which whilst 'objective', can be started using subjective information. Data has been collected from UK and Russia SMEs to see what forecasting procedures they use currently.

INTRODUCTION

This paper examines the sales forecasting practices of small firms and then goes on to discuss the application of Bayesian decision theory in the production of sales forecasts for small firms. The management of many SMEs feel unable to use formal objective forecasting techniques because of a lack of information to start off the forecasting procedure. Evidence from the authors own work suggests that the management of many small firms make no formal sales forecasts at all. However, a more robust procedure is available which overcomes the lack of initial starting information for forecasting – and this is based on Bayesian decision theory. In a sense many small firm entrepreneurs are inherently 'Bayesian' in their thinking approach to predicting events in that they often rely on subjective estimates at least for initial starting values. The basic principles of Bayesian forecasting procedures should be relatively easy for small business managers to grasp and apply. More importantly Bayesian forecasting utilises both subjective and objective methods. Small businesses should be both comfortable with, and have, subjective knowledge and experience, and encouraging them to use, in part, a more objective approach, can only strengthen their sales forecasting competence. Such a procedure should be well within the competence level of the majority of small business managers and has the added benefit of utilising their own experience and judgement. Hence such a procedure should not only be useful to the small business manager but should also have strong intuitive appeal as the initial starting conditions of the model is based on the managers own judgement.

THE IMPORTANCE OF THE SMALLER FIRM

SMEs make an invaluable contribution to the wider economy in both Russia and the UK (but which is often overlooked) including increasing competition, creating jobs, building effective networks, sharing knowledge and making a positive contribution towards social inclusion. The importance of small firms and entrepreneurship generally in achieving economic growth in contemporary economies is widely recognised both by policy makers and economists (Van Stel, Carree and Thurik (2005), Wennekers, Van Stel, Thurik and Reynolds (2005), Acs (2006), Acs and Armington (2006)), Audretsch,

Keilbach and Lehmann (2006), Lundstrom and Stevenson (2005)). Small firms are big business: they contribute significantly to employment, turnover and the number of businesses in the UK.

In the UK as a whole, SMEs account for over half of employment (58.7 per cent). This is also true for each region and country in the UK except London, where SMEs only account for 47 per cent. For the South West, Wales and Northern Ireland, this figure exceeds 70 per cent. For each region and country in the UK, no more than 0.2 per cent of enterprises are large (250 or more employees), and at least 99.0 per cent of enterprises are small (0 to 49 employees). The proportions of enterprises that are medium-sized (50 to 249 employees) range from 0.5 per cent (in the East of England, South East and South West) to 0.8 per cent (in the North East and Northern Ireland) see DTI National Statistics URN 06/402 News Release 2006.

The development of small business in Russia since 1998 has been affected by crucial decisions of central government by which the taxes have been cut and 'red tape' reduced. As a result the registration of new enterprises has become both simpler and cheaper and consequently the number of small businesses has grown. The situation in Omsk region is indicative of Russia as a whole.

However, where Omsk does differ is that for many years it used to be one of the most important industrial centres in Soviet Union producing electronics, engines for aircraft, agricultural equipment and many other engineered goods. However after perestroika Omsk industry has collapsed. Five years ago small businesses in Omsk mostly represented trade services. However since 2000 positive changes have come to life and industrial enterprises have started up. Our research shows that in parallel to this, the number of small businesses in industry is increasing.

Year	1995*	2001*	2002*	2003*	2004*	2005**
Number of small enterprises in Omsk region	6519	10856	10973	10864	12460	14435

* Omsk region annual statistics 2005 (Омский областной статистический ежегодник – Омск, 2005).
** Omsk region annual statistics 2006 (Омский областной статистический ежегодник – Омск, 2006).

Year	1995*	2001*	2002*	2003*	2004*	2005**
Number of industrial small enterprises in Omsk region	989	1504	1327	1242	1543	1816
Sales (roubles)	289,6	1494,7	2087,7	2963,9	4648,0	9529,1

* Omsk region annual statistics'2005 (Омский областной статистический ежегодник – Омск, 2005).
** Omsk region annual statistics»2006 (Омский областной статистический ежегодник – Омск, 2006).

Alongside the positive trends mentioned above, Russian small business are experiencing some particular obstacles at the moment. Research and monitoring at the Omsk State University in (2002-2006) show that these obstacles as a whole are quite similar to these in Omsk region and can be summarized as:

– the lack of professional and political integration of businessmen. It means that there is no small business lobby in Russia which could influence some real official decisions;

– the lack of trust to the state and its representatives. Central and local government provide some assistance for small business but in practice businessmen either are not ready or don not want to get it.

We do believe that the successful development of small enterprises both in Russia as a whole and in Omsk region depends on cooperation and communication between businessmen themselves and between them and the state.

THE NEED FOR SALES FORECASTING WITHIN ALL FIRMS INCLUDING SMEs

The recognition of the importance of forecasting was first illustrated in the United States by Ledbetter and Cox (1977). They found that forecasting techniques were used by 88 per cent of the 500 largest US industrial companies. It was also established that no other class of planning techniques was used as much as forecasting. Although forecasting is important in most functional areas of a firm, the forecasting of sales is particularly important (Sanders and Ritzman 2004). The sales forecast is the bedrock on which company plans are built and for this to be sound, the forecast must be built on a firm scientific foundation (Wacker and Lummus 2002). The central issue facing businesses is not *whether* to forecast, but *how* to forecast. The forecaster can choose 'subjective' or 'objective' methods or a mixture.

The availability of appropriate data is of central importance to the development of any forecasting system. Obviously dependent upon the degree of accuracy required, most forecasting techniques require

a considerable amount of data collection and processing (Zareipour, et al 2006). The selection of the most suitable forecasting technique depends on the availability of existing data and/or company's ability to acquire such. For example, a technique requiring a long historical time series would be of little use if data was only available for the past year (Conejo et al 2005). If data accuracy or validity were questionable, it would hardly be worthwhile, or cost-effective, to spend time and effort using a sophisticated technique known for its precision (Jobber and Lancaster 2003). In forecasting, the principle of 'garbage in/garbage out' applies; a forecast will only be as good as the data used in its compilation.

The management of all firms – and SMEs are no exception- are involved in making decisions about the future *but* in the present. In a sense that is what the job of management is really all about, at least at the more strategic level. The act of preparing for the future whether in business or any other area of our lives implies forecasting, consciously or subconsciously, of tomorrow's condition. In our personal lives, such predictions are usually made on an informal, subjective basis. If they turn out to be wrong, we can usually adjust our personal circumstances. However, we rarely enjoy the same degree of flexibility in our working lives, particularly if we are an SME owner manager. Managerial decisions are usually of a more formal nature and of greater consequence. The very nature of such decision-making involves forecasting future conditions (Lawrence and O'Connor 2000). It is not a question of whether managers should forecast or not but merely how are they to do it? Small firms are often considered to lack formal marketing skills (Carson, Cromie, McGowan and Hill 1995) and project management skills (Murphy and Ledwith 2007), however sales forecasting is fundamental to management's ability to plan, budget and control (Lawrence et al 2000). They are the bedrock of all other management forecasts since they are dependent upon an accurate sales forecast (Mentzer et al 2002). These forecasts then form the basis of budgetary control systems (Mentzer and Moon 2005).

Managerial decisions are not always strategic and much of a busy manager's time is taken up with day-to-day operational issues which, although not of the same magnitude as strategic decisions, are nonetheless important to the manager because of the proportion of their time that they occupy. Management requires forecasting information to assist them in making operational decisions, although the required time horizon for such forecasts is shorter than for strategic decisions. For example, for the marketing manager to set monthly sales targets, operational expense or advertising budgets, they may require regular short-term forecasts for each product, broken down according to product type, size, colour, salesperson's territory, channel of distribution and even by individual customer. Whatever type of decision is being made, forecasting is required. Forecasting can make a contribution to the successful management of the small enterprise, whereas poor forecasting can lead to high inventories and associated stockholding costs which must be paid for out of working capital, or under-production and unrealised market potential (Stanton, Etzel and Walker 1999).

CRISIS POINTS IN SMALL FIRMS

All firms, of whatever size, need to make predictions or forecasts about future conditions (Tkacz 2001). The term 'prediction' is often reserved for subjective 'qualitatively' based forecasts, for example: the sales force composite technique. Whereas the term 'forecasting' is often used for objective 'quantitatively' based forecasting procedures e.g. moving averages, exponential smoothing, regression etc. Bayesian forecasting is a mixture of the two and involves both objective and subjective forecasting elements.

Forecasts may be required for an important 'one-off' decision such as when a business may be considering expanding by acquisition, diversifying into a totally new market or modernising its production processes. Such decisions tend to be long-term and strategic, rather than operational. In such situations, because of the importance of the decisions being made, it is important that forecasting receives careful consideration, meaning an investment of time and money in the forecasting process. However many of the decisions the small firms managers have to make are more routine tactical or operational. As Bischoff, Belay and Kang (2000) state:

«The choice is not a trivial one--for at least twenty years leading economists and econometricians in *business*, government and academia have argued both sides of this issue. It is important because no *business* decision-maker can avoid making forecasts. Decisions about stocks of raw materials, goods in process and finished goods, among other things, must be based on forecasts. The advent of the Internet does not change this necessity: at best the process is speeded up» (p. 12).

The need for an adequate and appropriate sales forecasting framework can be linked to the literature on growth and life cycle models related to small firms (Scott and Bruce 1987; Greiner 1972; Hanks et al.

1994; Cope, 2003). Scott and Bruce (1987) argue that a small business develops by moving through five growth stages, each with their own characteristics. Because the transition from one stage to the next requires change, it is accompanied by some crisis or another. Crises tend to be disruptive and problems of change can be minimised if managers are proactive rather than reactive (Steinmetz 1969, Deakins and Freel 1998). Thus crucially, sales forecasting may help them in this respect. Prior knowledge of what generates crises and of what to expect in each stage will smooth the process of change and may improve their chance of adequately dealing with the crisis and hence survival (Dodge and Robbins 1992; Garud and Van de Ven 1992). Scott and Bruce (1987) claim that they have tested the model and that it is robust enough for them to be able to generalise across all small firms. Albeit that organisations move along the curve at different speeds and the spacing of crises are likely to differ between firms and industries. Indeed, the original authors were themselves aware of these limitations and argue that what they provided was:

«A diagnostic tool to assist in analysing a firm's present situation. It is also meant to be an indicator of what strategies appear suitable at various stages in an organisation's growth. It is, however, only a tool and cannot make the decisions for management. They must rely on their judgment for that. Hopefully that model will add to their information and thus enable them to make better judgments» (Scott and Bruce, 1987:48).

As indeed would the adoption of Bayesian forecasting that both exploits and plays up to the exercise of informed judgement.

BAYESIAN DECISION THEORY

Probability theory studies the possible outcomes of given events together with their relative likelihoods and distributions. In fact there is considerable debate about exactly what probability means in practice. Some mathematicians regard it as simply a component of abstract theory, while others give it an interpretation based on the frequencies of certain outcomes (Quintana and Amer 1998). However the Bayesian approach is a mixture of both subjectively derived probabilities and mathematically derived likelihoods (Gómez-Villegas, Maín, and Sanz, 2002). This technique is named after Reverend Thomas Bayes (1702 to 1761), a statistician. A fully detailed historical account of Bayes can be found in Buck and Sahu, (2000); Singh and Provan, (1996); Lin, Mayers and Ye (2000) and in the very informative St Andrews University site, (2003). Bayes's original account is freely available (see: Bayes 1736, 1764).

However some account of Bayes and his early work is of enough specific interest to the topic of this paper to discuss below. Bayes set out his theory of probability in 'Essay towards solving a problem in the doctrine of chances published in the Philosophical Transactions' of the Royal Society of London in 1764. The paper was sent to the Royal Society by Richard Price, a friend of Bayes, who wrote:-

«I now send you an essay which I have found among the papers of our deceased friend Mr Bayes, and which, in my opinion, has great merit... In an introduction which he has writ to this Essay, he says, that his design at first in thinking on the subject of it was, to find out a method by which we might judge concerning the probability that an event has to happen, in given circumstances, upon supposition that we know nothing concerning it but that, under the same circumstances, it has happened a certain number of times, and failed a certain other number of times» (see Condorcet, 1785, Boole, 1854 and St Andrews University WWW site, 2003)

Despite the fact that Bayesian Decision theory was developed in the 18th century, it has only recently been widely adopted (Buck, 2001). The method incorporates the firm's guesses at data inputs for the statistical calculation of sales forecasts. It uses network diagrams showing the probable outcome of each decision alternative considered. These are shown together with expected values and associated probabilities, initially derived on a subjective basis (see Smith and Faria, 2000) Bayesian statistical forecasting, like all Bayesian statistics is based on two basic concepts. First, uncertainty about unknown quantities is expressed using the language of subjective probability, and, given new information or data, probabilities are updated using Bayes rule or procedure (Ghosh and Ramamoorthi 2003, Quintana, 2006).

Many statisticians and forecasters believe that Bayesian inferential methods have advantages over classical statistical procedures for a wide range of inferential problems mainly because the initial stating probabilities are arrived at subjectively thus opening up the potential of statistical inference, including sales forecasting applications, to a much wider range of problems, particularly those sorts of problems often found in marketing (Albert, 1996, also see the reference for the International Journal of Clothing Science and Technology report 2003 (anonymous)). One of the problems of using probabilities in a statistical model is in ascertaining initial probabilities to commence the forecasting process (Bolfarine, et al,

2005). Bayesian statisticians differ from 'purist' statisticians in the respect that 'purists' view the concept of probability as the relative frequency with which an event might occur (Iglesias, et al, 2004). The Bayesian view is that probability is a measure of our belief and that we can always express our degree of belief in terms of probability (Buck et al 1996). Although the initial probabilities are derived subjectively (the figures are based on judgmental opinion, rather than on objective calculation) proponents of Bayesian theory believe that such probabilities are perfectly valid and hence perfectly acceptable as initial starting points in an extensive quantitative forecasting process (Müller et al 2005). It is this subjective nature of arriving at the initial probabilities that makes the Bayesian approach useful in solving business problems for which initial probabilities are often unknown and are difficult or impossible to calculate using objective methods (Faria and Smith, 1997a, Finucane et al 2003, Gaglio and Katz, 2001).

To use the Bayesian approach, the decision-maker must be able to assign a probability to each specific event (Pole et al, 1994). The sum of the probabilities of all such events considered must be unity (one). These probabilities represent the magnitude of the decision maker's belief that a particular event will take place (Faria and Souza, 1995; Faria and Smith, 1997b). In business situations such decisions should be delegated to personnel who have the knowledge and experience to assign valid initial subjective probabilities to the occurrences of various business events. These initial probabilities are based on previous experience of information (such as published secondary data or simply the manager's own subjective judgement based on experience) acquired prior to the decision-making process. For this reason, the initial subjective probabilities are referred to as 'prior probabilities' (West and Harrison, 1997).

When making business decisions, the financial implications of actions must be taken into account. For example, when a manager is considering investing a firm's surplus cash, they must consider the probability of making a profit (or loss) under different economic scenarios and also assess the probability of such scenarios or events occurring (Pole et al., 1994). Applying Bayesian decision theory involves selecting an option and having a reasonable idea of the economic consequences of choosing a particular course of action. Once the relevant future events have been identified, the decision-maker assigns prior subjective probabilities to them (West and Harrison, 1997; Huerta and West, 1999). The expected pay-off for each act is then computed and the act with the most attractive pay-off is then chosen. If pay-offs represent income or profit, the decision-maker usually chooses the act with the highest expected pay-off (Lopes et al., 2003; Singh and Valtorta, 1995).

INTERIM CONCLUSION

Evidence from the literature above, and from the primary research from case study one presented below, suggest that many managers and owners in small firms tend to favour their own subjective judgement when asked to make decisions involving predictions. Thus Bayesian forecasting procedures would seem to offer an interesting option given that it offers a good 'fit' between the forecasting requirements of small firms and those skills that small firms managers/ owners seem to rate most highly i.e. the use of their own subjective judgement.

Two obvious research questions follow on from this, firstly to what extent do those SME owners and/or managers who declare themselves to be entrepreneurial and/or marketing competent – or given the interests of the audience for this paper – both, feel more comfortable with a Bayesian approach. This could be crudely summed up as: are entrepreneurs Bayesian? Secondly what forecasting, if any, and of what type do SMEs practice?

We have collected but not analysed data on the first question and in this paper concentrate on the second question. Case Study Two is a sample of 170 local companies to Huddersfield University, all but two companies were with a 15 mile radius drawing predominantly from Huddersfield, Halifax and Leeds. Data was collected by mail shot (130 cases); e-mail (13 cases); telephone interview (20 cases), and 'face-to-face' (3 cases). Case Study Three is a sample of 54 companies local to Omsk in Russia. The English questionnaire was translated into Russian, then mail shot to local companies, the results were then translated from Russian into English by our Omsk colleagues. All 224 cases have been coded and put onto an SPSS database.

SALES FORECASTING PRACTICES IN SMALL FIRMS

Case Study One:

This involved three exploratory group interviews of eight people and a moderator each., The group members included entrepreneurs/ managers running their own small firms, counsellors from various organisations involved with advising or supporting enterprise, small business advisors from the commercial

banks, consultants and trainers to small firms from both the private sector and such bodies as Business Link. Conversations within the group discussions were recorded and a thematic content analysis carried out. The information gained from these interviews was used to design a postal questionnaire to be used in the second part sample survey. This returned 320 respondents from 1200 that were posted out.

Case Study One: Phase Two

Questionnaires were sent out to a representative sample of 1,200 small firms in the Kirklees and Calderdale local authority area (jurisdiction) of West Yorkshire, England. This area was chosen because one of the authors' universities is in the area. A combination of lists was used as a sampling frame including the local Chamber of Commerce Membership Directory (which identified firm size), local trade directories and a small firm database held by the University.

The sample was stratified by the type of industry found in the area: textile manufacturing; chemical processing and related industries; transport and distribution services; construction; light engineering; and other financial/business services; and, in proportion to the importance of a particular sector to the local economy in terms of contribution to local GDP (see Bhattacharya, D. 2007, Alreck and Settle, 1995, Everitt, 1995). In order to ensure the sample of respondents matched the initial stratification design final post stratification of the marginals was conducted.

The questionnaire asked respondents to rate the importance, as they perceived it, of various marketing and sales topics which could, if selected and rated highly enough by a sufficient number of respondents, be incorporated into a training course, which they would be invited to attend at subsidised rates. Respondent's selection and rating of various sales and marketing topics gave the authors a proxy measure of how respondents perceive the importance and usefulness of conventional sales and marketing topics to the running of their businesses. The list of possible course topics specifically included sales forecasting. The rating procedure was in two parts. Respondents were asked firstly to select from a prepared list the three course areas that they would find most useful and/ or interesting. A space was provided for respondents to include topic areas not on the list. Having completed this section of the questionnaire respondents were then asked to go through each topic area on their list and rate it as either 'Very Useful', 'Quite Useful' or of 'No Use at All'.

Results from the three group discussions were somewhat alarming as all agreed that in general small firms do not make use of formal sales forecasting (whether objective or subjective) or predictive techniques on an on-going or regular basis. In the case of the management of many small firms the only time such forecasting procedures were used was as part of an 'official' business plan that small firm management had to complete in order to get a bank loan or government grant. Even under these conditions subjective predictions rather than quantitative objective sales forecasts were the norm. The owners and managers of smaller firms placed greater value in their own experience and subjective judgement that in official sources of information or formal predictive or forecasting procedures. The main themes emanating from the discussion in order of importance are as follows:

1. The majority of small firms make no formal sales forecasts either using quantitative or qualitative methods

2. Managers and owners of small firms use subjective judgement in a range of decisions including those decisions involving some form of prediction

3. The majority of small firm owner/managers have little understanding of formal forecasting procedures

4. When sales forecasts are made it is usually that the small firm has been 'forced' to make a forecast as part of a business plan to be submitted to a bank for a loan

5. When predictions are required the majority of small form managers/ owners use their own experiential judgement

6. The majority of small firm managers/ owners do not consider the ability to make reasonably accurate sales forecasts a particularly important skill.

The survey questionnaire was designed using the information gained from the group discussions. The survey results supported the general conclusions of the group discussions. Sales forecasting was very low down on the list of priorities reported by the survey respondents in fact it was not formally rated in the three most important topic areas per se by any of the respondents although some mentioned subject areas that might contain sales forecasting subjects such as marketing research. However when asked to formally rank the *three most* important sales or marketing areas to the success of their business none entered sales forecasting. Also when respondents were asked to list any other courses or subject areas not

already discussed none of them mentioned sales forecasting. Even subject areas that might have contained elements of sales forecasting in them such as marketing research and marketing planning received very low ratings. In fact only 5,6 % of respondents rated marketing research as the area they would find most interesting if attending a course and only 1,9 % of respondent rated marketing planning as the area in which they would be most interested. None of the respondents rated sales forecasting as the course they would find most interesting.

In the second phase of the rating procedure respondent were asked to go through all the possible course topics on the list (including the topics they may have added in the open ended space provided) and put each course topic in one of three categories which were either 'Very Useful', 'Quite Useful' or of 'No Use at All'. Six respondents out of 320 (1,8 %) rated sales forecasting as 'Very Useful' (a somewhat internally inconsistent response considering none of the respondents had entered sales forecasting as one of the three most useful topics on the list), 46 (14,3 %) rated sales forecasting as 'Quite Useful' and 271 (84,6 %) rated it as being of 'No Use at All'.

So the data from the sample survey confirmed that sales forecasting is not regarded as particularly important by the managers of small firms and if they were given the opportunity to attend a free business course none of the respondents expressed any interest in attending a course on sales forecasting specifically even if heavily subsidised i.e. sales forecasting was not included in the three most important topic on the list (including topics that might be added to the list) by any of the respondents. When, in the separate exercise respondents were asked to rank the usefulness of a course in sales forecasting to their organisation 84,6 % rated it as no use at all. There were a few (six) internally inconsistent answers which can be expected from a survey of this size. However overall the results from both the qualitative and survey research were conclusive.

A Pearson Chi Square test was used to test whether there was any significant difference between the six different commercial and industry sectors used to stratify the sample survey. The responses describes above were taken as a proxy measure of the respondents' perception of the importance of sales forecasting to their firm. The Null Hypothesis (H_0) was that there was no significant difference between the groups in relation to the expressed interest in attending a course in sales forecasting. The alternative hypothesis (H_1) was that there was a difference. The data used was nominally scaled and hence a non parametric test was considered appropriate, and so Pearson's Chi-Square was used to test (H_0) against (H_1). Six (33,3 %) of the 18 cells in the contingency table had expected frequencies less than five. Given that Chi square is not valid if more than 20 % of the cells in the contingency table have expected frequencies less than five, in a second run the column cells were collapsed with the cells for 'Very Useful' and 'Quite Useful' merged into the column cells 'Very/ Quite use'. The calculated Chi square value was 3,049 whereas the tabulated Chi square value at the 5 % level of significance is 11,07. As the calculated Chi square value is not equal to or greater than the tabulated Chi square value (H_0) was accepted. There was no discernable association between respondents rating of sales forecasting as an important management skill and the industry sector the respondent belonged to. There was an equal degree of disinterest and perceived importance amongst all of the commercial/ industrial sectors surveyed.

Case Studies Two and Three

The questionnaire consisted of four classification questions; fourteen questions on forecasting practice, two on sales staff training and nine and twelve questions that attempted to capture marketing and entrepreneurial orientation respectively. Given that both case studies used the same questionnaire we have reported the results jointly.

Questionnaires were completed by chairman (8); owners (18); directors (125); managers (28); sales executives (6), and others such as company accountants (38). The majority of respondents (109) had just two managers whilst eighty-five of the SMEs had between three and ten managers – the rest of the sample having over seven named managers. Most of the respondents provided services (112). IT, manufacturing, retail and 'other' providing twenty, thirty-one, seventeen and forty-one replies respectively. One hundred and sixty three SMEs had fifty employees or less; thirty-eight had between 51-100, and twenty employed over 100 in their SMEs.

This dataset gives us somewhat more encouragement in respect of a positive attitude to forecasting. The majority of firms claim to use forecasting, believe it to be an appropriate management activity and almost believe that they could not survive without it (Exhibit One). At this stage the sample is often not large enough to compute Chi-square and we need to collect more data. The raw data does suggest some differences within this sample between the Omsk and West Yorkshire SMEs. We tried to design question

fourteen not only to capture what data they used in forecasting but to see if they used 'ex post' data such as a fall in sales – or that they tried to use a leading indicator such as a change in enquiries to predict ahead. Exhibit Two shows that importantly firms may be using the latter approach.

EXHIBIT ONE: Summary data, selected questions, percentages

QUESTION ONE		UK	OMSK
What do you understand by the term forecasting?	Trying to see next year	3	2
	Predicting using history and current trends	10	6
	Predicting finance planning, staff, production, sale	30	19
	Predicting business performance	2	17
	Predicting market changes	14	18
	Using data to anticipate future needs	0	20
	Predicting the future	27.	15
	Other Answer	14.	0

QUESTION TWO			
Do you use forecasting?	Yes	72	83
	No	15	13
	Other Answer	13	04

QUESTION THREE			
What sort of things do you try to forecast?	Sales alone	14.1	22.2
	Sales and cash flow	7.6	14.8
	Sales and profits	10.6	13.0
	Sales and market trends	8.2	22.2
	Sales related total:	40.5	72.2
	Profits	6.5	1.9
	Cashbflow	2.9	0
	Other	18.2	7.4
	Market trends	6.5	3.7
	Profits and cash flow	4.7	1.9
	Profit and market trends	2.4	1.9
	No response	15.9	11.1

QUESTION FOUR			
What information do you use to make the forecast	Past/current data alone	26.5	35
	Experience alone	2.4	6
	Market trends alone	7.1	9
	Customer feedback alone	12.9	0
	Other alone	15.9	2
	Past/current data and experience	1.2	7.4
	Past/current data and market trends	10.0	16.7
	Past/current data and customer feedback	3.5	5.6
	Experience and market trends	2.4	1.9
	Market trends and customer feedback	1.2	3.7
	No response	17.1	13

Percentages may not add to 100 due to rounding

Do you find forecasting reliable and accurate?

	yes	no	do not know	other	no response
Omsk	52	7	0	35	6
West Yorkshire	53	22	2	11	12

Is forecasting an essential management activity?

	yes	no	other answer	no response
Omsk	52	7	35	0
West Yorkshire	79	6	4	11

Could the SME survive without forecasting?

	yes	no	do not know	other	no response
Omsk	44	46	0	7	2
West Yorkshire	45	38	0	7	10

If you knew more could you manage better?

	yes	no	do not know	other	no response
Omsk	76	0	0	17	7
West Yorkshire	56	·26	2	6	10

Have you prevented problems using forecasting?

	yes	no	other	no response
Omsk	65	18	7	10
West Yorkshire	45	30	10	15

How far ahead do you forecast?

	Less than a year	1 to 2 years	2 to 3 years	3 plus	no response
Omsk	28	33	7	6	26
West Yorkshire	20	31	12	18	20

Do you use a computer programme for forecasting?

	yes	yes and named	no	other answer	no response
Omsk	9	33	47	4	7
West Yorkshire	9	25	43	9	13

Percentages may not add due to rounding

Perhaps unsurprisingly the firms are most concerned with trying to forecast 'sales'. They seem however not to place a great deal of reliance on intuition and 'gut feel' alone as a forecasting tool and this is in contrast to the implication that can be drawn from case study one, we need to do more work on the role of intuition and perhaps link it to the role that plays in the now well established opportunity rec-ognition literature stream. However the sample seems to believe that they want, and could, forecast better and so a Bayesian approach still has the potential to improve their forecasting capacity. An obvious re-

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search direction is to increase the Omsk sample and to consider if there are statistically significant differences between the UK and the Russian samples and what are the transferable skills lessons and techniques.

CONCLUSION

It is frequently said that forecasting is the key to success, and poor forecasting can lead to high inventories and associated costs that use up working capital, or result in under-production and unrealised market potential. Forecasting is important in most areas of the firm, but forecasting of sales is particularly important since predicted sales are the base on which all company plans are built.

Evidence from the empirical work suggested that the majority of small firms in the first West Yorkshire sample do not use sales forecasting procedures in any meaningful way. The second West Yorkshire sample and the Omsk sample give us more hope that forecasting plays a more central role.

Even so the use of a Bayesian type approach to strengthen forecasting is still a foreseeable possibility. Particularly because such forecasting is within the skill set of many small businesses particularly when a simple personal computer programme can be adopted. Indeed the very notion of a Bayesian approach – the combination of subjective and objective methods allows the small business to be comfortable with utilising their subjective knowledge and experience. Equally the combining of subjective knowledge within a more objective scenario might well encourage more thoughtful and accurate forecasting with the commensurate benefits as discussed in this paper. For those who need to be encouraged to start more formal forecasting, Bayesian decision trees, for example, could provide an intuitive and logical starting point. Forecasting should not simply be for the larger and more established SMEs.

Given that the evidence from the literature reveals that many small firms under perform or even fail completely because of poor planning skills, especially longer term planning skills, then sales forecasting using a Bayesian approach should be encouraged. Given that forecasting is needed at all time horizons if a business is to be managed properly, small businesses should be encouraged not only to forecast sales better but to develop short, medium and long term sales forecasts for different types of decisions.

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INTEGRATING PROCESS CONTROL TECHNIQUES INTO A MARKETING MONITORING AND CONTROL SYSTEM TO TRACK KEY MARKETING PARAMETERS WITHIN SMALL FIRMS

Paul L. Reynolds, University of Huddersfield, England
John Day, University of Huddersfield, England

ABSTRACT

This paper interfaces concepts and techniques from process control and marketing control in order to monitor the marketing "health" of small firms. It should be of interest to all people involved with monitoring or advising a large number of small enterprises or business units within a larger organization.

INTRODUCTION

The authors are concerned with developing a quantitative method to help SMEs manage their operations more successfully. It will be of particular use to those who provide business advice and services to the small business. The authors are particularly concerned with the growing SME but the theory and method is applicable to firms that have reached their desired size. The behavior of the SME is described by reference to a life cycle/stages framework. The proposal is that either a single, or several, key performance indicator(s) are monitored, and that when they fall outside of an acceptable range a warning message is generated. This requires an effective forecasting method, preferably one that utilizes and "learns" from past data and a method by which to track unexpected deviations and generate a warning message. For the former it is argued that exponential smoothing models are suitable. For the tracking signal, by which the data is monitored, a smoothed error tracking signal based on the work of Trigg, et al. (1964, 1967) is employed. The generation of the exception message must be related to a particular confidence level and for this cumulative probability tables for the tracking signal are needed. A full set of such tables for a wide range of smoothing co-efficient value permutations and for use with all of the main exponential smoothing forecasting models are available from the authors.

The particular form of the life cycle model adopted is that of Scott and Bruce (1987). For the sake of completeness it is suggested that this model be amalgamated with Cooper's (1981) model covering the pre-start up phase. In this version firms are hypothesized to develop through five stages—pre-start up, inception, survival, growth and consolidation. There is much debate over whether life cycle models are realistic approximations of SME behavior, hence we are exhibiting some caution by referring to it as a schema. The formulation of the model by Churchill and Lewis (1983) is an important part of the lineage of this approach. Recently they have modified and refined the model—allowing more flexibility and turbulence in actual behavior. (Eggers, Leahy, and Churchill 1994). Hanks, et al. (1993) have demonstrated that for their sample of high-technology organizations that four distinct life cycle stages can be identified. The Scott and Bruce variant suggests that for firms to grow through the life cycle stages they have to address and pass through crisis points. Each boundary between the stages presents them with a different set of management problems to address. The key skills to solve these are identified as managerial, organizational and commercial, to which should be added the entrepreneurial capacity of the firm.

We propose that for the SME one should track a suitable leading indicator, or indicators, such as sales turnover, profits, customer enquiries, etc. Whilst there is no reason that an individual SME cannot use this technique it is probably of more interest to SME advisors. Bank managers who are required to monitor a large number of firms simultaneously would find the method particularly helpful. It would allow them to monitor their clients by "exception," each client being monitored by the most appropriate indicator for their business with individual confidence limits set to adjust the sensitivity of the tracking signal to trip the warning message. Both in the UK and the States, SMEs represent a large proportion of bank clients and effective understanding and monitoring of them represents good commercial practice (Robley Wood and Harrison 1993). Whilst Scott and Bruce do produce an excellent schema it is very broad in its approach and descriptive rather than predictive. Hence the desire to be able to produce a means by which one can provide continuous monitoring of performance and an early prediction of crisis points occurring. The following criteria need to be satisfied for our technique to be both valid and useful:

1. the concept of identifiable stages within a life cycle schema to be acceptable and realistic. Alternatively that crisis situations are preceded by a change in the performance indicators being monitored.

2. Exponential smoothing forecasting models are reliable and suitable for predicting future values of the appropriate data. At this stage the authors are concerned only with producing one period ahead forecasts. Indeed tracking the errors of the "n" period

ahead forecasts produces a less sensitive tracking signal (Reynolds and Day 1996).

3. That the monitoring scheme is accurate, simple to understand, economizes on the storage of data and is robust to whatever data series is employed.

4. That Trigg's tracking signal is a reliable tracking device, capable of picking up both unexpected step (large) and ramp (gradual) changes in the underlying data pattern, and reporting such unexpected deviations as quickly as possible. Additionally cumulative probability values are available for the tracking signal which can be used to set control limits for a wide choice of sensitivity.

5. Suitable data is available to use as a leading indicator. For the purpose of illustration we have used sales turnover but realize this may not be the best indicator, and that a combination of indicators will be needed particularly to capture more subtle effects such as entrepreneurial ability.

The main concern of this paper is to establish (2), (3), and (4) above. Exhibit One reports on the performance of the tracking signal with both different exponential smoothing models and either a step or ramp change. Exhibit Two graphs the data for one actual case and plots the tracking signal. The appropriate forecasting model for this data being Winters Seasonal Model. ·

THE FORECASTING PROCEDURE

In monitoring the key marketing parameters of small firms the authors have made use of exponential smoothing to produce one period ahead forecasts of the parameter values. If the input data used in the forecasts is behaving as expected then the forecasting errors will be normally distributed and lie within certain bounds. These forecasting errors can be tracked with a tracking signal in order to identify as quickly as possible any unexpected patterns in the errors, which in turn could indicate possible unexpected changes in the underlying input data. If the tracking signal is computed as a derivative of the one period ahead forecast error then it to will be normally distributed. It should lie within certain cumulative probability boundaries provided that the underlying input data are "well behaved," and within certain expected limits of variation given the specific model used. The authors' are not using this forecasting procedure with the intention of producing forecasts *per se* but as part of their process to enable the monitoring of selected performance variables.

Exponential smoothing has been adopted to provide these forecasts for the following reasons.

- It has replaced moving averages as the predominant method used in short term forecasting (see, for

example, Montgomery and Johnson 1976; Makridakis and Hibon 1979).

- It is a quantitative technique and evidence from the literature strongly suggests that quantitative techniques are generally superior in terms of accuracy than qualitative methods, (for example see Hogarth 1975; Sarbin 1943; Slovic 1972; Mabert 1975).

- It is a time series method and evidence also suggests that in respect of short term forecasting, time series methods perform as well or even better in terms of accuracy than the more complicated causal techniques (see Narashimham 1975).

Other studies by Bauman (1965), Geurts and Ibrahim (1975) and Newbould (1974) have concluded that simpler methods such as exponential smoothing do as well or better in terms of accuracy than more sophisticated models. Both Geurts and Iberhim (1975) and Makridakis and Hibon (1979) show that exponential smoothing outperforms the more sophisticated Box-Jenkins models. Interestingly the comprehensive study by Witt and Witt (1992) on modeling and forecasting demand in tourism concluded, inter alia, that more complicated econometric models do not necessarily outperform more naive models.

THE TRACKING SIGNAL

The first tracking signal designed specifically for forecast control was used in inventory control and proposed by Brown (1962). This is defined as the sum of forecast errors divided by the mean absolute deviation (MAD) and is known as the Simple CUSUM technique. The smoothed error tracking signal, the procedure used in this paper, was developed by Trigg (1964) and based on the earlier work of Brown (1962). The real difference in his method is that he uses a "smoothed error" in the numerator of the tracking signal instead of the sum of errors. In the simple CUSUM Brown applied exponential smoothing to the modulus of the error to produce a smoothed MAD, and the sum of errors was calculated by summing the plus and minus values of successive errors. Trigg retains the smoothing of MAD but in addition applies simple exponential smoothing to the plus and minus errors to produce a smoothed error as the numerator of the tracking signal instead of the sum of errors. Appendix One explains and discusses these variants.

TRACKING SIGNAL CONTROL LIMITS

One of the authors has produced tables of confidence limits for use with the smoothed error tracking signal for each of the main exponential smoothing models. That is Simple Exponential Smoothing, Brown's One Parameter Linear Exponential Smoothing, Holt's Two Parameter Linear Exponential Smoothing and Winters Seasonal Method. Since Holt's method is more

frequently used than Brown's method the authors have only discussed the use of Holt's method. These cumulative probability tables contain many hundreds of individual confidence limit values that could be integrated into a computerized monitoring and control system. Their advantage is that they impart greater accuracy to the technique because they allow a greater permutation of smoothing coefficient values to be used. In essence the coefficient for the forecasting level equations can now be different to the coefficient used in the tracking signal equation. The first published report of a study using different values of smoothing coefficients in the forecasting equations to that used in the tracking signal ($\alpha > \alpha_1$, or, $\alpha < \alpha_1$), is by McKenzie (1978). He shows that the performance of the smoothed error tracking signal (T_t) may be significantly improved by such a simple alteration in its application.

METHODOLOGY USED TO OBTAIN CONTROL LIMITS.

Cumulative frequency tables were produced for the smooth error tracking signal using "well behaved" data produced by simulation. The method involved setting the parameters for a particular model and then generating random errors drawn from a normal distribution and adding these to the time series. Many possible permutations of smoothing coefficient values were used for level component, trend component, seasonal index (for Winters Model) and tracking signal. These tables are able to serve as "tracking signal confident limit tables" when smoothed error tracking signal values from "real" one period ahead forecasting runs are compared to the theoretical, simulated values. If the value of the smoothed error tracking signal (T_t) in the forecast procedure exceeds the value given in the table (the modulus of T_t is shown in the Tables) for a given permutation of smoothing coefficient values i.e., trend component, seasonal components etc.—then the tracking signal T_t would be said to have "tripped" at a certain level of confidence, i.e., the 95 percent level or the 99 percent level, etc.

The tracking signal "critical value" produced using this simulation exercise agree with the limited range of values reported by Batty (1969), Trigg (1964) and Gardner (1983) for simple exponential smoothing and with the theoretical values derived by McKenzie (1978) for Holt's Two Parameter model. Critical values were produced for Winters seasonal model although there is nothing in the literature either of a theoretical or empirical nature to compare these with. A detailed account of this methodology is reported by Reynolds (1986) and discussed by Reynolds and Greatorex (1988). For example in Exhibit Two, the tracking signal limit derived from the cumulative probability tables discussed in the last section is +/- 0.38 at the 95 percent level of confidence.

DISCUSSION OF RESULTS

The technique has been applied to four case study companies. One of these is in the authors' local economy with a turnover of less than £2m per annum and with less than 50 employees. This data is plotted as Exhibit Two and it demonstrates very well how difficult it is to identify unusual changes in the underlying data by merely looking at a plot of the data. The other three cases were in the North East of England employing between 20 and 200 employees. Results obtained from using the procedure look promising at present in cases where the input data exhibits some predicable pattern, and appear to be robust and suitable for a range of data patterns including data exhibiting seasonal or cyclical patterns. When the input data exhibits extreme variability, as in the firms drawn from the North East of England, the method performs less well, (Richards, Day, and Reynolds 1995). Because the data is virtually impossible to predict with any of the exponential smoothing forecasting models available, tracking the one period forecasting errors is a pointless exercise. The one period errors are so large that the resulting tracking signal exceeds its predetermined control limit virtually every time period. This is the one very serious drawback and limitation of the proposed scheme. Of course the authors are simply using sales as input data, it may be possible to find, or even derive, a more stable leading indicator to use as input data and hence improving the general applicability of the procedure under a wider range of more volatile conditions.

In those cases where the underlying input data was predictable with an exponential smoothing forecasting model, the smoothed error tracking signal Tt was found to be extremely responsive. For example when the simulated data was subject to a step change of approximately 5 percent of the mean level in the cases where the underlying mean level of the data was stationary or displaying a linear trend, the tracking signal "tripped" within one time period of the introduction of the step "shock." When, again simulated data was subject to a "ramp" change of approximately 2 percent in the underlying mean input data, the tracking signal "tripped" within two time periods, usually within one time period. When the real small firm data from the author's own area was used the method proved to be highly robust and "tripped" within two time periods. This data was exhibiting a ramp change and was the most predictable of the four cases mentioned.

The idea of monitoring the commercial/marketing health of small firms using some form of monitoring device or "tracking signal" seems to work well in principle for a wide range of situations where the underlying input data is time dependent enough to be predicted by an established exponential forecasting model. In cases where predictability is impossible with

EXHIBIT ONE
Tripping Signal Performance

Model	Suitable for Data "Displaying"	Type of Data Used	Step Change	Ramp Change	Trips Within "x" Periods
Simple Exponential Smoothing	stationarity	simulated	yes, 5%		1
Simple Exponential Smoothing	stationarity	simulated		yes, 2%	2
Holt's Two Parameter Linear Trend	negative or positive linear trend	simulated	yes, 5%		1
Holt's Two Parameter Linear Trend	negative or positive linear trend	simulated		yes, 2%	2
Winters	either stationarity; positive or negative linear trend but with a seasonal or cyclical component	simulated	yes, 5-8%		2
Winters (See also Exhibit Two)	either stationarity; positive or negative linear trend but with a seasonal or cyclical component	real		yes	2

EXHIBIT TWO
The Tracking Signal Value is +/- 0.38 at 95% Confidence Level
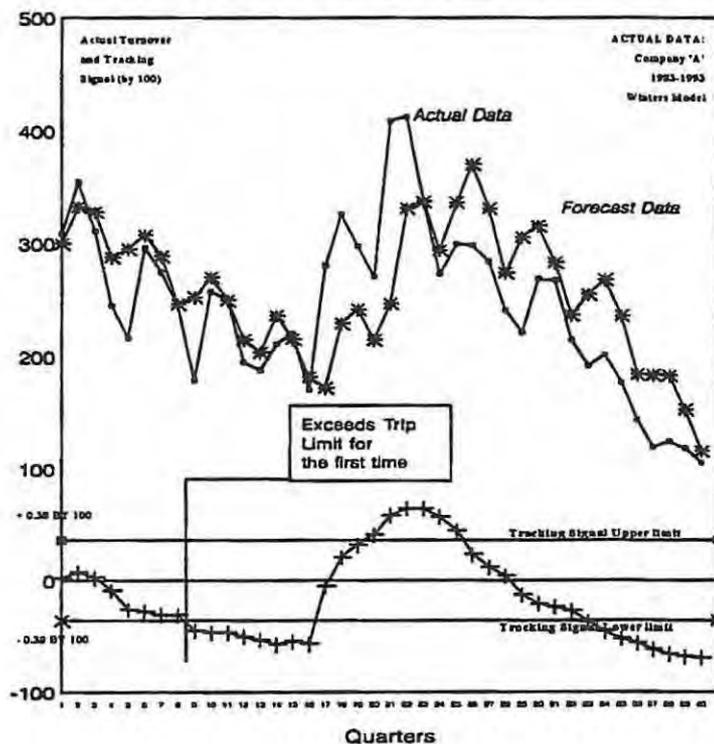
such a model because of the chaotic nature of the underlying input data, the procedure fails and this is its main limitation. However some derivative or composite of sales, or wider parameters would probably provide more valuable and more responsive input data.

Given the importance of being able to monitor the commercial health of the SME so that crisis points can be identified before they occur, and remedial action taken, we argue that our proposal merits further attention and development. Despite the limitations this method does have two strong points in its favor, namely:

- an exponential smoothing forecasting system, coupled with a monitoring procedure in the form of the smoothed error tracking signal is a suitable and robust procedure and one suited to the range of data characteristics found in commercial data.

- That the use of more sophisticated performance measures by potentially reducing the variability of the chosen leading indicator should reduce the main limitation of the procedure discussed above. The potential benefits in terms of improved survival and growth for the SME are sufficiently enticing to continue the search.

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APPENDIX ONE
Technical Details

For Simple Exponential Smoothing the one step ahead forecast produced in current time is denoted by F_t+1 and the actual current demand value X_t. Using this we get: $F_{t+1} = \alpha X_{t-1} + \alpha(1-\alpha)X_{t-1} + \alpha(1-\alpha)^2 X_{t-2} + \alpha(1-\alpha)^3 X_{t-3}$, etc. Transcribing the equation for F_{t+1} into F_t by subtracting one from all the subscripts, we obtain: $F_{t+1} = \alpha X_{t-1} + \alpha(1-\alpha)X_{t-2} + \alpha(1-\alpha)^2 X_{t-3} + \alpha(1-\alpha)^3 X_{t-4}$ etc. If the equation is rewritten as: $F_{t+1} = \alpha X_t + (1-a)[\alpha X_{t-1} + \alpha(1-\alpha)X_{t-2} + \alpha(1-\alpha)^2 X_{t-3}$ etc. It can be seen then that the equation for F_t is exactly the same as that which appears in brackets in the equation for F_{t+1}. Substituting F_t for this we obtain: $F_{t+1} = \alpha X_t + (1-\alpha)f_T$. This is the basic equation defining a simple exponentially weighted moving average given by Holt (1957), and from which all other models of exponential smoothing derive. More correctly the process is a geometrically weighted moving average, the exponentially weighted moving average being its analogue in continuous time (see Reid 1969, p. 80). *For Holt's two parameter linear exponential smoothing* the forecast is formed by using two smoothing coefficients, $0 \leq \alpha \leq 1$ for the original series, and $0 \leq \beta \leq 1$ for the trend. The updating equations for Holt's method are:

LEVEL	S_t	$= \alpha X$	$+ (1-\alpha)(S_{t-1} + Z_{t-1})$	. . . .	(1)
TREND	Z_t	$= \beta(S_t - S_{t-1})$	$+ (1-\beta)Z_{t-1}$	. . . .	(2)
FORECAST	F_{t+m}	$= S_t$	$+ mZ_t$	. . . .	(3)

where S_t is the level in time "t," Z_t is the trend component and F_{t+m} is the forecast produced in time "t" for "m" periods ahead of current time. Basically the trend Z_t is multiplied by the number of periods ahead to be forecast m, and added to the value of the level S_t. For a more extensive treatment see Makridakis, et al. 1983, p. 98. *Winter's three parameter linear and seasonal* exponential smoothing (1960) model is an extension of Holt's (1957) linear model, in that it includes an extra equation that is used to estimate seasonality. It is sometimes referred to as the Holt's-Winters Model (see Lewis 1978, p. 54 and 1982, p. 32). The updating equations for Winters model are given by Wheelwright and Makridakis (1978, p. 98) as follows:

OVERALL SMOOTHING	S_t	$=$	$\alpha(X_t/I_{t-L})$	$+ (1-\alpha)(S_{t-1} + Z_{t-1})$	(1)
TREND	Z_t	$=$	$\varepsilon(S_t - S_{t-1})$	$+ (1-\varepsilon)Z_{t-1}$	(2)
SEASONALITY	I_t	$=$	$\beta(X_t/S_t)$	$+ (1-\beta)I_{t-L}$	(3)
FORECAST	F_{t+m}	$=$	$(S_t + mZ_t)I_{t-L+m}$	. . . .	(4)

where L is the length of seasonality (e.g., number of months or quarters in the year etc.). Z_t is the trend component, I_t is the seasonal adjustment factor, and F_{t+m} is the forecast for m periods ahead. α, ε, β and are the smoothing coefficients for overall smoothing, trend and seasonal components respectively. The overall smoothing equation (1) differs slightly from Holt's equation (1) in that the first term is divided by the seasonal number I_{t-L} which adjust X_t for seasonality by reviewing the seasonal effects which may exist in X_t. The estimate of seasonality, calculated with equation (3), is given as an index fluctuating around one.

The seasonal index is a ratio of the current value of the series X_t divided by the current single smoothed value for the series S_t. If X_t is *greater than* S_t the ratio will be *greater than* 1, while if X_t is *less than* S_t the ratio will be *less than* 1. S_t is a smoothed average value of the series that does not include any seasonality, the values of X_t contain both seasonality and any randomness in the series. To smooth out this randomness, equation (3) weighs the newly computed seasonal factor X_t / S_t, with β and the most recent seasonal number corresponding to the same season with $(1-\beta)$. This prior seasonal factor was computed in period $_{t-L}$, where L is the length of seasonality. The form of equation (3) used to calculate the seasonal component, is similar to that of other smoothing equations, there is a value, in this case the ratio X_t / S_t, which is multiplied by a smoothing coefficient β and is then added to its previous smoothed estimate which has been multiplied by $(1-\beta)$. Equation (2) used for the smoothing the trend is exactly the same as Holt's trend equation (2) discussed earlier. Equation (4) used to produce the forecast in Winters model is the same as the corresponding formula used to produce a forecast in Holt's model (equation (3) for Holt's), except that the estimate for the future period t+m is multiplied by I_{t-L+m}. In the equation for overall smoothing (1) X_t was divided by I_{t-L} to remove any seasonal effects that may exist in X_t. Multiplying the value of $(S_t + mZ_t)$ by I_{t-L+m} in equation (4) readjusts the forecast for seasonality by reintroducing seasonal effects into the forecast. For a more extensive treatment of Winters method see Makridakis, et al. (1983); Lewis (1983); and Winters (1960). *The updating equations for the smoothed error tracking signal* are given by Trigg (1964, p. 272) as follows: Smoothed Error = $(1-\alpha)$ previous smoothed error + α latest error; Mean Absolute Deviation (MAD) = $(1-\alpha)$ previous MAD + α latest absolute error and the Tracking Signal = Smoothed Error/MAD. These updating equations are expressed in a more concise form by Gardner (1983, p. 10) as: $E_t = \alpha e_t + (1-\alpha)E_{t-1}$; $MAD_t = \alpha|e_t| + (1-\alpha)MAD_{t-1}$ and $T_t = E_t / MAD_t$, where: t represents current time, E_t is the smoothed error, e_t is the present error, MAD_t is the mean absolute deviation, $|e_t|$ is the modulus or absolute value of the forecast error, T_t is the smoothed error tracking signal, and α is the smoothing coefficient $0 \leq \alpha \leq 1$.

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GEOFF LANCASTER AND PAUL REYNOLDS

MARKETING

THE ONE SEMESTER INTRODUCTION

MARKETING:
THE ONE-SEMESTER INTRODUCTION

SOLUS

Geoff Lancaster &
Paul Reynolds
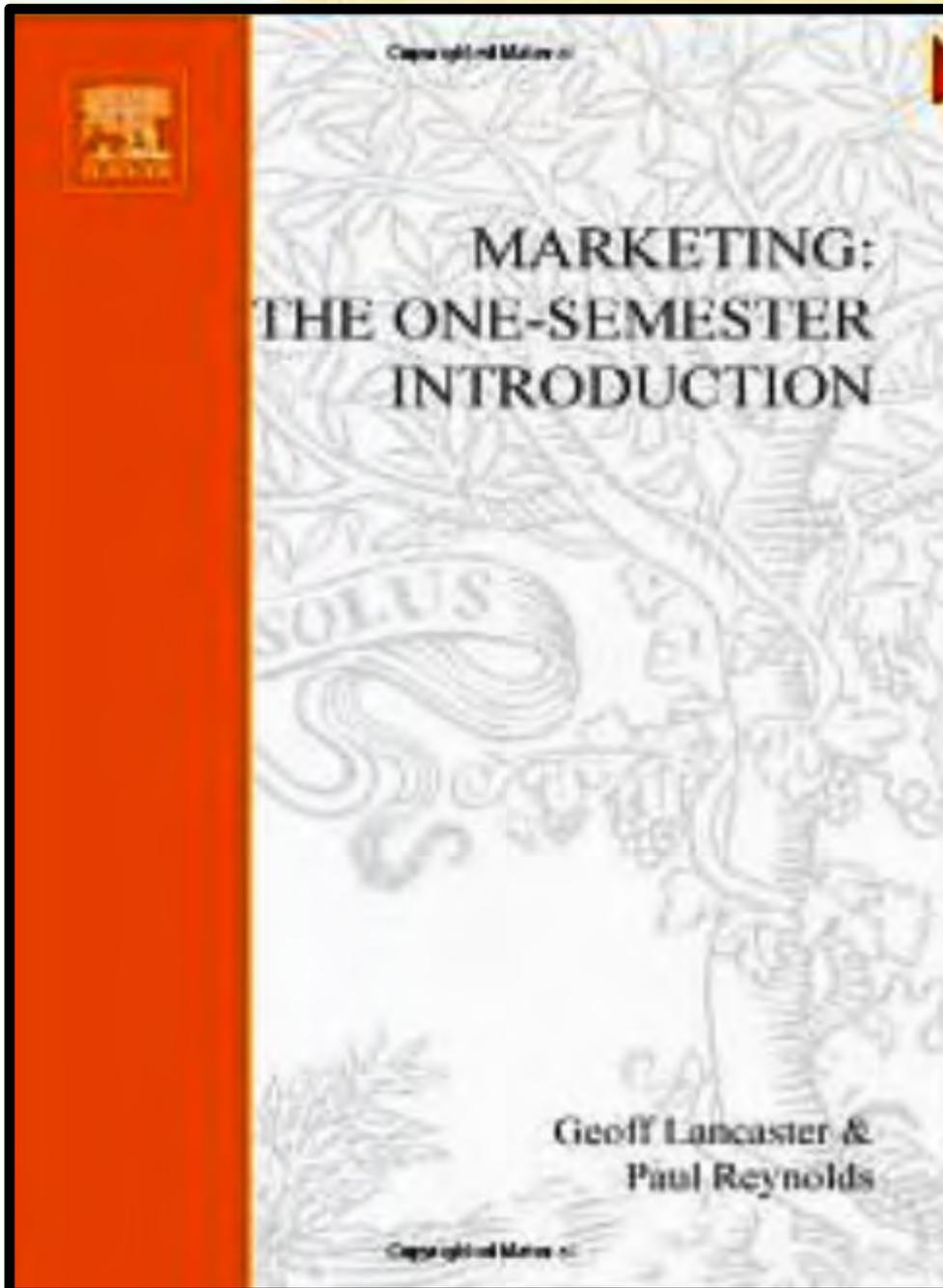
Chapter 14

Sales Forecasting

14.1 Introduction

The act of preparing for the future implies forecasting, consciously or subconsciously, of tomorrow's condition. In our personal lives, such predictions are usually made on an informal, subjective basis. If they turn out to be wrong we can usually adjust our personal circumstances. However, we rarely enjoy the same degree of flexibility in our working lives. There, decisions are usually of a more formal nature and of greater consequence.

The very nature of managerial decision-making involves forecasting future conditions. Forecasts may be required for an important 'one-off' decision e.g. the company may be considering expanding by acquisition, diversifying into a totally new market or modernising its production processes. Such decisions tend to be long-term and strategic, rather than operational. In such situations, because of the importance of the decisions being made, it is important that forecasting receives careful consideration, meaning an investment of time and money in the forecasting process.

Managerial decisions are not always strategic and much of a busy manager's time is taken up with day-to-day operational issues which, although not of the same magnitude as strategic decisions, are nonetheless important to the manager because of the proportion of time they occupy. Management requires forecasting information to assist them in making operational decisions, although the required time horizon for such forecasts is shorter than for strategic decisions. For example, for the marketing manager to set monthly sales targets, operational expense or advertising budgets, he or she may require regular short-term forecasts for each product, broken down according to product type, size, colour, salesperson's territory, channel of distribution and even by individual customer.

Whatever type of decision is being made, forecasting is required. Forecasting is a key to success, but poor forecasting can lead to high inventories and associated stockholding costs which must be paid for out of working capital, or under-production and unrealised market potential. Stanton et al contend: 'The cornerstone of successful marketing planning is forecasting the demand for a product.'

The recognition of the importance of forecasting was first illustrated by the results of a major research exercise carried out in the United States by Ledbetter and Cox in 1977. They found that forecasting techniques were used by 88 per cent of the 500 largest industrial companies in the USA. It was also established that no other class of planning techniques was used as much as forecasting.

Although forecasting is important in most functional areas of a firm, the forecasting of sales is particularly important. The sales forecast is the bedrock on which company plans are built and for this to be sound, the forecast must be built on a firm scientific foundation.

The central issue facing businesses is not whether to forecast, but how to forecast. The forecaster can choose 'subjective' or 'objective' methods or a mixture of each.

14.2 Forecasting terminology

The terminology used in the literature to describe forecasts can be confusing. Many writers make a distinction between prediction and forecasting, using 'forecast' to refer to objective, quantitative techniques and 'predict' to denote subjective estimates. This distinction is pedantic and the debate is a matter of semantics. 'Forecast' is of Saxon origin, meaning 'to throw ahead' implying that there is something in hand. In the context of this discussion, it would be historical data that can be extrapolated into the future. 'Predict' is of Latin origin, literally meaning 'to say beforehand' and no empirical basis is indicated. Dictionary definitions are unhelpful, a forecast being defined as 'a prophecy or prediction' and prediction, in turn, is defined as 'something predicted, a forecast'. Consequently, the use of the terms **subjective** and **objective** forecast is recommended and these terms are used throughout.

1

The availability of appropriate data is of central importance to the development of a forecasting system. Depending on the degree of accuracy required, most forecasting techniques require a considerable amount of data to be collected and analysed in terms of usefulness and validity before it can be used in the forecasting process.

Selection of the most suitable forecasting method from the choice of techniques available depends on the availability of existing data and/or company's ability to acquire relevant data. For example, a technique requiring a long historical time series would be of little use if data was only available for the past year. If the accuracy or validity of data were questionable, it would not be worthwhile or cost-effective to spend time and effort using a sophisticated technique known for its precision. In forecasting, the principle of 'garbage in/garbage out' applies; a forecast will only be as good as the data used in its compilation.

Vignette 14.1

Sales forecasting is difficult, especially for the future-Fujitsu gets profit forecasts wrong by 78%.

Some say that forecasting is an art, others, especially those who favour the use of more objective quantitative forecasting methods claim that forecasting is more of a science. Whatever position you take on the arts / science debate what is clear is that forecasting future market conditions, and hence profitability conditions is very difficult. So difficult in fact that some of the worlds most respected and sophisticated companies get their profit forecasts embarrassingly wrong.

No where is this inherent difficulty so well illustrated than in the case of the high technology company Fujitsu. On the 2nd march 2001 the company cut its forecast consolidated net profit forecast for the year by a staggering 78%. The company says many business environmental factors impacted on sales and hence forecast profits. Nearly 40% of Fujitsu's sales are made overseas. The USA is a particularly important market for the firm. The economic slowdown in the USA has hit high technology products and especially product components hard. Computers, disc drives, microchips for computers and other electronic devices have all suffered from a dramatic down turn in demand.

Fujitsu is amongst Japan's most respected companies. The organisation is proud of its management staff; many of whom are selected from the elite of Japan's top universities and business schools. It has a highly trained and educated team producing sales and profit forecasts for its markets all over the world. Some of the top forecasting brains in Japan's

international business community is involved in the production of its forecasts. This illustrates very well how difficult it is to produce robust commercial forecasting information even only one year into the future.

14.3 Data collection

Once the company has decided how much time, energy and money is to be spent on data collection, it must determine where it will obtain the data. The most promising sources depend on the individual situation.

There are two main categories of existing data:
1. 'Internal data' generated within the company itself, e.g. previous company plans, sales statistics and other internal records. For certain situations this may be sufficient.

2. 'Secondary data from external sources', e.g. Government and trade statistics and published marketing research surveys.

Both are important, and in many forecasting situations it is necessary to utilise both.

A third category of data is that generated specifically for the forecasting task through some form of marketing research such as a sample survey, a test-marketing experiment or an observational study. This is usually the most expensive source of data, and before commencing, a full study should be made of existing data sources, both internal and external.

14.3.1 Internal data sources

In immediate and short-term forecasting that is used for operational decision-making and control purposes, much of the necessary data can be gathered from internal sources. There may be questions that can only be answered by a detailed investigation of the firm's own data, so it is essential that internal data is collected, recorded and stored as part of a firm's routine administrative procedures. Desk research into internal company records is a useful and economic source of data and should be a starting point for data collection in any forecasting exercise. An advantage is that the departmental manager concerned can give an indication of the accuracy of data and its relevance to the forecasting situation. A disadvantage is that although the company's internal system may contain useful information, it may be difficult for the forecaster to obtain it in an appropriate form as it has been compiled for different purposes.

Success in obtaining past data from within the firm will depend to a great extent on knowing the firm and its staff. Much information can be obtained by consulting heads of departments and other staff. Obtaining access to information may sometimes be a problem so it is important that such exercises have the authority of top management to obtain maximum Cupertino.

The first stage is to take a systems analysis approach and trace the documentary procedures of the firm. The forecaster should look carefully at what records are kept and how data is obtained, altered, processed and circulated throughout the firm. Every document should be recorded, possibly using some form of flow chart. The type of document as well as the function it serves, should be noted as well as its origin and destination.

Administrative and documentary procedures vary, but most company systems start with a customer enquiry and end with the customer's invoice. With detailed analysis, it is possible to identify the main steps in the procedure within each department. The idea is to build up a picture of the overall system from individual employees to the total departmental system and ultimately the company. 'Unofficial' records are sometimes kept for contingency purposes. Such sources may be useful to the forecaster and may only be discovered by probing.

3

14.3.2 Data from the sales department

The sales/marketing department is the main point of commercial interaction between the company and its customers. Consequently, it is the chief source of information including:

1   Sales volume by product and by product group
This information can be combined to give total sales volume, but it also allows each product or product group in the overall product mix to be evaluated in terms of its contribution to total volume.

2   Sales volume by area
This may be divided according to salesperson territories, standard media areas as used by the Joint Industry for Television Advertising Research (JICTAR) or other geographical areas (e.g. countries).

3   Sales volumes by market segment
The basis for segmentation may be regional or, especially in industrial markets, by type of industry. Such information will give an indication of which segments are likely to remain static, which are declining and which show growth possibilities. Where the firm deals with a few large customers, segmentation may be by customer, and any change in demand from any of these may be significant in terms of forecasting sales.

4   Sales volume by type of channel of distribution
Where a company has a multi-channel distribution policy, it is possible to calculate the effectiveness and profitability of each type of channel. It also allows for trends in the pattern of distribution to be identified and taken into account in forecasting future channel requirements. Channel information by geographical area may indicate a difference in the profitability between various types of channel in different parts of the country, allowing for geographical differentials.

Information gathered by type of retail outlet, agents, wholesalers and distributors can contribute to a more realistic forecast. Such information allows marketing to identify and develop promising channel opportunities, resulting in more effective channel management.

5   Sales volume over time
In terms of actual sales and units sold, this allows seasonal variations to be identified and inflation and price adjustments to be taken into consideration.

6   Pricing information
Historical information relating to price adjustments by product types allows forecasters to establish the effects of price increases or decreases on demand. The forecaster is then able to judge the likely effects of future price changes.

7   Communication mix information
The effects of previous advertising campaigns, sponsorship, direct mail or exhibitions can be assessed. Various levels of expenditure in marketing communications can be evaluated. This information will act as a guide to the likely effectiveness of future communication mix expenditures.

8   Sales promotional data
The effectiveness of past promotional campaigns such as reduced-price pack, coupons, self-liquidating offers and competitions, can be assessed. Trade incentives aimed at distributive intermediaries can also be assessed in terms of their individual influence on sales.

9   Sales representatives' records and reports
As described in Chapter 8, sales representatives should keep files on 'live' customers. Often such records are kept in considerable detail, ranging from information on customer interests to detailed personal information as well as information about the customer's firm, its product range, diversification plans and likely future purchases. Even what the customer last said to the salesperson may be recorded. In addition, sales representatives make reports to the sales office on such matters as orders lost to competitors, customers holding future purchasing decisions in abeyance and information on quotations that never materialised in orders. This information is potentially useful to the forecaster.

10   Enquiries received and quotations sent

Customers submit enquiries asking for details of price, delivery, etc., and records should be kept of verbal enquiries. Customers make enquiries to a number of companies. Enquiries lead to a detailed quotation being submitted to the customer. This information can be useful to the forecaster, especially if patterns can be established in the percentage of enquiries that mature into orders and the time between a quotation being submitted and an order being received. The number of requests for quotations can provide a guide to economic activity in the market place, and as firms are likely to request quotations from a number of sources, the number of quotations successfully converted into orders gives an indication of the firm's market share.

14.3.3 Data from other departments

1   Accounts department

The management accountant will be able to provide accurate cost data. Other useful information can be gained from previous management reports. Management information requirements differ between firms, but such reports may contain very accurate information on such matters as:

- number of new customers in a given period
- number of withdrawals
- number of items sold by product in volume and monetary terms
- total sales by salesperson, area, division, etc.

Management accounting reports give information on staff matters such as absenteeism. Such information can be useful when attempting to accurately forecast production capacity. Past budgets with variance analysis will show budgeted figures against actual figures.

The accounts department will also keep statistics on current operations such as orders received, orders dispatched and orders on hand. Such information is kept for internal management information needs and to fulfil legal requirement when presenting accounts. This information may duplicate information held elsewhere, but may be most accessible in the accounts department. Since such information has been collected independently, it can be used as a 'check' on information gathered from other sources.

2   Purchasing department

Copies of purchase orders, material lists, requisitions, material status schedule reports, information on suppliers (e.g. reliability of delivery, lead times, prices) can be useful. Purchasing will also be able to provide stock control data relating to reorder levels, buffer and safety stock levels, economic order quantities and stock-turn by inventory item. The forecaster may need to take such information into account. Stock availability and short lead times are part of the general level of service offered by the firm to customers. Depending on the service sensitivity of the market, service levels can have a significant influence on demand. Present and future service levels will have a bearing on both sales and materials management as an increase in the level of service would mean more stock and a greater variety of materials being held.

3   Dispatch department

The dispatch department will have its own information system detailing goods dispatched and transportation methods as well as advice notes and other delivery documents. Such information may be useful for forecasting in its own right or act as a check on information gathered elsewhere.

4   Production department

The production department should be able to supply documentation relating to production control e.g. copies of works orders, material lists and design information. Information will be available on orders placed with the company's own workshops, requisitions for materials to stores, orders subcontracted to other suppliers, manufacturing times, machine utilisation times and order completion dates.

14.3.4 Departmental plans

Not only should historical and current internal information be available to the forecaster, but this should also include short-, medium- and long-term plans relating to individual departments.

Activity and changes in company policy or methods of operation already planned could have a considerable bearing on a forecast. For instance, plans to expand the sales department or to increase promotional activity will affect a sales forecast. Investment in capital equipment such as new machine tools or a new material handling system may significantly affect both materials requirements and future sales.

The sources mentioned are not an exhaustive list of the sources or types of internal information available to the forecaster. Other departments, e.g. human resource management, research and development, work study, etc., may also hold useful information. The choice of sources will depend on the type of forecast required.

Vignette 14.2

Dell Computers lowers sales forecasts.

On Thursday 15th February 2001, Dell Computers announced a first round of job losses. This was to be the first reduction in personnel in the history of the company, spanning over 16 years of successful trading. The company had got its sales forecasts badly wrong and totally underestimated the world-wide fall in demand for personal computers and related products. Dell is a high 'tech' firm and employs some of the best business brains the world's business schools can generate. The management make full use of a range of sales forecasting techniques including both qualitative and quantitative methods, running forecasting software on powerful computers. However even Dell's level of sophistication and expertise could not prevent them from miss- forecasting the global slowdown for their products, particularly in the USA consumer sector where the largest slowdown has occurred.

The Global PC market is still uncertain and the company admit they do not have a clear picture of what market conditions will be like beyond the short term, about four months. Even the professional independent annalists got it wrong and so did other leading computer manufacturers such as Compaq and Gateway. This scenario illustrates the difficulty of producing reliable sales forecasts even up to 12 months ahead of current time, where market conditions are volatile. The slowdown in PC demand growth has been blamed partly on the world economic uncertainty and the concern about general economic slowdown in the USA particularly. Businesses and individuals are feeling less secure and are deferring the purchase of a new or replacement PC.

14.4 Forecasting methods

14.4.1 Subjective methods

Subjective methods of forecasting are generally qualitative techniques in that they rely largely on judgement rather than numerical calculations. They are sometimes called 'intuitive' or, unkindly perhaps, 'naïve' techniques, being applied through a mixture of experience and judgement. Subjective techniques include:

1. Executive Opinion (or Jury) method and Sales Force Composite

This method involves the sales or marketing manager making an informed subjective forecast. This is sometimes done in conjunction with the field sales force (in which case is it the 'sales force composite' method) and then consulting other executives in production, finance and elsewhere. The group forms a 'jury' which delivers a 'verdict' on the forecast. The final forecast is thus based on the collective experience of the sales force and the group and has the backing and input of experienced executives in the company. Proponents of this technique claim that the informed opinions of such people provide as valid a prediction as any other method. Such panels are often used in the final stages of the development of a forecast. Where subjective forecasts have been obtained from various sources, there is usually a need to assess and evaluate each one before consolidating them into a final forecast.

Advantages
- The forecast is compiled by people who have experience of the industry.
- The final forecast is based on the collective experience of a group, rather than on the opinion of a single executive.
- Because the final forecast is based on consensus of opinion, variations in individual subjective estimates are 'smoothed out'.
- Because of the status of individuals contributing to the forecast, the figures are perceived to have a high level of source credibility by people who make use of the forecasting information.

Disadvantages
- If salespersons know that the resulting sales quotas or targets are linked to bonus payments or commission rates, they may deliberately produce pessimistic forecasts in order to be in a better earning position.
- As forecasting is only a subsidiary activity of the salesperson, the forecast may often be based on guesswork rather than on careful reasoning. Salespeople are often too concerned with everyday events to devote sufficient time to produce realistic forecasts. The modern salesperson has a much wider role than say 15 years ago (as discussed in Chapter 8). They are already expected to attend exhibitions, contribute to marketing plans, provide market intelligence and carry out numerous other related activities. Add to this time spent travelling and waiting to see clients, and there is little time available for forecasting activity. This would particularly apply if a large number of product forecasts were required on a regular basis.

2 Customer-use projections

This method uses survey techniques to ascertain purchase intentions of customers and/or users. Such surveys range from the sales representative merely talking to existing and potential customers and reporting back to head office, to more formal market research surveys. In consumer markets, where the population is often large, a sample survey is usually undertaken. Such a survey can be at two levels: the customer's intention to buy; or the distributive intermediary's intention to stock and promote the product(s). In industrial markets, where the number of customers may be relatively few, sampling may not be necessary. This method is seldom used on its own, but more often in conjunction with other forecasting methods. Test marketing is also used to produce forecasts and is similar to surveys. A small representative area is used and the results form the basis of a forecast. Pat Seelig proposes using simulated test marketing i.e. a test market in a laboratory.

Advantages
- The information on which the forecast is based comes from prospective purchasers and the rationale is that only they really know what and how they are likely to purchase in the future.

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- The technique utilises proven marketing research methodology such as sample surveys, projective techniques and questionnaires to elicit information.
- The task of producing sales forecasts can be subcontracted to professional research agencies which is useful if executive or salespeople's time is at a premium.

Disadvantages

- Sample surveys, particularly if they involve face-to-face contact with customers and potential customers, can be very time-consuming and expensive. This cost must be compared with those of alternative methods of producing a forecast using a cost-benefit approach. If forecasts are required on a regular basis, then such a method is likely to be expensive, particularly if forecasts are required in a disaggregated form (e.g. product line by product line over time).
- There may be a difference between what respondents say they are going to purchase and their actual purchases.
- There is a limit to how often the same people (e.g. purchasing managers) can be approached and expected to participate in such a fact-finding study.

Where subjective forecasting techniques are used, the 'jury of executive opinion' and 'salesforce composite' methods have greater application than customer-use projections. This is true in industrial markets as the success of these techniques depends on a close relationship between the supplier and customers.

14.4.2 Bayesian decision theory

The methods of subjective forecasting described do not form an exhaustive list. Some other methods are variations on the techniques described. The main exception is Bayesian decision theory that is a mixture of qualitative and quantitative techniques. The method is named after Reverend Thomas Bayes (1702-61), a statistician. Despite the fact that it was developed in the 18th century, it has only recently been widely adopted.

The method incorporates the firm's guesses at data inputs for the statistical calculation of sales forecasts. It uses network diagrams showing the probable outcome of each decision alternative considered. These are shown together with expected values and associated probabilities, initially derived on a subjective basis.

One of the problems of using probabilities in statistical model is in ascertaining initial probabilities to commence the forecasting process. Bayesian statisticians differ from 'purist' statisticians in the respect that 'purists' view the concept of probability as the relative frequency with which an event might occur. The Bayesian view is that probability is a measure of our belief and that we can always express our degree of belief in terms of probability. Although the initial probabilities are derived subjectively (i.e. the figures are based on judgmental opinion, rather than on objective calculation) proponents of Bayesian theory believe that such probabilities are perfectly valid and hence perfectly acceptable as initial starting points in an extensive quantitative forecasting process. It is the subjective nature of arriving at the initial probabilities that makes the Bayesian approach useful in solving business problems for which initial probabilities are often unknown and are difficult or impossible to calculate using objective methods.

To use the Bayesian approach, the decision-maker must be able to assign a probability to each specific event. The sum of the probabilities of all events considered must be unity (one). These probabilities represent the magnitude of the decision maker's belief that a particular event will take place.

In business situations such decisions should be delegated to personnel who have the knowledge and experience to assign valid initial subjective probabilities to the occurrences of various business events. These initial probabilities are based on previous experience of information (such as published secondary data) acquired prior to the decision-making process. For this reason, the initial subjective probabilities are referred to as 'prior probabilities'.

When making business decisions, the financial implications of actions must be taken into account. For example, when a manager is considering investing a firm's surplus cash, he or she must consider the

probability of making a profit (or loss) under different economic scenarios and also assess the probability of such scenarios or events occurring. Applying Bayesian decision theory involves selecting an option and having a reasonable idea of the economic consequences of choosing a particular course of action. Once the relevant future events have been identified, the decision-maker assigns prior subjective probabilities to them. The expected pay-off for each act is then computed and the act with the most attractive pay-off is then chosen. If pay-offs represent income or profit, the decision-maker usually chooses the act with the highest expected pay-off.

To illustrate the theory just described, a practical example is now discussed:

Shepley Textiles produce high quality Axminster carpets. Such carpets are made from 80 per cent wool and 20 per cent nylon (for strength). In the UK the product retails for approximately £22 per square metre. Axminster carpets are very popular among the higher income households in Australia where only small quantities are produced. The product is perceived by Australian higher social groups as being a luxury purchase. For Shepley Textiles to gain economies in freight charges, export consignments need to be relatively large and it is planned that the first consignment will be worth £3,000,000. Because of its high-status image in Australia, the carpet can command a premium price (about £36 per square metre sterling equivalent). However, such a product is a deferrable purchase and demand is only likely to remain high if the Australian economy remains strong. Management foresee a possible decline of the Australian economy as the main risk factor in this venture. The first 12 months are particularly important, as this is the time when the first consignment is expected to be sold, given the present economic climate. Economists have predicted an economic downturn over this period if monetary conditions tighten in response to rising domestic inflation and poor trade figures.

The decision facing Shepley Textiles management is whether to risk going ahead with the Australian centre now, when present demand for their product is likely to be high, or to postpone the decision, waiting for the economic outlook in Australia to become more stable. If the decision is postponed, fashion tastes may change away from this type of product in the interim.

The management of Shepley Textiles assesses the Australian economy is likely to go in one of three directions over the next 12 months:

(a) stay the same
(b) slight deterioration
(c) significant deterioration

Management assigns subjective initial probabilities to each of the possible economic scenarios (Figure 14.1). (Note that the sum of the probabilities of the three possibilities considered is unity [1]).

Event	Probability
Economic conditions remain the same	0.4
Slight deterioration in the economy	0.3
Significant deterioration in the economy	0.3
Sum of probabilities	1.0

Figure 14.1 Subjective prior probabilities of alternative future economic scenarios

The direction of the Australian economy is an event (E) that is outside the control of the company. Management decides on three possible courses of action (A):

1   Export now while conditions are relatively good

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2   Delay six months, in which time the direction of the Australian Government's economic strategy is likely to become clearer

3   Delay one year to observe the longer-term economic trends

Management then forecasts expected profit for each course of action under different economic conditions (Figure 14.2).

Events (E)	Actions (A)		
	1 Export now	2 Delay 6 months	3 Delay 1 year
(a) Economic conditions remain the same	1,600,000	1,200,000	1,000,000
(b) Slight deterioration in economy	900,000	740,000	400,000
(c) Significant deterioration in economy	-648,000	100,000	160,000

Figure 14.2 Expected pay-offs for different decisions under different economic conditions

The prior probabilities are now incorporated into a decision tree (Figure 14.3). This is made up of 'nodes' and 'branches', with the decision point represented by square and chance events by circles.
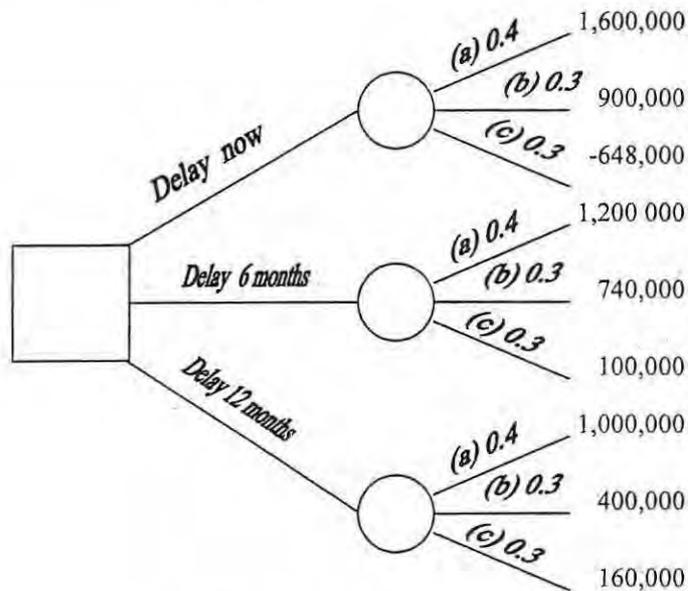
Figure 14.3 Decision tree for Shepley Textiles Ltd:
(a) economy remains same; (b) slight deterioration; (c) significant deterioration

The expected value (EV) is now calculated for each forecast and then totalled for each alternative course of action (A). This is done using pay-off tables where the expected profit for each event is multiplied by its assigned probability and the resulting products summed (See Figure 14.4):

A1 - Export now

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Event (E)	Probability	Expected Profit (£)		Expected Value (£)
(a)	0.4	1,600,000		620,000
(b)	0.3	900,000		270,000
(c)	0.3	-648,000		-194,400
			Total EV:	695,600

A1 – Delay 6 months

Event (E)	Probability	Expected Profit (£)		Expected Value (£)
(a)	0.4	1,200,000		480,000
(b)	0.3	740,000		220,000
(c)	0.3	100,000		30,000
			Total EV:	732,000

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A1 – Delay 12 months

Event (E)	Probability	Expected Profit (£)	Expected Value (£)
(a)	0.4	1,000,000	400,000
(b)	0.3	400,000	120,000
(c)	0.3	160,000	48,000
		Total EV:	568,000

Figure 14.4 Expected Value (EV)

By examining the total values for each of three possible actions management sees that A2 (i.e. delay action for 6 months) gives the maximum expected pay-off (£732,000). Since the action is selected under conditions of uncertainty, the EV is referred to as the 'EV under uncertainty' and the action chosen as the 'optimal action'.

In this example, the probabilities assigned to events were prior probabilities. They were subjective, largely based on the decision-makers' beliefs in the probability that certain events will occur. Such an analysis, carried out using prior probabilities, is called a prior analysis.

After prior analysis, the decision maker has two choices - to go ahead with the optimal action indicated by the prior analysis or to collect additional primary data, re-evaluate the probabilities in the light of further information and carry out new calculations. Additional information may be obtained by carrying out a market research survey or some other form of primary data collection procedure (as described in Chapter 13). If additional information is gathered and another analysis carried out, the term for these new calculations is 'posterior analysis'. Clearly, it is going to cost the decision-maker time and money to collect further information. A decision must be made as to whether the better-informed decision will be worth the extra cost or not.

Vignette 14.3

Long range economic forecasts dampen the spirit of Palermo.

On Saturday 17 February 2001 ministers and bankers from the Group of 7 industrialised countries (G7) will meet for a summit in Palermo's Plazzo dei Normanni to discuss the implications of the latest spate of economic forecasts. They will be seeking co-operation and harmony to avoid world-wide economic recession in the face of the continuing USA slowdown in demand. Macro economic forecasts for the US economy predict that the slowdown in demand is continuing although Alan Greenspan the Chairman of the US Federal Reserve Bank is putting a brave face on it, and claims the USA will not experience a severe economic recession. However even the great Greenspan's forecasts can be wrong.

Whatever the Federal Reserve bank in the USA says, the main theme of the discussion at Palermo will be the size of the US slowdown and its likely effect on the world economy.

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Forecast figures released just before the meeting show a fourth fall in US industrial production and confirmation that the US economy is experiencing virtually no growth at all. A further worrying trend is the rise in US producer prices making any interest cut from the Federal Reserve a risky strategy because of its possible impact on fuelling inflation.

On a more positive note, economic long range forecasts show that Japan is likely to experience continued positive economic growth. However even this forecast has been reduced from previous forecasted figures because of the reduction if Japanese imports from Japan to the US due to the slowdown. Japan's growth will not compensate for the slowdown in the USA and is not powerful enough to function as an economic engine for the rest of the world. However positive growth in Japan over the long term, even if it is relatively modest is still good news in an uncertain world. Forecasts for Europe also indicate hope for the future with news that the Italian economy is growing by nearly 3% the highest growth rate since 1996. The Palermo scenario indicates the importance of forecasting at the macro level. Many of the macro economic forecasts for industrial sector demand are in fact an aggregate of forecasts made form individual forms within a particular sector.

14.4.3 Objective methods

Objective methods of forecasting are quantitative in nature. Historical data are analysed to identify a pattern or relationship between variables and this pattern is then extended or extrapolated into the future to make a forecast. Objective methods fall into two groups: 'time series' and 'causal' models.

1   Time series models

Time series analysis uses the historical series of only one variable to develop a model for predicting future values. The forecasting situation is treated rather like a 'black box', with no attempt being made to discover other factors that might affect its behaviour.

Because time series models treat the variable to be forecast as a function of time only, they are most useful when other conditions are expected to remain relatively constant, which is most likely true of the short-term rather than the long-term. Hence such methods are particularly suited to short-term, operational, routine forecasting – usually up to six months or one year ahead of current time.

Time series methods are not very useful when there is no discernible pattern of demand. Their whole purpose is to identify patterns in historical data, model these, and extrapolate them into the future. Such methods are unlikely to be successful in forecasting future demand when the historical time series is very erratic. In addition, because it is assumed that future demand is a function of time only, causal factors cannot be taken into consideration. For example, such models would not be able to incorporate the impact of changes in management policy.

2   Causal models

Causal models exploit the relationship between the time series of the variable being examined and one or more other time series. If other variables are found to correlate with the variable of interest, a causal

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model can be constructed incorporating coefficients that give the relative strengths of the various causal factors. For example, the sales of a product may be related to the price of the product, advertising expenditure and the price of competitors' products. If the forecaster can estimate the relationship between sales and the independent variables, then the forecast values of the independent variables can be used to predict future values of the dependent variable (in this case, sales).

Such techniques are illustrated by two of the simpler models, 'moving averages' and 'exponential smoothing' that are discussed here. Other, more sophisticated, time series models include decomposition models and auto-regressive moving averages (Box-Jenkins) techniques that are the subject of more advanced study.

3 Moving averages (time series)

- *Simple moving average*

The simple moving or 'rolling' average is a useful and uncomplicated method of forecasting the average expected value of a time series. The process uses the average individual forecasts (F) and demand values (X) over the past n time periods.

A suffix notation is used, which may seem complicated, but is quite simple: the present is referred to as time t and one period into the future by $t + 1$, one period into the past by $t - 1$, two periods by $t \pm 2$, and so on. This is best appreciated with reference to a time diagram:

$t-3$	$t-2$	$t-1$	t	$t+1$	$t+2$	$t+3$

3 periods into the past   Present   3 periods into the future

The simple moving average process is defined by the equation:

$$F_{t+1} = F_t + \frac{1}{n}(X_t - X_{t-n})$$

where: F_{t+1} = forecast for one period ahead

F_t = the forecast made last time period for the present period

n = the number of time periods considered in the calculation

X_t = actual demand at the present time

X_{t-n} = actual demand for period $t - n$

- *Weighted average*

The simple moving average has the disadvantage that all data in the average are given equal weighting i.e.:

$$\frac{1}{n}$$

More recent data may be more important than older data, particularly if the underlying pattern of the data has been changing, and, therefore, should be given a greater weight. To overcome this problem and increase the sensitivity of the moving average, it is possible to use 'weighted averages', with the sum of the weights equal to unity, in order to produce a true average. In decimal form, a weighted moving average can be expressed as:

$$F_{t+1} = 0.4X_t + 0.3X_{t-1} + 0.2X_{t-2} + 0.1X_{t-3}$$
(Notation as defined for the simple moving average).

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Problems common to all moving average procedures are that a forecast cannot be made until n time periods have passed, because it is necessary to have values available for the previous $n - 1$, etc. periods. The sensitivity or speed of response of moving average procedures is inversely proportional to the number of periods n included in the average. To change the sensitivity, it is necessary to change the value of n which creates problems of continuity and much additional work.

The methods of simple and weighted moving averages discussed so far are only suitable for reasonably constant (stationary) data – they are unable to deal with a significant trend. An example of a 'stationary time series' is shown in Figure 14.5. It can be seen from the graph that over a period of nine months the time series fluctuates randomly abut a mean value of 200 units that is not increasing or decreasing significantly over time.
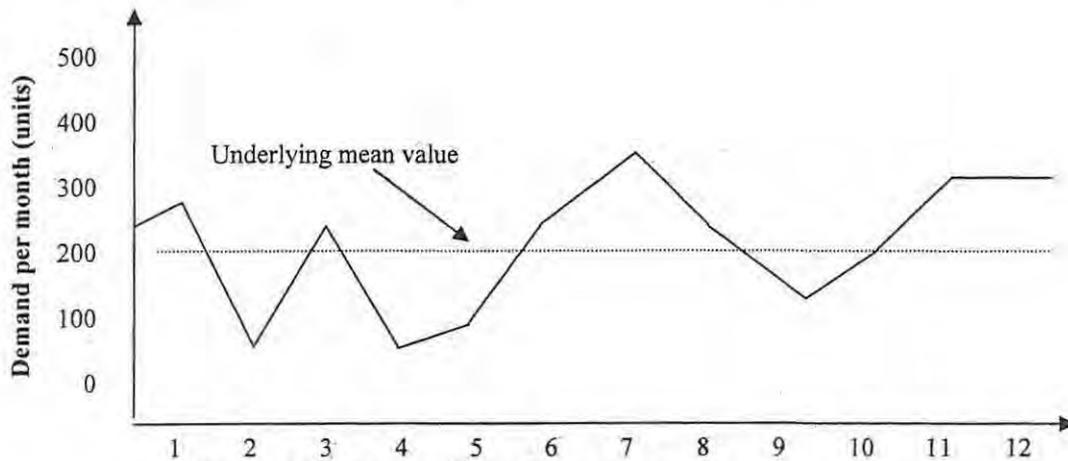
Figure 14.5 Example of a stationary time series

In the times series shown in Figure 14.6 the underlying mean value of the series is not stationary. If a line of best fit is drawn through all of the points, you can see that while the actual values are fluctuating randomly, the underlying mean value is following a rising linear trend.
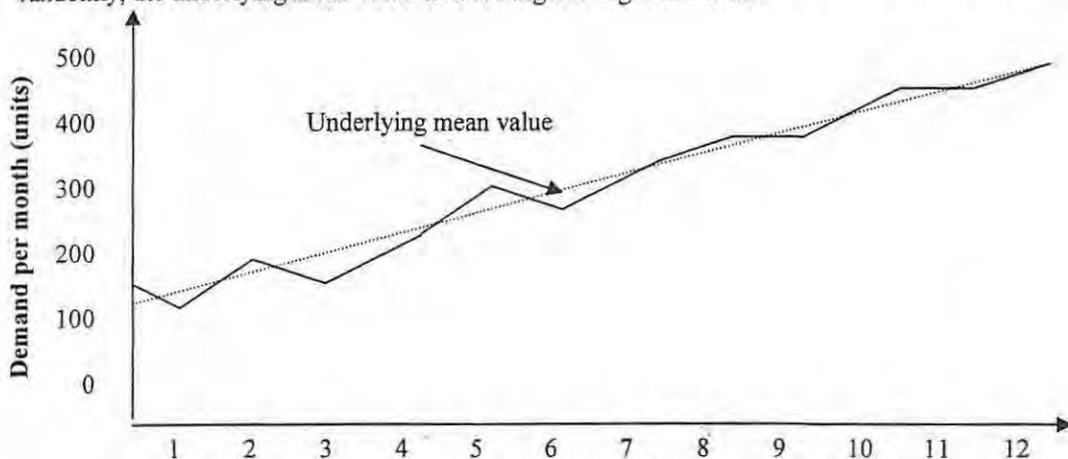
Figure 14.6 Example of a time series with a linear underlying trend

- **Double (linear) moving average**

A method of moving averages designed for a reasonably stationary time series cannot accommodate a series with a linear trend. In such situations, the forecasts tend to lag behind the actual time series, resulting in systematic errors. To counter such error factors, the method of 'double' (or 'linear') moving averages has been developed. This method calculates a second (or double) moving average which is a moving average of the first one. The principle is that a single moving average (MA_t^1) will lag behind the actual trend series X_t and the second moving average (MA_t^2) will lag behind MA_t^1 by approximately the same amount. The difference between the two moving averages is added to the single

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moving average $MA_t{}^1$, to give the level (a_t). The difference between $MA_t{}^1$ and $MA_t{}^2$ can then be added to the level (a_t) to produce a one- or m-period-ahead forecast.

The 'double moving average procedure' is summarised as follows:

1 The use of a simple moving average at time t (denoted as $MA_t{}''$).

2 An adjustment, which is the difference between the simple and the double averages at time t ($MA_t{}'' - MA_t{}'$).

3 An adjustment for trend from period t to period $t+1$ (or to period $t+1$ (or period $t + m$, if the forecast is for m period ahead).

The updating equations for the double moving average are as follows:

Single moving average

$$MA_t{}'' = \frac{X_t + X_{t-1} + X_{t-2} + ... + X_t - N + 1}{N}$$

Double moving average

$$MA_t{}' = \frac{MA_t{}'' + MA_t{}''_{-1} + MA_t{}''_{-2} + ... + MA_t{}'' - N + 1}{N}$$

Level component, $a_t = MA_t{}'' + (MA_t{}'' - MA_t{}') = 2MA_t{}'' - MA_t{}'$

Trend component, $b_t = \dfrac{2}{N-1} (MA_t{}'' - MA_t{}')$

Forecast $F_t + {}_m = a_t + b_t m$

The general principle of the double moving average is shown in Figure 14.7.

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0	1	2	Time

periods
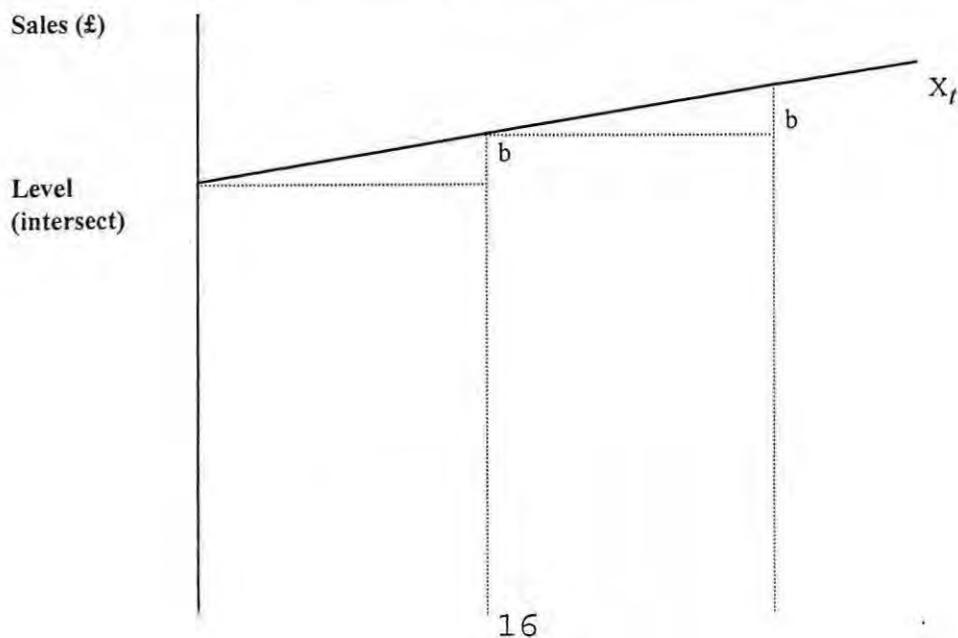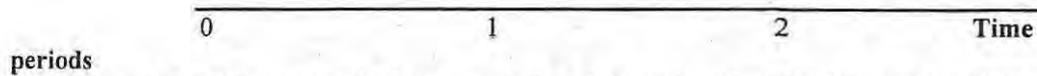
Figure 14.7 Diagrammatical representation of the principle of double moving average

Although the double moving average has the advantage of being able to handle data with a trend, it has the disadvantage of requiring extra data. N data points are required to update each MA_t'' and MA_t', i.e. $2n$ or twice the number required for the simple moving average must be stored. The necessity for substantial data storage makes the double moving average less attractive in practice than other techniques which provide similar results from less data. This is particularly so if short-term forecasts are required on a routine basis (e.g. weekly) for a large number of items.

4. **Exponential smoothing (time series)**

The use of exponentially-weighted moving averages was first developed from a number of unpublished reports by C Holt of the Carnegie Institute of Technology. This overcomes some of the shortcomings and limitations of the moving average method.

- *Simple exponential smoothing*

When using simple exponential smoothing, weights used in the averaging process decrease exponentially over time, allowing greater weight to be given to more recent values. This is achieved by means of a smoothing coefficient, the value of which can be chosen to give the required weight to each piece of historical data used in the calculation of the forecast. To illustrate the principle, we let the weighting function used to smooth the random fluctuations from the time series, be denoted by α (alpha). A series can be constructed:

$$\alpha + (1-\alpha) + \alpha(1-\alpha)^2 + \alpha(1-\alpha)^3 + \alpha(1-\alpha)^4 \dots + \alpha(1-\alpha)^n$$

For $0 \leq \alpha \leq 1$, as n gets larger the sum of the series will approximate to one. For example, if $\alpha = 0.4$ and $n = 15$, the series will sum as follows:

$0.4 + 0.24 + 0.144 + 0.0864 + 0.0518 + 0.0311 + 0.0187 + 0.0112 + 0.0067 + 0.004 + 0.0024 + 0.0015 + 0.0009 + 0.0005 + 0.003 = 0.995$
Rounded up, this is 1.0

To illustrate how the technique is used in forecasting, we use the notation discussed earlier for simple moving averages (i.e. the one-step-ahead forecast produced in current time is denoted by F_{t+1} and the actual current demand value by X_t). Using the weighting coefficient series, we produce the following equation:

$$F_{t+1} = \alpha X_t + \alpha(1-\alpha)X_{t-1} + \alpha(1-\alpha)^2 X_{t-2} + \alpha(1-\alpha)^3 X_{t-3} + \dots + \alpha(1-\alpha)^n X_{t-n}$$

Transcribing this equation to an expression for F_t (by subtracting one from all the subscripts) we obtain:

$$F_t = \alpha X_{t-1} + \alpha(1-\alpha)X_{t-2} + \alpha(1-\alpha)^2 X_{t-3} + \dots + \alpha(1-\alpha)^{n-1} X_{t-n}$$

The equation for F_{t+1} can be written as follows:

$$F_{t-1} = \alpha X_t + (1-\alpha)[\alpha X_{t-1} + \alpha(1-\alpha)X_{t-2} + \alpha(1-\alpha)^2 X_{t-3} + \dots + \alpha(1-\alpha)^{n-1} X^{t-n}]$$

The expression in the square brackets is exactly the same as that derived for F_t. Substituting F_t, we obtain the basic equation defining a simple exponentially-weighted moving average from which all other models or exponential smoothing are derived:

$$F_{t+1} = \alpha X_t + (1-\alpha)F_t$$

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(More correctly, the process is a geometrically weighted moving average, the exponentially weighted moving average being its analogue in continuous [series] form).

The technique of simple exponential smoothing is historically very important, as it was the first 'adaptive forecasting' method to be proposed. It is adaptive in the sense that the current forecasting errors are used to update the model: A more compact form of equation can be achieved by noting that $X_t - F_t$ represents the value of the current forecasting error, e_t' and that the equation for simple exponential smoothing could be written as:

$$F_{t+1} = F_t + \alpha \, (X_t - F_t).$$

$$F_{t+1} = F_t + \alpha \, (e_t)$$

Thus, the previous forecast is updated by a proportion (α) of the current error (e_t).

An example is given where the one-period-ahead forecast (weeks, months or years) for a hypothetical product is calculated using this last equation. Different values of smoothing coefficient have been used in the calculation ($\alpha = 0.1$, 0.5 and 0.9). In the first period, no earlier forecast is available to use as an F_t value. The normal convention of using the observed value X_t for F_t in the first calculation has been followed:

Time Period	Observed demand (X_t)	Exponentially smoothed forecast values (units) (F_t)		
		$\alpha = 0.1$	$\alpha = 0.5$	$\alpha = 0.9$
1	2000	-	-	-
2	1350	2000	2000	2000
3	1950	1935	1675	1415
4	1975	1937	1813	1897
5	3100	1941	1894	1967
6	1750	2057	2497	2987
7	1550	2026	2124	1874
8	1300	1978	1837	1582
9	2200	1910	1569	1328
10	2775	1939	1885	2113
11	2350	2023	2330	2709
12	-	2056	2340	2386

- *Double exponential smoothing*

Simple exponential smoothing is only appropriate for a relatively stationary time series. In particular, the method will perform badly if the series contains a long-term trend. Like simple moving average, if simple exponential smoothing is applied inappropriately to a time series with a trend, the forecast will continually lag behind the actual value of series X_t.

The method of 'double exponential smoothing' is technically known as 'Brown's one parameter linear exponential smoothing'. This method introduces additional equations to those of the simple exponential smoothing to estimate a trend. The method uses the same principle as the double or linear moving average, that is, that if simple exponential smoothing is applied to a time series with a significant trend it will lag behind. If single exponential smoothing is applied again to the first smoothed series, the second smoothed series (S^2_t) will lag behind the first (S^1_t) by approximately the same amount as the first smoothed series (S^2_t) lagged behind the original time series (X_t). This is illustrated in Figure 14.8.

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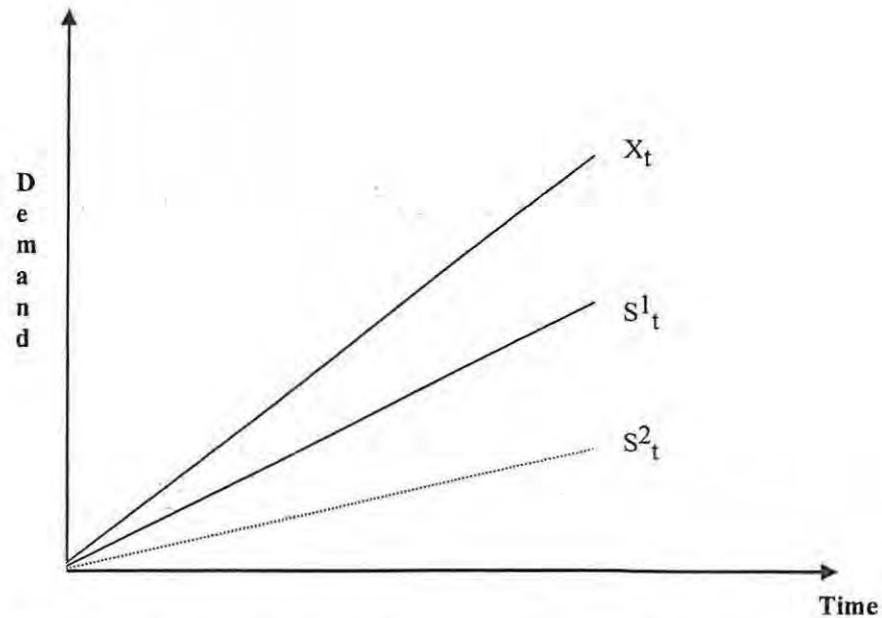
Figure 14.8 The lagged response of a simple exponential smoothing model applied to a series with a linear additive trend

Brown's method accepts that after initial transients have died down, S^1_t will lag behind X_t by amount A. A second single exponentially-weighted average (S^2_t) will lag behind the first (S^1_t) by the same amount, A. At time t, the difference between S^1_t and S^2_1 is added to the S^2_t to give the level component a_t. A proportion of the difference between S^1_t and S^2_t is then used to provide a trend component, b_t, which is multiplied by the number of periods ahead to be forecast, m, and the product added to the level a_t to produce a forecast for m steps ahead (see Reynolds and Greatorex 1988).

Brown's model of double exponential smoothing is made up of two components: a level component (or intercept) (α) and a trend component (β). These components are combined to provide a forecast, as illustrated in fig. 14.9.

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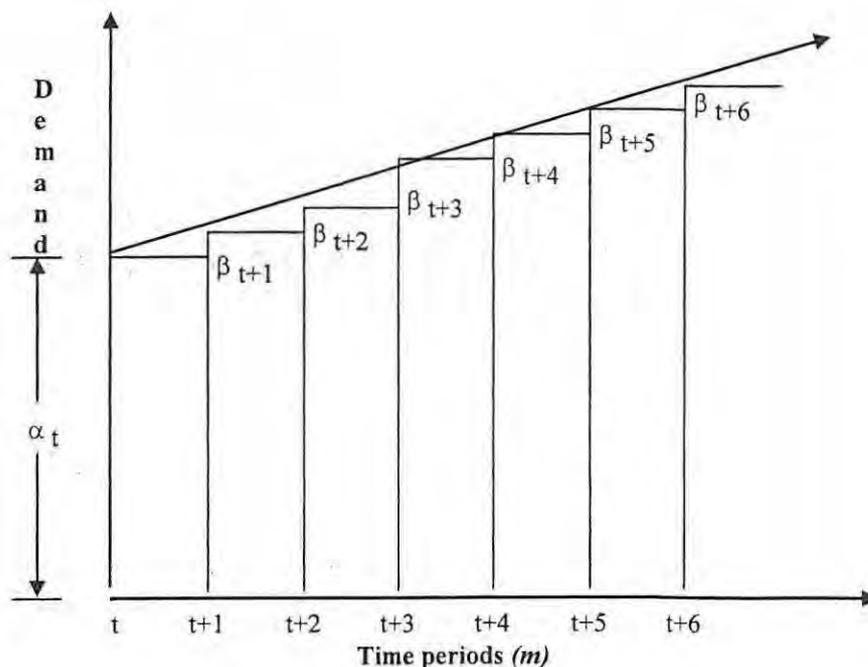
Figure 14.9 The level (α_t) and trend ($\beta+m$) components of Brown's double exponential smoothing

The updating equations for Brown's model are:

Single smoothing $\qquad S^1_t = \alpha X_t + (1 - \alpha)S^1_{t-1}$

Double smoothing $\qquad S^2_t = \alpha S^1_t + (1 - \alpha)S^2_{t-1}$

Level component $\qquad \alpha_t = S^1_t + (S^1_t - S^2_t) = 2S^1_t - S^2_t$

Trend component $\qquad \beta_t = \dfrac{\alpha}{1 - \alpha}(S^1_t - S^2_t)$

Forecast $\qquad F_{t+m} = \alpha_t + \beta_t m$ where m is a multiplier of the trend component i.e. the periods ahead to be forecast.

- *Winter's trend and seasonal model*

The exponential smoothing models discussed so far cannot deal with seasonal data. When seasonality does exist, these methods may perform poorly, because the seasonality will produce a systematic error pattern. Such a data series requires the use of a seasonal method to eliminate the systematic pattern in the errors. 'Winter's trend and seasonal model' is based on three smoothing equations – one for stationary series, one for trends and one for seasonality. The updating equations for this model are as follows:

Overall smoothing $\qquad S_t = \alpha \dfrac{X_t}{I_{t-L}} + (1 - \alpha)I_{t-L}$

Trend $\qquad Z_t = Y(S_t - S_{t-1}) + (1 - Y)(Z_{t-1})$

Seasonality $\qquad I_t = \beta \dfrac{X_t}{S_t} + (1 - \beta)I_{t-L}$

Forecast $\qquad F_{t+m} = (S_t + mZ_t)I_{(t-L+m)}$

where: L is the length of seasonality (e.g. the number of months or quarters in a year)
Z_t is the trend component
I_t is the seasonal adjustment factor
F_{t+m} is the forecast for m periods ahead
X, Y and β are the smoothing coefficients for overall smoothing, trend and seasonal components respectively.

Vignette 14.4

Using exponential smoothing and a tracking signal to monitor the commercial health of small firms.

Researchers at the University of Huddersfield in Yorkshire, UK and Macquarie University in Sydney, Australia have been experimenting with using short term forecasting methods in a rather unusual way. Many small firms fail in the important first five years from start up. Something goes

wrong but the management of small firms often fail to spot the problem before it is too late. What was needed was some form of early warning system to alert the managers of small firms that things are starting to go wrong. The idea was to feed various commercial parameters, such as sales, orders, profitability etc. into a semi automatic short term forecasting system. The system is run on a standard PC computer and utilises exponential smoothing forecasting techniques. A range of models are available for different input data patterns, including simple exponential smoothing, Holt's Method which can handle a linear trend and Winter's Model which can also deal with seasonality or cyclicality. The time series data are tracked by a signal itself computed from the forecasting errors. Tracking signal 'trip' limits are set within the system. When errors from forecasts are large enough to 'trip' the system and error message is generated which warns management that the situation needs investigating.

Such a system is widely used in process control situations and for stock control systems. However it is the first time such a system has been used to try and monitor the commercial health of small firms by monitoring a range of parameters. Early results look promising and the system might be of use to bank managers and other small firm advisors that need to monitor a large number of small firms simultaneously (*see Reynolds and Day 1994, 2000, and Reynolds, Day and Lancaster, 2001*).

14.5 *Summary*

Forecasting is the starting point for business planning, so if the forecast is incorrect then all strategic and tactical plans will be affected. It follows that the most important link is with marketing planning and control that is the theme of Chapter 17. Forecasting does, of course, impinge on other areas like marketing research, the subject of the Chapter 13, and this is an important forecasting tool when the product is new to the market.

ACTIVITIES

1   What are the advantages and disadvantages of the various qualitative forecasting methods available to a market researcher wishing to forecast sales up to one year ahead of current time?

2   'Good forecasting becomes a key factor in company success. Poor forecasting can lead to overly large inventories, costly price mark-downs, or lost sales due to being out of stock.' (Philip Kotler)

Critically evaluate the above statement, using examples to illustrate the points being made.

3   What is the difference between sales forecasting up to one year ahead of current time and the annual sales budget? Show how each contributes to the marketing planning and control process.

4   What advantages do exponential smoothing forecasting techniques have, if any, over the method of moving averages techniques?

5   List the type of decision making that involve either subjective or objective forecasts of future events or states.

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Are sales forecasters in small firms Bayesian?

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Proposal

Introduction

All individuals and purposeful organisations forecast or predict future conditions even if they do not actually call it forecasting or prediction. In businesses whether a sole trader, an SME or an established larger company it is not a question of whether to forecast or not but simply how to forecast and when. The nature of managerial decision-making involves forecasting future conditions which might be for an important 'one-off' decision e.g. the company may be considering modernising its production processes. Such decisions tend to be long-term and strategic, rather than operational. Managerial decisions are not always strategic and much of a manager's time is taken up with day-to-day operational issues, which although not of the same magnitude as strategic decisions, are nonetheless important to the manager because of the proportion of time they occupy.

Forecasting in small firms

Is there a sales forecasting model or process that might be particularly suitable for the decision makers in smaller firms? That is what the discussion in this paper seeks to examine and if possible, answer. All commercial enterprises need to forecast possible future conditions to be able to manage effectively. Small firms are no different in this respect. Evidence would suggest that a Bayesian approach to forecasting, particularly sales forecasting might be suitable for small firms because of the subjectivity allowed in the derivation of initial starting conditions. Bayesian statistical analysis is a paradigm quite different from traditional statistical inference.

The importance of the smaller firm

SMEs make an invaluable contribution to the wider economy including increasing competition, creating jobs, building effective networks, sharing knowledge and making a positive contribution towards social inclusion. The importance of small firms and entrepreneurship generally in achieving economic growth in contemporary economies is widely recognised both by policy makers and economists (Van Stel, Carree and Thurik (2005), Wennekers, Van Stel, Thurik and Reynolds (2005), Acs (2006), Acs and Armington (2006)), Audretsch, Keilbach and Lehmann (2006), Lundstrom and Stevenson (2005)). Small firms are big business: they contribute significantly to employment, turnover and the number of businesses in the UK.

In the UK as a whole, SMEs account for over half of employment (58.7 per cent). This is also true for each region and country in the UK except London, where SMEs only account for 47 per cent. For the South West, Wales and Northern Ireland, this figure exceeds 70 per cent. For each region and country in the UK, no more than 0.2 per cent of enterprises are large (250 or more employees), and at least 99.0 per cent of enterprises are small (0 to 49 employees). The proportions of enterprises that are medium-sized (50 to 249 employees) range from 0.5 per cent (in the East of England, South East and South West) to 0.8 per cent (in the North East and Northern Ireland) see DTI National Statistics URN 06/402 News Release 2006.

The importance of sales forecasting in small firms

Although forecasting is important in most functional areas of a firm, the forecasting of sales is particularly important (Sanders and Ritzman 2004). The sales forecast is the bedrock on which company plans are built and for this to be sound, the forecast must be built on a firm scientific foundation (Wacker and Lummus 2002). The central issue facing businesses is not *whether* to forecast, but *how* to forecast. The forecaster can choose 'subjective' or 'objective' methods or a mixture. The recognition of the importance of forecasting was first illustrated in the United States by Ledbetter and Cox (1977). They found that forecasting techniques were used by 88 per cent of the 500 largest US industrial companies. It was also established that no other class of planning techniques was used as much as forecasting.

The selection of the most suitable forecasting technique depends on the availability of existing data and/or company's ability to acquire such. For example, a technique requiring a long historical time series would be of little use if data was only available for the past year (Conejo et al 2005). If data accuracy or validity were questionable, it would hardly be worthwhile, or cost-effective, to spend time and effort using a sophisticated technique known for its precision (Jobber and Lancaster 2003). In forecasting, the principle of 'garbage in/garbage out' applies; a forecast will only be as good as the data used in its compilation. The availability of appropriate data is of central importance to the development of any forecasting system. Obviously dependent upon the degree of accuracy required, most forecasting techniques require a considerable amount of data collection and processing (Zareipour, et al 2006).

The management of all firms – and SMEs are no exception- are involved in making decisions about the future *but* in the present. In a sense that is what the job of management is really all about, at least at the more strategic level. The act of preparing for the future whether in business or any other area of our lives implies forecasting, consciously or subconsciously, of tomorrow's condition. In our personal lives, such predictions are usually made on an informal, subjective basis. If they turn out to be wrong, we can usually adjust our personal circumstances. However, we rarely enjoy the same degree of flexibility in our working lives, particularly if we are an SME owner manager. Managerial decisions are usually of a more formal nature and of greater consequence. The very nature of such decision-making involves forecasting future conditions (Lawrence and O'Connor 2000). It is not a question of whether managers should forecast or not but merely how are they to do it? Small firms are often considered to lack formal marketing skills (Carson, Cromie, McGowan and Hill 1995) and project management skills (Murphy and Ledwith 2007), however sales forecasting is fundamental to management's ability to plan, budget and control (Lawrence et al 2000). They are the bedrock of all other management forecasts since they are dependent upon an accurate sales forecast (Mentzer et al 2002). These forecasts then form the basis of budgetary control systems (Mentzer and Moon 2005).

Managerial decisions are not always strategic and much of a busy manager's time is taken up with day-to-day operational issues which, although not of the same magnitude as strategic

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decisions, are nonetheless important to the manager because of the proportion of their time that they occupy. Management requires forecasting information to assist them in making operational decisions, although the required time horizon for such forecasts is shorter than for strategic decisions. For example, for the marketing manager to set monthly sales targets, operational expense or advertising budgets, they may require regular short-term forecasts for each product, broken down according to product type, size, colour, salesperson's territory, channel of distribution and even by individual customer. Whatever type of decision is being made, forecasting is required. Forecasting can make a contribution to the successful management of the small enterprise, whereas poor forecasting can lead to high inventories and associated stockholding costs which must be paid for out of working capital, or under-production and unrealised market potential (Stanton, Etzel and Walker 1999).

Crisis points in small firms

All firms, of whatever size, need to make predictions or forecasts about future conditions (Tkacz 2001). The term 'prediction' is often reserved for subjective 'qualitatively' based forecasts, for example: the sales force composite technique. Whereas the term 'forecasting' is often used for objective 'quantitatively' based forecasting procedures e.g. moving averages, exponential smoothing, regression etc. Bayesian forecasting is a mixture of the two and involves both objective and subjective forecasting elements.

Forecasts may be required for an important 'one-off' decision such as when a business may be considering expanding by acquisition, diversifying into a totally new market or modernising its production processes. Such decisions tend to be long-term and strategic, rather than operational. In such situations, because of the importance of the decisions being made, it is important that forecasting receives careful consideration, meaning an investment of time and money in the forecasting process. However many of the decisions the small firms managers have to make are more routine tactical or operational. As Bischoff, Belay and Kang (2000) state:

"The choice is not a trivial one--for at least twenty years leading economists and econometricians in *business*, government and academia have argued both sides of this issue. It is important because no *business* decision-maker can avoid making forecasts. Decisions about stocks of raw materials, goods in process and finished goods, among other things, must be based on forecasts. The advent of the Internet does not change this necessity: at best the process is speeded up" (p. 12).

The need for an adequate and appropriate sales forecasting framework can be linked to the literature on growth and life cycle models related to small firms (Scott and Bruce 1987; Greiner 1972; Hanks et al. 1994; Cope, 2003). Scott and Bruce (1987) argue that a small business develops by moving through five growth stages, each with their own characteristics. Because the transition from one stage to the next requires change, it is accompanied by some crisis or another. Crises tend to be disruptive and problems of change can be minimised if managers are proactive rather than reactive (Steinmetz 1969, Deakins and Freel 1998). Thus crucially, sales forecasting may help them in this respect. Prior knowledge of what generates crises and of what to expect in each stage will smooth the process of change and may improve their chance of adequately dealing with the crisis and hence survival (Dodge and Robbins 1992; Garud and Van de Ven 1992). Scott and Bruce (1987) claim that they have tested the model and that it is robust enough for them to be able to generalise across all small firms. Albeit that organisations move along the curve at different speeds and the spacing of crises are likely to differ between firms and industries. Indeed, the original authors were themselves aware of these limitations and argue that what they provided was:

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"A diagnostic tool to assist in analysing a firm's present situation. It is also meant to be an indicator of what strategies appear suitable at various stages in an organisation's growth. It is, however, only a tool and cannot make the decisions for management. They must rely on their judgment for that. Hopefully that model will add to their information and thus enable them to make better judgments." (Scott and Bruce, 1987:48). As indeed would the adoption of Bayesian forecasting that both exploits and plays up to the exercise of informed judgement.

Bayesian decision theory

Probability theory studies the possible outcomes of given events together with their relative likelihoods and distributions. In fact there is considerable debate about exactly what probability means in practice. Some mathematicians regard it as simply a component of abstract theory, while others give it an interpretation based on the frequencies of certain outcomes (Quintana and Amer 1998). However the Bayesian approach is a mixture of both subjectively derived probabilities and mathematically derived likelihoods (Gómez-Villegas, Maín, and Sanz, 2002). This technique is named after Reverend Thomas Bayes (1702 to 1761), a statistician. A fully detailed historical account of Bayes can be found in Buck and Sahu, (2000); Singh and Provan, (1996); Lin, Mayers and Ye (2000) and in the very informative St Andrews University site, (2003). Bayes's original account is freely available (see: Bayes 1736, 1764).

However some account of Bayes and his early work is of enough specific interest to the topic of this paper to discuss below. Bayes set out his theory of probability in 'Essay towards solving a problem in the doctrine of chances published in the Philosophical Transactions' of the Royal Society of London in 1764. The paper was sent to the Royal Society by Richard Price, a friend of Bayes, who wrote:-

"I now send you an essay which I have found among the papers of our deceased friend Mr Bayes, and which, in my opinion, has great merit... In an introduction which he has writ to this Essay, he says, that his design at first in thinking on the subject of it was, to find out a method by which we might judge concerning the probability that an event has to happen, in given circumstances, upon supposition that we know nothing concerning it but that, under the same circumstances, it has happened a certain number of times, and failed a certain other number of times" (see Condorcet, 1785, Boole, 1854 and St Andrews University WWW site, 2003)

Despite the fact that Bayesian Decision theory was developed in the 18th century, it has only recently been widely adopted (Buck, 2001). The method incorporates the firm's guesses at data inputs for the statistical calculation of sales forecasts. It uses network diagrams showing the probable outcome of each decision alternative considered. These are shown together with expected values and associated probabilities, initially derived on a subjective basis (see Smith and Faria, 2000) Bayesian statistical forecasting, like all Bayesian statistics is based on two basic concepts. First, uncertainty about unknown quantities is expressed using the language of subjective probability, and, given new information or data, probabilities are updated using Bayes rule or procedure (Ghosh and Ramamoorthi 2003, Quintana, 2006).

Many statisticians and forecasters believe that Bayesian inferential methods have advantages over classical statistical procedures for a wide range of inferential problems mainly because the initial stating probabilities are arrived at subjectively thus opening up the potential of statistical inference, including sales forecasting applications, to a much wider range of problems, particularly those sorts of problems often found in marketing (Albert, 1996, also see the reference for the International Journal of Clothing Science and Technology report 2003 (anonymous)). One of the problems of using probabilities in a statistical model is in ascertaining initial probabilities

to commence the forecasting process (Bolfarine, et al, 2005). Bayesian statisticians differ from 'purist' statisticians in the respect that 'purists' view the concept of probability as the relative frequency with which an event might occur (Iglesias, et al, 2004). The Bayesian view is that probability is a measure of our belief and that we can always express our degree of belief in terms of probability (Buck et al 1996). Although the initial probabilities are derived subjectively (the figures are based on judgmental opinion, rather than on objective calculation) proponents of Bayesian theory believe that such probabilities are perfectly valid and hence perfectly acceptable as initial starting points in an extensive quantitative forecasting process (Müller et al 2005). It is this subjective nature of arriving at the initial probabilities that makes the Bayesian approach useful in solving business problems for which initial probabilities are often unknown and are difficult or impossible to calculate using objective methods (Faria and Smith, 1997a, Finucane et al 2003, Gaglio and Katz, 2001).

To use the Bayesian approach, the decision-maker must be able to assign a probability to each specific event (Pole et al, 1994). The sum of the probabilities of all such events considered must be unity (one). These probabilities represent the magnitude of the decision maker's belief that a particular event will take place (Faria and Souza, 1995; Faria and Smith, 1997b). In business situations such decisions should be delegated to personnel who have the knowledge and experience to assign valid initial subjective probabilities to the occurrences of various business events. These initial probabilities are based on previous experience of information (such as published secondary data or simply the manager's own subjective judgement based on experience) acquired prior to the decision-making process. For this reason, the initial subjective probabilities are referred to as 'prior probabilities' (West and Harrison, 1997).

When making business decisions, the financial implications of actions must be taken into account. For example, when a manager is considering investing a firm's surplus cash, they must consider the probability of making a profit (or loss) under different economic scenarios and also assess the probability of such scenarios or events occurring (Pole et al., 1994). Applying Bayesian decision theory involves selecting an option and having a reasonable idea of the economic consequences of choosing a particular course of action. Once the relevant future events have been identified, the decision-maker assigns prior subjective probabilities to them (West and Harrison, 1997; Huerta and West, 1999). The expected pay-off for each act is then computed and the act with the most attractive pay-off is then chosen. If pay-offs represent income or profit, the decision-maker usually chooses the act with the highest expected pay-off (Lopes et al., 2003; Singh and Valtorta, 1995).

Methodology

The author has used a quantitative exploratory approach. Mini depth interviews have been conducted with 15 managers/ owners of small firms in the Huddersfield region of West Yorkshire, UK. Interviewees were asked how they predicted future market conditions and in particular future sales conditions. Sampling for the interviews was non-probability and exploratory based on purposeful sampling i.e. those that were prepared to offer an opinion. Other areas of decision making were also discussed for example planning and planning methods. However only the results relevant to predicting future market conditions are presented here. A survey of small firms has also been conducted but the processing of the data is not yet complete. This is a draft paper and the survey findings may be included in the final paper for inclusion in the proceedings.

Sample of results qualitative interviews

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"We use past sales data and look at the level of customer enquiries compared to last year" – Small hotel and restaurant business (24 employees)

"We use charts and averages to work out trends but also use our own experience for the business" – Distribution Company (45 employees)

"We do not do any forecasting" – Hairdressing Company (13 employees)

"We are a franchise so all of that is done for us" – Retail Footwear Company (10 employees)

"We use our own 'feel' for the market and past data" – Contract Cleaning small firm (30 employees)

"We know the market and we know what our competitors are doing" – Construction Company (12 employees)

"We know when the market turns before official forecasts and publications although we look at these as well"- (Software Company 18 employees)

"We have an instinctive understanding of the way the market is going but also look at industry publications such as Campaign" – Marketing and PR Company (10 employees)

"I have been in business more years than I remember and I can feel the changes and other people in our business are always talking about business conditions" – Timber and Joinery Company (10 employees)

"We just know!" – Transport Company (12 employees)

"We get wind of changes from our enquiries and from what our suppliers and customers are saying to use" –Engineering Company (12 employees)

The interviewees from the other four firms had difficulty answering this question so it assumed that they did not conduct sales forecasting or predict market conditions. It may be that a different member of staff might have given a different response, for example an owner rather than a manager.

Conclusions

This is an exploratory study based on a limited number of mini depth interviews and does not claim to be conclusive. A further survey has been conducted but the results are not as yet ready for this paper. These additional results may form part of the final paper. The Bayesian approach to learning is based on the subjective interpretation of probability. This is a different way of thinking about probability. The empirical evidence presented in this paper would suggest that many owners / managers responsible for sales forecasting in smaller enterprises exhibit Bayesian tendencies. Evidence suggest that whilst some of the managers/ owners interviewed do use some form of quantitatively based model, albeit rather simplistic ones, many of them arrive at the starting values for such 'models' by purely subjective means largely based on intuition and experience. This might be considered a typically Bayesian trait. It is not only in the area of sales forecasting that the owners and entrepreneurs in small firms use subjective probabilities. Evidence from the author's research would suggest that such entrepreneurial managers and / or owners are predominantly 'Bayesian' in their thinking and reasoning patterns in general across a

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range of decision making areas where they need to understand the probability of risk or of a specific event occurring e.g. planning. This may form the basis of another paper. In fact it would be fair to say that evidence might suggest that entrepreneurs generally tend to be Bayesian in their thinking patterns. It might be that Bayesian thinking is an additional 'trait' to add to the entrepreneur's repertoire of traits. Could it be that one of the distinguishing features of an entrepreneur is this tendency to think in a Bayesian fashion in a number of business decision making settings, particularly sales forecasting situations?

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COMMERCIAL HEALTH MONITORING OF ENTREPRENEURIAL FIRMS USING PROCESS CONTROL TECHNIQUES

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The work of Scott, Bruce and Cooper on small firm growth and development is reviewed. It is shown that by adapting exponential smoothing forecasting procedures it is possible to monitor the commercial health of a small firm. This is achieved by 'tracking' key indicators and producing an exception message when a signal exceeds certain predetermined control limits. The procedure is equally effective for either a step or ramp change in the underlying input data. This suggested approach requires little sophistication in either data or technique and has a practical application to small firm management, while adding to our understanding of the process of growth of small businesses.

INTRODUCTION

The objective of this paper is to demonstrate that the Scott and Bruce (1987) and Cooper (1981) schema are possible and worthwhile frameworks from which to investigate the behaviour of small businesses and to suggest that one avenue for development is a robust and simple forecasting method containing a tracking signal that is designed to monitor and 'trip' when the variable(s) being forecast fall(s) outside desirable, pre-set parameters. Such a method would be of value to the entrepreneurs themselves, their advisers and lenders. Although small businesses could use the method as a simple forecasting and monitoring procedure, greater potential benefit would arise if academics, bankers and consultants who need to monitor several dozen, perhaps hundreds, of businesses used the proposed technique to manage 'by exception'. The various methods, five simulated and one actual case study are reported.

We have previously discussed work by Scott and Bruce (1987) and Cooper (1981) which reviews the 'growth life cycle' of small businesses as they start up, survive and mature into larger companies. If businesses choose to, and are competent, they are hypothesized to develop through five stages, each separated by a crisis band which the firm must overcome. Competent firms may make a decision to halt this growth process when they have reached their preferred size, whereas less competent firms may find their growth plans thwarted or even be forced to leave the industry. The five stages are: pre-start-up, inception, survival, growth and consolidation. Three areas of interest are: (i) the part that entrepreneurial ability plays in ensuring success
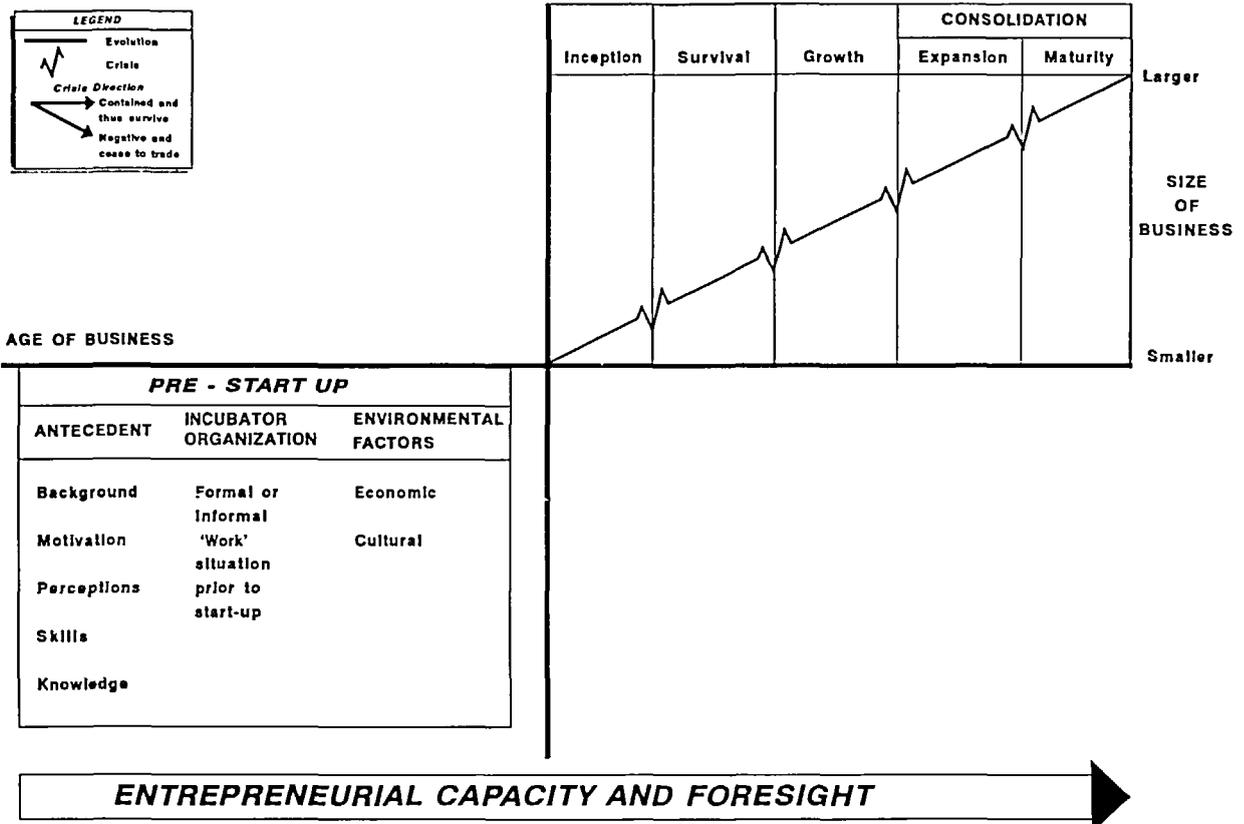
Figure 1. The modified Scott/Bruce/Cooper schema. Based on Scott and Bruce (1987); note that Scott and Bruce (1987) draw heavily on Churchill and Lewis (1983) and Greiner (1972). Birley (1989) uses Cooper (1981) in her article on female entrepeneurs. Although Scott and Bruce (1987) use a non-linear curve, we have chosen the linear version (Greiner, 1972). The last two phases are united under consolidation. We have emphasized the entrepenurial capacity and foresight variable.

and, in particular, growth; (ii) whether firms do go through these crisis periods; and (iii) the possibility that the schema can be operationalized and, if so, what are the benefits of so doing.

With respect to the last four stages of the model, Scott and Bruce, although suggesting that the growth curve could be logistic, concentrated on comparing and contrasting the different organizational, commercial and management skills needed to address successfully each phase and the connecting crisis points. To elaborate, at the inception stage typical problems are the management of cash flow, creating viable profit levels and meeting conflicting demands on the entrepreneur's time. In contrast, at the growth stage, issues such as the formal structure of the company, competitive pressures and long-term strategy setting will take precedent. As such, the work provides an excellent schema which would be useful to consultants, bank managers, small business owners and academics to suggest the broad problem areas that small firms face. Figure 1 outlines the model.

However, it could be argued that there might be academic and practical gains to be realized if the

model could be treated in a more quantitative fashion. Reynolds and Day (1993) have suggested, with particular reference to the UK timber and joinery industry, that the general notion of crisis points is valid, and that identifying them via primary and secondary data is possible. In this paper we are concerned with whether the tracking signal trips in a sensible and predictable way, rather than what would constitute good and appropriate data. Hence we have use secondary data on turnover, but realize that in practice leading rather than trailing indicators are needed.

By attempting to operationalize the model, rather than leaving it as a more general schema, we might be able to produce a means by which to predict the future performance of firms, or at the very least provide continuous monitoring of performance. For such a model to be of use it needs to be accurate, simple to understand and to economize on the use of data, particularly if entrepreneurs themselves are to use the system. Furthermore, it should ideally be indifferent to whatever data series is used. Although this paper limits itself to turnover, in practice the firm could monitor present and

expected performance via a whole series of variables such as customer enquires, actual output and so on. One forecasting technique that would meet these criteria is exponential smoothing and, as the associated monitoring and control procedure, Trigg's (1964) smoothed error tracking signal, developed further by Trigg and Leach (1967).

FORECASTING PROCEDURE

Exponential smoothing has replaced moving averages as the predominant method used in objective short-term forecasting, not necessarily because the techniques produce better results (although a number of studies claim that they do, e.g. Kay and Hampton, 1963; Gross and Ray, 1965; Levine, 1967; Montgomery and Johnson, 1976; Makridakis and Hibon, 1979), but because they are computationally simpler as they require less data to be stored and are more flexible in their degree of sensitivity (Lewis, 1978: 53). One of the main strengths of exponential smoothing is that it is a quantitative, or objective, method of forecasting. Published evidence strongly suggests that quantitative techniques are generally superior in terms of accuracy to qualitative methods (Sarbin, 1943; Sawyer, 1966; Goldberg, 1970; Slovic, 1972; Hogarth, 1975; Mabert, 1975). The second strength of exponential smoothing, particularly as a method of short-term sales forecasting (which we define here as six months ahead of current time, which is the generally accepted definition of in the forecasting literature), is that it is a time series technique. Evidence suggests that in short-term sales forecasting, time series methods perform as well or even better in terms of accuracy than the more complicated causal techniques (Narashimham, 1975: 409–464). For example, in comparing moving averages, exponential smoothing and regression, Kirby (1966) found that in month to month forecasting accuracy, exponential smoothing performed the best. With a time horizon of six months (e.g. producing a sales forecast up to six months ahead of current time), both exponential smoothing and moving averages performed better than regression, which was considered more appropriate for longer term forecasts of one year or more (Kirby, 1966: 202).

Other studies by Bauman (1965), Geurts and Ibrahim (1975) and Newbould (1974) have concluded that simpler methods such as exponential smoothing perform as well or better in terms of accuracy than more sophisticated models. When time series methods themselves are compared, again evidence suggests that the simpler techniques such as exponential smoothing perform as well or better than the more complex techniques

such as Box–Jenkins. In a study comparing Box–Jenkins methods with exponential smoothing, Geurts and Ibrahim (1975: 187) concluded that the forecasting errors of both methods were more or less the same, although all exponential smoothing models, e.g. Winter's method, yielded smaller average errors than the Box–Jenkins models. In a study involving the use of 111 time series for determining the accuracy of various time series methods, Makridakis and Ebony (1979) stated that their results indicated that the far more sophisticated Box–Jenkins models were actually inferior to forecasts made using exponential smoothing.

When considering short-term sales forecasting specifically, several workers have reported that exponential smoothing offers the best potential accuracy for sales forecasting in the short term (Gross and Ray, 1965; Kirby, 1966; Levine, 1967; Raine, 1971). Interestingly, the study by Witt and Witt (1992) on modelling and forecasting demand in tourism concludes that their two best predictors of demand were either a naive model based on a 'no change' scenario or, for longer ahead (two years), an autoregressive model taking into account previous demand levels. Both of these performed better than the more complicated econometric models.

The properties of exponential smoothing make the technique a suitable method for short-term sales forecasting when a large number of routine short-term forecasts are required on a regular basis for example, when a bank manager or small firm business adviser has a large portfolio of firms under their responsibility. Because the technique is adaptive, in the sense that the current forecasting errors are used to update the model and the technique requires relatively little storage, exponential smoothing is a particularly appropriate technique when used as part of a semi-automatic computerized system of short-term sales forecasting. With such a system, the routine sales forecasting or, indeed, the forecasting of any selected key indicator of business performance, can mainly be left to a computer, leaving the bank manager or small business consultant to get on with more important and more interesting none-routine problems that necessitate human involvement. However, in such a situation a control mechanism is required to check that the forecasts are satisfactory and to warn management if the system goes out of control.

TRACKING SIGNAL

There are many kinds of monitoring procedures available and reported for example, 'control charts', originally developed by Shewhart (1931) and

subsequently modified by numerous workers (Dudding and Jennet, 1942; Page, 1954; 1955; 1957; Duncan, 1956; Lorden, 1971; Gilchrist, 1976). Work on control charts in the 1930s, 1940s and 1950s evolved to produce the backward cumulative sum technique.

The first tracking signal designed specifically for forecast control was proposed by Brown (1962), defined as the sum of forecast errors divided by the mean absolute deviation (MAD). This procedure is known as the simple CUSUM technique (not to be confused with backward CUSUM). The smoothed error tracking signal, the procedure demonstrated here, was developed by Trigg (1964), based on the earlier work of Brown (1962). It is not so much a new method as a modification of the simple CUSUM; consequently, the basic idea of Brown is retained. The only real difference in Trigg's method is that he uses a 'smoothed error' in the numerator of the tracking signal instead of the sum of errors. In the simple CUSUM Brown applied exponential smoothing to the modulus of the error to produce a smoothed MAD, and the sum of errors was calculated by summing the plus and minus values of successive errors. Trigg retains the smoothing of MAD using exactly the same equation as Brown, but, in addition, applies simple exponential smoothing to the plus and minus errors to produce a smoothed error as the numerator of the tracking signal instead of the sum of errors. The updating equations for the smoothed error tracking signal are explained and discussed in Appendix 1.

TRACKING SIGNAL CONTROL LIMITS

It is important that management should have a high degree of confidence in their forecasts if they are to undertake effective decision-making. Management need to know as soon as possible when a forecast has gone 'out of control' to avoid the mistake of basing important decisions on poor information and to carry out corrective action. As Golder and Settle (1976: 489) state: 'A necessary ingredient of a practical short term forecasting system in which the parameters of the demand model are not adaptive, is some form of monitoring to detect changes in the demand pattern for which the model is inadequate.'

The term 'adaptive' in the above statement is meant in terms of a model such as the Trigg and Leach (1967) adaptive response rate model.

One of the authors has produced tables of confidence limits for use with the smoothed error tracking signal for each of the main exponential smoothing models, i.e. simple, Brown's method, Holt's method and Winter's method. The advantage of these tables is that they impart greater accuracy to the technique because they allow a greater permutation of smoothing coefficient values. In essence, the coefficient for the forecasting equations can now be different to the coefficient used in the tracking signal equation and it is this flexibility that allows for potentially greater accuracy.

The first published report of a study using different values of smoothing coefficients in the forecasting equations to that used in the tracking signal equation ($\alpha > \alpha_1$, or $\alpha < \alpha_1$) is in a paper by McKenzie (1978). The idea of using different smoothing coefficients is not discussed by Trigg (1964) and other major workers in this area such as Batty (1969: 321) and Gardner (1983: 11) merely comment that there is no obvious argument in favour of doing so. However, McKenzie (1978) shows that the performance of the smoothed error tracking signal (T_t) may be significantly improved by such a simple alteration in its application.

This technique has been applied to four case study companies in the authors' local economy. The data were obtained from secondary published sources. Selection was based on companies with a turnover of less than £2m per annum who were employing less than 50 people and were not a subsidiary of another company. Finally, selection required that they had shown some variation in their financial performance over the last 10 years, as indicated by their ICC score (a composite score of financial soundness).

The results obtained from using exponential smoothing forecasting techniques to extrapolate patterns in the data, and the monitoring of such forecasts using the Trigg model to detect evidence of crisis points occurring in advance of them becoming serious, look promising at present and appear to be robust and suitable for a range of data patterns, including data showing seasonality. To illustrate the case succinctly, we have reported only one of the actual case studies as Figure 2 and this demonstrates very well how difficult it is to identify unusual changes in the underlying data by merely looking at a plot of the data. The other examples shown (Figures 3–7) use simulated data which has been designed to reduce the sort of random fluctuations around the level often found in real historical sales data. This does not mean that the procedure is not robust for real data, merely that it is easier to explain the effects of the procedure when some of the 'natural' fluctuations have been removed.

METHODOLOGY USED TO OBTAIN CONTROL LIMITS

Cumulative frequency tables were produced for the

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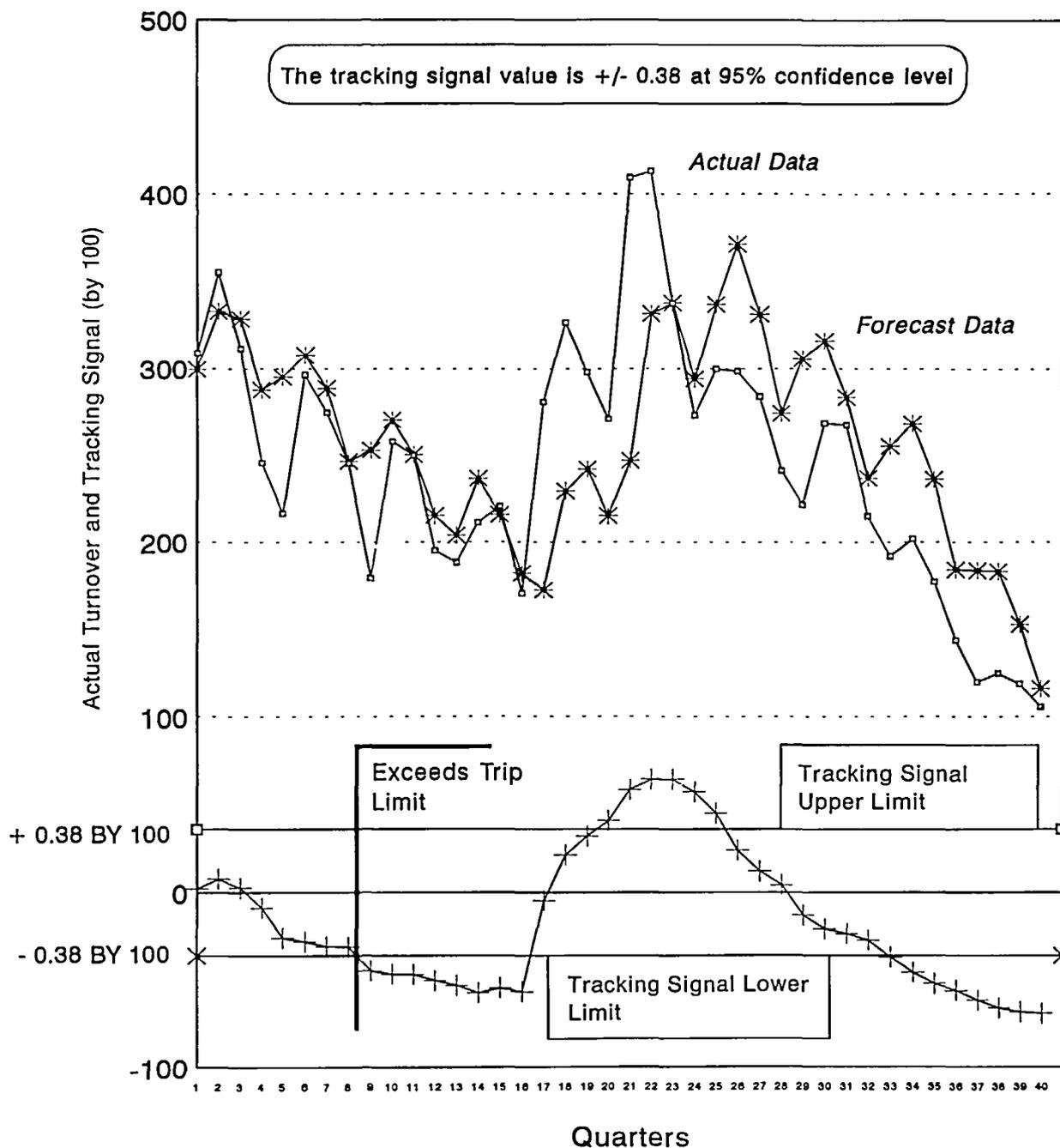
Figure 2. Actual data. Company A, 1983–1993; Winter's model.

smooth error tracking signal using 'well-behaved' data by simulation. Tables were produced using the forecasting models of simple exponential smoothing, Holt's two-parameter linear exponential smoothing and Winter's seasonal method. Many possible permutations of smoothing coefficient values were used for level component, trend component, seasonal index (for Winter's model) and tracking signal. These tables were able to serve as 'tracking signal confident limit tables' that is, smoothed error tracking signal values from 'real'

forecasting runs were compared with the theoretical, simulated values in the tables. If the value of the smoothed error tracking signal (T_t) in the forecast procedure exceeds the value given in the table (the modulus of T_t is shown in the tables) for a given permutation of the relevant smoothing coefficient values, then the tracking signal T_t would be said to have 'tripped' at a certain level of confidence, i.e. 95% level, 99% level, etc.

The tracking signal 'critical value' produced using this simulation exercise agrees with the

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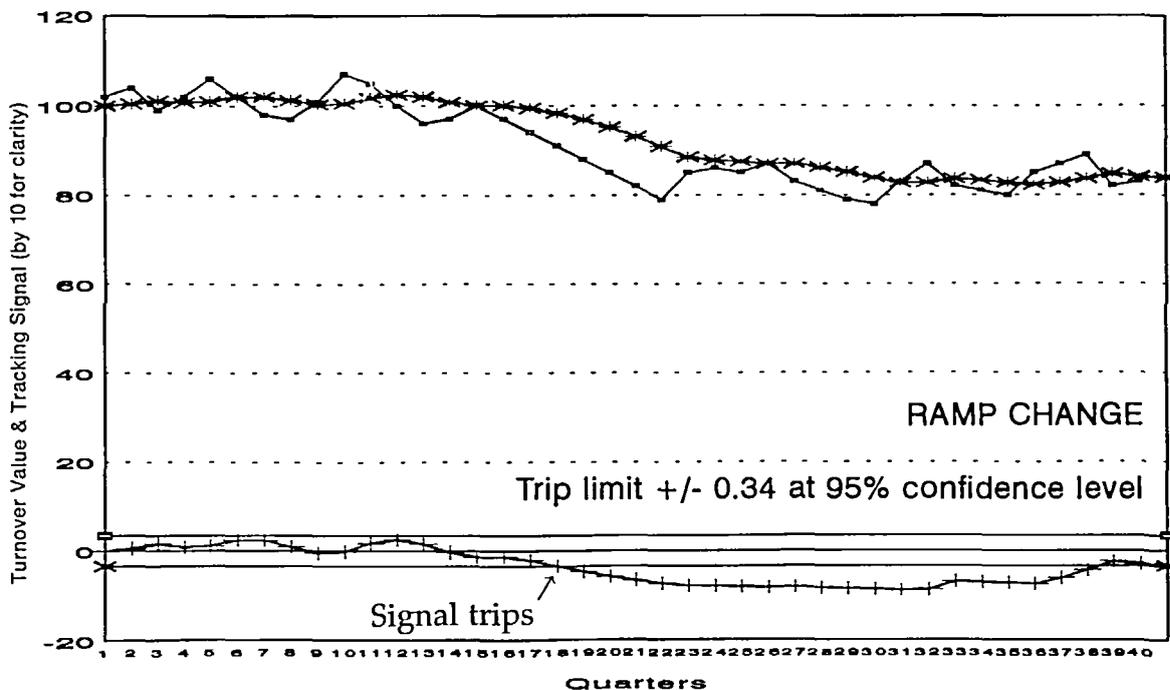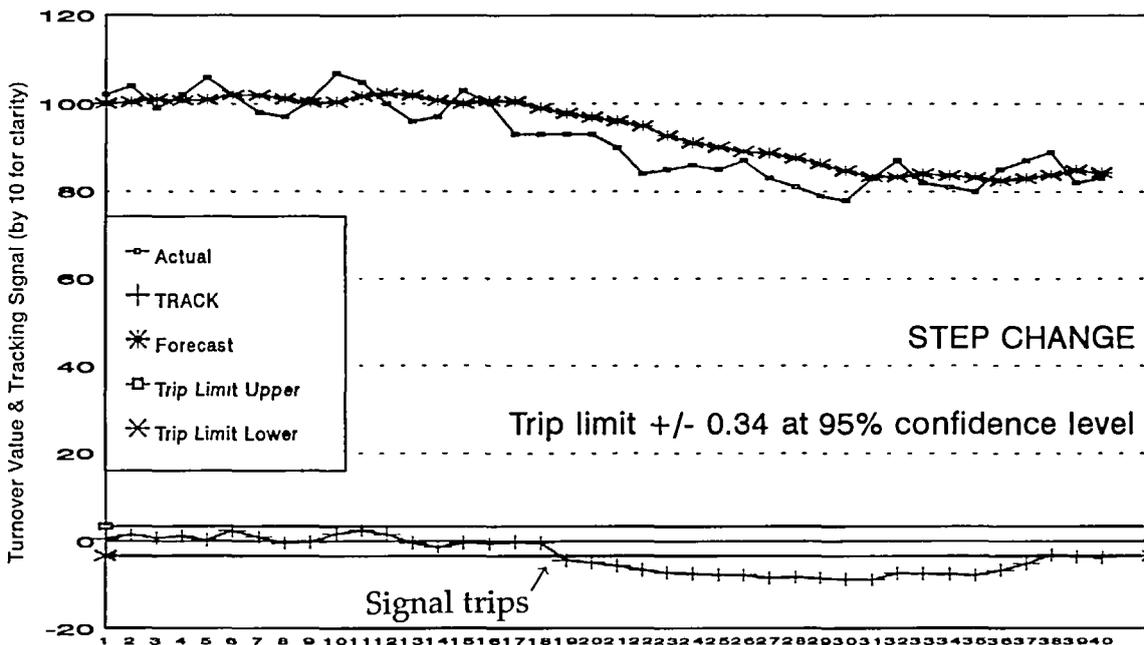
Figure 3. Simulated data. Simple exponential model; step changes.
Figure 4. Simulated data. Simple exponential model; ramp changes.

limited range of values reported by Trigg (1964), Batty (1969) and Gardner (1983) for simple exponential smoothing and with the theoretical values produced from equations derived by McKenzie (1978) for Holt's two-parameter model of linear exponential smoothing. Critical values were produced for Winter's seasonal model, although there is nothing published about either of a theoretical or empirical nature for Winter's model to compare these critical values with. A detailed account of this methodology is reported by Reynolds (1986) and discussed by Reynolds and Greatorex (1988).

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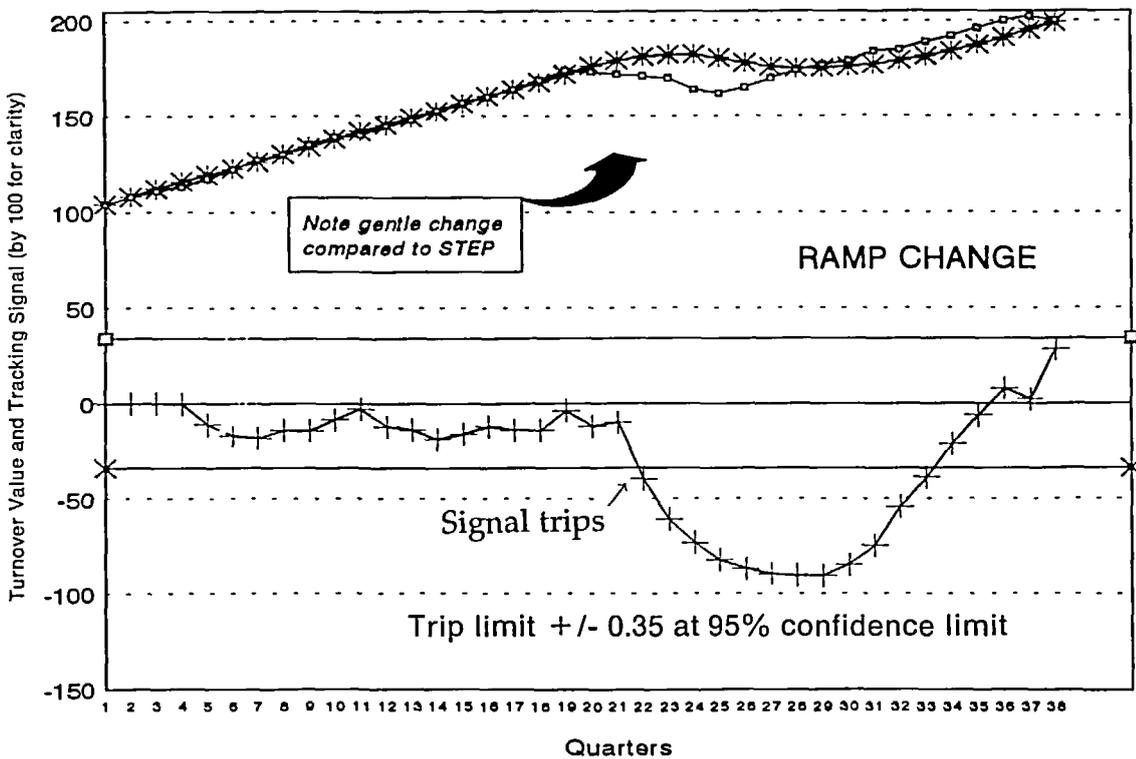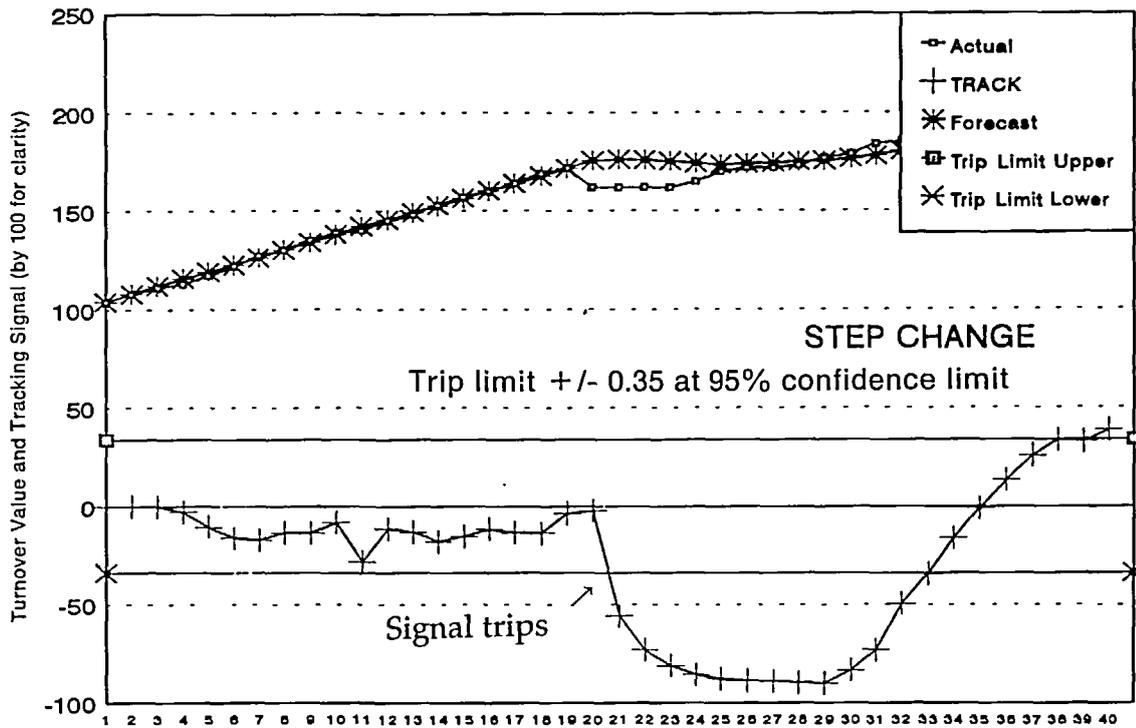
Figure 5. Simulated data. Holt's model: ramp changes.
Figure 6. Simulated data. Holt's model; step changes
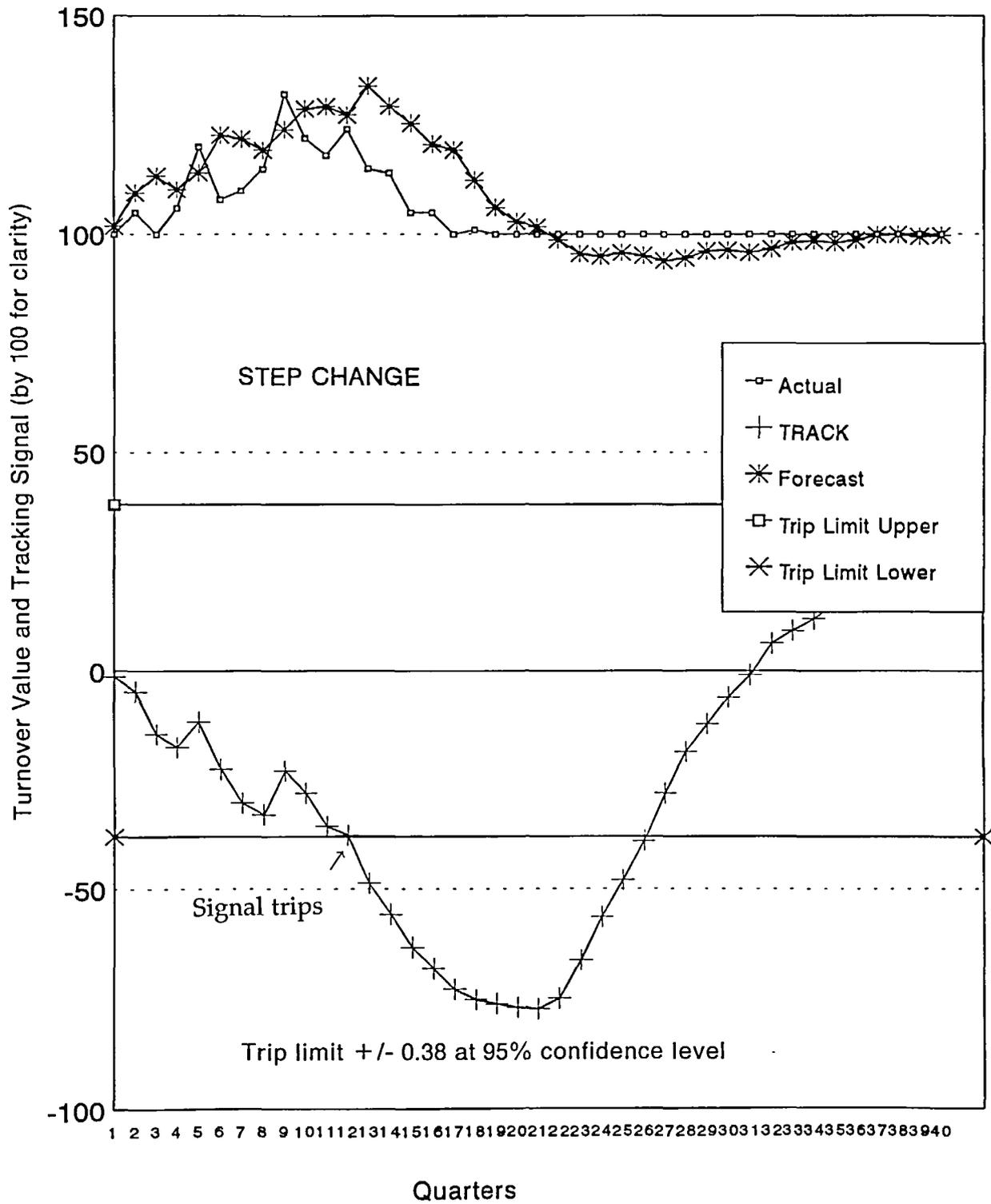
Figure 7. Simulated data. Winter's model; step changes.

METHODOLOGY USED TO DEMONSTRATE TRACKING SIGNALS REACTION TO A STEP OR RAMP CHANGE IN THE MEAN INPUT DATA

Standard forecasting models (those of Holt, Winter and simple exponential smoothing) were used to test the ability of the tracking signal to monitor step and ramp changes (shocks) in underlying input data for both simulated time series and real-time series obtained from small firms; the actual programmes incorporating the tracking signal were designed by Greatorex of Manchester School of Management, UMIST, UK and are used with his kind permission. Such a procedure can be designed to run on a standard spreadsheet, whereas a package such as SPSS-PC can be used to select initial best-fit scenarios. These forecasting and tracking signal programmes, in conjunction with the tables of tracking signal 'critical values' discussed earlier, were then used to test the reaction of T_t to step or ramp shock in both simulated and real-time series data for small firms.

DISCUSSION

Three desirable characteristics of a successful smoothed error tracking signal (T_t) are that it responds to data changes, is sensitive to the degree of change, ramp or step, and, finally, that it is indifferent to which of the three forecasting methods is used. The tracking signal performance is encouraging for all three models – that is, the simple exponential smoothing model which forecasts stationary data, Holt's two-parameter linear exponential smoothing model which is used where data exhibit a negative or positive linear trend and Winter's model which is used where there is a seasonal component over and above either a stationary or trend data pattern.

When the underlying input data were subject to a step change of approximately 5% of the mean level where the underlying mean level of the data was stationary or displaying a linear trend (i.e. using simple exponential smoothing or Holt's linear trend method of forecasting, respectively), the tracking signal 'tripped' within one time period of the introduction of the step 'shock'. Subjecting the underlying data to a 'ramp' change of approximately 2% in the underlying mean input data, the tracking signal 'tripped' within two time periods, usually within one time period. When data displaying clear seasonality every fourth period and being forecast using Winter's model was subjected to a 5–8% step 'shock' in the input data,

the tracking signal 'tripped' its predetermined control limits within two time periods. When real small firm data showing a ramp change in the underlying data were used, again the method proved to be highly robust and 'tripped' within two time periods.

Thus, in principle, the idea of monitoring the commercial health of small, entrepreneurial firms using some form of monitoring device or 'tracking signal' seems to work very well for a reasonably wide range of situations. The fact that this method was found to be suitable for use with Winter's seasonal model of exponential smoothing is encouraging, as the demand for many goods and services supplied by small firms is subject to seasonality. As discussed earlier, there are other monitoring devices available and reported; the majority of these procedures have been designed as process control techniques for use in production and stock control systems. Thus it would be interesting to see how they perform relative to the Trigg procedure.

Our evidence suggests that using the smoothed error tracking signal as the Trigg methodology is particularly useful when a large number of time series require monitoring on a regular basis, e.g. every week or every month – that is to say, short-term forecasting. A bank manager or other small business adviser may have tens or even hundreds of small firms under his or her care, or at least have the responsibility for monitoring their performance. It has been shown here that the properties of exponential smoothing make the technique a suitable method of forecasting when a large number of routine short-term forecasts are required on an on-going regular basis.

Because this technique is adaptive, in the sense that the current forecasting errors are used to update the model and the fact that the technique requires relatively little data storage, exponential smoothing is a particularly appropriate technique when used as part of a semi-automatic computerized system of short-term forecasting, coupled with the Trigg procedure to warn of changes in the input data which might indicate future problems. There is no reason why the individual firm could not use the method to monitor its performance. With such a system, the routine sales forecasting or the forecasting of any key leading indicator can mainly be left to a computer, leaving the manager to get on with more important and interesting problems.

In a wider perspective, the procedure provides a mechanism to allow those people concerned with small firm commercial 'health' and performance to identify when 'crisis points' are beginning to occur and hence enable them to intervene and to carry out corrective measures before the situation becomes too serious.

CONCLUSIONS

This paper is intended to encourage further consideration of the usefulness and validity of a particular class of growth models as represented by the work of Scott and Bruce, Churchill and Lewis and Cooper. We have demonstrated a robust and relatively simple monitoring procedure for small firm performance that is of use to the firm itself and to third-party advisers and consultants.

Our suggested method of doing this is to make use of the one period ahead forecast error generated by an exponential smoothing forecasting system coupled with a monitoring procedure in the form of the smoothed error tracking signal. This is a suitable and highly robust procedure which can handle those data patterns commonly found in commercial data, namely, stationarity, a positive or negative linear trend, seasonality or cyclicity or, indeed, any combination of these three data patterns. Consequently, we recommend the use of such a procedure, particularly where counsellors and advisers need to monitor continuously a range of 'key' parameters over a large number of small firms.

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APPENDIX 1: TECHNICAL DETAILS

For simple exponential smoothing the one step ahead forecast produced in current time is denoted by F_{t+1} and the actual current demand value X_t. Using this we obtain

$$F_{t+1} = \alpha X_t + \alpha(1-\alpha)X_{t-1}$$
$$+ \alpha(1-\alpha)^2 X_{t-2} + \alpha(1-\alpha)^3 X_{t-3}, \text{ etc.} \tag{1}$$

Transcribing the equation for F_{t+1} into F_t by subtracting one from all the subscripts, we obtain

$$F_t = \alpha X_{t-1} + \alpha(1-\alpha)X_{t-2}$$
$$+ \alpha(1-\alpha)^2 X_{t-3} + \alpha(1-\alpha)^3 X_{t-4}, \text{ etc.} \tag{2}$$

If the equation is rewritten as

$$F_{t+1} = \alpha X_t + (1-a)[\alpha X_{t-1}$$
$$+ \alpha(1-\alpha)X_{t-2} + \alpha(1-\alpha)^2 X_{t-3} \text{ etc.}] \tag{3}$$

it can be seen that the equation for F_t is exactly the same as that which appears in brackets in the equation for F_{t+1}.

Substituting F_t for this we obtain

$$F_{t+1} = \alpha X_t + (1-\alpha)F_t \tag{4}$$

This is the basic equation defining a simple exponentially weighted moving average given by Holt (1957) and from which all other models of exponential smoothing derive. More correctly, the process is a geometrically weighted moving average, the exponentially weighted moving average being its analogue in continuous time (Reid 1969: 80).

For Holt's two-parameter linear exponential smoothing the forecast is formed by using two smoothing coefficients, $0 \le \alpha \le 1$ for the original series and $0 \le \beta \le 1$ for the trend. The updating equations for Holt's method are

LEVEL
$$S_t = \alpha X + (1-\alpha)(S_{t-1} + Z_{t-1}) \tag{1}$$

TREND
$$Z_t = \beta(S_t - S_{t-1}) + (1-\beta)Z_{t-1} \tag{2}$$

FORECAST
$$F_{t+m} = S_t + mZ_t \tag{3}$$

where S_t is the level in time t, Z_t is the trend component and F_{t+m} is the forecast produced in time t for m periods ahead of current time. Basically, the trend Z_t is multiplied by the number of periods ahead to be forecast m, and added to the value of the level S_t. For a more extensive treatment, see Makridakis et al. (1983: 98).

Winter's three-parameter linear and seasonal exponential smoothing (1960) model is an extension of Holt's (1957) linear model in that it includes an extra equation that is used to estimate seasonality. It is sometimes referred to as the Holts–Winters model (Lewis, 1978: 54; 1982: 32). The updating equations for Winter's model are given by Wheelwright and Makridakis (1978: 98) as follows:

OVERALL SMOOTHING
$$S_t = \alpha(X_t/I_{t-L}) + (1-\alpha)(S_{t-1} + Z_{t-1}) \tag{1}$$

TREND
$$Z_t = \beta(S_t - S_{t-1}) + (1-\beta)Z_{t-1} \tag{2}$$

SEASONALITY
$$I_t = \epsilon(X_t/S_t) + (1-\epsilon)I_{t-L} \tag{3}$$

FORECAST
$$F_{t+m} = (S_t + mZ_t)I_{t-L+m} \tag{4}$$

where L is the length of seasonality (e.g. the number of months or quarters in the year), Z_t is the trend component, I_t is the seasonal adjustment factor and F_{t+m} is the forecast for m periods ahead. α, β and ϵ are the smoothing coefficients for the overall smoothing, trend and seasonal components, respectively.

The overall smoothing Equation (1) differs slightly from Holt's equation (1) in that the first term is divided by the seasonal number I_{t-L}, which adjusts X_t for seasonality by reviewing the seasonal effects which may exist in X_t. The estimate of seasonality, calculated with Equation (3), is given as an index fluctuating around unity. The seasonal index is a ratio of the current value of the series X_t divided by the current single smoothed value for the series S_t. If X_t is greater than S_t the ratio will be greater than unity, whereas if X_t is less than S_t the ratio will be less than unity. S_t is a smoothed average value of the series that does not include any seasonality; the values of X_t contain both seasonality and any randomness in the series. To smooth out this randomness, Equation (3) weighs the newly computed seasonal factor X_t/S_t with ϵ and the most recent seasonal number corresponding to the same season with $(1-\epsilon)$. This prior seasonal factor was computed in period $t-L$, where L is the length of

Table A1: Smoothing coefficients.

	Level	Tracking signal	Trend	Seasonality
Simple	α	α_1		
Holt	α	α_1	β	
Winter	α	α_1	β	ϵ

Table A2: Models, data type and level of change.

Figure	Data type	Data 'displays'	Appropriate forecasting model for data	Step change	Ramp change	Trips within approximately
2	Real	Seasonality	Winter		Yes	Two time periods
3	Simulated	Stationarity	Simple exponential smoothing	Yes, 5%		One time period
4	Simulated	Stationarity	Simple exponential smoothing		Yes, 2%	Two time periods
5	Simulated	Linear trend	Holt's linear trend	Yes, 5%		One time period
6	Simulated	Linear trend	Holt's linear trend		Yes, 2%	Two time periods
7	Simulated	Seasonality	Winter	Yes, 5–8%		Two time periods

seasonality. The form of Equation (3) used to calculate the seasonal component is similar to that of other smoothing equations; there is a value, in this case the ratio X_t/S_t, which is multiplied by a smoothing coefficient ϵ and is then added to its previous smoothed estimate which has been multiplied by $(1 - \epsilon)$.

Equation (2) used for smoothing the trend is exactly the same as Holt's trend equation (2) discussed earlier. Equation (4), used to produce the forecast in Winter's model, is the same as the corresponding formula used to produce a forecast in Holt's model [equation (3) of Holt], except that the estimate for the future period $t + m$ is multiplied by I_{t-L+m}. In the equation for overall smoothing [Equation (1)], X_t was divided by I_{t-L} to remove any seasonal effects that may exist in X_t. Multiplying the value of $(S_t + mZ_t)$ by I_{t-L+m} in Equation (4) readjusts the forecast for seasonality by reintroducing seasonal effects into the forecast. For a more extensive treatment of Winter's method, see Makridakis et al. (1983), Lewis (1983) and Winter (1960). The updating equations for the smoothed error tracking signal are given by Trigg (1964: 272) as follows:

Smoothed error $= (1 - \alpha_1)$ previous smoothed error

$+ \alpha_1$ latest error

Mean absolute $= (1 - \alpha_1)$ previous MAD
deviation (MAD) $+ \alpha_1$ latest absolute error

Tracking signal $=$ smoothed error/MAD

These updating equations are expressed in a more concise form by Gardner (1983: 10) as:

$$E_t = \alpha_1 e_t + (1 - \alpha_1)E_{t-1}$$

$$\text{MAD}_t = \alpha_1 |e_t| + (1 - \alpha_1)\text{MAD}_{t-1}$$

$$T_t = E_t/\text{MAD}_t$$

where t represents current time, E_t is the smoothed error, e_t is the present error, MAD_t is the mean absolute deviation, $|e_t|$ is the modulus or absolute value of the forecast error, T_t is the smoothed error tracking signal and α_1 is the smoothing coefficient $0 \leq \alpha_1 \leq 1$.

Deriving the tracking signal value is possible because for every unique permutation of smoothing coefficient values in the models there is an associated upper and lower limit to the trip values. These values were obtained by the original simulations. Greatorex and Reynolds (1988) developed the mathematics and contains sample tables of values. The value is the outcome of the choice of smoothing coefficents and selected confidence limit. Table A1 shows the relevant smoothing coefficients.

APPENDIX 2: GUIDE TO FIGURES 2–7

Table A2 shows the models, data type and level of change. To take Figure 2 as an example, we have plotted a forecast of the actual data and compared it with the actual known values. If the forecasting method is competent to model the data, then we would not expect a perfect forecast, but one in which there were errors around the actual value. If these errors were within an acceptable theoretical limit, then we would consider the forecasting model to be 'doing its job' and producing acceptable forecasts. Thus should excessive errors be thrown up, they will be due to a change in the underlying data pattern. The role of the tracking signal is to pick up this potential deviation. Therefore in Figure 2 we are 95% certain that nothing is untoward provided that the tracking signal value remains within +/−0.38; if this value is exceeded, then there is a problem. We are therefore alerted in period 9 that all is not well; up until period 8 the forecast and actual values are moving together, but in period 8 they diverge. The forecast expects the actual value to rise, but, in fact, it falls sufficiently for the 'trip' to occur in period 9. The model does not trip earlier where there is almost the same degree of error because the forecast was predicting (correctly) a fall in turnover. By letting the data run for 40 periods we obtain multiple trips, but it is the first that alerts us.

The tracking signal values are read from the derived statistical tables described in the text and Appendix 1. We have called the data quarterly for sake of illustration, but what is important is that there is a reasonable run of data which could be hourly, daily or weekly. In all the figures we have multiplied the tracking signal and the trip limits by a factor of 10 to highlight the pattern. Figure 2 shows how difficult it can be to spot such deviations by sight; Figures 3–7, by using simulated data, are visually more obvious.

Provided that the appropriate forecasting method is chosen and that there is a sufficient run of accurate data, then the practising adviser, consultant or bank manager can now manage by exception, only reviewing those firms who fall outside his/her acceptable predetermined limits. If the adviser is particularly worried, then they can set the trip at a very cautious level. In practice, the results would be reviewed from a spreadsheet rather than as a graphical output. Although the method has obvious advantages where the person is handling a great deal of data covering many firms, there is no reason why the small business could not use the technique. Lotus 1-2-3 or Excel run on a 486 personal computer are perfectly capable of running the model once the 'best-fit' initial parameters have been set. Optimizing the performance of the forecasting model(s) does, however, require competence in statistical analysis.

C (T2/8) Reynolds P.L. and Day, J. (1996), ''A Semi Automatic Scheme for Monitoring the Adequacy of Short Term Sales Forecasts'', Paper presented to the *1996 INFORMS Marketing Science Conference*, University of Florida, Gainesville, Florida, USA, 8 -10th March.

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A SEMI-AUTOMATIC SCHEME FOR MONITORING THE ADEQUACY

OF SHORT TERM SALES FORECASTS

ABSTRACT

This work examines whether the concepts and techniques more usually found in the process control literature has any practical use within the field of marketing monitoring, review and control. The work is particularly concerned with the monitoring and control of short term sales forecasts produced by the employment of exponential smoothing techniques e. g. Holt's Two Parameter Linear Exponential Smoothing. Potentially the scheme has a wide range of uses. A multi product firm may need to produce regular short term sales forecasts for many hundreds of products or product components. To be operationally useful such forecasts may have to be provided in disaggregated form e.g. by size, colour, type etc. This disaggregated procedure may result in literally thousands of individual sales forecasts being produced. The monitoring procedure under discussion is basically a tracking signal device based on the work of Brown (1956) and Trigg (1964). Such a scheme allows the adequacy of a large number of short term forecast, being produced simultaneously, to be monitored and evaluated semi automatically i.e. the procedure generates an exception message for the user when a forecast is deemed to be inadequately accurate and thus allows correction or re setting by human intervention. The authors have shown that the procedure can also be adapted as a monitoring device to monitor key marketing parameters within firms. It is shown to have possibilities as a commercial health monitoring device for firms that are 'at risk', e.g. small, entrepreneurial firms. It should be of particular interest to all people involved with monitoring or advising a large number of small enterprises or business units within a larger organisation. For example, a bank manager or a small business consultant responsible for a portfolio of firms. The authors utilise process control techniques more often used in production and inventory control systems to monitor the marketing 'health' of small firms. The procedure can be used in any sized organisation although this paper concentrates on its application in small enterprises. This paper represents part of a larger ongoing research programme into small enterprises by the co-authors. Finally the authors produce frequency distributions for the smoothed error tracking signal using not only the one period ahead forecasting error which is the method conventionally used, but also using the 2, 3,........6 period ahead forecasting errors. The objective of the exercise was to investigate whether it was possible to improve the response rate of the smoothed error tracking signal to a sudden step or ramp change in the input data by making this relatively simple modification to the way the signal is calculated. Once again simulation has been used to produce frequency distributions and the results thus obtained are discussed toward the end of this paper.

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INTRODUCTION.

The authors intend to first discuss the use of the smoothed error tracking signal as a monitoring and control device which may be of use in a number of marketing situations, but in particular in monitoring key marketing and sales parameters within small firms. The authors then discuss the more general use of the scheme i.e. the monitoring of short term sales forecasts produces by exponential smoothing. Finally the authors discuss some of the technical aspects of the scheme such as the effects of various smoothing coefficients on the frequency distribution of the tracking signal, and the affect of using the 2.......6 period ahead forecast error in the tracking signal equations rather than the one period ahead error.

In relation to small firms specifically, the authors make an assumption, derived from two models of small firm growth and development (Scott and Bruce, 1987), (Cooper, 1981), that a natural feature of all small business growth and development is the addressing of crisis points, and that to be able to track certain key marketing parameters in order to be able to predict these would be advantageous both to the management of small firms and to their advisors and counsellors. The procedure discussed in this paper develops a quantitative approach to such monitoring and to the eventual management of key marketing variables by exception. The scheme is simple to use, can be run on any desk top computer.

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To test the operational robustness of the procedure the authors have made use of computer simulation to introduce step or ramp changes to time series input data. In order to test the speed of reaction in the monitoring and control device the authors have used average run length criteria. Results are shown and discussed at the end of this paper. An example of a time series drawn from empirical data will demonstrate the practical usefulness of the monitoring scheme. The use of exponential smoothing forecasting techniques coupled with the use of a smoothed error tracking signal based on the work of Trigg et al. (1964 & 1967) as the monitoring procedure.

The objective of this paper is twofold, firstly to demonstrate that the Scott/Bruce/Cooper schema is a worthwhile framework from which to investigate the behaviour of small businesses. Secondly to suggest that the development of a robust monitoring device based essentially on a simple forecasting method containing a tracking signal, would be of value both to entrepreneurs themselves, and to other interested parties such as academics, consultants, advisors and lenders. The method has important potential benefits if used by academics, bankers and consultants who are likely to wish to monitor several dozen, perhaps hundreds of businesses, and select or manage 'by exception'. The application of the procedure under various conditions is reported at the end of this paper.

The authors have previously discussed work by Scott/Bruce (1987) and Cooper (1981) that reviews the "growth life cycle" of small businesses as they start up, survive and mature into larger companies. Firms' are hypothesised to develop through five stages each separated by a crisis band which the firm must overcome. The five stages are -

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pre-start up, inception, survival, growth and consolidation. Three areas of interest are firstly the role that entrepreneurial ability plays in ensuring success and in particular growth; secondly, whether firms do go through these crisis periods; and thirdly, the possibility that the schema can be operationalised and, if so, what are the benefits of so doing. Scott/Bruce, the original authors of the last four stages of the model whilst suggesting that the growth curve could be logistic concentrate on comparing and contrasting the different organisational, commercial and management skills needed to address successfully each phase and the connecting crisis points. As such, the work provides an excellent schema that would be useful to consultants, bank managers, small business owners and academics to suggest the broad problem areas that small firms face. Exhibit One outlines the model.

There might be academic and practical gains to be realised if the model could be treated in a more quantitative fashion. Reynolds and Day (1993) have suggested with reference to the UK timber and joinery industry, that the general notion of crisis points is valid, and that identifying them via primary and secondary data was possible. Empirical validation can take several forms. Data could be primary or secondary, descriptive or statistical, individual or aggregate. It can be focused in one of two ways, the first we will call *continuous* by which we mean that a firm is followed as it progresses from stage to stage. The second approach we will call *point* by which we mean that we focus on a firm at a particular point on the evolution path and see how it arrived there.

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At present we have chosen turnover since our present interest is in seeing if the model can produce an operationally useful monitoring procedure. In reality one would select a leading rather than a trailing indicator(s). By attempting to operationalise the model, rather than leaving it as a more general schema we might be able to produce a means by which one can provide continuous monitoring of performance and a early prediction of crisis point occurring. For such a monitoring scheme to be of practical use it needs to be accurate, simple to understand and to economise on the use of data. Furthermore it should ideally be indifferent to whatever data series is used. One monitoring technique that would meet these criteria is based on a combination of exponential smoothing to track performance and in doing so produce one period ahead forecasts which are then in turn tracked by Trigg's (1964) smoothed error tracking signal.

THE FORECASTING PROCEDURE.

Exponential smoothing has replaced moving averages as the predominant method used in short term forecasting,. Montgomery and Johnson, 1976, Levine, 1967, Gross and Ray, 1965, Kay and Hampton, 1963 and Makridakis and Hibon, 1979. Evidence from the literature strongly suggests that quantitative techniques are generally superior in terms of accuracy than qualitative methods, for example (see Goldberg, 1970, Hogarth, 1975, Sarbin, 1943, Sawyer, 1966, Slovic, 1972 and Mabert, 1975). Evidence suggests also that in terms of short term sales forecasting, time series methods perform as well or even better in terms of accuracy than the more complicated causal techniques (see Narashimham, 1975 , pp. 409-464).

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Other studies by Bauman (1965), Geurts and Ibrahim (1975) and Newbould (1974) have concluded that simpler methods such as exponential smoothing do as well or better in terms of accuracy than more sophisticated models. In a study comparing Box-Jenkins methods with exponential smoothing Geurts and Iberhim (1975p187) concluded that the forecasting errors of both methods were more or less the same, although all exponential smoothing models yielded smaller average errors than the Box-Jenkins models. Makridakis and Ebony (1979) stated that their results indicated that the far more sophisticated Box-Jenkins models were actually inferior to forecasts made using exponential smoothing.

THE TRACKING SIGNAL

There are many kinds of monitoring procedures available and reported in the literature, for example, 'Control Charts', originally developed by Shewhart (1931), and modified by Dudding and Jennet (1942), Page (1954, 1955, 1957), and Duncan (1956), Lorden (1971), Gilchrist (1976). Work on 'Control Charts' in the 1930's, 1940's and 1950's evolved to produce the 'Backward Cumulative Sum Technique. The first tracking signal designed specifically for forecast control (for use in inventory management) was proposed by Brown (1962), defined as the sum of forecast errors divided by the mean absolute deviation (M.A.D.). This procedure is known as the Simple CUSUM technique (not to be confused with the Backward CUSUM mentioned above). The smoothed error tracking signal, the procedure adapted for marketing monitoring and control in this paper, was developed by Trigg (1964), based on the earlier work of Brown (1962). The only real difference in Trigg's method is that he uses a 'smoothed error' in the numerator

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of the tracking signal instead of the sum of errors. In the simple CUSUM Brown applied exponential smoothing to the modulus of the error to produce a smoothed MAD, and the sum of errors was calculated by summing the plus and minus values of successive errors. Trigg retains the smoothing of MAD but in addition applies simple exponential smoothing to the plus and minus errors to produce a smoothed error as the numerator of the tracking signal instead of the sum of errors. Appendix One explains and discusses the updating equations for the smoothed error tracking signal.

TRACKING SIGNAL CONTROL LIMITS

In this paper the authors' are using a forecasting procedure, not with the intention of producing forecasts for planning purposes, but as a means of monitoring performance and comparing it with expected. Management need to know as soon as possible when a forecast has gone 'out of control' in order to avoid the mistake on basing important decisions on poor information and, if necessary, to carry out corrective action. As Golder and Settle (1976) state;

'A necessary ingredient of a practical short term forecasting system in which the parameters of the demand model are not adaptive, is some form of monitoring to detect changes in the demand pattern for which the model is inadequate.' (p489).

By using the one period ahead forecast and tracking the one period ahead forecast error with a tracking signal, what is essentially designed as a forecasting procedure can be utilised as a monitoring and control device. One of the authors has produced tables of confidence limits for use with the smoothed error tracking signal for each of the main exponential smoothing models, i.e. simple, Brown's method, Holt's method and Winter's

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method. Such tables contain many hundreds of individual confidence limit values which could be integrated into a computerised monitoring and control system. The advantage of these tables is that they impart greater accuracy to the technique because they allow a greater permutation of smoothing coefficient values to be used. In essence the coefficient for the forecasting equations can now be different to the coefficient used in the tracking signal equation. This has certain operational benefits. The first published report of a study using different values of smoothing coefficients in the forecasting equations to that used in the tracking signal ($\alpha > \alpha_1$, or, $\alpha < \alpha_1$), is in a paper by McKenzie (1978). McKenzie shows that the performance of the smoothed error tracking signal (T_t) may be significantly improved by such a simple alteration in its application.

This technique has been applied to four case study companies in the authors' local economy with data being obtained from secondary published sources. Selection being based upon companies with a turnover of less than £2m per annum who were employing less than 50 people and were not a subsidiary of another company. The final criterion was that they had exhibited some variation in their financial performance over the last ten years as indicated by their ICC Score (a composite financial score of financial soundness). Results obtained from using exponential smoothing and Trigg procedure, look promising at present and appear to be robust and suitable for a range of data patterns including data exhibiting seasonal or cyclical patterns. Because of a limit on space the authors have decided to only present data from one actual case in this paper (shown in Chart Six). This example demonstrates very well how difficult it is to identify

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unusual changes in the underlying data by merely looking at a plot of the data. The other examples shown (see Charts One to Five) have simulated data because they produce more easily demonstrable charts, as the simulations have been designed to reduce the sort of random fluctuations around the level often found in real historical sales data. This does not mean that the procedure is not robust for real data (Chart 6 shows that it is), merely that it is easier for the authors to explain the effects of the procedure when some of the 'natural' fluctuations have been removed as it allows the underlying pattern of the data to be more easily observable.

METHODOLOGY USED TO OBTAIN CONTROL LIMITS.

Cumulative frequency tables were produced for the smooth error tracking signal using 'well behaved' data produced by simulation. The method involved setting the parameters for a particular model e.g. Holt's, and then generating random errors drawn from a normal distribution and adding these to the time series. Tables were produced using the forecasting models of Simple Exponential Smoothing, Holt's Two Parameter Linear Exponential Smoothing and Winters Seasonal Method. Many possible permutations of smoothing coefficient values were used for level component, trend component, seasonal index (for Winters Model) and tracking signal. These tables are able to serve as 'tracking signal confident limit tables' when smoothed error tracking signal values from 'real' one period ahead forecasting runs are compared to the theoretical, simulated values. If the value of the smoothed error tracking signal (T_t) in the forecast procedure exceeds the value given in the table (the modulus of T_t is shown in the tables) for a given permutation of smoothing coefficient values i.e. trend component, seasonal components

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etc. - then the tracking signal T_t would be said to have 'tripped' at a certain level of confidence i.e. 95% level, 99% level etc. The tracking signal 'critical value' produced using this simulation exercise agree with the limited range of values reported by Batty (1969), Trigg (1964) and Gardner (1983) for simple exponential smoothing and agreed with the theoretical values produced from equations derived by McKenzie (1978) for Holt's Two Parameter model of linear exponential smoothing. Critical values were produced for Winters seasonal model although there is nothing in the literature either of a theoretical or empirical nature for Winters model to compare these critical values with. A detailed account of this methodology is reported by Reynolds (1986) and discussed by Reynolds and Greatorex (1988). Readers are referred to these references for a more detailed coverage of the procedures used as they are beyond the scope of this paper It is not possible to show the comprehensive cumulative probability tables derived for T_t in this paper, as the tables for Winter's method alone extend to some 20 pages. Consequently only the values pertinent to the six computer runs discussed here are given for illustrative purposes in Charts 1 to 6. For example in Chart One showing the use of simulated data and using simple exponential smoothing as a forecasting model, the tracking signal limit derived from the cumulative probability tables discussed in the last section is +/- 0.34 at the 95% level of confidence, denoted in the box on the chart as **TS Limit 0.34 at 95%**. The other five charts have similar boxes with the relevant tracking signal cumulative probability value shown in the same manner and should be interpreted in the same way. Each chart also has a box showing whether simulated or real data has been used in the exercise and the forecasting model used i.e. simple exponential smoothing, Holt's method or Winter's method. A full comprehensive set of cumulative

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probability tables for a wide range of smoothing co-efficient value permutations and for use with all of the exponential smoothing forecasting models discussed in this paper are available on request from the authors.

METHODOLOGY USED TO DEMONSTRATE TRACKING SIGNALS REACTION TO A STEP OR RAMP CHANGE IN THE MEAN INPUT DATA.

Standard forecasting models (those of Holt, Winters and simple exponential smoothing) were used to test the ability of the tracking signal to monitor step and ramp changes (shocks) in underlying input data for both simulated time series and real time series obtained from small firms. Such a procedure can be designed to run on a standard spreadsheet. These forecasting and tracking signal programs, in conjunction with the tables of tracking signal 'critical values' discussed earlier, were then used to test the reaction of T_t to a step or ramp shock for both the simulated and real time series data. In this sense the forecasting methodology is used as a marketing monitoring and control procedure.

DISCUSSION OF RESULTS

The smoothed error tracking signal T_t was found to be extremely responsive to a step or ramp change in the underlying input data for situations where the mean level of the data was either stationary or subject to a linear trend, or either of these cases embedded in an overriding pattern of seasonality or cyclicality. That is the tracking signal device worked well for the forecasting models of simple exponential smoothing which is used to forecast stationary data, Holt's Two Parameter linear exponential smoothing which is

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used to forecast data exhibiting a negative or positive linear trend, and Winters model which is suitable for data exhibiting either stationarity or a negative or positive linear trend plus a seasonal or cyclical component.

For example when the underlying input data was subject to a step change of approximately 5% of the mean level in the cases where the underlying mean level of the data was stationary or displaying a linear trend, (i.e. using simple exponential smoothing or Holt's linear trend method of forecasting respectively), the tracking signal 'tripped' within **one time period of the introduction of the step 'shock'.** When the underlying data was subject to a 'ramp' change of approximately 2% in the underlying mean input data, the tracking signal **'tripped' within two time periods,** usually within one time period.

When the tracking signal device was used for data displaying stationarity or a linear trend coupled with a seasonal or cyclical component the signal is also robust. When data displaying clear seasonal / cyclical patterns every fourth period were forecast using Winters model and subject to 5% to 8% step 'shock' in the input data, the tracking signal 'tripped' its predetermined control limits **within two time periods.** When real small firm data exhibiting a 2% ramp change in the underlying data was used again the method proved to be highly robust and **'tripped' within two time periods.**

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Type	Data 'displays'	Model	Step change	Ramp change	Trips within
simulated	linear	Holt's Linear Trend	yes, 5%		1 time period
simulated	linear	Holt's Linear Trend		yes, 2%	2 time periods
simulated	stationary	Simple Exponential Smoothing	yes, 5%		1 time period
simulated	stationary	Simple Exponential Smoothing		yes, 2%	2 time periods
simulated	seasonality	Winters	yes, 5-8%		2 time periods
real	seasonality	Winters		yes	2 time periods

The idea of monitoring the commercial / marketing health of small firms using some form of monitoring device or 'tracking signal' seems to work well in principle for a wide range of situations. With such a system, the routine monitoring or the monitoring of any key leading indicator) can mainly be left to a computer, leaving the manager to get on with more important work. The a control mechanism is required to check that the firm's performance is satisfactory and to warn management if there appears to be a problem requiring manual investigation as soon as possible.

Small firms are either 'healthy' or 'unhealthy' and their commercial / marketing health can be monitored and 'tracked' using a range of key parameters. In this paper the authors have only used sales as a way of illustration. Some derivative or composite of sales would probably provide more valuable and more responsive input data. One method of monitoring such parameters is to make use of the one period ahead forecast error generated by an exponential smoothing forecasting system, coupled with a monitoring

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procedure in the form of the smoothed error tracking signal. Such a system of small firm commercial / marketing health monitoring is a suitable and robust procedure for underlying data displaying a range of characteristics and can cope adequately with situations where data displays stationarity, a positive or negative linear trend, data exhibiting seasonality or cyclicality or indeed any combination of these three data patterns. This combination covers the main types of data patterns found in commercial data. Consequently the authors recommend the use of such a procedure in the monitoring of small firms by small firm counsellors, academics and advisors, particularly under conditions where a large number of such firms require the continuous monitoring of a range of 'key' parameters. Referring back to the idea of crisis points often exhibited by small firms and discussed in the introduction of this paper, the procedure provides a mechanism to allow those people concerned with small firms' marketing 'health' and performance to identify when such 'crisis points' are beginning to occur and enables them the chance to intervene and to hopefully carry out corrective measures before the situation becomes too serious. Further work will investigate which composite or derivative of sales or other parameter provides the most useful input data for the monitoring scheme.

EFFECTS OF SMOOTHING COEFFICIENTS ON THE DISTRIBUTION OF THE TRACKING SIGNAL

The only parameters affecting the distribution of the tracking signal are the smoothing coefficients used in the components of the forecasting equations e.g. α, β etc, and the smoothing coefficient used in the tracing signal equations α_1. The authors results agree

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with those of McKenzie (1978), in that gross changes in the distribution of the tracking signal are due to varying the value of α_1. Changes in α and other forecasting model component smoothing coefficients have little or no effect on the distribution of T_t. Finally the authors can also report that the distribution of the tracking signal T_t are completely independent of the mean and variance of the input data.

PRODUCING FREQUENCY DISTRIBUTIONS FOR THE SMOOTHED ERROR TRACKING SIGNAL USING 2, 3,......6 PERIOD AHEAD FORECAST ERRORS.

The objective of this exercise is to attempt to increase the responsiveness of the smoothed error tracking signal to a sudden change in the input data. This might be a sudden change in demand if the device is being used to monitor a large number of short term sales forecasts produced by exponential smoothing. If the device is being used to carry out the commercial health monitoring of small firms then any key parameter can be used as input data. This might still be sales or, more likely some composite or derivative of sales. It is part of the authors on-going reseach into small entrepreneurial firms to test which parameter provides the most effective input data to monitor in order to try and predict problems ahead.

The approach used in this exercise is that at any given time t, forecasts are made not only for periods t+1 but also for periods t+2, t+3.........t+6. Holt's forecasting model has been used in the computer simulation with the forecasting equation given as:

$$F_{t+m} = S_t + Z_t m$$

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where F_{t+m} is the 'm' period ahead forecast, S_t the current base level, and Z_t the current value for the trend. The trend Z_t is multiplied by the number of periods ahead to be forecast,'m', and the product added to the base value S_t. For example the one period ahead forecast is the level plus one current trend value, whereas a four period ahead forecast is the level plus four current trend values.

This exercise uses not only the usual one period ahead forecast error in the calculation of the smoothed error tracking signal, but also produces five additional tracking signals each time period using the 2, 3,....6 period ahead forecast errors, denoted here as e(2), e(3),......e(6), giving tracking signals T(2), T(3),.......T(6) repectively.

In Holt's method the level and trend components are updated each time period using the following equations,

For level.

$$S_t = \alpha X_t + (1 - \alpha)(S_{t-1} + Z_{t-1})$$

For trend.

$$Z_t = \beta(S_t - S_{t-1}) + (1 - \beta) Z_{t-1}$$

where α and β are the smoothing coefficients used in the level and trend. The one period ahead forecast is calculated using:

$$F_{t+1} = S_t + Z_t$$

Note that the values of S_t and Z_t used to calculate the one period ahead forecast are the current, updated values and hence the most accurate estimates available. If the correct

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forecasting model and choice of smoothing parameters have been selected, the updated values of level and trend should be reasonably close to the true values. Any changes in the level or trend that has occurred over say, the last five time periods should have been taken into account as the level and trend components are updated each time period. However a forecast made for say, period t+1 five periods ago, i.e. a six period ahead forecast, is in effect based on values of level and trend five periods out of date. In such a forecast the values for the level and trend are, out of necessity those values calculated for the period at which the forecast was made, with a constant trend component simply being multiplied by the number of periods into the future to be forecast, and the product added to a constant base level S_t. Therefore if a change in either level or trend occurs between the time the forecast was actually made and the time period for which it was made, it would not be taken into account because the values of level and trend have not actually been updated using the equations for level and trend given earlier.

In general, with an adaptive forecasting model such as Holt's model of exponential smoothing, one would expect a one period ahead forecast to be more accurate , and hence produce a smaller forecasting error, than say five or six period ahead forecast. This would be particularly so if the assumption on which the five or six period ahead forecasts were based had altered before the period for which the forecast was made, i.e. the underlying demand conditions had changed. Therefore if one to six period ahead forecasts are made for period 't', and a significant change in the level of demand occurs at any time before period 't', it may be the case that either one or all of the 2, 3, 4, ...6 period ahead forecast errors are larger than the one period ahead forecast error. This

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being so, a tracking signal calculated at period 't', using the 2, 3, 4, ...6 period ahead forecast errors may experience a greater impulse shock and possibly be more responsive to such a change than a similar tracking signal based on the one period ahead forecasting error. A larger + or - forecast error should have the effect of increasing the ratio

$\left| E_t/MAD_t \right|$ more towards unity than a smaller error and hence should cause the tracking signal to reach it's control limits more quickly.

The question this exercise seeks to answer is whether a smoothed error tracking signal based on $e(2)_t, \ldots \ldots e(6)_t$, i.e. $T(2)_t, \ldots \ldots T(6)_t$, would react faster to a sudden change in the level of demand than $T(1)_t$. The test attempts to find out if there is any advantage in using one, or perhaps even all of the signals $T(2)_t, \ldots \ldots T(6)_t$, instead of or in addition to $T(1)_t$. Obviously there would only be an advantage in using such tracking signals if they reacted faster than $T(1)_t$. It is the speed of this reaction to an induced step or ramp change in the input data that is tested here. In a sense the test is a form of 'average run test' with the input data being subjected to specified increase in level in a particular time period. The period in which each of the tracking signals $T(1)_t, \ldots \ldots T(6)_t$, exceed their predetermined control limits for a given level of cumulative probability is then monitored and compared to identify the signal with the fastest response rate.

As Holt's method has been used as a forecasting model in this exercise, a large part of the methodology is the same as that used to produce cumulative probability tables for $T(1)_t$ discussed in the earlier methodological section. That is the initial starting values for

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the level, S_0, trend Z_0, one period ahead forecast, F_1, the smoothed error tracking signal components, E_0, MAD_0. the generation of $N(0,1)$ deviates, the simulation of demand values X_t, the updating of mean and standard deviation, and the method used to produce a trend in the input data, are all dealt with in exactly the same way.

METHODOLOGY

A number of well behaved time series, i.e. demand values, X_t, each series 10,000 observations in length were generated. The values of X_t were then used in Holt's forecasting equations to produce 1, 2, ...6 period ahead forecasts. The resulting 1, 2,.....6 period ahead forecast errors were then used in the calculation of $T(1)_t$, $T(2)_t$,........$T(6)_t$, for which frequency distributions were obtained. In each time period not one but six sets of control limits were produced. It was the intention that these control limits could be used individually or in combination. Hence in a commercial application of the system, if any one of the signals $T(1)_t$,.....$T(6)_t$, exceeded it's predetermined control limits an exception message would automatically be generated. Different combinations of smoothing coefficient values were tested for level (α), trend (β), and tracking signal (α_1), with each smoothing coefficient having values in the range 0.1 to 0.5.

DISCUSSION OF RESULTS

With respect to the results generated from this exercise, they are interesting if rather disappointing. Generally the tracking signals' $T(2)_t$........$T(6)_t$ based on the 2,.....6 period

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ahead forecast errors, performed poorly. At best, in reaction to step or ramp increase, they reached their corresponding control limits equally as fast as the conventional tracking signal $T(1)_t$. More often than not their performance was inferior to $T(1)_t$ in as much as they tended to reach their control limits one or two periods later than the conventional $T(1)_t$. The frequency distributions shown in the table below are only a relevant sample. In turn they are only an example of the many distributions produced in this exercise using a wide range of permutations for α, α_1 , and β. If the reader looks at the table below it can be seen that the further back in time the forecast error on which the tracking signal is based, the larger the value for the corresponding cumulative probability control limits.

Holt's Linear Simulation Producing Frequency Distributions For $T(1)_t$.....$T(6)_t$.

Tracking Signal	$T(1)_t$	$T(2)_t$	$T(3)_t$	$T(4)_t$	$T(5)_t$	$T(6)_t$
Less than 0.80	88..01	77.27	70.73	67.05	66.05	66.38
Less than 0.81	88.92	78.61	72.37	68.59	67.89	67.66
Less than 0.82	89.91	80.19	73.77	70.02	69.22	69.21
Less than 0.83	90.84	81.60	75.41	71.6	70.76	70.62
Less than 0.84	91.84	83.15	77.19	73.3	72.17	71.87
Less than 0.85	92.72	84.44	78.79	75.03	73.67	73.13
Less than 0.86	93.56	85.8	80.58	76.84	75.36	74.72
Less than 0.87	94.34	87.31	72...27	78.61	76..79	76.39
Less than 0.88	95.07	88.89	84.06	80.58	78.64	78.01
Less than 0.89	95.96	90.14	85.88	82.49	80.39	79.90
Less than 0.90	96.67	91.38	87.64	84.44	82.26	81.65

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Less than 0.91	97.43	92.69	89.25	86.56	84.10	83.53
Less than 0.92	97..92	94.05	90.97	88.52	86.19	85.51
Less than 0.93	98.47	95.43	92.79	90.59	88.43	87..49
Less than 0.94	99.00	96.60	94.48	92.53	90.56	89.60
Less than 0.95	99.25	97.56	96.09	94.42	91.66	91.84
Less than 0.96	99.50	98.42	97.25	96.23	94.98	93.87
Less than 0.97	99.80	99.16	98.42	97.75	97.02	96.05
Less than 0.98	99.94	99.64	99.25	99.00	98.54	98.04
Less than 0.99	99.99	99.92	99.86	99.76	99.66	99.51
Less than 1.00	1.00	1.00	1.00	1.00	1.00	1.00

Number of observations = 10,000

Trend % mean = 0.05   M.A.D. = 12

Initial smoothed error = 0 $\alpha = 0.5$

Mean = 789   S.D. = 15 (starting values) $\alpha_1 = 0.5$

Trend % S.D. = 0.05 $\beta = 0.5$

Relevant sections of frequency distributions for $T(1)_t.....T(6)_t$ using $\alpha = \beta = \alpha_1$

In the cumulative probability table above it can be seen that the 95% level + or - control limits are as follows:

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Tracking signal	95% Control limits
$T(1)_t$	0.88
$T(2)_t$	0.93
$T(3)_t$	0.95
$T(4)_t$	0.96
$T(5)_t$	0.96
$T(6)_t$	0.97

When the time series was subjected to a 5% step increase in mean level in period 20 the 95% control limits were exceeded in the following time periods:

Tracking signal	Period in which 95% control limits exceeded
$T(1)_t$	20
$T(2)_t$	20
$T(3)_t$	20
$T(4)_t$	21
$T(5)_t$	22
$T(6)_t$	23

In non of the cases tested was it observed that any of the signals $T(2)_t$.........$T(6)_t$ reacted faster than $T(1)_t$.

In summing up this section the authors must conclude that in terms of achieving the objective of the exercise, i.e. producing a modified smoothed error tracking signal that reacts faster to a step or ramp change than $T(1)_t$ the exercise has been unsuccessful. If

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anything there is a disadvantage to using signals $T(2)_t \ldots \ldots T(6)_t$. This is not to say that the exercise has been totally unproductive. A certain amount was learnt about the behaviour of the tracking signal based on other than one period ahead forecast errors, which proved useful in understanding the behaviour of the tracking signal under 'normal' conditions.

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Конкурентоспособность региональной экономики: опыт, проблемы, перспективы

Материалы международной научно-практической конференции 29 ноября 2007 года.

РАЗДЕЛ I. КОНКУРЕНТОСПОСОБНОСТЬ ЭКОНОМИКИ РЕГИОНА

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FORECASTING DECISIONS IN SMALL FIRMS

ABSTRACT

The authors are interested in how SMEs forecast sales. We suggest as a working proposition that many entrepreneurs are inherently, but unconsciously, 'Bayesian' in their predictive thinking. Thus we speculate that such a forecasting procedure would fit well with their skills, particularly where they value subjective judgement. A possible perceived barrier to using objective forecasting techniques, namely, the lack of information to start off the procedure can be overcome by using a Bayesian approach which whilst 'objective', can be started using subjective information. Data has been collected from UK and Russia SMEs to see what forecasting procedures they use currently.

INTRODUCTION

This paper examines the sales forecasting practices of small firms and then goes on to discuss the application of Bayesian decision theory in the production of sales forecasts for small firms. The management of many SMEs feel unable to use formal objective forecasting techniques because of a lack of information to start off the forecasting procedure. Evidence from the authors own work suggests that the management of many small firms make no formal sales forecasts at all. However, a more robust procedure is available which overcomes the lack of initial starting information for forecasting - and this is based on Bayesian decision theory. In a sense many small firm entrepreneurs are inherently 'Bayesian' in their thinking approach to predicting events in that they often rely on subjective estimates at least for initial starting values. The basic principles of Bayesian forecasting procedures should be relatively easy for small business managers to grasp and apply. More importantly Bayesian forecasting utilises both subjective and objective methods. Small businesses should be both comfortable with, and have, subjective knowledge and experience, and encouraging them to use, in part, a more objective approach, can only strengthen their sales forecasting competence. Such a procedure should be well within the competence level of the majority of small business managers and has the added benefit of utilising their own experience and judgement. Hence such a procedure should not only be useful to the small business manager but should also have strong intuitive appeal as the initial starting conditions of the model is based on the managers own judgement.

THE IMPORTANCE OF THE SMALLER FIRM

SMEs make an invaluable contribution to the wider economy in both Russia and the UK (but which is often overlooked) including increasing competition, creating jobs, building effective networks, sharing knowledge and making a positive contribution towards social inclusion. The importance of small firms and entrepreneurship generally in achieving economic growth in contemporary economies is widely recognised both by policy makers and economists (Van Stel, Carree and Thurik (2005), Wennekers, Van Stel, Thurik and Reynolds (2005), Acs (2006), Acs and Armington (2006)), Audretsch, Keilbach and Lehmann (2006), Lundstrom and Stevenson (2005)). Small firms are big business: they contribute significantly to employment, turnover and the number of businesses in the UK.

In the UK as a whole, SMEs account for over half of employment (58.7 per cent). This is also true for each region and country in the UK except London, where SMEs only account for 47 per cent. For the South West, Wales and Northern Ireland, this figure exceeds 70 per cent. For each region and country in the UK, no more than 0.2 per cent of enterprises are large (250 or more employees), and at least 99.0 per cent of enterprises are small (0 to 49 employees). The proportions of enterprises that are medium-sized (50 to 249 employees) range from 0.5 per cent (in the East of England, South East and South West) to 0.8 per cent (in the North East and Northern Ireland) see DTI National Statistics URN 06/402 News Release 2006.

The development of small business in Russia since 1998 has been affected by crucial decisions of central government by which the taxes have been cut and 'red tape' reduced. As a result the registration of new enterprises has become both simpler and cheaper and consequently the number of small businesses has grown. The situation in Omsk region is indicative of Russia as a whole.

However, where Omsk does differ is that for many years it used to be one of the most important industrial centres in Soviet Union producing electronics, engines for aircraft, agricultural equipment and many other engineered goods. However after perestroika Omsk industry has collapsed. Five years ago small businesses in Omsk mostly represented trade services. However since 2000 positive changes have come to life and industrial enterprises have started up. Our research shows that in parallel to this, the number of small businesses in industry is increasing.

Year	1995*	2001*	2002*	2003*	2004*	2005**
Number of small enterprises in Omsk region	6519	10856	10973	10864	12460	14435

* Omsk region annual statistics 2005 (Омский областной статистический ежегодник – Омск, 2005).
** Omsk region annual statistics 2006 (Омский областной статистический ежегодник – Омск, 2006).

Year	1995*	2001*	2002*	2003*	2004*	2005**
Number of industrial small enterprises in Omsk region	989	1504	1327	1242	1543	1816
Sales (m. roubles)	289,6	1494,7	2087,7	2963,9	4648,0	9529,1

* Omsk region annual statistics'2005 (Омский областной статистический ежегодник – Омск, 2005).
** Omsk region annual statistics"2006 (Омский областной статистический ежегодник – Омск, 2006).

Alongside the positive trends mentioned above, Russian small business is experiencing some particular obstacles at the moment. Research and monitoring at the Omsk State University in (2002-2006) show that these obstacles as a whole are quite similar to these in Omsk region and can be summarized as:

- the lack of professional and political integration of businessmen. It means that there is no small business lobby in Russia which could influence some real official decisions;
- the lack of trust to the state and its representatives. Central and local government provide some assistance for small business but in practice businessmen either are not ready or don not want to get it.

We do believe that the successful development of small enterprises both in Russia as a whole and in Omsk region depends on cooperation and communication between businessmen themselves and between them and the state.

THE NEED FOR SALES FORECASTING WITHIN ALL FIRMS INCLUDING SMEs

The recognition of the importance of forecasting was first illustrated in the United States by Ledbetter and Cox (1977). They found that forecasting techniques were used by 88 per cent of the 500 largest US industrial companies. It was also established that no other class of planning techniques was used as much as forecasting. Although forecasting is important in most functional areas of a firm, the forecasting of sales is particularly important (Sanders and Ritzman 2004). The sales forecast is the bedrock on which company plans are built and for this to be sound, the forecast must be built on a firm scientific foundation (Wacker and Lummus 2002). The central issue facing businesses is not *whether* to forecast, but *how* to forecast. The forecaster can choose 'subjective' or 'objective' methods or a mixture.

The availability of appropriate data is of central importance to the development of any forecasting system. Obviously dependent upon the degree of accuracy required, most forecasting techniques require a considerable amount of data collection and processing (Zareipour, et al 2006). The selection of the most suitable forecasting technique depends on the availability of existing data and/or company's ability to acquire such. For example, a technique requiring a long historical time series would be of little use if data was only available for the past year (Conejo et al 2005). If data accuracy or validity were questionable, it would hardly be worthwhile, or cost-effective, to spend time and effort using a sophisticated technique known for its precision (Jobber and Lancaster 2003). In forecasting, the principle of 'garbage in/garbage out' applies; a forecast will only be as good as the data used in its compilation.

The management of all firms –and SMEs are no exception- are involved in making decisions about the future *but* in the present. In a sense that is what the job of management is really all about, at least at the more strategic level. The act of preparing for the future whether in business or any other area of our lives implies forecasting, consciously or subconsciously, of tomorrow's condition. In our personal lives, such predictions are usually made on an informal, subjective basis. If they turn out to be wrong, we can usually adjust our personal circumstances. However, we rarely enjoy the same degree of flexibility in our working lives, particularly if we are an SME owner manager. Managerial decisions are usually of a more formal nature and of greater consequence. The very nature of such decision-making involves forecasting future conditions (Lawrence and O'Connor 2000). It is not a question of whether managers should forecast or not but merely how are they to do it? Small firms are often considered to lack formal marketing skills (Carson, Cromie, McGowan and Hill 1995) and project management skills (Murphy and Ledwith 2007), however sales forecasting is fundamental to management's ability to plan, budget and control (Lawrence et al 2000). They are the bedrock of all other management forecasts since they are dependent upon an accurate sales forecast (Mentzer et al 2002). These forecasts then form the basis of budgetary control systems (Mentzer and Moon 2005).

Managerial decisions are not always strategic and much of a busy manager's time is taken up with day-to-day operational issues which, although not of the same magnitude as strategic decisions, are nonetheless important

to the manager because of the proportion of their time that they occupy. Management requires forecasting information to assist them in making operational decisions, although the required time horizon for such forecasts is shorter than for strategic decisions. For example, for the marketing manager to set monthly sales targets, operational expense or advertising budgets, they may require regular short-term forecasts for each product, broken down according to product type, size, colour, salesperson's territory, channel of distribution and even by individual customer. Whatever type of decision is being made, forecasting is required. Forecasting can make a contribution to the successful management of the small enterprise, whereas poor forecasting can lead to high inventories and associated stockholding costs which must be paid for out of working capital, or under-production and unrealised market potential (Stanton, Etzel and Walker 1999).

CRISIS POINTS IN SMALL FIRMS

All firms, of whatever size, need to make predictions or forecasts about future conditions (Tkacz 2001). The term 'prediction' is often reserved for subjective 'qualitatively' based forecasts, for example: the sales force composite technique. Whereas the term 'forecasting' is often used for objective 'quantitatively' based forecasting procedures e.g. moving averages, exponential smoothing, regression etc. Bayesian forecasting is a mixture of the two and involves both objective and subjective forecasting elements.

Forecasts may be required for an important 'one-off' decision such as when a business may be considering expanding by acquisition, diversifying into a totally new market or modernising its production processes. Such decisions tend to be long-term and strategic, rather than operational. In such situations, because of the importance of the decisions being made, it is important that forecasting receives careful consideration, meaning an investment of time and money in the forecasting process. However many of the decisions the small firms managers have to make are more routine tactical or operational. As Bischoff, Belay and Kang (2000) state:

"The choice is not a trivial one--for at least twenty years leading economists and econometricians in *business*, government and academia have argued both sides of this issue. It is important because no *business* decision-maker can avoid making forecasts. Decisions about stocks of raw materials, goods in process and finished goods, among other things, must be based on forecasts. The advent of the Internet does not change this necessity: at best the process is speeded up" (p. 12).

The need for an adequate and appropriate sales forecasting framework can be linked to the literature on growth and life cycle models related to small firms (Scott and Bruce 1987; Greiner 1972; Hanks et al. 1994; Cope, 2003). Scott and Bruce (1987) argue that a small business develops by moving through five growth stages, each with their own characteristics. Because the transition from one stage to the next requires change, it is accompanied by some crisis or another. Crises tend to be disruptive and problems of change can be minimised if managers are proactive rather than reactive (Steinmetz 1969, Deakins and Freel 1998). Thus crucially, sales forecasting may help them in this respect. Prior knowledge of what generates crises and of what to expect in each stage will smooth the process of change and may improve their chance of adequately dealing with the crisis and hence survival (Dodge and Robbins 1992; Garud and Van de Ven 1992). Scott and Bruce (1987) claim that they have tested the model and that it is robust enough for them to be able to generalise across all small firms. Albeit that organisations move along the curve at different speeds and the spacing of crises are likely to differ between firms and industries. Indeed, the original authors were themselves aware of these limitations and argue that what they provided was:

"A diagnostic tool to assist in analysing a firm's present situation. It is also meant to be an indicator of what strategies appear suitable at various stages in an organisation's growth. It is, however, only a tool and cannot make the decisions for management. They must rely on their judgment for that. Hopefully that model will add to their information and thus enable them to make better judgments." (Scott and Bruce, 1987;48).

As indeed would the adoption of Bayesian forecasting that both exploits and plays up to the exercise of informed judgement.

BAYESIAN DECISION THEORY

Probability theory studies the possible outcomes of given events together with their relative likelihoods and distributions. In fact there is considerable debate about exactly what probability means in practice. Some mathematicians regard it as simply a component of abstract theory, while others give it an interpretation based on the frequencies of certain outcomes (Quintana and Amer 1998). However the Bayesian approach is a mixture of both subjectively derived probabilities and mathematically derived likelihoods (Gómez-Villegas, Maín, and Sanz, 2002). This technique is named after Reverend Thomas Bayes (1702 to 1761), a statistician. A fully detailed historical account of Bayes can be found in Buck and Sahu, (2000); Singh and Provan, (1996); Lin, Mayers and Ye (2000) and in the very informative St Andrews University site, (2003). Bayes's original account is freely available (see: Bayes 1736, 1764).

However some account of Bayes and his early work is of enough specific interest to the topic of this paper to discuss below. Bayes set out his theory of probability in 'Essay towards solving a problem in the doctrine of chances published in the Philosophical Transactions' of the Royal Society of London in 1764. The paper was sent to the Royal Society by Richard Price, a friend of Bayes, who wrote:-

"I now send you an essay which I have found among the papers of our deceased friend Mr Bayes, and which, in my opinion, has great merit... In an introduction which he has writ to this Essay, he says, that his design at first in thinking on the subject of it was, to find out a method by which we might judge concerning the probability

that an event has to happen, in given circumstances, upon supposition that we know nothing concerning it but that, under the same circumstances, it has happened a certain number of times, and failed a certain other number of times" (see Condorcet, 1785, Boole, 1854 and St Andrews University WWW site, 2003)

Despite the fact that Bayesian Decision theory was developed in the 18th century, it has only recently been widely adopted (Buck, 2001). The method incorporates the firm's guesses at data inputs for the statistical calculation of sales forecasts. It uses network diagrams showing the probable outcome of each decision alternative considered. These are shown together with expected values and associated probabilities, initially derived on a subjective basis (see Smith and Faria, 2000) Bayesian statistical forecasting, like all Bayesian statistics is based on two basic concepts. First, uncertainty about unknown quantities is expressed using the language of subjective probability, and, given new information or data, probabilities are updated using Bayes rule or procedure (Ghosh and Ramamoorthi 2003, Quintana, 2006).

Many statisticians and forecasters believe that Bayesian inferential methods have advantages over classical statistical procedures for a wide range of inferential problems mainly because the initial stating probabilities are arrived at subjectively thus opening up the potential of statistical inference, including sales forecasting applications, to a much wider range of problems, particularly those sorts of problems often found in marketing (Albert, 1996, also see the reference for the International Journal of Clothing Science and Technology report 2003 (anonymous)). One of the problems of using probabilities in a statistical model is in ascertaining initial probabilities to commence the forecasting process (Bolfarine, et al, 2005). Bayesian statisticians differ from 'purist' statisticians in the respect that 'purists' view the concept of probability as the relative frequency with which an event might occur (Iglesias, et al, 2004). The Bayesian view is that probability is a measure of our belief and that we can always express our degree of belief in terms of probability (Buck et al 1996). Although the initial probabilities are derived subjectively (the figures are based on judgmental opinion, rather than on objective calculation) proponents of Bayesian theory believe that such probabilities are perfectly valid and hence perfectly acceptable as initial starting points in an extensive quantitative forecasting process (Müller et al 2005). It is this subjective nature of arriving at the initial probabilities that makes the Bayesian approach useful in solving business problems for which initial probabilities are often unknown and are difficult or impossible to calculate using objective methods (Faria and Smith, 1997a, Finucane et al 2003, Gaglio and Katz, 2001).

To use the Bayesian approach, the decision-maker must be able to assign a probability to each specific event (Pole et al, 1994). The sum of the probabilities of all such events considered must be unity (one). These probabilities represent the magnitude of the decision maker's belief that a particular event will take place (Faria and Souza, 1995; Faria and Smith, 1997b). In business situations such decisions should be delegated to personnel who have the knowledge and experience to assign valid initial subjective probabilities to the occurrences of various business events. These initial probabilities are based on previous experience of information (such as published secondary data or simply the manager's own subjective judgement based on experience) acquired prior to the decision-making process. For this reason, the initial subjective probabilities are referred to as 'prior probabilities' (West and Harrison, 1997).

When making business decisions, the financial implications of actions must be taken into account. For example, when a manager is considering investing a firm's surplus cash, they must consider the probability of making a profit (or loss) under different economic scenarios and also assess the probability of such scenarios or events occurring (Pole et al., 1994). Applying Bayesian decision theory involves selecting an option and having a reasonable idea of the economic consequences of choosing a particular course of action. Once the relevant future events have been identified, the decision-maker assigns prior subjective probabilities to them (West and Harrison, 1997; Huerta and West, 1999). The expected pay-off for each act is then computed and the act with the most attractive pay-off is then chosen. If pay-offs represent income or profit, the decision-maker usually chooses the act with the highest expected pay-off (Lopes et al., 2003; Singh and Valtorta, 1995).

INTERIM CONCLUSION

Evidence from the literature above, and from the primary research from case study one presented below, suggest that many managers and owners in small firms tend to favour their own subjective judgement when asked to make decisions involving predictions. Thus Bayesian forecasting procedures would seem to offer an interesting option given that it offers a good 'fit' between the forecasting requirements of small firms and those skills that small firms managers/ owners seem to rate most highly i.e. the use of their own subjective judgement.

Two obvious research questions follow on from this, firstly to what extent do those SME owners and/or managers who declare themselves to be entrepreneurial and/or marketing competent – or given the interests of the audience for this paper –both, feel more comfortable with a Bayesian approach. This could be crudely summed up as: are entrepreneurs Bayesian? Secondly what forecasting, if any, and of what type do SMEs practice?

We have collected but not analysed data on the first question and in this paper concentrate on the second question. Case Study Two is a sample of 170 local companies to Huddersfield University, all but two companies were with a 15 mile radius drawing predominantly from Huddersfield, Halifax and Leeds. Data was collected by mail shot (130 cases); e-mail (13 cases); telephone interview (20 cases), and 'face-to-face' (3 cases). Case Study Three is a sample of 54 companies local to Omsk in Russia. The English questionnaire was translated into Russian, then mail shot to local companies, the results were then translated from Russian into English by our Omsk colleagues. All 224 cases have been coded and put onto an SPSS database.

SALES FORECASTING PRACTICES IN SMALL FIRMS

Case Study One: Phase One

This involved three exploratory group interviews of eight people and a moderator each. The group members included entrepreneurs/ managers running their own small firms, counsellors from various organisations involved with advising or supporting enterprise, small business advisors from the commercial banks, consultants and trainers to small firms from both the private sector and such bodies as Business Link. Conversations within the group discussions were recorded and a thematic content analysis carried out. The information gained from these interviews was used to design a postal questionnaire to be used in the second part sample survey. This returned 320 respondents from 1200 that were posted out.

Case Study One: Phase Two

Questionnaires were sent out to a representative sample of 1,200 small firms in the Kirklees and Calderdale local authority area (jurisdiction) of West Yorkshire, England. This area was chosen because one of the authors' universities is in the area. A combination of lists was used as a sampling frame including the local Chamber of Commerce Membership Directory (which identified firm size), local trade directories and a small firm database held by the University.

The sample was stratified by the type of industry found in the area: textile manufacturing; chemical processing and related industries; transport and distribution services; construction; light engineering; and other financial/business services; and, in proportion to the importance of a particular sector to the local economy in terms of contribution to local GDP (see Bhattacharya, D. 2007, Alreck and Settle, 1995, Everitt, 1995). In order to ensure the sample of respondents matched the initial stratification design final post stratification of the marginals was conducted.

The questionnaire asked respondents to rate the importance, as they perceived it, of various marketing and sales topics which could, if selected and rated highly enough by a sufficient number of respondents, be incorporated into a training course, which they would be invited to attend at subsidised rates. Respondent's selection and rating of various sales and marketing topics gave the authors a proxy measure of how respondents perceive the importance and usefulness of conventional sales and marketing topics to the running of their businesses. The list of possible course topics specifically included sales forecasting. The rating procedure was in two parts. Respondents were asked firstly to select from a prepared list the three course areas that they would find most useful and/ or interesting. A space was provided for respondents to include topic areas not on the list. Having completed this section of the questionnaire respondents were then asked to go through each topic area on their list and rate it as either 'Very Useful', 'Quite Useful' or of 'No Use at All'.

Results from the three group discussions were somewhat alarming as all agreed that in general small firms do not make use of formal sales forecasting (whether objective or subjective) or predictive techniques on an on-going or regular basis. In the case of the management of many small firms the only time such forecasting procedures were used was as part of an 'official' business plan that small firm management had to complete in order to get a bank loan or government grant. Even under these conditions subjective predictions rather than quantitative objective sales forecasts were the norm. The owners and managers of smaller firms placed greater value in their own experience and subjective judgement that in official sources of information or formal predictive or forecasting procedures. The main themes emanating from the discussion in order of importance are as follows:

1. The majority of small firms make no formal sales forecasts either using quantitative or qualitative methods

2. Managers and owners of small firms use subjective judgement in a range of decisions including those decisions involving some form of prediction

3. The majority of small firm owner/managers have little understanding of formal forecasting procedures

4. When sales forecasts are made it is usually that the small firm has been 'forced' to make a forecast as part of a business plan to be submitted to a bank for a loan

5. When predictions are required the majority of small form managers/ owners use their own experiential judgement

6. The majority of small firm managers/ owners do not consider the ability to make reasonably accurate sales forecasts a particularly important skill.

The survey questionnaire was designed using the information gained from the group discussions. The survey results supported the general conclusions of the group discussions. Sales forecasting was very low down on the list of priorities reported by the survey respondents in fact it was not formally rated in the three most important topic areas per se by any of the respondents although some mentioned subject areas that might contain sales forecasting subjects such as marketing research. However when asked to formally rank the *three most* important sales or marketing areas to the success of their business none entered sales forecasting. Also when respondents were asked to list any other courses or subject areas not already discussed none of them mentioned sales forecasting. Even subject areas that might have contained elements of sales forecasting in them such as marketing research and marketing planning received very low ratings. In fact only 5.6% of respondents rated marketing research as the area they would find most interesting if attending a course and only 1.9% of respondent rated marketing planning as the area

in which they would be most interested. None of the respondents rated sales forecasting as the course they would find most interesting.

EXHIBIT ONE: Summary data, selected questions, percentages

QUESTION ONE			UK	OMSK
What do you understand by the term forecasting?		Trying to see next year	3	2
		Predicting using history and current trends	10	6
		Predicting finance planning, staff, production, sale	30	19
		Predicting business performance	2	17
		Predicting market changes	14	18
		Using data to anticipate future needs	0	20
		Predicting the future	27	15
		Other Answer	14	0
QUESTION TWO Do you use forecasting?		Yes	72	83
		No	15	13
		Other Answer	13	04
QUESTION THREE What sort of things do you try to forecast?		Sales alone	14.1	22.2
		Sales and cash flow	7.6	14.8
		Sales and profits	10.6	13.0
		Sales and market trends	8.2	22.2
		Sales related total:	**40.5**	**72.2**
		Profits	6.5	1.9
		Cashbflow	2.9	0
		Other	18.2	7.4
		Market trends	6.5	3.7
		Profits and cash flow	4.7	1.9
		Profit and market trends	2.4	1.9
		No response	15.9	11.1
QUESTION FOUR What information do you use to make the forecast		Past/current data alone	26.5	35
		Experience alone	2.4	6
		Market trends alone	7.1	9
		Customer feedback alone	12.9	0
		Other alone	15.9	2
		Past/current data and experience	1.2	7.4
		Past/current data and market trends	10.0	16.7
		Past/current data and customer feedback	3.5	5.6
		Experience and market trends	2.4	1.9
		Market trends and customer feedback	1.2	3.7
		No response	17.1	13
Percentages may not add to 100 due to rounding				

In the second phase of the rating procedure respondent were asked to go through all the possible course topics on the list (including the topics they may have added in the open ended space provided) and put each course topic in one of three categories which were either 'Very Useful', 'Quite Useful' or of 'No Use at All'. Six respondents out of 320 (1.8%) rated sales forecasting as 'Very Useful' (a somewhat internally inconsistent response considering none of the respondents had entered sales forecasting as one of the three most useful topics on the list), 46 (14.3%) rated sales forecasting as 'Quite Useful' and 271 (84.6%) rated it as being of 'No Use at All'.

So the data from the sample survey confirmed that sales forecasting is not regarded as particularly important by the managers of small firms and if they were given the opportunity to attend a free business course none of the respondents expressed any interest in attending a course on sales forecasting specifically even if heavily subsi-

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dised i.e. sales forecasting was not included in the three most important topic on the list (including topics that might be added to the list) by any of the respondents. When, in the separate exercise respondents were asked to rank the usefulness of a course in sales forecasting to their organisation 84.6% rated it as no use at all. There were a few (six) internally inconsistent answers which can be expected from a survey of this size. However overall the results from both the qualitative and survey research were conclusive.

EXHIBIT TWO: Summary data, selected questions, percentages

Do you find forecasting reliable and accurate?

	yes	no	do not know	other	no response
Omsk	52	7	0	35	6
West Yorkshire	53	22	2	11	12

Is forecasting an essential management activity?

	yes	no	other answer	no response	
Omsk	52	7	35	0	
West Yorkshire	79	6	4	11	

Could the SME survive without forecasting?

	yes	no	do not know	other	no response
Omsk	44	46	0	7	2
West Yorkshire	45	38	0	7	10

If you knew more about forecasting could you manage better?

	yes	no	do not know	other	no response
Omsk	76	0	0	17	7
West Yorkshire	56	26	2	6	10

Have you prevented problems using forecasting?

	yes	no	other	no response	
Omsk	65	18	7	10	
West Yorkshire	45	30	10	15	

How far ahead do you forecast?

	Less than a year	1 to 2 years	2 to 3 years	3 plus	no response
Omsk	28	33	7	6	26
West Yorkshire	20	31	12	18	20

Do you use a computer programme for forecasting?

	yes	yes and named	no	other answer	no response
Omsk	9	33	47	4	7
West Yorkshire	9	25	43	9	13

Percentages may not add due to rounding

A Pearson Chi Square test was used to test whether there was any significant difference between the six different commercial and industry sectors used to stratify the sample survey. The responses describes above were taken as a proxy measure of the respondents' perception of the importance of sales forecasting to their firm. The Null Hypothesis (H_0) was that there was no significant difference between the groups in relation to the expressed interest in attending a course in sales forecasting. The alternative hypothesis (H_1) was that there was a difference. The data used was nominally scaled and hence a non parametric test was considered appropriate, and so Pearson's Chi-Square was used to test (H_0) against (H_1). Six (33.3%) of the 18 cells in the contingency table had expected frequencies less than five. Given that Chi square is not valid if more than 20% of the cells in the contingency table have expected frequencies less than five, in a second run the column cells were collapsed with the cells for 'Very Useful' and 'Quite Useful' merged into the column cells 'Very/ Quite use'. The calculated Chi square value was 3.049 whereas the tabulated Chi square value at the 5% level of significance is 11.07. As the calculated Chi square

value is not equal to or greater than the tabulated Chi square value (H_0) was accepted. There was no discernable association between respondents rating of sales forecasting as an important management skill and the industry sector the respondent belonged to. There was an equal degree of disinterest and perceived importance amongst all of the commercial/ industrial sectors surveyed.

Case Studies Two and Three

The questionnaire consisted of four classification questions; fourteen questions on forecasting practice, two on sales staff training and nine and twelve questions that attempted to capture marketing and entrepreneurial orientation respectively. Given that both case studies used the same questionnaire we have reported the results jointly.

Questionnaires were completed by chairman (8); owners (18); directors (125); managers (28); sales executives (6), and others such as company accountants (38). The majority of respondents (109) had just two managers whilst eighty-five of the SMEs had between three and ten managers – the rest of the sample having over seven named managers. Most of the respondents provided services (112). IT, manufacturing, retail and 'other' providing twenty, thirty-one, seventeen and forty-one replies respectively. One hundred and sixty three SMEs had fifty employees or less; thirty-eight had between 51-100, and twenty employed over 100 in their SMEs.

EXHIBIT THREE: Question Fourteen, If there was one thing that you could sue to predict future problems – what would it be? (Omsk and Yorkshire data combined)

This dataset gives us somewhat more encouragement in respect of a positive attitude to forecasting. The majority of firms claim to use forecasting, believe it to be an appropriate management activity and almost believe that they could not survive without it (Exhibit One). At this stage the sample is often not large enough to compute Chi-square and we need to collect more data. The raw data does suggest some differences within this sample between the Omsk and West Yorkshire SMEs. We tried to design question fourteen not only to capture what data they used in forecasting but to see if they used 'ex post' data such as a fall in sales – or that they tried to use a leading indicator such as a change in enquiries to predict ahead. Exhibit Two shows that importantly firms may be using the latter approach.

Perhaps unsurprisingly the firms are most concerned with trying to forecast 'sales'. They seem however not to place a great deal of reliance on intuition and 'gut feel' alone as a forecasting tool and this is in contrast to the implication that can be drawn from case study one, we need to do more work on the role of intuition and perhaps link it to the role that plays in the now well established opportunity recognition literature stream. However the sample seems to believe that they want, and could, forecast better and so a Bayesian approach still has the potential to improve their forecasting capacity. An obvious research direction is to increase the Omsk sample and to consider if there are statistically significant differences between the UK and the Russian samples and what are the transferable skills lessons and techniques.

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CONCLUSION

It is frequently said that forecasting is the key to success, and poor forecasting can lead to high inventories and associated costs that use up working capital, or result in under-production and unrealised market potential. Forecasting is important in most areas of the firm, but forecasting of sales is particularly important since predicted sales are the base on which all company plans are built.

Evidence from the empirical work suggested that the majority of small firms in the first West Yorkshire sample do not use sales forecasting procedures in any meaningful way. The second West Yorkshire sample and the Omsk sample give us more hope that forecasting plays a more central role.

Even so the use of a Bayesian type approach to strengthen forecasting is still a foreseeable possibility. Particularly because such forecasting is within the skill set of many small businesses particularly when a simple personal computer programme can be adopted. Indeed the very notion of a Bayesian approach - the combination of subjective and objective methods allows the small business to be comfortable with utilising their subjective knowledge and experience. Equally the combining of subjective knowledge within a more objective scenario might well encourage more thoughtful and accurate forecasting with the commensurate benefits as discussed in this paper. For those who need to be encouraged to start more formal forecasting, Bayesian decision trees, for example, could provide an intuitive and logical starting point. Forecasting should not simply be for the larger and more established SMEs.

Given that the evidence from the literature reveals that many small firms under perform or even fail completely because of poor planning skills, especially longer term planning skills, then sales forecasting using a Bayesian approach should be encouraged. Given that forecasting is needed at all time horizons if a business is to be managed properly, small businesses should be encouraged not only to forecast sales better but to develop short, medium and long term sales forecasts for different types of decisions.

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ОЦЕНКА СОСТОЯНИЯ И ПЕРСПЕКТИВЫ ИСПОЛЬЗОВАНИЯ ЧЕЛОВЕЧЕСКИХ РЕСУРСОВ НА ПРЕДПРИЯТИЯХ ПРОМЫШЛЕННОСТИ КАЛУЖСКОЙ ОБЛАСТИ

В современных экономических условиях российские промышленные предприятия как создатели национального богатства, измеряемого показателями валового внутреннего продукта, по-прежнему играют важную роль. В частности Калужская область была и остаётся регионом, в котором преобладают предприятия, работающие в промышленности. Хотя за время рыночных преобразований произошли существенные структурные сдвиги в составе населения, занятого в промышленности, можно утверждать, что промышленность по прежнему является одним из основных работодателей для населения области и важнейшим источником формирования валового регионального продукта.

В условиях возрастающей глобальной конкуренции особую актуальность в управлении промышленными предприятия приобретают вопросы, связанные с обеспечением и эффективным использованием человеческих ресурсов. Именно человеческие ресурсы являются важным фактором , обеспечивающим выход промышленных предприятий на новый уровень хозяйствования.

Управление человеческими ресурсами (УЧР) представляет собой человеческий аспект управления предприятием и отношений работников со своими компаниями. Цель УЧР – обеспечить использование сотрудников компании, т.е. ее человеческие ресурсы таким образом, чтобы наниматель мог получить максимально возможную выгоду от их умений и навыков, а работники – максимально возможное материальное и психологическое удовлетворение от своего труда.

При исследовании вопроса состояния и эффективности использования человеческих ресурсов в промышленности Калужской области и в целом по России были выявлены определённые проблемы, большинство из которых обусловлены проблемами и перспективами развития промышленного комплекса в целом, среди которых выделяются:

1. Низкая инновационная активность на фоне морально устаревших и физически изношенных производственных фондов, что препятствует не только модернизации производства и повышению производительности труда, но и способствует деформации профессионально-квалификационного уровня персонала;

2. Невысокий уровень оплаты труда на ряде предприятий области, плохо развитая система стимулирования труда являются главной причиной достаточно высокой текучести кадров

3. Дефицит квалифицированных рабочих и инженерных кадров и недостаточное внимание к решению данной проблемы со стороны органов власти, министерств и ведомств (недостаточно развит механизм взаимодействия органов власти, предприятий и образовательных учреждений)

4. Стихийный характер процессов управления человеческими ресурсами (основой научного подхода является информация (статистика), сбор и анализ которой по многим ключевым показателям на предприятиях не осуществляется. – это и "издержки на рабочую силу в общем объёме издержек организации", и "расходы на профессиональное развитие персонала", и "абсентизм"

5. Текущая потребность в кадрах и потребность на перспективу практически совпадают и касаются, в основном, профилирующих для каждого предприятия профессий как по категории рабочего персонала, так

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Theme 3 (T3 MATERIALS 1 TO 8) J = 4, R = 1, C = 3.

PEDAGOGIC ASPECTS – ADVISORS AND COUNSELLORS.

<u>Code</u>

J = JOURNAL

C= CONFERENCE

B = BOOK

R = REPORT

J (T3/1) Reynolds, P.L., Day, J. and Lancaster, G. (2006), ''Entrepreneurship and the small to medium-sized enterprise: A divergent/convergent paradox in thinking patterns between advisers and SME owner-managers'', *Management Decision*, 44 (5), pp. 581-597. ISSN 0025-1747.   346

J (T3/2) Reynolds, P.L., Day, J. and Lancaster, G. (1998), ''A marketing strategy for public sector organisations compelled to operate in a compulsory competitive tendering environment'', *International Journal of Public Sector Management*, 11 (7), pp. 583-595; ISSN- 0951-3558.   364

J (T3/3) Reynolds, P.L., (1987), ''Professional Selling and the Art of Effective Listening'', Journal *of Sales Management*, Vol.4, No. 3, pp. 28-37.   378

J (T3/4) Reynolds, P.L. and Lancaster, G. (2007), ''Predictive strategic marketing management decisions in small firms: A possible Bayesian solution'', *Management Decision*, 45 (6), pp. 1038-1057. ISSN 0025-1747.   382

R (T3/5) Reynolds, P.L., (1986b), ''A Report In To the Sales and Marketing Training Needs of Small Firms'', – *Department of Trade and Industry, Kirklees Council, Calderdale Council – Local Collaborative Project.*   403

C (T3/6) Reynolds, P.L. and Day, J. (1996), ''Understanding the Relationship between the Small and Medium Sized Enterprise (SME) and their Advisors and Counsellors'', *Paper presented to the 41st ICSB World Conference*, Stockholm, Sweden, 17/19 June.   471

C (T3/7) Reynolds, P.L. and Day, J. (1999), ''Some observations from teaching a module in entrepreneurship and marketing'', - paper submitted to *Research at the Marketing-Entrepreneurship Interface*, AMA/AM/University of Illinois European Symposium on Research at the Marketing-Entrepreneurship Interface, Nice, France; 16th -17th June.   495

C (T3/8) Day, J. and Reynolds P.L. (2011), ''Exploring the marketing – entrepreneurship interface: Bringing an understanding of small business marketing into the curriculum'', *Annual Learning and Teaching Conference*, University Of Huddersfield, UK, http://eprints.hud.ac.uk/99667/   514

J (T3/1) Reynolds, P.L., Day, J. and Lancaster, G. (2006), ''Entrepreneurship and the small to medium-sized enterprise: A divergent/convergent paradox in thinking patterns between advisers and SME owner-managers'', *Management Decision*, 44 (5), pp. 581-597. ISSN 0025-1747.

Entrepreneurship and the small to medium-sized enterprise

A divergent/convergent paradox in thinking patterns between advisers and SME owner-managers

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Abstract

Purpose – The purpose of this paper is to suggest a framework for competing theories of entrepreneurship but to argue for transparency in one's attempts to understand this phenomenon. Then to argue that, when matching small business advisers to small business, one should consider their entrepreneurial abilities and match as appropriate. A parsimonious method is suggested to measure entrepreneurial ability – divergent thinking.

Design/methodology/approach – A discussion of entrepreneurship and a proposed matrix that considers the relative entrepreneurial abilities of both partners and is then expanded to account for different decision scenarios.

Findings – A simple test for divergent thinking is suggested to measure entrepreneurship, applied to some hypothetical scenarios, and is supported by some broad evidence on the relationship between small businesses and commercial banks.

Research limitations/implications – At this stage a conceptual article but with real implications for managing SME and adviser relationships.

Practical implications – Should lead to a better understanding by both the SME and their advisers of what each party needs to contribute to ensure a successful outcome.

Originality/value – Provides a framework for classifying entrepreneurship and a different perspective on the SME and adviser relationship; suggests a different way from, say, traditional entrepreneurial orientation scales by which to measure entrepreneurial capacity of either the adviser or the SME.

Keywords Entrepreneurs, Small enterprises, Medium-sized enterprises, Commercial banks

Paper type Conceptual paper

Introduction

Whilst Blackburn *et al.* (1991) had noted that over the previous decade, the term "enterprise culture" had become a dominant theme in the discussion of small enterprise in the UK, one could argue that on the evidence of the work in the special issue of *Entrepreneurship: Theory & Practice* in 2001 (Davidsson *et al.*) there were still formidable problems in conceptualising and operationalising this concept. This article argues that a similar fate might happen to the terms "entrepreneurial" and "entrepreneur" unless the wealth of conflicting research in this area is translated

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effectively into the "broad church" of SME models. As was stated succinctly by Kilby (1971) researchers have both been pursuing different targets and using different methodologies (Watkins-Mathys, 2005). What we have is a wealth of data lacking consistency both of purpose and intent.

Much attention has been focused on understanding entrepreneurial personality either through the unsatisfactory trait approach or through the superior behavioural approach (Davidsson, 2005). However, better results are compatible with mainstream economic rationalisations of the entrepreneur, e.g. the entrepreneur as risk taker (Cantillon, 1751), as innovator (Schumpeter, 1934), as one who uses perception and/or adjustment (Kirzner, 1973) and the various contemporary syntheses of these by Casson (1982) and Binks and Vale (1990). It is these classifications that are adopted here.

We argue the importance of a clear and rational definition of the entrepreneur and entrepreneurial process by showing the impact of such on the relationship between SMEs and their advisers, where the authors allow for interaction between entrepreneurial or non-entrepreneurial advisers and entrepreneurial or non-entrepreneurial clients. This allows for more subtle interactions than often held popularist views like the dynamic thrusting SME constrained in its development by a myopic and over-cautious commercial lender.

SMEs need to seek out information and one of their sources is from interaction with advisers in the private, public or quasi-private sectors of an economy (Acs and Audretsch, 2005). This article argues the critical importance of matching advisers and SMEs by reference to their entrepreneurial capacities. A novel method for capturing this has been suggested. For SMEs, this assesses their ability to think divergently, for which we use the Torrance Test. This could be considered a necessary but not sufficient approach, and so we would suggest that as a second stage check, the SME be asked to articulate their vision for the business.

This article seeks to set out a framework that helps to reconcile the often conflicting definitions surrounding entrepreneurs and entrepreneurship (Welsh, 2004). Whilst our understanding of entrepreneurs can come from several disciplines, this article adopts a set of characteristics and actions that are compatible with more rigorous economic definitions. This approach allows the reader to employ judgement as to whether the authors' views on "less satisfactory" definitions represents a positive or normative contribution to the debate.

In practice, despite their preferences, the authors argue that what is needed is not the acceptance of a single unambiguous definition of the entrepreneur, but a transparency of approach so that we are all aware of what phenomena each of us believes that entrepreneurship embraces. Albeit this still leaves a possibility for confusion as noted by Kilby (1971) cited in Hebert and Link (1982). For those countries less embracing of A.A. Milne's Winnie the Pooh books, it is the notion of us all employing our own particular definition of the entrepreneur and in the process disregarding other equally valid definitions that leads to the confusion in the hunt! However the Heffalump metaphor has an endearing and lasting place in contemporary entrepreneurship theory.

"The search for the source of dynamic entrepreneurial performance has much in common with hunting the Heffalump. The Heffalump is a large and rather important animal. He has been hunted by many individuals using various ingenious trapping devices, but no one so far has succeeded in capturing him. All who claim to have

caught sight of him report that he is enormous, but they disagree on his particularities. Not having explored his current habitat with sufficient care, some hunters have used as bait their own favourite dishes and have then tried to persuade people that what they have caught was a Heffalump. However very few are convinced, and the search goes on."

Entrepreneurs are recognised by their actions and not their characteristics (Virk, 2004). Gartner (1989) demonstrated that this approach was more logical and consistent than the trait method. In 2001, he chastises the academic entrepreneurial community for their wide ranging and inconsistent definitions of the entrepreneurial process but through the medium of elephants rather than heffalumps! Here Gartner uses the better known metaphor of the blind men and the elephant, where the blind men only able to understand the elephant by touch, see it variously as a snake, a tree trunk, and so forth, depending upon where they touch. Interestingly Mintzberg *et al.* (1998) employ this metaphor in the context of schools of strategy.

We propose that SMEs seek advice because information is asymmetric in its distribution, and they do so whenever search and decision costs can be lowered through seeking advice. Thus one behaviour/action of an entrepreneur is to seek information. Extending this view, we argue that because entrepreneurs are actors in the market, and actively seek information about customers, products, costs, etc., they are involved in the marketing function. Logically, more entrepreneurial companies will use marketing techniques and employ and benefit from them more consistently than less entrepreneurial firms. In support of this view one could cite the work from colleagues interested in the entrepreneurial marketing interface in both the UK and the USA, for example Hills (1995) argues that the fate of the small business is often determined by their ability to be both competent entrepreneurs and marketers. When defining entrepreneurship the authors make use of this extension.

Companies will, therefore, seek and learn from diverse informational sources, both externally from the market, customers, advisers, etc., and internally from production processes, colleagues, and so on (Acs and Varga, 2005). This article concerns itself both in how they acquire and use external information and in particular external advice from advisers.

Taxonomies of entrepreneurial behaviour

The authors sought to find methods of identifying entrepreneurial behaviour that could be applied equally to SMEs and their advisers that although simple and robust, could be considered to have compatibility with, and draw upon, extensive academic debate and literature in this field (Davidsson, 2006). To this end, for the SME we have adopted a dual definition in a similar manner to that used by Pinchot (1986). When discussing intrapreneurship, he required entre/intrapreneurs to be doers and visionaries. This "necessary but not sufficient" test would ensure that both artists – who he considered to be visionaries but unable to translate that into practical outputs, and artisans who exhibited the reverse characteristics hard work, would not classify as entrepreneurs. It is the entrepreneur who has the winning combination of action and vision. In this article the authors' propose a measure of a person's predisposition to a particular thinking style, either convergent or divergent combined with whether they can articulate a business vision. This second check is not unlike the approach taken by

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the Babson GEM Consortium in their Global Entrepreneurship Monitor (2004) as they distinguish between the small business and the entrepreneurial small business

The Marshallian view is that markets are in equilibrium or move to equilibrium rather rapidly. The Schumpeterian view is that markets move from periods of equilibrium through periods of discontinuity to new equilibrium states. The Austrian (Kirznerian) view is that equilibrium is not the natural state of markets. Rather, it is disequilibrium, and the role of the entrepreneur is to discover and exploit such information asymmetries, and by so doing, bring the market to eventual equilibrium. Schumpeter (1934) argued that the role of the entrepreneur is to innovate, and in so doing move the economy from one equilibrium to another via a period of disequilibrium (see also Brown and Ulijin, 2004). Such innovation could come about from one or more of the introduction of a new product; a new method of production; the exploitation of a new market; the use of new source(s) of raw material, and the reorganisation of an industry or its processes. He also distinguished between the entrepreneur and the capitalist; the latter being the provider of capital, and ascribed the taking of risk to capitalists since it would be they who could lose their capital (Alvarez, 2005). For Kirzner (1973) and the Austrian School the entrepreneur exploits information asymmetries in markets that are by their very nature in disequilibrium. Such a view of markets is the antithesis of the view held by Adam Smith. There is a fundamental difference in approach in that the Schumpeterian entrepreneur seeks to destroy an equilibrium situation whilst the Kirznerian entrepreneur is operating in a market assumed to be in disequilibrium (Smith, 2005). Therefore, their role is to exploit the informational imperfections and to bring the market to eventual equilibrium. Figure 1 and subsequent discussion suggests perspectives from which we can address definitions of entrepreneurs.

1. Trait theory

At a naïve level it seeks to select relevant traits and to argue that these occur in a sufficient number of repeated cases to capture the uniqueness of the entrepreneur. For example, many entrepreneurs are male, showed entrepreneurial behaviour in their teens, exhibited a need to prove achievement to their father, are married, come from an ethnic minority, etc. Whilst these may be true, they are not sufficiently reliable to act as predictors of entrepreneurial capability and they lack a coherent theoretical underpinning

2-3. Personality and behavioural

This is superior to the trait approach and this article focuses on such behavioural definitions. Here we are concerned with what the entrepreneur does and not what they are, and better economic definitions parallel this approach. Economists have argued that entrepreneurs innovate or exploit information asymmetries, whereas Gartner (1989) raises the issue of behavioural definitions particularly well in the entrepreneur created organisation. Thus, the entrepreneur is distinguished from the small business owner in the general run of events. Gartner's well made analogy of the difference between the trait and the behavioural approach is between describing an American football player by his physical characteristics compared to the obvious view that if someone plays football, he must be a football player. Gartner's objective is to refocus academic thinking about characterising the entrepreneur and to ask what it is about

1	Trait	Search for common traits of successful entrepreneurs	Lacks predictive power & tends to produce 'larger than life' profiles
2	Personality	Search for a definitive entrepreneurial personality	Superior to trait and can handle complex psychological dimensions
3	Behavioural	Focusing on what they do and not on what they are	Superior to trait and compatible with the better economic definitions
4	Competencies	That entrepreneurs have equal, but different competencies to non-entrepreneurs, managers, or others operating in a large business environment	Multidimensional e.g. Carson *et al.* (1993, 1994, 1995), or uni-dimensional e.g. focus on, say, growth ability. (Hill, 2001)
5(a)	Economic Compliant	That entrepreneurs have a different attitude to risk/uncertainty; innovation/disruptions, and exploit informational asymmetry	Separate mainstream economic schools – Knight (1921), Schumpeter (1934), Kirzner (1973)
5(b)	Economic Compliant – Synthesis	As above, but synthesising more than one broad school of thought, examples being Casson (1982), Binks & Vale (1990), Omura (1994) and Drucker (1986)	Drawing from more than one school and taking a holistic viewpoint
6	Strategic Management Compliant	If entrepreneurship is valuable, then larger firms will seek to gain from its application (intrapreneurship). The nature of the relationship between entrepreneurship & strategic management	Growing importance in strategic management literature e.g. Jacobson (1992); Miles and Covin (2002) although intrapreneurship has a more established history e.g. Pinchot (1986)

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Figure 1.
Entrepreneurial definitions

organisation creation that is different to just running the business. Providing that we focus on the behavioural, and not the trait dimension, then we could consider other entrepreneurial functions than just the creation of the business, but we need to be very certain that they are entrepreneurial actions. The problem is accentuated, as Gartner points out, in that it can be difficult to separate out valid traits from their behavioural counterparts: "How do we know the dancer from the dance?" But his work created a needed paradigm shift.

4. Competencies

Entrepreneurs may well make different decisions and use different decision making processes than non-entrepreneurs. Many authors exploit this dichotomy to distinguish entrepreneurial from non-entrepreneurial individuals. For Casson (1982) the entrepreneur carries out those actions that cannot be sub-contracted to other employees – that is his or her judgmental skills. Carson *et al.* (1994, 1995), argue that there is a distinguishable set of marketing competencies that exist alone for the entrepreneur or entrepreneurial SME; namely a unique combination of judgement,

experience, knowledge and communication. Hill (2001, 2002) summarises well this school of thought.

5(a). Economic-compliant

To try and summarise an understanding and role of the entrepreneur in economic terms is difficult, but the authors draw attention to some key issues (Hougaard, 2005). Initially, economics serves the entrepreneur badly. Richard Cantillon (1751) writing just prior to Adam Smith (1776) was an exception and he argued that the entrepreneur, in essence, working with existing products in existing markets, bought at certain prices and sold at uncertain prices, therefore, assumed the role of risk taker. Their alertness to profitable transactions brought "demand" and "supply" into equilibrium from previous disequilibrium situations, which created an opportunity.

The work of Adam Smith and subsequent followers all but drove out the entrepreneur from economic analysis, not through ignorance or deliberate intention, but as a consequence of philosophical persuasion and necessity. Smith's great contribution was to show that even with selfish consumers and selfish producers, each only interested in their own wellbeing, they could strike acceptable bargains through a decentralised market system and this would tend to equilibrium. Not surprisingly, the infant social science adopted the conventions of the physical sciences and embraced Newtonian concepts of order and equilibrium. Subsequent development of microeconomics through a mathematical routine drives out the human qualitative side of the entrepreneur, who becomes merely a calculator and maximiser responding to, but never creating, consumer needs (Parker, 2005). As eloquently summarised by Baumol (1968):

> One hears of no clever ruses, ingenious schemes, brilliant innovations, of no charisma or any other stuff of which outstanding entrepreneurship is made; one does not hear of them because there is no way in which they can fit into the model.

Knight (1921) distinguished between risk (that is insurable) and uncertainty. Thus, the entrepreneur operates in an uncertain environment making judgements about future profitable situations.

5(b). Economic-compliant – synthesis

Several contemporary authors have attempted to synthesise the broad schools of thought. Casson (1982) achieves this by employing an encompassing definition:

> An entrepreneur is someone who specialises in taking judgmental decisions about the co-ordination of scarce resources.

Binks and Vale (1990) take a hierarchical approach that is summarised in Figure 2, that as well as incorporating a Schumpetarian dimension is also amenable to an Austrian interpretation. The refining role serves to remind us that entrepreneurism is not a continuous activity and is more likely to be discontinuous. Omura (1994) uses both Schumpeterian and Austrian dimensions as can be seen in Figure 3.

6. Strategic management-compliant

Whilst traditional strategic management literature has been concerned with areas such as leadership, culture, innovation, new product development, vision and creating a competitive edge, it has often not explicitly drawn this out in a formalised

entrepreneurial framework (Shane and Delmar, 2004). A quick, albeit imperfect test, is to take the index of either of two popular UK strategy texts, Thompson (1993) or Johnson and Scholes (1999) and to note that whilst the concomitant topics are there, and often entrepreneurs are used as examples, a unifying framework is not. Accepting that one role of these texts is to give a broad overview of the subject area, then this is indicative of the importance ascribed to an explicit entrepreneurship framework. On the positive side, the components are there and the strategic management literature considers entrepreneurship more formally. We note a few indicative contributions: Mintzberg (1994a, 1994b) proposed new definitions of planning and strategy and organisational changes in systems, culture and leadership to enact these. In Strategy Safari (1998), the entrepreneurial school of strategy with vision as a distinguishing feature is offered but not integrated into traditional strategy thought. Goddard and Houlder (1995) consider the nature of strategy and the role of the strategist. Jacobson (1992), Levy (1994) and Kippenberger (1993) all consider issues of change, turbulence and unpredictability. Finally, whatever strategic planning does or does not do, Miller and Cardinal (1994) demonstrate that it does have a positive influence on a firm's performance (see also Chandler *et al.*, 2005; Delmar and Shane, 2004; Honig *et al.*, 2005; Honig and Karlsson, 2004).

An important consideration is that of intrapreneurship and the debate as to whether entrepreneurs can co-exist within a large corporation and bring to that organisation the benefits and drive of the individual entrepreneur. Pinchot (1986) demonstrated that this
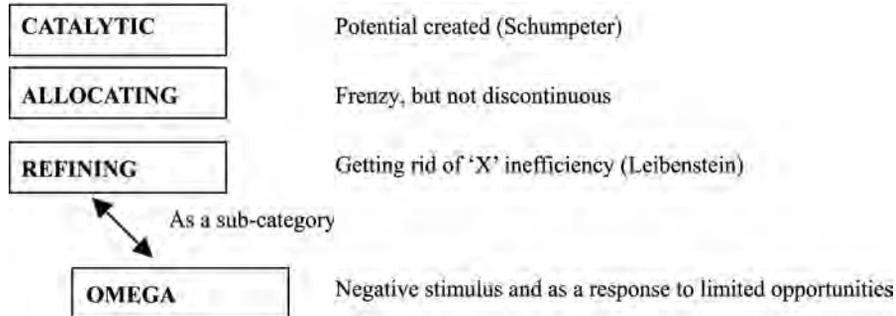
Figure 2.
Binks and Vale synthesis of entrepreneurial types

Figure 3.
The Omura grid with Kirznerian and Schumpeterian dimensions

is possible, particularly when some of the assumed traits of the entrepreneur, such as a singular desire to maximise their own monetary wealth are dismissed. Equally, for achievement driven entrepreneurs then they may be better able to achieve their goals within a large organisation. Carrier (1994) convincingly argues that intrapreneurship is a valid notion for even small to medium sized firms and provides a useful definition of intrapreneurship:

"The taking in charge of an innovation by an employee or other individual working under the control of an enterprise. Innovation in this context means the introduction of a change leading to an increase in the firm's competitiveness."

In conclusion the authors' argue that: unless the term entrepreneurship is defined explicitly then studies are difficult to compare. They may be incompatible and hamper the understanding of small business behaviour, particularly the entrepreneurial small business. Economic compliant definitions of entrepreneurship that emphasise information seeking, innovation, discontinuity and disequilibrium are to be preferred.

The relationship between the small business and their advisers

The relationship between advisers and SMEs can be critical to their success, and we need to consider both the type of decision and the degree of entrepreneurial behaviour of both the SME and their advisers. In this way we might be able to ensure that appropriate advisers are matched both to the business and the decisions that need to be taken. Entrepreneurial businesses behave in different ways to non-entrepreneurial businesses and it is essential to distinguish between the two. This differing behaviour will result in different needs to be fulfilled by advisers (Sibley-Butler, 2005). If one considers that advisers can demonstrate different degrees of entrepreneurial behaviour, the question of matching becomes more important. The propositions are:

(1) An understanding of SME/adviser relationships will lead to better, more measurable outcomes in respect of quality decisions and the viability of the business measured in terms of financial success, survival, etc.

(2) This relationship depends upon two broad factors:
   - the nature of the decision; and
   - the degree of entrepreneurial capacity as demonstrated by: the SME; and the adviser.

(3) Both matches and mismatches will occur in the advice given and sought.

In order to demonstrate (1)-(3) above we need to be able to:
- measure entrepreneurial capacity/behaviour for, the SME and the adviser;
- develop a schema to identify matching and non-matching outcomes in the adviser/client relationship; and
- be able to link adviser advice and SME performance.

We now develop issues involved in achieving these aims.

One could attempt to proxy entrepreneurship by capturing Austrian (Kirznerian) information seeking behaviour and Schumpeterian product and market behaviour to provide empirical validation of Figures 3 and 4. However, the authors are proposing the use of convergent and divergent labels coupled with vision articulation to proxy entrepreneurship. If creative/divergent thinking is coupled with an ability to clearly

SMALL BUSINESS

	Convergent Thinker	Divergent Thinker

SMALL BUSINESS ADVISER

	Convergent Thinker	Divergent Thinker	
Convergent Thinker		A	B
Divergent Thinker		C	D

Category	General comment	Positive and negative outcome examples
A	The small business is not entrepreneurial by the strictest definition. Casual empiricism would suggest that this represents the majority of business start up and survivals	**Negative:** average performance; complacency disguises real threats to survival **Positive:** comfortable match between the two parties; solid performance
B	A combination where adviser and business person could be in real conflict, with neither understanding the other's frame of reference	**Negative:** could be potentially disastrous **Positive:** synergistic with the adviser reigning back the worst excesses of the business person
C	A combination that could produce worrying results	**Negative:** at worst it could leave the business floundering when support ceases, or is not immediately available **Positive:** at best the adviser could inspire the venture to achieve better results
D	Where both the adviser and the business person are of the same entrepreneurial nature	**Negative:** both might not be, or care to be, aware of day to day control issues **Positive:** immense synergy and creativity

Figure 4.
The adviser/small
business –
convergent/divergent
matrix

articulate an entrepreneurial vision for the company, the authors are more convinced that the convergent/divergent thinking test is a suitable proxy for entrepreneurial behaviour. The advantages of this approach are its simplicity and general applicability whilst being underpinned by appropriate theoretical economic, marketing and behavioural foundations. More particularly, our main hypothesis is that entrepreneurs think in a different way to non-entrepreneurs, and they think divergently rather than convergently. Hence, if a reliable test was available to separate the two, then we would have a way to define entrepreneurial behaviour.

Even with the recent development of parsimonious measures of Entrepreneurial Orientation – which capture appropriate behaviours (Knight, 1997; Kreiser *et al.*, 2002), we believe that employing a convergent/divergent approach has several advantages:

(1) It is more allied to a behavioural than a trait approach, but less constrained by a specific organisational context then conventional measures of Entrepreneurial Orientation. Authors such as Pinchot (1986) and Drucker (1986) would argue that entrepreneurship is a more common attribute in the general population

than one might believe (Sing and Lucas, 2005), and that it does not merely manifest itself in the starting up of a private business.

(2) It could prove to be a simple yet accurate measure, whilst being free of some of the definitional incongruities thrown up by other methods, e.g. as Gartner (1989) contented, those studies that distinguish between small firms and entrepreneurial small firms by distinguishing between the pursuit of personal goals and profit/growth goals.

(3) In applying a test that is initially neutral with respect to the particular entrepreneurial behaviour it is trying to capture, allows us to potentially use the same test on both advisers and their SME clients.

(4) The notion of divergent thinking is generally associated with highly creative individuals, who perhaps rarely subscribe to "conventional wisdom" and tend to be something of "free spirits", often reluctant to "follow the crowd". In contrast, convergent thinkers display the opposite characteristics. Elements of this debate have a certain commonality with, for example, the work of Carson *et al.* (1994) and Brown (2001) on the practice of marketing in entrepreneurial SMEs, namely that their marketing in practice is often more flexible, intuitive and informal than that set out in standard marketing and strategy texts.

The disadvantages of our approach revolves around whether or not we can depict entrepreneurial spirit by recourse to one measure, and the extent to which there are available and reliable psychometric or other tests that can capture divergent and convergent thinking, and we seek to avoid lengthy and detailed test situations. The key constraints are how narrow an approach can be taken before sacrificing reliability, consistency and explanatory power of the data, whilst not losing focus on creativity itself. So, for example, we argue that tests such as the Myers-Briggs test for personality, although it has been used in this context before by a number of small business researchers – is too complex (Myers-Briggs and McCaulley, 1985).

The adviser/small business interaction
Most small business owners interact with an adviser at some stage in its development. Taking the simplest case, we propose a grid as shown in Figure 4. There are four possible matching combinations, each of which could result in either a positive or negative outcome and Figure 4 speculates on these.

Excluding environmental influences, there are four other dimensions that need accounting for:

(1) the interaction may be voluntary or involuntary;

(2) there may or may not be a desire for mutuality of outcome;

(3) the type of outcome sought; and

(4) whether the contact is formal or informal.

Taking the latter first, there is anecdotal evidence that indicates that for very small business these are supported and helped by the spouse, who would be a natural person to turn to for advice. In many situations there is a desired mutuality of outcome. As Molian (1994) hypothesises, small firms that employ consultants are more likely to implement their findings if they perceive a cultural and business fit with their

proposals. The type of outcome sought will also be of importance. A small firm wanting a book-keeping function fulfilled is more likely to seek a convergent accountant than if they are desirous of some legal, yet more creative, accounting scheme. Finally, the context of the interaction may be voluntary when the meeting is sought by the SME, or involuntary where the client has no choice but to attend. Figure 5 illustrates.

Measuring convergent and divergent thinking
The measure we suggest is a simplified version of Torrance's Test (Torrance, 1962, 1965, 1972) but one that would be reinforced by attempting to capture vision. The simplified version can be a "brainstorming exercise" where the reponses by participants are rated according to: fluency (the number of uses quoted); flexibility (the number of categories quoted); and originality of the idea based upon how many or few prior mentions of that idea were generated.

Thinking divergently is a necessary, but not wholly sufficient, criterion for defining the entrepreneur in that the divergent thinking must be within an appropriate context that is contiguous with true entrepreneurial behaviour. Getzels and Jackson (1962) distinguishes between the high IQ and the highly creative child; the former is good at intelligence tests, but weak on tests that set out to measure creativity, whilst the latter is weak as measured by intelligent tests, but strong on creativity. From this he argues for the use of the terms convergent and divergent thinker to describe the process of their thinking patterns. What it is not then possible to do, is to proceed in absolute terms i.e. to assume that convergent thinkers are not, as such, creative and divergent thinkers are, per se, creative. Creativity and high IQ need not be mutually exclusive, and what the measure is trying to pick up is the bias that the individual possesses towards one mode of thinking or the other. Whilst this is potentially confusing, in reality the literature on the entrepreneur reviewed above, and the work by Drucker (1986) could be interpreted as suggesting that entrepreneurship can be seen as a bias rather than an absolute. Additionally, the Schumpeterian entrepreneur over his or her lifetime is likely to switch between pure entrepreneurship and Leibenstein entrepreneurship that is more akin to the management process. In essence, this is
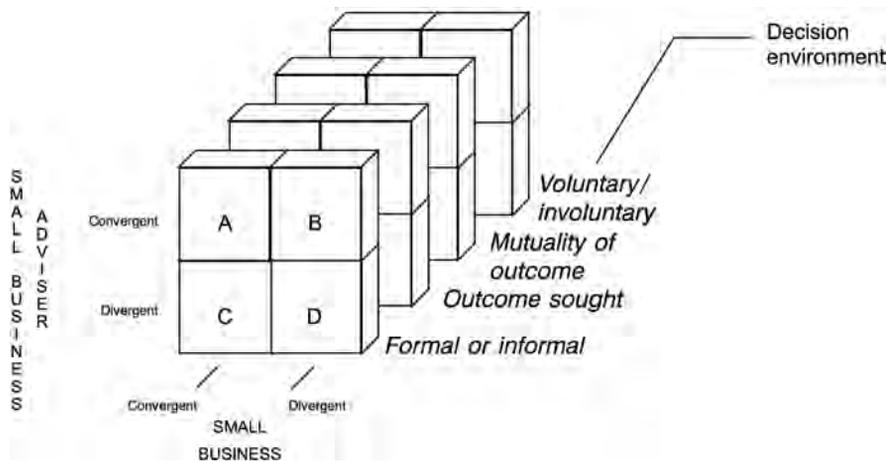
Figure 5.
The adviser/small business – convergent/divergent matrix: a more realistic scenario

exploiting information asymmetries within the organisation, for example, by reducing the costs of production. As with all psychometric and allied tests there are competing tests with often-conflicting outcomes. The simplified Torrance Test that we propose is by no means the only available test. In general, tests for divergent thinking use open-ended scenarios that encourage creative answers, e.g. how many uses are there for xyz; how many meanings are there of word abc; commenting on a particular controversial statement.

Policy implications: the commercial bank relationship; a brief scenario

A brief scenario of where a better understanding of the adviser/SME relationship is important can be demonstrated by the relationship between small businesses and their commercial bank.

We have seen the report by the Competition Commission (2002) into the supply of banking services to small businesses and the forthcoming review by the OFT of those undertakings. Preceding this activity was the so called Cruikshank Bank Review, more formally, "Competition in UK Banking: A Report to the Chancellor of the Exchequer" in 2000 that covered some aspects of the small business/bank relationship. In respect of the current OFT review, the view of the Federation of Small Business, who are never afraid to be critical, is:

> Despite improvements in small business banking in recent years, the FSB believes more can be done to improve services and has pledged to work with the OFT on the review.

Angela Silberberg, FSB Deputy Policy Manager, said:

> The service provided to small businesses by the large banks for many years was disappointing and the progress that has been made in recent years has been good news for small firms. The FSB supports self-regulation by the banks and has found that they have an open and constructive approach to the reviews of the Banking Code. However, we feel that they can do more to protect business customers by ending branch closures and promoting inter-bank agreements, which allow customers to use branches where they do not have an account. We look forward to working with the DTI on ensuring that the banks achieve practical solutions for small firms.

Times have been more difficult, for example, scanning the financial press during the late 1990s made salutary reading. The fourth annual report from the Forum of Private Business published in 1994 based on a survey of 5,500 enterprises, indicated that there were perceivable differences in the treatment of small business customers by banks, but switching costs inhibited many small businesses from changing lender. The head of a major bank "small business services" was reported as saying:

> The most significant constraints on the growth of small business remain low demand, late payment, red tape and lack of skills (*The Guardian*, 1994).

A feature in the *Yorkshire Post* (1994) conveyed, a then, not atypical attitude:

> The banks, for their part, blame business collapses – particularly among small to medium-sized enterprises – on poor management and the failure of company directors to educate themselves on the need for sound financial management. If only business people, especially the smaller ones, would construct proper financial plans, say the banks, they would get the loans they ask for. After all, they insist, there is plenty of money sloshing around. The real problem is finding a worthwhile business to lend to. . . .and from the same source:

Following a Treasury inquiry into the role of banks in small business, Bank of England Governor Eddie George chose not to blame either the banks or small business for the antagonism which has built up over the past two years. He claimed there were 'exaggerated expectations on one side and insensitivity on the other', but believed the main source of the problem was the high rate of company failures during the recession. The relationship between the lender and the borrower has never been an easy one, but now, with banks becoming much more conciliatory, a more open relationship is developing between bank manager and small businessman. Moreover, many smaller businesses are developing a more professional attitude to business, encouraged by the banks, and are acquiring a financial acumen that will help in the banking process. Clearly the wounds will take a while to heal but already the banks have woken up to the ideal of a long-term relationship with a business, and businessmen are learning that honesty does pay – though not always when it comes to a free lunch.

Clearly the relationship has improved over the past decade but we would argue that a better understanding and matching of bank advisor and client based on their perceived entrepreneurial capabilities would be sensible.

Implication of our proposal

We have argued for a better understanding of the adviser/small business relationship particularly with regard to the entrepreneurial capabilities of both parties, and alternative outcome scenarios have been discussed. SMEs in practice seek advice from sources including fully private, governmentally owned and governmentally supported but privately delivered. Thus, the notion of matching appropriate advisers to clients has wide-ranging applicability. A novel way of attempting to measure entrepreneurial capacity based upon divergent thinking ability (backed up by vision articulation) has been suggested, and some important consequences of such a measure have been explored. The main advantage of this approach, apart from its simplicity in application, is its consistency and compatibility with mainstream economic and behavioural definitions of entrepreneurship.

Truly entrepreneurial businesses will behave in different ways to the non-entrepreneurial businesses and have different needs in respect of help and advice from both public and private agencies. Being able to make such a distinction is important both for government policy setting and helping to ensure that expectations for SME performance are met.

Conclusion

In theory we need to be able to understand the meaning of entrepreneurship, and, in practice we need to be able to measure this behaviour. This article started by reviewing briefly key themes in the academic understanding of entrepreneurship and offers a taxonomy through which to classify these. Whilst naïve trait approaches are not helpful, when trying to understand the phenomenon of entrepreneurship we should recognise that complexity, and insights from several academic disciplines means that we do not have to accept a single pedagogic approach but rather we should insist on a transparency of definition and approaches. We propose a simple way of measuring entrepreneurial capacity through considering how entrepreneurs think and behave – divergent thinking. The corollary of this is convergent thinking which can be used to measure non entrepreneurial behaviour.

SMEs interact with advisers all the time and both need to maximise the outcome of the relationship and so we propose a "matching" of adviser to SME that accounts both for their respective entrepreneurial capacity and the situation for which advice is sought. The optimal outcome is by no means simply achieved by matching "like-for-like", that is only entrepreneurial advisors with entrepreneurial SMEs. Thus we explore more subtle combinations in our matrix. We illustrate some of our views by considering an important relationship – that of the small business and their bank.

Further research would be to actualise the matrix and to see the extent to which our simple measure of entrepreneurial capacity was superior or inferior to more established scales such as entrepreneurial orientation. Even as a conceptual model we hope that this article would help advisers to consider how best to help the SME and to understand the implications of their and their client's entrepreneurial capacity and particular needs.

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A marketing strategy for public sector organisations compelled to operate in a compulsory competitive tendering environment

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Introduction and issues

This article suggests that one neglected area is the entrepreneurial ability and capacity exhibited by public sector personnel. This sector is amenable to analysis through the application of the same concepts and theory as applied currently to the private sector. Indeed, in the area in which this paper concentrates, the government is attempting to instil those very disciplines. The UK economy has been undergoing substantial change in respect of the ownership of its public services with many key sectors now having been privatised or subjected to competitive pressures through, for example, arrangements such as Compulsory Competitive Tendering (CCT). Other examples are the devolution of financial budgeting decisions to schools, the development of the regional Training and Enterprise Councils (TECs) which look after the provision of skills training for the workforce and reforms in national health care and local doctors' surgeries.

An interesting research topic therefore is the extent to which the behaviour of these organisations has moved towards becoming more entrepreneurial. Economics literature is quite clear about why their efficiency may well improve through the change in ownership and re-distribution of property rights. Equally changes to the underlying competitive dynamics of their industry structure will affect behaviour. However, it is much less certain as to the entrepreneurial outcomes. Casson (1982) and Drucker (1986) hold opposite views on whether entrepreneurial characteristics are unique, and in short supply, as opposed to the view that all individuals have some predisposition to entrepreneurial acts given the appropriate trigger(s). Schumpeter (1934) and Kirzner (1973) define

the basic entrepreneurial act in relation to the market and competitive conditions and information acquisition and opportunity exploitation respectively.

This paper examines one particular change in one part of the UK public sector and pays particular attention to one management task – marketing. A recognition, and practice, of this could be considered a precursor to becoming entrepreneurial. Through the frameworks offered by Omura *et al.* (1994) and Sashi and Lazer (1991) a formal link can be made into the marketing/entrepreneurship interface.

The organisation covered is the South and West Yorkshire Local Authority Training Consortium. This covers the geographical area that was previously administered by these two primary level metropolitan counties. Since reorganisation their functions as appropriate have been assumed by the nine metropolitan district councils that were once their second tier. These district councils are divided into 92 (South Yorkshire) and 82 (West Yorkshire) smaller administrative districts. South Yorkshire has a population of approximately 1,300,000 citizens and West Yorkshire about 2,096,000 citizens.

Compulsory competitive tendering
General background
As Thomson (1992) argues eloquently the UK over the past decade and a half has been characterised by the desire of the state to "roll back its frontier" and there has scarcely been an area of the public domain that has remained untouched: central and local government, health, education and training and the professions. She goes on to argue that the themes of this government policy can be classified as privatisation, delegation, competition, enterprise, deregulation, service quality and the curtailment of trade union powers. These themes in themselves being underpinned by the three principles of: efficiency, effectiveness and economy, which could themselves be summarised as a search for value for money.

Richards and Rodrigues (1993) in an attempt to unravel the puzzle of why:

> ... in the current policy for management in the Civil Service ... have market forces, as in the current competitive tendering initiative, come to the fore, when management reform has previously been designed on the basis of change through centralised planning?

utilise the idea that one can distinguish between (as Hirsh, 1979) a Type A and Type B strategy, where:

> Type A Strategies – centrally directed planning

> involve strengthening the capacity to plan by establishing control over the definition of purpose, and devolving implementation within a tight framework. (Such) strategies have been applied where the Government's levers of direct control were powerful enough to achieve the purpose, as in the case of central government's direct employees. The common methodology is the establishment of strong corporate management, and the development of devolved budgetary systems which establish a clear chain of responsibility and management accountability for performance. For example: the reforms in the National Health Service from 1983 which focused on the creation of a framework for corporate strategic management and control.

Type B Strategies – market competition

involve the introduction of a framework of competition in markets so designed as to produce efficiency-seeking behaviour. Sometimes this involved privatisation into private markets; sometimes privatisation into non-competitive circumstances, which required regulation: sometimes the creation of statutory frameworks requiring competitive tendering for services which formed part of the public service in question, such as office-cleaning or security. For example: CCT in local authorities.

CCT in particular

Competitive tendering has been a part of UK government procurement for many decades and not necessarily linked to Conservative governments; for instance, the Labour party contracted out the cleaning of central government offices in 1967 (Bailey, 1995). From 1979 onwards the Ministry of Defence was concerned with contracting out support and ancillary services traditionally conducted in-house (Uttley, 1993). Hospital support services – catering, domestic services and laundry were out to competitive tender from around 1983. From the 1980s a small but significant number of local authorities were competitively tendering refuse collection either to outside contractors or to their own in-house operators.

The watershed, as it were, is when competitive tendering becomes a policy of compulsory competitive tendering required by statute. The Local Government Planning and Land Act of 1980 required that local government-related construction services were subject to CCT. The Local Government Act of 1988 extended CCT to the maintenance of grounds and vehicles, the management of local authority sports and leisure facilities, catering and the cleaning of streets and buildings, other cleaning and refuse collection.

CCT has been extended to white collar services with implementation dates between April 1996 and April 1997. As is normal, arrangements are in place to ensure the fair specification of the scope and nature of the contracts; that contract values below a certain monetary value (the *de minimis* rule) are excluded: certain functions are excluded and a detailed implementation timetable is set. Unlike the manual services which were subjected fully to CCT, only part of the white collar services need to be "CCTed" and this has been done by reference to:

taking account of the amount of work that can be readily subjected to tender, and to ensure that there is adequate provision for the internal client-side management of the service, as well as to provide for core democratic processes (Walsh, 1995).

Percentage of work to go out to CCT

Legal services	45	Construction and property services	65
Financial services	35	Information technology services	70
Personnel services	35	Housing management	95

There are important additional offsets that are allowed since local authorities can credit certain existing categories of work as if they had been subjected to CCT; these are:

- work already performed by private providers;
- work that is done for schools under delegated budgets (LMS initiative);
- work that is provided for other local services that themselves have been subjected to CCT.

The gains from CCT

These can be considered as cost based, choice based and structural. The UK government has an ideological commitment to the benefits of competition whilst having seen that those local authorities that had tendered out services in the early 1980s had realised cost savings (Szymanski and Wilkins, 1993). Structural issues concern whether one can consider a marketing culture and ethos to be acceptable:

> the welfare state was the expression of the fulfilment of citizenship rights, emphasising equity and equality, and the importance of meeting basic needs if people were fully to be members of society... The relationship between the state and its citizens was not to be one of free exchange, as happens in markets, but one of mutual obligations and duties. The basis of state operations was to be political decision and implementation through bureaucratic organisations, operating without partiality. The state bureaucracy operated on the basis of plans rather than markets, ensuring that equity and fairness were maintained. Citizens were seen as having obligations, as well as rights within the public realm, for example the payment of taxes. The state expressed the collective nature and the mutuality of obligation of society (Walsh, 1991).

Cost savings from CCT

Some of the best debate and data in the UK centre on the case of refuse collection, with data drawn from the period prior to 1988. Thus the sample consists of those local authorities which had voluntarily contracted out its service, offered the work for contract but awarded it to its own internal team and those which had not sought tenders.

Szymanski and Wilkins (1993) provide a useful summary and extension of this work. The methodology used to determine cost savings is both econometric and quantitative using production functions and isoquant analysis and qualitative drawing from case study examples. Researchers encountered the usual problems concerning data set reliability; identifying immediate effects that may differ from medium- to long-term effects, particularly when the contracts are renegotiated; and the usual specification problems as theoretical economic models are translated into testable propositions. Therefore as might be expected the sizes of estimates vary; however, their direction does not, with studies indicating cost savings. One typical set of estimates from Domberger *et al.* (1986) for refuse collection suggested cost savings of 22 per cent where the work had been tendered out to private contractors and 17 per cent savings where the work had been won by the in-house team. Ganley and Grahl (1988) criticised this work on two counts, first on the data set used and second on the sources and nature of the savings, and it is this latter criticism that is relevant for this paper. More specifically they argued that cost savings arose only because:

improvements in local costs have been realised through pressures in labour markets rather than through competition: in many cases this meant large-scale redundancies and a deterioration in working conditions; private contracts had been won only through loss-leading behaviour; and, the quality of services had been reduced by contracting out, demonstrated by the high levels of complaints and payment of significant penalties for under-performance. (cited in Szymanski and Wilkins, 1993).

Having taken account of these data-handling criticisms Domberger *et al.* (1988) on re-estimating their equations found little difference; however, particularly amongst the critics of the following CCT legislation, the second set of criticisms have found currency. Szymanski and Wilkins (1993) conclude, *inter alia,* that using data in the four year period immediately prior to the 1988 Act:

- competitive tendering and contracting out reduced unit costs by around 20 per cent;

- in-house providers have a smaller impact on the level of costs than contracting out, but the difference is not statistically significant at 5 per cent;

- some evidence that renewed contracts are let at a higher price suggesting either deliberate or unintentional initial underbidding;

- most cost savings for contracting out can be associated with productivity improvements.

CCT and marketing, and entrepreneurship, and the interface
It is not the purpose of this paper to argue whether the public sector has been, is now or has ever been capable of being entrepreneurial. We can all find anecdotal examples to illustrate our favourite position. There have, however, been papers presented in 1995 at both this Workshop and the Babson Frontiers of Entrepreneurship Conference that show that the public sector either on its own or in collaboration with private sector partners is so inclined.

If we describe organisations by an ownership variable (private or publicly owned) and by a competition variable (competitive or non-competitive market) then it serves to remind us that being non-competitive can be as much the prerogative of the private sector as the public sector.

A more difficult issue is the type of goods and services provided by the public sector. Classifying goods as rival (person A's consumption reduces the stock until more are made) or non-rival and excludable (unless the good is paid for, the consumer can be excluded) or non-excludable gives us purely private goods (rival and excludable) and purely public goods (non-rival and non-excludable). Marketing clearly applies to the first but less clearly to the second since for public goods there will be both "free riders" – who consume but under-contribute to the costs – and forced riders who receive more of the good than they desire. This arises simply because the quantity of the public good supplied is by default the same to all consumers irrespective of their individual preference.

As has been in effect argued above by Walsh (1991) there is some doubt as to the universal application of marketing to the public sector. Scrivens (1991) argues that marketing as outlined by Kotler (1988) will only work when a number of basic conditions are met – at least two parties where one party has something of value to the other party and where both are willing and able to

deal with each other. Additionally each party must be capable of communication and delivery, and each must be free to accept or reject the offer. Since the public sector has functions which do not meet these criteria then the role of marketing as a philosophy, as distinct from a collection of useful techniques, is in doubt.

However, the public sector does for reasons of assumed equity or fairness deliver many goods that can be considered private goods or quasi-private goods and hence amenable to a marketing philosophy.

One advantage of CCT is that it at least focuses the organisation's mind on the notion of the customer and issues such as price and exchange relationships which are at the heart of marketing. The arena is complicated further by the political aspects of the public sector, notions of the public good and responsibility and the fact that much of the output is service based.

The authors have argued elsewhere for a tripartite perspective on the interface covering marketing, entrepreneurship and an organisation descriptor and therefore see no conflict with introducing the interface into this sector of the economy.

Of interest is the idea proposed by Dobson (1996) that in considering the marketing aspect for the public sector marketing should be defined as appropriate by drawing from a standard definition of marketing, a definition of services marketing and one of non-profit marketing.

Thus the customer can be treated appropriately as to whether they are perceived to be a citizen or a customer in the transaction.

There is no doubt that public officials have some sympathy towards an appropriate marketing stance. Dobson (1996) administered an attitudinal survey to marketing related Civil Servants (senior grade eight and above) and 24 responses from 17 departments were received. The sample size allows her only some preliminary conclusions but these are:

> the degree of market-orientation in a government department is dictated by the degree of public/private orientation, the measurability of objectives, the culture of the organisation and finally the need to know and understand customers. The styles of marketing in government can be divided into three segments: services marketing, non-profit marketing and a combination of the two. However, the trend is towards a combination style which aims to provide value for money and a high service level whilst maintaining government ethics.

> Opinions regarding the acceptance and ethical constraints of marketing in government were divided. This was attributed on the whole to a lack of understanding of marketing in government. This causes Civil Servants to be sceptical about the merits associated with being marketing orientated. However, there is pressure to move forward but the process is slow. The fact that marketing is less measurable and tangible than other private sector actions such as costing means that it is subject to much criticism. As a result when this study sought to find out the communications tools employed, the most popular tool was publicity because it was perceived as being relatively inexpensive and less controversial than other communication tools.

Walsh (1995) reporting on his recently conducted survey of the attitudes of 264 managers involved in local government CCT reveals a complex mixture of attitudes, namely:

- the majority of respondents felt that contracting made managers more business-like (76.8%);

- that it made service standards clearer (64.7 per cent);

- contracting had produced positive results in terms of accountability;

- however, 69.8 per cent felt that contracting produced local difficulties:

    - co-operation between organisations was made more difficult;

    - creating administrative problems;

    - making the process of management more complex;

    - creating organisational conflict;

    - making authorities less flexible;

- clients and contractors in some cases differed significantly in their perception of the actual problem area.

In terms of common entrepreneurial frameworks such as Binks and Vale (1990), Omura (1994) and Sashi and Lazer (1991) the current position of much "CCTed" work is in the Leibenstein reduction of X-inefficiency quadrant, perceived and continuous environment (traditional marketing) and the existing products/existing markets (Marshallian and Kirznerian entrepreneurship) respectively.

Given the changes that many organisations have had to accommodate and the concomitant cultural change expected this is not a criticism but a realistic assessment of the current state of play.

The South and West Yorkshire case study
This section describes the situation as discussed by the authors with the South and West Yorkshire Local Authority Training Consortium. All information discussed in the research findings is used with permission. Local authority building and land professionals, such as architects, quantity surveyors, building surveyors and valuers are facing an uncertain and somewhat turbulent future. For the first time in their history they are being forced by the present government to submit to the "market discipline" of compulsory competitive tendering (CCT). Some managers see the new regime as an opportunity, although some see the new conditions as a serious threat to their professional existence. Many departments within this area consider their very survival to be in question, at least in their present form.

There is a real possibility that whole departments will be forced to close or at least "downsize", resulting in much professional work currently carried out by such departments being transferred to the private sector. In an attempt to secure employment and the continued existence of their departments within local authorities, many managers are turning to marketing as a possible solution to at least some of their problems. One of the problems that the new CCT environment managers face is the fact that although their departments have to tender for their own local authority's work along with firms in the

private sector, they are not allowed to tender for the work of their potential competitors in the private sector. The majority of such senior managers have only ever worked in a local authority setting. They know little, if anything, of the subject of marketing except that all of the commercial firms seem to be involved in it and seem to spend quite a lot of money on the activity. Many have therefore reached the conclusion that, to compete effectively in the new competitive world, marketing is a strategic necessity and is generally speaking "a good thing".

The results (Appendix) are from a self-completion postal questionnaire that was administered following an evening seminar with this Consortium. Response was on the low side with 15 completed questionnaires.

Whilst the responses to the questionnaire were positive and showed that the respondents were aware of the need to embrace CCT and gain strategic advantage through the new arrangements we have decided to maintain a degree of confidentiality in respect of the data. Therefore we have reported a consolidated set of results.

CCT postscript

On the 21 May 1996, the Department of the Environment (Local Government Competition Division) issued a Consultation Paper to interested parties concerning changes to CCT for professional (Finance, Personnel, Legal, Construction and Property and IT) and housing management services which included two changes proposed to security work and vehicle management CCT.

They wished to discuss making changes to:

- the percentage of work which must be exposed to competition;
- *de minimis* levels below which CCT is not required;
- credits and allowances which can be offset against the competition requirement.

Essentially these adjustments would make more of professional white collar work subject to CCT and additionally help to realise the expected efficiency gains. As stated in the consultation note, changes were being suggested to:

> bring the effects of CCT into line with their original policy intentions which were to provide a reasonable challenge to local authorities to improve the efficiency and effectiveness of local service provision

and

> not only to increase the volume of work put out to competition but to reduce the complexity of the CCT calculation process so that it is more transparent and imposes less of a burden on local authorities.

The review which was carried out between December 1995 and March 1996 covered all local authorities which were required to implement CCT by March 1996.

The concerns that had been raised and which led to the review were:

- local authorities complained that CCT involved significant costs and was not producing competition;
- private sector bidders and industry representatives complained that local authorities were frustrating competition;
- *ad hoc* surveys and comments by authorities suggested far less work was going out to competition than had been expected;
- these surveys and comments also indicated that significant private sector interest in bidding was not being taken forward to the formal bid stage and almost all CCT contracts were being awarded to in-house teams;
- the Audit Commission expressed concerns about the way that some local authorities were interpreting credits and allowances and said that in many cases the external auditor could not enforce a challenge to an authority's actions because of the wording of credits and allowances.

The issues highlighted by the Review were:

- Less work than anticipated was being subjected to CCT, for example for construction and property service – the concern of this paper – only 9 per cent of the work in London and Metropolitan authorities has been exposed to competition. The requirement being 65 per cent.

- In other separate areas such as personnel and IT, services have been manipulated such that the decision to CCT is virtually at the discretion of the local authority. In housing management around 100 authorities will conclude that they are *de minimis,* which is many more than anticipated.

- Where work is going out to competition there is too little competition for many contracts. Outside of London, the average number of bids including in-house bids were two per Construction and Property services contract.

- In certain authorities all CCT contracts were being awarded in-house; for example 98 per cent of Construction and Property and Legal services work has been awarded to in-house teams.

To just set some of the disliked practices (at least by the DoE) into context with two examples. Where local authorities were doing work for schools which themselves were holding delegated budgets under the LMS (local management of schools) initiative, then this could be counted as part of the 65 per cent requirement. This was on the basis that the schools had already made their (competitive) choice of supplier. However, it was meant only to refer to work that the schools could contract under their delegated budget part of their funding whilst many local authorities interpreted it as all relevant work for schools.

The second example concerns security work where by-laws have to be enforced and local authorities cannot transfer the powers to enforce by-laws. For such security work to be exempt from CCT it must first require the enforcement of by-laws and second personnel must spend 51 per cent or more of their time patrolling so called designated "controlled places". Some local authorities were adjusting work patterns to exceed the 51 per cent threshold and with *de minimis* exemptions were avoiding CCT altogether for security work. The DoE proposal is to increase this ratio to 81 per cent.

Conclusions

CCT is a genuine attempt by the UK government to instil competition and thus to secure the advantages of such in local authorities. CCT is not solely to be found in the local authority sector.

Empirical studies of, in particular, manual services have shown that competitive tendering has resulted in lower costs through greater efficiency. The same should follow through compulsory competitive tendering.

The concept of marketing can be seen as appropriate to the public sector albeit in a modified form and with a concomitant danger that tactical marketing swamps strategic marketing action.

Whilst proponents of CCT recognise the potential gains from the required restructuring of the organisation from being a provider to a facilitator and to the role of the management and enforcement of numerous contracts, little emphasis is placed on the entrepreneurial potential of such moves.

Perhaps it is rather too early in the life cycles of these organisations for such an ethos to be considered. In terms of the conventional models of entrepreneurship germane to the interface we are not yet dealing with organisations that are truly entrepreneurial in the sense of operating in discontinuous markets and meeting unperceived customer needs. That is not to say that entrepreneurial capacity is not there and indeed some authors would accept the reduction of X-inefficiency as an example of Leibenstein entrepreneurship and a legitimate first stage response both in theory and in practice.

In the specific case of building service professionals then they are aware of the need to employ better marketing tactics and strategy in order to compete successfully with private services. Equally they are aware of the existing culture and past and contemporary constraints that will make their task more difficult.

Thus doctrines such as relationship marketing and customer retention should find a cultural fit, particularly where public sector marketing is more about the building of long-term and trusting client relationships.

However, the very real constraints on not being able to compete on an equal basis for private clients will force them into a lop-sided arrangement whereby they can only exploit relationship marketing to hold onto an existing client base.

Whilst it is not entirely acceptable to divorce building service professional CCT from the plurality of values and objectives that political systems need to

accommodate, if central government is seeking a more entrepreneurial response from this group then it should, following a short transitional period, allow them to compete on equal terms in this marketplace.

A marketing
strategy

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Appendix. Results from the questionnaire: open questions.
What has CCT meant or will mean to the organisation ?

- Extra work in preparing for CCT strategies and creating the necessary informative documentation.
- Careful review of all activities and culture transformation.
- Ensuring that all servicing work is properly accounted for, understood and paid.
- Restructuring to reduce costs and potential departmental closures.
- Reduction in staff.
- Reduced productivity.
- Reduced income.

Does marketing have a role to play in the organisation?

- Marketing to other councils.
- Marketing is limited in scope because of legislation restricting service to city/local authority boundaries.
- In creating a loyal customer base and trying to attract new customers.
- With our internal clients and partners such as housing associations.
- Larger role if regulations preventing "cross-boundary" tendering are ended.
- In helping to determine positioning in the new market and with pricing policy, mix of services to be provided and promotion to existing and new clients.
- Only within council and public body projects.

In the new CCT environment, what are the goals of the organisation in the next five years?

- To survive/win CCT tenders.
- To maintain employment of existing workforce.
- To prove to Government that local authorities are efficient and provide value for money
- To maintain existing services.
- Improve efficiency and review traditional working methods.
- Deploy more IT.
- Effectively position ourselves in the new order to take whatever advantage is available.

What is the role of marketing within public sector CCT environment?

- Maintaining existing clients and to prove to them that they receive a better value service than from the private sector.
- Ensure clients know of full range of services.
- Attract new clients.
- To ensure that we are the first choice for the customer.
- Identify new opportunities and threats and to analysis of marketplace and segmenting the service(s) offered.
- Improve "internal marketing".
- Change the mindset away trom marketing as "sales" to appropriate strategic behaviour.
- To communicate the good work we do and to demonstrate breadth of technical expertise and resultant services on offer.
- If legislation changes to market services regionally, nationally and internationally.

Results from the questionnaire: consolidated SWOT

Strengths

Detailed knowledge of market
Established contacts/client loyalty
Experienced staff
Good internal customer values
through links to other council
departments and wealth of in-
house experience
Knowledge of client needs
Knowledge of local authority
procedures
Multidisciplinary services
Quality service/technical abilities

Weaknesses

High overheads and inflexible working and pay
structure
No reward system
Internal structure
Static staffing structure
Unable to employ on temporary contracts
Unions
Leadership
Local government culture and past history/image
Lack of commercial experience
Need to develop commercial culture
No business plan
Restricted market

Threats

Capable competitors
Loss leading and aggressive private
sector pricing
Clients – price sensitive
Traditional image
Lack of commitment by local authority
Takeover by private sector
Declining public sector workload
Further government legislation
Privatisation of other services

Opportunities

A chance to focus on our core skills
Computerisation
Cultural changes
Improved management
Multidisciplinary teams offering client services
Diversification of services
Greater independence from local authority
financing restrictions
Legislation changes that would allow us to tender
for private work
Loopholes in the legislation
Loyal customers
New customers such as housing associations
New markets
Partnership with private sector
Scope for offering a building design service to the
general public/businesses that exploits our ethical
and honest public sector design practice ethos

J (T3/3) Reynolds, P.L., (1987), ''Professional Selling and the Art of Effective Listening'', *Journal of Sales Management*, Vol.4, No. 3, pp. 28-37.

Most salesmen are good speakers, but how many are good listeners? There are many reasons why we are poor listeners. Most importantly, there are several skills we can acquire to make us better listeners.

Professional Selling and the Art of Effective Listening

by Paul Reynolds
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Introduction

Over the years that I have spent in a sales and marketing environment, as a salesperson, in a sales support role and more recently teaching marketing to salespeople on post-experience courses, I have gradually come to realise a very important fact. Professional salespeople are generally very effective speakers but are not necessarily very effective listeners. It would seem that effective listening as opposed to effective speaking is a neglected skill amongst salespeople. A good speaker may not be a good listener and hence will often be a poor communicator.

Effective communication is a two sided affair. While the salesperson uses many forms of communication including charts, films, models and brochures, by far the most important vehicle is the human voice. If you like, professional salespeople, like politicians and even lecturers, are really "professional speakers".

Many elements of sales courses are concerned in one way or another with what a salesperson should say, when they should say it, how they should say it and the best way to go about saying it. However, it is just as important for the salesperson to listen as it is to talk[1]. Not all of us are born good listeners and we are usually happier talking than listening. However, as I hope this short article will explain, good listening skills should be and can be taught and developed. After finishing this article it is hoped that the reader will appreciate that it is not just the way a person talks to customers and potential customers that is the mark of the professional salesperson, but equally how that person listens to what the customer has to say[2].

The Importance of Effective Listening

Most of us think that we listen to what other people say, we may even think of ourselves as "good listeners", but are we really? Proper listening requires a conscious effort on the part of the listener; it is in fact hard work and can often be mentally exhausting. By proper listening I mean *active listening;* when most of us listen we generally listen in a more *passive* sort of way[3].

Reasons for Poor Listening Habits

I am sure that we have all experienced the situation at one time or another where someone is talking to us and for some reason we "switch off" and start to think about something else. In a sense we go into a form of day-dream. Day-dreaming is quite normal and the lapse is usually only momentary. In fact, psychologists tell us that not only is day-dreaming quite normal, it is, in fact, necessary for good mental health. However, there is a time and place for everything. Day-dreaming on your day off can be fun but day-dreaming in the middle of an important sales meeting or when a customer is explaining a technical problem to you is quite another matter. Why do we often have a tendency to "switch off" and lapse into a sort of day-dream? If we understand the causes we have a much better chance of avoiding it. Possible causes are as follows:

The Listener Wishes the Speaker would get to the Point

Salespeople often work within one industry, or even for one firm, for a considerable period. Over the years they develop not only "selling" skills but also technical expertise. When you are an expert it is sometimes difficult to communicate with a non-expert. When talking to a fellow expert a person often skips over elementary points because he "takes them as given".

However, a potential customer may be trying to explain something to you that is new to him or her. Simple points which you may have heard from other such customers time and again are none the less new and very important to the customer. In such a situation there is a temptation for the salesperson to think "I wish he would get to the point" and switch off. The really professional salesperson will listen properly and use the extra mental time not needed for comprehension really to digest what is being said and *learn* something.

The Listener Thinks he has "Heard It All Before!"

In a way, this is similar to the first point. A salesperson deals with a finite range of products but often a very large number of customers. Obviously many customers' problems are likely to be similar. To the customer the situation may appear unique; to the salesperson it may well be a case of "I've heard it all before".

A poor salesperson will switch off and think about something else. In reality, it is unlikely that the salesperson has really "heard it all before". Every sales situation is different. Many are similar but none are the same. The professional salesperson treats every situation as if it were a "one off". It is only the poor or average salesperson who is naive enough to think he has "heard it all before!".

The Content of What is being Said is Perceived by the Listener as Boring

Boring it may be but that does not mean that what is being said is unimportant. Professional salespeople should be mature and realistic enough to accept that not everything they have to listen to is going to be interesting. They usually have the good sense, however, to listen to everything that is being said whether they regard it as being "boring" or otherwise.

The Subject Matter is too Technical

Trying to understand a complicated topic takes great mental effort and concentration. A student can "switch off" and "doodle" on his notepad. The salesperson can nod his head in agreement and may get away with it. However, simply nodding your head in agreement achieves nothing. The speaker continues talking, taking your non-verbal response as meaning you have understood. The salesperson is then faced with the embarrassing task of coming back to the customer to "clarify" certain points. This, of course, would have been unnecessary if the salesperson had *listened effectively* to what was being said in the first place. If the topic the customer is discussing is just too technical or complicated for the salesperson to understand, the true professional does the sensible thing and obtains assistance from Head Office.

Using Non-verbal Cues as an Aid to Effective Listening

If the potential customer is so engrossed in talking to the salesperson that he or she does not really notice the salesperson's lack of attention, then the salesperson may get away with "passive listening". However, more often than not the customer will eventually realise that the salesperson is not really listening. This lack of attention could cause considerable offence and may even lose the salesperson the order. During sales presentations or negotiations day-dreaming can work out quite expensive in terms of lost business!

During customer contact, the true professional not only makes sure he is listening to everything the customer has to say, but actually *shows* the customer he is listening through non-verbal forms of communication. Non-verbal communication includes such important things as eye-contact, facial expressions, hand movements, head movements and other forms of "body language". Using such non-verbal cues, the salesperson is able to signal his or her understanding of what the customer is saying without actually speaking a word. The salesperson who is really adept at using non-verbal communication can, to some extent, regulate the speed of the conversation and the depth and detail of the customer's discussion without verbally interrupting him.

The proper use of non-verbal cues shows the speaker that the listener is really *actively* listening and not just being polite or going through the motions of listening. This encourages the customer to "open up" and discuss points in greater detail. Eye movements and facial expressions are particularly useful in encouraging the customer to talk *to* you rather than *at* you.

The Psychological Effect of Post-Listening

The American psychologist, Abraham Maslow[4], sought to explain why people are driven by particular needs at particular times. Maslow put forward a theory that human needs were arranged in a hierarchy from the most pressing

to the least pressing. In their order of importance they are: Physiological needs, Safety needs, Social needs, Esteem needs and Self-Actualisation needs. The theory explains that a person will try to satisfy the most basic but none the less most important needs first, such as food, water and shelter. When such needs are satisfied, the person will then be motivated to satisfy the next most important need. Maslow's hierarchy of needs is shown below in Figure 1.

Figure 1. *Maslow's Hierarchy of Needs*[5]
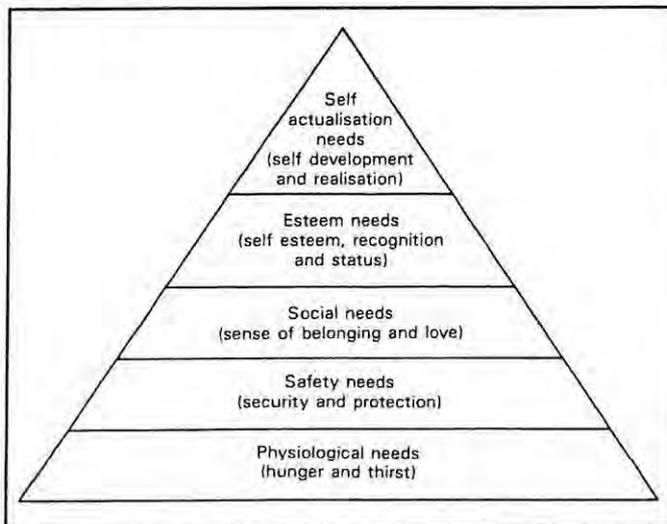
Maslow's idea of a hierarchy of needs goes some way towards explaining the deep-seated need to be really listened to which we all have. This need to be listened to forms part of Maslow's categories of:

(a) Social needs

(b) Esteem needs.

When we know that people are not *really* listening to us, or if someone continually interrupts us when we are trying to get a point across, it can have a deep psychological effect on us[6]. When someone is obviously not paying attention we often take it to mean that they do not regard what we have to say as worth listening to.

This is precisely how customers and potential customers feel if a salesperson loses concentration or has a tendency to interrupt and not let them finish. Customers have needs like anyone else, and a need of paramount importance is the need to be listened to.

Why do People Generally Prefer to Talk than Listen?

In Western societies children are brought up in an atmosphere of healthy competition. At school and at play children are encouraged to "do better" and to excel. Capitalist democracies are based on the principle of competition. We are taught from an early age that in order to compete effectively we must be assertive.

To be able to talk effectively and to be assertive is often thought of as power. To listen is sometimes thought of as being passive and compliant. Hence in our adult lives we seem to have a conditioned resistance to effective listening behaviour because our schools and universities tend to produce good speakers but not such good listeners.

When we are talking rather than listening we tend to get the feeling that we are in control of the situation. We feel that people are listening to our views and opinions and hence things have a good chance of "going our way". The problem is that in talking we are satisfying our own needs but often fail to consider the needs of others. Generally salespeople aim to satisfy customers' genuine needs and wants by offering goods and/or services that fit their precise requirements. But salespeople must remember that customers have needs over and above those that can be satisfied with a product or service. As we mentioned earlier, one of these needs is the need to be listened to, and a failure to listen properly can lose business.

Summary

The professional salesperson should be skilled in the art of sales communication. Communication is a two way process. While it is of paramount importance that a salesperson is able to talk effectively, he must also be able to *listen* effectively[7]. *Active* listening, as opposed to what we might term "passive listening" requires a conscious effort on the part of the listener.

Every person has the psychological desire and need to be acknowledged and listened to. The professional salesperson will take note of this fundamental but important fact and strive to develop good listening habits. Sales management and those responsible for the provision of sales training, whether in-house or otherwise, can play their part in improving the effectiveness of their sales personnel's communication skills by ensuring that courses on the importance of "effective, active listening" become an intrinsic part of any training programme.

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Predictive strategic marketing management decisions in small firms

A possible Bayesian solution

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Abstract

Purpose – The purpose of this paper is to suggest a framework for sales forecasting more suitable for smaller firms. The authors examine the sales forecasting practices of small firms and then proceed to discuss the application of Bayesian decision theory in the production of sales forecasts, a method arguably more suited to the smaller firm. The authors suggest that many small firm entrepreneurs are inherently "Bayesian" in their thinking approach to predicting events in that they often rely on subjective estimates at least for initial starting values.

Design/methodology/approach – A triangulated approach which uses qualitative group discussions and thematic content analysis, a reasonably large-scale questionnaire sample survey administered by post and analysed using descriptive statistics and non-parametric tests of association and a case study approach based on the authors own consultancy activities to illustrate the practical application of the forecasting model suggested.

Findings – That many small firms use no formal sales forecasting framework at all. That the majority of small firm owners and/or managers rate sales forecasting skills very low in their list of priorities when given a choice of course to attend at subsidised rates. That there is no significant difference in the importance small firm owners and/or managers attach to formal sales forecasting skills.

Research limitations/implications – Information has been gained from one geographic area in the north of England although the results may have a wider application to all small firms in the UK and elsewhere. Only the region's six most important industry sectors were included as stratification variables in the sample survey. Other regions will have a different mix of industries and will be stratified differently.

Originality/value – The article addresses the sales forecasting needs of small firms specifically within the marketing for small business context and offers a realistic option with a clear rationale.

Keywords Bayesian statistical decision theory, Sales forecasting, Decision making, Small enterprises, Statistics

Paper type General review

Introduction

This paper examines the sales forecasting practices of small firms and then goes on to discuss the application of Bayesian decision theory in the production of sales forecasts for small firms. Bayesian forecasting has its foundation in subjective probability. It employs numerical methods as used in conventional quantitative forecasting models to

calculate final results. However the initial starting conditions, expressed in the form of probabilities are arrived at subjectively. Such a scheme offers the user possible forecasting solutions for problems that prove difficult when approached using non Bayesian methods. Because the initial starting conditions are arrived at subjectively such an approach is considered particularly appropriate when used by the management of small firms. In a sense many small firm entrepreneurs are inherently "Bayesian" in their thinking approach to predicting events in that they often rely on subjective estimates at least for initial starting values. A specific case study based on the authors' consultancy experience is used to illustrate the application of the procedure. The management of many firms feel unable to use formal objective forecasting techniques because of a lack of information to start off the forecasting procedure. Evidence from the authors own work suggests that the management of many small firms make no formal sales forecasts at all. However, a more robust procedure is available which overcomes the lack of initial starting information for forecasting – and this is based on Bayesian decision theory.

The importance of the smaller firm

SMEs make an invaluable contribution to the wider economy, which is often overlooked, including increasing competition, creating jobs, building effective networks, sharing knowledge and making a positive contribution towards social inclusion. The importance of small firms and entrepreneurship generally in achieving economic growth in contemporary economies is widely recognised both by policy makers and economists (Van Stel *et al.* (2005), Wennekers *et al.* (2005), Acs (2006), Acs and Armington (2006)), Audretsch *et al.* (2006), Lundstrom and Stevenson (2005). Small firms are big business: they contribute significantly to employment, turnover and the number of businesses in the UK.

In the UK as a whole, SMEs account for over half of employment (58.7 per cent). This is also true for each region and country in the UK except London, where SMEs only account for 47 per cent. For the South West, Wales and Northern Ireland, this figure exceeds 70 per cent. For each region and country in the UK, no more than 0.2 per cent of enterprises are large (250 or more employees), and at least 99.0 per cent of enterprises are small (0 to 49 employees). The proportions of enterprises that are medium-sized (50 to 249 employees) range from 0.5 per cent (in the East of England, South East and South West) to 0.8 per cent (in the North East and Northern Ireland) see DTI (2006) National Statistics URN 06/402 News Release (see Figure 1).

The need for sales forecasting within small firms

The management of all firms are involved in making decisions about the future in the present. In a sense that is what the job of management is really all about, at least at the more strategic level. The act of preparing for the future whether in business or any other area of our lives implies forecasting, consciously or subconsciously, of tomorrow's condition. In our personal lives, such predictions are usually made on an informal, subjective basis. If they turn out to be wrong, we can usually adjust our personal circumstances. However, we rarely enjoy the same degree of flexibility in our working lives, particularly if we are the owner manager of a small firm. There, decisions are usually of a more formal nature and of greater consequence. The very nature of managerial decision-making involves forecasting future conditions
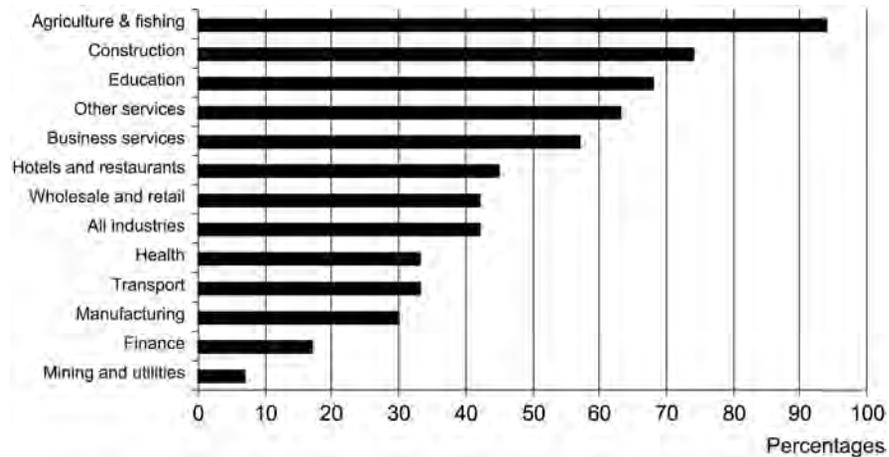
Figure 1.
Share of employment in
small businesses (fewer
than 50 employees) by
industry sector, UK

Source: Small Business Service 2006 relating to private industry sector at the start of 2005: (DTI, 2006)

(Lawrence and O'Connor, 2000). It is not a question of whether managers should forecast or not but merely how are they to do it? This fact applies to organisations of whatever size and whatever industry. Small firms are often considered to lack formal marketing skills (Carson *et al.*, 1995) and project management skills (Murphy and Ledwith, 2007), however sales forecasting is fundamental to management's ability to plan, budget and control (Lawrence *et al.*, 2000). Additionally sales forecasts are the bedrock of all other management forecasts since they are usually all in some way dependent upon an accurate sales forecast (Mentzer *et al.*, 2002). These plethora's of derived forecasts then form the basis of the budgetary control system of the firm (Mentzer and Moon, 2005).

Crisis points in small firms

All firms, of whatever size, need to make predictions or forecasts about future conditions (Tkacz, 2001). The term "prediction" is often reserved for subjective "qualitatively" based forecasts, for example: the sales force composite technique. Whereas the term "forecasting" is often used for objective "quantitatively" based forecasting procedures, e.g. moving averages, exponential smoothing, regression etc. Bayesian forecasting is a mixture of the two and involves both objective and subjective forecasting elements. Forecasts may be required for an important "one-off" decision such as when a business may be considering expanding by acquisition, diversifying into a totally new market or modernising its production processes. Such decisions tend to be long-term and strategic, rather than operational. In such situations, because of the importance of the decisions being made, it is important that forecasting receives careful consideration, meaning an investment of time and money in the forecasting process. However many of the decisions the small firms managers have to make are more routine tactical or operational. As Bischoff *et al.* (2000) state:

The choice is not a trivial one, for at least twenty years leading economists and econometricians in *business*, government and academia have argued both sides of this issue. It is important because no *business* decision-maker can avoid making forecasts. Decisions about stocks of raw materials, goods in process and finished goods, among other things, must be based on forecasts. The advent of the Internet does not change this necessity: at best the process is speeded up (p. 12).

The need for an adequate and appropriate sales forecasting framework can be linked to the literature on growth and life cycle models related to small firms (Scott and Bruce, 1987, Greiner, 1972, Hanks *et al.*, 1994, Cope, 2003). Scott and Bruce (1987) argue that a small business develops by moving through five growth stages, each with their own characteristics (see Figure 2). Because the transition from one stage to the next requires change, it is accompanied by some crisis or another. Crises tend to be disruptive and problems of change can be minimised if managers are proactive rather than reactive (Steinmetz, 1969, Deakins and Freel, 1998). Sales forecasting may help them in this respect. Prior knowledge of what generates crises and of what to expect in each stage will smooth the process of change and may improve the chance of adequately dealing with the crisis and may even be important in the small firms survival (Dodge and Robbins, 1992, Garud and Van de Ven, 1992). According to Scott and Bruce at the crisis point the firm faces three options: to contain at their existing size; grow to the next stage; or, by failing to handle the change, go out of business. Scott and Bruce claim that they have tested the model and that it is robust enough for them to be able to generalise across all small firms. Organisations move along the curve at different speeds and the spacing of crises are likely to differ between firms. Indeed, the original authors were themselves aware of these limitations and argue that what they provided was:

A diagnostic tool to assist in analysing a firm's present situation. It is also meant to be an indicator of what strategies appear suitable at various stages in an organisation's growth. It is, however, only a tool and cannot make the decisions for management. They must rely on their judgment for that. Hopefully that model will add to their information and thus enable them to make better judgments." (Scott and Bruce, 1987, p. 48).
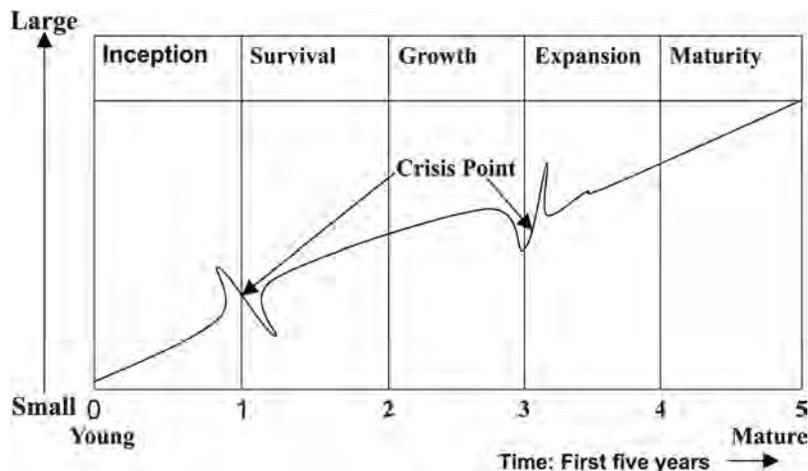
Figure 2.
Scott and Bruce stage
model

A simple graphical representation of the model is presented below. It is not meant to be accurate but merely to demonstrate the principles involved.

The idea of crisis points on the small firm's growth path can be related to the example of the Bayesian forecasting "decision tree" model shown as an applied example in the Appendix. As Scott and Bruce state above their stage model and similar models are only a "tool" and cannot make the decisions for management. At the end of the day managers must rely "on their own judgement". Subjective judgement is what Bayesian forecasting is all about at least for the initial starting conditions. As the reader will see the small firm in the case faces a major decision which must be made under conditions of uncertainty. If management make the wrong decision it could be a crisis for the firm. Management cannot afford to make a mistake as the resources of the firm are limited. Management use their judgement and skill to estimate the initial starting conditions in terms of subjective probabilities. Such a procedure should be well within the competence level of the majority of small business managers and has the added benefit of utilising their own experience and judgement. Hence such a procedure should not only be useful to the small business manager but should also have strong intuitive appeal as the initial starting conditions of the model is based on the managers own judgement.

Operational decisions

Managerial decisions are not always strategic and much of a busy manager's time is taken up with day-to-day operational issues which, although not of the same magnitude as strategic decisions, are nonetheless important to the manager because of the proportion of their time that they occupy. Management requires forecasting information to assist them in making operational decisions, although the required time horizon for such forecasts is shorter than for strategic decisions. For example, for the marketing manager to set monthly sales targets, operational expense or advertising budgets, they may require regular short-term forecasts for each product, broken down according to product type, size, colour, salesperson's territory, channel of distribution and even by individual customer. Whatever type of decision is being made, forecasting is required. Forecasting can make a contribution to the successful management of the small enterprise, whereas poor forecasting can lead to high inventories and associated stockholding costs which must be paid for out of working capital, or under-production and unrealised market potential ((Stanton *et al.*, 1991).

Choice of forecasting procedure

The recognition of the importance of forecasting was first illustrated by the results of a major research exercise carried out in the United States by Ledbetter and Cox (1977). They found that forecasting techniques were used by 88 per cent of the 500 largest industrial companies in the USA. It was also established that no other class of planning techniques was used as much as forecasting. Although forecasting is important in most functional areas of a firm, the forecasting of sales is particularly important (Sanders and Ritzman, 2004). The sales forecast is the bedrock on which company plans are built and for this to be sound, the forecast must be built on a firm scientific foundation (Wacker and Lummus, 2002). The central issue facing businesses is not whether to forecast, but how to forecast. The forecaster can choose "subjective" or "objective" methods or a mixture of each.

Terminology
The terminology used in the literature to describe forecasts can be confusing. Many writers make a distinction between prediction and forecasting, using "forecast" to refer to objective, quantitative techniques and "predict" to denote subjective estimates. This distinction is pedantic and the debate is a matter of semantics. "Forecast" is of Saxon origin, meaning "to throw ahead" implying that there is something in hand. In the context of this discussion, it would be historical data that can be extrapolated into the future. "Predict" is of Latin origin, literally meaning "to say beforehand" and no empirical basis is indicated. Dictionary definitions are unhelpful, a forecast being defined as "a prophecy or prediction" and prediction, in turn, is defined as "something predicted a forecast". Consequently, the use of the terms subjective and objective forecast is recommended and these terms are used throughout this paper.

Information
The availability of appropriate data is of central importance to the development of a forecasting system. The management of small firms may not have the resources or the knowledge to source the most appropriate sources of secondary data and often prefer instead to rely on their own judgement based on experience. Depending on the degree of accuracy required, most forecasting techniques require a considerable amount of data to be collected and analysed in terms of usefulness and validity before it can be used in the forecasting process as input data (Zareipour *et al.*, 2006). This procedure may be too complicated and time consuming for small firms. Selection of the most suitable forecasting method from the choice of techniques available depends on the availability of existing data and/or company's ability to acquire relevant data. For example, a technique requiring a long historical time series would be of little use if data was only available for the past year (Conejo *et al.*, 2005). If the accuracy or validity of data were questionable, it would not be worthwhile or cost-effective to spend time and effort using a sophisticated technique known for its precision (Jobber and Lancaster, 2003). In forecasting, the principle of "garbage in/garbage out" applies; a forecast will only be as good as the data used in its compilation. As the reader will see from the evidence presented below many small firm managers/owners have greater confidence in their own judgement than the judgement of others found in secondary sources.

Sales forecasting practices in small firms
Research methodology
Phase one. The first piece of work involves exploratory group interviews these are then followed by a survey discussed below. The methodology involves exploratory, qualitative research based on three groups with people involved in running or advising people who run small firms. Carson and Gilmore (2000) consider qualitative research the most appropriate when examining SME phenomena generally and particularly the interface between marketing and entrepreneurship. Further support for this position can be found in Gibb and Davis (1990); and Hofer and Bygrave (1992).

The group members included entrepreneurs/managers running their own small firms, counsellors from various organisations involved with advising or supporting enterprise, small business advisors from the commercial banks, consultants and trainers to small firms from both the private sector and such bodies as the Business Link. Each group discussion contained eight participants plus a moderator. Conversations within the

group discussions were recorded and a thematic content analysis carried out. Transcripts were examined and various common themes identified and colour coded for classification and analysis. The information gained from this analysis was used to design a questionnaire to be used in a larger sample survey. Using the Department of Trade and Industry national statistics for the start up and failure rates of small firms and modelling down to the sub regional level of Kirklees and Calderdale in West Yorkshire, UK it would seem that approximately 34 per cent of small business start ups fail within four years of trading (see Small Business Service DTI, 2005 figures for business survival rates). Therefore one might consider that an understanding of forecasting could reduce the local failure rate among small businesses.

Phase two. Questionnaires were sent out by post to a representative sample of 1,200 small firms in the Kirklees and Calderdale local authority area (jurisdiction) of West Yorkshire, England. The local population numbers about 580,000 people. This area was chosen because one of the authors' universities is in the area. A combination of lists was used as a sampling frame including the local Chamber of Commerce Membership Directory (which identified firm size), local trade directories and a small firm database held by the University.

The sample was stratified by the type of industry found in the area: textile manufacturing; chemical processing and related industries; transport and distribution services; construction; light engineering; and other financial/business services; and, in proportion to the importance of a particular sector to the local economy in terms of contribution to local GDP (see Bhattacharya, 2007; Alreck and Settle, 1995; Everitt, 1995). Note that not all of the DTI/Small Business Service 2006 industry categories shown in Exhibit 2 (see Figure 2) to were used, only the six categories most important to the Kirklees region. A total of 320 respondents mailed back the questionnaire in the pre-paid envelope provided. In order to ensure the sample of respondents matched the initial stratification design final post stratification of the marginal responses was conducted. Where a particular sector was under represented, follow up calls encouraging response or if necessary a second copy of the questionnaire was sent to respondents. These were also selected randomly from the non-respondents on the original sampling list. Questionnaires were sent out in waves and so it was possible to "fine tune" the eventual sample to bring it into an acceptable approximation to the composition of the local small firm population.

The questionnaire contained questions asking respondents to rate the importance, as they perceived it, of various marketing and sales topics which could, if selected and rated highly enough by a sufficient number of respondents, be incorporated into a training course, which they would be invited to attend at subsidised rates. Respondent's selection and rating of various sales and marketing topics gave the authors a proxy measure of how respondents perceive the importance and usefulness of conventional sales and marketing topics to the running of their businesses. The list of possible course topics specifically included sales forecasting. The rating procedure was in two parts:

(1) First respondents were asked to select from a prepared list the three course areas that they would find most useful and/or interesting. A space was provided for respondents to include topic areas not on the list.

(2) Having completed this section of the questionnaire respondents were then asked to go through each topic area on the list (including the topic areas they may have added to the list) and rate it as either "Very Useful", "Quite Useful" or of "No Use at All".

Discussion of empirical results

Qualitative group discussions

Results from the three group discussions were somewhat alarming if not particularly surprising. All agreed that in general small firms do not make use of formal sales forecasting (whether objective or subjective) or predictive techniques on an on-going or regular basis. In the case of the management of many small firms the only time such forecasting procedures were used was as part of an "official" business plan that small firm management had to complete in order to get a bank loan or government grant. Even under these conditions subjective predictions rather than quantitative objective sales forecasts were the norm. The owners and managers of smaller firms placed greater value in their own experience and subjective judgement that in official sources of information or formal predictive or forecasting procedures. The main themes emanating from the discussion in order of importance are as follows:

- the majority of small firms make no formal sales forecasts at all either using quantitative or qualitative methods;
- managers and owners of small firms use subjective judgement in a range of decisions including those decisions involving some form of prediction;
- the majority of small firm owners/managers have little understanding of formal forecasting procedures;
- when sales forecasts are made it is usually the small firm has been "forced" to make a forecast as part of a business plan to be submitted to a bank for a loan;
- when predictions are required the majority of small form managers/owners use their own experiential judgement; and
- the majority of small firm managers/owners do not consider the ability to make reasonably accurate sales forecasts a particularly important skill.

Sample survey results

The survey questionnaire was designed using the information gained from the group discussions. The survey results supported the general conclusions of the group discussions. Sales forecasting was very low down on the list of priorities reported by the survey respondents in fact it was not formally rated in the three most important topic areas per se by any of the respondents although some mentioned subject areas that might contain sales forecasting subjects such as marketing research. However when asked to formally rank the three most important sales or marketing areas to the success of their business none entered sales forecasting. Also when respondents were asked to list any other courses or subject areas not already discussed none of the 320 respondents mentioned sales forecasting. Even subject areas that might have contained elements of sales forecasting in them such as marketing research and marketing planning received very low ratings. In fact only 5.6 per cent of respondents rated marketing research as the area they would find most interesting if attending a course and only 1.9 per cent of respondent rated marketing planning as the area in which they would be most interested. None of the respondents rated sales forecasting as the course they would find most interesting.

In the second phase of the rating procedure respondent were asked to go through all the possible course topics on the list (including the topics they may have added in the open ended space provided) and put each course topic in one of three categories which

were either "Very Useful", "Quite Useful" or of "No Use at All". Six respondents out of 320 (1.8 per cent) rated sales forecasting as "Very Useful" (a somewhat internally inconsistent response considering none of the respondents had entered sales forecasting as one of the three most useful topics on the list), 46 (14.3 per cent) rated sales forecasting as "Quite Useful" and 271 (84.6 per cent) rated it as being of "No Use at All".

Hypothesis test re *perceived importance of sales forecasting*
A Pearson Chi Square test was used to test whether there was any significant difference between the six different commercial and industry sectors used to stratify the sample survey. The responses describes above were taken as a proxy measure of the respondents" perception of the importance of sales forecasting to their firm. The Null Hypothesis (H_0) was that there was no significant difference between the groups in relation to the expressed interest in attending a course in sales forecasting. The alternative hypothesis (H_1) was that there was a difference. The data used were nominally scaled and hence a non parametric test was considered appropriate, and so Pearson's Chi-Square was used to test (H_0) against (H_1) (see Table I).

Chi Square test of association – rating scores by industry segment (sales forecasting)
The calculated Person's Chi Square value was 3.226 and the level of significance was less than 0.05 which is of no statistical interest or significance. For Chi-Square to be significant at the 0.05 level the calculated value needed to be 18.31. The calculated value for Chi Square at 3.226 is well below the tabulated value needed for (H_1) to be accepted 18.31. Hence (H_0) was accepted, there was no evidence of statistical association between groups of firms from the six different sectors used for stratification of the sample and their managers/owners perceived importance of sales forecasting. There was an equal degree of disinterest and perceived importance amongst all of the commercial/industrial sectors surveyed. Measures of the strength of the association such as the Contingency Coefficient and Cramer's V were not computed as they have a significance value the same as that for the Chi Square statistic at less than 0.05, again showing nothing statistically significant. Six (33.3 per cent) of the 18 cells in the contingency table had expected frequencies less than five. Chi square is not valid if more than 20 per cent of the cells in the contingency table have expected frequencies less than five. Because of this the column cells were collapsed with the cells for "Very Useful" and "Quite Useful" merged into the column cells "Very/Quite useful".

	Very useful	Quite useful	No use at all	Total
Textiles manfacture	1	10	39	50
Chemical	1	8	55	64
Trans. and dist.	1	8	47	56
Construction	1	8	35	44
Light eng.	1	6	52	59
Fin/bus serv.	1	6	43	50
Total	6	46	271	323

Table I.
Rating scores by industry segment (sales forecasting)

Notes: Degrees of freedom: 10; Chi-square $= 3.226$; for significance at the 0.05 level, chi-square should be greater than or equal to 18.31; the distribution is not significant; p is less than or equal to 1

This was done in an attempt to overcome the low expected frequency problem in the contingency table (see Table II).

Chi Square test of association – rating scores by industry segment (sales forecasting) with collapsed column cells
The above Chi square test is valid in that none of the cells in the contingency table have expected frequencies less than five now that the columns have been collapsed from three response categories to two (it is valid as long as no more than 20 per cent of the cells in the contingency table have expected frequencies less than 5). However the results are the same. The calculated Chi square value is 3.05 whereas the tabulated Chi square value at the 5 per cent level of significance is 11.07. As the calculated Chi square value is not equal to or grater than the tabulated Chi square value (H_0) was accepted. There was no discernable association between respondents rating of sales forecasting as an important management skill and the industry sector the respondent belonged to. In the re-test there was still an equal degree of disinterest and perceived importance amongst all of the commercial/industrial sectors surveyed. Again measures of the strength of the association such as the Contingency Coefficient and Cramer's V were not computed as they have a significance value the same as that for the Chi Square statistic at less than 0.05, again showing nothing statistically significant.

Overall interpretation
Overall the data from the three group discussions and the survey results seemed to indicate that very few small firms engaged in formal sales forecasting procedures. When they were used, in order to complete a business plan to raise finance for example, simple subjective forecasts or predictions were usually used. Emphasis was placed on the managers or owners own experience and subjective judgement. Outside of these special circumstances (filling in an "official" plan etc), formally constituted sales forecasts were rarely made for strategic or even operational decision making. Data from the sample survey confirmed that sales forecasting is not regarded as particularly important by the managers of small firms and if they were given the opportunity to attend a free business course none of the respondents expressed any interest in attending a course on sales forecasting specifically. This was so even if heavily subsidised i.e. sales forecasting was not included in the three most important topics on the list (including topics that might be added to the list) by any of the respondents.

	Very/quite useful	No use at all	Total
Textiles manfacture	11	39	50
Chemical	9	55	64
Trans. and dist.	9	47	56
Construction	9	35	44
Light eng.	7	52	59
Fin/bus serv.	7	43	50
Total	52	271	323

Notes: Degrees of freedom: 5; chi-square $= 3.05$; for significance at the 0.05 level, chi-square should be greater than or equal to 11.07; the distribution is not significant; p is less than or equal to 1

Table II.
Rating scores by industry segment (collapsed cells)

When, in a separate exercise respondents were asked to rank the usefulness of a course in sales forecasting to their organisation 84.6 per cent rated it as no use at all. There were a few (six) internally inconsistent answers which can be expected from a survey of this size. However, overall the results from both the qualitative and survey research were conclusive. In addition there was no discernable association between respondents rating of sales forecasting as an important management skill and the industry sector the respondent belonged to.

Bayesian decision theory

Probability theory studies the possible outcomes of given events together with their relative likelihoods and distributions. In fact there is considerable debate about exactly what probability means in practice. Some mathematicians regard it as simply a component of abstract theory, while others give it an interpretation based on the frequencies of certain outcomes (Quintana and Amer, 1998). However the Bayesian approach is a mixture of both subjectively derived probabilities and mathematically derived likelihoods (Gómez-Villegas *et al.*, 2002). This technique is named after Reverend Thomas Bayes (1702 to 1761), a statistician. A fully detailed historical account of Bayes can be found in Buck and Sahu (2000); Singh and Provan(1996); Lin *et al.* (2000) and in a very informative St Andrews University (2003) site, (see bibliography). See also Bayes's original account (Bayes, 1736, 1764). However some early account of Bayes and his work is of specific interest to the topic of this paper:

Bayes set out his theory of probability in "Essay towards solving a problem in the doctrine of chances published in the Philosophical Transactions" of the Royal Society of London in 1764. The paper was sent to the Royal Society by Richard Price, a friend of Bayes, who wrote:

> I now send you an essay which I have found among the papers of our deceased friend Mr Bayes, and which, in my opinion, has great merit. . .In an introduction which he has writ to this Essay, he says, that his design at first in thinking on the subject of it was, to find out a method by which we might judge concerning the probability that an event has to happen, in given circumstances, upon supposition that we know nothing concerning it but that, under the same circumstances, it has happened a certain number of times, and failed a certain other number of times (see Condorcet, 1785; Boole, 1854; and St Andrews University (2003) site given in the bibliography).

Despite the fact that Bayesian decision theory was developed in the eighteenth century, it has only recently been widely adopted (Buck, 2001). The method incorporates the firm's guesses at data inputs for the statistical calculation of sales forecasts. It uses network diagrams showing the probable outcome of each decision alternative considered (Geweke, 2001). These are shown together with expected values and associated probabilities, initially derived on a subjective basis (see Smith and Faria, 2000). A complete worked example of this Bayesian approach by a small manufacturing firm based on the authors" consultancy research is shown in the Appendix. Bayesian statistical forecasting, like all Bayesian statistics is based on two basic concepts. First, uncertainty about unknown quantities is expressed using the language of subjective probability, and, given new information or data, probabilities are updated using Bayes rule or procedure (Ghosh and Ramamoorthi, 2003; Quintana, 2006).

Many statisticians and forecasters believe that Bayesian inferential methods have advantages over classical statistical procedures for a wide range of inferential

problems. This is mainly because the initial stating probabilities are arrived at subjectively opening up the potential of statistical inference, including sales forecasting applications, to a much wider range of problems, particularly those sorts of problems often found in marketing (Albert, 1996; also see the reference for the International Journal of Clothing Science and Technology report ((Raheja, 2003)). One of the problems of using probabilities in statistical model is in ascertaining initial probabilities to commence the forecasting process (Bolfarine *et al.*, 2005). Bayesian statisticians differ from "purist" statisticians in the respect that "purists" view the concept of probability as the relative frequency with which an event might occur (Iglesias *et al.*, 2004). The Bayesian view is that probability is a measure of our belief and that we can always express our degree of belief in terms of probability (Buck *et al.*, 1996). Although the initial probabilities are derived subjectively (the figures are based on judgmental opinion, rather than on objective calculation) proponents of Bayesian theory believe that such probabilities are perfectly valid and hence perfectly acceptable as initial starting points in an extensive quantitative forecasting process (Müller *et al.*, 2005). It is the subjective nature of arriving at the initial probabilities that makes the Bayesian approach useful in solving business problems for which initial probabilities are often unknown and are difficult or impossible to calculate using objective methods (Faria and Smith, 1997a; Finucane *et al.*, 2003; Gaglio and Katz, 2001).

To use the Bayesian approach, the decision-maker must be able to assign a probability to each specific event (Pole *et al.*, 1994). The sum of the probabilities of all events considered must be unity (one). These probabilities represent the magnitude of the decision maker's belief that a particular event will take place (Faria and Souza, 1995; Faria and Smith, 1997b). In business situations such decisions should be delegated to personnel who have the knowledge and experience to assign valid initial subjective probabilities to the occurrences of various business events. These initial probabilities are based on previous experience of information (such as the manager's own subjective judgement based on experience) acquired prior to the decision-making process. For this reason, the initial subjective probabilities are referred to as "prior probabilities" (West and Harrison, 1997).

When making business decisions, the financial implications of actions must be taken into account. For example, when a manager is considering investing a firm's surplus cash, they must consider the probability of making a profit (or loss) under different economic scenarios and also assess the probability of such scenarios or events occurring (Pole *et al.*, 1994). Applying Bayesian decision theory involves selecting an option and having a reasonable idea of the economic consequences of choosing a particular course of action. Once the relevant future events have been identified, the decision-maker assigns prior subjective probabilities to them (West and Harrison, 1997; Huerta and West, 1999). The expected pay-off for each act is then computed and the act with the most attractive pay-off is then chosen. If pay-offs represent income or profit, the decision-maker usually chooses the act with the highest expected pay-off (Lopes *et al.* 2003; Singh and Valtorta, 1995). The worked example given in the Appendix illustrates these principles in detail.

Conclusion

It is frequently said that forecasting is the key to success, and poor forecasting can lead to high inventories and associated costs that use up working capital, or result in

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under-production and unrealised market potential. Forecasting is important in most areas of the firm, but forecasting of sales is particularly important since predicted sales are the base on which all company plans are built.

Evidence from the empirical work suggested that the majority of small firms, at least in West Yorkshire, England, do not use sales forecasting procedures in any meaningful way. Qualitative group discussion results indicate that very few small firms are likely to use any kind of objective, quantitatively based sales forecasting procedures at all. Where sales forecasting is carried out it seems to be qualitative methods that are used. Even here however there is little evidence that the qualitative procedure being used is of a formally planned nature, for example a "Sales Force Composite" method or a "Consensus of Executive Opinion method". It would seem that where qualitative predictions/forecasts are made they are informal and simply based on the subjective opinion of the owner or manager making the forecast. Results from the sample survey support the above qualitative findings. Sales forecasting procedures and techniques were hardly mentioned at all by respondents when asked what additional marketing or sales skills they would like to learn or what areas they felt would help manage their businesses more professionally.

However the use of a Bayesian type approach is a foreseeable possibility. Such forecasting is within the skill set of many small businesses particularly when a simple personal computer programme can be adopted. Indeed the very notion of a Bayesian approach – the combination of subjective and objective methods allows the small business to be comfortable with utilising their subjective knowledge and experience. Equally the combining of subjective knowledge within a more objective scenario might well encourage more thoughtful and accurate forecasting with the commensurate benefits as discussed in this article. For those who need to be encouraged to start more formal forecasting, decision trees provide an intuitive and logical starting point. Forecasting should not simply be for large companies.

Given that the evidence from the literature reveals that many small firms under perform or even fail completely because of poor planning skills, especially longer term planning skills, then sales forecasting using a Bayesian approach should be encouraged. Given that forecasting is needed at all time horizons if a business is to be managed properly, small businesses should be encouraged not only to forecast sales better but to develop short, medium and long term sales forecasts for different types of decisions.

Because evidence from the literature and from the primary research presented in this paper suggests that many managers and owners in small firms tend to favour their own subjective judgement when asked to make decisions involving predictions, Bayesian forecasting procedures would seem to offer an interesting option. It presents a good "fit" between the forecasting requirements of small firms and the skills small firms managers/owners seem to rate most highly i.e. the use of their own subjective judgement.

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Marketing management decisions

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Appendix

The example below is based on personal consultancy research by the authors' with a small textile company. The name of the firm has been changed. The example illustrates an application of the Bayesian forecasting decision making process under conditions of risk and uncertainty to an actual marketing situation faced by a small firm.

Case study: Quality Wilton Ltd

For reasons of commercial confidentiality the name of the firm used has been altered as has the country of export although the location of the company within the UK is accurate. However the industry discussed is the original one and the figures used in the calculations are the original figures collected as part of a consultancy project under the auspices of the Department of Trade and Industry (DTI). The figures shown have been rounded up to the nearest £500.

Quality Wilton Ltd, Kidderminster, Worcestershire, UK produce high quality Wilton carpets. Such carpets are made from 80 per cent wool with 20 per cent nylon added for strength and wear resistance. In the UK the product retails for approximately £32 per square metre. Wilton carpets are very popular among the higher income households in the United Arab Emirates (UAE) where only small quantities are produced using a "Wilton" weave. The product is perceived by UAE higher social groups as being a luxury purchase. For Quality Wilton Ltd to gain economies in freight charges export consignments need to be relatively large and it is planned that the first consignment will be worth £3,000,000. Because of its high-status image in the UAE, the carpet can command a premium price (about £56 per square metre sterling equivalent). However, such a product is a deferrable purchase and demand is only likely to remain high if the UAE economy remains strong. Management foresee a possible decline of the UAE economy as the main risk factor in this venture. The first 12 months are particularly important, as this is the time when the first consignment is expected to be sold, given the present economic climate. Economists have

predicted an economic downturn in the UAE over this period if monetary conditions tighten in response to rising domestic inflation and poor trade figures.

The decision facing Quality Wilton Ltd management is whether to risk going ahead with the UAE contract now, when present demand for their product is likely to be high, or to postpone the decision, waiting for the economic outlook in UAE to become more stable. If the decision is postponed, fashion tastes may change away from this type of product in the interim. This is an important decision for the firm because with limited resources they cannot afford to make the wrong decision. The management of Quality Wilton Ltd assesses the UAE economy is likely to go in one of three directions over the next 12 months:

(1) stay the same;

(2) slight deterioration; and

(3) significant deterioration.

Management assigns subjective initial probabilities to each of the possible economic scenarios and these are shown in Figure A1. (Note that the sum of the probabilities of the three possibilities considered is unity). The direction of the UAE economy is an event (E) that is outside the control of the company. Management decides on three possible courses of action (A):

(1) export now while conditions are relatively good;

(2) delay six months, in which time the direction of the UAE Government's economic strategy is likely to become clearer; and

(3) delay one year to observe the longer-term economic trends.

Management then forecasts expected profit (in Pounds Sterling) for each course of action under different economic conditions (see Figure A2). The prior probabilities are now incorporated into a decision tree (ee Figure A3). This is made up of "nodes" and "branches", with the decision point represented by a square and chance events by circles.

The expected value (EV) is now calculated for each forecast and then totalled for each alternative course of action (A). This is done using pay-off tables where the expected profit for each event is multiplied by its assigned probability and the resulting products summed (see Figure A4).

Event	Probability
Economic conditions remain the same	0.4
Slight deterioration in the economy	0.3
Significant deterioration in the economy	0.3
Sum of probabilities	1.0

Figure A1.
Quality Wilton Ltd: subjective prior probabilities of alternative future economic scenarios

		Actions (A)		
Events (E)		1 Export now	2 Delay 6 months	3 Delay 12 months
(a)	Economic conditions remain the same	£2,726,000	£2,357,000	£2,100,000
(b)	Slight deterioration in the economy	£1,870,000	£1,694,500	£1,425,000
(c)	Significant deterioration in the economy	£ - 711,000	£900,500	£766,000

Figure A2.
Expected pay-offs for Quality Wilton Ltd for different decisions under different economic conditions (figures are approximate and rounded up to the nearest £500)

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(a) economy remains same
0.4

(b) slight deterioration
0.3

(c) significant deterioration
0.3

A £2,726,000

B £1,870,000

C

£ -711,000

Export now

A £2,357,000

B £1,694,500

C

£900,500

Delay 6 months

A £2,100,000

B £1,425,000

Delay 12 months

C

£766,000
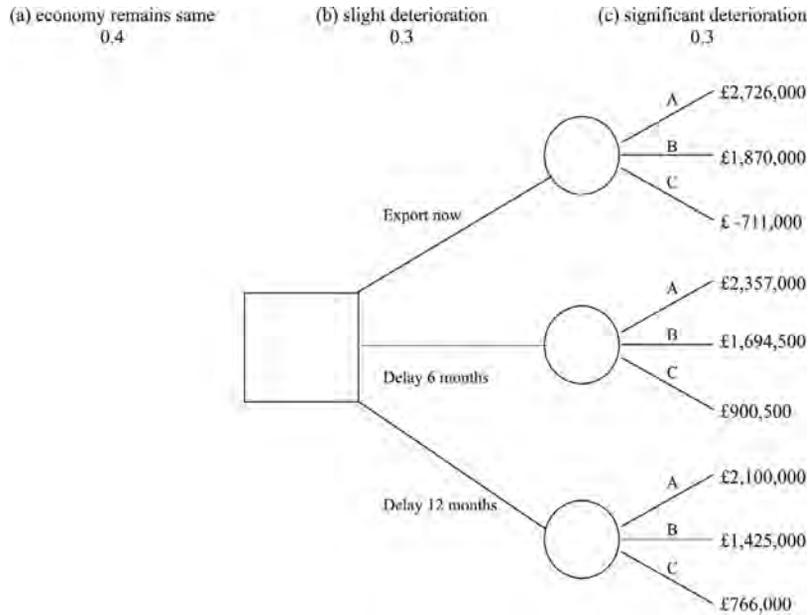
Figure A3.
Decision tree for Quality
Wilton Ltd

A1 - Export now

Event (E)	Probability	Expected Profit (£)		Expected Value (£)
(a)	0.4	2,726,000		1,094,400
(b)	0.3	1,870,000		561,000
(c)	0.3	-711,000		-213,300
			Total EV:	1,442,100

A2 - Delay 6 months

Event (E)	Probability	Expected Profit (£)		Expected Value (£)
(a)	0.4	2,357,000		942,800
(b)	0.3	1,694,500		508,350
(c)	0.3	900,500		270,150
			Total EV:	1,721,300

A3 - Delay 12 months

Event (E)	Probability	Expected Profit (£)		Expected Value (£)
(a)	0.4	2,100,000		840,000
(b)	0.3	1,425,000		427,500
(c)	0.3	766,100		229,830
			Total EV:	1,497,320

Figure A4.
Expected value (EV)

By examining the total values for each of three possible actions management sees that A2 (i.e. delay action for 6 months) gives the maximum expected pay-off (£1,721,300). Since the action is selected under conditions of uncertainty, the EV is referred to as the "EV under uncertainty" and the action chosen as the "optimal action" for Quality Wilton Ltd. In this example, the probabilities assigned to events were prior probabilities. They were subjective, largely based on the decision-makers' beliefs in the probability that certain events will occur. Such an analysis, carried out using prior probabilities, is called a prior analysis.

After prior analysis, the decision maker, Quality Wilton Ltd, has two choices – to go ahead with the optimal action indicated by the prior analysis or to collect additional primary data, re-evaluate the probabilities in the light of further information and carry out new calculations. Additional information may be obtained by carrying out a market research survey or some other form of primary data collection procedure. If additional information is gathered and another analysis carried out, the term for these new calculations is "posterior analyses". Clearly, it is going to cost the decision-maker time and money to collect further information. A decision must be made as to whether the better-informed decision will be worth the extra cost or not.

The basic principles of Bayesian forecasting procedures are relatively easy for small business managers to grasp and apply. More importantly Bayesian forecasting utilises both subjective and objective methods. Small businesses should be both comfortable with, and have, subjective knowledge and experience, and encouraging them to use, in part, a more objective approach, can only strengthen their sales forecasting competence.

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R (T3/5) Reynolds, P.L., (1986b), ''A Report In To the Sales and Marketing Training Needs of Small Firms'', – *Department of Trade and Industry, Kirklees Council, Calderdale Council – Local Collaborative Project.*

DEPARTMENT OF TRADE AND INDUSTRY (UK)

LOCAL COLLABORATIVE PROJECT

An investigation into the sales and marketing needs of small firms in Kirklees and Calderdale

Huddersfield Polytechnic

Percival Whitley College, Halifax

Calderdale
Council

Kirklees
COUNCIL

1986

Director of Research: Mr. PL Reynolds

School of Economic and Marketing Studies

Faculty of Business

The Polytechnic, Huddersfield

June 1986

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SECTION

FORWARD

This project originated from discussions between the Percival Whitley
College of Further Education, Halifax and The Polytechnic,
Huddersfield, both of whom are members of the Calderdale and Kirklees
Pickup Unit, in January 1986.

Following these early discussions research was carried out by Pickup
staff from the institutions into the failure rate for small businesses
within the geographical area of Calderdale and Kirklees.

By using the Department of Trade and Industry National Statistics for
the start-up and failure rate of small businesses and modelling down
to the sub-regional levels of Calderdale and Kirklees it was possible
to predict that from 1985 to 1987 approximately 2,580 would start
trading and 1412 would fail to trade for a fourth consecutive year, a
failure rate of 54.7%.

In the light of this research a Local Collaborative Project proposal
was submitted jointly to the Manpower Services Commission and
Department of Education and Science via the Yorkshire and Humberside
Regional PICKUP Development Officer for consideration.

Following the proposals submission several meetings were held between
the MSC, DES, Percival Whitley College and Huddersfield Polytechnic to
discuss the project in depth. During these discussions both the MSC
and DES made valuable contributions with regard to the funding
arrangements and the methods available for collecting and identifying
the date required by the project. As a result of these meetings the
initial project submission was altered slightly and resubmitted to the
agreement of all parties concerned.

The project commenced on the 22 September 1986 with the aim of identifying training needs of small and medium companies in the Calderdale and Kirklees area who employ between five and 200 people. The projects major objective is to survey the market in order to improve the effectiveness and efficiency of small firms through the development of training in accordance with its findings.

Identification of Training Needs (ITN) was achieved by two approaches.

1) An extensive and statistical survey, requiring the collection of ITN data from a sample of firms. Data obtained through this sample will then be 'grossed up' to give a reliable picture of the training needs of small businesses from the various industrial sectors studied.

2) By means of a series of ITN seminars, the aim of which is to generate discussion and interest from an invited audience from various industrial sectors. The seminars will have well known keynote speakers from industry who have a local reputation for business expertise, and will be supported by members of the project team with expertise in the area of ITN.

By identifying the areas of need and deliverying short industry based courses it is expected that this project will contribute to the industrial rehabilitation of Calderdale and Kirklees.

SECTION 1

Collaborative Mechanisms

Prior to the project there were both formal and informal links between some of the collaborative partners. The project had the effect of strengthening the existing links and forging new ones between individual partners and the organisation they represented.

To initiate these links visits were made by the project staff to employer's premises in order to discuss the project proposal in detail and the contribution and expertise they could offer towards its successful conclusion.

In July 1986 an informal meeting was arranged of all the potential partners in Halifax to discuss the LCP proposal and the roll of the individual partners and their contribution. As a result of this meeting the projects steering committee was formed, which consisted of members representatives of public sector organisations, educational establishments, private sector training organisations, commerce, individual companies, trade organisations and a Chamber of Commerce.

As well as the formal steering committee meetings, which were held at regular intervals, informal links developed between various partners and will no-doubt last much longer than the life of the project.

In addition to both the formal and informal collaboration between the partners numerous other links were established: these included:

> Other Collaborative Projects running in the Yorkshire and Humberside area.
> College Employer Links Project (CELP) organiser for Calderdale and Kirklees who contributed a considerable amount of information with regard to textile training.
> BACIE
> CALDIS, who published articles in Caldis News on numerous occasions and supplied mailing lists.
> Business Sections of local newspapers who were keen to report the activities of the project.

Various Open Learning centres throughout the
country with particular reference to Enterprise
Training Service in Halifax.
National Federation of Small Business and Self
Employed Office at St Annes, Lancashire as well as
their regional representative.

Throughout the length of the project both the MSC and DES were
actively involved in the project. MSC officials attended the majority
of steering committee meetings and kept in constant contact with the
project staff and vice versa.

During the project no major obstacles or problems were encountered in
the collaboration between the partners. However, there was one small
problem of one partner not keeping to his original commitment with
regard to payment in kind. Project staff members had several on-site
meetings with the partner to keep them informed of the project's
progress. Unfortunately, nine months into the project the partner had
to withdraw their commitment due to pressure of work. Although this
action resulted in a reduction of partner contribution it was more
than made up for by the in-kind payments and contribution in effort
and time by various other organisations.

Only once in all the steering committee meetings was there a major
difference of opinion concerning the project. The problem emerged due
to a difference of opinion over the type of questions being asked of
companies in the questionnaire. Although the problem took some time
to resolve through discussion a conclusion was reached that was
satisfactory to all members of the Committee.

SECTION 2

<u>Information Gathering</u>

<u>Business Success Through People Seminars</u>

Three Business Success Through People Seminars using the Manpower Services Commission "Business Success Through People Kit" were held to gather information on general training needs. A total of 245 attended the seminars from 160 companies including various training organisations.

<u>Halifax Seminar</u>

Held on the 23 October 1986 at Dean Clough Industrial Park from 5 pm until 8.00 pm.

<u>Organisation and Delivery of Seminar</u>

Three weeks prior to the seminar 1000 companies were contacted directly by mail. Each company received a leaflet detailing the event plus a letter of invitation personally signed by David Cook Director of Research and Development at The Percival Whitley College explaining the importance of training and a reply slip for confirmation of attendance.

Access to the 1000 companies was gained via a mailing list from "Caldis News" which contains 2000 companies from every industrial sector in Calderdale. The mailing list was divided into six sectors, Chemical, Confectionery, Construction, Engineering Service Industries and Textiles. Each sector was modelled down to find the percentage representation and contacted accordingly.

Seven days after the mail-shot six replies had been returned, four accepting the invite and two declining the offer. The percentage return from the mail-shot was low - 0.6%, 3.6% below the national average.

Follow-up telephone calls to the mail-shot companies gained another 17 replies, advertisements in a local paper attracted two companies and selected advertising spots on Radio Pennine another two, making the total number of companies in attendance to 25.

Company Sectors

A breakdown of the number of people attending the Seminar by Sector:

Sector	No of Companies	%	No of people attending
Chemical	2	4	3
Confectioner/ Catering	1	4	2
Construction	3	12	5
Engineering	4	16	5
Service Ind	12	4	17
Textiles	3	12	4
	—	—	—
	25	100	38
	—	—	—

Plus 28 people from various other organisations - MSC, Chamber of Commerce, Private Training Organisations and Collaborative Partners etc.

Breakdown of Sectors

Accountants

Builders

Chemical and Paint Finishers

Clothing Manufacturer

Compressed Air and Industrial Equipment Factors

Confectionery

Joinery

Light Engineering

Motor Factors

Press Tool Manufacturers

Printers

Typesetters

Residential Homes

Sheet Metal Engineering

Waste Disposal

Seminar

Following an introduction to the seminar by the Chairman of
Calderdale's Chamber of Commerce David Cook presented the BSTP kit.
During the presentation several key questions were asked; these were:

Why had they attended the seminar?

63%   to improve company performance
10%   to put companies on the correct lines
15%   for support on matters of training
12%   to hear other people's views with regard to training and evaluate
      them.

Was their present training adequate?

50%   said yes
50%   said no

After the kit had been introduced and the delegates briefed on its use
the following questions were asked:

How many people will work through the whole kit?   5 said yes
How many people will complete Section A only?   3 said yes
How many people will complete Section B only?   7 said yes
How many people will complete Section C only?   3 said yes

At the end of the seminar delegates raised questions on the following
topics.

Training

Accessibility and relevance of training to firms
Types of courses that were acceptable
Length of courses
Types of delivery systems

Grants

Types of Training Grants that are available to companies from MSC and EEC

Availability Grants

Assessibility Grants

Two questions related to the video used in the presentation

Were the companies in the video fiction?

Were the companies successful or not?

Before leaving all the delegates completed the questionnaire (appendix 1) with the following results.

Question 1

What did you hope to achieve by attending this seminar tonight?

With this being an "open" question the answers varied, but to summarise the answers were:

To gain information on training and grants

How we can increase our training

To get more idea of working and running a business

To find out more about the kit

To find out more about Training Needs Analysis and grants to aid training programmes

Find out more about Sales and Marketing methods

Question 2

What training do you carry out at present, and do you consider it
adequate to meet your needs?

Type of Company	Managers	Supervisors	Technician	Skilled	Unskilled	Other	Adequate	Inadequate
In-company	3	3		4	5	2		
Manufacturers Training			2	3			3	11
Private Training Company	-	2						
College	1	1	3	6				
Polytechnic	1		1					
Other		1						

Question 3

Now that the presentation is almost complete, in what ways do you hope that Business Success Through People Kit will help you with your business?

Again an open question but to summarise the answers were:

All aspects of training

Financial assistance in funding training

To achieve a more efficient business through training

Create an awareness and provide a means to promote training within the company

Give new ideas for company training and insight into techniques for improving present training

Not sure

To pinpoint the areas where training will benefit the company

Question 4

Write down your action plan on training for the next month

Again the answers varied and included the following:

Consider Open Learning for Supervisors

Not sure at this stage

Start working through the kit

Follow up with The Percival Whitley College and Manpower Services Commission

Where we should go from here

Evaluate the kit and review company training

Seek more advice on how to use the kit

Conclusion

All the companies who attended the seminar were contacted within five weeks.

Every company had started to work through the kit and approximately 40% of them had almost completed all three sections within this period. Two companies had specific training programmes specially designed to their needs and started training within three months of the seminar.

A number of other companies requested information regarding Sales and Marketing Training.

As a result of the follow up visits there is a possibility of one company filling a long standing vacancy through the link with one of the collaborative partners.

Dewsbury Seminar

Held in the main hall at Dewsbury College on the 19 November 1986 from 5 pm to 8 pm.

Organisation and Delivery of Seminar

Approximately three and a half weeks prior to the seminar 1100 companies were contacted directly by mail informing them of the seminar. Each company received a formal invitation together with a reply slip, outlining the event and the importance of training.

Within seven days of the letters being mailed to companies positive replies were being received.

Access to all the companies was gained through several data bases held in the College by various sections of staff.

Approximately 70 company delegates attended the seminar representing about 45 companies from the Dewsbury area, plus representatives from various public and private training organisations and local Collaborative Project Partners.

Seminar

Following an introduction to the seminar by Mr W Binks, Chairman of Smiths Cleaners the format was similar to that of the Halifax Seminar. The following questions were asked:

Why had they attended the seminar?

70%   to improve company performance

8%   to put companies on the correct lines

12%   for support on matters of training

10%   to hear other peoples views with regard to training an to evaluate them

Was their present training adequate?

Approximately 60% said yes

Approximately 40% said no

After the kit had been introduced and the delegates briefed on its use the following questions were asked:

How many people will work through the whole kit	Approx 12 said yes
How many people will complete Section A only	" 10 said yes
How many people will complete Section B only	" 12 said yes
How many people will complete Section C only	" 11 said yes

Again at the end of the seminar delegates raised seveal questions relating to training and grants; these were:

Training

Types of courses available

Minimum length of courses

Cost of courses

Where do the courses take place

Grants

Value of grants from the MSC

Can a company apply for a grant more than once

How long does it take to process a grant application

Conclusion

Within six weeks of the companies attending the seminar a large percentage has been contacted either by telephone or personal visit.

Of those that had been contacted various training needs had been identified by the kit with the two main areas being supervisory and word processing training.

Huddersfield Seminar

Held on 3 December 1986 in the Staff Conference Room at the
Polytechnic Huddersfield from 5 pm to 8 pm.

Organisation and Delivery of Seminar

Organised jointly by Huddersfield Technical College and Huddersfield
Polytechnic with staff involvement from both institutions during the
presentation.

Three weeks prior to the seminar in excess of 1500 companies from the
Huddersfield area were contacted by letter inviting them to the
seminar.

Within a week of the invitations being posted positive replies were
being received. 89 delegates attended the seminar from 54 companies
from the six industrial sectors, plus representatives from private and
public training organisations, local collaborative partners and MSC
officials; the total attendance at the seminar was 109.

Seminar

Following a welcome by the Rector of the Polytechnic, Professor
Durrands, Mr Weaving of Cooper, Liversedge and Wood Ltd addressed the
audience on the benefits his company had achieved through training.
This was confirmed by Mr Eaglen who then continued and presented the
"Business Success Through People Kit."

Following a resume of the three sections of the kit, delegates broke
off into small sector groups where each section of the kit was covered
in more detail by College and Polytechnic staff fully briefed in it's
use.

After a short break the audience were encouraged to field questions on
training to a panel of experts. The questions raised were:

Training

Types of courses available
Course for specific companies
Time and length of courses
Approximate course cost

Grants

MSC Training Grants
MSC Consultancy Grants
DTI Grants
Other forms of company assistance
Grant application

Company Sector

A breakdown of the number of people attending the seminar by sector:

Sector	No of Companies	%	No of people attending
Chemical	5	9	7
Confectionery/ Catering	3	6	6
Construction	7	13	11
Engineering	13	24	19
Service Ind	21	39	38
Textiles	5	9	8
	54	100	89

Breakdown of Sectors

Accountants

Business Equipment Company

Builders

Caterers

Chemical Manufacturers

Cinema Club

Clothing Manufacturers

Cloth Manufacturers

Electrical Engineers

Electronic Engineers

Hairdressers

Heavy Engineering

Hydraulic Engineering

Light Engineering

Motor Vehicle Repairs

Promotion Company

Property Development

Printers

Timber Merchants

Sheet Metal Engineering

YTS Managing Agent

By the end of January the majority of companies that attended the
seminars had been contacted by either College or Polytechnic staff.
Of the companies contacted a substantial number requested further
information on various types of courses including Management Studies,
Accounting and Word Processing packages.

In addition several companies requested information on consultancy for
training needs analysis, and further information on the Graduate
Gateway Scheme.

It is noticable that there was a substantial increase in the number of
companies attending the seminar as time progressed, for example 25 for
the first seminar in October and 89 for the third in December. This
could be due to several reasons:

Increased awareness of the seminars, as each seminar received a
substantial amount of publicity from local press and radio.

The positive response rate to mail advertising from one geographical
area to another.

An increased commitment to training in different geographical areas.

Each individual seminar built on the strengths of the previous ones.

Although each industrial sector received the same amount of publicity
it was apparent that the "Industrial Service" sector showed a greater
interest in training, with Engineering second and Construction third.
It was surprising that the Textile sector showed little interest in
training in an area that provides substantial amount of employment.
One possible reason could be Textile Training Boards are meeting the
industries training need adequately.

Overall, 97 companies attended the three seminars from six industrial
sectors. Most companies have either had training programmes designed
to meet their specific needs or identified areas of training for key
pesonnel and enrolled them on the appropriate short courses offered by
both public and private sector training organisations.

SECTION 3

3   <u>THE NEED FOR RESEARCH INTO SALES AND MARKETING TRAINING</u>

It has been widely recognised for some years now that there is an urgent national need to improve our marketing performance, particularly amongst companies in industrial sectors. Poor marketing performance has been frequently cited as a key reason for British industry's failure not only to retain its share of world trade but also to prevent import penetration of domestic markets. Of course, poor marketing performance is not believed to be the sole cause of this industrial decline. Other factors such as troublesome labour relations, a failure to invest in sufficiently sophisticated equipment, investors' and management's short-term financial objectives, poor quality and other shortcomings are also blamed for this comparative failure.

The question to be answered at this stage, therefore, is why it was decided to single out the area of sales and marketing as an important area of research for this Local Collaborative Project. There are a number of reasons which are listed below.

3.1   It is well known that several LCPs have already received funding for general investigations into all training needs. Although such an investigation had not been undertaken in Kirklees and Calderdale it was felt that, if this broad policy were followed, there would be a significant risk of 're-inventing the wheel', producing results which were little different from other funded projects. It was the wish of the partners in the project to use the funding to undertake research of a more original nature.

3.2   In choosing a specific area of research it would be possible to undertake a more in-depth and comprehensive investigation. A survey of general training needs would, of necessity, have been rather superficial.

3.3   As already indicated, many factors are suggested as explanations for Britain's poor industrial performance, but not all of these problem areas are capable of amelioration as a result of training. Improvements in marketing performance are probably achieved as a result of training more than any other single factor.

3.4   A further factor which distinguishes marketing management in many companies, especially in industrial sectors, is the lack of grounding in the subject that many managers have. Production engineers, designers, accountants, in common with staff in most management functions, have usually followed a consistent career path in those disciplines. Many marketing managers, however, move into that department from other areas of management. This is particularly prevalent in

industrial companies where marketing staff often have a technical background but little or no marketing qualifications or experience. In this situation one would expect training to have a particularly important role to play in improving marketing performance.

3.5 Unlike many areas of functional training, marketing training is a very complex matter. There are a large number of specific areas of marketing which could represent training needs for different companies. Even a basic marketing course could require a completely different orientation for an industrial company compared to a producer of consumer items. Marketing training can therefore come in many forms, and thus investigation of marketing training needs is, in reality, a very complex area of research.

In conclusion, few would dispute the need for many companies to improve their marketing performance. There would also be widespread agreement that training has a significant role to play in helping to improve the performance of marketing managers, or the owners of small companies. However, as far as the training providers are concerned, this generally accepted hypothesis is not sufficient. More specific information is required if this training need is to be responded to adequately. It was to be the objective of the survey carried out by this LCP to generate detailed information concerning the nature of small companies' sales and marketing training needs. It is only with detailed and firm information on the nature of this need that training providers can respond effectively by offering appropriate solutions to companies' problems.

SECTION 4

4   FOCUS GROUP SEMINAR ON SALES AND MARKETING TRAINING NEEDS

On the afternoon of Thursday, 19 February 1987 a focus
group discussion on sales and marketing training needs
in small companies in the Kirklees and Calderdale areas
was held at Percival Whitley College, Halifax. The
group discussion was chaired by Nigel Hill, Senior
Lecturer in Marketing at Huddersfield Polytechnic and
was attended by the following people:

Mr W Lloyd	CCST
Mr A Sykes	Ellis & Booth Ltd
Mr M Foster	Gardinia Windows Ltd
Mrs J Parker	National Hairdressers Federation
Ms Firth	Carlac Ltd
Mr G Wild	Halifax Training Group
Mr D Roberts	Lloyds Bank
Ms C Dunne	Interface Flooring Systems
Mr N Hill	Huddersfield Polytechnic
Mr J Coe	Percival Whitley College
Mr D Peace	Manpower Services Commission

4.1   The Purpose of the Focus Group

The purpose of a focus group in any research project is
to probe, in depth, the views of a number of people or
organisations who are typical of the much larger number
of respondents who will be used in the main sample
frame. The idea is that the group leader directs the
discussion to cover the main areas of relevance to the
study, but does not in any way attempt to influence the
views which the participants wish to express. By
allowing the discussion to be wide-ranging and by
encouraging the participants to voice their opinions on
all relevant subjects it is hoped that the researchers
will gain a more accurate understanding of the target
group to be researched prior to drawing up the main
research survey. As a result, the questionnaire will
reflect more accurately the areas of greatest interest
and greatest concern of the target group. It is also
hoped that any problems with terminology will be
identified and, that as a result, the subsequent
questionnaire will not be phrased in such a way that
respondents are likely to misunderstand or misinterpret
the questions. The results of the seminar are not
considered to be objective findings for the purposes of
this research study. They are merely a useful guide-
line for the researchers to use when compiling the
survey questionnaire.

4.2   Focus Group Proceedings

The delegates for the focus group seminar arrived
between 3.00 pm and 3.30 pm. Following light refresh-
ments and an informal discussion, the meeting was
opened. After everybody had introduced themselves,

Mr Hill gave a brief, fifteen-minute presentation of the marketing concept and the marketing process, in order to establish a framework for the discussion.

4.2.1 <u>Specific Marketing Courses</u> To aid the development of the discussion, Mr Hill distributed a handout which is reprinted below.

(The figures in brackets refer to the suggested length in hours of such courses).

<u>Some of the Possible Marketing Courses</u>

1 **Introduction to Marketing** - one-day seminar (6)

2 **In-depth Marketing Course** - evenings (30)

3 **Practical Market Research** (6)

4 **How to write a marketing plan** (6)

5 **Marketing Communications Course** (15)
6 **DIY Advertising and Publicity** (6)

7 **Sales:** a) How to Sell (6)
          b) Telephone Selling (3)
          c) Managing the Sales Function (3)

8 **Direct Mail** (3 - 6)

9 **Exporting** (6 - 12)

10 **Marketing Course for Employees** - (3)
        - Customer Care: The Importance of the Customer

The handout simply listed twelve possible marketing courses which could, in theory, be developed and offered by the College or the Polytechnic. The list did not pretend to be exhaustive but merely outlined some possible courses with the objective of aiding the discussion. The participants were asked to highlight the kind of courses which would be of most interest and most relevance to their company.

The discussion was opened by Mr Sykes who expressed the opinion that Course No 1 (the one-day Introduction to Marketing seminar) would be of great interest to his business as an introductory course which would enable him to evaluate which of the more in-depth courses would be most relevant to his needs. He also thought that Course No 10 (The Importance of the Customer) would be of great value to his business. Not being an exporter, Mr Sykes expressed a total lack of interest in Course No 9 and also a similar view of Courses 6 and 8 as they were promotional techniques not considered effective by his company.

Mr Foster felt that Course No 1 would be of great
interest to many small businesses, although he person-
ally would not be interested as he had already attended
a similar course. He thought that Course No 2 would be
of more value to him. Ms Firth also expressed her
strong interest in Course No 1.

Several people, including Mrs Parker and Mr Wild, express-
ed the opinion that Course No 10 would be of great
interest to many companies. It was also felt by Mr
Wild that all three sales courses would be of benefit
to the engineering industry. Mr Lloyd also made the
same point and expressed the opinion that sales courses
had not been given sufficient prominence in the list of
courses handed out. Mr Hill pointed out that the list
was not intended to be hierarchical but merely a dis-
cussion guideline intended to help the participants
establish priority areas. Everybody agreed that sales
training (of some kind) was an important training need.
Finally, Course No 3 was mentioned by Mr Roberts and by
Mr Foster as being of potentially great help to new
businesses. Mr Foster expressed the view that a
practical course along the lines of 'How can I estab-
lish that there is a market for my business idea?"
would be very valuable. Mr Roberts strongly agreed.

All the delegates were asked to fill in a form before
leaving (see Appendix). At the foot of this form they
were asked to list the three courses in order of
priority which would be of most value to them. It is
interesting to note that every participant listed
Course No 1 as top priority. Interestingly, Course No
10 was considered overall to be the second most
important. Third in order of priority overall were the
sales training courses. There was also support from
two of the participants for the Practical Market
Research course and from a further two for the In-depth
Marketing course. It is relevant to point out that
five of the courses did not appear on anybody's list.
They were Course Nos 4, 5, 6, 8 and 9.

In conclusion, there is clear and overwhelming interest
in the one-day Introduction to Marketing seminar and
also a considerable level of interest in Course No 10.
This concept of a course for all staff on the import-
ance of the customer is certainly an idea which should
be probed by the main survey to ascertain the level of
interest amongst businesses in general. If it is a
widely felt training need, a considerable volume of
potential business would have been identified. Sales
training courses made up the third area of need as far
as the focus group participants were concerned. Market
research did not receive much support from the business-
men present, with the exception of Mr Foster from
Gardinia Windows. The idea of market research courses
received more vocal support from the 'business support'

representatives, eg Mr Roberts, Mr Wild, who are probably in a stronger position to see the consequences of businesses failing through a lack of knowledge of their market place. It is clear that market research courses and the need for marketing information are areas that should be tackled by the survey.

However, some caution needs to be exercised over the use of the term 'market research'. It was felt that the addition of the word 'practical' would help small businesses to relate to the concept of a marketing research course.

Although five courses were not listed by anyone present in their most important three courses, it was not felt that they should be deleted from the main survey. All participants agreed that they were important aspects of marketing practice and that some companies may have training needs in those areas. In fact, it was generally considered that the list of potential courses should be extended. As a result, a wider range of selling and customer relations courses, a course on exhibiting, and additional courses on product and marketing planning and strategy, were added.

4.2.2 <u>Delivery of Courses</u> The discussion then moved away from the possible range of courses that might be needed to the way that any courses which were developed should be delivered. A second handout was distributed to all participants and covered a number of questions of delivery and organisation which would need to be resolved before courses could be offered by the colleges. A copy of the handout appears below.

<div align="center">

<u>Delivery of Courses</u>

</div>

1 **Mode of courses:**

    a) Daytime
    b) Afternoon/Evening
    c) Evening
    d) Weekend
    e) Taught courses
    f) Open learning courses

2 **Type of Venue**

3 **Cost of Courses**

4 **In-house Courses**

5 **Style of Teaching:**

    a) Lectures
    b) Practical sessions

The discussion began with an examination of the merits
of taught courses compared to open learning courses.
Despite the strong case for open learning made by
Mr Peace, it was quite clear that the large majority of
people around the table favoured taught courses rather
than open learning courses. Mr Foster, Mr Roberts,
Mr Sykes, Mr Lloyd, Mr Wild and Mrs Parker all express-
ed in fairly strong terms their views concerning the
value of taught courses with a tutor present at all
times. It was understood that open learning could be
more flexible in terms of time, place and the range of
subjects that could be offered but it was felt by most
delegates that typical trainees from their companies
would be much more highly motivated in a group environ-
ment with a tutor leading the course. It was also felt
that on a taught course, people could benefit from
interaction and discussion with other trainees.
It was pointed out by Mr Lloyd tht the role of the
tutor or trainer is critical and that, for courses of
this nature, a high calibre of tutor would be
necessary.

In the design of the questionnaire it is important to
treat the phrase 'open learning' with great caution.
There was some discussion on whether or not people
still misunderstood the term 'open learning' and still
look upon it as meaning no more than the old
correspondence-type courses. Both Mr Peace and Mr Coe
were at great pains to point out that open learning in
the 'eighties is much more flexible and does involve
meetings with a tutor on a regular basis as well as
private study by the trainees. However, several of the
industry representatives such as Mr Sykes and Mr Foster
appeared to be well aware of the current open learning
format and range of opportunities but still felt that
taught courses would offer a more effective form of
training for their companies. When testing this issue
in the survey it will be necessary to avoid the use of
the terms 'open learning' and 'distance learning' which
may be misunderstood by a large number of respondents.

4.2.3   The Timing of Courses   At this point, Mr Hill moved the
discussion on to the question of the timing of any
taught courses that might be offered. Using the
example of the one-day Introduction to Marketing
course which appeared to be very much in demand,
Mr Hill asked the participants whether that 6-hour
course should be offered as:

a)   a conventional one-day course, running from
     10.00 am to 6.00 pm;
b)   an afternoon/evening course, eg 1.30 pm to 8.30 pm;
c)   an evening course split into 3 separate 2-hour
     evening classes;
d)   a weekend course.

It was considered almost unanimously by all present
that companies were becoming increasingly reluctant to
release their staff for a whole day and that the tradi-
tional daytime course was, therefore, not going to be
popular with decision makers in small businesses. It
was also felt even more strongly that weekend courses
would be most unpopular with employees who would be
most reluctant to give up their leisure time at the
weekend.

This left us with the choice of a 6-hour course run on
the same afternoon and evening, or the same 6-hour
course spread over a number of evenings, ie Options
1(b) and 1(c) on the handout. Mr Wild felt that
afternoon/evening courses would be very popular on the
grounds that the company would be giving half the time
for the training and the employee would also be
contributing his own time during the evening. This
would conform to the view that both the company and the
employee as an individual, would benefit from the
train-ing and, therefore, both should make a commitment
of time to the course. This viewpoint was generally
supported.

Mr Lloyd expressed the view that for some courses,
especially sales training courses, the 6 hours should
be spread over several evenings so that trainees would
have the opportunity to put their learning into prac-
tice between sessions. This view was also well
supported, especially for courses which were likely to
be more practical in nature.

In conclusion, it was felt that courses which would be
more lecture-based and less practical, would probably
be better held on the afternoon/evening model, starting
at 1.00 pm and finishing no later than 7.30 pm. The
more practical courses, however, might benefit from an
evening format, eg 3 evening sessions of 2 hours'
duration, with one week between each class. However,
it was agreed that all the possibilities listed should
be included on the questionnaire in order to generate
some objective data on this subject.

4.2.4   Type of Venue   Moving on to point 2 on the second
handout, Mr Hill asked the participants whether their
employees would be happy to attend courses in a college
environment or whether they would prefer a venue such
as a hotel. It was suggested by Mr Foster that a non-
college venue would be preferable, being more relaxed
and offering the possibility of a bar and perhaps more
congenial surroundings. However, there was a consider-
able amount of disagreement on this point. Mr Sykes
expressed a view very strongly that he was very much
against sending staff on courses where alcohol was
offered, as this would interfere with their concen-
tration. He expressed the view that a college would

offer a more serious learning environment and that, as
a result, the course would be taken more seriously by
the trainees. This viewpoint was supported by
Ms Firth, Mr Lloyd and Mrs Parker.

In conclusion, the majority of the participants
appeared to support the use of a college venue.
However, this view was not unanimous and it may well be
that for management courses (especially middle to
senior management) the non-college environment would be
more attractive. The nature of the venue is, there-
fore, an important area of questioning which the survey
must tackle.

4.2.5   Cost of the Courses The fee to be charged is always a
difficult issue for potential customers to discuss
objectively. A certain problem arose here because some
of the participants may have felt that the role of
Mr Hill and Mr Coe was to try to discover how much
companies were prepared to pay so that the colleges
could then charge the maximum fee! Mr Hill made the
point that the purpose of focus groups was simply to
allow a preliminary airing of views on all aspects of
sales and marketing training courses, including the
fees. Mrs Parker felt that, in her industry, £35 per
day per trainee appeared to be a normal fee for train-
ing, but she considered this excessive and thought that
£20 to £25 would be a more fair price. Mr Sykes made
the point that many professional courses, such as
courses for accountants, were priced at a minimum of
£125 per day. However, as a managing director, he
would be more likely to send a large number of his
people on a marketing course if the cost were much
lower. He was somewhat reluctant to specify a 'fair
price' but seemed to imply that £50 would be reason-
able. Mr Foster agreed with this figure. Mr Wild made
the point that courses were not cheap to run and he
felt that, being realistic, £50 would be a minimum fee
for a course with 10 - 15 trainees.

Price will be a very difficult issue for the survey to
tackle in an objective manner. There will be a tend-
ency for respondents to minimise the price they are
prepared to pay. However, it is clearly an issue that
should be covered by the questionnaire because at the
moment it appears that the price which small companies
are prepared to pay for their training is somewhat
below the costs of the college in mounting those
courses. Moreover, the very small businesses were not
represented at the focus group and their ability/
willingness to pay is likely to be even lower. Despite
all these negative points, the question of price is
certainly a key issue which will have to be overcome if
successful sales and marketing training courses are to
be run. One positive point was that, in response to
questions by Mr Peace, the participants seemed rather

unsure about the MSC's Local Training Grants of £25 per trainee per day. This may help to bridge the gap between the cost of running the course and the target group's ability to pay.

4.2.6   **In-House Courses**   Mr Hill then asked the delegates to consider the question of in-house courses. He wondered whether small companies would have a sufficient number of trainees, for a particular course, to make in-house courses viable. However, most of the delegates felt that there was considerable scope for in-house training. The participants from the larger companies, including Mr Sykes and Ms Dunne (employing 60 and 200 staff respectively), were certainly of the opinion that in-house courses would be of great interest to their companies. Mr Foster, from a smaller company (employing 25 people), thought that in-house courses could be of interest to him, especially if there was a possibility of two companies joining together to run an in-house course. Clearly, if companies are interested in courses such as Course No 10 (Handout No 1), which would involve a very large proportion of their staff, the concept of in-house courses becomes much more viable. In conclusion, the level of demand for in-house training was certainly felt to be an issue which should be tested by the survey.

4.2.7   **Style of Teaching**   Finally, the question of the style of teaching, or method of delivery, was raised by Mr Hill. He asked the participants to give their views on two clear alternative methods of delivery, points 5(a) and 5(b) of the second handout.

Mr Lloyd had earlier made the point in strong terms that practical work rather than lectures was a more effective method of training. However, although there was a certain amount of support for Mr Lloyd's views, especially with reference to certain areas of training, eg active selling skills, it was felt by the large majority of people around the table that, for most courses, a realistic mixture of the two methods of delivery should be used. Some participants felt that unless a certain amount of material had been delivered to trainees by a teacher there was a tendency for course-goers to feel that they had not actually learnt anything. The most attractive option was a lecture style format, interspersed with practical sessions, case studies, group discussion, etc, to allow this learning to be placed in a practical context. It was felt that this would be the most interesting and effective mode of delivery.

/

4.3   <u>Conclusion</u>

Mr Hill finally brought the meeting to a close at
5.50 pm, 20 minutes later than scheduled, a sign of the
interest in the area of discussion.   it had been a
lively discussion which certainly added to the
researchers' understanding of the issues they were
attempting to tackle.   The exercise highlighted certain
clear areas of interest concerning the subject matter
for courses and also established a number of priorities
regarding the delivery of courses.   With the additions
and amendments already stated in this report, it is
felt that the two handouts used for the focus group
discussion would form an acceptable framework for the
design of the questionnaire.

SECTION 5

5   QUESTIONNAIRE DESIGN .

The focus group held on the afternoon of 19 February, at Percival Whitley College, proved to be a most valuable exercise when the researchers had to tackle the thorny issue of questionnaire design. Although the basic framework of a postal questionnaire to examine sales and marketing training needs could be drawn up without too much difficulty, the results of the focus group proved invaluable to the researchers in the addition of the detail to that framework.

A copy of the questionnaire can be found as an Appendix to this section. The main points of questionnaire design are summarised below.

5.1   Introductory Questions

The survey commenced with six introductory questions which were designed to stimulate thought in respondents about the importance of the marketing function to their company and the role that training may have to play in improving their performance in that area of management. The section would also aid the researchers in analysing responses, with Question 2 clearly indicating those businesses that are most unlikely to be customers for any sales and marketing training courses offered in the public or private sector.

Questions 3 to 6 were designed to move respondents' thoughts on to specific sales and marketing courses. Asking about past attendance of courses would further help in the quantification of the likely level of demand for training since actual behaviour is often a better guide to future behaviour than statements of intent. As well as encouraging respondents to think about marketing training, it was hoped that Questions 5 and 6 would help the researchers to draw some conclusions about the nature of marketing courses which are currently perceived as 'good' or 'bad'. However, it was appreciated that responses to these two questions would be very subjective and might be too heavily dependent on the respondents' memory. Caution, therefore, needs to be exercised when drawing conclusions from this type of question.

5.2   Specific Courses

Due to the lengthy list of potential sales and market- ing training courses (made even longer as a result of the focus group) this was always going to be a very difficult area of questionnaire design. With a total of eighteen potential courses to investigate, a very long and very unwieldy questionnaire was a real danger. This would have fatal consequences for a postal survey. It was, therefore, decided to itemise the courses in

list form with a box next to each course for a value
rating. Respondents were asked to give each course a
value of 1, 2 or 3 according to whether they considered
the course to be 'extremely useful', 'quite useful' or
'of little or no value' for their company. The
researchers believed that this technique enabled them
to receive the basic information required by the survey
without over-facing respondents.

In order to enable the researchers to further refine
the level of demand for specific courses, three further
questions were added. Question 8 identified, in order
of priority, the three courses which would be most
useful to each participating company. This helps to
overcome semantic problems arising from phrases in
Question 7 such as 'extremely useful' having different
values for different respondents.

However, even if a specific course, eg Course 7.1,
scored very highly for both Question 7 and Question 8,
it would not be conclusive evidence that a high level
of demand existed for that course. It could be that
the one-day Introduction to Marketing course was
interesting to respondents only in relation to the
other seventeen courses listed. Demand for that most
popular of the eighteen courses could still be very
low. Question 9 was designed to alleviate this
potential problem. If a large proportion of
respondents mark the 'nobody would attend' box, then
demand for any courses would, in reality be very low,
whatever responses were given to other questions.

If a large proportion of respondents is much more
positive about the likelihood of attendance, we can be
confident that demand does actually exist for those
courses most indicated as 'the course we would be most
interested in'. In that eventuality, Question 10 would
enable the researchers to identify, with even greater
accuracy, the level of potential demand for any
specific course. By cross-tabulating responses for
Questions 8 and 10 with the general company information
referring to number of employees, it would be possible
to predict with some accuracy the likely level of
demand for each of the eighteen courses listed in
Question 7.

Even with the most careful preparatory work,
researchers may still not cover all relevant points on
a questionnaire of this nature. An open-ended question
(Question 11) was, therefore, added in case there were
needs for any specific areas of sales and marketing
training which had been omitted from Question 7.

5.3   <u>Open Learning versus Taught Courses</u>

Question 12 was rather lengthy, but the extensive
definition of 'open learning' included in the question
was imposed on the researchers as a result of the
findings of the focus group. It was clear that owners
and managers of small businesses would have a rather
vague impression of the open learning concept and it
was hoped that the wording of Question 12 would go some
way towards alleviating this problem. In terms of the
strategic development of the training-providers it is,
of course, a very important question to answer.

5.4   <u>Timing of Courses</u>

The focus group discussion produced a fairly uniform
response to the question of the most desirable times
for courses to be offered. However, data obviously
needed to be collected on a larger scale in order to
reach a valid conclusion, therefore, all possible
options for the timing of courses were included in
Question 13, even those most strongly rejected by the
focus group. It is still a very straightforward
question and should, therefore, generate an accurate
response.

5.5   <u>Style of Teaching</u>

This was another topic which had generated a consider-
able amount of discussion at the focus group seminar.
It was decided to keep the range of options down to
three clear possibilities: firstly, taught courses,
secondly action learning courses or thirdly a mixture
of the two. As with the phrase 'open learning', the
focus group had felt that 'action learning', although
more concrete, could still be open to misinterpret-
ation. Explanation of this concept had, therefore, to
be built into the question, leading to a somewhat
lengthy paragraph. Although far from ideal, it was
felt by the researchers to be preferable to the
ambiguity that might result from the simple use of the
phrase 'action learning'.

5.6   <u>Course Venues</u>

Three questions were included on this subject to allow
for points raised during the focus group seminar.
Question 15 is a fairly straightforward dichotomous
question asking whether a college- or hotel-type of
venue would be preferred by course participants. The
option of 'no firm preference' was also offered.

However, as demonstrated by the focus group, it is not
just the venue itself which is of concern to the
potential participants, but the whole atmosphere and
style of the course. Some focus group participants

clearly viewed a course as an enjoyable day out, more
relaxed than the normal working day and, therefore,
most appropriately held in congenial suroundings with
drinks available at lunchtime and opportunities
provided to chat with other participants. Other focus
group members seemed to prefer a more functional, even
austere day with everything geared to effective learn-
ing. A classroom environment and no alcohol would be
more suitable for these people. Questions 15 and 17,
therefore, attempt to probe these views. The data
collected will be important to public sector providers
in determining the suitability of offering courses on
their own premises. It may well be that booking accom-
modation in the private sector is more consistent with
the wants of potential customers.

5.7   Pricing

The type of venue and style of course, up-market or
functional, will obviously have an impact on the cost-
ing of that course. Questions 18 and 19 attempt to
distinguish between these two styles and to discover
respondents' views of a 'fair and reasonable' price
band for such courses. One cannot avoid the problem of
respondents' reluctance to disclose this kind of inform-
ation honestly and researchers simply have to be alive
to this problem at the pilot testing stage and the
analysis stage.

Question 20 was added as a result of points made at the
focus group, where several of the participants were
unaware of this training subsidy. Small companies' use
of the local training grant is clearly a factor which
providers need to consider in both their pricing and
their marketing communications.

5.8   In-House Training

In general, there is a considerable amount of in-house
training carried out by companies across all industrial
sectors. However, since the objective of this survey
was to investigate sales and marketing training needs
in small companies, the level of demand for in-house
courses was by no means known. It is assumed that the
smallest companies will not have a need for in-house
trainers, but those companies employing around
50 people or more may well have a significant need for
this service.

5.9   Other Training Needs

Although the postal survey was to concentrate on sales
and marketing training needs, it would have been very
narrow-minded to fail to take advantage of this
opportunity to enquire, however briefly, about general
training needs. Two final questions were, therefore,

added. Question 22 simply gave a list of ten common
areas of potential training need and asked respondents
to place a cross in any appropriate box(es).

Question 23 was a straightforward open-ended question
asking respondents to state any other training needs
which they did not identify on the list given in the
previous question.

5.10   General Information

The final page of the questionnaire asked for general
company details to aid in the classification of
respondents and in any cross-tabulation required during
the analysis of the survey results. Respondents were
asked to provide their own name and position, the
company name, address and telephone number, together
with their number of employees and the type of business
in which they are engaged. They were also asked to
indicate whether or not they had a full-time training
officer. Apart from this information being of general
interest to providers, it also would enable the
researchers to post-code respondents according to the
MSC's definition of a small company, ie below 200
employees and without a full-time training officer.

The questionnaire ended with the usual expression of
thanks to respondents for giving their time, a request
that they return it as quickly as possible and a
reminder of the pre-paid envelope which had been
provided for their use.

SECTION 6

.6   THE PILOT SURVEY

Having designed the questionnaire, it was necessary to test it on a small scale before the full survey was undertaken. Even with the most thorough preparatory research, it is possible to produce ambiguous wording or unclear questions. The length of the questionnaire and the volume of information which respondents were being asked to read and assimilate was also a cause of concern to the researchers.

It was, therefore, decided to test the questionnaire by carrying out a small pilot survey of twenty companies. Individuals who had attended the focus group seminar, members of the Steering Committee and other college contacts, agreed to act as guinea pigs in this way. Although this was a quota sample rather than a random one and was, therefore, open to bias, it was considered to be the most effective way of testing the suitability of the questionnaire design. Since the researchers did not simply require a completed questionnaire but also needed respondents' comments on that questionnaire and details of any difficulties they had encountered in completing any of the questions, it was decided that using known LCP contacts would be the most sure way of achieving these objectives.

Twenty companies were, therefore, asked to complete the pilot questionnaire and to give the researchers the benefit of their comments. A copy of the covering letter which was sent to the twenty companies is included as an Appendix to this section.

All companies responded very quickly, and their questionnaires were all completed in a satisfactory manner. The general consensus was that the question- naire was rather long and, in some places, complex. However, it was felt that all questions were clear and understandable and that, provided respondents were prepared to sit for a few minutes to complete it with care, they should have no problems doing so. Moreover, it was generally accepted that no questions could be deleted without adversely affecting the information requirements of the research.

Therefore, apart form a few minor amendments, the questionnaire was left substantially unchanged for the main survey.

SECTION 7

7. SAMPLING DETAILS.

7.1. Sampling Frame.

It was the original intention of the research team to use a 'Stratified Random Sample' in order to select 700 firms from the Kirklees and Calderdale areas. This particular sampling method involved obtaining detailed information on the parameters of the survey population e.g.size of firm, number of employees, type of industry etc. From this information, quotas for each stratum would then be planned according to the size of that group in tne total population. Random selection would then be carried out from within each stratum until the quota for each stratum was filled.

Despite extensive efforts to obtain the necessary information, it soon became obvious that such data was not available in published form, at least not in the detail required. Enquiries were made to various organisations including The Business Statistics Office, The Department of Trade and Industry, and the Local Chamber of Commerce amongst others. None of these organisations were able to supply the type of information required. Consequently the original idea of using the Stratified Random Sampling method was abandoned.

Given the time and cost constraints, it soon became obvious that the researcn team would have to utilise lists of firms in the area which were relatively easy to obtain in order to produce a satisfactory sampling frame. Lists were obtained from a variety of sources including:

     i).   Huddersfield Polytechnic's computerised mailing list.

     ii).   Huddersfield Polytechnic's P.I.C.K.U.P. mailing list.

     iii). Chamber of Commerce lists.

iv).   The CALDIS list supplied by The Percival Whitley College.

v).   Other miscellaneous lists.

The lists were, as far as possible, checked for duplication. The lists were then 'combined' in order to produce an acceptable 'master list'. This 'master list' was then adopted as the population of interest. The combined list ran to some 20,000 companies, from which 700 firms were eventually randomly selected.

7.2. Sampling method used.

The sampling method used was a systematic random sample. This method is widely used by market research firms within the U.K. and is generally accepted to be the most practical approximation to a simple random sample.

The first stage of the sampling procedure involved calculating a 'sampling interval'. This was obtained by finding the ratio of the population (in this case approximately 20,000 firms) to the desired sample size (in this case 700 firms). The sampling interval in this particular study was found to be 29.

The second stage involved using two diget random numbers to select a number between 01 and 29. For convenience let us say this number turned out to be 20. This number allowed us to select our first sample number from the population list by reading down to the 20th company listed from the top of the list. The sampling interval was then repeatedly added to the original random number, and the series then becomes 20, 49, 78, 107 etc until the desired sample of 700 is achieved.

Because there was no reason to believe the master population list was subject to any periodic arrangement, a systematic random sample of 700 selected from a defined population of 20,000 was expected to produce a sample with characteristics representitive of the population from which it was drawn.

7.3. Size of firms.

Although every effort was made to restrict the sampling procedure
to firms with no more than 50 employees, some larger firms were also
included. As mentioned earlier, precise information on the size
of individual firms in the area was difficult to obtain, and in the
case of some of the lists used for sampling, out of date. Students
were used to contact every company sampled in order to obtain
co-operation. Filter questions were used on the phone to attempt
to ascertain the number of employees working for a particular firm.
At times this information was not given, for example, a receptionist
answering the phone might not actually know how many people the firm
employed. Often there was confusion over what was meant by 'the
firm', as some companies had branches in other areas. In
the final sample of 330 returned questionnaires, approximately 74%
of the firms taking part had less than 50 employees, with a further
15% having less than 100 employees. Approximately 11% had more than
100 employees, although it is possible that some of these firms had
included all employees working for the organisation, and not just
those working at the branch or division contacted in the survey area.
Overall however, the sampling procedure achieved its objective in
randomly selecting small or at least smaller firms in the main.
The size of firms included in the survey is discussed further at
the end of section 9 of this report. The actual administration of
the survey is discussed in detail in section 8.

SECTION 8

8 THE ADMINISTRATION OF THE SURVEY

8.1 Research Methodology

At the outset the project was faced with three broad options for collecting the required information. These options were firstly, a postal survey, secondly, a telephone survey, or thirdly, a series of personal interviews. The final solution was arrived at by eliminating the less suitable alternatives.

8.1.1 Telephone Survey

Although telephone surveys often represent the most cost-effective solution for undertaking business-to-business research and are consequently growing in popularity, this method appeared to the researchers to offer the least acceptable solution to the needs of this project for several reasons. Firstly, the subject area was a complex one and it would not always be clear to the researchers or company receptionists which person within the company would be the most appropriate respondent. Inability to identify a specific job title or a clear description of the ideal respondent is often a fatal failing of industrial telephone surveys. Secondly, the questionnaire was rather long for administration over the telephone and thirdly, some of the questions were almost certainly much too complex to be answered in this way.

8.1.2 Personal Interviews

Personal interviews would have represented the ideal method of data collection. The questionnaire could have been completed in fifteen to twenty minutes, which is quite acceptable for a personal interview, and the more complex questions could have been explained if necessary. However, this method suffers from the logistical problem of arranging appointments and actually visiting all respondents. It was clear that, within the constraints of the LCP budget, it would have been possible to visit only a relatively small number of companies. Due to the complexity of the subject and the varied nature of the responses anticipated, it was generally agreed by the Project Steering Committee that a large response of several hundred was desirable.

8.1.3 Postal Survey

This process of elimination left a postal survey as the only feasible method of collecting the data required. However, postal surveys do suffer from a notoriously low response rate. This problem can be even more acute in industrial marketing research. However, it was clear that these problems needed to be overcome and that the project needed to develop a method of maximising the response rate to a business-to-business postal survey.

8.2   Telephone Screening

As already stated, the telephone is often the most
cost-effective means of business-to-business communi-
cation. Although it has been rejected as a suitable
method for collecting the complex data required, there
was no reason why it should not be used as a means of
improving the response rate to the postal survey.
Small teams of students from both the Polytechnic and
the College rang each of the 700 companies in the
sample. It was hoped that this exercise would achieve
three objectives.

8.2.1   Encourage Participation Each telephone operator was
given a short script which outlined the purpose of the
research and the benefits, in terms of new training
opportunities, which would result for local companies
upon the successful completion of the research. It was
hoped in this way to demonstrate to companies the
potential value of participating in the survey.

8.2.2   Generate Commitment As anticipated, when they had
listened to the purpose of the research, the majority
of companies agreed to participate. It was hoped that
this verbal promise to return the questionnaire would
give respondents a certain amount of commitment to the
project and that they would feel an obligation to
complete and return the questionnaire.

8.2.3   Eliminate Negative Companies It was known that some
companies within the sample drawn up would almost
certainly be strongly opposed to filling in any
questionnaire on any subject. It would have been a
pointless exercise to send a questionnaire to those
companies. Almost 20% of the sample fell into this
category. They were, therefore, classified as non-
responses.

8.3   Undertaking The Postal Survey

The companies in the sample were telephoned, as
described above, in waves, due to the physical impossi-
bility of contacting 700 companies in a single week.
This activity spread over four weeks, from around the
end of March to the end of April. At the end of each
week, all companies telephoned during that week who had
agreed to participate, were sent a questionnaire.
Included with the questionnaire were a letter thanking
them for their participation, a reply-paid envelope and
a covering statement giving further details about the
LCP and the objectives of the research. A copy of this
explanatory leaflet forms and Appendix to this section
of the report.

By May, all the companies agreeing to co-operate had
been sent a questionnaire. As expected, responses came

in quickly initially and then gradually tapered-off to
a trickle. A very disappointing feature of the survey
was that, by the end of May, over one month after the
companies had been telephoned, only half of those agree-
ing to complete and return the questionnaire had in
fact done so. This totalled around 250 responses -
well below the anticipated number. It was therefore
decided, at the risk of delaying the analysis of the
results, to undertake a further round of telephone
calls with the objective of increasing the response.

June was, therefore, spent identifying those companies
which had initially agreed to participate in the survey
but had not in fact returned the questionnaire. Around
150 companies received a second telephone call asking
politely for the questionnaire to be returned. A vari-
ety of reasons were offered for failure to respond,
from lack of time and misplacement of the question-
naire, to insistence that the company had never been
approached in the first place. It is possible, of
course, that the second caller was not always able to
speak to the same contact as the first caller.
However, despite all these problems, the vast majority
of the reminded group agreed to co-operate. It was
decided, as a matter of policy, to send all of these
companies another questionnaire with a reply-paid
envelope, whether or not they had mislaid the original.
These were sent on a daily basis, immediately after the
call, in order to further reinforce the message.

Interestingly the response rate from this second round
of telephone calls was very similar. Around 50% again
responded, this time, however, more quickly. It had
been decided that mid-July should be the final cut-off
date for responses.

The latter part of July was spent checking each question-
naire for non-valid responses and post-coding the open-
ended questions. This enabled each question to be
coded in the column provided on the questionnaire.
Fortran coding cards had then to be completed for each
questionnaire and a programme written to enable the
result to be analysed using the 'SPSS' statistical
analysis package on the Polytechnic's mainframe
computer.

BUSINESS SUCCESS THROUGH PEOPLE LAUNCH

I/We would like to attend the Business Success through People Seminar at DABTAC, on Wednesday, 19th November, 1986 at 6.00pm.

Name(s) _____

_____

Company _____

Address _____

_____

_____ Post Code _____

Tel. No. _____

Steven Booth
DABTAC
Halifax Road
Dewsbury
West Yorkshire
WF13 2AS

Kirklees Metropolitan Council Directorate of Educational Services

DABTAC

Dewsbury & Batley Technical & Art College
Halifax Road, Dewsbury, West Yorkshire, WF13 2AS.
Telephone 465916-7-8
Acting Principal: T. Beaumont, C.Eng., M.I.Mech.E., M.B.I.M.

PICKUP

BUSINESS SUCCESS SEMINAR

We are pleased to invite a representative or representatives from your firm, to the above seminar which will take place in:

The Main Hall, Dewsbury and Batley Technical and Art College (DABTAC), Halifax Road, Dewsbury.

6.00pm - 8.30pm, Wednesday, 19th November, 1986

THE KIT - The evening is to launch a new business kit - "Business Success through People" - developed by the Manpower Services Commission to help indentify ways to make your business more successful. At the launch you will receive the kit, provided free by the MSC, and learn about its uses and the benefits that it can bring to your company. It helps you pinpoint the areas in which training and development can offer clear advantages by getting the best out of people involved in your business.

ADVICE AND ASSISTANCE - MSC representatives will be on hand during the evening to discuss the kit and the financial assistance that is available to firms. Local businessmen, College and Industry Year representatives, members of the Chamber of Commerce will be in attendance to provide further advice and information.

BROCHURES - Training brochures have been produced giving details of the training courses, programmes and facilities available in the area. These will be distributed on night.

BUFFET - A light buffet with wine will be provided free of charge.

If you wish to attend, please complete the attached slip and return it to me.

If you require any further information, please do not hesitate to contact me. I look forward to seeing you on the 19th November.

Steven Booth
DABTAC

INDUSTRY YEAR

ACTION FOR JOBS

APPENDIX

SALES AND MARKETING TRAINING DISCUSSION SEMINAR

Percival Whitley College

Thursday, 19 February 1987

Name   ....

Position ....

Company Name ....

Address ....

          ....

          ....

Telephone No ....

No of Employees ....

Product(s) or Service(s) ....

          ....

          ....

Priorities for sales and marketing training

1 ....

2 ....

3 ....

APPENDIX

THE SALES AND MARKETING TRAINING NEEDS

OF SMALL COMPANIES IN

CALDERDALE AND KIRKLEES

A Local Collaborative Project administered by Huddersfield
Polytechnic and Percival Whitley College of Further Education.

As part of the Manpower Services Commission's campaign to help
companies improve their training capability a research project
to investigate the sales and marketing training needs of local
companies is currently being undertaken. Staff in marketing
and business studies from Huddersfield Polytechnic and
Percival Whitley College in Halifax are collaborating to
administer an extensive survey of small companies in the area.

Over seven hundred local companies have agreed to fill in a
questionnaire which will describe in some detail their partic-
ular sales and marketing training requirements. The question-
naire returns will be analysed on the Polytechnic's mainframe
computer and the findings will be outlined in a report to be
published during the Summer.

It is hoped that the survey findings will point conclusively
to certain common areas of sales and marketing training need.
It will then be possible for the College and the Polytechnic
to develop courses to meet these training needs, and by the
Autumn it is envisaged that the first of these courses would
be available.

Preliminary research undertaken locally has shown that many
companies see sales and marketing as one of their key areas of
training need. National research commissioned last year by
the MSC showed beyond doubt that there is a clear link between
companies' level of investment in staff training and their
subsequent business performance. This Local Collaborative
Project should, therefore, be of considerable value in helping
local companies to improve the skills of their staff in a
vital area of management and, hopefully, to improve their
business performance as a result.

SALES AND MARKETING TRAINING SURVEY

		OFFICIAL U: ONLY
		COL NO

Q1 How much do you think your business could benefit from a more professional approach to sales and marketing?

(TICK ONE BOX)

We would benefit enormously 1

We would benefit to some extent 2

We would not benefit at all 3

| 1 |

Q2 Do you think that training has a useful role to play in improving the sales and marketing performance of your business?

(TICK ONE BOX)

Yes, sales and marketing training would be very beneficial 1

Yes, sales and marketing training would help to some extent 2

No, training would not improve our sales and marketing performance 3

| ? |

Q3 Have you as an individual ever attended any training courses on sales and marketing?

(TICK ONE BOX)   YES ... 1

                    NO ... 2

| 3 |

Q4 To your knowledge, has anybody from your company attended a course on sales or marketing within the last 2 years?

(TICK ONE BOX)   YES ... 1

                    NO ... 2

| 4 |

Q5 If the answer to Question 3 or Question 4 was YES, please give brief details of any course(s) attended in the space provided below.

....

....

....

....

OFFICIAL USE ONLY   5-6

Q6 If you have mentioned any courses in
    Question 5 could you please indicate
    briefly, in your own words, how useful
    each of the courses mentioned were. Please
    use the space provided below.

    ....

    ....

    ....

    ....

Q7 Below are a number of examples of sales and
    marketing courses. Please indicate the value
    of each course to your company by putting a
    number in the adjacent box. Please grade the
    courses according to the following criteria:

    [1]   The course would be extremely useful

    [2]   The course would be quite useful

    [3]   The course would be of little or no
          value to our company

7.1   A one day "Introduction to Marketing"
      course   13

7.2   An in-depth marketing course spread
      over several weeks of part-time
      attendance   14

7.3   A one day "Practical Market Research"
      course   15

7.4   A more in-depth marketing research
      course spread over several weeks of
      part-time attendance   16

7.5   A course on innovation, new product
      planning and development   17

7.6   A practical one day course on "How to
      write a marketing plan"   18

7.7   A high level course (of 2-3 days
      duration) on marketing strategy and
      planning   19

7.8   A one day course on "Do it Yourself
      Advertising and Publicity"   20

Continued......

Q7   Continued

7.9   An in-depth course on promotion and
        marketing communications spread over
        several weeks of part-time attendance

21

7.10   A short course on practical selling
        skills

22

7.11   A more detailed course (several weeks,
        part-time) on practical selling skills

23

7.12   A short course on telephone selling
        skills

24

7.13   A short course on managing the sales
        force

25

7.14   A short course on receptionist
        skills

26

7.15   A short course on using direct mail
        techniques

27

7.16   A short course on "getting the most out
        of exhibitions"

28

7.17   A short, practical course on exporting

29

7.18   A short course (probably half a day)
        aimed at all the company's employees
        and entitled "The Importance of the Customer"

30

Q8 Please consider which of the above courses would
        be the most useful to your company. Please list
        the 3 courses which you would be most interested
        in (in order of priority) by putting the number
        of the course (ie 1 - 18) in the relevant box.

The course we would be most interested in is

31-32

The second most interesting course for us would be

33-34

The third most interesting course for us would be

35-36

Q9 If the course, which you have listed in Question 8
        as the most useful course for your company, were
        available this year, at a local college, at a
        reasonable price, how likely is it that somebody
        from your company would attend? Please put a 'X'
        in the appropriate box.

It is very probable that somebody would attend

1

It is likely that somebody would attend

2

It is possible that somebody would attend

3

37

It is unlikely that somebody would attend

4

Nobody would attend

Q10 What proportion of your company staff would benefit from attending any of the courses listed in Question 7?

None   1

A very small number   2

Approximately one-quarter of our employees   3

Approximately half of our employees   4

A large proportion of our employees   5

Everybody in our company   6

38

Q11 Can you think of any additional sales or marketing training courses, not listed in Question 7, which would be of interest to your company? If so, please give brief details.

....

....

....

....

OFFICIAL USE ONLY

39-40
41-42

Q12 Do you prefer courses to be offered at a set time on a set date with a lecturer or trainer to run the course or do you prefer courses to be available on an "open learning basis" (eg a flexi-study or Open University type of course) for which specially developed course materials are available in a central location where they can be accessed on an individual learning basis at any time and where tutor support would be available at set times?

(TICK ONE BOX)

I would prefer courses to be taught courses   1

I would prefer courses to be open learning courses   2

I would prefer a mixture of both types of courses to be available   3

43

Q13 Assuming that a typical short course (of 6 hours duration) were to be a taught course, offered at set times, please indicate in the appropriate box the timing that would be most acceptable to your company.

Continued .....

OFFICIAL
ONLY

COL NO

Q13   Continued

Weekday morning + afternoon

Weekday, two afternoons

Weekday afternoon + evening

Weekday, two evenings

One day at the weekend

|1|
|2|
|3| 44
|4|
|5|

Q14   If a course is a taught course, would your
company prefer the style of the course to be
mainly lecture based, with a significant volume
of information being taught to trainees or would
your company prefer the course to be more action
based, including exercises, discussions and
simulations where the trainees "learn by doing"?
Please indicate your preference in the
appropriate box.

I prefer taught courses

I prefer action learning courses

I prefer courses to include a mixture of both
types of teaching

|1|
|2| 45
|3|

Q15   Do you think it is acceptable for courses to be
held within the College or Polytechnic or do you
think that your staff would prefer courses to be
held in a hotel or conference centre?

I would prefer courses to be held in a college
environment

I prefer courses to be held away from the college

I have no firm preference for the type of venue

|1|
|2| 46
|3|

Q16   Do you think that people expect wine or other
drinks to be available at lunch time on a full
day course?

I think a lunchtime drink improves the day

I am strongly opposed to alcohol being available

I have no firm preference about the availability
of alcohol

|1|
|2| 47
|3|

Q17   Do you think that smoking should be allowed in
lecture rooms?

2 5

	OFFICIAL USE ONLY
	COL NO

Q17 Continued

Smoking should be allowed

1

Smoking should not be allowed

2   48

I have no firm preference on this subject

3

Q18 What do you think is a fair price for a one day course (or 6 hours of part-time attendance) taught by a well qualified professional in a college environment and NOT including the cost of any meals? Please put a 'X' in the appropriate box.

Below £35

1

£35 - £49

2

£50 - £74

3

£75 - £99

4   49

£100-£125

5

Above £125

6

Q19 What do you think is a fair and reasonable price for a specialist course, of one day duration, with a bound set of course notes to take away, presented by 2 well qualified professionals, in a hotel environment and including the cost of meals and refreshments? Please put a 'X' in the appropriate box.

Below £35

1

£35 - £49

2

£50 - £74

3

£75 - £99

4   50

£100-£125

5

Above £125

6

Q20 Are you aware of the MSC Local Training Grant which offers £25 per person per day towards the cost of attending acceptable training courses?

YES

1   51

NO

2

Q21   Would you be interested in the idea of College
or Polytechnic staff being available to run in-
house courses on your premises (or at a convenient
venue organised by your company)?

YES | 1 |

NO | 2 |

52

Q22   Apart from sales and marketing training does
your company have any clear training needs in
other areas? Please put a 'X' in any boxes
where you have a need for training. If you
have any other training needs which are not
included in this list please give details
below.

Information technology in the office | 1 |

The use of computers for production or design | 2 |

General production management | 3 |

Financial management | 4 |

Supervisory skills | 5 |

: Computer programming | 6 |

Foreign languages | 7 |

Secretarial + reception skills | 8 |

Employment law | 9 |

Personnel selection | 10 |

53

Q23   Any other training needs, please specify:

....

....

....

....

OFFICIAL USE
ONLY

| | |
| | |

54-55
56-57

	OFFICIAL USE ONLY
	COL NO

Name ....

Position ....

Company Name .... OFFICIAL USE ONLY [ ][ ]   58-59

Address ....

....

.... OFFICIAL USE ONLY [ ]   60

Telephone No ....

No of Employees .... OFFICIAL USE ONLY [ ][ ][ ]   61-63

Type of Business .... [ ][ ]   64-65

Does your company have a full-time training
officer?

(TICK ONE BOX)   YES [1]   66

                                         NO   [2]

Thank you for your cooperation and patience in
filling in this questionnaire. We value your views
and opinions very much indeed.

Please go back through your completed questionnaire
and see if there are any answers that you have
inadvertently left out.

We would be very grateful if you could post off
this questionnaire to us, in the pre-paid envelope
provided, as soon as possible.

Thanking you once again for your valuable assistance.

Appendix 2

List of all the companies and individuals who took part in the project
. and the contribution in kind.

Company/Organisation	Individual	Amount
Dean Clough Industrial Park	Mr E Hall	£600.00
Lloyds Bank Halifax		£600.00
Halifax & Dist Training Group	Mr G Wild	£200.00
Calderdale Chamber of Commerce	Mr J Graydon	£600.00
Calderdale Junior Chamber of Commerce	Mrs A McAlister	£600.00
Halifax Building Soc Microtelex	Mr P Phillips	£850.00
Elland League of Trade & Industry	Mr J Raby	£400.00
Carlac Ltd	Ms J Firth	£300.00
W Y Motor Traders Assoc	Mr B Garside	£200.00
W Y Open Learning Federation	Mr A Thayre	£ 50.00
Smiths Cleaners	Mr Binks	£100.00
Cooper Liverside & Wood	Mr Weaving	£100.00
Kirklees & Wakefield Chamber of Commerce	Mr S Owen	£200.00
Bradford Skill Centre		£ 50.00
Bradford Road Hauliers Training Association		£ 50.00
Huddersfield Technical College	Various staff	£600.00
Dewsbury College	Various staff	£800.00
Huddersfield Polytechnic	Various staff + rooms etc	£8500.00
Percival Whitley College of Further Education	Various staff + rooms etc	£8500.00
		£23,900.00

In addition to the companies mentioned above thanks must be given to
all the delegates who attended the seminars and to the individuals who
participated in the questionnaire.

APPENDICES.

Relevant Documentation Connected

With The L.C.P. Project.

APPENDIX 1

L.C.P
PICKUP
ACTION FOR JOBS

Percival Whitley College of Further Education

INDUSTRIAL
LIAISON
TEAM

BUSINESS   SUCCESS   THROUGH   PEOPLE

Launch of Kit

Dean Clough Industrial Park,
23rd October, 1986 – 5.00 pm

Your Name
and Job Title _____

Name of FIRM/COMPANY: _____

PRODUCTS and/or SERVICE
THAT YOU OFFER: _____

Number of EMPLOYEES:

Total	Male	Female

Question 1

WHAT DID YOU HOPE TO ACHIEVE BY ATTENDING THIS SEMINAR TONIGHT?

IF YOUR ANSWER WAS   "TO FIND OUT MORE ABOUT THE KIT"
THEN GO INTO MORE DETAIL, i.e.   WHY DID YOU WANT TO FIND OUT MORE ABOUT IT ?

Question 2

WHAT TRAINING DO YOU CARRY ON AT PRESENT ?	DO YOU CONSIDER IT ADEQUATE TO MEET YOUR NEEDS?
TYPE In-company / Manufacturers' Training / Private Training Company / College / Polytechnic/ Other	(please tick where appropriate)
	YES NO
for Managers/Supervisors/Technicians/Skilled/Unskilled/Others	☐ ☐

Metropolitan Borough of Calderdale

The Percival Whitley College of Further Education

Francis Street
Halifax
West Yorkshire HX1 3UZ
Telephone Halifax 58221

Principal
John F. Bolton BA

Any reply should be addressed to:

Mr. D.A. Cook

Our Reference	Your Reference	Date
		29th September, 1986

Dear Sir

NEW M.S.C. KIT — BUSINESS SUCCESS THROUGH PEOPLE

SUBSTANTIAL BENEFITS TO LOCAL COMPANIES

LAUNCH: Thursday, 23rd October 1986 at 5.00 – 7.30 pm
Conference Room, Dean Clough Industrial Park, Halifax

Business Success through People

A new business kit to help you analyse your training needs is being launched at Dean Clough Industrial Park at 5.00 pm on Thursday, 23rd October 1986. This kit helps you to identify ways to make your business more successful. At the launch you will receive a kit, provided free by the M.S.C. and learn about its uses and the benefits that it can bring to your company. It will help you to pinpoint the areas in which training and development can offer clear advantages by getting the best out of the people involved in your business.

If you wish to attend please complete the slip on the next page and return it to us.

Local Collaborative Project — PICKUP

In addition to receiving the kit and learning of the benefits that it offers, you will also be introduced to a PICKUP Local Collaborative Project that is being carried out by Percival Whitley College of Further Education, Huddersfield Polytechnic and the other Further Education establishments in Kirklees. This project is financed by the M.S.C. and D.E.S. under the PICKUP initiative and its aim is to help you use the Business Success through People kit by analysing the training needs of small business in the Calderdale and Kirklees areas.

Training brochures have been produced giving details of the training courses and facilities available in the area and these will also be distributed on the night.

If you require any further information please do not hesitate to contact me. I look forward to seeing you on the 23rd.

Yours sincerely,

David A. Cook,
Director,
Research and Development

Enclosure

ACTION
FOR JOBS

C (T3/6) Reynolds, P.L. and Day, J. (1996), ''Understanding the Relationship between the Small and Medium Sized Enterprise (SME) and their Advisors and Counsellors'', *Paper presented to the 41st ICSB World Conference*, Stockholm, Sweden, 17/19 June.

UNDERSTANDING THE RELATIONSHIP BETWEEN THE SMALL AND MEDIUM SIZED ENTERPRISE (SME) AND THEIR ADVISORS AND COUNSELLORS: AN APPLICATION OF THE DIVERGENT / CONVERGENT PARADOX IN RESPECTIVE THINKING PATTERNS.

John Day and Paul Reynolds

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E Mail: J. Day   @ HUD.AC.UK

The most relevant track for this paper appears to be: The Role of Government and Public Policy

UNDERSTANDING THE RELATIONSHIP BETWEEN THE SMALL AND MEDIUM SIZED ENTERPRISE (SME) AND THEIR ADVISORS AND COUNSELLORS: AN APPLICATION OF THE DIVERGENT / CONVERGENT PARADOX IN RESPECTIVE THINKING PATTERNS.

ABSTRACT

SMEs will seek out information and one of their sources will be from their interaction with advisors who may be found either in the private, public or quasi private sectors of an economy. This paper argues that it is important to match advisers and SMEs by reference to their entrepreneurial capacities and a novel method for capturing this is suggested. For the SME this assesses their ability to think divergently and to articulate a vision. This was tested on 25 randomly chosen SMEs. The method whilst exhibiting operational simplicity is compatible with both behavioural and economic definitions of the entrepreneur.

INTRODUCTION

The relationship between advisors and the small business (SME) can be critical to their success. This paper proposes that we should consider both the type of decision and the degree of entrepreneurial behaviour of both the SME and their advisor. In this way we might be able to ensure that appropriate advisors are matched both to the business and the decision that needs to be taken. Entrepreneurial businesses behave in very different ways to non entrepreneurial businesses and therefore it is critical to be able to distinguish between the two. This differing behaviour will result in different needs to be fulfilled by advisors. If one then considers that advisors can demonstrate different degrees of entrepreneurial behaviour the question of matching becomes one of even more importance. The propositions in this paper are therefore:

(1)   an understanding of the SME advisor relationship will lead to better, and measurable, outcomes in respect of the quality of the decision and the viability of the business measured in terms of financial success, survival etc.

(2)   that this relationship depends upon two broad factors:
    (a)   the nature of the decision
    (b)   the degree of entrepreneurial capacity as demonstrated by:
        (i)   the SME   and (ii) the advisor

(3)   both matches and mismatches will occur in the advice given and sought.

In order to demonstration(1)-(3) above we need to be able to:

(A)   measure entrepreneurial capacity / behaviour for bi & bii
(B)   develop a schema to identify matching and non matching outcomes in the advisor / client relationship.

(C)   be able to link advisor advice and SME performance.

This paper concentrates on the issues involved with achieving (A)....(bi) and (B)

MEASURING ENTREPRENEURIAL BEHAVIOUR

This paper adopts a behavioural / functional definition of entrepreneurship rather than a trait view. That is entrepreneurs are recognised by their actions not by their characteristics, such an approach was demonstrated by Gartner to be both more logical and consistent than the trait method. The second justification for this is that we are proposing that SMEs seek advice because information is asymmetric in its distribution and do so whenever search and decisions costs can be lowered through seeking advice. Thus one behaviour/ action of an entrepreneur is to seek information. Extending this view allows us to argue that because entrepreneurs are actors in the market and actively seeking information about customers, products, costs etc. then they are involved in the marketing function and that logically the more entrepreneurial companies use marketing and employ and benefit from it more consistently than less entrepreneurial firms. When defining entrepreneurship the authors make use of this extension.

Companies will therefore seek and learn from diverse informational sources - both externally from the market, customers, advisors etc. and internally from production processes, colleagues and so on. This paper is interested both in how they acquire and use external information and in particular external advice from advisors.

In distinguishing the entrepreneurial from the non entrepreneurial company the authors follow the approach adopted by Sashi and Laser (1991) and Omura et al (1994). These are illustrated in Exhibits One and Two below. The Marshallian view is that markets are in equilibrium or move to equilibrium rather rapidly. The Schumpeterian view is that markets move from periods of equilibrium through periods of discontinuity to new equilibrium states. The Austrian (Kirznerian) view is that equilibrium is not the natural state of markets, rather that it is disequilibrium and the role of the entrepreneur is to discover and exploit such information asymmetries and by so doing to bring the market to eventual equilibrium. Schumpeter (1934) argued that the role of the entrepreneur was to innovate and in so doing to move the economy from one equilibrium to another via a period of disequilibrium. Such innovation could come about from one or more of the introduction of a new product; a new method of production; the exploitation of a new market; the use of new source (s) of raw material, and the reorganisation of an industry or its processes. He distinguished also between the entrepreneur and the capitalist, the provider of capital, and ascribed the taking of risk to the capitalist since it would be they who could lose their capital. For Kirzner (1973) and the Austrian School the entrepreneur is exploiting information asymmetries in markets that are by their very nature in disequilibrium. Such a view of markets is the antithesis of the view held by Adam Smith. There is a fundamental difference in approach in that the Schumpeterian entrepreneur seeks to destroy an equilibrium situation whilst the Kirznerian entrepreneur is operating in a market assumed to be in disequilibrium, and therefore their role is to exploit the informational imperfections and to bring the market to eventual equilibrium.

Omura (1994) in his contribution to the defining of the marketing/entrepreneurship interface uses both Schumpeterian and an Austrian dimensions. The Omura approach has parallels with

Sashi and Lazer (1991) who impose Marshallian (no innovation) and Kirznerian (continuous innovation) and Schumpeterian (discontinuous innovation) scenarios onto an Ansoff matrix. Thus we have a way at least conceptually of distinguishing the entrepreneurial from the non entrepreneurial company and one that is grounded in some robust economic and marketing theory.

EXHIBIT ONE: The Omura Grid with Kirznerian and Schumpeterian Dimensions

Market Condition

	Continuous	Discontinuous
Discovery		
Perceived Needs	Traditional Marketing	Strategic Interface
Unperceived Needs	Opportunistic Interface	Pure Entrepreneurship

---

EXHIBIT TWO: The Sashi and Lazer Grid

	Existing Markets	New Markets
Existing Products	Marshallian/ Kirznerian Entrepreneurship	Kirznerian / Schumpeterian Entrepreneurship
New Products	Kirznerian/ Schumpeterian Entrepreneurship	Schumpeterian Entrepreneurship

---

THEORY INTO PRACTICE

For this paper the authors wanted to find methods of identifying entrepreneurial behaviour that could be applied equally to SMEs and their advisors which although simple and robust could be considered to have compatibility with , and draw upon, the extensive academic debate and literature in this field. To this end, for the SME we have adopted a dual definition in a similar fashion to that used by Pinchot (1985) when discussing intrapreneurship, he required his entre/intrapreneurs to be both doers and visionaries. Visionaries alone would be people such as artists, and doers, alone would not have the visionary skills needed by entrepreneurs. The authors use a measure of a person's predisposition to a particular thinking style - either convergent or divergent along with back up questions about information seeking activity and vision articulation.

One could attempt to proxy entrepreneurship by capturing Austrian (Kirznerian) information seeking behaviour and Schumpeterian product and market behaviour and thus seek to provide empirical validation of Exhibits One and Two. However the authors are attempting to use convergent and divergent labels coupled with vision articulation to proxy entrepreneurship. At this stage of the research the authors are more concerned about the relationship between thinking patterns and vision articulation and thus the Austrian and Schumpeterian dimensions are used merely to find out the context within which the information was being sought, and indeed whether information is sought - one type of which involves actual interaction with an advisor. Why it was sought and how it might have been processed is the major concern. If creative / divergent thinking is coupled with the ability to articulate clearly an entrepreneurial vision for the company, the authors are more convinced that the convergent/divergent thinking

test is a suitable proxy for entrepreneurial behaviour, with or without back up attitudinal questions, particularly where a differentiated superior performance can be measured through say growth rates or financial return.

The advantages of this approach are its simplicity and general applicability whilst being underpinned by an appropriate and deep theoretical economic, marketing and behavioural foundation. More particularly our main hypothesis is that entrepreneurs think in a different way to the non entrepreneur, that they think divergently rather than convergently. Hence, if a reliable test was available to separate the two then we have a way to define entrepreneurial behaviour. We believe that such an approach has several advantages.

The first advantage of this approach is that it is more allied to a behavioural than a trait approach but less constrained by a specific organisational context. Authors such as Pinchot (1985) and Drucker (1986) would argue that entrepreneurship is a more common attribute in the general population than one might believe and that it does not only manifest itself in the starting up of a private business. Cooper's Antecedent - Incubator - Environment (1981) model whereby small business start up is the outcome of these three factors would support a view that entrepreneurship can remain latent until triggered by situational factors. The second advantage is that it could prove to be a simple but accurate measure whilst free of some of the definitional incongruities thrown up by other methods, for example, those studies that distinguish between small firms and entrepreneurial small firms by distinguishing between the pursuit of personal goals and profit/growth goals. This point was first made by Gartner (1989).

The third advantage is that in applying a test that is initially neutral with respect to whose entrepreneurial behaviour it is trying to capture, allows us to potentially use the same test on both advisors and their SME clients. Fourthly the economic context within which we have set the hypothesis is compatible with wider behavioural viewpoints, for example, Chell (1994). Equally a Schumpeterian approach fits well with selected growth and development models such as the Ansoff matrix and information gathering and processing under conditions of uncertainty is well developed in the strategic management literature.

Fifthly the notion of divergent thinking is generally associated with highly creative individuals, who may rarely subscribe to 'conventional wisdom' and tend to be something of a 'free spirit', often reluctant to 'follow the crowd' whilst in contrast convergent thinkers display the opposite characteristics. Elements of this debate have a certain commonality with, for example, the work of Carson, Hill and McGowan (1994) on the actual practice of marketing in entrepreneurial SMEs, namely that their marketing in practice is often more flexible, intuitive and informal than as codified in standard marketing and strategy texts.

The disadvantages of our approach are obvious namely can we capture entrepreneurial spirit by recourse to one measure and the extent to which there are available and reliable psychometric or other tests which will capture divergent and convergent thinking. We want to avoid lengthy and detailed test situations even given that these work exceptionally well, for example see Moran (1995) who reports on the successful application of Assessment/Development Centres. The key constraints are how narrow an approach can be taken before sacrificing reliability, consistency and explanatory power of the data whilst not losing focus on creativity itself. Equally in the authors 'first cut' of techniques available we have decided not to use an

indicator of the complexity of the Briggs-Myers Type Indicator for personality even though it has been used in this context before by some small business researchers and it does have a general applicability (Briggs-Myers & McCaulley, 1985).

THE ADVISOR / SMALL BUSINESS INTERACTION

At some stage in their business careers small business owners will interact with an advisor. Taking the simplest case one can construct the grid featured as Exhibit Three below. Thus there are four possible matching combinations, each of which could result in either a positive or negative outcome and Exhibit 3 speculates on these.

EXHIBIT THREE: The Advisor / Small Business - convergent / divergent matrix

SMALL BUSINESS

Convergent Thinker	Divergent Thinker

SMALL BUSINESS ADVISOR

	Convergent Thinker	Divergent Thinker
Convergent Thinker	A	B
Divergent Thinker	C	D

Category	General comment	positive and negative outcome examples
A	the small business is not entrepreneurial by the strictest definition. Casual empiricism would suggest that this represents the majority of business start up and survivals.	Negative: average performance; complacency disguises real threats to survival. Positive: comfortable match between the two parties, solid performance.
B	a combination where advisor and business person could be in real conflict, with neither understanding the others frame of reference.	Negative: could be potentially disastrous. Positive: synergistic with the advisor reigning back the worst excesses of the business person.

C	a combination that could produce worrying results.	Negative: at worst it could leave the business floundering when their support is no longer, or immediately available. Positive: at best the advisor could inspire the venture to achieve better results.
D	where both the advisor and the business person are of the same entrepreneurial nature.	Negative: both might not be, or care to be, aware of day to day control issues. Positive : immense synergy and creativity.

However excluding environmental influences, there are four other dimensions that need to be accounted for, firstly the interaction may be voluntary or involuntary, secondly there may or may not be a desire for mutuality of outcome, thirdly the type of outcome sought and finally whether the contact is formal or informal. Taking the latter first there is much anecdotal evidence that for the very small business they are supported and helped by their spouse, who would be a natural person to turn to for advice. In many situations there is a desired mutuality of outcome , as Molian (1994) hypotheses small firms that employ consultants are more likely to implement their findings if they perceive a cultural and business fit with the proposals. The type of outcome sought will also be of importance, a small firm wanting a book keeping function fulfilled is more likely to seek a convergent accountant than if they are desirous of some legal but creative accounting scheme. Finally the context of the interaction may be voluntary where the meeting is sought out by the SME or involuntary where the client has no choice but to attend. Exhibit Four elaborates.

MEASURING CONVERGENT AND DIVERGENT THINKING

The measure that we have chosen is a simplified version of Torrance's Test which has been reinforced by using some of the measures suggested by Hall (1992) which are much more concerned with corporate culture and attitude. Thinking divergently is a necessary but not

wholly sufficient criteria for defining the entrepreneur - the divergent thinking must be within

an appropriate context that is contiguous with true entrepreneurial behaviour, hence the other

questions in our research instrument and the linking of divergent thinking with measures of

vision. Liam (1966) citing Getzels and Jackson (1962) distinguishes between the high IQ and

the high Creative Child, the former is good at intelligence tests but weak on tests that set out

EXHIBIT FOUR: The Advisor / Small Business - convergent / divergent matrix - a more
realistic scenario
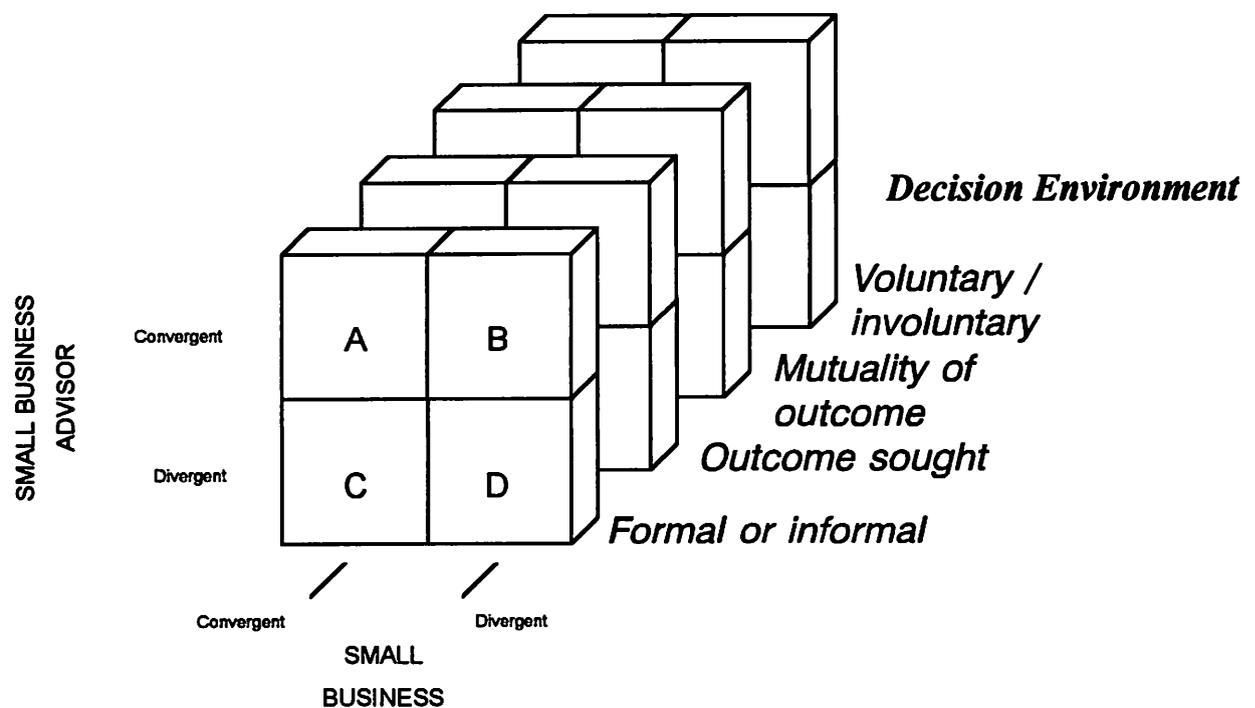
to measure creativity whilst the latter is weak measured by intelligent tests but strong on

creativity. From this he then argues for the use of the terms convergent and divergent thinker

to describe the process of their thinking pattern. What it is not then possible to do is to

proceed in absolute terms, that is to assume that convergent thinkers are , per se, not creative

and divergent thinkers, per se, creative. Creativity and high IQ need not be mutually exclusive,

what the measure is trying to pick up is the bias that the individual possesses towards one

mode of thinking or the other. Whilst this is potentially 'messy' in reality the literature on the entrepreneur reviewed above, and the work by Drucker (1986), could be interpreted as suggesting that entrepreneurship can be seen as a bias rather than an absolute. Additionally the Schumpeterian entrepreneur over their lifetime is likely to switch between pure entrepreneurship and Leibenstein entrepreneurship which is more akin to the management process. In essence, exploiting information asymmetries within the organisation, for example, reducing the costs of production. As with all psychometric and allied tests there are competing tests with often conflicting outcomes. The Torrance Test that we have used is by no means the only available test. In general tests for divergent thinking use open ended scenarios that encourage creative answers e.g. how many uses for .....; how many meanings of a word ....; illustrating a title ....; commenting on controversial statements. one of how many uses for a

MEASURING CONVERGENT AND DIVERGENT THINKING : THE PRIMARY RESEARCH

The results shown here represent the findings from 25 firms chosen randomly from a Dunn and Bradstreet list of small and medium sized firms in the local area.(the Kirklees district of West Yorkshire, England). This is very much an exploratory exercise, particularly focused on whether SMEs will provide the type of data that we require in the main research exercise, whether the Torrance test can be applied and whether a statistically valid relationship exists between divergent thinking and vision articulation. The results are sufficiently encouraging for the authors to administer a much larger sample and they intend to use a disproportionate stratified random sample.

Data was collected either by telephone survey or a faxed questionnaire. The questionnaire was deliberately simple in design in order to see just how much useful information can be obtained from such a level of design. The data analysis was carried out using SPSS PC +. Due to the size of the sample it was necessary to recode some of the original variables in order to decrease the number of cells in the contingency tables. Having done this the authors were able to establish a statistically significant association between 'vision articulation' (Sections 5 & 6) taken here as the reinforcing measure for entrepreneurship and divergent thinking (Section 7). The vision articulation score was achieved by amalgamating the summated Likert battery scores with a score for vision derived from the open ended questions. The open ended responses were assessed by the authors for their overall visionary content and a subjective numerical score on a 1 to 5 scale was allocated to each respondent. Thus the composite score provided an overall measure for vision articulation. . The questionnaire is discussed below:

	Question Group	Details	Commentary	
1	Background	Business type, length of trading, full & part time employees, change in turnover.	Standard background and classification variables.	
2	Interaction with advisors	How long since the last one, who, at your choice or their choice, why and was the outcome satisfactory?	Standard background questions, identifying the last interaction, its purpose and outcome.	
			'Pro' Kirznerian behaviour	'Pro' Schumpeterian behaviour
3	Creative variables	Is price above, below or equal to competitors; has a new service or product been developed; where did the idea come from; where did your original business idea come from; how did you find your last customer.?	Trying to separate out proactive from reactive, creative from routine. Prices above the average could indicate ability to add value. Source of the idea as to whether entrepreneurial or 'me too'. The way in which the last customer was found, again seeking if that	New product development & the ability to judge the market.

			was proactive, reactive or just routinely obtained.	
4	Business Plan	Is one available, who was it written for, is it updated and when?	Was it written just for a particular purpose. Did it provide information for contemporary decision making.	

Questionnaire Discussion continued /.........				
5	Vision Articulation: *Statements*	Six scaled statements about spotting opportunity, taking risk, adding value for clients.	To ascertain their degree of entrepreneurial behaviour.	New product and market development

6	Vision Articulation: *Open Ended*	Asked to state their vision for the company in the next two years.	Have they a vision, is it really a vision or just a functional statement. True entrepreneurs should be more future focused and visionary.	Does it includes new product and market development

7	Creative Thinking Test	Asked to give as many uses for a brick as possible, time constrained.

1   BACKGROUND

The majority were in manufacturing (40%), thirty two percent were in services and the rest in construction and other sectors. Of these only 16% had been in business for less than two years, a further 16% had been in business for up to five years, twelve percent up to ten years and the majority over ten years. Of these only 16% were very small employing less than 10 people, 20% had between 11 and 20 people and a further 20% had between 21 and 50 people. In terms of turnover growth or decline, the majority had either experienced no growth or some growth in their turnover during the last year.

2   INTERACTION WITH ADVISORS

The respondents were asked when they had last talked to an advisor and 84% had done so in the last year. When asked who they had talked to, 48% had talked to an accountant, 28% to a bank manager or other official and mostly to seek finance, 12% had talked to family or friends and only 4% to a consultant. When asked who instigated the request for a meeting, 44% said they did and 48% did so at the request of the advisor. Of those 48%, the majority were asked

to make appointments to discuss business bank overdrafts or regular accounting / tax issues. Many of the former were seeking commercial bank finance. Meeting outcomes were described as positive by 60%, 24% a compromise and only 12% that they were unsatisfied.

3   CREATIVE VARIABLES

In respect of the creative variables, only 21% were attempting to offer premium prices and 37% felt that their price was below their competitors. 80% stated that they had developed a new product over the last two years, half claimed that the idea was self generated and a further 36% came from customer complaints or requests. Reasons for starting their businesses were due almost equally to dissatisfaction with their previous working conditions or that their relationship with customers was sufficiently good enough to sustain their own venture. Sources of their last major customers were by recommendation from other customers (33%), actively making their own contacts (38%), unsolicited queries (21%) and other (8%).

4   BUSINESS PLAN

Forty four percent had a formal business plan and half of those with a business plan had written it for their bank and 27% for an accountant or similar advisor. Only 18% went to the trouble of developing a business plan for themselves as a management control tool. Of those having a plan approximately 64% had updated it within the last year.

5 & 6 VISION ARTICULATION (Scaled and Open ended questions)

As discussed above the authors attempted to measure vision articulation by a mixture of Likert scaled statements and open ended questions. On the scaled questions the majority (80%) gave a visionary response however when asked to respond to an open question asking then to

describe their vision for the company, 54% could be seen as being visionary and ambitious with 16% of those particularly visionary. 16% were decidedly not ambitious and unimaginative.

7   CONVERGENT AND DIVERGENT THINKING TEST

Application of the divergent thinking test involved assessing the answers in respect of fluency - the number of uses quoted; flexibility - the number of categories of uses quoted, and originality of the idea based upon how many or few prior mentions by other participants. Aggregating the scores gave a range from 6 (lowest) to 27 (highest), the median score was 16.5.

The original convergent / divergent thinking scores produced a continuous distribution with a median score of 16.5. These were recategorised into two groups, those below the median score (low divergent) and those at or above the median score (high divergent). The two variables described above i.e. the variable 'vision' and the variable 'divergent' were cross tabulated with the contingency table producing a Pearson Chi Square of 7.64 at an exact significance of 0.02194 (a 5% significance level).

This result suggested the statistically significant association between vision and divergency. The strength of the association was measured using the Contingency Coefficient which yielded a value of 0.483 at a significance level of 5% (0.02194 to be exact, the same as the Pearson Chi Square). This figure suggests a reasonably strong association between the two variables. In the recoded 'vision variable' the authors collapsed the original five point scale into three categories, namely, vision, lack of vision and neutral. If the neutral values are taken out of the data set or recoded into one of the other two categories, the Chi Square association is

significant at the 1% level. One problem with this test is that four of the six (66.7%) cells in the Contingency Table had an expected frequency of less than five. However Everett (1977) suggests that this condition does not greatly affect the validity of results as long as the expected frequencies in each of the cells is greater than one.

POLICY IMPLICATIONS - THE COMMERCIAL BANK RELATIONSHIP: A BRIEF SCENARIO

As a brief scenario of where a better understanding of the advisor / SME relationship is important can be demonstrated by the recent newspaper reportage on the relationship between small businesses and their commercial bank. For instance it would be all too easy to castigate the recent lending decisions of the UK commercial banks as the outcome of convergent bank managers dealing with divergent small business people. Scanning the popular and financial press during 1994 makes salutary reading. In the UK a major source of small firm financing is through a bank overdraft and according to the CBI in 1992, 74% of all small firms had to produce collateral against borrowing. The fourth annual report from the Forum of Private Business published in 1994 based upon a survey of 5,500 enterprises, indicated that there were perceivable differences in the treatment of small business customers by the banks but that switching costs inhibited many small businesses from changing lender. The head of one of the major banks small business services was reported as saying that:

'The most significant constraints on the growth of small business remain low demand, late payment, red tape and lack of skills' (Guardian, 1994).

In a feature article in the Yorkshire Post (1994), we find a not atypical attitude expressed:

'The banks, for their part, blame business collapses - particularly among small to medium-sized enterprises - on poor management and the failure of company directors to educate themselves on the need for sound financial management. If only business people, especially the smaller ones, would construct proper financial plans, say the banks, they would get the loans they ask for. After all, they insist, there is plenty of money sloshing around. The real problem is finding a worthwhile business to lend to'.... and from the same source .....

'Following a Treasury inquiry into the role of banks in small business, Bank of England Governor Eddie George chose not to blame either the banks or small business for the antagonism which has built up over the past two years. He claimed there were 'exaggerated expectations on one side and insensitivity on the other', but believed the main source of the problem was the high rate of company failures during the recession. The relationship between the lender and the borrower has never been an easy one, but now, with banks becoming much more conciliatory, a more open relationship is developing between bank manager and small businessman. Moreover, many smaller businesses are developing a more professional attitude to business, encouraged by the banks, and are acquiring a financial acumen which will help in the banking process. Clearly the wounds will take a while to heal but already the banks have woken up to the ideal of a long-term relationship with a business, and businessmen are learning that honesty does pay - though not always when it comes to a free lunch.'

These selected quotes in their general context are typical of both the contemporary and past relationships albeit whether perceived or actual in the UK for several decades past. We suggest that a better understanding by both banks and entrepreneurs of the actual client advisor relationship could be of mutual benefit. Work by Foley and Griffith (1994) suggests that such problems are encountered in other countries as well. To conclude and emphasise the need for understanding, Robley Wood and Harrison (1993) in respect of the training and evaluation of small business lenders in large banks noted that in the USA:

'small business lending is one of the few profitable financial services markets that remains dominated by the commercial banks .. and that .... local commercial banks are still the main

suppliers for most of the financial services used by small and medium-sized businesses. Therefore, this is a market commercial bankers need to protect and expand. One way to accomplish this is to have properly trained and educated small business loan officers.'

CONCLUSION

This paper has argued for a better understanding of the advisor / small business relationship particularly with regard to the entrepreneurial capabilities of both parties and alternative outcome scenarios are discussed. SMEs in practice seek advice from all kinds of sources both fully private, governmentally owned and governmentally supported but privately delivered and thus the notion of matching appropriate advisors to clients has a wide ranging applicability. A novel way of attempting to measure entrepreneurial capacity based upon divergent thinking ability (backed up by vision articulation) is suggested and some important consequences of such a measure are explored. The main advantage of this approach apart from its simplicity in application is in its consistency and compatibility with mainstream economic and behavioural definitions of entrepreneurship. Given that the truly entrepreneurial business will behave in different ways to the non entrepreneurial business and thus have different needs in respect of help and advice from both public and private agencies, being able to make such a distinction is important both for governmental policy setting and in helping to ensure that their expectations for SME performance are met.

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Some Observations From Teaching A Module In Entrepreneurship and Marketing

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Abstract

This paper discusses an entrepreneurial marketing course that is underpinned by the combining of marketing and entrepreneurship. This not only determines the content of the course but the way in which it assessed through students authoring a live case study on an SME. These case studies also provide much information about the real marketing behaviour of SMEs. In this paper some broad results from these cases are discussed (subject to confidentially).

Introduction

For the past two years the authors have taught a one semester small business marketing course, that is underpinned by the notion of the Marketing / Entrepreneurship Interface (Interface). This is reflected in the suggested course text(s) and the nature of one of the assignments, where students either as individuals, or small groups, are requested to write a short case study on a small business.

We would like to use this paper as an opportunity to set this course within the developing conventions, and literature on the Interface. Given that to be true to the ethos of teaching at the Interface, one should set students practical work that informs them about the real world of the small business, we report also (subject to confidentiality) on some germane behaviours of the SMEs that these students have chosen to study in some depth.

The major antecedent influences leading both to this programme and to the assessment strategy are: the notion of the Interface itself, and in particular the work by Hills (see, for example 1987 and subsequent volumes); the particular notion that SMEs may neither behave

in the way suggested by the prescriptive advice and models found in undergraduate business and marketing texts, or indeed, relate to such work - this is this the stream of work emanating from Carson et al. (1995); the work by Cunningham (1998) on what, and how, we should be teaching business studies students - in essence an andragogical rather than pedagogical approach; and lastly - contemporary work by colleagues reporting on their programmes designed to help students to be more creative and entrepreneurial - for example, O'Brien and Clarke (1998), Williams and Turnbull (1998) and Turnbull and Williams et al. (1998).

The Interface Notion

The Marketing / Entrepreneurship Interface is capable of being understood from several perspectives but what is common to them all is that marketing informs the process of entrepreneurship and entrepreneurship informs the practice of marketing.

Exhibit One suggests several perspectives on the Interface and it the last conceptual view that underpins the authors' entrepreneurial marketing course. There is no particular reason why the Interface should be preoccupied solely with the SME for as Hills (1993) argued the small business is simply the 'enterprise size variable'. However given that the starting point of the Interface debate (Hills 1987) was the relative neglect by American marketing academics of the needs of the SME in respect of marketing, it is not surprising that the focus of the Interface is still on this organisational form. Hills (1993) goes on to emphasise that to understand SMEs and entrepreneurship we must consider those constraints and opportunities that are unique to the SME itself.

A review of the published proceedings from both the USA and UK Special Interest Groups (for example, Day & Reynolds 1997) does initially suggest that American colleagues have a more catholic approach when it comes to considering what constitutes the Interface - the application of appropriate marketing theory and practice to the smaller, and often, high technology firm. European colleagues also offer work in this same vein but are also more pre-disposed to consider the precise meaning and boundaries of the Marketing / Entrepreneurship notion. No disrespect is intended here to American colleagues, and indeed, the first of the UIC/AMA published proceedings (1987) and the Foreword by Hills in Carson (1993) still represent some of the most thoughtful and original contributions to the nature of the paradigm. However judged by the current flow of papers from both the UK and USA (AMA) Special Interest Groups this divergence in approach is noticeable.

Teaching Influences

Over and above the Interface work itself, the strongly argued case by Cunningham (1996) for an andragogical rather than a pedagogical approach - which is illustrated in Exhibit Two has influenced us considerably as has the work by Carson (see, for example, 1998) on the appropriate scale and structure of semesterised marketing programmes. The work by Hill and Fallis (1995) and McGowan and Rocks (1995) reporting on their action learning approaches in Ulster, and the drawing out of appropriate general and marketing competencies have

influenced also our course design. Lastly contemporary work from colleagues in Scotland and Southern England on introducing and sustaining entrepreneurial approaches to teaching and placement have emphasised the importance of such approaches in the contemporary business curriculum (O'Brien and Clarke 1998, Williams and Turnbull 1998, Turnbull and Williams et al. 1998).

The Programme and the Exercise

Final year marketing degree students and final year BA(Hons) Business Administration students are eligible to take this optional ten credit advanced module offered in the second semester of their final year. It is titled Marketing of Small Business rather than an Interface course but as Exhibits 3 & 4 show, it is heavily underpinned by the notion of the Interface.

Students are advised to work in groups of four, this is a small enough size to gain 'economies of scale' in the work but not so large as to allow 'free riding'. Those students who prefer to work on their own may - since we are not using group work to look at group dynamics or their ability to co-operate and communicate as this is done elsewhere. Some students may want to be in absolute control of their final grade or they may prefer working individually or perhaps the business they choose is personal to them.

Exhibit One: Notions about the Interface (adapted from Carson, 1995a)

1	A particular organisational form:
	The application of marketing to the SME or the micro business.

2	Putting entrepreneurship into marketing:
	Marketing and entrepreneurship are not necessarily one and the same, so what constitutes the art and practice of entrepreneurial marketing?

3	Putting marketing into entrepreneurship:
	How do successful entrepreneurs market their product and services?

4	Relevant competencies:
	Authors such as Carson et al (1995), Hill and Fallis (1995) and McGowan and Rocks (1995) would argue that at the heart of both marketing and entrepreneurship are common competencies. Although one can then proceed to distinguish entrepreneurial from non-entrepreneurial competencies outside of that core.

5	From (4) we can develop the argument:
	Similar and dissimilar characteristics and behaviour
	"There are similarities and dissimilarities between entrepreneurial decision making and formal marketing planning and management competencies and contact networks. Entrepreneurial decisions are inherently informal, haphazard, creative, opportunistic and reactive whereas marketing decisions are formal, sequential, systems orientated, disciplined and structured. On the other hand there are similarities in the construction and employment of personal contact networks between entrepreneurs and marketing managers. *Equally* some of the skills required by entrepreneurs are those required by competent marketing managers, for example, analytical, judgmental and positive thinking, innovation and creativity." Carson, (1993).

Students may choose any small business in any sector and located anywhere within the United Kingdom. Many choose a business that is local to their home address rather than one in this immediate area.

Our definition of small business is behavioural rather than statistical. So the business has to have the strong involvement of the owner and to be independently owned. It is more likely to be serving a local or a regional market and facing the usual constraints experienced by the typical SME. Using a statistical measure of size, less than 100 employees.

A key part of the exercise - a 'rites of passage' as it were, is that we will not help the student select the business and do not offer a list of willing contacts! We feel that if students are daunted by the prospect of liasing with an SME then this is not the course for them.

In this paper we report their findings at a 'macro' level since for the first two tranches of cases studies, the students were told that we would not use their case material for either lectures or research purposes - this to maintain any confidentially in the material. However reporting at the level we do in this paper does not breach that undertaking.

Thus we report upon:

(a)   the general nature of the sample: number, size, time in business, industry   sector.
(b)   applicable business tools chosen by students to analyse the SMEs
(c)   how the SMEs plan
(d)   areas of major concern to the SMEs, and then,
(e)   some brief indicative quotes on marketing practice.

Finally we discuss some of the issues we see as having arisen from the teaching of the module.

General Nature of the Sample and Tools Chosen by the Students

This paper has drawn information from 46 SMEs studied either in the Spring/Summer of 1998 or the same period in 1997. Details are given in Exhibit Five - the main feature of note is that in the majority of cases, students have chosen SMEs that are over five years old. From those forty cases where it is possible to accurately identify firm size (Exhibit Six), very few have studied sole entrepreneurs, twenty-one of the businesses are micro businesses in scale, and only five firms are, measured by owners/employees, of a substantial size.

The tools of analysis chosen by the students (Exhibit Seven), are we hope, those to be expected from a business school. Our view is that provided students recognise that such tools of analysis are precisely that, and only the way in which they structure and perceive the world, then there is not an issue here provided that they understand there is, in essence, a 'technology transfer process' to be enacted. To directly ask the SME, for example, to comment upon, and converse upon, their marketing plan or how they precisely apply the marketing mix or communications mix or to discuss the merits of using a Porter Five Force Analysis ... is

confusing, misleading and irrelevant. But through asking more sensitive and contextually relevant questions to draw out the information that they can then use themselves to feed such frameworks *of their understanding* is legitimate. Whilst we believe this to be an insightful view - it is not one originated by these authors but a common theme to be drawn from that literature within the Interface concerned with appropriate teaching methods, for example, see Carson (1998), Cunningham (1996 & 1998), Carson & Gilmore et al (1998) and Stokes (1998)

SME Planning

From the thirty-three cases in which it was possible to determine a planning style, we were able to identify three groupings, those that seemed to only plan formally but did so both in the short and long run, those that planned informally in the short term, and those that used a mixture of formal and informal planning in both the short and the long term. (Exhibit Eight).

The most interesting category is those that are using informal short term planning as this corresponds to one of the Interface tenets that, in reality, planning is more informal and intuitive than we would like to imagine from within the confines of a business school classroom. However such a style of planning can cover a multitude of sins, the SME might just not be very good at formal planning and might benefit from an injection of such, on the other hand - intuitive, informal and flexible planning might be the way in which many entrepreneurs do business and respond to their marketplace. What matters is not how the planning is articulated or rationalised to outsiders, but in how it is done. Thus we further categorised the informal planning narrative into those who admitted to being forced to plan as window dressing; those who appeared to be planning in an ad hoc fashion (no real commitment or thought given); those who appeared to have adopted it as a particular style of planning - intuitive; and, lastly those whose planning was particularly operationally focused.

Whilst drawing firm conclusions from data at this level of aggregation is difficult - it does appear that informal short term planning predominates and that ad hoc and intuitive planning styles are the most often used within that category.

SME Internal and External Concerns

Exhibits Nine and Ten report on these. There is a wide variation in response with more internal concerns being offered than external concerns. For the external concerns, the state of competition, government policy and the reliance on a single customer are the three most voiced concerns.

With respect to internal concerns, personal concerns and planning concerns are not mentioned very often whilst issues about growth, number and quality of employees, marketing and resources are voiced much more often in the sample. Within the marketing category concerns that can be classified as about the marketing mix are the most prominently featured. Resource concerns in general and employee resource concerns in particular are cited almost as much as

the marketing concerns. Given that the case study report predisposes the subject, and the student, to discuss marketing issues - then the resource constraints are possibly understated in this exercise.

How Constrained and How Market?

Exhibits Eleven and Twelve are taken from the 1998 set of cases alone - about half of the full set. They report some representative views in the case of Exhibit Eleven where attention was particularly sharply drawn to them in the reports; and in the case of Exhibit Twelve where the cases were able to identify precisely and obviously the marketing functions carried out by the SMEs.

As such they paint an incomplete and not wholly representative picture in respect of the sample. However taken as indicative examples of problems faced they have accord with problems as identified elsewhere in the SME literature. Given their resource constraints they show also adaptability and a focus on achievable and sensible marketing. In respect of how and what we teach as 'SME marketing' these results are compatible with the notion of teaching what it is that SMEs actually do, and can afford to do, rather than the more grandiose formal marketing practice found in many textbooks which are more suited to large business.

Our feeling from the more detailed case reports is that these SMEs are not on the whole unsuccessful or unfulfilled or do not recognise the value of marketing.

Given that this is a working draft, the authors feel that some ambiguity can be allowed to impinge upon the argument in this paper, and one interpretation of the student exercise discussed could be that:

'In all of the (student) cases (discussed above) conventional marketing principles could be applied perfectly well to all of the small business situations. An evaluation the appropriateness of conventional marketing to smaller firms came from four sources. Firstly the authors evaluated all of the pieces of work mentioned above in terms of how well students could apply marketing principles (whether conventional or unconventional) to the case studies and small business 'consultancies'. Secondly the management of the small firms used in the student consultancy exercises were asked for 'feedback' by the students in order to evaluate the perceived usefulness of the work carried out and recommendations made. Thirdly all students participating on the 'Small Business Marketing' course were asked to rate the appropriateness of conventional marketing to the case studies and real firms they had seen. Finally students were asked to evaluate the value of the Small Business Marketing Course by questionnaire. Each of the four separate evaluations were positive, in the opinion of the small business managers / owners concerned, the students and the authors (the presenter of this paper in particular) conventional marketing can be usefully applied to a wide range of small firms.'

This is essentially the viewpoint of one of the co-authors in the paper presented last year at the Hong Kong Symposium. (Day and Reynolds, 1998).

'It is interesting to take the above view and to compare it to some further data in that Hong Kong paper, which reported on an attempt to elicit the enthusiasm of a sample of local SMEs in Calderdale and Kirklees in West Yorkshire. Exploratory group interviews were followed by a survey. So far

approximately 1,200 postal questionnaires have been sent out with some followed up by telephone interviews where responses were not always clear. Of these 320 have been returned. The survey is ongoing. A representative sample of small firms has more or less been achieved so far by using post stratification methods.

The methodology involves exploratory, qualitative research based on three group discussions with people involved in running or advising people who run small firms. The group members included entrepreneurs running their own small firms, counsellors from various organisations involved with advising or supporting enterprise, small business advisors from the commercial banks, consultants and trainers to small firms from both the private sector and such bodies as the Training Enterprise Council (TEC). Each group discussion contained eight participants plus a moderator.

Conversations within those group discussions were recorded and a content analysis carried out. The information gained from this analysis was used to design the postal questionnaire that was sent to small
firms in the Yorkshire area of the UK.

Simple random sampling was used to select potential respondents. There was insufficient information in the lists to allow pre-stratification of the population, hence post stratification was used to classify respondents by size, industry etc. Questionnaires were sent out in waves and so it was possible to 'fine tune' the eventual sample to bring it into an acceptable approximation to the composition of the local small firm population. This was done by taking additional care to screen the later targeted firms in terms of industry and size etc., by seeking additional information or by telephoning the potential respondents first. The procedure gave a good approximation to a post-stratified random sample.

The questionnaire contained questions asking respondents to rate the importance, as they perceived it, of various marketing and sales topics which could, if selected and rated highly enough by a sufficient number of respondents, be incorporated into a training course, which they would be invited to attend at subsidised rates. Respondent's selection and rating of various sales and marketing topics gave the authors a proxy measure of how respondents perceive the importance and usefulness of conventional sales and marketing topics to the running of their businesses.

A summary of the survey results are given below.

SUMMARY OF SURVEY FINDINGS.

%   of respondents

%		
85%	thought that	their firm could benefit from a more professional approach to marketing
84%	considered	marketing training would be useful
48%	considered	a 1 day marketing course of no value
53%	considered	a more in-depth course over several weeks of no value to them
45%	though that	a 1 day practical market research course of no value
65%	expressed the	feeling that a more in depth marketing research course, spread over several weeks would be of no value
53%	thought that	a new product planning course of no value
56%	thought that	a 1 day course on writing a marketing plan of no value
53%	thought that	a 3 day course on planning and strategy of no value
64%	thought that	an in depth marketing communications course of no value
60%	thought that	a more extensive course on practical selling of no value
55%	thought that	a short course on telephone sales of no value
62%	thought that	a course on sales management of no value
57%	thought that	a short course on direct mail of no value
58%	thought that	a short course on exhibition planning of no value
60%	thought that	a short course on exporting of no value

The most highly valued courses were 'Importance of the Customer' - 62% rating as very or quite useful. A short course on Practical Selling - 64% rating very useful or quite useful. A one day course on Publicity and Advertising - 63% expressed a rating of very or quite useful. As you can see from the above summary of survey results, for most of the courses listed between 50 and 60% of respondents rated the course as having no use to them at all. Some of their opinion was due to the duration and timing of the course listed.'

This particular data set could draw forth several explanations. In one sense it does lend credence to one interpretation of the Interface paradigm in that whilst marketing might be perceived as important - when SMEs are offered 'conventional' marketing topic choices they become uninterested and fail to see their relevance. This might suggest also that the starting point of the Interface debate is still with us in the sense that marketing has to be different for the SME as compared to the larger firm.

Another view could be that SMEs are perfectly well aware of what constitutes good marketing practice but either do not recognise such practices as marketing or articulate it in an academic manner - this was one of the opening points raised in this paper.

A final speculative interpretation to promote further discussion could be that because we did not 'ex ante' split the sample into entrepreneurial and non-entrepreneurial SMEs that we have simply reported the parlous state of marketing practice in this sample of SMEs.

Discussion on Teaching Issues

One outcome of this paper is that it has presented the opportunity to be introspective about the exercise and the authors have the following observations to offer:

(a)   the better students employ marketing and strategic tools as the framework for the case discussion as well as in the later comparison section. This is a good indicator for separating out the better reports and we continue to be of the view that we do not intend to give any guidance in this area. However not all students define 'planning' adequately and some instruction is needed here.

(b)   requiring students to write up one part in the style of the newspaper article is a good discriminator of the better reports, and as such is a relatively simple to set creativity exercise. The style template being the Financial Times - Minding Your Business article - which until its recent demise following the re-styling of the Financial Times Saturday Supplement - was a weekly feature.

(c)   at present we do not require the students to select an entrepreneurial SME. So our sample is more representative of the USA direction in Interface research. From Exhibits Eight, Nine, Eleven and Twelve we can see that they are picking up issues that differ from those that would concern a larger company, and in this sense their work is compatible with the first of the Interface notions in Exhibit One. Casual inspection of the full text of the cases would suggest that some of their choices

included genuinely entrepreneurial SMEs (as measured by their innovation behaviour and/or product and service lines) but many also reviewed 'me-too' operations.

(d)   one constraint that will remain is that this module is only one twelfth of their final year and they are therefore unlikely to have enough time with the SME to really get behind the public veneer. This can be offset by the student choosing an SME of which they have prior knowledge from family connections, their placement year or other business contacts. It might well explain why they are choosing older companies - who have more time and more self-confidence to respond to such an exercise.

(e)   in this exercise we deliberately do not offer the students as 'mini-project' consultants (other modules in the Business School do however). This gives the SME little in return for their help apart from the opportunity to talk and reflect upon their business. However we do not discourage students from offering help through drawing upon their taught course(s) experience. Sometimes a deeper relationship does develop, for example, one group last summer helped a company to author their first web page.

(f)   at present we do not develop any relationship with the SMEs as we see this as a student focused exercise but there are obvious reasons as to why we might want to develop reciprocal relationships for classroom material, case and research material or as a source of potential speakers and role models.

Conclusion

This paper has reported on some findings drawn from a small business marketing course that has a marketing entrepreneurship focus running through it and adopts what we believe to be an appropriate assessment exercise. This has produced some data on the sample of SMEs studied that in itself is of interest to the Interface debate. In our sample they do appear to be more informal in their planning and intuitive in their decision making and face particular concerns because they are SMEs. Despite their limited marketing budgets they do market in appropriate and cost effective ways by, for example, using word of mouth marketing.

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Exhibit Two : Andragogy Vs. Pedagogy (Nasta, 1994, from Cunningham, 1996)

Pedagogy	Andragogy
Learning (teaching?) is externally directed by professional educators	Learning is self-directed and self rewarding
The role of the teacher is to ensure that the teaching programme covers all elements of a set syllabus	The role of the teacher is to act as a facilitator in enabling individuals to identify and achieve their learning aims
Specific learning outcomes are prescribed by externally determined curricula and are related to particular career routes	Specific learning outcomes are negotiable and often unique for each individual, the underlying goal of education being to enhance learners' capacity to continue learning
Learning is sufficient when the goals of the prescribed curriculum are achieved	Learning is lifelong, an intrinsic need that can never be fully satisfied
Learning is compartmentalised into levels and subjects by external bodies. Learner choice is restricted by the compartmentalisation of knowledge	Learning expands choice in unpredictable ways. As learners become more developed and sophisticated, they perceive new learning needs.

Exhibit Three - Marketing of Small Business Module Specification (Abbreviated)

Module Code: BAM247. School involved in delivery: Huddersfield University Business School

Aims and Synopsis

To provide an understanding of the particular aspects of marketing management within small businesses. To become familiar with, and sympathetic to the ways in which resource constraints shape the role and use of marketing in the SME. To be able to critique the emerging literature on the marketing / entrepreneurship Interface in respect of the SME.

This course will initially focus on the Interface and the unique view that this offers on the realities of SME marketing. It will progress sequentially through opportunity recognition; market research activity; competency development; growth and life cycles; monitoring; control and forecasting; relationships with advisors; surviving crises; and the role of multi level marketing and franchising to both expand the franchisor's business and to create opportunity for the new small business.

Outline Syllabus

The Interface; why SMEs are important and the need to differentiate our marketing approach; Opportunity recognition; Market Research for the SME; Competencies and skills for the entrepreneurial SME. Marketing Vs. entrepreneurial orientations; Using customer surveys as a marketing tool; The growth process and life cycles; Monitoring & control - forecasting and monitoring using time series models and tracking signals. Commercial & health monitoring of SMEs; Relationships with advisors; Building the business through syndicating - franchising and multi level marketing; Difficult trading conditions - addressing and surviving crises; Strategic Marketing Planning in SMEs - applicability and differences compared to large firms.

Learning Outcomes

1   An understanding of the workings of small businesses.
2   An understanding of the crucial role of marketing and its strategic application.
3   Practical skills arising from the learning vehicles used - case studies which emulate real life situations.

Assessment Strategy & Weighting

One case study presentation accompanied by a written business report. (50% of the available marks). Students will be in small groups (2-4) and author the case study/business report in association with an actual SME. Students may if they wish, and agree to the same marking criteria, be the sole author of this case study. One two hour open book examination based on a small business case study provided prior to exam. (50% of available marks).

Assessment/Performance Criteria

In addition to the general criteria for written assignments the students must show:

1   An appreciation of the specific factors, opportunities and limitations in analysing markets and in planning for the small business employing a marketing perspective. (Learning Outcome 1).
2   (a) An understanding of how the functional areas of a small business can be integrated into a marketing orientated business planning framework., and, 2(b) An appreciation of contemporary marketing and business environment issues that affect small firms (Learning Outcome 2).
3   A sympathetic application of marketing models and analysis to the SME. (learning Outcome 3).

Learning Strategies

One lecture and one tutorial per week. Early tutorials will consider case study material and thus help students author their practical case studies. Students will be asked to debrief their learning points and the marketing implications from their case studies. Students may exceptionally be sole author of their SME case study.

Indicative References

Birley, S et al, (1996) Mastering Enterprise, London: F.T./ Pitman
Carson, D et al., (1995) Marketing and Entrepreneurship in SMEs: an innovative approach. Hertfordshire: Prentice Hall.

Research outputs of the Babson College Annual Entrepreneurial Conference (fully available on their Website-Babson.edu) and the University of Illinois at Chicago / American Marketing Association, Marketing / Entrepreneurship Interface Workshop Proceedings. Journals such as: Journal of Marketing Practice; Journal of Marketing; European Journal of Marketing; Entrepreneurship: Theory and Practice; Journal of Business Venturing; International Small Business Journal; International Journal of Entrepreneurial Behaviour and Research.

Exhibit Four: Mark Schedule Extracted From The Full Assessment Brief

For your chosen SME (Weightings are indicative)			
	ACTIVITY	FORMAT	WEIGHT
1	Write a descriptive business history outlining the critical developments in their trading to date.	written	20
2	Clearly show the reader their relative position in their marketplace.	written	10
3	Produce a short brief on secondary market data.	written	10
4	Write up a profile of the SME in a similar style to that found in the Saturday supplement of the Financial Times - illustrations to be used as appropriate	written & presented	see (6)

5	Find out how they 'do business' and then		
a	Consider the nature of how they plan	written	10
b	Critically discuss two areas of particular concern to them	written	10
c	Consider the particular way in which they market their good or service - how is this constrained or facilitated by their being an SME?	written	10
d	Having done the above then compare the outcome to three marketing or strategy models with which you are familiar	written	10
e	to what extent are the themes and issues discussed by Carson et al in the course text realistic for your SME?	written	10
6	Present (4) to colleagues having initially paired up with one other group to draw out the similarities and differences between your SMEs.	written and verbal	10

Exhibit Five: Case Sample Details - time in business

Age of SMEs Chosen	Number
new starts	3
up to including 2	3
over 2 up to including 5	5
over 5 to including 10	14
over 10 up to including 20	12
over 20	9
'n'	46

Exhibit Six: Case Sample Details - Number in business including owner(s)

Number	Cases
one	2
greater than one including two	5
three to four	8
five to ten	6
eleven to fifteen	7
sixteen to twenty	4
between twenty one & thirty	3
over thirty	5
'n'	40

Exhibit Seven: Use of Business Tools by Students

	number of times
SWOT	28
Ansoff	23
Porter 5 Force	19
Pest	17
Marketing Mix (4P or 7 P as appropriate)	12
BCG - Boston Box	10
GE Market Attractiveness Business Position Matrix	4
Growth Life Cycle Models	3
Various:	10

Exhibit Eight: Reported Planning Modes

STYLE

1	FORMAL Short Term & Long Term	9
2	INFORMAL Short Term	19
3	MIX Short Term & Long Term	5
4	Unable to ascertain from case material	13
	Each bullet point below represents data from each case	n=44

1 Typical Comments: Formal Short Term & Long Term

◊ formal planning
◊ formal and long term planning
◊ core 5 year formal plan
◊ currently yearly to be developed into 3-5 year plans
◊ formal planning - quarterly & annual
◊ formal marketing plan, promotional activity as required, strong central budgetary controls, formal business plan
◊ short and long term, from production through to dealers
◊ weekly / monthly
◊ introducing appropriate level of formalised planning   n=9

2 Typical Comments: Informal Short Term

CATEGORY

◊ formally for the bank when needed, do not plan ahead, if opportunity then go for it,   **forced**
   obvious operational planning carried out
◊ had formal planning to receive grants, for banks, for set up - now more informal, costs
   scrutinized on a daily basis

◊ ad hoc, very day to day and operational   **ad hoc**
◊ informal
◊ limited and short term
◊ little
◊ little formal
◊ no formal approach
◊ no formal plan

◊ some consideration given   **intuitive**
◊ short term opportunistic, no strategic or long term
◊ intuition, networking, trade press, loosely structured
◊ no formal, intuitive marketing
◊ 'that sounds a good idea, lets have a crack at it'
◊ very intuitive - a reaction to where, and how, the business started and the style of the owner
◊ need to do basis

◊ no formal plan, but high quality in-house IT database used to segment, direct mail and   **operationally**
   control performance   **focused**
◊ none apart from operational e.g. client bookings and loading
◊ operational quite formal   n=19

3 Typical Comments: Mix of Short Term & Long Term

◊ formal through Board and informal
◊ informal but have more formal plan for bank purposes, seasonal fluctuations in the trade are important &
   take decisions when finance allows. Obvious good and precise food planning
◊ marketing planning very operational, limited use of 4Ps, unwilling to discuss financial planning but good
   customer canvassing and referral systems.
◊ operational day to day but more formal to meet seasonal peaks - planning highly flexible and seasonal
◊ some formal but swamped by pressures from growth   n=5

Exhibit Nine: Internal Concerns Reported

Employee	◊	lack of experienced workers	
	◊	employee training and skills	
	◊	finding new staff	
	◊	retaining staff (2)	
	◊	staffing	=6
Growth	◊	need to generate and achieve new growth (3)	
	◊	expansion and diversification (2)	
	◊	managing and controlling growth	
	◊	controlling all aspects of the business as it grows	=7

Marketing

marketing mix	◊	better use of marketing mix, branding their company rather than their trade customer	
	◊	fully exploit marketing mix	
	◊	product range, variety & diversification (3)	
	◊	establishing brand for new product	
	◊	promotion (2)	
	◊	pricing	=9
communications mix	◊	marketing communications	
	◊	internet strategy	=2
market research	◊	need for more market research and more focused segmentation	
	◊	need for better competitor knowledge	=2
customer care	◊	longer term customer care	
	◊	maintaining quality auditing and continuous improvement	
	◊	quality	=3
strategic	◊	more formal marketing	
	◊	less reliance on a major trade customer, developing a consistent corporate image, trade and consumer shows	
	◊	acquisition of customers to offset aging customer base	
	◊	strategic as opposed to operational marketing	=4
Personal	◊	fear of failure -corporate & personal	
	◊	internal communications	=2
Planning	◊	lack of formal planning	
	◊	planning difficult as no past record	
	◊	re-writing of new 5 year plan	=3
Resources	◊	location and premises e.g. current offices too small (2)	
	◊	expansion constrained by resources	
	◊	management skills	
	◊	succession planing	
	◊	efficiency	
	◊	stock control	
	◊	increasing overheads	
	◊	level of profit too small	
	◊	maintaining trading levels	
	◊	supplier relationship	
	◊	lack of retail IT	=12

Some respondents gave more than one concern, hence responses = 50.

Exhibit Ten: External Concerns Reported

◊	competition	12	**three most**
◊	government policy	6	**popular**
◊	reliant on one major customer	5	**responses**

◊	fluctuations in demand		**market**
◊	seasonality - weather, trade or religion		**conditions**
◊	market as a whole in slow irreversible decline		
◊	recession		
◊	textile production moving out of Europe		
◊	exchange rates and exporting		

◊	supplier reliability		**other**
◊	technological advance, speed of		

All responses shown, total responses = 31

Exhibit Eleven: HOW CONSTRAINED - Some Indicative Quotes

- advertising considered too expensive, market research expensive and difficult but as an SME have some advantages - know customers, flexible in outlook and practice, can be opportunity focused and react quickly.
- better IT technology to help market
- calls on owners time
- lack of formal planning, limited financial resources, lack of formal business training, pricing . However the opportunity and flexibility to differentiate as a small business
- more production than service orientated
- resources for overall marketing and larger national companies offering more competitive financial packages
- Stage of the business life cycle (old) and existing clients (old) but younger demands different.

Exhibit Twelve: How market - indicative examples

- good balance 7Ps, emphasis on relationship marketing & promotion
- 7P analysis shows good appropriate balance
- canvassing, telesales, word of mouth (WOM)
- catalogue, CD ROM, WOM, Trade advertising, database
- direct mail, advertising, relationship marketing
- emphasis on promotion - ads, window display, boards and personal selling
- minimal amount of formal marketing, direct marketing with key customers - personal visits and letters
- networking, exhibitions, trade journals
- niche and relationship marketing to avoid competing with multiples with far larger budgets
- telesales, data base, trade advertising, pricing policy and relationship marketing
- trade journals, directories trade shows, sport sponsorship
- WOM, loyal returning customers, level of supplier promotions
- WOM, some promotion but not a great deal
- WOM, value pricing, service, upgrades

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Exploring the marketing - entrepreneurship interface: bringing an understanding of small business marketing into the curriculum

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Abstract

The success of small firms worldwide is determined by entrepreneurship and marketing (Hills, 1995). 95% of firms worldwide are small (less than 250 employees) – and often smaller than that. Marketing and entrepreneurship are not the same but they are interconnected. Consider Apple, the fabled 1970's 'garage' start-up by Wozniak and Jobs. Often great innovators but not always great entrepreneurs. That is until they revolutionised the music industry with iTunes, and in the future, may well revolutionise personal computing with the iPad.

This paper considers the authors' experience over the last decade in teaching what can be called entrepreneurial marketing. Given our belief, which is surprisingly common, that entrepreneurship is to some extent learnable and thus teachable – it is both 'nature and nurture' … we share our experience of our module – Marketing of Small Business. Our research interests both feed into, and draw from, our teaching on this final year module.

Keywords: SME, marketing, entrepreneurship

Introduction

This paper is underpinned by the notion of the marketing-entrepreneurship interface, or, what is termed by some colleagues as entrepreneurial marketing. In the USA, the best reference source is the collection of annual workshop proceedings, initiated and edited by Professor Gerald Hills (1987-). In order to progress we need to move through several gates- firstly: to define marketing, then to define entrepreneurship, then to believe that they are not the same construct – otherwise there would be no interface!! We are going to conceptualise the interface as a simple three circle Venn diagram. The addition of the third circle allows in this case for an organisational dimension, which will be the small to medium sized business (SME).
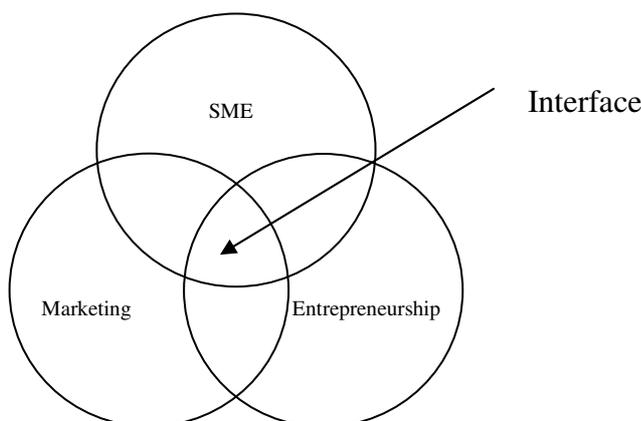
EXHIBIT ONE: THE INTERFACE

## Marketing

Defining marketing should be the simplest of the tasks but as society and economies have become more complex, so has the definition of marketing. Going back four centuries to Adam Smith's *Wealth of Nations*, then marketing is something that producers do to, or better, do with consumers. Although the notion of relationship marketing was not in common usage until the early nineteen

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eighties, one can argue that the seeds of the transactional marketing versus relationship marketing debate are there in the eighteenth century. Transactional marketing being characterised as a one way exchange from the producer to the consumer, probably short term and probably a single exchange, compared to relationship marketing characterised as a mutual two way exchange of understanding between the consumer and the producer, probably over the long term, and on multiple occasions. (see Lancaster and Reynolds, 2004; Morris et al., 2002).

The American Marketing Association attempts to reflect contemporary thinking by offering a definition of marketing and then up-dating this every five years albeit with the objective of "craft(ing) a new definition that better serves the constituents of the American Marketing Association" (AMA, 2008).

In 1935, the predecessor of the AMA defined marketing as "the performance of business activities that direct the flow of goods and services from producers to consumers", a definition that Adam Smith would have recognised. Following the latest five year rethink, the definition is now:

"Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (AMA, 2008).

A convenient example to illustrate the logic and necessity of widening of the scope of marketing is to reflect that in 1995, The Journal of Ministry Marketing and Management was launched with the aim to provide practical information on marketing and management issues in all types of church and ministry settings. Although it was short lived for only seven volumes. As well as moving away from a transactional approach and extending into services, marketing perspectives have fragmented, and hence, Morris et al. (2008) were able to identify thirteen alternative marketing approaches in the ten years preceding their article. More commonly recognised variants being: relationship marketing; guerrilla marketing; viral marketing; permission marketing; and, buzz marketing.

However, a useful skeleton on which to accommodate marketing is that of Webster (1992), who sees marketing as having three distinct dimensions, namely, culture, strategy and tactics. At the cultural level is a concern for customers and at the strategic level we consider how to secure competitive market position. Tactics are most commonly visualised as the 7Ps (product, price, promotion, place (distribution), physical evidence, people and process) of the marketing mix. Whilst the mix metaphor is probably accepted universally, the mnemonic convenience of the 7Ps is disputed. Alternative, and equally viable, schemas exist (Gronroos, 1993).

Within the confines of this paper, the most appropriate way to measure the extent to which small business carry out marketing would be to use the measure of marketing orientation. Two competing frameworks exist although there is no reason why the individual scale elements cannot be combined. Narver and Slater (1990) advocated taking a cultural focus and measuring three items: customer orientation, competitor orientation, and, interfunctional co-ordination (essentially communication) within the organisation. Kohli and Jaworski (1990) argued for measuring Intelligence Generation, Intelligence Dissemination and Responsiveness. Laferty and Hunt (2001) suggest a synthesis with the emphasis on the customer, importance of information, interfunctional communication, and taking action. Despite that suggestion, most studies employ either Narver and Slater (the so called MKTOR scale) *or* Kohli and Jaworski (the MARKOR scale). Earlier we illustrated the marketing discipline moving into services marketing by citing religion and the article abstract below continues that theme whilst illustrating a classical marketing orientation approach.

> "… The purpose of this research is to develop and test a model that explains the role of market orientation in a church participation context. Data were collected from a particular church denomination in Australia" ... "The findings suggest that market orientation is significantly related to church participation. Further, competitor

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orientation was found to be negatively associated with church participation. These findings suggest that it is important for church leaders to: (1) understand the needs of church members (customer orientation), (2) ensure that the various ministries in the church are perceived as delivering significant value by its members (interfunctional coordination), and (3) ensure that the range of ministries offered by the church is not perceived as the strategic tools to compete with other churches (competitor orientation), but rather as the means to serve its members effectively" (Mulyanegara, Tsarenko and Mavondo, 2010),

Entrepreneurship

Since this paper does not seek to deliver a history of the study of entrepreneurship, we are going to adopt the following definition: "Entrepreneurship is the process by which individuals pursue opportunity without regard to the resources that they currently control." (Stevenson and Jarillo, 1990). This definition is grounded in behaviour and action – not in traits and characteristics and it is indifferent to organisation type and ownership. It states that opportunity seeking is a key activity, and that the entrepreneur considers opportunity and then tries to assemble resources – not the other way around. Finally the notion of a 'process' rather than serendipity is enticing as it suggests that we might be able to unscramble and understand such a process.

This comes though with two caveats. Firstly, we still have little overall consistency in the defining of the term 'entrepreneur', perhaps given the nature of the entrepreneurial act that is not in itself surprising. The whimsical use of Winnie the Pooh by Kilby (1971), still serves as a good general warning to us all!

> "The search for the source of dynamic entrepreneurial performance has much in common with hunting the Heffalump. The Heffalump is a large and rather important animal. He has been hunted by many individuals using various ingenious trapping devices, but no one so far has succeeded in capturing him. All who claim to have caught sight of him report that he is enormous, but they disagree on his particularities. Not having explored his current habitat with sufficient care, some hunters have used as bait their own favourite dishes and have then tried to persuade people that what they have caught was a Heffalump. However very few are convinced, and the search goes on".

Secondly, that search has been long and is still continuing. Cantillon in 1755, was probably the first western economist to have recognised the unique attributes of the entrepreneur. He argued that the entrepreneur, in essence, bought at certain prices and sold at uncertain prices and therefore assumed the role of risk taker. This search has involved, and is likely to continue to do so, several academic disciplines. One can easily recognise economic, psychological, managerial, strategic elements in even a cursory literature review on entrepreneurship.

More recently, the work by Sarasvathy (2008) on effectuation would give some hope that entrepreneurship is to some degree learnable, and the work by Nicolaou (2008) along with his main co-author for several papers, Scot Shane on nature vs. nurture ascribes a role to both. But for some (such as Casson, 1992) it is a unique and very lightly bestowed behaviour that cannot be copied or mimicked. Finally, we need to remember that not all entrepreneurship is a 'perennial gale of creative destruction' (Schumpeter, 1934) and which is perhaps the most overused metaphor in entrepreneurship. Chell (1993) classifies the business owner along a spectrum from entrepreneur through to caretaker with quasi administrator and administrator as intervening hybrid positions. Entrepreneurs are seen as being alert to opportunities and proactive in taking the initiative and trying to control events, whereas, caretakers would be much more concerned with effective management whilst being well within their perceived comfort zone. Thompson (1999) compares and contrasts incompetent and competent entrepreneurs.

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As with marketing, we need to measure the extent to which entrepreneurship is practiced and this paper offers the concept of the entrepreneurial orientation. Miller and Friesen (1983) stated that an entrepreneurial firm is one that "engages in product market innovation, undertakes somewhat risky ventures and is *first* to come up with 'proactive' innovations, beating competitors to the punch" and "numerous scholars have developed this and used the term "entrepreneurial orientation" to describe a fairly consistent set of related activities or processes" (Lumpkin and Dess, 2001). Covin and Slevin (1991) are probably cited the most frequently and they consider an entrepreneurial orientation as having three dimensions -risk taking, innovation and proactiveness with the attendant entrepreneurial behaviour being reflected in management style and process. For example, a conservative management style would be reactive to market changes, as opposed to the proactive stance taken by an entrepreneurial management style. Knight (1997) provides a useful commentary on measuring entrepreneurial orientation in practice.

The Interface
If we now simply replace marketing with the scale to measure it (marketing orientation) and similarly for entrepreneurship, then we can see that at first sight the two scales share little in common. What research at the interface attempts to do is to consider what synergistic relation exists between these two business philosophies.

Three broad approaches can be taken, firstly, 'to put marketing into entrepreneurship', secondly, to put entrepreneurship into marketing', and thirdly to look for commonalities in action and competencies. In the first approach, we might start with entrepreneurial businesses and see how they market, whilst for the second approach we might try to understand how marketing creates and sustains entrepreneurial action, for example, the creation of a new product perhaps within a new market segment. The third approach has always been well described by Carson et al (1995) in their book but particularly succinctly by Hills (1995) in the Foreword to that book.

> "Good marketing is inherently entrepreneurial. It is coping with uncertainty, assuming calculated risks, being proactive and offering attractive innovations relative to competitors. And good entrepreneurship is inherently marketing oriented. A customer focus by everyone in the enterprise is a way of life. And the implementation of marketing strategies that generate customer satisfaction is essential to survival."

How does that impact our teaching and research?
One of the author works in entrepreneurship and the other in marketing and their research interests come together in looking at how small businesses in the UK, Russia and Poland carry out selected marketing functions. Some of our work involves using both marketing orientation and entrepreneurial orientation scales with SMEs. Another piece of research by one of the authors is to consider the extent to which standard marketing techniques are applicable to the small business (Reynolds, 2002).

The Hills (1987) perspective is that SMEs might use different marketing practices and techniques, particularly new and resource constrained SMEs. Carson et al, (1995) argued that personal contact networks and word of mouth marketing would be more likely to be witnessed rather than complex and expensive activity based around a comprehensive marketing plan. Whilst not denying the ability of the SME to plan – such planning might well be informal and 'in the head' of the entrepreneur. Opportunity recognition and exploitation might come from seeing a problem and then seeing a solution, rather than deliberate formal market research.

So we do the obvious, which we all do, that is bringing relevant research into the curriculum. Given our individual and joint research interests, and in the spirit of the interface, we focus on entrepreneurial marketing rather than just marketing per se, we do not teach scaled down big business marketing.

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Well sometimes! In the early days of the *interface,* the predominant view was that a new paradigm could, indeed, should be forged but the more recent consensus led by Carson is that we should take what works whether that be formal and traditional marketing techniques or whatever it is that SMEs practice. What is key is that we continue to research and observe exactly how SMEs market. Readers of this paper might well assume, and rightly so, that our taught module would require students to understand the real life of the SMEs. Such a view would then feed into how we assess the module. Reinforcing this is the fact that Carson whose textbook (1995) is still the seminal work in Europe was hugely influenced by his mentor, Professor Tony Cunningham who always argued for a andragogic rather than a pedagogic teaching philosophy. In respect of textbooks on the interface, Carson et al. (1995) has been joined recently by Bjerke and Hultman (2002).

On this module students undertake three pieces of assessment:

A short tutorial presentation on a relevant topic of our choosing – this may embrace a marketing concept or a specific technique such as cheap and effective public relations for an SME;

A one thousand word academic critique that helps to signal that this is a final year undergraduate module that whilst practical is one that is informed, and underpinned, by a wide and sometimes controversial literature base. Typical topics are marketing orientation; entrepreneurial orientation; a combination of the two; or specific techniques such as importance performance analysis and locating uncontested market segments;

However, the major assessment is to write a case study that demonstrates that they understand how an SME of their choosing markets their product or service. Unlike many such assignments across the School and University – this is not a quasi consultancy project or concentrating upon a particular problem. Aside from human interest and perhaps 'space' for the small business owner to reflect, it is a deliberately one-sided brief. There is no expectation that students will go beyond observing, reporting and reflecting. Of course, some may well want to go deeper than observation and that is fine by us.

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EXHIBIT TWO: SUMMARY CLASS BRIEF WITH COMMENTARY ADDED

	ACTIVITY	COMMENTARY
1	Write a descriptive business history outlining the critical developments in their trading to date.	Depth depends upon where the SME is in their lifecycle; we are trying to get the student to identify *critical* points and to draw us into the story.
2	Clearly show the reader their relative position in their marketplace.	An invitation to use a traditional positioning map/diagram; for many SMEs this will cover competitors in a very tight geographical location.
3	Produce a short brief containing secondary data on their market.	(1) and (2) are practical depending very much upon information derived from the SME, this task puts them back into the Library.
4	Write up a profile of the SME in a similar style to that which until recently could have been found in the Saturday supplement of the Financial Times - illustrations to be used as appropriate	This is an excellent test of their creative writing styles and the articles have three components: the headline which is always a pun; the text which is serious but designed to be read on a weekend when the paper is more leisure orientated; and, a well chosen photograph.
5	Find out how they 'do business' and then.....	
	a Consider the nature of how they plan	Planning might be very formal or very informal this in itself is interesting
	b Select two areas of particular concern to them and critically discuss these	Not of concern to the students but of concern to the SME
	c Consider the particular way in which they market their good or service - how is this constrained or facilitated by their being an SME?	To avoid the stereotype that small business are always at a disadvantage to their larger competitors
	d Having done the above then compare the outcome to three marketing or strategy models with which you are familiar	This is a crucial section, we are not asking students to report or discuss the models that they have learnt on the course – that is our language and how we see the world. We are asking them to use tools familiar to them and to make sense of their encounter. Of course, depending upon the background and knowledge of the owner this could be a shared language, and the SME may use such techniques.
	e Having stated what you believe entrepreneurial marketing is about- to what extent are these themes and issues realistic for your SME? This section must demonstrate that you are familiar with both the key textbook(s) for this module and appropriate journal articles. You must cite your sources clearly and accurately. That goes without saying – but you will find sources that Paul and I have come across and we will enjoy following these up!	Again we are asking students to be reflective at a more academic level given that the modules seeks a balance between practice and theory. There are only two key textbooks, the original Carson et al (1995) and the later Bjerke and Hultman (2002)
6	Having paired up with one other student or group, draw out the similarities and differences between your SMEs. Attach no more than one A4 sheet of bullet points to your report to demonstrate that you have done this. In our experience it does not matter who you pair up with … the outcomes are always useful as are the shared insights. Pairing up is not exclusive – if they want you can pair up with a group who have already discussed outcomes with another group.	It would be a real shame if students did not share some of their findings with each other and this section encourages them to do just that.
	(*) Weightings are indicative but you must attempt all the tasks set out above.	

Given the discussion above about the nature of entrepreneurship, you might imagine that we require them to select an entrepreneurial SME –but we do not. Who is, and who is not, entrepreneurial is of less concern to us than our students' understanding of the world of the SME and their owners and workers. At least 95% of business in the UK are small (less than 250 employers) and the population is skewed to the lower end of that range. (65% have between 1-4 employees; 83% less than 10, see BERR, 2007). If we assume that it is the entrepreneurial SMEs that grow, then in 2006, just under 6% of all businesses in the UK achieved a 60% growth in turnover over three years. This figure is below the USA (8.14 %.) but almost three times higher than France, Germany, Italy and Japan. As tutors and researchers our taste are catholic, we are as interested, perhaps more interested, in the 94% that do not grow – they are equally brave and

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interesting people. Because we are concerned with students developing a dialogue, we are not that concerned with accurate financials and we do not believe that they would be freely offered.

Some student findings

Exhibit Three reports brief details from fourteen of our case studies from this year. We have chosen to highlight the problems faced by the SMEs as this is a good example of how their knowledge informs our teaching and research. In the following section, we contrast these to an earlier data set. Also included are the techniques through which the students chose to frame some of their work. Whilst we give them a free choice, we have our preferences and we can use this information to influence and direct them in the next round of case studies. By looking at the effectiveness and richness of the data from these frameworks, we can reflect on how useful these may be as research instruments and to what extent they might be incorporated into our research. Exhibit Four is an example of Task Six.

Same old?

We last wrote a formal paper on this programme just over ten years ago and this reported in a similar way both findings on SME behaviour and our reflection on the module aims and objectives. Exhibit Five reports the same categories and it is interesting to reflect on how SME problems have, or have not, changed over the last decade. In respect of our teaching reflection, we still support the notions in that paper (Day and Reynolds, 1999), that:

> "Better students employ marketing and strategic tools as the framework for the case discussion as well as in the later comparison section. This is a good indicator for separating out the better reports and we continue to be of the view that we do not intend to give any guidance in this area.
>
> Requiring students to write up one part in the style of the newspaper article is a good discriminator of the better reports, and as such is a relatively simple to set creativity exercise. The (appropriate) style template being the Financial Times – 'Minding Your Own Business' article
>
> At present we do not require the students to select an entrepreneurial SME. So our sample is more representative of the USA direction in Interface research. *(which at the time was to consider how any SME irrespective of the level of entrepreneurial orientation did marketing)* Casual inspection of the full text of the cases would suggest that some of their choices included genuinely entrepreneurial SMEs (as measured by their innovative behaviour and/or product and service lines) but many also reviewed 'me-too' operations."

This paper has tried to strike a balance between reporting on the teaching of a particular module, and discussing the depth of academic work in the field of entrepreneurial marketing that informs and underpins the module. We remain unworried by allowing our students to select any SME, and interestingly, Carson (2010) in a reflective commentary argues that we have lost sight of our original aim, which was to understand marketing in small businesses. It was not to get embroiled in a debate concerning just what we mean by the entrepreneurial part of entrepreneurial marketing. It seems like we may have let somebody else's Heffalump into our room!!

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EXHIBIT THREE: BRIEF DETAILS OF FOURTEEN CASE STUDIES (A-Z BY TYPE)

SME Type	Size (including owner(s))	Start date	Concern One	Concern Two	Model 1	Model 2	Model 3
Bedding and General Household Textiles	n/s	1993	New and existing competitors	Finding reliable suppliers who preferably are not supplying their competitors	SWOT	STRATEGY CLOCK	PORTER FIVE FORCES
Business Consultancy	4	1997	Recession affecting client base	Lost of a member of staff	SWOT	PESTLE	CONVERGENT / DIVERGENT
Clothing Wholesale	20	1998	Chinese mainland competition	Exchange rate movements	SWOT	RESOURCE BASED VIEW	PORTER FIVE FORCES
Comic and Manga Bookstore, France	2	2009	Create a community of customers	Compete against national chains offering discounted product	IMPORTANCE PERFORMANCE MATRIX	STRATEGY CANVAS	PORTER FIVE FORCES
Food Wholesaling	3	1996	Perishable and seasonal products	Exchange rate movements	GE MATRIX	PESTLE	PORTER FIVE FORCES
Hardware Retailer with a niche specialisation in professional kitchen knives and scissors	2	1865 / 2009	Competing distribution channels (internet)	Supermarkets moving into stocking DIY ranges and knives as well as competition from large national DIY stores	SWOT	PESTLE	PORTER FIVE FORCES
Local Theatre	n/s	1992	Lack of capital and smaller than preferred marketing budget	Building up repeat and regular audiences	BOSTON MATRIX	MARKETING MIX	PORTER FIVE FORCES
Nail and Beauty Salon	2.5	2001	Pricing	Should they expand	OMURA ET AL GRID	PESTLE	PRODUCT LIFE CYCLE

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EXHIBIT THREE: BRIEF DETAILS OF FOURTEEN CASE STUDIES (A-Z BY TYPE) CONTINUED/-

SME Type	Size (including owner(s))	Start date	Concern One	Concern Two	Model 1	Model 2	Model 3
Pharmaceutical Specialist Manufacturer	250	1922	High level of compliance to complicated industry and product regulation is welcomed but adds to cost & speed of doing business.	Retailer buying power dictating price points and margins	SWOT/PESTLE	BOSTON MATRIX	PORTER FIVE FORCES
Plumbing	1	2007	Developing an effective internet presence	Growing the customer base	SWOT	MARKETING MIX	PORTER FIVE FORCES
Shoe Retailer	n/s	1864	Competition	Recession	SWOT	PESTLE	PORTER FIVE FORCES
Take Away Food franchise in early stage of	parent franchisor plus one other franchise plus one planned	2008	Employing and maximising business gain from Public Relations	Developing brand awareness in a crowded market	SWOT	MARKETING MIX	PORTER FIVE FORCES
Trade Publishing Company	10	2004	Recession affecting client base	Competitors	SWOT	PESTLE	PORTER FIVE FORCES
Watch Shop (High Street Independent)	2	1989	Decline of the high street as shopping focus	Changing trends away from wearing watches	MARKETING ORIENTATION	AIDA	RELATIONSHIP MARKETING

Notes: Businesses may be local to student's home town and therefore are not necessarily Huddersfield based. No order of importance for models and some attempt to align models.
Source: 2010 sample sent to External Examiner

For colleagues unfamiliar with the models listed above there follows a brief description of each model:

SWOT: considers on a quadrant diagram the internal strengths and weaknesses, and, the external opportunities and threats for a company; **Strategy clock**: offers eight strategic positions relative to competitors – for example, premium pricing – these positions are drawn to look like a clock face with eight options; **Porter Five Forces**: named after Michael Porter this is a way of assessing the competitive dynamics of an industry and drawing out an appropriate strategy, the five 'forces' are: bargaining power of suppliers, bargaining power of customers, threat of new entrants, threat of substitute products, competitive rivalry overall in the industry; **PESTLE:** a rational listing of the external factors affecting a business – political / economic / social / technical / legal and environmental, often used as the precursor to a SWOT;
Convergent /Divergent: considers the thinking style of SME owners and tries to argue that true entrepreneurs are divergent thinkers; **Resource Based View:** of strategy has several interpretations but basically firms should do what they are good at, based particularly on the quality of their human resources. **Importance Performance Matrix:** compares the importance placed on an element of delivery by the customer to how well the business matches that desired importance level - business thus match, over or under deliver relative to customer importance; **Strategy Canvas:** encourages business to denote what they believe are the competitive strengths of their business and then use a simple line graph to compare and contrast to their competitors and see where they are unique;
GE Matrix: so called after the use of this model with General Electric Company in the 1970's by McKinsey Consultants, using a matrix it strikes off industry attractiveness (want to be in that segment) versus capability to do that; **Boston Matrix:** named after the Boston Consulting Group, looks at the relationship between market growth overall and your share of that market, represented as 2x2 matrix, 'star' products, to name one of four categories, experience high market growth and you have a high market share; **Marketing Mix:** has been discussed in the paper; **Omura et al.** in a 2x2 matrix compares Schumpeterian scenarios of fundamental change versus Kirzerian market adjustments. Opposite positions on the matrix are stability Vs total creative destruction, bears more than a passing resemblance to an Ansoff matrix; **Product Life Cycle:** plots sales against time and argues that products and industries go through stages from development to maturity, drawn as an S shaped curve; **Marketing Orientation:** discussed in text; **AIDA:** simple marketing communications model that argues that one should move consumers through four stages – awareness, interest, desire and action; **Relationship Marketing:** discussed in the text.

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EXHIBIT FOUR: COMPARISON OF SMEs (TASK SIX) BY ONE PAIRING OF GROUPS

Business type	Leisure Facilities Provider	Beauty Salon
Legal Status	Charitable Trust / Social enterprise	Privately owned business
Employees	250 employees – part time, casual and full time	3 employees including owner
Real Estate	Head Office and multiple sites	One small shop but plans for expansion
Date of formation	Formed about same time	Formed about same time
Number of customers	7000+ members	Not disclosed
Key start-up event	Struggled to establish themselves with higher start up and operational costs	Tight opening budget and struggle to launch on that budget
Financials	Improving financial performance	Not disclosed but client base has grown rapidly
Market Trend	Health and fitness market has grown	Spending on health and beauty is expected to increase by 2011
Competitors	Competitors – threat from private sector providers	Main competition from other local salons that have started since this one
Macro economic impact	Economic downturn may benefit them with shift from more expensive private to cheaper public facilities	Economic downturn may be of benefit as it may slow down the growth of competitors
Greatest Concern	Biggest concern is rising energy costs and consequential need to be even more efficient	Biggest concern is the increased cost of supplies due to exchange rate movements
Market Positioning	Positioning – middle range of services and just above median price range in the industry	Positioning: high on quality and high price.
Planning Style	Planning conducted on a hierarchical framework – systematic short / medium and long term planning	Planning unsystematic and very short term
Main Objective	Main objective – put people first	Ensure customer loyalty and retention
Marketing Communications Used	Marketing Communications – have a budget and use leaflets. Posters, radio commercials, billboards, staff uniforms and website	Relationship Marketing, Public Relations, sales promotion, internal and external advertising.
Entrepreneurial Marketing?	Use commercial marketing and main themes of entrepreneurial marketing – risk taking, innovative, customer focussed and opportunity driven	Informal, day-to-day, risk taking, opportunistic, relationship marketing, excellent communication
Future Plans	Future plans – become self-sustainable, focus on 2012 Olympics, engage in Government Health plans and start a Facebook page.	Diversification and growth

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EXHIBIT FIVE: CONCERNS, CONSTRAINTS, HOW MARKET - FROM 1999 SURVEY

Exhibit Nine: Internal Concerns Reported

Employee	◊ lack of experienced workers	
	◊ employee training and skills	
	◊ finding new staff	
	◊ retaining staff (2)	
	◊ staffing	=6
Growth	◊ need to generate and achieve new growth (3)	
	◊ expansion and diversification (2)	
	◊ managing and controlling growth	
	◊ controlling all aspects of the business as it grows	=7

Marketing

marketing mix	◊ better use of marketing mix, branding their company rather than their trade customer	
	◊ fully exploit marketing mix	
	◊ product range, variety & diversification (3)	
	◊ establishing brand for new product	
	◊ promotion (2)	
	◊ pricing	=9
communications mix	◊ marketing communications	
	◊ internet strategy	=2
market research	◊ need for more market research and more focused segmentation	
	◊ need for better competitor knowledge	=2
customer care	◊ longer term customer care	
	◊ maintaining quality auditing and continuous improvement	
	◊ quality	=3
strategic	◊ more formal marketing	
	◊ less reliance on a major trade customer, developing a consistent corporate image, trade and consumer shows	
	◊ acquisition of customers to offset aging customer base	
	◊ strategic as opposed to operational marketing	=4
Personal	◊ fear of failure -corporate & personal	
	◊ internal communications	=2
Planning	◊ lack of formal planning	
	◊ planning difficult as no past record	
	◊ re-writing of new 5 year plan	=3
Resources	◊ location and premises e.g. current offices too small (2)	
	◊ expansion constrained by resources	
	◊ management skills	
	◊ succession planing	
	◊ efficiency	
	◊ stock control	
	◊ increasing overheads	
	◊ level of profit too small	
	◊ maintaining trading levels	
	◊ supplier relationship	
	◊ lack of retail IT	=12

Some respondents gave more than one concern, hence responses = 50.

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EXHIBIT FIVE: CONCERNS, CONSTRAINTS, HOW MARKET FROM 1999 SURVEY CONTINUED/

Exhibit Ten: External Concerns Reported

◊	competition	12	three most
◊	government policy	6	popular
◊	reliant on one major customer	5	responses
◊	fluctuations in demand		market
◊	seasonality - weather, trade or religion		conditions
◊	market as a whole in slow irreversible decline		
◊	recession		
◊	textile production moving out of Europe		
◊	exchange rates and exporting		
◊	supplier reliability		other
◊	technological advance, speed of		

All responses shown, total responses = 31

Exhibit Eleven: HOW CONSTRAINED - Some Indicative Quotes

- advertising considered too expensive, market research expensive and difficult but as an SME have some advantages - know customers, flexible in outlook and practice, can be opportunity focused and react quickly.
- better IT technology to help market
- calls on owners time
- lack of formal planning, limited financial resources, lack of formal business training, pricing . However the opportunity and flexibility to differentiate as a small business
- more production than service orientated
- resources for overall marketing and larger national companies offering more competitive financial packages
- Stage of the business life cycle (old) and existing clients (old) but younger demands different.

Exhibit Twelve: How market - indicative examples

- good balance 7Ps, emphasis on relationship marketing & promotion
- 7P analysis shows good appropriate balance
- canvassing, telesales, word of mouth (WOM)
- catalogue, CD Rom, WOM, Trade advertising, database
- direct mail, advertising, relationship marketing
- emphasis on promotion - ads, window display, boards and personal selling
- minimal amount of formal marketing, direct marketing with key customers - personal visits and letters
- networking, exhibitions, trade journals
- niche and relationship marketing to avoid competing with multiples with far larger budgets
- telesales, data base, trade advertising, pricing policy and relationship marketing
- trade journals, directories trade shows, sport sponsorship
- WOM, loyal returning customers, level of supplier promotions
- WOM, some promotion but not a great deal
- WOM, value pricing, service, upgrades

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Conclusion

In this paper, we hope to have shown a practical student exercise through which students and ourselves learn about the real world of the SME and which both feeds into, and feeds from, our research interests. This approach is not unique and certainly can be replicated. However, we are pleased to have had the opportunity to share our experience. It has given us the some space in which to consider our module, and it may be of interest to other colleagues.

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APPENDIX 1:

A FULL LIST OF THE AUTHOR'S PUBLICATIONS INCLUDED AND NOT INCLUDED IN THIS SUBMISSION

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END

APPENDIX 2:

PERSONAL AWARD PRESENTED BY THE UNIVERSITY OF ILLINOIS AT CHICAGO FOR RESEARCH AND LEADERSHIP IN THE AREA OF THE MARKETING ENTREPRENEURSHIP INTERFACE

UIC Research Symposium on Marketing and Entrepreneurship

Distinguished Research and Leadership Award

Paul L. Reynolds

-- An Award for Outstanding Research and Leadership Contributions --
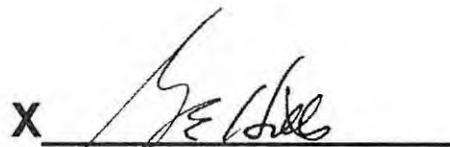
X _____
Gerald E. Hills
Symposium Co-Chair

X _____
Rod Shrader
Symposium Co-Chair

APPENDIX 3:

SCHEME FOR UNDERGRADUATE MODULE 'MARKETING FOR SMALL BUSINESS' DEVELOPED OUT OF RESEARCH CONDUCTED BY THE AUTHOR

Lecture Schedule: 2010-2011

MSB TERM ONE LECTURES

1	30/09	PLR/JD	Introduction
2	07/10	PLR	Is conventional marketing applicable to SMEs?
3	14/10	JD	Entrepreneurial marketing
4	21/10	JD	Is it entrepreneurship or marketing that matters?
5	28/10	PLR	Market Research and MkIS
6	04/11	PLR	Credit rating as a marketing tool
7	11/11	JD	Is it entrepreneurship or marketing that matters (Part two)?
8	18/11	JD	Opportunity Recognition One
9	25/11	JD	Opportunity Recognition Two
10	02/12	PLR	Marketing communications for the smaller business
11	09/12	PLR	Franchising and MLM
12	16/12	PLR	Franchising and MLM

TERM TWO

1	20/01	PLR	Entrepreneurial Pricing Strategies for small firms
2	27/01	JD	Personal Contact Networks
3	03/02	JD	Clusters
4	10/02	JD	External Shocks
5	17/02	PLR	Entrepreneurial New Product Development
6	24/02	PLR	International marketing and the Internet
7	03/03	JD	External shocks (2)
8	10/03	JD	Competencies for Entrepreneurial Marketing
9	17/03	JD	Competencies for Survival and Growth
10	24/03	PLR	Are Entrepreneurs 'Bayesian'?
11	31/03	PLR / JD	Plenary
12	07/04		NO LECTURE THIS WEEK: COURSEWORK HAND-IN

Overview

This module looks at entrepreneurial marketing for the small business. Some commentators would consider that any new small business is by default entrepreneurial, and, therefore this course would consider marketing as practised by a particular business form – the small to medium sized enterprise (SME).

We do not subscribe to that notion … and argue that there is marketing, and, entrepreneurial marketing which can be considered more creative.

Then there is the issue of what marketing …. because small businesses are not just small 'big businesses' it may be that appropriate marketing for the large business does not translate smoothly to the small business ('the still do advertising but do it on a smaller scale as there is less money' argument).

Small businesses may use different marketing, for example, they are more reliant on word of mouth marketing and the use of personal contact networks.

It may be that techniques that work well and are used in large companies (for, example, the marketing mix) work well for the small business as well.

Visualising the interface as a Venn diagram ...
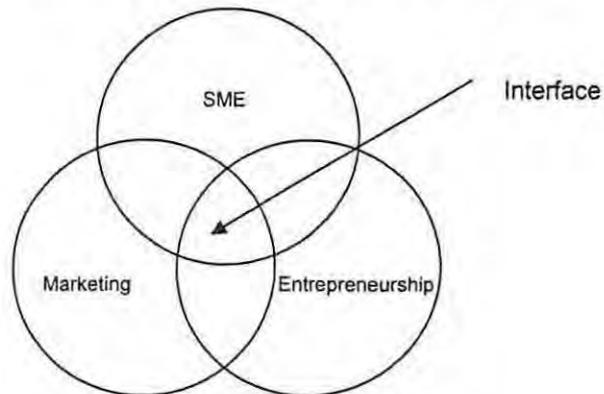
This would suggest that our lectures (and your coursework and our tutorial work) should consider:

The context of SMEs
Marketing in general
Entrepreneurship in general
Marketing in particular as it relates to the SME
Entrepreneurship in particular as it relates to the SME

That the 'interface' lies in the centre of the Venn diagram.

To reiterate, we have pasted below, the excellent and insightful Foreword by Gerald Hills to the Carson et al book, and, a paper that Paul and I have recently authored (which we have discussed in the tutorials with some of you).

Rationale for our lectures

This was written as an aide memoire summary half way through the second term of our programme in 2010 / 2011.

Term One (12 lectures)

In term one, we started with an introduction to the programme, the Gerry Hills Foreword in the David Carson et al. book and our paper on the teaching approach on this programme.

In Lecture Two, Paul raised the question about whether, and what, conventional marketing is appropriate for the small business.

In Lecture Three, John considered some strands in the history of the interface, the lecture covered a wide range of themes and a selection of the more pertinent themes was highlighted in the lecture.

Lectures Four and Lecture Seven considered the entrepreneurship and marketing dimensions in the
'Venn diagram' approach. Themes were selected from a wide set of issues.

Lectures Five and Six considered how both MkIS and Credit Rating can be used as an appropriate marketing tool for the SME, and, may be uniquely useful to them.

Lectures Eight and Nine considered Opportunity Recognition, a topic important both to students of entrepreneurship and small business marketing. The second lecture concerned itself with an important contribution by Stanley Stasch – his article from the Journal of Research in Marketing and Entrepreneurship formed the core of his excellent book published in 2010.

Lecture Ten concerned marketing communications for the smaller business.

The final two lectures considered one way that people might start a small business, through taking up a franchisee, or, one way that an established, but ambitious to grow SME, could chose to expand ... by franchising the business.

Term Two (11 lectures)

We started by looking at entrepreneurial pricing strategies – pricing is a key area of difficulty and importance for the SME.

Lectures Two and Three looked at personal contact networks – hugely important for the SME, and in the mind of David Carson, one of the fundamental behaviours of entrepreneurs. Lecture Three looked at the notion of clusters – where entrepreneurs would gather together (for example, Silicon Valley). At the heart of a vibrant and successful cluster are those personal contact networks that bind participants in the cluster together.

Lectures Four raised, and Lecture Seven will further consider, the question of how SMEs can use entrepreneurial marketing to overcome (or exploit) fundamental changes in their environment.

Lectures Five and Six looked at new product development and international marketing and the Internet. So covering key issues for the entrepreneurial SME seeking to survive and grow.

Lectures Eight and Nine will consider appropriate competencies for the small business.

Lecture Ten will consider a particular marketing behaviour that would be appropriate for the SME ... are Entrepreneurs Bayesian?

Lecture Eleven will round off the programme with a review over the module as a whole.

Carson, D., Cromie, S., McGowan, P. and Hill, J. (1995). Marketing and Entrepreneurship in SMEs: An Innovative Approach. London: Prentice Hall, 407–420.

Day, J. and Reynolds, P.L. (1999). Some Observations From Teaching A Module In Entrepreneurship and Marketing. 13th Annual University of Illinois at Chicago Research Symposium on marketing and entrepreneurship. June 16-17, France.

Day, John and Reynolds, Paul Lewis (2011). *Exploring the marketing - entrepreneurship interface: bringing an understanding of small business marketing into the curriculum.* In: Paper presentations of the 2010 University of Huddersfield Annual Learning and Teaching Conference. University of Huddersfield, Huddersfield, pp. 102-115.

Stasch, Stanley F. (2002). Screening For Successful Low-Budget Marketing Strategies For New Ventures, Journal of Research in Marketing and Entrepreneurship Volume: 4 Issue: 3.

MARKETING OF SMALL BUSINESS: ASSESSMENT BRIEF
2010-2011

PAUL L REYNOLDS and JOHN DAY

YOUR ASSESSMENT CONSISTS OF THREE TASKS – QUESTION ONE; QUESTION TWO; QUESTION THREE

When do I hand it in?

QUESTION ONE	Individual presentation	The day of the presentation	·

QUESTION TWO	1000 words	Thursday (by 15.00), 07th April, 2011	Or any other time of your choosing during the module

QUESTION THREE	'Live Case Study'	Thursday (by 15.00), 07th April, 2011

At present we are taking paper copy only with the exception of Question Two, the 1000 words that should also be submitted to Turnitin

We will feedback within the University three teaching week period with the exception of the Individual Presentation where we feel better able to mark your work if we have seen 3 weeks worth of presentations.

QUESTION ONE	An individual 15 minute PowerPoint anchored presentation on a mutually agreed topic. A reflective commentary on that presentation.	(see below)
	INDIVIDUAL	
QUESTION TWO	A 1000 word response to the academic topic below.	(see below)
	INDIVIDUAL	
QUESTION THREE	THE LIVE CASE STUDY	
	SMALL GROUP (INDIVIDUAL to THREE STUDENTS)	

Mark Weighting

Question One	30%
Question Two	20%
Question Three	50%

QUESTION ONE: INDIVIDUAL CLASS PRESENTATION AND PRESENTATION PACK

Presentation packs must be handed in on the day of the presentation to either John Day or Paul Reynolds.

(1)   A verbal presentation that engages the audience somewhat in your presentation. Presentations from start to finish are 15 minutes maximum.

(2)   A presentation pack

Which should be collected together in an appropriate physical context – folder, box file, CD or whatever.   Contains evidence of your presentation. This should contain your supporting material used in the presentation –e.g. PowerPoint slides, supporting material, transcriptions or recordings of interviews with small business etc.

It should have a front page giving your topic, name and date of presentation.   The next page should be an index page.

This pack should contain in addition to the above, sections that:

(a)   Discuss what you set out to achieve in your presentation – and how you set about doing that – what was your plan/strategy to enable your goals for the presentation.

(b)   What you gained from the exercise, what went well, less well.

(c)   How did you decided to engage the audience and how was that designed to support and enhance your presentation.

(d)   Show how you have used contemporary academic sources (journals and books) to help you build your knowledge, frame your analysis and drive out your recommendations and conclusions. *Please append the abstracts of your journal articles*. For books, a short 'publishers description' should be included.

(e)   How has the presentation helped with your personal knowledge about marketing in the small business and your personal and professional development.

(f)   Are there any lessons and themes that could be helpful in completing your second assessment – or depending upon the timing of the assessments – have you been able to use any material from your live case study in the presentation.

(g)   What have you learnt from one of your colleague's class presentations

(h)   A full set of references.

Apart from (d) which will of necessity be longer; and (h) for which the guidance is not necessary – we imagine that each of these sections would be about one-half to one page.

You are welcome to add any other material and observations over the above.

Because you are final year students, we expect you to have the ability to understand, interpret and run with the above brief.   However, we are looking for a technically competent presentation; imagination and creativity in the writing and delivery of the work; sound and evidenced academic research; competent and thoughtful reflection; and a professional and appropriate presentation pack.

QUESTION TWO: ACADEMIC 1000 words

Select one of the areas below, and show that you have considered the impact and relevance of the contemporary literature in understanding how an SME could use such a technique to improve their performance.

Target length is 1000 words (single spaced three pages) plus detailed referencing.

We will run a formal tutorial on each of these topics – but you need not wait for us until you start reading around. Below they are ordered alphabetically, not in order of presentation.

These areas have been chosen as they will help you consider the questions and themes that you can discuss with your SMEs for the second assignment. These are not obligatory questions to discuss with your SME but they might just help you to frame your thoughts

- Entrepreneurial orientation (EO)
- Gaps analysis – 'Servqual' and variants
- Importance Performance Matrix
- Marketing orientation (MO)
- Or perhaps in the spirit of this course EO and MO

QUESTION THREE: LIVE CASE STUDY

Individual to three students

In the spirit of this course, we want you to go out and find, and then talk in some depth with an actual small business.

We are not particularly concerned about what constitutes small - but typical definitions would include firms up to 250 employees, whilst the natural skew in SME size suggests you are more likely to meet up with SMEs around 25 employees or less.

The main selection criteria are that they will talk to you about how they do business and you can enter into some meaningful dialogue. This is what we expect you to do; you are not there as 'quasi consultants'. Unless you create a very good relationship - some aspects of the business are likely to be off limits, for example, company accounting data.

This is not meant to be an easy piece of work - it counts, after all is said, to your final degree classification and is in place of the more traditional examination.

To do this piece of work successfully you will need to work as a team, find a willing SME, persuade then to talk to you on several occasions and then write up the exercise in a professional manner. Along the way you will need to exercise judgement, tact, perception and be able to integrate your academic learning from this module and others into the analysis of the case. Thus it makes sense that you operate as a team - this will allow you to develop and share experience and skills, and you can give each other moral support as well.

Our suggestion is that you operate individually or pairs or threes (to share the work and gain moral support!) Neither the brief nor the marking will be altered to reflect team size. These do not have to be the same groups as your tutorial presentation.

Once you have found an SME we would like to have some contact details so that we can thank them for their help and introduce ourselves etc. We can then provide you with a formal briefing for the SME. If you need any formal documentation or verification before then, please ask. Alternatively give them our contact details (p.l.reynolds@hud.ac.uk; 01484-473123 (direct telephone); (j.day@hud.ac.uk; 01484-473355 direct telephone).

This is an innovative piece of coursework, and the tenth time that we have used this approach. In addition, we have listened and talked to colleagues in Northern Ireland, Scotland and the States about similar schemes. You are very much ambassadors of our joint Departments, the Business School and the University.

Therefore, you need to behave in a business like fashion and to make very sure that the SME that you are talking to is aware of the boundaries and goals of this exercise.

Presumably, you are going out to find reasonably successful SMEs and so we can expect that they know how to conduct their business. We can also expect you to have a whole toolbox of tools gathered from the marketing and strategy programmes that you have followed or are following, not to mention the material from this course. So you use those tools - SWOTs, PESTS, 4(7) Ps, PORTER etc. After all, they are how you understand the business world. Your problem is, and it is analogous to technology transfer, that your business will understand all too well their competitive environment but ask them to go through a Porter analysis with you will probably not be the best of ideas. Equally you will need to build up some trust and enthusiasm with the SME ... do not having said 'Hello' then ask them for their opinion of the GE Matrix and their response to each part of the matrix.

(Please note that we are unlikely to return your work as it is needed for External Examiner verification etc. ... so if you need a copy for yourselves or the SME we would be grateful if you would make a second copy for yourselves.)

FOR YOUR CHOSEN SME

	ACTIVITY	FORMAT	WEIGHTING
1	Some basic demographic data: name; location; date started; size (e.g. number of business units); business sector; number of employees – full time and part time; number of owners; family business.	written	gratis
2	Write a descriptive business history outlining the critical developments in their trading to date.	written	20
3	Clearly show the reader their relative position in their marketplace.	written	10
4	Produce a short brief containing secondary data on their market.	written	10
5	Write up a profile of the SME in a similar style to that which until recently could have been found in the Saturday supplement of the Financial Times - illustrations to be used as appropriate.	written	10
6	Find out how they 'do business' and then.....		
	a Consider the nature of how they plan	written	10
	b Select two areas of particular concern to them and critically discuss these	written	10
	c Consider the particular way in which they market their good or service - how is this constrained or facilitated by their being an SME?	written	10
	d Having done the above then compare the outcome to three marketing or strategy models with which you are familiar	written	10
	e Having stated what you believe entrepreneurial marketing is about – to what extent are these themes and issues realistic for **your SME.** This section must demonstrate that you are familiar with both the key textbooks for this module and appropriate journal articles. You must cite your sources clearly and accurately. That should go without saying – but it gives us a chance to follow up stuff that you will come across and that we have not.	written	10
7	Demonstrate that you have discussed, compared and contrasted headline findings for your SME with two other groups. The most basic way would be an A4 sheet of bullet points to your report to demonstrate that you have done this. But feel free to be more creative.	written	None – has to be done – you will benefit immeasurably – what more incentive do you need?
	Weightings are indicative but you must attempt all the tasks set out above.		

<div align="center">THE BUSINESS SCHOOL</div>

1.	**Module Code**	BHK 0015
2.	**MODULE TITLE**	MARKETING FOR SMALL BUSINESS
3.	**Schools involved in delivery**	Business School
4.	**Name of Course(s)**	BA (Hons) Marketing BA (Hons) Advertising & Marketing Communications BA (Hons) Sports Promotion & Marketing BA (Hons) Marketing with Public Relations BA (Hons) Business & Journalism BA (Hons) Business with Design BA (Hons) Business Administration & Management (Top-Up) BA (Hons) Global Business and Logistics Management BA (Hons) Business Management BA (Hons) Business & Psychology BA (Hons) Business & Financial Services BA (Hons) International Business BA (Hons) European Business BA (Hons) Global Politics & International Business BA (Hons) Law & Business BA (Hons) Entrepreneurship and Business
5.	**Module Leader**	John Day
6.	**Location for delivery**	Queensgate
7.	**Module Type**	**Core:** BA (Hons) Entrepreneurship and Business **Optional:** BA (Hons) Marketing BA (Hons) Advertising & Marketing Communications BA (Hons) Sports Promotion & Marketing BA (Hons) Marketing with Public Relations BA (Hons) Business Studies (Full & Part-time) BA (Hons) Business & Journalism BA (Hons) Business with Design BA (Hons) Business Administration & Management (Top-Up) BA (Hons) Global Business and Logistics Management BA (Hons) Business Management BA (Hons) Business & Psychology BA (Hons) Business & Financial Services BA (Hons) International Business BA (Hons) European Business BA (Hons) Global Politics & International Business BA (Hons) Law & Business
8.	**Credit Rating**	20
9.	**Level**	Honours
10.	**Learning Methods**	Lecture /seminar: 48 hours Self directed study: 152 hours
11.	**Pre-requisites**	None

THE BUSINESS SCHOOL

12.	Recommended Prior Study	None
13.	Co-requisites	None
14.	Professional Body Requirements	None
15.	Barred Combinations	None
16.	Graded or Non Graded	Graded

17. Synopsis

This course will initially focus the student on the marketing / entrepreneurship interface and the unique view this offers on the realities of marketing for the SME.

The student will progress sequentially through opportunity recognition; market research activity; competency development; growth and life cycles; monitoring; control and forecasting; relationships with advisors; surviving crises; and the role of multi-level marketing and franchising to both expand the franchisor's business and to create opportunity for the new small business.

18. Outline Syllabus

- The marketing / entrepreneurship interface; why SMEs are important and the need to differentiate our marketing approach.
- Opportunity recognition.
- Market Research for the SME.
- Competencies and skills for the entrepreneurial SME. Marketing Vs. entrepreneurial orientations.
- Using customer surveys as a marketing tool.
- The growth process and life cycles.
- Monitoring & control - forecasting and monitoring using time series models and tracking signals. Commercial & health monitoring of SMEs.
- Relationships with advisors.
- Building the business through syndicating - franchising and multi-level marketing.
- Difficult trading conditions - addressing and surviving crises.
- Strategic Marketing Planning in SMEs - applicability and differences compared to large firms.

19. Learning Outcomes

Knowledge and Understanding Outcomes

On completion of this module students will:

1. Appreciate the importance of the small firm sector to the national economy.
2. Understand the workings and constraints of small businesses.
3. Critique the crucial role of marketing and its strategic and tactical application within small firms.
4. Critically appraise conventional marketing principles when applied to the smaller enterprise.
5. Analyse and synthesise the functional areas that a small business should integrate with a marketing orientated business planning framework. Additionally be able to appreciate and advise (as appropriate) on a relevant skill set.

Ability Outcomes

On completion of this module students will be able to:

6. Develop practical skills arising from the learning vehicles used: the interactive presentation and the student authored case study.
7. Gain a balanced appreciation of those specific factors, opportunities and limitations in enacting marketing management and planning for the smaller business.
8. Develop a practical understanding of the contemporary marketing and business issues that affect smaller firms.

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9   To demonstrate the sympathetic application of marketing models and analysis to the SME or entrepreneurial SME.

20.   Assessment Strategy

20.1   *Formative assessment*

A range of formative devices typically in-class tests, formative feedback on summative assessments, reviews of files and folders etc., will be used by tutors to aid learning. The exact nature of these assessment devices is at the discretion of the module tutor.

20.2   *Summative Assessment*

Assessment tasks (including assessment weightings)

Individual presentation (15 minutes) & Written report (3-4000 words) (Eligible for tutor reassessment, covers learning outcomes 2,3,4,6,7)	50%
Group case study/business report (5,000 words) [final assessment] (Not eligible for tutor reassessment, covers learning outcomes 1-9)	50%

No assessment element is subject to anonymous marking.

Assessment Criteria

The assessment for criteria is as set out in the Business School Assessment Guidelines. The guidelines provide criteria for the assessment of both coursework's and examinations.

21.   Learning Strategy

One lecture and one tutorial per week. Early tutorials will consider case study material and thus help students author their practical case studies. Students will be asked to debrief their learning points and the marketing implications from their case studies. Students may exceptionally be sole author of their SME case study.

THE BUSINESS SCHOOL

MARKETING FOR SMALL BUSINESS

BHK 0015

Indicative Reading (latest editions)

Books:

Bjerke, B. and Hultman, C., *Entrepreneurial Marketing: The Growth of Small Firms in the New Economic Era*, Cheltenham: Edward Elgar Publishers.

Carson, D., Cromie, S. McGowan, P. and Hill, J., *Marketing and Entrepreneurship in SMEs: an innovative approach*, Hertfordshire: Prentice Hall.

Carter, S. and Jones-Evans, D., *Enterprise and Small Business: Principles, Practice and Policy*, Harlow: Pearson Education.

Carson, D. et al, *Qualitative Marketing Research*, London: Sage.

Chaston, I., *Entrepreneurial Marketing - competing by challenging convention*, Basingstoke: Palgrave.

Hills, G. and various (Eds.), Research at the Marketing/Entrepreneurship Interface, Proceedings from the UIC/AMA annual research symposium, Chicago, VIC.

Hulbert, B., Day, J. and Shaw, E. (eds.), Academy of Marketing, UIC/ MEIG-AMA, Symposia on the Marketing and Entrepreneurship Interface, 1996-1998, Northampton: Nene University College.

Jones, O. and Tilley, F., *Competitive Advantage in SMEs: Organising for Innovation and Change*, Chichester: John Wiley & Sons Ltd.

Storey, D. and Greene, F.J., *Small Business and Entrepreneurship*, Harlow: Pearson.

Wickham, P.A., *Strategic Entrepreneurship*, London FT Prentice Hall.

Journals:

Journal of Research in Marketing & Entrepreneurship

APPENDIX 4:

SCHEME FOR POSTGRADUATE MODULE 'ENTREPRENEURIAL MARKETING' DEVELOPED OUT OF RESEARCH CONDUCTED BY THE AUTHOR

University of
HUDDERSFIELD
THE BUSINESS SCHOOL

1.	**Module Code**	BMS 0009
2.	**MODULE TITLE**	ENTREPRENEURIAL MARKETING
3.	**School involved in delivery**	University of Huddersfield Business School
4.	**Name of Course(s)**	MSc Entrepreneurship
5.	**Module Leader**	John Day
6.	**Location for delivery**	Queensgate
7.	**Module Type**	Core
8.	**Credit Rating**	15
9.	**Level**	Masters
10.	**Learning Methods**	Student contact: 24 hours Self directed study: 126 hours
11.	**Pre-requisites**	None
12.	**Recommended Prior Study**	None
13.	**Co-requisites**	None
14.	**Professional Body Requirements**	None
15.	**Barred Combinations**	None
16.	**Graded or Non Graded**	Graded

17. **Synopsis**

The influences on modern marketing thought and practice are examined e.g. entrepreneurship, economics, psychology, sociology, statistics, information science. The entrepreneurial nature of the marketing concept is considered and the relationship between marketing and entrepreneurship is examined in depth from both a conceptual and empirical perspective. Whether marketing is 'formal sequential, systems orientated, disciplined and structured' whilst entrepreneurship is 'informal, haphazard, creative, opportunistic and reactive'. The commonalities between good marketers and good entrepreneurs – personal contact networks, creativity, analysis and judgement. Marketing as a codified form of entrepreneurship. The extent to which the 'classical' school as epitomised by Kotler, does or does not properly integrate creativity into the process.

The differences between the practice of marketing by organisations and the philosophical rationale and nature of the subject as a business philosophy and discipline is examined and critically appraised. The practice of marketing within organisations is considered from a philosophic, strategic, tactical and operational standpoint. A critique of the practice of modern marketing is provided and an examination of how the subjects of entrepreneurship and marketing can be better integrated into what might be called 'entrepreneurial marketing'. The extent to which there is sufficient critical mass for entrepreneurial marketing to be considered a paradigm.

18. **Outline Syllabus**

Entrepreneurship within the marketing literature. Marketing as codified, systemised entrepreneurship. Conventional marketing and its links with entrepreneurship. 'Entrepreneurial

BMS0009 approved by SAVP April 2002
Amendment Approved by Chair's Action 16/06/03
Amendment approved by SVP : 18.01.05 (DH)
Approved by: SVP　　　　Issue No. 3　　　　Module Code: BMS0009　　　　Date: 18.01.05　　　　Page 1 of 3

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HUDDERSFIELD
THE BUSINESS SCHOOL

marketing paradigms' and their applications to different types off organisations e.g. SMEs, not for profit, service providers' etc. The process of intrapreneurship. Opportunity recognition. Personal contact networking. SME verses (Entrepreneurial) SME competencies. Successful and appropriate entrepreneurial practices. Marketing management, marketing planning, innovation and new product/ service development from an entrepreneurial perspective. Entrepreneurial aspects of marketing communications and distribution.

19. Learning Outcomes

Knowledge and Understanding Outcomes

On completion of this module students will:

1 understand the classical and postmodernist marketing concepts and their application in business;

2 understand the relationship between the marketing and the entrepreneurial orientation;

3 appreciate the entrepreneurial nature of marketing as a business philosophy.

Ability Outcomes

On completion of the module the student will be able to:

4 critically evaluate current marketing practice in many organisations and to be able to formulate possible improvements by examining the marketing entrepreneurship interface and the entrepreneurial marketing approach.

5 integrate themes and issues on this module with, in particular, the module in Entrepreneurship.

6 engage competently, and forcibly, in a debate about what constitutes the entrepreneurial marketing paradigm.

20. Assessment Strategy

In order to pass the module all forms of assessment must be attempted.

20.1 *Formative Assessment*

Discourse between the tutor and the students and formative feedback on their summative assessment.

20.2 *Summative Assessment*

Assessment Tasks (including assessment weightings)

One piece of individual work (approximately 5,000 words) weighted at 100%. Covers all learning outcomes.

Full time students will consider a business with which they are either familiar, or can become familiar and then, drawing from the material and topics covered in this module, present their recommendations for an integrated marketing plan for the successful development of their chosen product, service or business unit.

BMS0009 approved by SAVP April 2002
Amendment Approved by Chair's Action 16/06/03
Amendment approved by SVP : 18.01.05 (DH)
Approved by: SVP   Issue No. 3   Module Code: BMS0009   Date: 18.01.05   Page 2 of 3

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HUDDERSFIELD
THE BUSINESS SCHOOL

Part-time students will be asked to select one of their organisations' products, services or business unit.

Assessment Criteria

The assessment for criteria is as set out in the Huddersfield University Business School Assessment Guidelines. The guidelines provide criteria for the assessment of both courseworks and examinations.

21. **Learning Strategy**

To develop the pedagogic approach by use of formal lectures, seminars and tutorial discussions. The pedagogical aspect of the module is literature based and students will be expected to carry out extensive reading of the available literature. Much of this will be made available to them electronically. The andragogical approach will take the form of individual and small group project work using actual firms and case study materials.

Conventional lectures and the use of seminar discussions, tutorial discussions, individual and group presentations, investigative practical exercises and the use of case studies.

Where it is not possible for a student to do the first assessment with their own organisation, they may substitute another organisation with which they are, or can become, familiar.

22. **Indicative References – Latest Editions**

Chaston, I. *Entrepreneurial Marketing: Competing by Challenging Convention*, Macmillan Press.
Carson, D., Cromie, S., McGowan, P. and Hill, J. *Marketing and Entrepreneurship in SMEs*, Prentice Hall.
Brown, S. *Postmodern Marketing*, London: Routledge
Brown, S. *Marketing – The Retro Revolution*, London: Sage
Armstrong, G. and Kotler, P. *Marketing an Introduction*, Prentice Hall, Inc.
Chisnall P.,*Marketing Research*, McGraw Hill.
Godin, S. *Permission Marketing*, Simon and Schuster.
Jobber, D. *Principles and Practices of Marketing*, McGraw Hill.
Keegan, W.J. and Green, M.S. *Global Marketing*, Prentice Hall Inc.
Lancaster, G.A. and Reynolds P.L., *Marketing*, Macmillan Press Ltd.
McKenna, R. *Relationship Marketing*, London, Century Business.
Reichheld, F.F. and Teal, T. *The Loyalty Effect: The Hidden Force Behind Growth, Profits and Lasting Value*, McGraw-Hill, July.

Other Information

BMS0009 approved by SAVP April 2002
Amendment Approved by Chair's Action 16/06/03
Amendment approved by SVP : 18.01.05 (DH)
Approved by: SVP   Issue No. 3   Module Code: BMS0009   Date: 18.01.05   Page 3 of 3

APPENDIX 5:

CERTIFICATE SHOWING THE AUTHOR'S VISITING PROFESSORSHIP AT THE SCHOOL OF INTERNATIONAL BUSINESS, OMSK STATE UNIVERSITY, BASED LARGELY ON THE AUTHOR'S COLLABORATIVE WORK WITH OMSK STAFF IN THE FIELD OF MARKETING FOR SMALL BUSINESS

**ФЕДЕРАЛЬНОЕ АГЕНТСТВО
ПО ОБРАЗОВАНИЮ**

Государственное образовательное учреждение
высшего профессионального образования

**Омский
государственный
университет
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ОКПО 02069007, ОГРН 1025500532947,

ИНН/КПП 5501003925/ 550101001

13.04.07 № 01.55/1115

На № _____ от _____

To whom it may concern

This is to certify that PAUL REYNOLDS from University of Huddersfield (UK)

has been appointed VISITING PROFESSOR at Omsk State University (Russia).
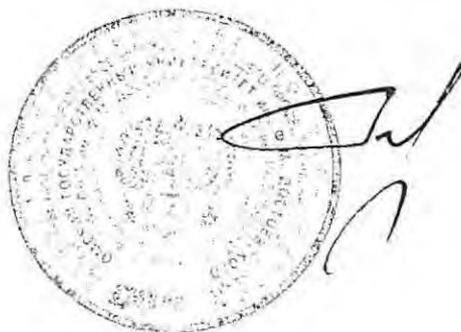
Rector   Professor G. Gering

APPENDIX 6:

CERTIFICATE SHOWING THE AUTHOR'S VISITING PROFESSORSHIP AT THE SCHOOL OF ECONOMICS, RZESZOW UNIVERSITY, POLAND, BASED LARGELY ON THE AUTHOR'S COLLABORATIVE WORK WITH RZESSOVE STAFF IN THE FIELD OF MARKETING FOR SMALL BUSINESS.
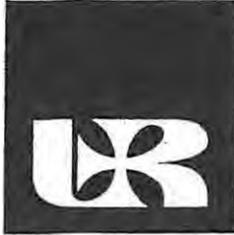
Uniwersytet Rzeszowski
Wydział Ekonomii

ul. M. Ćwiklińskiej 2
35 – 601 Rzeszów
tel. (017) 872–16–02
fax. (017) 872–16–09
e-mail: wekon@univ.rzeszow.pl

NIP: 813-32-38-822
REGON: 691-560-040

To whom it may concern

This is to certify that **Paul Reynolds** from Huddersfield University (UK) has been appointed a Visiting Professor at the Faculty of Economics, University of Rzeszów (Poland). The appointment is due to commence in September 2008.

691560040
UNIWERSYTET RZESZOWSKI
Wydział Ekonomii
35-601 Rzeszów, ul. Ćwiklińskiej 2
tel. (017) 872 1604, fax (017) 872 1609
tel. centr. (017) 872 1695

University of Rzeszów
Faculty of Economics
Dean

Dziekan
Wydziału Ekonomii

prof. zw. dr hab. Sylwester Makarski

APPENDIX 7:

JOINT AUTHOR DECLARATION

THE UNIVERSITY OF HUDDERSFIELD

UNIVERSITY RESEARCH COMMITTEE

JOINT AUTHORSHIP DECLARATION

PhD BY PUBLICATION

Candidate: Paul L Reynolds

Title of investigation: **PhD by Published Works**

MARKETING FOR SMALL BUSINESS: THE DEVELOPMENT OF A PRACTICAL AND CONCEPTUAL CONTRIBUTION TOWARDS A NEW PARADIGM 1986 TO 2011.

Title of publication (including citation):

C (T2/8) Reynolds PL and Day, J., (1996), 'A Semi Automatic Scheme for Monitoring the Adequacy of Short Term Sales Forecasts'. Paper presented to the 1996 INFORMS Marketing Science Conference, University of Florida, Gainesville, Florida, USA, 8 -10th March.

Please indicate candidate's contribution to publication (80%):

Signed: PL Reynolds... Date 25th June 2012
    (Candidate)

Signed: J Day...Date 25th June 2012

THE UNIVERSITY OF HUDDERSFIELD

UNIVERSITY RESEARCH COMMITTEE

JOINT AUTHORSHIP DECLARATION

## PhD BY PUBLICATION

Candidate: Paul L Reynolds

Title of investigation: **PhD by Published Works**

MARKETING FOR SMALL BUSINESS: THE DEVELOPMENT OF A PRACTICAL AND CONCEPTUAL CONTRIBUTION TOWARDS A NEW PARADIGM 1986 TO 2011.

Title of publication (including citation):

J (T2/4) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V. (2007) 'Forecasting decisions in small firms - Competition in Regional Economics - Experience/Problems/Prospects', *Journal of Finance and Economics*, Russian Institute of Economics and Finance, Siberia, No. 8, 8-16. ISBN: 978-5-9900-880-5-4.

Please indicate candidate's contribution to publication (80%):

Signed: PL Reynolds...Date 25th June 2012
        (Candidate)

Signed: J Day...Date 25th June 2012

Signed: A Kovalev...Date 25th June 2012

Signed: V Kovalev...Date 25th June 2012

THE UNIVERSITY OF HUDDERSFIELD

UNIVERSITY RESEARCH COMMITTEE

JOINT AUTHORSHIP DECLARATION

PhD BY PUBLICATION

Candidate: Paul L Reynolds

Title of investigation: **PhD by Published Works**

MARKETING FOR SMALL BUSINESS: THE DEVELOPMENT OF A PRACTICAL AND CONCEPTUAL CONTRIBUTION TOWARDS A NEW PARADIGM 1986 TO 2011.

Title of publication (including citation):

C (T3/6) Reynolds PL and Day, J., (1996), 'Understanding the Relationship between the Small and Medium Sized Enterprise (SME) and their Advisors and Counsellors'; *Paper presented to the 41st ICSB World Conference*, Stockholm, Sweden, 17/19 June.

Please indicate candidate's contribution to publication (50%):

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    (Candidate)

Signed: J Day..Date 25th June 2012

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Candidate: Paul L Reynolds

Title of investigation: **PhD by Published Works**

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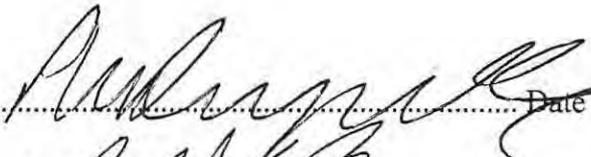
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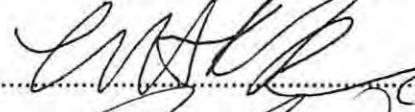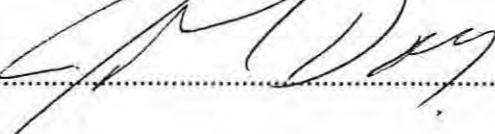
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PhDP(Decl) 2007

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Title of publication (including citation):

J (T2/1) Reynolds, P.L., Day, J. and Lancaster, G. (2001) 'Moving towards a control technique to help small firms monitor and control key marketing parameters: a survival aid ' *Management Decision*, 39 (2), pp. 113-120. ISSN 0025-1747

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C (T2/8) Reynolds PL and Day, J., (1996), 'A Semi Automatic Scheme for Monitoring the Adequacy of Short Term Sales Forecasts'. Paper presented to the 1996 INFORMS Marketing Science Conference, University of Florida, Gainesville, Florida, USA, 8 -10th March.

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Title of publication (including citation):

C (T3/7) Reynolds PL and Day J, (1999), 'Teaching entrepreneurship on marketing courses' - paper submitted to *AMA/AM/University of Illinois European Symposium on Research at the Marketing-Entrepreneurship Interface*, Nice, France, 16-17 June. ISSN: 312-996-2670.

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Title of publication (including citation):

J (T1/3) Reynolds PL, Day J and Dean A (1998), 'Relationship marketing: Its key role in entrepreneurship' - *Long Range Planning*, Vol.31, No.6, pp.828-831, Elsevier Science Ltd. ISSN: 0024-6301/98, December.

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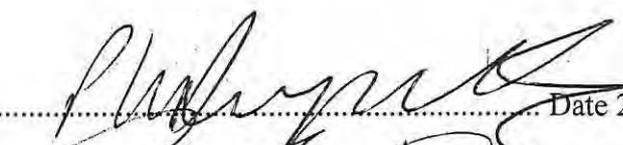
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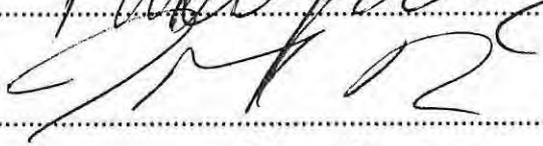
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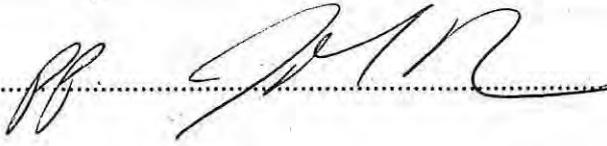
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Title of publication (including citation):

C (T1/6) Reynolds, P.L., Day, J., Kovalev, A; and Kovalev, V., (2008), 'Professional sales practice in small firms a UK and Russian comparison: An investigation into the relationship of sales competence with marketing and entrepreneurial orientations', *Research at the Marketing-Entrepreneurship Interface*, 2008 UIC Research Symposium on Marketing and Entrepreneurship, University of Illinois at Chicago, Stockholm, Sweden, June 14th-16th, ISSN: 312-996-2670.

Please indicate candidate's contribution to publication (80%):

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Signed: A Kovalev...Date 25th June 2012

Signed: V Kovalev...Date 25th June 2012

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Title of publication (including citation):

J (T2/3) Reynolds, P.L., Day, J., Kovalev, A. and Kovalev, V., (2007) 'A Bayesian approach to forecasting decisions in small firms', *The Herald Journal of Business and Economics*, Omsk State University Dostoyevsky, No. 2., 80-92. ISBN: 978-5-7779-0852-0.

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Title of publication (including citation):

J (T3/4) Reynolds, P.L. and Lancaster, G. (2007) 'Predictive strategic marketing management decisions in small firms: A possible Bayesian solution' *Management Decision*, 45 (6), pp. 1038-1057. ISSN 0025-1747.

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Title of publication (including citation):

B (T2/6) Chapter 15 'Sales Forecasting' in Reynolds PL and Lancaster, G.L. (1995), 'Marketing', Butterworth Heinemann Ltd, Oxford 1995, published in association with the Institute of Management, 16th June; ISBN 0 7506 2055 2.

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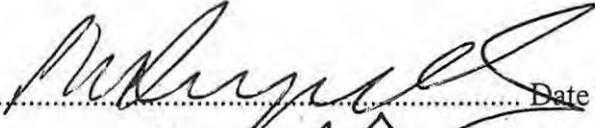
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Candidate: Paul L Reynolds

Title of investigation: **PhD by Published Works**

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Title of publication (including citation):

B (T2/5) Chapter 5 'Marketing Information Systems and Forecasting', in Reynolds PL, and Lancaster, G.A. (2003), 'Marketing', Palgrave Macmillan Publishing, text book published July, ISBN 0-333-9879-6.

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Title of publication (including citation):

J (T1/4) Reynolds PL and Lancaster GA, (1990), 'Three Food Multiple Superstores: Patronage and Attitudes: A Town Study', *British Food Journal*, Vol.92, No.6, pp.14-18.

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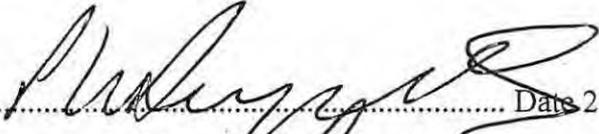
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Title of publication (including citation):

J (T1/2) Reynolds, P.L. and Lancaster, G. (2006) 'A scheme to increase profitability in entrepreneurial SMEs ' *Journal of Small Business and Enterprise Development*, 13 (3), pp. 395-410. ISSN 1462-6004.

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    (Candidate)

Signed: GA Lancaster ....Date 25th June 2012

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Candidate: PL REYNOLDS

Title of investigation: **PhD by Publication**

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Title of publication (including citation):

J (T1/5) Reynolds PL, and Brown, I. (1986), 'The Role of Trade Shows in Industrial Selling', Journal *of Sales Management*, Vol.3, No.1, pp.36-47.

Please indicate candidates contribution to publication (80%):

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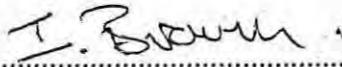
Signed ...I. Brown.............. Date ...9/7/12...
(Co Author)

APPENDIX 8:

EDITORIAL

Editorial where the author's contribution to the marketing/ entrepreneurship community is cited by Professor Gerald Hills of the Institute for Entrepreneurial Studies, University of Illinois at Chicago. Hills, G.E. (1999), Inaugural Commentary for the Journal of Research in Marketing and Entrepreneurship, Journal of Research in Marketing and Entrepreneurship: Vol.1: Fall 1999, pp. 5-7.

An Inaugural Commentary for the Journal of Research in Marketing and Entrepreneurship

Gerald E. Hills

Institute for Entrepreneurial Studies, University of Illinois at Chicago

Abstract: The Author considers the rationale for the integration of entrepreneurship and marketing and how that should better inform us all as academics and practitioners. The argument is that not only are marketing and entrepreneurship fundamental business disciplines but that they are intertwined and consistent one with the other.

Marketing and entrepreneurship largely determines the fate of entrepreneurs and SMEs around the world - their success, their growth, and their profitability. And the creation of employment by SMEs is the economic engine driving the global quality of life. It is only appropriate, therefore, that a research journal be created to encourage the generation of new knowledge at the marketing/entrepreneurship interface. Although I announced that such a Journal would be launched several years ago, it was premature. My market research at the time concerning journal purchase intention yielded only lukewarm results. It is perhaps ironic in an entrepreneurship context, however, that measuring purchase intentions, much less creating a sales forecast for "new to the world" products and ventures, are fraught with inaccuracies. But we waited for the window of opportunity to open more widely in parallel with the growth of interest in the subject. David Carson and I continued to fully support the launch of this Journal, but this first issue would not exist if not for the entrepreneurial passion, extensive work, commitment and persistence of John Day and Paul Reynolds. The marketing/entrepreneurship research community must give enormous credit to them for the creation of this journal. Now to the fundamental rationale for this new publication.

Research has shown that venture capitalists often see marketing as the most highly rated success factor in new enterprises, along with the management team and financing. The recognition and evaluation of market opportunities, combined with their strategic and tactical pursuit, are at the heart of entrepreneurial success. This is indisputable.

It has also become evident that as the largest corporations downsize and reengineer, they are seeking the entrepreneurial behaviour of successful SMEs. It was widely assumed in academia, even five years ago, that SMEs just required a simplified version of the more 'sophisticated' marketing practices used by the largest companies. Now it is apparent that marketing is often fundamentally different and more successful in SMEs than in large firms. This is partly because marketing implementation is often more important to success than planning and strategy.

What some may not consider, however, is that marketing and entrepreneurship are also an integral part of the world history that has unfolded before our eyes. Numerous countries in Latin America, Asia and Europe are for the first time fully embracing the market system. Inherent in the system is a marketing philosophy and entrepreneurial spirit that has contributed to many millions of new business births.

Marketing and entrepreneurship can each be viewed as fundamental philosophies - ways of seeing and responding to the business world. Studies have shown that these orientations are intertwined and consistent with one another. Yet they are too often not combined. Overwhelmingly, marketing books today still teach planning and analysis for large corporations rather than the dynamic process which intermixes entrepreneurs' qualitative and insightful comprehension of a marketplace with good judgment and action.

This new journal provides a refreshing and landmark change by bridging the marketing discipline with the entrepreneurship field. Marketing is treated as the externally oriented and dynamic function that it truly represents. Good marketing is inherently entrepreneurial. It is coping with uncertainty, assuming calculated risks, being proactive and offering customers attractive innovations relative to competitors. And good entrepreneurship is inherently marketing oriented. A customer focus by everyone in the enterprise is a way of life. And the implementation of marketing strategies that generate customer satisfaction is essential to survival.

'Small business', from a research perspective, is quite simply the enterprise size variable. Entrepreneurship is at least partly represented by the early stages of the business life cycle. But to begin to fully understand SMEs and entrepreneurship, we must study many related variables such as few, if any, economies of scale, severe resource constraints, a limited geographic market presence, a limited market image, little brand loyalty or market share, little specialized management expertise, decision making under even more imperfect information conditions than in larger firms, a sheer scarcity of time per major management task, and a mixture of personal, non-maximizing financial goals.

Just as a child is not a little adult, a new venture or SME is not a little Fortune 500 firm. In firms where several of these conditions exist, one could expect that the marketing function could both be viewed differently and performed differently than in larger firms.

It has been observed that, several decades ago, marketing teaching had a more entrepreneurial focus in recognition of the uncertainties inherent in coping with customer and competitive environments. But there has been very little research regarding marketing and entrepreneurship, including new ventures, since the inception of the Journal of Marketing in the 1930s. Three related bodies of literature, however, include new product research, diffusion of innovation studies, and marketing strategy writing.

The entrepreneurship field began to evolve substantially only in the 1970s, although considerable progress has been made. And then the first research meeting on marketing and entrepreneurship was held in 1982, with the first annual University of Illinois at Chicago/American Marketing Association Research Symposium on Marketing and Entrepreneurship in 1987. Thirteen volumes have appeared since then, including a major book on research opportunities for faculty and PhD students [1]. An Entrepreneurial School of Marketing Thought is evolving which could fundamentally change the way we understand marketing.

This journal will be seen as an important historical contribution because it is the first to integrate the unique knowledge that interrelates entrepreneurship and marketing into a form for use by professors and students. There will be many important perspectives, conceptualizations, and outright practical and useful methods never before presented. The very concept of entrepreneurial marketing is a major contribution to marketing and entrepreneurship thought. So it is with entrepreneurial spirit and optimism that we launch this new journal!

Gerald E. Hills, Coleman/Denton Thorne Chairholder in Entrepreneurship and Professor of Marketing, University of Illinois at Chicago.

This statement includes views expressed in several forums, including Marketing and Entrepreneurship in SMEs: An Innovative Approach, by David Carson, Stanley Cromie, Pauric McGowan and Jimmy Hill. Hemel Hempstead: Prentice Hall Europe, 1995, 0-13-150970-5.

(1) Marketing and Entrepreneurship: Research Ideas and Opportunities, Edited by G. Hills, Westport: Quorum Books, 1994, 0-89930-765-5.

APPENDIX 9:

CITATION NETWORK

Citation network and topic clusters. It can be seen from Figure 5 on page 14 that the authors work is included in an entrepreneurial marketing/ marketing – entrepreneurship network and cluster diagram. The author's work has been linked to clusters 1 and 2.

Kraus, S., Filser, M., Eggers, F., Hills, G.E. and Hultman, C.M. (2012), "The entrepreneurial marketing domain: a citation and co-citation analysis," Journal of Research in Marketing and Entrepreneurship, Vol. 14, No. 1, pp. 6-26.

The entrepreneurial marketing domain: a citation and co-citation analysis

Sascha Kraus
*University of Liechtenstein, Vaduz, Liechtenstein and
Utrecht University, Utrecht, The Netherlands*

Matthias Filser
*Montpellier Research in Management,
Group Sup de Co Montpellier Business School, Montpellier, France*

Fabian Eggers
Department of Marketing, Menlo College, Atherton, California, USA

Gerald E. Hills
Bradley University, Peoria, Illinois, USA, and

Claes M. Hultman
Swedish Business School, Örebro University, Örebro, Sweden

Abstract

Purpose – Entrepreneurial marketing (EM) is at the brink of becoming an established discipline. To advance the field further and to better guide research efforts in different sub categories, the purpose of this paper is to examine the field's intellectual structure with the help of citation and co-citation analysis.

Design/methodology/approach – This paper is based on a two-stage research design. First a citation analysis is carried out through which thematic clusters are identified. In a second step a co-citation analysis is conducted to determine the intellectual structure of EM research.

Findings – This study exposes the most influential authors and publications and emphasizes conjunctions among scholars and their findings. Results show three streams that are the foundation of EM research: theoretical foundations of management, entrepreneurship, and marketing; the research interface of marketing and entrepreneurship; SME and new venture marketing.

Research limitations/implications – The results of a bibliometric analysis are limited by the publications that have been selected as a starting point. However, through the selection criteria chosen to identify the database for analysis, the authors are confident that the results illustrate the intellectual structure of EM research in its entirety. The authors recommend that future research should be conducted in one of the three sub-fields identified in this study.

Practical implications – By laying out different research streams within EM it is hoped that future research will be guided in different directions. "Fine-tuning" of research efforts will benefit small, new, and entrepreneurial firms.

Originality/value – The analyses conducted in this paper draw a picture of the field that is based on a quantitative approach and therefore sets itself apart from other literature reviews that have a qualitative core.

Keywords Entrepreneurial marketing interface, Bibliometrics, Citation and co-citation analysis, Literature review, Marketing, Entrepreneurialism

Paper type Literature review

Introduction

Entrepreneurial marketing (EM) is an emerging field of research that is establishing itself as a substantial school of thought. It can be viewed as a subset of the entrepreneurship field, somewhat analogous to international entrepreneurship. It may also be seen as a subset of the marketing discipline that closely relates to relationship marketing. In this paper, we argue that the fusion of both leads to a unique school of thought that goes beyond either of these subsets.

As recently noted, the past decade has witnessed far greater use of the term EM, reflecting a growing sense of legitimization among EM scholars (Hills and Hultman, 2011). Although the term was used in the first EM national research meeting in 1982 (by William Brannen), widespread use has occurred only recently. This growing momentum builds upon the high quality conceptual/theoretical work at the beginning of the last decade by Shane and Venkataraman (2000).

Marketing and entrepreneurship can each be viewed as fundamental philosophies – ways of seeing and responding to the business world. Research has shown that these orientations are often combined and consistent with one another (Miles and Arnold, 1991). Research has continued on entrepreneurial orientation (EO) and market orientation (MO), and these analyses have documented the relationship of the two. Proactiveness, risk-taking, innovativeness and other dimensions have been studied in some depth, although with little specific focus on marketing. The definitional discussion by Shane and Venkataraman (2000) provided for a focus on "opportunities" and the creation of solutions to problems, yielding new products and new organizations. Since then, opportunity has been a leading definitional dimension in the entrepreneurship field.

The current definitions of marketing and entrepreneurship enjoy a largely complementary relationship. Marketing is "the activity, set of institutions and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (AMA, 2008, p. 1). Entrepreneurship is the process of "discovering, evaluating, and exploiting opportunities" (Shane and Venkataraman, 2000, p. 218). Even though there have been attempts to define the M/E interface in the past, one of the first comprehensive definitions of EM was:

> [...] a spirit, an orientation as well as a process of passionately pursuing opportunities and launching and growing ventures that create perceived customer value through relationships by employing innovativeness, creativity, selling, market immersion, networking and flexibility (Hills *et al.*, 2010, p. 6).

This definition recognizes several fundamental viewpoints (spirit, orientation, processes) as well as "passion" at the individual level. The pursuit of opportunities is central to the definition, as well as the execution in launching and growing enterprises. Consistent with the marketing literature, creating perceived customer value is part of the definitional core. And the definition concludes by addressing how: what is unique in the conduct of EM as compared to traditional marketing? Special attention is given to creativity, innovativeness, selling, relationships, networking, market immersion, and flexibility. This definition is based on several studies over the past decade, including a representative national survey in the USA that sought to identify the uniqueness of EM and its different elements (Hills and Hultman, 2006, 2007).

Despite progress, a fully developed and unique EM paradigm has not been forthcoming. A by-invitation meeting of scholars to address this need was held in 2010, achieving some progress (Hansen and Eggers, 2010). Bridging the marketing discipline with the entrepreneurship field and developing EM are two of the motivations for this article. EM is on the brink of becoming a legitimate and accepted discipline. However, when looking at other, further developed research fields, it becomes apparent that the process of establishing a field is often achieved by branching out into sub-disciplines. This was, among others, observed during the development of services marketing (Lovelock and Gummesson, 2004) and B2B marketing (Hutt and Speh, 2009). So in order to advance the field further, researchers have to come up with a clear understanding of its structure that can guide research efforts better in different sub-categories. First attempts in this direction were started at the Charleston Meeting in 2010 (Hansen and Eggers, 2010). These findings, however, lack a quantifiable, objective basis. In addition, entrepreneurship needs marketing as an integral part. Pointing out the role of marketing in entrepreneurship and developing a clearer picture of this relationship can benefit the field as a whole. Furthermore, when looking at the development of EM, it appears essential to ask how much attention has actually been given to the needs of small and new firms. By dividing the research field into different sub-sections and investigating relationships between them, we can determine to what extent EM literature has dealt with an application focus.

The primary objective of this article is to generate an overview of the structure and development of the field of EM. We provide insights concerning the topics that have been studied, the authors who have made contributions to the body of knowledge, and the articles that have provided important work at the marketing/entrepreneurship interface. We review EM's past and present state and identify some of the most influential work.

Methodology

The methods applied in the following citation and co-citation analyses are primarily quantitatively oriented bibliographic approaches to determine the structures of scientific fields of study. This is an area of research that has seen increasing application and popularity in the English-language realm since the 1980s (Roth and Gmür, 2004).

Citation and co-citation analyses are based upon the theory that citations are a valid, reliable indication of scientific interaction between researchers and research institutions. It is also assumed that citing literature within publications makes conceptual interconnections of scientific ideas visible (Garfield, 1979; Small, 1978). A citation analysis will be used in the following to help analyze the relationships between citing and cited authors and publications, as well as which cited sources are the most influential among those publications used in the analysis. This is an influence that is based on the fact that the most-cited sources provide essential findings, which are in turn influential for the scientific works of other authors.

A citation is literature mentioned in the bibliography of a publication and/or used as a source for another written work. It is an acknowledgement of a published statement's level of significance, regardless of whether the citing author is in agreement or disagreement with it (Roth and Gmür, 2004; Schäffer et al., 2006; Voeth et al., 2006). For our study, a co-citation is the citation of at least two identical sources in at least two

of the publications analyzed. It in turn generates insight into what relationships are prevalent between the cited publications and authors. From this, an attempt is made to identify the inner structure of research fields, which is the primary goal of a co-citation analysis. So to put it another way, the amount of co-citations determines the degree of content-based proximity. A co-citation as a result provides a benchmark of the content similarities of two works and/or authors. For this, a minimum amount of co-citations is necessary to ensure a valid interpretation (Schildt *et al.*, 2006). The co-citation structure found within a research field is an indicator of the importance of different research streams within this field, which has been shown with a relatively high degree of reliability in the investigations by Mullins *et al.* (1977) and McChain (1986). Co-citation networks create a basis for the determination and establishment of so-called "invisible colleges" that form networks among publications.

The key difference between a citation and co-citation analysis is that while a citation analysis only aims to identify the characteristics and influences of different authors based on the amount of times they are cited, a co-citation analysis deals with the relationships among the authors and publications themselves and, as a result, provides information on the internal structure of a research field. The two-step citation/co-citation analysis can therefore be seen as facilitating a general overview, which is then refined by a co-citation analysis as a means to generate all-encompassing information on structure and development.

Business studies have so far only seen limited use of these kinds of analyses. The few bibliometric studies that have been conducted in the management and business realms have only concentrated their investigations on either marketing (Baumgartner and Pieters, 2003; Guidry *et al.*, 2004; Hubbard *et al.*, 2005; Yang and Wu, 2007; Hubbard *et al.*, 2010) or entrepreneurship (Gregoire *et al.*, 2006; Reader and Watkins, 2006; Schildt *et al.*, 2006; Dos Santos *et al.*, 2011). There are no existing bibliometric studies that have been conducted in the field of EM. This kind of limitation has been anything but a motivation to further develop this research field. In spite of this, the incorporation of the most central, most relevant publications is critical if research progress is to be made (Roth and Gmür, 2004).

Different methods exist in citation and co-citation research that allow the establishment and development of clusters. The method applied here is a well-known construct that has been used in similar studies (Casillas and Acedo, 2007; Gmür, 2003; Gundolf and Filser, n.d.; Leonidou *et al.*, 2010; Prévot *et al.*, 2010; Schäffer *et al.*, 2006). Using this procedural approach allows research fields to be presented in a clear and detailed fashion (Roth and Gmür, 2004). Our citation and co-citation analysis was performed using the following approach:

- *Identification of key documents.* The original dataset was determined by publications containing the terms "entrepreneur*" and "marketing" in their titles.

- *Generation of the citation analysis.* The most-cited publications and/or authors (or teams of authors) was determined.

- *Dataset analysis.* The next step analyzed the dataset regarding attributes and consistency. Here, among other attributes such as the number of citations, the most-cited journals and author affiliations were discussed.

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- *Citation cluster identification.* Topic clusters were then identified based upon their content similarities. This was done by assigning the most-cited publications to thematic priorities.

- *Topic cluster retention.* The topic clusters were then searched for content similarities and interpreted. Essential criteria here included common topics and focal points found within the clusters.

- *Creation of the co-citation matrix.* A co-citation matrix was created using a pivot chart. Here, the references of each analyzed publication were listed. At the intersection points, the amount of co-citations between each source pair in the analyzed articles was determined.

- *Co-citation ranking.* A weighting of the co-citations was determined using the absolute co-citation values, which is the amount of co-citations that occurred. Along with the absolute amount of co-citations, the value of existing citations was factored into the ranking, from which the absolute co-citation value was qualified by the citation frequency of each individual source. This method is very similar to that applied by Gmür (2003) as well as Schäffer *et al.* (2006) which evaluates and ranks co-citations using a so-called "CoCite Score."

- *Co-citation network construction.* Using this weighting, the strongest co-citation relationships were determined. Only the sources that had a minimum amount of citations are displayed. Without a minimum criterion requirement, the visualizations would have shown all ($n = 6,505$) of the cited references, making readability and clarity impossible. A further argument for the establishment of a minimum criterion is how it allows an exposure of only the most-cited, most influential references.

- *Co-citation cluster identification.* Individual clusters emerged as a result of the co-citation networks. They started as segregated pairs and developed into co-citation chains and co-citation constellations, all the way into multiple interconnected groups. A cluster's configuration resulted from the relation of the co-citations between/among the publications and the amount of received citations.

- *Topic cluster interpretation.* Finally, each cluster was analyzed. Content similarities were identified among the centrally positioned and frequently co-cited sources within the cluster.

Analyses
Dataset
The citation and co-citation analysis used journal articles, monographs, and papers from edited volumes and conferences in English only. The publications had to have the term "entrepreneur*" and "marketing" in their titles in order to be considered.

A total of 211 publications were identified that fulfilled these criteria. Databases such as Google Scholar, EBSCO, and ABI Inform/ProQuest were used for the search. Of the 211 publications 131 originated from the UIC edited volumes research at the marketing/entrepreneurship interface.

Figure 1 shows the fields of study that the analyzed publications cover. It can be seen that they mostly originate from the research interface between marketing and entrepreneurship (78 percent). The noticeably lower amount of remaining publications

come from the fields of marketing (10 percent), entrepreneurship (8 percent) as well as 4 percent from the field of general management and business research.

Of the 211 publications 76 are journal articles. These are shown in Figure 2 along with their titles and the amount of times they were used. For reasons of space, only the top 13 journals have been listed; all other journals provided only one publication. It can be seen in Figure 2 that the field of entrepreneurship provides a valuable contribution to EM interface research. The prominence, reputation, and quality of the journals in which the analyzed sources were published indicate the high level of scientific importance.

Figure 3 shows the increasing amount of interest the research field of EM has seen over the years. The diagonal line highlights the growing interest in the field's findings and developments.

Nine of the 211 publications analyzed did not utilize any reference as a scientific base. These include the introductions to edited volumes, reflections, indications, as well as quantitative and qualitative studies and investigations.
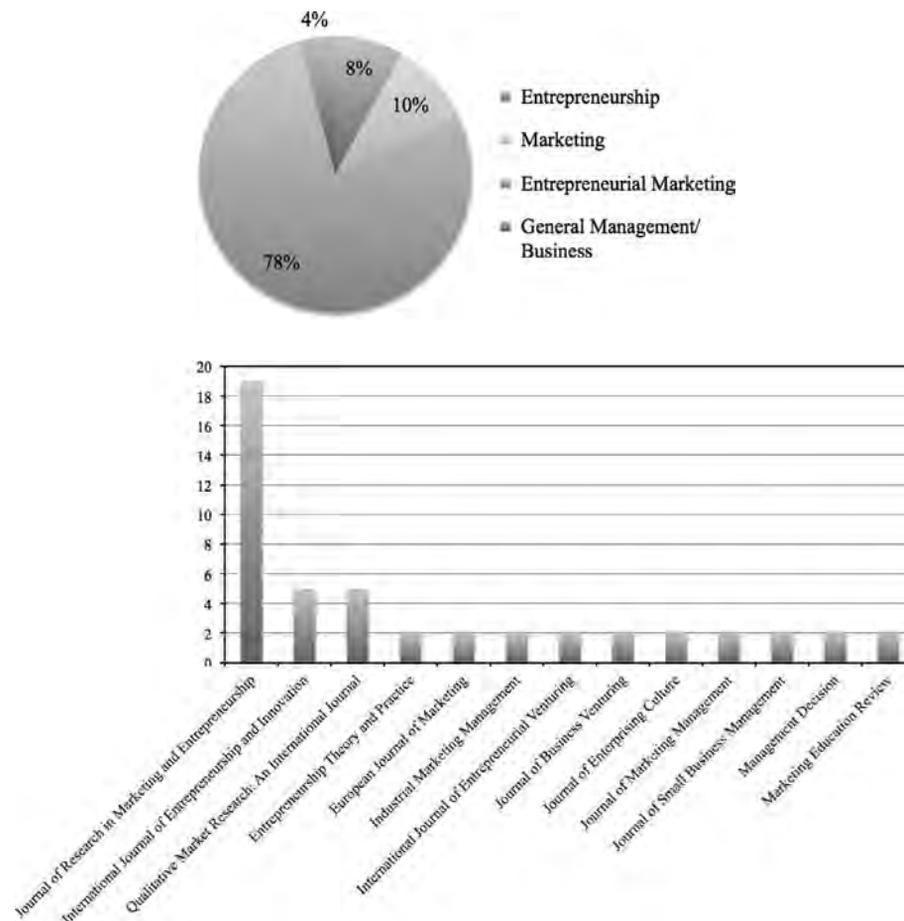
Figure 1.
Research fields in original dataset ($n = 211$)

Figure 2.
Publishing journals of contributions in original dataset ($n = 211$)

12

Figure 3.
Number of EM
publications in original
dataset ($n = 211$)
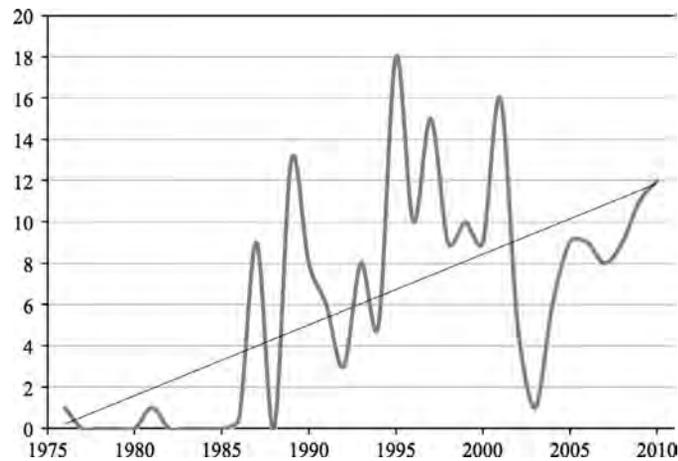
Citation analysis

It was our aim to identify the most-cited publications within our original dataset to create a basis for cluster development. The original dataset ($n = 211$) referenced 6,505 publications. The amount of citations in these publications ranges from 0 to 229.

The sources used were mainly journal articles (59 percent). Along with these, 25 percent were monographs; 11 percent edited volumes; 3 percent working papers, conference papers, or conference proceedings; while 2 percent were miscellaneous sources such as dissertations or reports.

As anticipated, the research fields of marketing, entrepreneurship, and management have a strong influence on the field of EM. This point is shown in Figure 4, where a relatively balanced amount of well-established marketing, management, and entrepreneurship journals is seen among the most-cited journals. About 40 percent
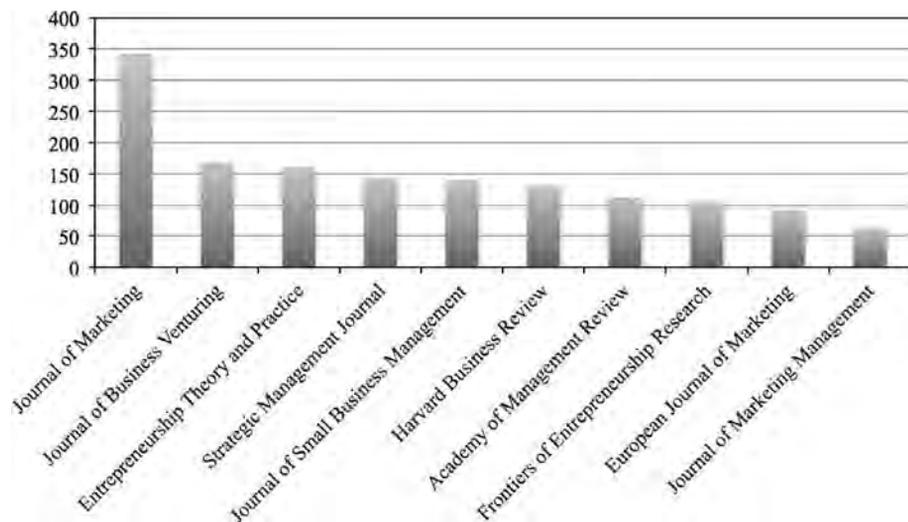

Figure 4.
Journal citations-number
and sources in cited
publications ($n = 6,505$)

of the top 10 cited journals are from the entrepreneurship realm, while 30 percent are found each in management and marketing.

As established in comparable studies, a minimum number of citations was set to determine the most influential publications. This was also done for reasons of clarity and space. A source had to have been cited at least 14 times to be regarded as influential on the field of EM (for similar approaches, see for example, Gundolf and Filser, n.d.; Leonidou *et al.*, 2010; Prévot *et al.*, 2010). While Roth and Gmür (2004) and Schäffer *et al.* (2006) set a minimum citation score for publications to be listed, Leonidou *et al.* (2010) set a top 25. Prévot *et al.* (2010) and Schäffer *et al.* (2006), as well as Gundolf and Filser (n.d.) provide a top 20, while Voeth *et al.* (2006) use a top ten list of the most-cited publications. This boils down to a list of the 19 most-cited publications (as illustrated in Table I) which

Author/year	Title	Number of citations
Carson *et al.* (1995)	Marketing and entrepreneurship in smes. an innovative approach	28
Morris and Paul (1987)	The relationship between entrepreneurship and marketing in established firms	24
Drucker (1985)	*Innovation and Entrepreneurship: Practice and Principles*	24
Kohli and Jaworski (1990)	Market orientation: the construct, research propositions, and managerial implications	24
Narver and Slater (1990)	The effect of a market orientation on business profitability	24
Covin and Slevin (1989)	Strategic management of small firms in hostle and benign environments	23
Miles and Arnold (1991)	The relationship between marketing orientation and EO	23
Hills and LaForge (1992)	Research at the marketing interface to advance entrepreneurship theory	21
Schumpeter (1934)	The theory of economic development	20
Bjerke and Hultman (2002)	EM – the growth of small firms in the new economic era	19
Morris *et al.* (2002)	*EM: A Construct for Integrating Emerging Entrepreneurship and Marketing Perspectives*	
Miller (1983)	The correlates of entrepreneurship in three types of firms	18
Kirzner (1973)	*Competitions and Entrepreneurship*	17
Hills (1984)	Market analysis and marketing in new ventures: venture capitalists perceptions	17
Miller and Friesen (1983)	Innovation in conservative and entrepreneurial firms: two models of strategic momentum	16
Hills (1987)	Marketing and entrepreneurship research issues: scholarly justification?	16
Davis *et al.* (1991)	Perceived environmental turbulence and Ist effect on selected entrepreneurship, marketing and organizational characteristics in industrial firms	15
Carson (1985)	The evolution of marketing in small firms	15
Lumpkin and Dess (1996)	Clarifying the EO construct and linking it to performance	14

Table I.
The most influential publications on the field of EM

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were published between 1934 and 2004. The definition of a top 20 was not feasible: the next citation level would have produced an odd number as well.

Finally, out of the 19 most-cited publications, as illustrated in Table I, we derived clusters on the basis of content similarities between these publications. Thus, the citation analysis produced a network of the most influential publications, which is shown in Figure 5.

Those authors whose names are not enclosed by a circle represent those publications that were used as a starting point for the analysis. Not all 211 articles are shown, since not all of them were ultimately connected with the most-cited sources. The arrows coming from these sources indicate their respective citations. Publications enclosed within a circle are the respective citations. The size of the circle with which an author/a pair of authors is surrounded indicates the amount of citations it contains.

The three clusters determined are analyzed in Table II.

As Table II indicates, Cluster 1 depicts the foundations of management, entreprenurship, and marketing. None of the publications found in Cluster 1 deal directly with the field of EM. Rather, they provide the groundwork for the discipline by exploring the concepts of EO (Covin and Slevin, 1989; Lumpkin and Dess, 1996; Miller, 1983), and marketing orientation (Narver and Slater, 1990; Kohli and Jaworski, 1990). They also deal with the basics of entrepreneurship and innovation management (Drucker, 1985; Kirzner, 1973; Miller and Friesen, 1983; Schumpeter, 1934).
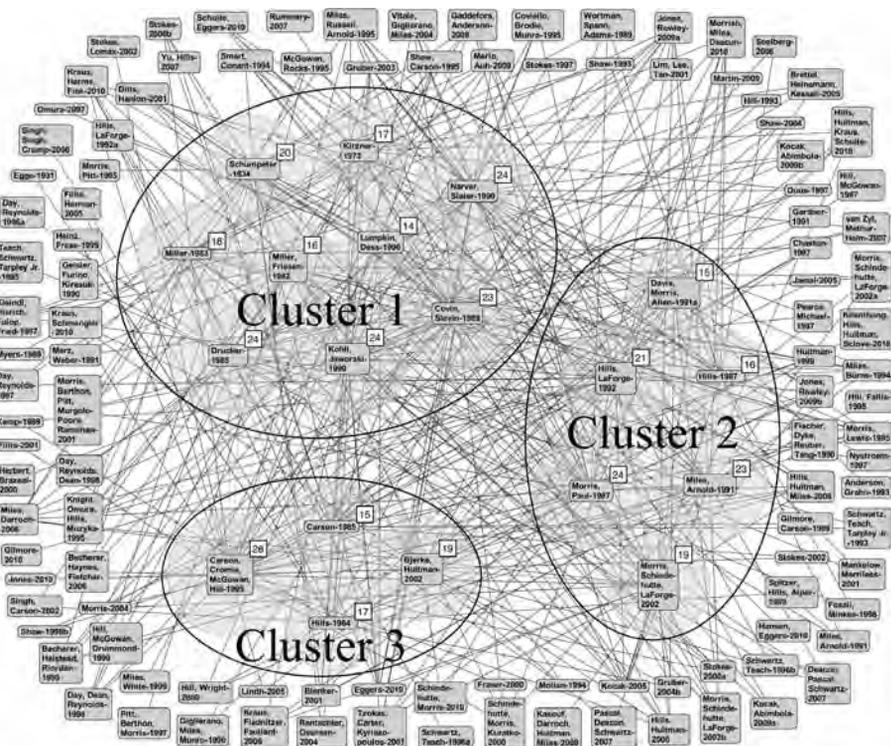
Figure 5.
Citation network and topic clusters

Author(s)	Type of publication	Purpose	Nature of study	The EM domain

Cluster 1: theoretical foundations of management, entrepreneurship, and marketing (avg. age of publications 30.8 years)

Author(s)	Type of publication	Purpose	Nature of study
Covin and Slevin (1989)	Journal article	Investigates effective strategic responses to environmental hostility among small manufacturing firms, clarifies and further develops the construct of EO	Empirical
Drucker (1985)	Monograph	Discusses the nature and interplay of entrepreneurship and innovation in organizations and society	Conceptual
Kirzner (1973)	Monograph	Discusses price theory, the theory of entrepreneurship, and the theory of competition, highlights the importance of the entrepreneur and entrepreneurial activity	Conceptual
Kohli and Jaworski (1990)	Journal article	Constructs a theoretical framework, research propositions, and managerial implications for the concept of market orientation	Conceptual
Lumpkin and Dess (1996)	Journal article	Clarifies the domain of EO and addresses its linkage to business performance	Conceptual
Miller (1983)	Journal article	Discovers the main determinants of entrepreneurship, namely proactiveness (pioneering), innovativeness, and risk taking	Empirical
Miller and Friesen (1983)	Journal article	Analyzes different forms of innovativeness in organizations: the more conservative innovation model and the highly aggressive entrepreneurial innovation approach	Empirical
Narver and Slater (1990)	Journal article	Develops a valid measure for the concept of market orientation and analyzes its effects on business performance	Empirical
Schumpeter (1934)	Monograph	Discusses (among others) the impact of innovations on economic development and the importance of the entrepreneurial function	Conceptual

Cluster 2: the EM research interface (avg. age of publications 19.3 years)

Author(s)	Type of publication	Purpose	Nature of study
Davis *et al.* (1991)	Journal article	Examines interrelationship among a turbulent business environment, corporate entrepreneurship and market orientation	Empirical
Hills (1987)	Article in conference proceedings	Calls for research efforts from the marketing discipline to the field of entrepreneurship and smaller firms and addresses research opportunities for this interface	Conceptual
Hills and LaForge (1992)	Journal article	Identifies key contingencies at the marketing and entrepreneurship interface by examining potential contributions from the marketing discipline to the field of entrepreneurship	Conceptual
Miles and Arnold (1991)	Journal article	Evaluates the interrelationship between the market orientation and the EO construct	Empirical
Morris and Paul (1987)	Journal article	Examines the relationship between EO and marketing orientation	Empirical
Morris *et al.* (2002)	Journal article	Presents EM as an integrative construct for approaching marketing activities under certain conditions	Conceptual

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(*continued*)

Table II.
Cluster configuration

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Author(s)	Type of publication	Purpose	Nature of study
Cluster 3: SME and new venture marketing (avg. age of publications 19.5 years)			
Bjerke and Hultman (2002)	Monograph	Addresses the ever increasing importance of small firms in the so-called new economic era and discusses the role and framework of EM for these types of firms	Conceptual
Carson (1985)	Journal article	Provides insights into the evolution of the marketing function during the growth of small firms	Conceptual
Carson *et al.* (1995)	Monograph	Sets out a framework for EM for SMEs by interrelating entrepreneurship, marketing, and management to one another	Textbook
Hills (1984)	Book chapter	Provides findings from an exploratory study on the application of market analysis and marketing by entrepreneurs prior to startup and during early stages of new ventures	Empirical

Table II.

As can be seen in Table II, Cluster 2 focuses on the interface of marketing and entrepreneurship. Whereas some publications discuss the similarities and differences between the two (Hills, 1987; Hills and LaForge, 1992), others investigate the interplay of market and EO's (Davis *et al.*, 1991; Miles and Arnold, 1991; Morris and Paul, 1987). Morris *et al.* (2002) conceptualize the EM construct by investigating its underlying core dimensions that are derived from both entrepreneurship and marketing disciplines.

Table II indicates that Cluster 3 is mainly application-focused and deals with marketing in SMEs and new ventures. Here, it is discussed how the marketing concept can be translated to SMEs and how these firms can run a more entrepreneurship-orientated marketing approach (Carson, 1985; Carson *et al.*, 1995; Bjerke and Hultman, 2002). Hills (1984) is particularly concerned with market research in small and new firms.

The following will verify and deepen the results with the help of a co-citation approach. After this, both the citation and co-citation results will be compared and discussed.

Co-citation analysis
Our citation analysis focused on the total number of citations and the most-cited publications within our original dataset. We created clusters on the basis of perceived similarities between these publications out of the 19 publications identified. The cluster building process in a citation analysis here revealed itself as notably subjective.

To confirm these clusters and to shed more light on the interrelationships between the publications, we now will conduct a co-citation analysis. As described above, co-citations are determined by highlighting publications that are cited together in the dataset. So in our case, we looked for pairs of publications as cited within our original dataset of 211 publications.

Based on the aim to determine the most-used co-citations, and for the sake of clarity in displaying the clusters, a minimum number of citations as well as co-citations were defined for each analyzed timeframe. Since three timeframes are analyzed (1987-2010; 1987-1999; 2000-2010) within the co-citation analysis, there is the issue that the partial datasets vary in size. To make the results convergent, the minimum number of citations and co-citations in regard to the respective timeframe were adapted and set at a comparable level.

In Figure 6, the squares on the upper right corner of the sources highlight the number of citations they contain. The size of the circle that encloses the sources is indicative of the amount of citations found within them. The small numbers seen on the grey lines connecting two authors or author teams indicate the number of co-citations, i.e. how often these two publications have been cited together.

Figure 6 shows co-citation clusters that resulted from the investigation of the time interval between 1987 and 2010.

The investigation produced the following three clusters:

- *Cluster 1.* Foundations in entrepreneurship (Covin and Slevin, 1989; Miller, 1983) and the marketing/entrepreneurship interface (Miles and Arnold, 1991; Morris and Paul, 1987), average age 23.5 years. By comparing this cluster with our citation analysis, the four publications identified here represent a hybrid between Cluster 1 and Cluster 2 as found in the citation analysis.

- *Cluster 2.* The marketing/entrepreneurship interface (Morris *et al.*, 2002) and new/small firm marketing (Bjerke and Hultman, 2002), average age nine years. This cluster represents a hybrid between Cluster 2 and Cluster 3 as found in the citation analysis.

- *Cluster 3.* Market orientation (Kohli and Jaworski, 1990; Narver and Slater, 1990), average age 21 years. This cluster focuses on a sub-topic of Cluster 1 as found in our citation analysis.

Although both the citation and co-citation analysis come up with the same number of clusters, it can be seen that the cluster configurations show differences. As seen above, the co-citation analysis tends to produce "hybrids", i.e. clusters that blend different disciplines. Cluster 1 in the co-citation network is a combination of publications dealing with entrepreneurship and, in particular, with the concept of EO and publications that investigate the interplay of entrepreneurial and marketing orientations. This is however

The EM domain

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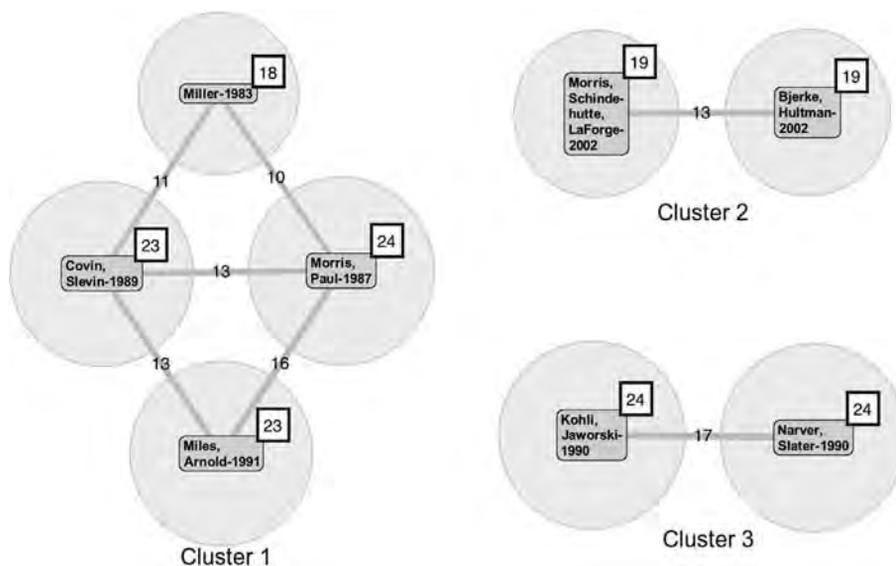
Figure 6.
Co-citation clusters
1987-2010 (citations
≥ = 18, co-citations
≥ = 10)

not very surprising. In order to highlight the differences between EO and MO it is logical to develop a foundation by also discussing the underlying dimension of EO. What is surprising is that market orientation as discussed by Narver and Slater (1990) and Kohli and Jaworksi (1990) is not part of this cluster, which is instead constituted in Cluster 3.

Our citation analysis results show that Cluster 2 is a hybrid of a publication that focuses on the marketing/entrepreneurship interface (Morris *et al.*, 2002) and a publication on new/small firm marketing (Bjerke and Hultman, 2002). This is plausible, since a discussion of how the marketing concept can be applied to small and new firms demands a debate on how the two underlying disciplines work together. Further, it shows proximity between these two publications that was not discovered in our initial citation analysis. In fact, despite analyzing the interplay of marketing and entrepreneurship, Morris *et al.* (2002) also provide several insights on how to execute the concept of EM, moving the paper closer to Bjerke and Hultman (2002).

So the differences between citation and co-citation analysis can be interpreted from two different angles. First, by covering a topic such as EM that is grounded in different research disciplines, it is not surprising that co-citations show clusters of publications that cover this diversity of thought. Second, a co-citation analysis can also provide additional insights into similarities of publications that are hard to detect in a more simplistic citation analysis.

Before we focus on a more in-depth comparison and discussion, we aim to shed more light on the development of the research field by dividing the total time span of our analysis into two time periods: a co-citation analysis for the period from 1987 to 1999 and another analysis focusing on 2000-2010.

Figure 7 shows the co-citation clusters that resulted from the investigation of the time interval between 1987 and 1999, which produced the following results:

- *Cluster 1*. Foundations of management and entrepreneurship (Drucker, 1985; Schumpeter, 1934), average age 51.5 years. This cluster represents a subset of Cluster 1 as found in the citation analysis.

- *Cluster 2*. Foundations in entrepreneurship (Covin and Slevin, 1989; Miller, 1983) and the marketing/entrepreneurship interface (Hills, 1987; Morris and Paul, 1987), average age 24.3 years. This cluster represents a hybrid between Cluster 1 and Cluster 2 as found in the citation analysis.


Figure 7.
Co-citation clusters
1987-1999 (citations
$\geq = 8$, co-citations
$\geq = 5$)
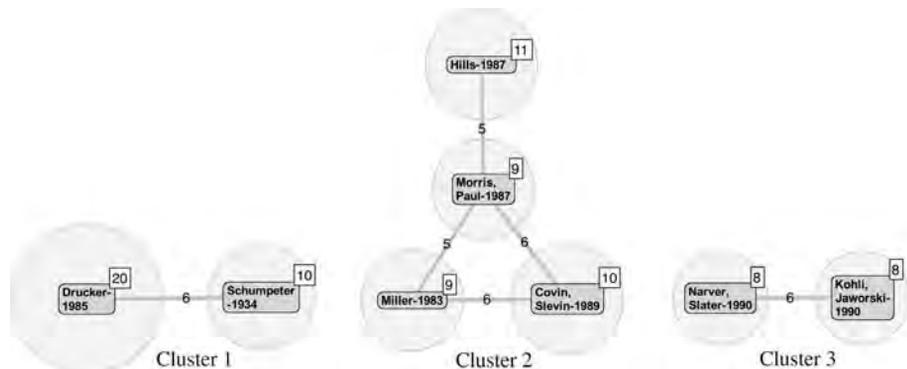
- *Cluster 3*. Market orientation (Kohli and Jaworski, 1990; Narver and Slater, 1990), average age 21 years. This cluster focuses on a sub-topic of Cluster 1 as found in our citation analysis.

This time span is dominated by publications laying out the groundwork for the research field of EM. Cluster 1 consists of two classic publications, which have constituted the groundwork for the disciplines of entrepreneurship and innovation management. Cluster 2 has similarities with Cluster 1 out of the time span 1987-2010. However, there are differences in cluster layout, and Hills (1987) replaces Miles and Arnold (1991). We find the same with Cluster 3, i.e. "market orientation", as in the co-citation analysis covering 1987-2010. Interestingly, SME and new venture marketing is not covered in the time span 1987-1999.

Figure 8 shows the co-citation clusters that emerged from the analysis of the time interval between 2000 and 2010:

- *Cluster 1*. Given the focus of a different time span and the change in the minimum amount of citations in comparison with our citation analysis, a new publication appears. Collinson and Shaw (2001) focus on the development of EM and on the marketing/entrepreneurship interface. Cluster 1 represents a hybrid between small and new venture marketing (Bjerke and Hultman, 2002; Carson *et al.*, 1995) and the marketing/entrepreneurship interface (Collinson and Shaw, 2001; Morris *et al.*, 2002), with an average age of 11 years. This cluster represents a hybrid between Cluster 2 and Cluster 3 as found in the citation analysis.

- *Cluster 2*. Foundations in entrepreneurship (Covin and Slevin, 1989) and the marketing/entrepreneurship interface (Miles and Arnold, 1991; Morris and Paul, 1987), average age 22 years. This cluster represents a hybrid between cluster 1 and Cluster 2 as found in the citation analysis.

- *Cluster 3*. Market orientation (Kohli and Jaworski, 1990; Narver and Slater, 1990), average age 21 years. This cluster focuses on a subset of Cluster 1 as found in our citation analysis.

The main difference between the two time intervals can be seen in Cluster 1. Here, SME and new venture marketing comes into play, a topic that was not found between 1987
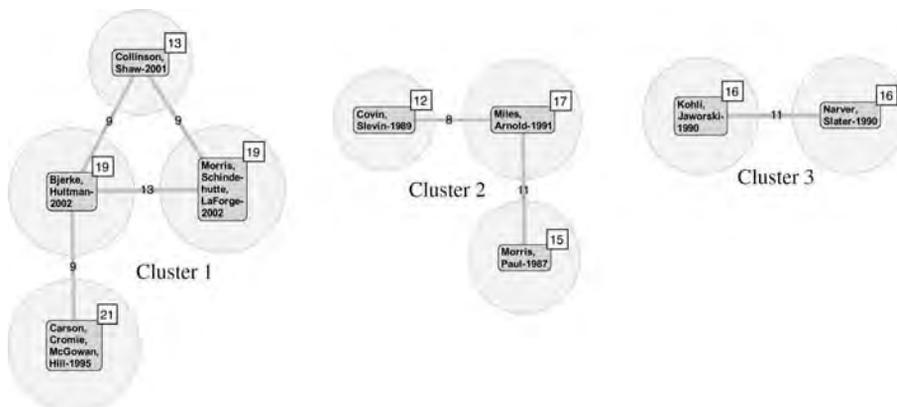

Figure 8.
Co-citation clusters
2000-2010 (citations
$\geq\, = 12$, co-citations
$\geq\, = 8$)

and 1999. Cluster 2 has similarities with Cluster 2 (1987-1999) and Cluster 1 (1987-2010), whereas Cluster 3 is identical throughout all analyses.

Discussion

Our article revealed different schools of thought within the field of EM. The citation analysis discovered three research streams that constitute the discipline of EM. Apparently, the field:

(1) is grounded on fundamental findings in management research, entrepreneurship, and marketing;

(2) legitimizes itself by investigating the marketing/entrepreneurship interface; and

(3) has come up with approaches of how to execute marketing within SMEs and new ventures.

Our co-citation analysis basically confirmed these schools of thought and, even more importantly, shed additional light on research patterns within the EM discipline. This became particularly apparent by dividing the total investigation period (1987-2010) into two time intervals (1987-1999 and 2000-2010). The result of the analysis shows that SME and new venture marketing was not present in the earlier time interval but appeared later (2000-2010). It seems that whereas the main focus was previously to constitute the field by exploring its foundations and the interface between marketing and entrepreneurship, the interest then shifted slightly towards applicability, i.e. translating the findings into marketing approaches for small and new ventures. With a research focus on instrumental and tactical implications in the later time interval, we see indications that the field is developing towards a more mature stage.

Further, throughout the co-citation analyses we see a pattern where entrepreneurship publications are cited together with interface literature, whereas marketing literature is handled independently. Or in other words: throughout all co-citation analyses we found a similar, separate market orientation cluster, represented by Narver and Slater (1990) and Kohli and Jaworski (1990). In our citation analysis we interpreted these two articles as part of the "foundations" cluster together with entrepreneurship and management publications. So the question arises of why this cluster appears as a separate entity in our co-citation analyses. An explanation for the close connection between entrepreneurship and interface research could be seen in the finding that the field of EM was always dominated by entrepreneurship literature (Hansen and Eggers, 2010). Also, as shown above, the majority of EM publications in our original dataset were published in entrepreneurship and not in marketing journals (Figure 2). In the words of Hansen and Eggers (2010), there is an abundance of publications dealing with "marketing in entrepreneurship" and only very few contributions covering "entrepreneurship in marketing." Whereas the former is about how marketing should be adapted to small, entrepreneurial ventures, the latter deals with more entrepreneurial ways of doing marketing.

In terms of the implications that can be derived out of our findings, we recommend several avenues. Our paper shows SME and new venture marketing as a stream within the EM field and, according to our co-citation analysis, that this sub-topic has gained more importance over time. So we recommend that the discipline should continue its

path of moving towards this application-oriented focus where marketing approaches are tailored to the special needs of new and small firms. In other words, it is recommended to further investigate how small and new ventures can apply marketing findings to increase their chances of success. However, when taking a closer look, most papers do not distinguish enough between small and new, thereby lacking the point that a small, new, entrepreneurial venture might have completely different marketing needs than a small, established, traditional firm. Also, there are entrepreneurial but established larger firms that, again, might need a different approach. Within the realm of EM, a clear distinction between firm types has never been the focus. Further expanding on an application focus by developing approaches for different firm types is therefore necessary.

Further, the co-citation analysis revealed that EM is mainly influenced by entrepreneurship literature with a disconnect between MO and the rest of the field. In fact, EM to a large extent still refers to the classic marketing approach (Kotler and Keller, 2009) and has paid little attention to more recent developments in the marketing literature such as for instance the service dominant logic (Kasouf *et al.*, 2008; Uslay and Teach, 2010), online marketing (Epps *et al.*, 2008), and the related trends of Guerilla, Buzz, and Viral Marketing as discussed in Kraus *et al.* (2010). It will be increasingly important to investigate the ways of how recent developments in the marketing literature can be used to help small and new firms.

Also, we recommend more emphasis on researching how entrepreneurship can contribute to marketing. Whereas we identified a lot of publications dealing with "marketing in entrepreneurship" it seems to be reasonable to investigate "entrepreneurship in marketing." That is, how can findings derived within the entrepreneurship discipline be used to make marketing more entrepreneurial? Among others, it might be an idea to apply the concept of opportunity evaluation and exploitation (Ardichvili *et al.*, 2003) to marketing. The latest development in EM is the consideration of effectuation theory (Sarasvathy, 2001). Whereas marketing theory and practice still assume the principles and tools of causal reasoning (one begins with a specific goal and a given set of means for reaching it), they also interpret effectual reasoning of the future as fundamentally unpredictable, yet controllable through human action (one starts with only a set of means; in the process of deploying them, goals gradually emerge). Thus, causal reasoning is the exact inverse of the effectual reasoning that drives entrepreneurial success. EM indicates that successful marketing can be better created along paths other than those suggested within traditional marketing literature. These are implications that should be highlighted in marketing practice, and are especially important within marketing education, a field that is strongly dominated by causal reasoning.

Taking a closer look at the interface cluster, it is clear that no further research is needed in this regard. The question if, why, and how entrepreneurship and marketing work together has been answered. As already indicated in our co-citation analysis, interface research should now instead serve as basis for further developing application-focused approaches for different kinds of entrepreneurial firms. Publications that serve as theoretical foundations are also needed. Here, it is advised to continuously look for additional theoretical insights that can be used to develop the discipline. Single sector studies as proposed by Schwartz and Teach (2000) could also be valuable in this regard.

Conclusion

The approach applied in this paper comes with some limitations. The literature review could be criticized for its limited number of publications, which might cause potential bias when concluding on the current body of knowledge. However, by having identified the "prevailing and influential thoughts" within the EM research fields, we developed a literature base that can be believed to have impacted the way other studies are being conducted. This is in essence the power of a citation and co-citation analysis. Therefore, while discussing findings and thoughts among these publications, the review does not pretend to have included all findings on specific research areas. Instead it attempts to portray the central structure or foundation of EM on the basis of this set of the most influential publications. Furthermore, the set of a minimum level of obtained citations is seen as a limitation since not all citations are illustrated and elucidated concerning their relation to the other references. They are also not classified regarding their impact on the field of EM (in our analyses: the 6,505 cited references). Examples of publications not included in the analyses are a vast number of studies on SME marketing between 1987 and 1999. Much of what was published early within EM had a focus such firms but obviously made few lasting impressions in terms of citations. However, it is now clear that this stream did in fact continue to grow and has now become a strong body of knowledge. In the future, EM researchers may extend their research not only to SMEs and new ventures but also to established and mature firms. Citation and co-citation analyses capture the number of citations; they are therefore quantitative and not qualitative approaches. This makes it impossible to generate any statements concerning the direction of the impact that publications have made. A more qualitative view is for example taken by Kraus *et al.* (2010) and Hills *et al.* (2010).

Nevertheless, the aim of this study was to identify, analyze, and discuss the most-cited references regarding their impact on the development of the field of EM, and their relation among each other. Additionally, it has to be considered that older publications tend to be cited more often regarding the effect of duration. At the same time, it should be mentioned that citation and co-citation analyses are challenged by their ability (or lack thereof) to capture newer marketing developments. After all, it takes some time to establish a certain thought with a number of citations. Although there are methods trying to solve this limitation, it does not seem viable to predict future citations, as this does not (yet) reflect an established fact.

As an emerging new field of research, EM will have to earn recognition and legitimization among researchers. From this perspective, these bibliographic analyses supplement and underline findings presented in the previously cited *JSBM* article (Hills *et al.*, 2008) on the evolution of EM. Here, it was stated "the results clearly indicate that entrepreneurs engage in marketing in ways that deviate from administratively focused marketing" (p. 109). The body of knowledge in EM now includes a structure of the major contributions and publications in the field. This will be a tool that allows us to not only continue along the established routes, but understand the present research better, and carve out new research directions in the future as well. EM is now taking an important step forward to become an established stream of research within both marketing and entrepreneurship.

Another important conclusion is the complex heritage of EM that rests not only on foundations of both marketing and entrepreneurship, but general management studies

as well. It will be a challenge for future research to further explore and exploit the full potential of this complex heritage.

Along with its shedding new light on the evolution of EM, an important finding from our study is that a great deal of previous work has been published in entrepreneurship outlets. With this in mind, we can perhaps hope the marketing discipline will be more open towards new influences coming from entrepreneurship. More than 15 years ago a discussion was initiated about the problems such as "marketing in mid-life crises" within the mature marketing discipline, see for example Brady and Davis (1993) and Brown (1995). This discussion is still both vital and relevant, and will hopefully trigger EM researchers to identify potential contributions from entrepreneurship together with marketing. Optimally speaking, the coming three decades of research in the field will be disseminated in influential entrepreneurship journals as well as the most notable marketing journals.

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The EM domain

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