Chapter One: <u>Background to and Need for the Study</u>

The new environmental reality affecting the organisations of today and the future, regardless of the sectors, in which they operate, is increasingly being characterised by continuous and, often, unpredictable change. Although environmental uncertainty triggered by change is not a new phenomenon, however, Zhang and Sharifi (2000) point out that today's change is taking place at a much faster speed than ever. A number of terms have been used interchangeably to refer to such environmental conditions, examples of which include environmental turbulence, uncertainty, volatility, unpredictability, and dynamism.

Such a dynamically changing environment has highlighted the absolute necessity and need for organisations affected by it to adapt and respond flexibly and in an agile manner to the changing requirements, pressures and demands emanating from a variety of stakeholders and/or environmental parties, which have vested interests in the operation and performance of the organisation. In this sense, an organisation's ability to quickly adapt and respond to such changing conditions "*is considered to be one of the most critical capabilities for long-term success and growth*" (Bititci et al., 1999, page 190).

As a result, there has never been a stronger need for new thinking in the fields of management, organisation theory, strategic management, manufacturing and service operations management, among others, which would replace the outmoded, traditional bureaucratic organisation paradigm, towards realising the desired agile organisation state, reflected in the organisational agility paradigm.

Zairi and Youssef (1998), in this context, emphasise the fact that the 1990s have witnessed a change in the competitiveness formula, in that timeliness, responsiveness to customer needs, as well as agility have become the main ingredients of the competitiveness equation. Such recent ingredients build on the need for quality and cost effectiveness as necessities for successful competitiveness. However, they are not alone enough to sustain such competitiveness in today's fast changing and dynamic environment. Timeliness, responsiveness, and agility are required to survive, advance and thrive in such an environment. Ahmed et al. (1996) provide further support to this

view, by indicating that the competitive reality of the 1990s is of a high degree of *complexity and dynamism* as such that it does not *merely* rely on old competitive concerns as quality and low costs. They express their belief that the route to competitive advantage is increasingly likely to be based upon time.

Stalk Jr. and Hout (1990) strongly emphasise the importance of and the need for a new "time-driven paradigm of achieving competitive advantage", when they argue that the innovation in competitive strategy of the latter twentieth century is time-based competition. They indicate that "*demanding executives at aggressive companies are changing their measures of performance from:*

- *competitive costs and quality, to*
- *competitive costs, quality and responsiveness*" (Stalk Jr. and Hout, 1990, page 1).

This signifies the transition from:

- The traditional pattern of corporate success, in that competitive advantage is best achieved by providing the most value for the lowest cost, to
- The new pattern, which is based on providing the most value for the lowest cost in the *least amount of time*.

Such a transition, according to Stalk Jr. and Hout (1990), represents the dawn of a new competitive age based on *time compression* and *responsiveness*. In this context, Burgess et al. (1998) have indicated that lately, some authors have advocated that time, as manifested in aspects such as time to introduce new products and services to the market, has become the dominant competitive capability.

Zairi (1996) has also emphasised the importance of the "time" dimension in building competitive advantage, when he indicated that building a competitive advantage does not solely depend on an ability to deliver uniqueness and excellence in products and services (*Quality*). It also requires a more important capability, which is that of *time compression*. In this context, Zairi (1996) illustrates the importance of time in today's competitive global environment, when he stresses that being first and good matters more to quality than being last and best.

Building on such an increasingly growing importance of establishing the ability to respond and thrive in a rapidly changing environment, and in its 1999 "State of the Art / Practice Report", the *Human Resource Planning Society* conducted a longitudinal survey that probed four basic topics deemed necessary by the society in providing them with timely information helpful in preparing appropriate human resource strategies. Wright et al. (1999), in the vein of presenting their summary of the major findings emanating from this study, describe the general tone of such findings to be "*one of urgency emanating from the intersection of several underlying themes: the increasing fierceness of competition, the rapid and unrelenting pace of change, the imperatives of marketplace and thus organisational agility, and the corresponding need to buck prevailing trends by attracting and, especially, retaining and capturing the commitment of world-class talent*" (Wright et al., 1999, p. 2).

In particular, they indicate that one of the main findings stresses the point that the major challenges affecting organisations in the years ahead will emanate from the rapid and unrelenting pace of changes in the external environment and, the often, unpredictable ways in which such changes can affect organisations.

Under such increasingly dynamic and unpredictable circumstances, Wright et al. (1999) indicate that the bureaucratic organisational paradigm clearly suffers in guiding organisations operating in turbulent and fluid environments characterised by constant change. A solution recognised by the study is to work toward developing a new guiding paradigm: *the agile organisation*. Such a call for a shift in management philosophy and thinking towards embracing the notion of organisational agility has also been strongly supported by Shafer et al. (2001). They clearly state that: "*Constant marketplace discontinuities, coupled with an accelerating pace of changes, are making a mockery of traditional business and organisational models, so the search is on for new, more agile paradigms*" (Shafer et al., 2001, page 197).

Salauroo and Burnes (1998) have also echoed the need to search for more agile and adaptive organisational structures, in order to respond effectively to the emerging environmental reality. The change in the dynamics of the environment, from being characterised by relatively stable and predictable conditions, to witnessing unprecedented and unpredictable changes, has necessitated a corresponding change in

the structures of organisations affected by this situation, as well as their practices and ways of working. As a result, they highlight that: "*The main argument is that structures and practices which may have been appropriate to the relatively stable environment of the 1960s and 1970s were no longer suitable for organisations operating in the dynamic and unpredictable environment of the 1990s*" (Salauroo and Burnes, 1998, page 462).

In this context, it is argued that environments affecting healthcare organisations are experiencing a similar pace of change. The evidence emanating from literature concerned with health services management research in The United Kingdom and The United States, supports the contention that today's healthcare organisations are operating in increasingly changing environments. Such change is significantly impacting the way in which healthcare organisations are managed and organised, and the challenge has become more of how such organisations can respond to the shifting environmental conditions.

The market reforms, which have been introduced by consecutive Conservative Governments, particularly the "internal market" reforms in the early 1990s, in addition to changes introduced by The New Labour Government through the publication of The Department of Health (1997) White Paper: "*The New NHS: Modern, Dependable*", and The Department of Health (2000) White Paper: "*The NHS Plan: A Plan for investment. A Plan for reform*", have created new environmental conditions that have widespread and all-encompassing changing effects on the way, in which healthcare organisations operate within the NHS.

As far as healthcare organisations are concerned, Salauroo and Burnes (1998) indicate that the various NHS reforms introduced by successive governments have moved the NHS and its organisations from a relatively stable to a relatively dynamic environment. They quote Savage (1993) as indicating that since the 1980s, the NHS has experienced successive waves of increasingly contentious change, the most radical of which perhaps was aimed at creating an internal market within the NHS. Such an internal market resulted from the separation of purchasers of healthcare, such as Primary Care Trusts for example, and providers of healthcare, such as NHS Hospital Trusts. This has resulted in the creation of *divergence* rather than

convergence in the NHS, which often puts pressures upon organisations operating under such conditions to deal and cope effectively with the changing environmental requirements.

In its publication of The Department of Health (2000) White Paper: "*The NHS Plan: A Plan for Investment. A Plan for Reform*", the New Labour Government has inextricably linked the promise of investing more resources into the NHS with the *need for managerial and organisational reform in the NHS*. Linking the injection of more resources into the NHS (A Plan for Investment) with the need for managerial and organisational reform (A Plan for Reform) emphasises the need for effectively managing resources in the best manner possible, which enables adaptation and response to the requirements, pressures and demands of the environment. This implicitly stresses the vital role and contribution of effective management of the organisation and of its resources and capabilities in enabling healthcare organisations operating in the NHS, to proactively and successfully respond to, and even thrive in, an environment of changing expectations and requirements.

One of the tenets of the "market-based orthodoxy" of healthcare reform earlier instigated by consecutive Conservative Governments, as indicated by Collins et al. (1994), is the emphasis that users of public services should be viewed not so much as citizens but as consumers and customers, who have requirements and expectations, to which organisations providing public services such as NHS Trusts must be responsive and attentive. This clearly places increasing emphasis on the need to be responsive and flexible in adapting to as well as dealing with the various requirements, expectations and demands placed on providers of healthcare. In addition, the gist of the recent Governmental initiatives, plans and key targets for the NHS have focused on responsiveness, speed, as well as flexibility in delivering healthcare, thus adding increased pressures on NHS Hospital Trusts to effectively deal with change.

In this way, the different governmental reform initiatives of the NHS [The Department of Health White Paper (1989): "*Working for Patients*"; The Department of Health (1997) White Paper: "*The New NHS: Modern. Dependable*"; The Department of Health (2000) White Paper: "*The NHS Plan: A Plan for Investment. A Plan for Reform*"] have arguably sought to advocate the principle that the health

service should be a responsive as well as an agile one, which is sensitive to the needs, requirements and expectations of patients. In the light of such an increasingly changing and demanding operating environment affecting NHS Trusts, the importance of maintaining viability and the ability to thrive, is particularly highlighted.

Based on such a growing need for organisational agility, the various studies that have addressed this concept were reviewed in Chapter Three and, as a result, three major, inter-related themes were concluded as characterising the crux of such literature. These themes are mainly represented by the following:

- The first theme is concerned with the basic conceptualisation and perception of agility, which is reflected in various definitions of the concept; the majority of which having been developed to suit organisations with mainly manufacturing backgrounds. However, the extent to which such particular definitions of agility can be considered as suitable or relevant to organisations operating in different contexts is argued here to be contingent upon the type of organisation, to which the concept of agility is to be introduced. This is usually determined by the nature of the sector, in which such an organisation operates. Emanating from this is the argument highlighted in Chapter Seven, in that those conceptualisations of agility, which might be suitable to manufacturing organisations, are unlikely to be so to organisations operating in non-manufacturing contexts, particularly healthcare ones.

- The second theme is concerned with the need for agility, which is primarily driven by the dynamic and unpredictable nature of changes characterising today's environment affecting the activities and operations of organisations in various sectors.

- Building on such an intensifying need for agility, the third theme in the agility literature is concerned with examining those factors or capabilities, which may well underpin an organisation's ability to attain agility.

The various studies conducted within the realms of each of these themes had not reached a conclusive and empirically rigorous basis. Nevertheless, such themes can well constitute the starting points for any researcher interested to further explore the main issues related to the concept of agility, in an effort designed to contribute to new knowledge and better understanding of the concept.

In addition, as highlighted in Chapter Seven outlining the contribution of this research, the agility literature is characterised by its overwhelming emphasis on investigating the application of the concept in manufacturing organisations. Few studies addressing agility have been conducted in service organisations, particularly in healthcare, with virtually no previous study examining organisational agility in the National Health Service. In this way, the usefulness and practicality of this concept can arguably be enhanced, through investigating it in various contexts / sectors, of which healthcare was particularly chosen in this research to be the context for exploring this concept of organisational agility, due to the important expected benefits of facilitating agility in the NHS, as earlier reported. Therefore, there is a need for research to be conducted to examine and explore agility in contexts other than manufacturing, especially in services and particularly healthcare services sector.

Based on the aforementioned discussion highlighting the need for organisational agility, as well as the useful exploration of the application of such a concept and desired organisational state, in the NHS, two NHS Hospital Trusts have been designated as case study organisations for the purposes of this research: **Trust A**, which is a *one star, lower performing Trust*, and **Trust B**, which is a *three star, higher performing Trust*, according to the NHS Performance Ratings published by the Commission for Health Improvement (CHI) (2003). The choice of these two differently performing Trusts provides an interesting opportunity for exploring whether there is a corresponding difference between these Trusts, in terms of the main concepts and variables concerning organisational agility being addressed in this research, and are covered by its main objectives. This is considered in its own right a major contribution of this study.

Therefore, based on the aforementioned themes characterising the nature of the literature discussing agility, as well as the choice of healthcare as the context of study, it was decided to formulate the major aims of the research so as to reflect such themes and context. **Based on this, the main objectives are: -**

1. To explore and identify how the concept of organisational agility is understood and perceived in the NHS Trusts.

2. To explore and identify the perceived need for organisational agility in the NHS Trusts, as essentially being driven by the nature of the environment affecting such Trusts.

3. To explore and identify the capabilities that underpin organisational agility in the NHS Trusts.

Building on these objectives, the rationale of **Chapter Two** emanates from the new environmental reality characterised by continuous and often unpredictable change. Such a reality requires from organisations to build the ability to sustain their responsiveness and agility, in order to adapt and respond to changing requirements, expectations and demands emanating from a variety of stakeholders affecting their operation and performance and, thus, thrive. Therefore, Chapter Two discusses recent strategy views addressing how organisations can thrive in a continually changing environment. These views, which are primarily concerned with the attainment of competitive advantage, have witnessed a shift from market-based approaches to strategy development, to resource-based ones, culminating into the dynamic capabilities approach.

The suitability and relevance of these views of strategy are assessed within the context of healthcare organisations, in general, and the National Health Service (NHS) organisations represented by Hospital Trusts, in particular. Such an assessment and evaluation has the purpose of identifying which of these two approaches to strategy are more suited to enable and assist healthcare organisations to better respond and adapt to the new dynamic environmental reality affecting them, in an effort designed to attain organisational agility.

Chapter Three particularly discusses the concept of organisational agility, which is considered an emerging dynamic paradigm to organisation and management that is arguably more suited to guide organisations in today's turbulent environment characterised by continual change. In this vein, Chapter Three charts the development of the concept of agility, beginning with discussing its emergence as a manufacturing paradigm that has been proposed as a means of enabling manufacturing organisations to maintain their competitive advantages as they approach the 21st century. The chapter then seeks to broaden the applicability of agility to service organisations, through highlighting a generic conceptualisation of agility that emphasises the importance of thriving in a continually changing environment. This can be facilitated through enablers, which mainly revolve around four key concepts: organising to manage change and uncertainty, enriching the customer, forming co-operative alliances and partnerships, and leveraging the impact of people and information.

Chapter Four explains the choices made concerning the research philosophy, design, as well as methodology employed to seek to fulfil the main objectives of the study.

Chapter Five presents and discusses the analysis of the primary data collected from the case NHS Trusts, with the purpose of fulfilling the first and second research objectives, which are concerned with: exploring and identifying the perception and understanding of organisational agility on the part of the NHS Trusts, as well as identifying their need for agility in the light of the degree of turbulence in the environment affecting such Trusts, respectively.

Chapter Six, in turn, addresses the third research objective, in that it presents the operationalisation and measurement process of the "agility-enabling" capabilities undertaken by this research, as well as the analysis and discussion of the primary data collected from the Trusts addressing the extent of their *practice / existence*, and the *perceived importance* of such capabilities in enabling the Trusts to better respond and adapt to continuous and unpredictable change.

Finally, **Chapter Seven** presents the major findings and conclusions, contribution and limitations of the study, as well as areas for further research.

Chapter Two

The Effect of the Dynamic Environment on an Organisation's Ability to Thrive, with a Focus on Healthcare

2.1 Introduction

The new environmental reality affecting the operation and performance of organisations is being characterised by continuous and often unpredictable change. As a result, many calls have been voiced for organisations to build the ability to respond and adapt to changing and uncertain environmental conditions, in order to sustain their competitiveness and, thus, thrive. In this context, strategy has often been related to building and sustaining the competitiveness and effective performance of the organisation, in response to the conditions of its environment. However, the aforementioned change in the dynamics of the environment has affected the way in which strategy is developed in order to enable organisations to effectively navigate in turbulent operating conditions. This led to the environment occupying a pivotal position within the conversation of the strategic management literature, which has been exemplified in the debate concerning the two main views informing how organisations may build and sustain their competitiveness; namely the "*Market-Based*" and the "*Resource-Based*" views of competition.

Within the context of the strategic management debate concerning the two aforementioned views, there has been a recent shift in these views from a "Market-Based" to a "Resource-Based" one, in the light of the dynamic and ever-changing nature of today's environment. This shift has developed so as to embody the recent "Dynamic Capabilities" approach, and has accordingly led to emphasising the increasingly growing importance and relevance of the two notions of *Strategic Flexibility* as well as *Agility*, particularly in view of today's turbulent and uncertain environment.

Therefore, a particular research interest reflected in Chapter Two is exploring strategy views regarding the bases, upon which organisations can build the ability to sustain their responsiveness and agility, in the face of a dynamic environmental reality. All

this in order to provide a comprehensive background to understanding and synthesising the latest concepts, which address the question of how organisations may develop the ability to adapt and respond to changes that are a part of dynamic and turbulent environments and, thus, thrive in such environments.

Based on such a research interest, **section 2.2** provides an analytical overview of the link between strategy and competitiveness, by explaining and illustrating how the concept of strategy views the bases upon which competitive advantage for the organisation can be built and sustained. These bases are represented by the "Market-Based View" and the "Resource-Based View" of strategy, which correspond to the two concepts of "Strategic or Environmental Fit" and "Strategy Development by Stretch and Leverage", respectively.

Section 2.3 provides an introduction to the philosophy of the "*market-based*" view of strategy, along with its main assumptions and principles. **Section 2.4** discusses the "market-based" approach to healthcare management reform in the National Health Service (NHS), whereas **section 2.5** will be concerned with assessing the suitability and relevance of such a "market-related" approach to strategy and reform, in the NHS.

Section 2.6 addresses the effect of today's dynamic environment on strategy views concerning building and sustaining organisational competitiveness, through particularly highlighting the recent shift from a "*market-based*" view to a "*resource-based*" one. **Section 2.7**, then, discusses the philosophy of the "resource-based" view of strategy, as well as its main assumptions and concepts.

Section 2.8 builds on the themes emerging from the previous sections, by discussing the vital contribution of the recent "dynamic capabilities" approach towards seeking to understand how organisations can thrive in rapidly changing conditions.

Section 2.9 addresses the importance of integrating and co-ordinating diverse knowledge bases, in the vein of developing as well as regenerating organisational capabilities, so as to enable the organisation to maintain congruence with ever-changing environmental requirements and demands placed upon it.

Section 2.10 argues in favour of the suitability of the "resource-based" and the "dynamic capabilities" views in enabling and assisting healthcare organisations to better respond and adapt to the new dynamic environmental reality affecting them, in an effort designed to attain organisational agility.

2.2 <u>The Link Between Strategy and Competitiveness</u>

An understanding of the early strategic thinking (Ansoff, 1965; Bain, 1968; Andrews, 1971; Hofer and Schendel, 1978; Scherer, 1980; Porter, 1980, 1981, 1985) reveals that it has often related an organisation's strengths and resources to opportunities in the surrounding environment. This conclusion represents a well-established understanding of the concept of strategy, which has been illustrated through the following definition of the term strateg*y*: "*strategy is a course of action together with decisions on the specification and deployment of resources required to attain a stated objective*" (Galloway et al., 2000, page 38). This definition of strategy highlights the premise that the purpose of strategy is the attainment of a stated objective, through the active specification and deployment of resources.

Such a stated objective has often been associated with the fundamental issue of how to create and sustain a competitive advantage for the organisation (Bain, 1956; Porter, 1980, 1998; Anderson et al., 1989; Rumelt, 1991; Kay, 1994; Chaharbaghi and Lynch, 1999; Pandza et al., 2003a). Attaining competitive advantage for the organisation, according to Anderson et al. (1989) and Chaharbaghi and Lynch (1999), represents a general agreement among scholars in the field of strategic management as to the purpose behind formulating a strategy. In this context, they highlight that strategy refers to a long-range direction or plan for an organisation designed to achieve competitive advantage. Based on this, it can be argued that the literature on strategy and strategic management thinking embodies a comprehensive view to achieving competitiveness, which can inform an organisation's efforts to effectively operate in its environment and, thus, thrive.

Reaching to an understanding of the contribution of the strategic management field as to the fundamental question of how competitiveness may be built and sustained can be primarily facilitated by exploring the *characteristics of strategy and strategic decisions*, as well as the *elements of the strategic management process*, which explain and show how the concept of strategy views the means by which competitive advantage can be attained. In this vein, Johnson and Scholes (1999) discuss a number of characteristics, which they indicate are usually associated with the words "strategy" and "strategic decisions", which explain their nature and distinguish them from other types of decisions taken within the organisation. A number of these characteristics have been introduced by such strategy writers as Porter (1980, 1998), Hayes and Wheelwright (1984), Prahalad and Hamel (1990), Barney (1991), Stalk et al. (1992), Hamel and Prahalad (1993, 1994), Collis and Montgomery (1995) and Teece et al. (1997). <u>Such characteristics of strategic decisions mainly include the following</u>: -

❖ Strategic decisions are likely to be concerned with the long-term direction of an organisation. Thus, strategy involves an extended time horizon, both with regard to the time required to carry out strategic activities and the time required to observe their impact.

❖ Strategic decisions often determine the scope of an organisation's activities; that is, defining the boundaries of the business. Providing a focus for the scope of an organisation's activities facilitates the concentration of its long-term planning and efforts within a given context of boundaries related to the markets as well as products and/or services to be addressed.

❖ Strategy and strategic decisions are normally concerned with providing competitive advantage for the organisation. This is supported in the following description of strategy, which states: "*It is generally agreed that strategy refers to a long-range thrust or direction for an organisation designed to give competitive advantage*" (Anderson et al., 1989, page 137). Therefore, strategic decisions are often conceived of as the search for effective positioning in the external environment in relation to competitors, so as to achieve advantage in the marketplace.

❖ Emanating from the need to identify a favourable position for the organisation in its external environment, which would put it at an advantage compared with its competitors, is the consideration that strategy can be seen as the matching of the activities of an organisation to the environment in which it operates. This is known as the search for "strategic fit", which is defined as *developing strategy by identifying opportunities arising from an understanding of the environmental forces acting upon the organisation, and adapting resources so as to take advantage of these*" (Johnson and Scholes, 1999, page 23).

Brown (1996) highlights the important role of an organisation's resources and capabilities in achieving a successful state of "strategic fit", when he emphasises the organisation's need to focus, in that it should not compete in markets without there being a match between the opportunities inherent in the targeted markets on one hand, and the organisation's technology, skills, capabilities and other key resources, on the other. This logical, linear approach to formulating strategy has also been mentioned by Slack et al. (1998), who emphasise the role of strategic decisions in relating an organisation and its resources and capabilities to the opportunities in the environment, as well as enabling an organisation to achieve its long-term goals. By this apparent emphasis on relating an organisation's existing capability with a targeted market segment that holds an obvious opportunity for the organisation, this characteristic of strategic decisions can be considered as the origin of the "*Market-Based*" view of strategy, which informs one of two main bases upon which competitiveness can be built. A discussion of the philosophy of the market-based view of strategy, along with the various analyses of the external environment, which it embodies, will be presented in section 2.3.

❖ Another approach to formulating strategy is the "resource-based view", which emphasises the importance of firm-specific assets and capabilities in developing strategy. This view has mainly emerged as a response to the overemphasis on the part of the strategy literature on "environmental fit" approaches to strategy development, which as Brown (1996) indicates has often led to ignoring the vital role of the internal capabilities and competencies inherent in the organisation, in providing competitive advantage.

The proponents of this more recent approach to strategy (Becker, 1964; Williamson, 1975; Nelson and Winter, 1982; Wernerfelt, 1984; Hitt and Ireland, 1986; Tomer, 1987; Prahalad and Hamel, 1990; Barney, 1991, 1995, 1996, 2001; Grant, 1991, 1996a, 1996b; Hamel and Prahalad, 1993, 1994; Peteraf, 1993; Collis and Montgomery, 1995; Teece et al, 1997; Wernerfelt, 2000; Gilgeous and Parveen, 2001) argue strongly in support of the inclusion of organisational capabilities and core competencies as an important part of strategy, through their role in supporting and developing competitive advantage.

Under this approach, strategy can also be seen as building on or stretching an organisation's resources and competencies to create opportunities or to capitalise on them. Existing organisational capabilities are further developed and enhanced, in order to support the attainment of ambitious long-term objectives that are thought to be difficult for its management to attain under its current existing resources.

Johnson and Scholes (1999) describe this as representing more imaginary or visionary thinking in developing or planning strategy, which differs from "*strategic fit*", in that it goes beyond mere matching to stretching resources, by providing means of stretching the organisation beyond its current base of resources. Such a development of strategy, thus, depends on the identification and leverage of the resources and competencies of the organisation, which yield new opportunities or provide competitive advantage in the marketplace, as expressed by Hamel and Prahalad (1994). The triggers for the shift from a "market-based" view to strategy to a "resource-based" one are discussed in section 2.6, after which section 2.7 explains the main assumptions and concepts representing the "resource-based" view of strategy.

❖ So far, two main approaches have been identified, which affect strategy development in the vein of accruing an organisation competitive advantage:
  − One is based on identifying the environmental forces acting upon the organisation, analysing the nature of their impact in terms of potential opportunities and threats, and actively seeking to match the activities, resources, skills and capabilities of the organisation to exploit such opportunities.

- The other approach emphasises the importance of developing the contribution of organisational resources and competencies in creating opportunities or capitalising on them.

The aforementioned characteristics of strategy and strategic decisions can provide a basis for a definition of strategy, which emphasises its role in achieving advantage for the organisation within a changing environment. Such a definition would particularly stress that: "*Strategy is the direction and scope of an organisation over the long term: which achieves advantage for the organisation through its configuration of resources within a changing environment, to meet the needs of markets and to fulfil stakeholder expectations*" (Johnson and Scholes, 1999, page 10).

2.2.1 The Elements of the Strategic Management Process and Competitiveness.

The aforementioned definition of strategy clearly sets the task of responding to the changing needs and demands of the environment / marketplace and, thus, achieving (competitive) advantage, as the primary objective of strategy. In this context, Hitt et al. (1999) emphasise that *the pursuit of competitiveness* is at the heart of strategic management and the choices made when designing and using the strategic management process. Thus, they define the strategic management process as "*the full set of commitments, decisions, and actions required for a firm to achieve strategic competitiveness and earn above-average returns*" (Hitt et al., 1999, page 5).

In support of such a contention, arguing that the major purpose of strategy development is seeking to attain a long-term advantage for the organisation, have been a number of efforts aiming at reaching a conceptualisation of the *strategic management process*. The common theme among these is that the strategic management process consists of three main elements, which according to Johnson and Scholes (1999) and Lynch (2000) form the core areas of *corporate* strategy. These elements are *strategic analysis*, *strategy development* or *strategic choice*, and *strategy implementation*:

1. <u>Strategic analysis</u> is concerned with understanding the strategic position of the organisation, in terms of:

- Analysing and understanding the external environment surrounding the organisation, which consists of the general, industry / sector and competitor environments, thus identifying the opportunities and threats that exist for the organisation.

- Analysing the internal resources, skills, and competencies of the organisation, in order to form a view of an organisation's strengths and weaknesses in relation to the opportunities and threats identified in the external analysis.

- Identifying and analysing the expectations and influence of stakeholders in relation to an organisation's vision, mission, and objectives.

2. <u>Strategic choice</u>, which involves understanding the underlying bases guiding future strategy, generating strategic options for evaluation and selecting from among them.

3. <u>Strategy implementation</u>, which is concerned with the translation of strategy into organisational action through organisational structure and design, resource planning, and the management of strategic change.

It can be seen that the *strategic analysis* element embodies the two main routes to strategy development: the *market-based* and the *resource-based* routes, which correspond to *analysis of the environment* and *analysis of the resources*, respectively. The combination of internal as well as external analyses, in the vein of developing strategy that can attain an advantage for the organisation, has been reflected in subsequent models of strategy outlining processes of strategy development with the aim of achieving competitive advantage.

Of those models are the ones developed by Hope and Muhlemann (1997), Hitt et al. (1999) and Lynch (2000). Hitt et al. (1999), for example, explain that the constituents of their conceptualisation of the process of strategic management include relevant *analyses of the internal and external environments*, which are required and considered necessary for effective strategy formulation and strategy implementation actions.

Thus, they conclude that through matching the sources of strategic inputs: *the conditions of an ever-changing competitive market structure* with *an* organisation*'s continuously evolving resources, capabilities, and competencies*, effective strategic actions can take place that result in achieving *competitiveness* (See figure 2.1).

In this sense, the element of *strategic analysis* and its role in achieving an advantage for the organisation highlights the interaction between: a) The *opportunities afforded by the external* environment affecting the organisation, and b) An organisation's *internal resources and core competencies*, as the foundation upon which an organisation's *competitive advantage* can be built. These two bases relate to two approaches to strategy formulation, namely "strategic fit" as well as "strategy development by stretch and leverage", respectively.
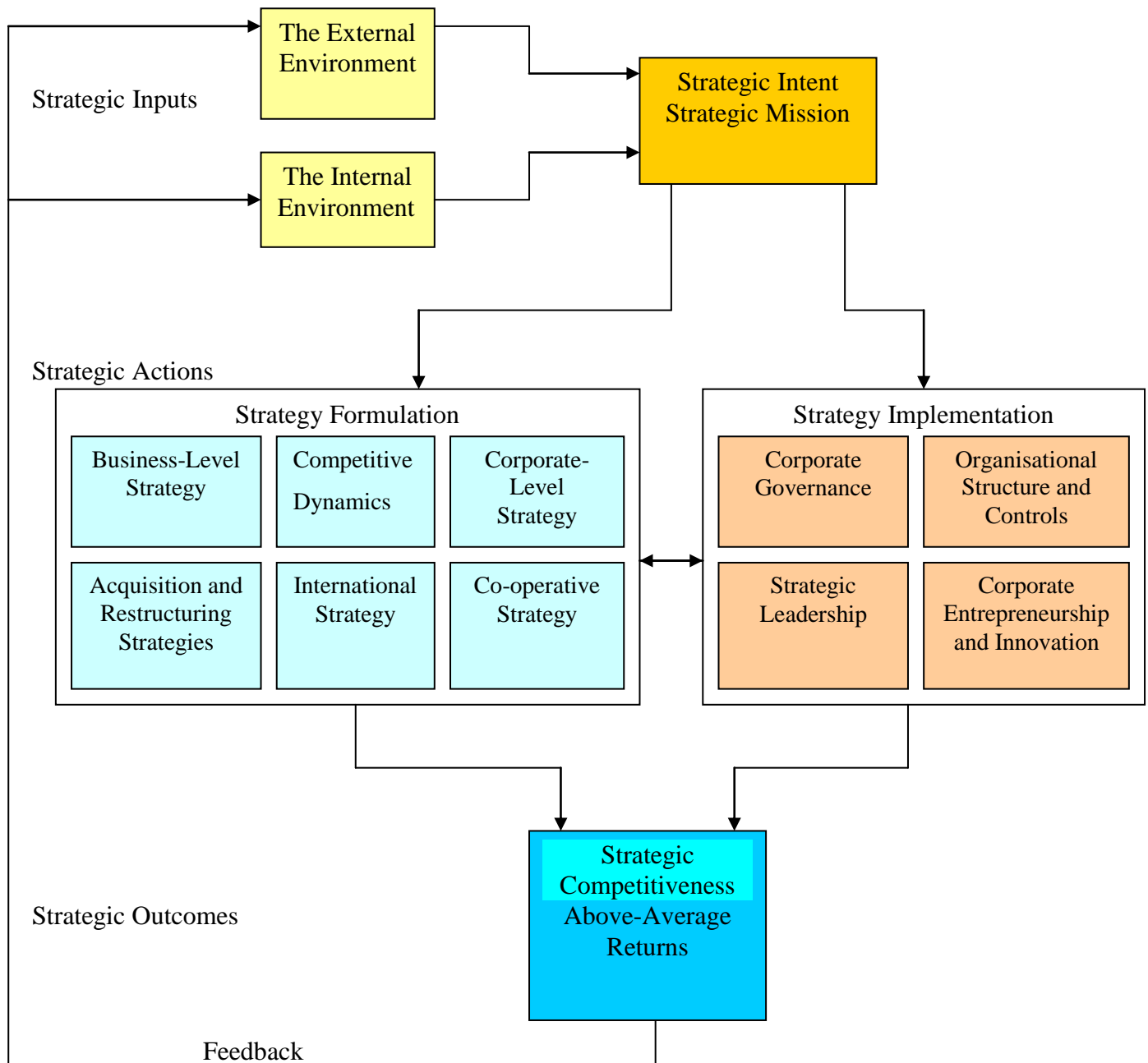
Figure 2.1: "*The Strategic Management Process*", Hitt et al. (1999) Strategic Management: Competitiveness and Globalisation, Concepts. Cincinnati, Ohio: South-Western College Publishing, page 6.

Therefore, Lynch (2000) concludes that the task of corporate strategy is to create, through a process linking the analysis of an organisation's internal resources with the analysis of an organisation's external relationships with its customers, suppliers, competitors and the economic and social environment in which it exists, a *distinctive way* ahead for an organisation; a term which he uses to refer to the development of a sustainable competitive advantage that can allow the organisation to survive against

competition. Hitt et al. (1999) refer to these views or bases prescribing the attainment of competitive advantage as representing two main models that suggest conditions, which organisations should study to gain the strategic inputs needed to select strategic actions in the pursuit of competitiveness. These models are:

1. The "Industrial Organisation" Model, which suggests that the external environment should be the *primary determinant* of an organisation's strategic actions, and

2. The "Resource-Based" Model, which suggests that an organisation's unique resources and competencies are the *critical link* to strategic competitiveness.

These two models, which are discussed in greater depth in sections 2.3, 2.6, and 2.7, reflect a comprehensive description of strategy's view of achieving competitiveness, through informing the foundations upon which a value-creating strategy can be developed that can deliver a competitive advantage for the organisation and, thus, achieve strategic competitiveness. Such an understanding of the prescription offered by strategic management in relation to achieving competitiveness raises an issue, which is concerned with the extent to which the emphasis is on developing strategy on the basis of *"fit"* with the environment or *"stretching"* the organisation on the basis of resources and competencies which can create opportunities for strategy development. Such an issue has witnessed a rich debate in the strategic management literature, with the more recent arguments or views being in support and in favour of integrating the two perspectives, as is discussed in section 2.6.

2.3   Strategic or Environmental Fit and the "Market-Based" View of Strategy.

In the course of discussing the characteristics, which are usually associated with strategy and strategic decisions, Johnson and Scholes (1999) indicate that strategy can be seen as the matching of the activities of an organisation to the environment in which it operates. This is known as the search for "strategic fit", which is defined as *"developing strategy by identifying opportunities arising from an understanding of the environmental forces acting upon the organisation, and adapting resources so as to take advantage of these"* (Johnson and Scholes, 1999, page 23).

The approach to developing strategy known as "strategic fit", as indicated by Barney (1991), suggests that "*firms obtain sustained competitive advantage by implementing strategies that exploit their internal strengths, through responding to environmental opportunities, while neutralising external threats and avoiding internal weaknesses*" (Barney, 1991, page 99). This conceptualisation of strategy as being an outcome of fitting an organisation's strengths, represented by its resources and capabilities, to the opportunities inherent in the surrounding environment, clearly reflects the traditional classic conceptualisation of strategy, promulgated by a number of early scholars in the strategic management discipline, including Ansoff (1965), Andrews (1971), and Hofer and Schendel (1978). In his book discussing the concept of corporate strategy, Andrews (1971) defines strategy as the match between what an organisation *can* do (organisational strengths and weaknesses) within the universe of what it *might* do (environmental opportunities and threats).

Bain (1968), Scherer (1980), and Porter (1980, 1981, 1985) have also adopted such an approach to strategy formulation, which essentially emanated from their promulgation of the Industrial Organisation model of competitive advantage. Emerging from this visualisation of strategy is the outlining of the important step of analysing and understanding the environmental forces affecting the operation, survival, and growth of the organisation, in order to identify the opportunities offered and the threats posed so as to exploit the former while minimising the latter. The importance of analysing the external environment emanates from the significant role, which such an environment plays in the growth and profitability of organisations, as highlighted by Kotha and Nair (1995) and Wagner and Gooding (1997). Hence, through understanding the organisation's external environment, Fombrun (1992) indicates that strategic decision-makers can help to improve an organisation's competitive position, increase operational efficiency, and win battles in the global economy.

Based on this conclusion, Hill and Jones (1998) argue that to succeed, an organisation must either fit its strategy to the *industry / sector environment* in which it operates, or be able to reshape the *industry / sector's environment* to its advantage through its choice of strategy. Therefore they come to the conclusion that "*companies typically fail when their strategy no longer fits the environment in which they operate*" (Hill and Jones, 1998, page 102).

The identification of both opportunities and threats is considered an important objective of studying the external environment for two main reasons, as expressed by both Hill and Jones (1998) and Hitt et al. (1999):

a) Opportunities represent possibilities or conditions, which if identified can provide an advantage for a particular organisation to achieve strategic competitiveness, by formulating and implementing strategies that enable it to deliver a distinctive value to its customers and thus earn higher profits than its competitors.

b) Threats, on the other hand, represent constraints in the general environment, which may hinder an organisation's efforts to achieve strategic competitiveness. Thus by identifying them, an organisation can work towards minimising their negative effect upon it through preparing certain contingencies or developing capabilities to override them.

Barney (1991) and Seth and Thomas (1994) indicate that the *Industrial Organisation* model has four underlying assumptions, which they explain place little emphasis on the impact of an organisation's *idiosyncratic attributes* on its competitive performance, in an effort designed to focus the analysis of what affects an organisation's competitive position on its *environment*. Such assumptions are:

1. Organisations competing within a particular industry, or a certain segment of an industry, are assumed to be controlling similar strategically relevant resources and thus pursuing similar strategies. This means that the role of organisational resources in distinguishing a particular organisation from another is to a great extent neutralised, which makes the contribution of an organisation's attributes in accruing it a competitive edge over its rivals negligible.

2. This leads to the second assumption, which is based on the contention that the external environment is assumed to be the main party primarily affecting the strategies to be formulated so as to achieve competitiveness for the organisation.

3. The resources used by organisations to implement their strategies are considered to be highly mobile. Therefore, should resource heterogeneity develop in a particular industry, it will not be sustained for long because of the easy accessibility to such resources by all organisations.

4. The behaviour of organisational decision-makers is assumed to be rational, in that it is geared towards profit maximisation. This indicates the tendency to choose those market positions that are thought to be the most profitable for the organisation.

Based on the aforementioned assumptions, it is concluded that these seek to neutralise the effect of an organisation's resources on building competitive advantage. However, Hitt et al. (1999) stress that an important factor that enables the organisation to compete successfully in its chosen industry is the development or acquisition of the necessary assets and skills needed to implement the strategy determined in the light of analysing the external environment. Despite acknowledging the vital part that resources and competencies play in supporting organisational competitiveness, they highlight that this should not undermine the premise that under the *Industrial Organisation Model*, profitability is primarily determined by *external characteristics*. Figure 2.2 illustrates the premise of such a model.

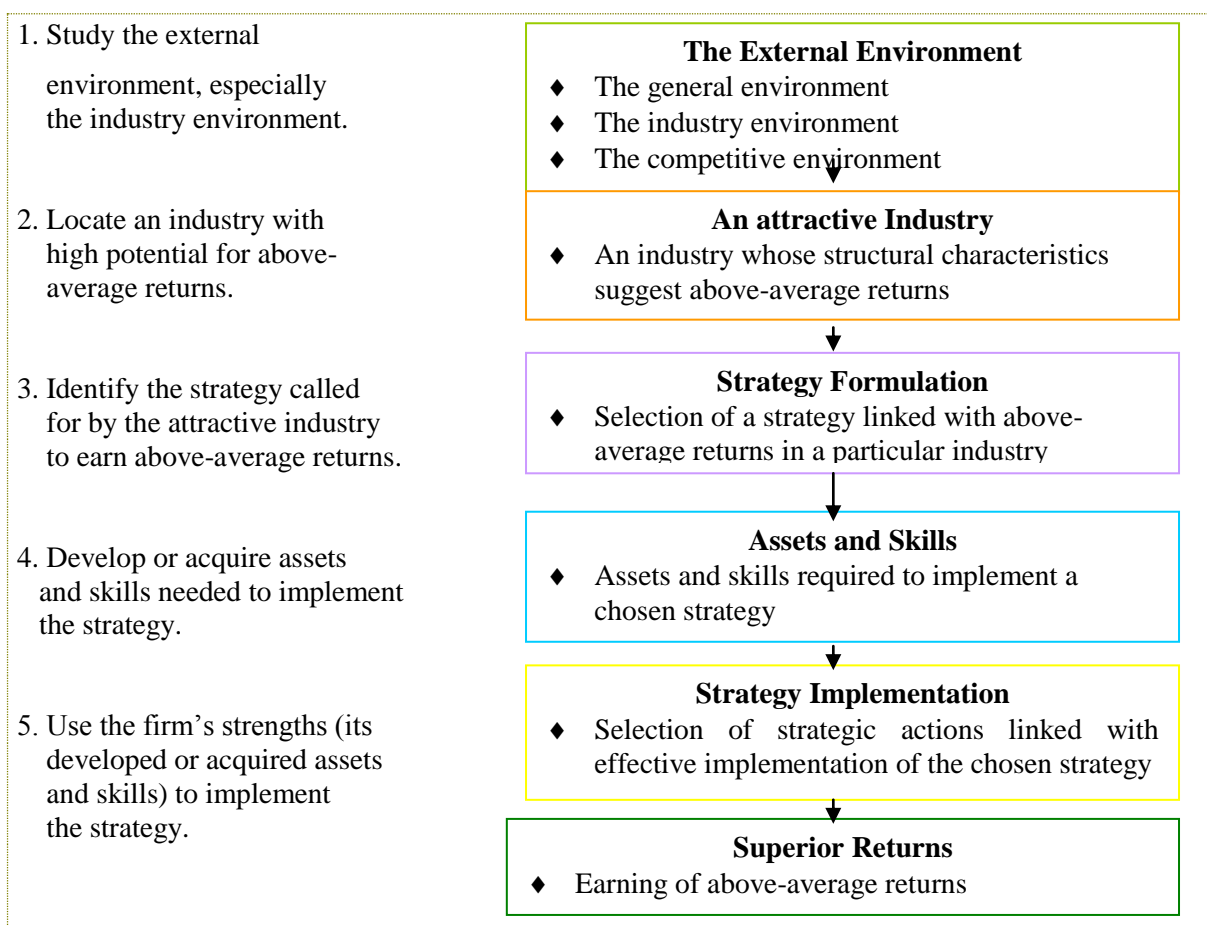|	
1. Study the external environment, especially the industry environment.	**The External Environment** ♦ The general environment ♦ The industry environment ♦ The competitive environment
2. Locate an industry with high potential for above-average returns.	**An attractive Industry** ♦ An industry whose structural characteristics suggest above-average returns
3. Identify the strategy called for by the attractive industry to earn above-average returns.	**Strategy Formulation** ♦ Selection of a strategy linked with above-average returns in a particular industry
4. Develop or acquire assets and skills needed to implement the strategy.	**Assets and Skills** ♦ Assets and skills required to implement a chosen strategy
5. Use the firm's strengths (its developed or acquired assets and skills) to implement the strategy.	**Strategy Implementation** ♦ Selection of strategic actions linked with effective implementation of the chosen strategy
	Superior Returns ♦ Earning of above-average returns

Figure 2.2: "*The I/O Model of Superior Returns*", Hitt et al. (1999) Strategic Management: Competitiveness and Globalisation, Concepts. Cincinnati, Ohio: South-Western College Publishing, page 20.

2.3.1 <u>Analysis of the External Environment</u>

As mentioned earlier in subsection **2.3.1**, the "Industrial Organisation" Model emphasises the importance of analysing the external environment, which affects the organisation, as the first step towards identifying opportunities to be exploited by the organisation and, thus, achieving competitiveness. Such an external environment consists of three main components, which include: The *General* or *Macroenvironment*, the *Industry / Sector environment*, and the C*ompetitor environment*.

2.3.1.1 <u>The General Environment</u>

The General Environment represents the wider context or, as Hill and Jones (1998) term it, the "*macroenvironment*", in which the "industry / sector" as well as the "competitor" microenvironments are embedded. Such a macroenvironment consists of a number of environmental segments, which include: The political and legal environment, the macroeconomic environment, the demographic environment, the socio-cultural environment, the technological environment, and the global environment.

In order to increase the understanding of the general environment so as to assess and evaluate the practical impact of the environmental data generated from the aforementioned segments of such an environment, organisations engage in a process called "external environmental analysis". The challenge in this process of analysis, according to Hitt et al. (1999), is to *scan* and *monitor* current changes/trends in the elements of the aforementioned environmental segments, and adopt this as a basis for *forecasting*, in order to be able to *assess* the implications of those environmental changes and trends, which prove to have the most significant relevance to an organisation and its strategic management. In this context, Lynch (2000) indicates that it may be useful to begin this process of analysing the external environment surrounding the organisation with a checklist- often called a "**PEST**" analysis- which can be used to scan the *Political*, *Economic*, *Socio-cultural*, and *Technological* aspects of this environment embodying any other related segments, and monitor changes in these environmental segments so as to select a few areas that seem to reflect an important emerging trend.

The third activity of external analysis is *forecasting*, which involves developing feasible projections of what might happen, and how quickly, as a result of the changes and trends detected through scanning and monitoring. The relevance of these projections developed by forecasting, to the organisation, is then *assessed*, in order to specify the implications of the understanding reached from the previous three steps used in the analysis of the general environment, on an organisation's strategic management.

2.3.1.2 <u>The Industry / Sector Environment.</u>

Hitt et al. (1999) indicated that the "Industrial Organisation" model challenges organisations to locate the most attractive industry / sector in which to compete, since the basic premise of this environmental model of competitive advantage is based on the contention that competitiveness in general can be increased only when:

♦ Organisations are able to find the industry, which proves to be attractive in terms of having the highest profit potential, and when

♦ Organisations are able to compete successfully in such an industry / sector, through learning how to develop and use their internal resources and skills to implement the generic competitive strategy required by the structural characteristics in that industry (Porter, 1980, 1998; Hitt et al., 1999; Hill and Jones, 1998).

Such a premise of the industrial organisation model highlights the point that the *industry environment* has a more direct effect on the competitive position of an organisation, compared to the *general environment*. This is evidenced by Porter (1980, 1998), who states that: "*The essence of formulating competitive strategy is relating a company to its environment. Although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of the organisation's environment is the industry or industries in which it competes. Industry structure has a strong influence in determining the competitive rules of the game as well as the strategies potentially available to the firm*" (Porter, 1998, page 3). In this context, Porter (1980, 1998) defines an industry / sector as the group of organisations producing products and/or services that are close substitutes for each other.

He also develops the "*Five Competitive Forces Analysis*" framework for analysing an organisation's industry environment, which is considered to be the most important and vital analysis in identifying an attractive industry for an organisation. Two main significant outcomes, which can well arise from using such an analytical framework, as explained by Porter (1980, 1998) and Hitt et al. (1999), are: -

- Facilitating the understanding of an industry's potential profitability, which is attained as a function of analysing the interaction among five main competitive forces.

- Formulating the strategy, which should be implemented to establish a defensible competitive position.

First: - Understanding an industry's potential profitability is attained as a function of analysing the interaction among five main competitive forces outlined and discussed by Porter (1980, 1998) in his "*Five Competitive Forces Analysis*" framework. Figure 2.3 shows this framework and the competitive forces, which it embodies.
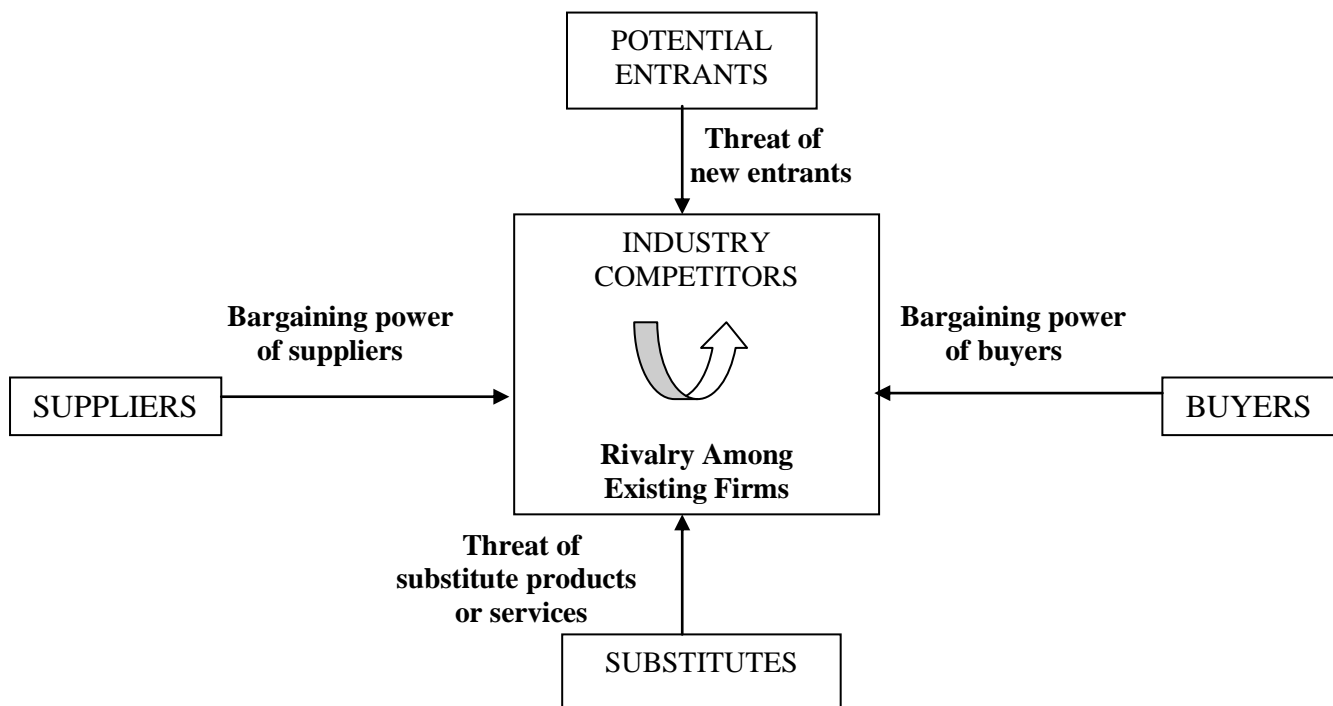

Figure 2.3: "*Forces Driving Industry Competition*", Porter (1998) Competitive Strategy: Techniques for Analysing Industries and Competitors, with a new introduction. New York: The Free Press, page 4.

The collective strength of these five competitive forces determines the *intensity of competition* in an industry as well as the ultimate *profit potential* in that industry. As indicated by Porter (1980, 1998), the stronger the competitive forces, the lower the profit potential for organisations competing in an industry. This is because the stronger each of these forces is, the more limited is the ability of established organisations to raise prices and earn greater profits. In this respect, Hill and Jones (1998) indicate that a strong competitive force is regarded as a *threat* as it can depress profits, while a weak competitive force can be viewed as an *opportunity* as it allows an organisation to earn greater profits.

Second: - Another important outcome from using Porter's "Five Competitive Forces *Analysis*" framework is establishing a defensible competitive position for the organisation. This is facilitated through the identification of the opportunities and threats arising from such competitive forces, and formulating appropriate strategic responses to these. Based on this, such a defensible competitive position established by an organisation's competitive strategy is considered as a strategic response to the opportunities and threats identified from analysing the five competitive forces affecting the organisation's industry environment. This is clear from Porter's (1980, 1998) description of the purpose of his structural analysis framework, in that such a framework is used to identify at the broadest level the three generic competitive strategies that can be viable in the long run.

In this context, generic competitive strategies are concerned with achieving such a chosen basis of building competitive advantage. Typically, such a competitive position can be based on producing standardised products and/or services at costs below those of competitors (*a cost leadership strategy*), offering a differentiated product and/or service for which customers are willing to pay a premium price (*a differentiation -based strategy*), or competing on the basis of product and/or service innovation. Such a position can also be based on carving out a niche market for the organisation, in which none of its rivals is positioned, and in which an organisation can achieve either low cost or differentiation, or both (*a focus-based strategy*). The differences among the three generic strategies are illustrated in figure 2.4.

STRATEGIC ADVANTAGE

	Uniqueness Perceived By the Customer	Low Cost Position
STRATEGIC TARGET — Industry Wide	**DIFFERENTIATION**	**OVERALL COST LEADERSHIP**
Particular Segment Only	**FOCUS**	
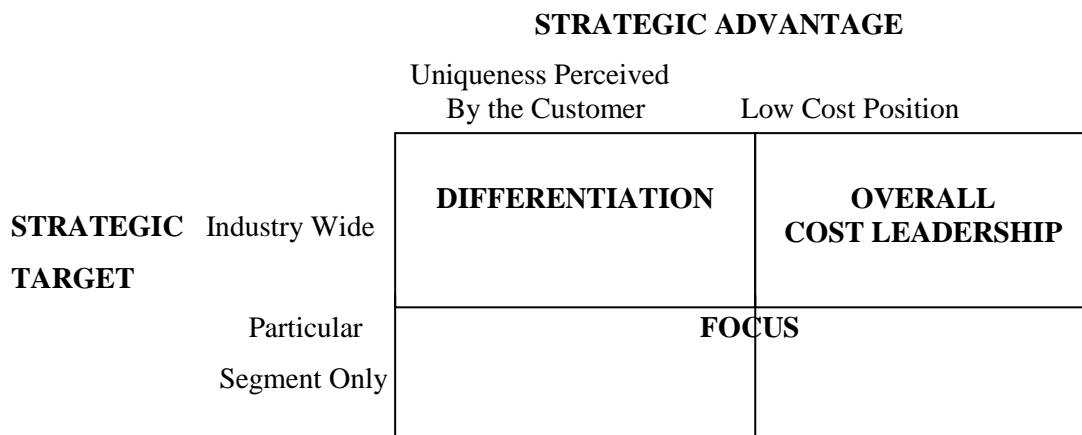
Figure 2.4: "*Three Generic Strategies*", Porter (1998) Competitive Strategy: Techniques for Analysing Industries and Competitors, with a new introduction. New York: The Free Press, page 39.

2.3.2.3 The Competitor Environment.

Following the cascading order of analysis from the general environment to the industry / sector environment, the third logical step for the organisation is to conduct an analysis of each potential party, with which it may compete directly. This type of analysis, which is called "*competitor analysis*", is especially critical for organisations facing one or a few powerful competitors. Hitt et al. (1999) explain that competitor analysis informs an organisation about the objectives, strategies, assumptions, and capabilities of the organisations with which it competes. The purpose behind such a study of an organisation's direct competitors, as indicated by Lynch (2000), is to identify the specific competitive advantages of rival organisations and to highlight any strategic resources, which may hold the potential of delivering competitive advantage to the rivals.

2.4 The Market-Based Approach to Strategy and Reforms, and the National Health Service (NHS)

The changes in the environment affecting the healthcare sector, in terms of the various reforms that have been introduced by consecutive governments, have led to the transformation of the healthcare sector and organisations operating within it, according to Swinehart et al. (1995), from a social-welfare system, which exists on cost-reimbursed government subsidies, into an economic system split primarily

between purchasers and providers of care. Such a change in the nature of the environment, within which NHS Trusts operate, has highlighted the importance of maintaining viability in an increasingly competitive market.

The most prominent of such governmental reforms of the NHS have been the market-based reforms, which were introduced in the early and mid 1990s. These reforms assumed an approach to healthcare based on market principles by involving the creation of the "internal market", in which a two-tier system has been established, through the separation of the purchasing and provider functions. Other changes related to such reforms include the introduction of managed competition, contracting, General Practitioner (GP) fund-holding and hospital Trust autonomy.

Such reforms draw on the contention expressed by Collins et al. (1994), in that a new international orthodoxy around the reform of the management of health services has emerged, which is shaping changes formulated, and being implemented, in the British National Health Service (NHS) and in a number of other European, Latin American, African and Asian health service systems. The dominant theme of this new orthodoxy, as Collins et al. (1994) argue, is its embodiment of ideas and concepts, which represent an approach to healthcare reform based on market principles. Of the principal themes behind the rise of the "market-based" orthodoxy of healthcare reform, as discussed by Collins et al. (1994), the following are perceived to be most relevant in informing the healthcare reforms, which have been and are being introduced in the NHS. These include:

1. The Efficiency and Position of the Public Sector: - The orthodoxy considers governments as fundamentally and inherently inefficient, and argues that such inefficiency must be counter-balanced by the involvement of the private sector in the production of public goods and services. Thus, a newly emerging model of co-ordination and control in the management of public services, which Osbourne and Gaebler (1992) call: "steering not rowing", suggests that governments are not best equipped to be providers. Instead, Barlow and Rober (1996) indicate that an alternative approach of providing public services is that of "steering", in which private social institutions deliver public services alongside state agencies.

The main reason behind the apparent efficiency of the private sector, as opposed to the public sector, as Stewart and Walsh (1992) and Collins et al. (1994) argue, is due to the fact that the private sector operates in a competitive and profit-maximising environment. Such an environment necessitates from organisations operating in the private sector to be efficient, since otherwise they will not be able to withhold in the face of increasing competitiveness. Such an incentive to be efficient, as promulgated by the proponents of this orthodoxy, is lacking in the public sector due to lack of competitiveness and the unfamiliarity with, and unimportance of, the objective of profit maximisation.

However, Barlow and Rober (1996) have indicated that the cost efficiency of private sector organisations, coupled with increasing fiscal pressures on governments to limit state expenditures and activities, have resulted in political demands being placed on public organisations to follow the private sector in its market-oriented management practices in an attempt to be cost efficient. Thus, the reason behind such pressures and demands to be cost effective lies in that "*an inefficient public service and hence expensive public service is a burden on the competitiveness of industry. Individual taxpayers may increasingly resist their burden of tax if they perceive that public services are not provided economically and efficiently*" (Barlow and Rober, 1996, page 80).

2. <u>The Public Sector, Competition and Markets</u>: - As a means to overcome the inherent inefficiency of the public sector just explained, the public sector should operate in a competitive environment through the development of markets and the adoption of its principles. This entails that the government itself introduce internal and managed markets within government, as a means of organising service delivery.

In fact, this has been the purpose of the internal market reforms in the early 1990s, which had the creation of purchasers and providers of healthcare as its primary objective, in an effort designed to promote efficiency. A major tool, which was employed as a result of such reforms in order to emphasise efficiency, was using competition as the means of choosing the providers of healthcare services, as Smyth (1998) indicates.

3. Consistent with the notion of introducing internal and managed markets within healthcare is the idea of <u>splitting the financing, purchasing and providing functions</u>. Collins et al. (1994) argue that such a separation of the functions of financing and providing healthcare is desirable, since this clarifies the roles and responsibilities attached to each. The underlying theme here is that the public sector purchases healthcare for a population from a number of potential providers who are in competition with each other. In this way, competition is regarded as the key to efficiency, and a competitive environment exists within a "managed market" for healthcare, regulated by central government. This organisation of healthcare is similar to what has been introduced in the early 1990s in the British NHS, through the "internal market" reforms.

The main classifications of organisations operating within this type of "healthcare market" environment fall into purchasers and providers of care:

- The purchaser of healthcare is responsible for identifying the healthcare needs of a given population and then buying packages of healthcare from providers of its choosing.

- The providers of healthcare, on the other hand, are encouraged to compete among each other in order to provide the kind of service that meets the requirements of purchasers.

4. <u>Decentralisation</u>: - One of the tenets of the market-based orthodoxy of healthcare reform is that public service organisations should operate in a pluralistic and decentralised fashion. This entails that traditional top-down, monolithic, and inefficient bureaucracies, as Collins et al. (1994) explain, have to be disaggregated into more adaptable and flexible units, and given the freedom to manage their own resources in the vein of producing goods and services.

5. <u>From Citizens to Consumers and the Importance of Choice</u>: - An important theme of managing in the private sector is the notion of customers. Following this and under this orthodoxy, users of public services should be viewed not so much as citizens but as consumers and customers, who have requirements and expectations, to which organisations providing public services such as NHS Trusts must be responsive and attentive. This emphasis on treating citizens or patients as

consumers and/or customers brings with it the benefit of delivering greater responsiveness to consumer preferences.

Thus, with the increasing emphasis on cost efficiency side by side with the need for managerial reform in the NHS, reflected in New Labour Governmental reforms reflected in The Department of Health (1997) White Paper: "*The New NHS: Modern, Dependable*" and The Department of Health (2000) White Paper: "*The NHS Plan: A Plan for Investment. A Plan for Reform*", coupled with the earlier market reforms instigated by previous conservative governments, NHS organisations particularly hospital Trusts have begun experiencing the stresses of a maturing market.

In the light of such a new reality affecting NHS organisations, Swinehart et al. (1995) make it clear that the economic viability and survival of hospitals operating in such a new environment will increasingly depend on how these approach and manage their relationships with their various stakeholders, as well as how they make sound strategic choices regarding allocating resources to benefit and exploit environmental opportunities, as well as respond effectively to demands, requirements and pressures.

Thus, as a result of the competitive pressures generated by the NHS market reforms, Hackett (1996) expresses the need for NHS Trusts to determine and develop a long-term strategic direction for their organisations, in order to respond to such pressures. Such a need for NHS Trusts to adopt such a strategic approach, towards ensuring their long-term viability, has also been supported by Swinehart et al. (1995). They have indicated that one of the sectors, in which research associated with strategic thinking is conspicuously absent, is healthcare. In this context, Hackett (1996) examines the application of Porter's *Generic Competitive Strategies* in NHS Trusts, in view of the internal market reforms. He highlights the relevance of the seminal work of Porter (1980, 1998) on competitive strategy, including his famous "*Five Competitive Forces Analysis*" framework. As argued by Porter (1980, 1998), this framework can help provide an organisation with an understanding of the dynamics that are in play in its environment, and how the organisation can plan its response to the environmental factors that are shaping the competitive reality of its industry / sector.

As has been discussed earlier in **subsection 2.3.1.2**, the value of the five forces framework lies in providing an essential framework for understanding and analysing the nature of the industry / sector environment within which the organisation operates, and the relative strengths and weaknesses of the competitive forces affecting organisations operating within such an environment. Thus, the benefit of this framework for NHS Trusts, as Hackett (1996) explains, lies in assisting such Trusts to determine how to work and behave, in view of the relative impact of forces existent in their environment on the way their organisations are organised and managed. In this way, "*the challenge for managers and clinicians is to determine and shape these forces into a coherent strategy which is understood by employees, consumers, general practitioners and purchasers, so they can ensure survival of their organisation and meet the needs and demands of tomorrow*" (Hackett, 1996, page 5).

However, Collins et al. (2000) point to the contradictions and drawbacks of elements of the 1991 reforms, which have been highlighted by the incoming Labour Government in 1997 through the publication of The Department of Health (1997) White Paper: "*The new NHS: Modern, Dependable*", and The Department of Health (2000) White Paper: "*The NHS Plan: A Plan for Investment, A Plan for Reform*". These drawbacks have emphasised the need to end the competitive stance in the NHS internal market and replace it with a focus on collaboration, co-ordination, integration and partnership, in place of competition. Thus, notions of collaboration, consolidation of resources, integrated care, partnerships and alliances, and how these are related to an alternative approach to developing strategy that is based on leveraging and regenerating an organisation's resources and capabilities, will be discussed in more depth in **sections 2.8**, **2.9** and **2.10**.

Such a discussion will highlight the suitability of such an approach to strategy in a healthcare services context, in an effort designed to provide healthcare organisations with the means, which can enable them to deal with, and respond flexibly and in an agile manner to, the changing requirements, demands, and pressures of today's healthcare environment. Based on this, **section 2.5** will be concerned with assessing the suitability of the "market-based" approach to strategy and reform, in the National Health Service (NHS).

2.5 <u>Assessing the Suitability of the "Market-Based" Approach to Strategy and Reform, to the National Health Service (NHS)</u>

While Swinehart et al. (1995) indicate that most researchers would agree that a business-oriented model is appropriate for a hospital, nevertheless, they quote Peters and Wacker (1982) as making the argument that the adoption of a pure business model for helping hospitals cope in an increasingly changing environment is inappropriate. This is due to the reason that the ethos and values, upon which the provision of healthcare services by hospitals is based, are very different from those most typically associated with competitive, free market processes.

Swinehart et al. (1995) cite a study conducted by Buller and Timpson (1986), which explores the issue of developing an integrative approach towards the strategic management of hospitals. In this study, Buller and Timpson (1986) argue in favour of the inappropriateness of applying ready business models, borrowed from competitive, free market contexts, in healthcare. They justify their argument by explaining that unique relationships between hospitals, physicians, and payer / purchasing groups make strategy formulation and implementation more complex than in the traditional business setting.

For example, customer markets, as Swinehart et al. (1995) indicate, are not as clearly defined in healthcare as in manufacturing because of the uniqueness of physician, patient and payer / purchaser associations. Thus, Cerne (1993) indicates that provider networks under managed competition will require new *strategic planning partnerships* between hospitals and physicians, community leaders and the business community.

In this context, Collins et al. (1994) have referred to the sensitivity of applying "market-related" approaches to reforming healthcare services delivery and provision, which are borrowed from private sector management principles and practices that mainly revolve around the notion of competition. They highlight the fact that despite the apparent inefficiency of the public sector in producing and delivering public goods and services, which has been highlighted by the proponents of the "market-based" orthodoxy of healthcare management reform, nevertheless, governments in all

countries have often been involved in funding healthcare due to reasons related to basic human and social rights, as well as equality and fairness.

Thus, Collins et al. (1994) warn against the danger of inappropriate transfer of the market approach to the public sector, as a result of not recognising the specific characteristics of the public, as opposed to the private, sector. This warning has put the issue of the suitability of applying "market-based" approaches to healthcare management and reform under questioning and scrutiny. The adoption of "private sector" techniques of management in the public sector, as a result of the apparent efficiency of the private sector, can well be based on an oversimplified view of private sector management, as Stewart and Walsh (1992) point out. Thus, particular care has to be paid to the process of transferring management practices from the private to the public sector, since as Collins et al. (1994) contend, applying market style reforms on the healthcare sector is showing distinct signs of restricting the analysis and development of healthcare management and planning. This, according to Collins et al. (1994), is a matter for considerable concern as the adoption of market-style reforms can generate unforeseen, and in some cases, negative consequences.

In this context, they explain that research concerned with management in the private sector has shown that it has to adapt to a range of variables, one of which is form of production or service. Thus, they suggest that the particular context or nature of healthcare management may well require some modification of the notions of competition and other business-related concepts when applied in healthcare management context. In this way, Collins et al. (1994) indicate that interchange of experiences between the public and private sectors should take into account the essential differences between them. Such differences include:

- The political nature of policy-making in the public sector and its goal of equity.
- The requirements of co-ordinated and integrated action between organisations.
- The nature of political accountability.

Such a restriction of the analysis and development of healthcare management and planning, as a result of expediting market-based reforms too far too fast, has pushed for the need for strengthening management research and development as a basis for

effective healthcare sector reform. Such a need has also been stressed by The Department of Health (2000) White Paper: "*The NHS Plan: A Plan for Investment. A Plan for Reform*", which has inextricably linked between the promise of providing more resources to the NHS with the need for managerial and organisational reform.

As discussed earlier in **section 2.4**, the drawbacks of market-based reform of the NHS, which have been highlighted through the aforementioned NHS Plan, have emphasised the need to end the competitive stance in the NHS internal market and replace it with a focus on collaboration, co-ordination, integration and partnership, in place of competition. Thus, the proceeding sections will highlight the suitability of an alternative approach to strategy, to a healthcare context. Such an approach emphasises notions of collaboration, consolidation of resources, integrated care, partnerships and alliances, which refer to a new way of managing and delivering healthcare that can enable provider organisations to deal with, and respond flexibly and in an agile manner to, the changing requirements, demands, and pressures of today's healthcare environment.

2.6 <u>The Shift From a "Market-Based" to a "Resource-Based" View of Strategy</u>

Much of the strategy literature has paid considerable attention to analysing the impact of the external environment on the competitive position of the organisation, to the extent that it has largely ignored the role of the distinctive or idiosyncratic resources of the organisation, in accruing it a competitive edge over its rivals (Barney, 1991; De Toni and Tonchia, 2003). This overemphasis in attaching greater importance to the likely impact of environmental opportunities and threats on organisations' competitiveness has been mainly due to two main assumptions promulgated by the advocates of the Industrial Organisation model of competitive advantage, including Bain (1968), Scherer (1980), and Porter (1980, 1981, 1985). These are:

1. Organisations within an industry are identical in terms of the strategic resources they control.
2. Even if resource heterogeneity develops in an industry, such heterogeneity will be short lived because the resources, which organisations use in their strategies, are highly mobile.

In this way, environmental models of competition largely understate the role of organisational resources and capabilities in distinguishing an organisation from another and, thus, accruing it competitive advantage. Instead, such environmental models place heavy emphasis upon industry structural characteristics as well as competitive strategy as the main basis, upon which competitive advantage can be developed. However, such promulgators of the resource-based view of strategy as Wernerfelt (1984), Barney (1991, 1995, 1996, 2001), Peteraf (1993), and Grant (1991, 1996a, 1996b), have emphasised the important role of an organisation's unique resources and capabilities in distinguishing an organisation from its competitors and, thus, developing competitive advantage. This led to the fairly recent emergence of a number of alternative perspectives to strategy, which adopted resource and competence based approaches to analysing and explaining how superior performance and competitiveness can be built and maintained.

De Toni and Tonchia (2003) explain that a number of terms were coined to refer to such recent strategy views, which include: the Resource-Based View (RBV), Competence-Based Competition (CBC), Competence Theory (CT), and Dynamic Capabilities Approach (DCA). These emerging views have gradually become the most concrete and plausible alternative to the dominant strategic model of the Industrial Organisation, as De Toni and Tonchia (2003) indicate. Such strategy approaches emphasising the important role of unique resources and core competencies in accruing an organisation an advantage over its rivals, have been advocated on the basis of the following two main assumptions:

1. Each organisation is a collection of unique resources and capabilities, which provide the basis for its strategy. Thus, differences in the performance of organisations in a particular industry may well be driven more by their unique resources and capabilities, rather than by their position, which they occupy based on an analysis of an industry's structural characteristics.

2. Accordingly, such heterogeneity in the resources and capabilities possessed by organisations can be long lasting given that these resources may not be perfectly mobile, which makes it difficult for competing organisations to imitate each other in terms of their strategic capabilities. As such, what distinguishes an organisation from another is its unique set of resources and capabilities that it controls, which provides the basis for competitive advantage.

This shift in strategic thinking in explaining the sources of competitive advantage has been highlighted by Gagnon (1999), who has indicated that the strategic management discipline has moved recently from a "market-based" to a "resource-based" view of competition. This paradigm shift has started with evidences that high performance is explained primarily by the strength of an organisation's resources, and not by the strength of its market position. Thus, such evidences support the importance of resources and capabilities in achieving competitiveness. For example, a study of businesses in mature markets conducted by Baden-Fuller and Stopford (1992) concluded that success could not be explained by the conditions of markets or the general state of the industry. Success, they indicate, was the result of managers' abilities in identifying strategies for growth on the basis of "stretching" competencies unique to the organisation to provide advantages over competition or create new ones. Thus, the emphasis has shifted towards the role of organisation-specific factors in explaining an organisation's performance. In this context, Rumelt (1991) has shown that intra-industry differences in profits are greater than inter-industry differences in profits, strongly suggesting that the different profitability of firms may well depend on the unique individual performances of single organisations, rather than on the structural characteristics of the industry to which the organisations belong. Jacobsen (1988) and Hansen and Wernerfelt (1989) made similar findings.

Thus, Roth and Jackson (1995) indicate that the resource-based view of competition implies that any source of superior performance is less likely to be market specific and more likely to be organisation specific. At the heart of such a framework based on the "resource-based" view of strategy lies the concept of *strategy development as stretch and leverage*, which Hamel and Prahalad (1994) develop its concept that distinguishes it from the *strategic fit* concept.

In the context of explaining this framework, they indicate that in its strategic meaning, *strategic stretch* involves a situation whereby there is a chasm or gap between ambition or managerial goals and an organisation's resources. Such a gap or misfit between resources and aspirations is believed to provoke and motivate the organisation to stretch its resources and leverage them in a more efficient and creative manner than those organisations, which have abundant resources but scarce ambitions, in an effort designed to enable the organisation to meet its ambitions and

thus contend with hungry rivals. In this context, Hamel and Prahalad (1993) stress the point that it is not the abundance of resources and their allocation to opportunities in the market which alone can achieve and sustain the competitiveness of an organisation in the market place, but it is rather, the strategic practice of stretch that manifests the important role of creativity, resourcefulness, and leverage in responding to scarcity and achieving competitiveness. This is because "*Abundant resources alone won't keep an industry giant on top when its hungrier rival practices the strategic discipline of stretch*" (Hamel and Prahalad, 1993, page 77).

Such stretch and leverage of resources becomes particularly important in the case of the National Health Service (NHS), especially when given the limited resources available, and the fact that expectations and demands quite often exceed availability of resources, as Griffiths (2002) and Cereste et al. (2003) explain. In this context, Griffiths (2002) highlights the importance of leveraging the resources available to NHS organisations, a contention that has also been supported by the promise, which the New Labour Government has made in The Department of Health (2000) White Paper: "*The NHS Plan: A Plan for Investment. A Plan for Reform*", of coupling investing more resources into the NHS with the need for managerial and organisational reform in the NHS. The coupling of injecting more resources into the NHS (A Plan for Investment) with the need for reform (A Plan for Reform) emphasises the need for effectively managing resources in the best manner possible, which enables adaptation and response to the requirements, pressures and demands of the environment. Freemantle (1995) explains the reason behind such a focus on efficiency and effectiveness in using public funds, when he quotes Klein (1983) as arguing that one responsibility of a socialised healthcare system, which is resourced through public funds, is to provide the best possible healthcare for individuals given the inevitably finite resources available.

Despite promulgating resource stretch and leverage, nevertheless, Hamel and Prahalad (1993) argue that the dominant strategy frame reflected in environmental fit is not wrong, but that it is unbalanced. That every organisation must ultimately effect a fit between its resources and the opportunities it pursues goes without saying. But the predominance of this view in corporate strategic thinking has encouraged and led to the overlooking of an alternative perspective, in which the concept of *stretch*

supplements the idea of *fit*. Therefore, according to this new thinking, in addition to aligning an organisation's resources to market opportunities, strategy can also be seen as building on or stretching an organisation's resources and competencies/capabilities to create opportunities or to capitalise on them.

Thus, strategy development by stretching an organisation's resources and capabilities would be with no disregard to the opportunities and threats inherent in the competitive environment affecting an organisation. This contention emanates from Hamel and Prahalad's (1994) conviction, in that any strategy that is not grounded in a deep understanding of the dynamics of competitive rivalry will fail. Hart (1995) points out that, in fact, many recent contributions of management scholars concerning the relative importance of an organisation's internal resources and capabilities, versus environmental factors, to sustained competitive advantage, attempt to integrate both of these internal and external perspectives. Recent examples of authors supporting the call for an approach integrating both of these perspectives to strategy development include Hitt et al. (1999), De Toni and Tonchia (2003) and Acur and Bititci (2004).

Therefore, Hitt et al. (1999) explain that *an organisation* is increasingly viewed as being both: -

⇒ A bundle of *market activities*, which are understood through the application of the *Industrial Organisation model*, and

⇒ A bundle of *resources*. The development and effective use of an organisation's *resources, capabilities, and core competencies* is understood through the application of the *Resource-Based model*.

The trigger for such a move in driving strategy development from the resources and competencies of the organisation, as indicated by Collis and Montgomery (1995), has essentially been due to the pace of global competition and technological change in today's world, which has created a dynamic environment that is characterised by hyper-competition and fast changes in all aspects of operation. In this context, Hayes et al. (1996) argue that the basic conceptualisation of strategic planning is witnessing a fierce debate concerning the bases upon which successful organisations have been able to build and sustain their competitive advantage. The dramatic changes in the world's competitive environment and in the nature of industrial competition,

represented by the huge increase in the number of new entrants, the emergence of the global economy, and rapid technological changes, have created a *new business environment reality* that is characterised by hyper-competition, unpredictability and rapidly changing environmental conditions.

As a result, such a new reality has rendered many of the *traditional views* examining the basis, upon which competitive advantage can be built, as ineffective due to the changes in the nature of the business environment, from being reasonably stable or static to being ever-changing, hyper-competitive, and dynamic. In view of such a dynamic environment, organisations that still had relatively *stable reactive fit strategies* complained that their strategic planning was too static and too slow. Hitt et al. (1999) refer to such a situation, when they indicate that *conventional* sources of competitive advantage are not as effective in the new competitive landscape. This is supported by Hayes et al. (1996), who have highlighted the fact that practitioners and academics alike have discovered that competitive advantage "*rests less on a firm's ability to identify and defend an apparently attractive market position than on the cultivation of organisational capabilities that enable it to create and deliver a product or service that is regarded as exceptional- even unique- by its customers*" (Hayes et al., 1996, page vii).

Based on this recent understanding of building and sustaining organisational competitiveness, Hamel and Prahalad (1994) argue that the goal is to enlarge the concept of strategy so that it more fully encompasses *the emerging competitive reality*. Emerging from such a new dynamic reality is a recognition of the need to emphasise the importance of incorporating dynamic resources and capabilities, which can respond to dynamic markets or environments, in strategy development and planning.

In this context, Hitt et al. (1999) argue that the new competitive landscape mandates that an organisation build a unique set of resources and capabilities that are dynamic so as to achieve congruence and flexibility with such an environment. Teece and Pisano (1994) as well as Teece et al. (1997) highlight such an emphasis through the development of the "dynamic capabilities" approach, which will be discussed in section **2.8**.

As a result, a new framework in strategic thinking has been proposed, which is based on the premise that an organisation's resources and capabilities can be valuable enough to serve as the basis for strategy. Such a framework is known as "*The Resource-Based Model of Above-Average Returns*" (See figure 2.5).

1. Identify the firm's resources. Study its strengths and weaknesses as compared to those of competitors.	**Resources** • Inputs into a firm's production process
2. Determine the firm's capabilities. What do the capabilities allow the firm to do better than its competitors?	**Capability** • Capacity of an integrated set of resources to integratively perform a task or activity
3. Determine the potential of the firm's resources and capabilities in terms of a competitive advantage.	**Competitive Advantage** • Ability of a firm to outperform its rivals
4. Locate an attractive industry.	**An Attractive Industry** • An industry with opportunities that can be exploited by the firm's resources and capabilities
5. Select a strategy that best allows the firm to exploit its resources and capabilities relative to opportunities in the external environment.	**Strategy Formulation and Implementation** • Strategic actions taken to earn above-average returns
	Superior Returns • Earning of above-average returns

Figure 2.5: "*The Resource-Based Model of Superior Returns*", Hitt et al. (1999) Strategic Management: Competitiveness and Globalisation, Concepts. Cincinnati, Ohio: South-Western College Publishing, page 23.

2.7 The Philosophy of the "Resource-Based" View of Strategy.

The basic contention of the "Resource-Based Model" is that a sustainable competitive advantage is achieved when organisations implement a value-creating strategy that is grounded in their own unique resources, capabilities, and core competencies. Such a strategy should allow the organisation to best exploit its core competencies, through leveraging them effectively to take advantage of opportunities in the external

environment. In this context, Hitt et al. (1999) explain that the decisions involved in identifying, developing, and deploying an organisation's resources, capabilities, and core competencies, have a significant influence on the ability of an organisation to develop competitive advantage and earn above-average returns.

Therefore, in order to facilitate the undertaking of such decisions concerned with analysing an organisation's internal resources, capabilities, and core competencies, such constituent parts of competitive advantage under a resource-based view, as well as the inter-relationships between them, are discussed. Barney (1991) considers an organisation's resources to include all assets, capabilities, organisational processes, attributes, information, and knowledge, which are controlled by an organisation in order to enable it to conceive of and implement strategies that improve its efficiency and effectiveness. He classifies these numerous possible resources generated by a variety of authors (Becker, 1964; Williamson, 1975; Hitt and Ireland, 1986; Tomer, 1987) into three categories, which include physical, human, and organisational capital resources. This categorisation is largely shared by other scholars, including Grant (1991), Barney (1995), Collis and Montgomery (1995), and Johnson and Scholes (1999).

However, resources alone do not typically yield a competitive advantage, since according to Johnson and Scholes (1999), it is rarely possible to be able to fully explain the differences in the performance of different organisations in the same industry / sector by differences in their resource base per se. Superior performance will also be determined by the way in which resources are deployed to create competencies in the organisation's separate activities, as well as by *the processes* of linking these activities together to sustain excellent performance.

In this context, recent authors on the subject (De Toni and Tonchia, 2003; Mills et al., 2003; Pandza et al., 2003a; Rungtusanatham et al., 2003; Wilk and Fensterseifer, 2003) explain that such a conceptual distinction between resources and competencies / capabilities is a typical connotation of the resource-based view. They highlight the distinctions made by a number of prominent writers in this field (i.e. Aaker, 1989; Grant, 1991; Amit and Schoemaker, 1993) between the two concepts. For example, according to Grant (1991), resources are the inputs into the productive process, which need accumulation and co-ordination and, as such, they are often considered the basic

unit of analysis. Competencies, on the other hand, are placed at a higher level of the aggregation, and identify the capacity of a group of resources, if properly managed, to carry out an activity or reach a target. Aaker (1989) as well as Amit and Schoemaker (1993) support this consideration of resources as the constituent parts, upon which the capability / competence of the organisation is built.

For instance, Amit and Schoemaker (1993) describe the *resources* as a group of possessed or controlled factors available to the firm, that can be transferred or acquired from outside, while the *competencies* represent the capacity to spread resources by means of organisational processes so as to obtain the desired results. In support of the essential role of organisational processes or routines in building organisational capabilities, through co-ordinating and integrating tangible and intangible resources, Rungtusanatham et al. (2003) indicate that "*capabilities are organisational routines or mechanisms that enable a firm to acquire and deploy resources to facilitate the production and delivery of goods or service*" (Rungtusanatham et al., 2003, p. 1089). Moreover, Pandza et al. (2003a) inextricably link between an organisation's routines or processes and its resources, particularly intangible or tacit ones, in explaining the composition of capabilities. They state that: "*Capabilities constitute individual skills, tacit forms of knowledge and social relations that are embedded in a firm's routines, managerial processes, forms of communication and culture*" (Pandza et al., 2003a, pp. 1010-1011).

This conceptualisation of resources and capabilities highly resembles Aaker's (1989) terms of assets and skills, respectively: assets (resources) are linked to the possession, while skills (capabilities) are linked to the doing. Therefore, in essence, a capability is "*the capacity for a set of resources to integratively perform a task or an activity*" (Hitt et al., 1999, page 22). The importance of the notion of integration is, hence, considered instrumental in building organisational capabilities / competencies from a set of resources / assets, as Teece et al. (1997) explain. They indicate that what constitutes organisational competencies is the assembly of firm-specific assets in integrated clusters, in a manner that enables distinctive activities to be performed. The role of integration and co-ordination in building as well as regenerating an organisation's capabilities / competencies, will be discussed in sections 2.8 and 2.9 addressing the "dynamic capabilities" approach.

Such a nature of capabilities has often made them more suitable in conferring competitive advantage to an organisation, compared with resources. Hitt et al. (1998) explain the key reason for considering capabilities as the more likely source to yield competitive advantage, by indicating that the manner, in which the organisation forms, nurtures, and exploits core competencies that are grounded in capabilities, is less visible to competitors and, hence, more difficult to understand and costly to imitate. In support of this are McGrath et al. (1995), who argue that a competitive advantage can be created through *the unique* bundling of several resources. Therefore, the key to good or poor performance is usually found in the competencies/capabilities, which are reflected in the way in which several resources are grouped or bundled together to perform the activities of the organisation, and the processes through which these activities are linked together, rather than in the resources per se.

Emanating from gaining an understanding of the nature of organisational resources and capabilities is the identification of an organisation's core competencies. As defined by Grant (1991) as well as Lado et al. (1992), *core competencies* are resources and capabilities that serve as a source of competitive advantage for an organisation over its rivals. It is worth noting here that the emphasis is placed more on core competencies than on unique resources in building competitive advantage, since resources alone are of little value unless there are competencies in deploying them into value-adding activities. Also, it is worth noting that not all of an organisation's resources and capabilities have the potential to be the basis for competitive advantage. This potential is realised when resources and capabilities are *valuable*, *rare*, *costly or difficult to imitate*, and *non-substitutable*, as explained by Barney (1991, 1995). When these four criteria are met, resources and capabilities become *core competencies*. In this way, every core competence is a capability, but every capability is not a core competence (See figure 2.6).

Based on the above discussion, *resources* are the source of *capabilities*, some of which lead to the development of an organisation's *core competencies*. By using their core competencies, organisations are able to perform activities better than competitors or that competitors are unable to duplicate. Hence, core competencies are "*the essence of what makes an organisation unique in its ability to provide value to customers over a long period of time*" (Leonard-Barton et al., 1994, page 123). Core competencies,

then, are actually a value-creating system through which an organisation seeks strategic competitiveness and above average returns.
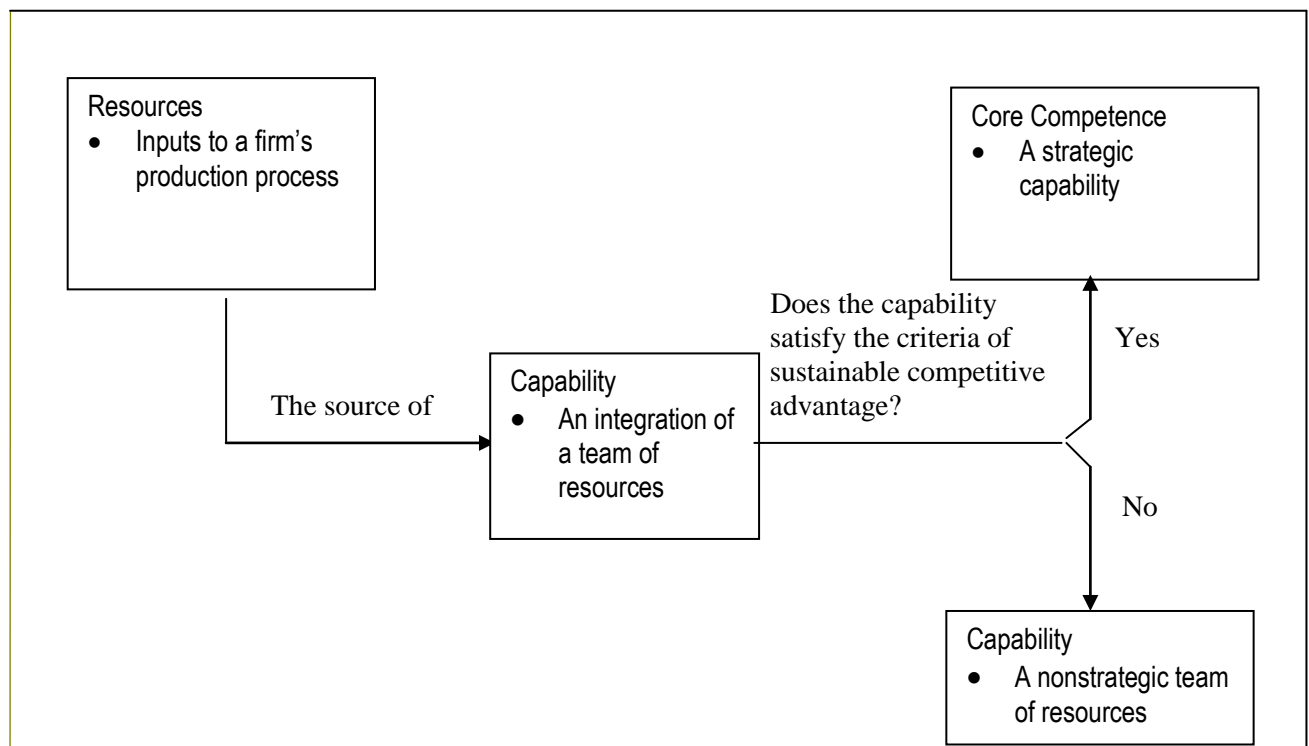
Figure 2.6: "*Core Competence as a Strategic Capability*", Hitt et al. (1999) Strategic Management: Competitiveness and Globalisation, Concepts. Cincinnati, Ohio: South-Western College Publishing, page 99.

This strategic importance of core competencies in achieving competitive advantage for an organisation is highlighted by Prahalad and Hamel (1990) and Hamel and Prahalad (1994). They argue that core competencies are considered a source of competitive advantage, in that they are competitively unique and make a contribution to customer value. As such, there is a need to identify and discuss those criteria or attributes, which make resources and capabilities distinctive, and, thus, facilitate competitive advantage. This is considered particularly important when embarking on an effort designed to develop or build such core competencies.

In this vein, such scholars as Prahalad and Hamel (1990), Barney (1991, 1995), Peteraf (1993), Hamel and Prahalad (1994), Collis and Montgomery (1995), and Johnson and Scholes (1999), have listed a number of criteria, which they refer to as attributes or tests that should be applied, in order to decide which resources and capabilities are considered unique, in a particular organisation. Such criteria mainly centre on those specified by Barney (1991, 1995) and Collis and Montgomery (1995),

which include four main attributes that are required from a resource or capability to have in order to hold the potential of generating competitive advantage and sustaining it.

However, it is important to highlight in this context that one of the main criticisms of resource and competence based approaches to strategy, as De Toni and Tonchia (2003) explain, centre on the lack of a theoretical model, which clearly defines the links between resources and competencies on one side, and sustainable competitive advantage on the other. They cite Doz (1996) as arguing that such a lack of a solid theoretical and empirical base makes it difficult to establish and distinguish the effects of single resources and competencies on the performance of the organisation. This results in the problem of analysing the particular causal connection between resources and competencies possessed, and the performance obtained due to these resources and competencies.

In relation to this criticism is Montgomery's (1995) remark that a fundamental characteristic of competence based approaches to competitiveness, which should be re-evaluated, is the optimism and emphasis placed on the capacity of the resources to give a competitive advantage. Despite this limitation, it is still arguably quite useful to review the contributions of "resource and competence based competition" scholars, since they facilitate the identification of criteria or attributes helpful in deciding whether resources and capabilities *hold the potential* of generating and sustaining a competitive advantage for an organisation. Reviewing the contributions of the aforementioned scholars in identifying such criteria reveals that these include the following:

1. Valuable Resources / Core Competencies: - A number of authors (Prahalad and Hamel, 1990; Barney, 1991; Hamel and Prahalad, 1994; Collis and Montgomery, 1995; Teece et al., 1997; Gilgeous and Parveen, 2001) have strongly argued that an organisation's resources and competencies can only be considered as possible sources of competitive advantage when they are valuable. Such a criterion emanates from the traditional strategic fit principle, which is based on the premise that organisations are able to improve their performance when their strategies exploit opportunities or neutralise threats. This is indicative of the contention that the resource-based view of strategy builds on a market-based strategy for

achieving competitive advantage and complements it, in terms of acknowledging the fact expressed by Collis and Montgomery (1995), in that the value of resources is determined in the interplay with market forces.

Thus, the need for combining the internal analysis of phenomena within organisations with the external analysis of the industry / sector and the competitive environment, as expounded by Collis and Montgomery (1995) and Teece et al. (1997), becomes evident under a resource-based view of strategy. In this context, resources and competencies are considered valuable when they enable an organisation to conceive of or implement "value-adding" strategies that improve its strategic competitiveness, through exploiting environmental opportunities, as suggested by Barney (1991).

Based on this, regardless of any other attributes that resources may have, which could qualify them as sources of competitive advantage, such as rareness, inimitability, and non-substitutability, without the attribute of value being applicable, such resources cannot qualify as sources of competitive advantage, or in other words become unique. This is because an invaluable resource would not enable the organisation's strategies to exploit opportunities or neutralise threats inherent in its environment. As such, it would be of no value or benefit for the organisation in its operation in its market place, and thus, could not be considered as contributing to the organisation's competitiveness.

However, De Toni and Tonchia (2003) point out that the consideration that "only valuable resources can be sources of competitive advantage" has led to what is called the "*tautology*" critique. This critique cautions against drawing a rigid or strict cause and effect relationship between only one attribute of firm resources, which is that of being valuable, and competitive advantage. Instead, Barney (2001) has stressed that the competitiveness of an organisation is a function of four main attributes of its resources: their value, rarity, inimitability, and unsubstitutability.

2. Extending from the importance for an organisational resource to be able to deliver a significant contribution to customer-perceived value is the attribute of "extendibility". According to Prahalad and Hamel (1990), extendibility refers to the ability of the organisation to deliver a number of products and/or services based on the same competence or capability. This can consequently ensure access

to a wide variety of product and/or service markets and, thus, satisfy a wider segment of customers. Therefore, such an ability to imagine an array of new products or services issuing from the competence, as argued by Hamel and Prahalad (1994), is what identifies a competence as core from the point of view of the organisation, because in this way, it forms the basis for entry into new product and/or service markets, thus superseding other competitors.

3. Rare or competitively unique resources: - If a large number of competing organisations possess similar valuable resources, then it follows that none of these organisations will be able to consider such valuable resources sources of competitive advantage. This is due to the basic fact expressed by Barney (1991), in that possessing similar valuable resources by such a large number of organisations provides each of those organisations possessing them with an ability to exploit them in a similar manner, thus enabling each organisation to implement a common strategy that does not give any organisation a competitive advantage over another.

Thus, Hamel and Prahalad (1994) emphasise that in addition to making a significant contribution to customer-perceived value, a competence must also be competitively unique in order to qualify as a core competence, or in other words, it should differentiate the competitor possessing it. Therefore, the more difficult it is for such resources and capabilities to be imitated or copied, the more sustained the competitive advantage that they will generate. This, in turn, leads to discussing the reasons, which make such resources and capabilities hard or difficult to copy or imitate by other competitors.

4. Difficult to imitate, or imperfectly imitable, resources: - Valuable and rare resources and capabilities should also be difficult to imitate, in order to defend their rareness and robustness in generating a sustained competitive advantage. In this vein, Barney (1991) identifies three reasons, which individually or in combination, are responsible for making an organisation's resources and capabilities difficult to imitate perfectly or "imperfectly imitable", a term which he explains to have been developed by Lippman and Rumelt (1982) and Barney (1986a, 1986b), and refers to the difficulty of imitating a resource exactly as possessed by another competitor. These reasons include:

a) <u>Unique historical conditions and imperfectly imitable resources</u>: - An important assumption of most environmental models of competitive advantage is that an organisation's performance can be solely understood through the influence of its external environment and the opportunities and threats inherent in it, thus largely putting aside the important influence and effect of an organisation's particular history, and its other idiosyncratic attributes such as its experience in doing things, in understanding its performance.

However, the relevance of incorporating an organisation's unique histories and time-developed resources and competencies in explaining its performance has been emphasised by Barney (1991). He indicates that the resource-based view of competitive advantage asserts that an organisation's ability to acquire and exploit resources, to the advantage of its performance or competitive position, also depends upon its place in time and space. This, according to Collis and Montgomery (1995), refers to the build up and accumulation of an organisation's resources and/or competencies as being the result of a particular "path dependency", which represents all that has happened and that the organisation has done along the path taken in the accumulation or acquisition of these resources/competencies. Such a perspective in explaining the antecedents of an organisation's current performance has its roots in path-dependent models of economic performance, which Barney (1991) indicates to have been employed by several economists (Arthur, 1983, 1984a, 1984b; Arthur, Ermoliev and Kaniovski, 1984; David, 1985; Arthur, Ermolieve and Kaniovsky, 1987), to suggest that the performance of an organisation does not depend simply on the industry / sector structure within which an organisation finds itself at a particular point in time, but also on the path an organisation followed through history to arrive where it is.

The significance of these historical paths in accruing an organisation competitive advantage over its competitors has been highlighted by Barney (1991), when he explains that: "*If a firm obtains valuable and rare resources because of its unique path through history, it will be able to exploit those resources in implementing value-creating strategies that cannot be duplicated by other firms, for firms without that particular path through history cannot obtain the resources necessary to implement the strategy*" (Barney, 1991, p. 108). Examples discussing how different types of

organisational resources can be acquired, depending upon the unique historical position of the organisation, include the following:

- An organisation that locates its facilities on a much more valuable location than was anticipated when the location was chosen. This particular resource acquisition, as indicated by Collis and Montgomery (1995), accrues an organisation "physical uniqueness", which by definition characterises something that almost cannot be copied.

- Also, an organisation may gain an imperfectly imitable resource from the history-dependent nature of its individual human capital.

- An organisation with a unique and valuable organisational culture that emerged in the early stages of an organisation's history may have an imperfectly imitable resource advantage over organisations founded in another historical period, where different organisational values and beliefs come to dominate.

b) Causal ambiguity and imperfectly imitable resources: - Causal ambiguity exists when the link between the resources controlled by an organisation and an organisation's competitive advantage is not understood or understood only imperfectly. In this situation, it is difficult for organisations that are attempting to duplicate a successful organisation's strategies through imitation of its resources to know exactly or definitely which resources it should imitate. This is because it is not clear which resources can be described as generating a competitive advantage, since there will always be some other non-described organisational resources.

In order for an organisation's resources to be a source of competitive advantage under the condition of causal ambiguity, Barney (1991) cites Lippman and Rumelt (1982) as indicating that all organisations existing in an industry / sector, whether possessing resources that generate competitive advantage or not, must be faced with the same level of causal ambiguity, that is, none of them should have a better understanding of the impact of such resources on competitive advantage. This is because once knowledge of the link between an organisation's resources and its ability to implement certain strategies is diffused throughout competing organisations, any competitive advantage that is based on causal ambiguity will no longer exist.

c) <u>Social complexity and imperfectly imitable resources</u>: - The third reason that contributes to the difficulty of perfectly imitating an organisation's resources and capabilities is that they may be very complex social phenomena, which are *beyond the ability of organisations to systematically manage and influence*. Hence, even if the link between these socially complex resources and capabilities, and competitive advantage, is known or understood, this does not necessarily imply that organisations without such capabilities can engage in systematic efforts to create them. Hence their characteristic of constraining the ability of other organisations to imitate those that are characterised by competitive advantages based in such complex social phenomena. Examples of such resources include the interpersonal relations among managers in an organisation, as well as an organisation's culture and reputation.

5. Elaborating on the contention that core competencies should be *difficult for competitors to imitate*, in order to defend their robustness in generating competitive advantage, Teece et al. (1997) explain that an important factor in sustaining the role of such competencies in generating competitive advantage is that if they are based on a collection of routines (processes), skills, and complementary assets (resources) that are *difficult to imitate*.

In this context, Prahalad and Hamel (1990) indicate that an important factor, which contributes to the difficulty of imitating a capability, is that if it is a complex harmonisation of individual skills, resources, and knowledge bases, or in other words, if it is a comprehensive pattern of internal co-ordination (*managing linkages*) and learning (t*acit and explicit knowledge*). The difficulty of imitation, thus, arises from the complex harmonisation of the various skills and resources that form the core competence. Based on this, *complex competencies/capabilities*, which are usually underpinned by the co-ordination and integration of a number of key skills and resources and are thus not explained by one factor but by linked factors, are considered as being difficult to imitate by other competitors. The rationale behind considering this characteristic of core competencies as capable of accruing an organisation competitive advantage lies in the fact expressed by Hamel and Prahalad (1994), in that a rival might be capable of acquiring some of the skills and/or resources that comprise the core competence, but *it will find it difficult to duplicate*

the more or less comprehensive pattern of internal co-ordination and learning of the skills and resources underlying the core competence.

Emanating from this is another characteristic of core competencies, which Johnson and Scholes (1999) indicate increases the difficulty to imitate such core competencies by competitors. Such a characteristic is that of them being embedded in *organisational practice or knowledge* so as to be tacit. This means that it is often better for core competencies to be identified with aspects of the organisation that are not visible or that are intangible, since then it would be relatively difficult for competitors to identify them. Much of these core competencies are found in operational levels of activity in the organisation, and as such they are part of the tacit knowledge embedded in the organisation's routines, rituals and culture. This is supported by Nelson and Winter (1982) as well as Teece (1982), who indicate that many organisational routines are quite tacit in nature. Thus, this makes competencies not easily evident to and, hence, not easily identified by competitors.

In this context, Pandza et al. (2003a) highlight the *system complexity* of the phenomenon of capability development. They argue that the complexity of a capability lies in its structural composition of a series of elements that constitute a capability, and which have meaning and value only when linked together. Thus, they indicate that "*System complexity is characterised by a high level of interdependency among elements that constitute a capability*" (Pandza et al., 2003a, p. 1015). Based on this, the complexity in any system, as Potts (2000) suggests, is a manifestation of the number and diversity of the elements in the system and the nature of the connections among those elements. Also, supporting the inherent complexity of an organisation's core competencies are Hamel and Prahalad (1994), who stress that it is the integration of various skill and knowledge bases as well as tangible and intangible resources, to deliver significant customer-perceived value, which is the hallmark of a core competence. Based on this integration of various skill and knowledge bases, they indicate that a core competence represents the *sum of learning* across individual skill sets and individual organisational units.

Collis and Montgomery (1995) have supported such a conceptualisation of core competencies, when they indicated that these competencies emphasise the importance of the skills and collective learning embedded in an organisation, and of management's ability to marshal them. This signifies the importance of *organisational processes* in *consolidating and integrating* organisation-wide knowledge bases, technologies, and skills into competencies that empower individual organisations to adapt quickly to changing opportunities, which is considered by Prahalad and Hamel (1990) as the real source of advantage.

2.8 The Dynamic Capabilities Approach and its Emphasis on Strategic Flexibility and Agility

Emanating from the vital role of organisational routines or processes in building and regenerating capabilities/competencies, Teece and Pisano (1994) and Teece et al. (1997) advocate the "*dynamic capabilities*" approach. They do so in an attempt to identify a paradigm discussing the sources of competitive advantage in dynamically changing business environments. This approach emphasises and manifests the important role of organisational processes in co-ordinating as well as integrating an organisation's skills and knowledge bases, in the vein of building and regenerating its core competencies so as to achieve congruence with the changing environment. In this endeavour, Teece et al. (1997) describe aspects of the "*dynamic capabilities*" approach, in the vein of providing assistance in understanding how certain organisations build competitive advantage in regimes of rapid change.

They indicate that in such a new competitive landscape characterised by rapid and often unpredictable change, the "dynamic capabilities" framework supplements the resource-based model by arguing that organisations should consistently develop, adapt, and renew their competencies in order to be able to respond effectively to the changes in the dynamic environment, and consequently achieve competitive advantage. In this way, dynamic capabilities reflect an organisation's capacity to achieve new and innovative forms of competitive advantage, by consistently renewing competencies to respond to the requirements of a changing environment. This is supported by Teece et al. (1997), who define dynamic capabilities as "*the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments*" (Teece et al., 1997, p. 516).

In this context, Pandza et al. (2003a) explain that the resource-based view and the dynamic capabilities approach have addressed the issue of how organisations create and sustain a competitive advantage in different ways. According to the resource-based view, competitive advantage and durable performance differences between organisations are accounted for by asymmetric resource endowments with differential productivities. However, the dynamic capabilities perspective highlights that differences in performance among organisations over time are not solely attributed to the possession of unique resources and capabilities. Rather, such differences in performance according to this perspective are mainly explained by differences in the capacity of organisations to accumulate, deploy, renew, and reconfigure such resources and capabilities in response to changes in the external environment. In this way, Pandza et al. (2003b) indicate that the dynamic capabilities approach shifts the emphasis from static firm-specific assets to the dynamic process of developing capabilities, in explaining how organisations can maintain dynamic congruence with ever changing environmental conditions and, thus, sustain their competitiveness. Hence, the focus is on how organisations develop and regenerate specific capabilities that allow them to respond to shifts in the business environment.

Supporting such a difference between the resource-based view and the dynamic capabilities approach are De Toni and Tonchia (2003), who point out that the ability to sustain long-term competitive advantage in today's dynamic business environment lies in the resource configurations that managers build using dynamic capabilities, not in the capabilities themselves. This is due to the reason that as the pace of change in the environment affecting an organisation intensifies, resulting in more unpredictable effects and requirements, the emphasis shifts towards creating new knowledge for new situations. Hence the need for renewing and regenerating existing organisational knowledge and capabilities, as the dynamic capabilities approach advocates.

In this way, the "dynamic capabilities" literature emphasises the contention that following a *"resource-based" strategy* of accumulating valuable resources and configuring them into core competencies to achieve competitive advantage, has often proved not to be enough to support a sustained competitive advantage in a changing business environment. Instead, the dynamic capabilities approach calls for an expansion on the resource-based view, which could support a significant competitive

advantage in a changing business environment. Thus, Teece and Pisano (1994) and Teece et al. (1997) point out that winners in such a dynamic business environment have been organisations that can demonstrate *timely responsiveness, as well as rapid and flexible product and/or service innovation*, coupled with *the management capability to effectively renew, reconfigure, and re-deploy internal and external competencies*.

In this sense, Teece et al. (1997) refer to "dynamic capabilities" as the *ability* to sustain competitive advantage in continuously changing environments, by emphasising <u>two key aspects that were not the main focus of attention in previous strategy perspectives</u>: -

1. The term *dynamic* refers to the shifting character of the environment and the capacity, which such an environment requires from organisations, in terms of continually renewing their competencies so as to achieve congruence with the changing environmental requirements. Teece and Pisano (1994), therefore, explain that *certain strategic responses* are required when timeliness is critical, the pace of innovation is accelerating, and the nature of future competition and industries is difficult to determine, which emphasise *responsiveness* and *flexibility*.

Zairi and Youssef (1998), in this context, emphasise the fact that the 1990s have witnessed a change in the competitiveness formula, in that timeliness, responsiveness to customer needs, as well as agility have become the main ingredients of the competitiveness equation. Such ingredients of competitiveness build on the need for quality and cost effectiveness as necessities for successful competitiveness. However, they are not alone enough to sustain such competitiveness in today's fast changing environment. Timeliness, responsiveness and agility are required to survive, advance and thrive in such an environment.

In this context, it is worthy to note that environments affecting healthcare organisations are experiencing a similar pace of change. The evidence emanating from literature concerned with health services management research in both the United Kingdom and the United States supports the contention that today's healthcare organisations are operating in increasingly changing environments. Such change is having significant impact on the way in which healthcare organisations are managed

and organised, and the challenge has become more of how such organisations can respond to the shifting environmental conditions.

2. As a result of emphasising today's dynamic environmental reality, and the subsequent need to enable organisations to respond to changes emanating from it, the term *capabilities* emphasises the key role of strategic management in appropriately adapting, integrating, and reconfiguring organisational skills, resources, and functional competencies to match the requirements of a changing environment. Thus in this way, the "*dynamic capabilities*" approach highlights the duality between:

- The need to be flexible and responsive in dealing with changes in today's increasingly dynamic environment, and

- The importance of continuously reconfiguring and regenerating organisational resources and competencies in order to enable organisations to achieve congruence with such changes and, thus, attain agility.

In this context, the dynamic capabilities approach places significant emphasis on the role of *organisational processes*, which refer to the way things are done in the organisation or what might be referred to as its routines and patterns of current practice and learning, in enabling the organisation to renew its competencies so as to respond to changing environmental conditions. This is evidenced by Teece et al. (1997), during the course of discussing the bases upon which distinctive competitive advantages can be built in rapidly changing environments. They argue, in this context, that the *competitive advantage of organisations* in rapidly changing environments is seen as resting on:

- ➢ *Distinctive processes* (ways of co-ordinating and combining through organisational and managerial processes), shaped by

- ➢ *The organisation's (specific) asset positions* (such as the organisation's portfolio of difficult-to-trade *knowledge assets*), and

- ➢ *The evolution path(s)* it has adopted or inherited, which represent the historical path that the organisation had followed in acquiring its portfolio of skills, technology, and knowledge bases.

With regard to distinctive processes, these serve three roles, which are consistent with those roles specified by Garvin (1998) for organisational processes. Such organisational processes, which include work, behavioural, as well as change processes, serve the three roles of co-ordination/integration, learning, and reconfiguration, respectively (See table 2.1). The first two roles: *co-ordination / integration* and *learning,* are those that are involved in competence/capability building under the "dynamic capabilities" approach.

	Work Processes	**Behavioural Processes**	**Change Processes**
Definition	• Sequences of activities that transform inputs into outputs	• Widely shared patterns of behaviour and ways of acting/interacting	• Sequences of events over time
Role	• Accomplish the work of the organisation	• Infuse and shape the way work is conducted by influencing how individuals and groups behave	• Alter the scale, character, and identity of the organisation
Major categories	• Operational and administrative	• Individual and interpersonal	• Autonomous and induced, incremental and revolutionary
Examples	• New product development, order fulfilment, strategic planning, and manufacturing	• Decision making, communication, organisational learning	• Creation, growth, transformation, decline

Table 2.1: "*An Organisational Processes Framework*", Garvin (1998) "The Processes of Organisation and Management", Sloan Management Review, Vol. 39, No. 4, page 41.

Eisenhardt and Martin (2000) also support such an important role of organisational processes in building dynamic capabilities, in that they emphasise the consideration of dynamic capabilities as *specific strategic and organisational processes or routines* embedded in organisations, by which organisations synthesise, integrate and acquire knowledge assets, and generate new applications from those resources. Thus, they define dynamic capabilities as: "*The firm's processes that use resources- specifically the processes to integrate, reconfigure, gain and release resources- to match and even create market change. Dynamic capabilities thus are the organisational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die*" (Eisenhardt and Martin, 2000, p. 1107).

In this way, diverse knowledge and skill bases are integrated in an effort designed to build and renew organisational core competencies, and learning is often considered the mechanism by which knowledge can be generated and renewed, in order to continuously sustain competitive advantages in changing environments.

Based on this, dynamic environments require that competencies and capabilities be subject to continuous regeneration and renewal, which as Gagnon (1999) argues necessitates organisational change processes that allow for flexibility. This entails an increasing dependence on *dynamic capabilities* to face changing environmental conditions. Such an important role of organisational processes in building dynamic capabilities is supported by Gagnon (1999). He argues that the need for *dynamic organisational processes* is exacerbated in the case of a rapidly-changing environment, since failure may emerge as an organisation tries to fight dynamic change and hyper-competition with "static" organisational processes, which fail to embody the required agility and "dynamic" features to build up capabilities as needed. As a result, organisational agility would depend directly on an organisation's proficiency in analysing, developing, and leveraging resources, capabilities, and competencies, which can respond effectively to changes in the environment. This highlights the important role of organisational processes or routines responsible for integration, learning, and reconfiguration.

Therefore, as a consequence of the changing conditions in today's competitive environment, organisations are required to develop and acquire the ability to adapt quickly to achieve strategic competitiveness. In order for organisations to be able to do this, Hitt et al. (1999) refer to the term *strategic flexibility*, which they define as "*a set of capabilities firms use to respond to various demands and opportunities that are a part of dynamic and uncertain competitive environments*" (Hitt et al., 1999, p. 18). Such an importance attached to the ability of the organisation to effectively respond and adapt to environmental change has also been emphasised by Hitt et al. (1998). They indicate, in the context of their investigation of the issue of building and maintaining competitive advantage for organisations in the new competitive landscape, that success in the 21st century will depend first on building *strategic flexibility*.

Thus, they state that: "*Perhaps the most important attribute that firms must achieve to operate effectively in the new competitive landscape is that of strategic flexibility*" (Hitt et al., 1998, p. 26).

In this context, they indicate that dynamic core competencies enable an organisation to develop strategic flexibility, by helping it remain flexible and be able to respond quickly to changing requirements. Hayes and Pisano (1994) have supported this linkage between *dynamic capabilities* and attaining *strategic flexibility*, when they highlighted the point that strategic flexibility becomes the means for achieving competitive advantage in *dynamic hyper-competitive environments*, through *dynamic capabilities*, instead of *strategic fit*. This places particular emphasis upon the role of dynamic capabilities in facilitating competitive advantage in dynamic environments. Gagnon (1999) supports such a role of dynamic capabilities, when he indicates that organisational agility in dynamic environments increasingly depends upon dynamic capabilities.

Instead of nurturing markets, this perspective would call instead for creative strategies to nurture competencies and capabilities. Therefore, Hayes and Pisano (1994) argue that in such a dynamic and turbulent environment, an organisation should think of itself as a *collection of evolving capabilities*, which provide the flexibility needed to embark on new directions, not just as a collection of products and/or services and businesses,. Hence, Gagnon (1999) indicates that such a dynamic development and leveraging of competencies and capabilities enables organisations to respond in an agile manner to changes in environmental requirements.

In this context, Pandza et al. (2003a), building on the efforts made by Bowman and Hurry (1993), Bowman and Moskowitz (2001), Kogut and Kulatilaka (2001), and Kylaheiko et al. (2002), indicate that capability development has parallels with the application of the real options heuristic to strategy, whereby a firm's resources, capabilities and knowledge create options for future exploitation. Under this view, Pandza et al. (2003a) explain that real options are investments in physical and intangible resources that provide the organisation with contingencies in an uncertain environment. Such contingencies, thus, enable an organisation to alter a course of action in the light of new information, and it is this "flexibility" that is captured by real options analysis.

In this way, the real options concept can be considered as providing an appropriate approach to managing the uncertainty arising from the inherent complexity, which characterises the capability development phenomenon, as Pandza et al. (2003a) contend. Such complexity associated with capability development primarily emerges as a result of the nature of capabilities, which are considered as a system where diverse knowledge bases are integrated via an uncertain and ambiguous process. In this context, Pandza et al. (2003a) highlight the complexity of the phenomenon of capability development, through both: *system complexity* and *process complexity*.

♦ **System complexity: -** It was explained earlier that the consideration of organisational capabilities as complex social phenomena affects the ability of organisations to systematically manage and influence their building as well as regeneration (Prahalad and Hamel, 1990; Barney, 1991, 1995; Peteraf, 1993; Hamel and Prahalad, 1994; Collis and Montgomery, 1995, Johnson and Scholes, 1999). Pandza et al. (2003a) explain that the system complexity of a capability is reflected in its structural composition of a series of elements, which only have meaning and value when linked together.

In this sense, they highlight the interrelationships and connections between the elements or assets, which make up a capability, and suggest that it is the number and diversity of the elements making up a capability, as well as the nature of connections among those elements, which manifest its system complexity. As a result, attempts to identify and isolate specific resources or capabilities for development are fraught with difficulties. Moreover, Pandza et al. (2003a) explain that the conceptualisation by a number of known writers in the field of capability and competence based competition (i.e. Penrose, 1959; Kogut and Zender, 1992; Grant, 1996a; Spender, 1996; Loasby, 1998) of a capability as a system, where diverse specialised knowledge bases are co-ordinated and integrated, introduces uncertainty as an intrinsic characteristic of a capability. This is due to the reason expressed by Tsoukas (1996), who argues that firms confront radical uncertainty, since nobody knows what patterns of knowledge integration are relevant in particular circumstances. This implies that uncertainty results from causal ambiguity, in that the capability's underlying structure of individual knowledge and skills is not known completely. As a result, the link between resources, capabilities and competitive advantage will not be readily clear.

♦ The inability to know in advance what kind of knowledge integration is likely to be relevant introduces uncertainty as a result of the dynamic characteristics of the capability development process. **Process complexity** arises from the nature of the capability development process, which was described by Dierickx and Cool (1989) and Pandza et al. (2003a) as a highly dynamic phenomenon, in that capability development is often considered a generative process, by which capabilities are identified through retrospective / reflective sense making as knowledge of organisational processes and markets evolve. In this sense, a capability is not something that can be identified at the beginning of the process. Pandza et al. (2003a) argue that the complexity of the capability development process could be high, as "*managers will be confronted by causal ambiguity in that they will have little understanding of the direction in which a process is likely to evolve or how market uncertainties are likely to be resolved*" (Pandza et al., 2003a, p. 1015).

Thus, organisations are unlikely to be able to identify in advance which resources and capabilities should be integrated, or what configurations the market will value in the future. This is mainly due to the reason explained by Loasby (1998), in that resources and capabilities represent conjectures to be tested in the market, and like many conjectures, they may be false.

Based on this, Pandza et al. (2003a) demonstrate that complexity and uncertainty are inherent within capability development, and given the evolutionary nature of the process, such complexity and uncertainty constrain managerial actions. As such, they contend that given the inherent complexity characterising both the composition of capabilities, as well as their development process, the real options framework is an appropriate heuristic for managing the process of capability development. In this context, Pandza et al. (2003a) explore the interplay between a capability's systems and process complexity, and real options, from an "open systems" approach based on the ideas discussed by Potts (2000) and Loasby (2002).

In an open system, Pandza et al. (2003a) indicate that change occurs by rearranging connections, or by constructing new connections, which produce different sets of sub-systems or a hierarchy of systems. Different connections form different systems and

managerial activity will involve experimenting with these connections to form new entities with new routines, capabilities, and social behaviours. Hence, a specific set of connections constitutes an organisation's competencies and capabilities.

The suggestion is that the development of resources and capabilities follows a time consuming process by adding and rearranging connections. As a result, managers have to decide what resources and capabilities to commit to ahead of when they might be needed and at a time when their future value is uncertain. Faced with this situation, organisations will want to invest in resources and capabilities that have value in a range of circumstances.

In this context, Pandza et al. (2003a) contend that a real options approach provides a useful set of tools for thinking about capability development, in that possible different combinations of connections represent different option sets. When an option is exercised (a deepening of a commitment in a specific set of resources and capabilities), the resulting configuration will yield a different option set for future exercise. In this way, Pandza et al. (2003a) indicate that their approach to real options adopts a similar view as that of Loasby (1991, 1999, 2002) as well as Kylaheiko et al. (2002), in that organisations are considered as networks of reserves or pools of resources and capabilities, which generate flexibility in a world of incomplete knowledge. As a result, the real options approach contributes to building flexibility as a response to uncertainty and systems complexity.

2.9 Integration and Co-ordination as a Means of Responding to, and Thriving in, Dynamic Environments

The importance of developing and regenerating capabilities over time has been emphasised in the competence-based literature by a number of prominent writers, most particular of which include: Penrose (1959), Rosenberg (1982), Wernerfelt (1984), Chandler (1990), Prahalad and Hamel (1990), Teece et al. (1992), Dosi and Marengo (1993), and Teece et al. (1997). Such an importance, according to Iansiti and Clark (1994) and Teece et al. (1997), has primarily emanated from the recognition of the dynamic nature of the interaction between the environment and the competence base of the organisation. Despite acknowledging such a need for dynamic capabilities, Iansiti and Clark (1994) indicate that empirical studies have not focused on the

detailed processes that explain how an organisation's capabilities / competencies can be built or renewed, in terms of explicitly linking proficiency in specific dynamic routines or processes with competitive performance, or identifying which activities may be particularly critical in the capability building and renewal process.

Teece et al. (1997), in the vein of understanding how an organisation renews its capabilities in response to changes in its environment, explain that only recently have researchers begun to focus on the specifics of how some organisations develop and renew competencies, in order to adapt and respond to, as well as capitalise on rapidly changing environments. Examples of efforts representing such a focus include those of Henderson (1994), Iansiti and Clark (1994), and Grant (1996a, 1996b), who discuss the development of an integrative dynamic capability for the organisation and its role in renewing and adapting the organisation's competencies to achieve competitive advantage, through organisational processes and asset bases.

In their paper, Iansiti and Clark (1994) indicate that their purpose is to deepen understanding of the processes that lie behind building and renewing organisational capabilities. Therefore, in the vein of closing this gap in gaining a better understanding of competence building and renewal, they introduce a generic framework for thinking about dynamic capabilities, which emphasises the importance of *knowledge as the foundation of capability*, and *the problem-solving process* as the primary driver for the generation of new knowledge and, hence, capability, through serving the *dynamic role of learning*.

The connection between knowledge and capability in considering knowledge to be the foundation of capability has been an important theme in the "resource-based view of strategy" as well as the "competence-based competition" literatures. Loasby (1998), for instance, interprets capability as a particular kind of knowledge how. Petroni (1998) supports such a contention originating from Winter (1987), and states that "*Knowledge is then the basic foundation of capabilities, and problem solving represents the driver of their building, nurturing and renewing process*" (Petroni, 1998, p. 179). He relates the role of problem solving to that of a process of continuous learning, which facilitates the evolution of an organisation's elementary levels of

knowledge to some forms of "technological mastery" targeted to product, service or process innovation resulting in performance differentials.

Moreover, Petroni (1998) emphasises that the *organisational routines* adopted by organisations in *problem-solving activities* are considered the essence of dynamic capabilities, since such organisational routines represent the important activities through which the organisation regenerates its knowledge base and, hence, capabilities through learning. Under this view, Iansiti and Clark (1994) indicate that knowledge must be implemented in action-producing forms in order to create capability. Such forms are represented in Leonard-Barton's (1992) critical dimensions of the "interrelated, interdependent knowledge system" that makes up the capability base of the organisation, which include *human skills*, *the technical system* (equipment, software, tools), *the managerial system* (routines, procedures, incentives), and *the values and norms in the organisation*. In this way, the organisation adapts, nurtures and builds its capacity for action through problem solving and learning processes. The basic relationships between capacity for action, capability, knowledge base, and problem-solving activities, in the vein of building an integrative capacity for the organisation, are charted in figure 2.7.
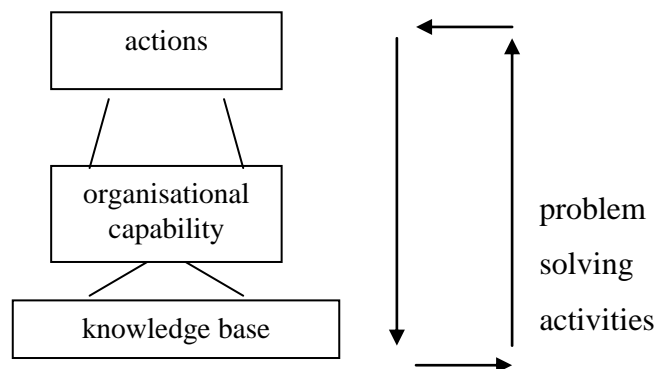
Figure 2.7: "*The Basic Relation Between Actions, Capability, Knowledge Base and Problem-Solving Activities*", Iansiti and Clark (1994) " Integration and Dynamic Capability: Evidence from Product Development in Automobiles and Mainframe Computers", Industrial and Corporate Change, Vol. 3, No. 3, page 561.

Hitt et al. (1999) also provide support to such a relationship between knowledge and capabilities, when they indicate that capabilities are often based on developing, carrying, and exchanging information and knowledge through the organisation's

human capital. Thus, Grant (1996a) as well as Lei et al. (1996) explain that the organisation's knowledge base is embedded in and reflected by its capabilities, and is a key source of advantage in the new competitive landscape. In fact, knowledge possessed by the organisation's human capital is increasingly being considered among the most significant of an organisation's capabilities and may ultimately be at the root of all competitive advantages.

This is supported by Hitt et al. (1998) in their assertion that the one source of lasting competitive advantage is knowledge. Moreover, Rungtusanatham et al. (2003) indicate that knowledge assets represent the principal source of competitive advantage and have come to articulate a more focused form of the resource-based view, namely the "*knowledge-based view of the firm*" promulgated by Grant (1996a, 1996b). De Toni and Tonchia (2003), building on Spender (1996), explain the reason behind considering knowledge as a more convincing source of competitive advantage than physical resources. They state*: "Since the origin of all tangible resources lies outside the firm, it follows that competitive advantage is more likely to arise from the intangible firm-specific knowledge which enables it to add value to the incoming factors of production in a relatively unique manner*" (De Toni and Tonchia, 2003, p. 952).

Also, Quinn (1993) argues that unlike competitive advantages built on the basis of a product, service or a market, the best maintainable competitive edge lies in a skill- or knowledge-based competitive advantage, which is often a strategy based on an internal distinctive core competency that provides unique value to the customer. Such an advantage built on a distinctive skill- or knowledge-based core competency, as indicated by Quinn (1993), provides a flexible, long-term platform for a competitive advantage especially in a rapidly changing and unpredictable environment. He cites Microsoft as an organisation that has successfully recognised the value of knowledge-based systems and has successfully managed professional intellect, through focusing on a number of individuals around whom most of the value of the organisation is created. In this way, he indicates that organisations such as Microsoft have thus focused on concentrating and leveraging their professional intellect, in terms of hiring the best people and leveraging their intellectual capabilities through employing certain organisational forms such as flat organisational structures and networks.

Based on this, Grant (1996a) stresses such an important emphasis being placed upon knowledge as the main source of competitive advantage in dynamic competitive environments, when he refers to two assumptions related to achieving success in such environments. He states that:

"*First, under dynamic competition, superior profitability is likely to be associated with resource and capability-based advantages than with positioning advantages resulting from market and segment selection and competitive positions based upon some form of "generic strategy";*

Second, such resource and capability-based advantages are likely to derive from superior access to and integration of specialised knowledge" (Grant, 1996a, p. 376).

Emanating from the importance of the skills, expertise and knowledge of the employees of an organisation, as the primary basis for the organisation's capabilities, the vital role of integrating diverse specialised knowledge bases in developing and regenerating organisational capabilities, is emphasised. Iansiti and Clark (1994) as well as Henderson (1994) argue, in this context, that the capacity to integrate diverse knowledge bases is essential to effective problem solving and, hence, provides the foundation for the capability building and renewal process. In other words, an organisation's capacity to integrate diverse knowledge bases is considered essential for generating new knowledge through learning, and that such a capacity to integrate, thus, is perceived to be instrumental in building and renewing organisational capabilities.

This is supported by Grant (1996a), who argues in the context of developing a "*knowledge-based theory of organisational capability*" that the *essence of organisational capability* is the *integration of multiple knowledge bases*, which enables the organisation to prosper in dynamically competitive market environments and, thus, achieve competitive advantage in such environments. Based on this, a pertinent theme related to capability development and regeneration in the light of today's dynamic environment is the emphasis placed upon the capacity to integrate and co-ordinate diverse knowledge bases, through organisational routines or processes.

In this vein, Becker and Zirpoli (2003) aim to provide an in-depth analysis of which organisational mechanisms can be used to integrate dispersed specialist knowledge. Their main concern is the analysis of the organisational mechanisms designed to address the problem of how to integrate and co-ordinate fragmented specialised knowledge bases and capabilities. Thus, they describe the dominant strategies available to organisations for integrating and co-ordinating dispersed specialist knowledge, and assess how efficient these strategies are in achieving such integration. These strategies include:

1. Organisational structures as integration mechanisms: -

Becker and Zirpoli (2003) explain that the origins of this strategy emanate from the literature known as the "knowledge-based approach" to the theory of the firm promulgated by Kogut and Zander (1992, 1993), Grant (1996a, 1996b), and Spender (1996), which contends that firms are seen as providing the integration of specialist knowledge. According to this view, organisations hire specialists, put them under the authority of a manager, and thereby integrate the knowledge that the specialists hold. This literature sees organisations doing so by creating the conditions for knowledge integration, which include for instance providing incentives designed to foster co-ordination between individual specialists.

Grant (1996a), in the vein of discussing his theory of organisational capability based on knowledge integration, explores the mechanisms through which knowledge is integrated to form organisational capability. These include *direction* and *organisational routines*:

a) Direction is the principal means by which knowledge can be communicated at low cost between specialists and a large number of individuals who are either non-specialists or specialists in other fields. It involves codifying tacit knowledge into explicit rules and instructions.

b) Organisational routines provide a mechanism for co-ordination, which is not dependent upon the need for communication of knowledge in explicit form. Grant (1996a) explains that according to his knowledge-based view, the essence of an organisational routine is that individuals develop sequential patterns of interaction, which permit the integration of their specialised knowledge without the need for communicating that knowledge. The advantage of routines over direction is in economising on communication and a greater capacity to vary responses to a broad range of circumstances.

As to explaining the role of knowledge integration in developing and regenerating organisational capability that facilitates the attainment of competitive advantage, Grant (1996a) indicates that:

A. The competitive advantage conferred by an organisational capability depends in part on the efficiency of knowledge integration.

B. An organisational capability's potential for establishing and sustaining competitive advantage increases with the span of knowledge integrated.

C. "*Sustaining competitive advantage under conditions of dynamic competition requires continuous innovation, which requires flexible integration through either (a) extending existing capabilities to encompass new knowledge or (b) reconfiguring existing knowledge within new patterns of integration. Since efficient integration of tacit knowledge requires experience through repetition, achieving flexible integration represents a formidable management challenge*" (Grant, 1996a, page 385).

Becker and Zirpoli (2003) highlight that there is one problem with the notion that firms integrate specialist knowledge. The basic premise of Grant's (1996a, 1996b) view on knowledge integration is that such integration is undertaken by the organisation, through being a co-ordinating mechanism based on authority. However, Becker and Zirpoli (2003) argue that "*the problem is that a hierarchy and its underlying mechanism, authority, is not a good way to integrate specialist knowledge inputs - even though it might be a good way to co-ordinate and integrate labour inputs*" (Becker and Zirpoli, 2002, p. 1039). They base their argument on Hayek (1988), who stated: "*dispersed knowledge is essentially dispersed, and cannot possibly be gathered together and conveyed to an authority charged with the task of deliberately creating order*" (Hayek, 1988, p. 77).

Despite criticising the notion of authority as a means for integrating specialised knowledge, however, Becker and Zirpoli (2003) have indicated from their study of the case of FIAT Auto's experience with integrating dispersed knowledge that knowledge integration by direction based on authority within the hierarchy of the organisation, is still considered a very powerful way of integrating knowledge. They quote Williamson (1985) as providing support for the importance of such a mechanism for integrating knowledge, based on authority conferred by hierarchy.

2. Substitute knowledge by access to knowledge: -

This strategy calls for the creation of communication structures, through which knowledge can be acquired, as a means of integrating dispersed specialist knowledge. According to this strategy, dispersed knowledge can be co-ordinated by either developing ways of interrelating and connecting the knowledge held by individual members of the organisation, as Tsoukas (1996) explains, or by establishing collaborative links among organisations to share knowledge and expertise. In this context, Hitt et al. (1998) quote the benefit of using formal integrating mechanisms, as advocated by Ancona and Caldwell (1992), Hitt et al. (1993), and Woodman et al. (1993). Such integrating mechanisms include the use of boundary spanners, task forces, teams, integrating committees / departments, and sophisticated information networks, which are believed to increase the breadth, frequency and quality of information shared across functional specialties and units.

Emanating from these mechanisms is the emphasis on developing cross-functional teams, which integrate the different knowledge and expertise backgrounds of team members from across the organisation, through improved communication.

Moreover, Becker and Zirpoli (2003) indicate that the notion of "absorptive capacity" coined by Cohen and Levinthal (1990) is particularly important here, i.e. being able to receive, interpret and apply knowledge. In this context, Jones and Craven (2001) explain that the term "absorptive capacity" describes the ability of the organisation to identify, obtain and utilise new knowledge. They particularly emphasise the point that: *"The absorptive capacity of any organisation depends on the role of key boundary spanners who link the organisation to its environment"* (Jones and Craven, 2001, p. 21). The importance of these boundary spanners lies in their ability to identify potential business opportunities for the organisation, by establishing contacts and external linkages between the organisation and its customers, suppliers and even competitors. They also have a role with regard to encouraging the dissemination of knowledge throughout the organisation, as Jones and Craven (2001) explain.

In addition, Jones and Craven (2001) conclude from the results of a case study undertaken with the intention to reveal the processes, which contribute to an organisation's absorptive capacity, that improving such absorptive capacity requires

the introduction of new organisational routines, which help translate tacit knowledge into codified knowledge that can then be disseminated throughout the organisation. They provide examples of such routines, which mainly include an "idea capture form" ICF, which provides a mechanism by which the ideas of employees at all levels can be brought to the attention of senior managers. As such, such a form can be considered as a mechanism for capturing knowledge. In addition, management as well as new product development committees are viewed as mechanisms by which organisational learning can be fostered, and ideas and information can be disseminated.

3. The competency to fill in knowledge gaps: -

As a result of dispersed or fragmented knowledge, gaps pertaining to knowledge in certain areas in the organisation may appear. Such gaps, according to Becker and Zirpoli (2003), can be dealt with by having the competence to fill them in, rather than by acquiring or transferring the missing knowledge. They compare such an activity of filling in knowledge gaps with the ability to recognise the meaning of a word or a sentence, for example, despite the existence of misspellings or the absence of letters or words. Hence, this strategy presupposes that the organisation has sufficient knowledge regarding the situation in question, which can permit it to compensate for any lack of complementary knowledge bases.

4. Decomposition: -

One of the problems arising from dispersed knowledge, as Becker and Zirpoli (2003) indicate, is known as the problem of "large numbers". Such a problem is illustrated in a situation where, for example, one unit in the organisation holds all the knowledge related to a particular application (e.g. designing a component of a machine), but then other units or departments also come to possess some part of that specific knowledge. Thus, the dispersion that occurs in that particular knowledge leads to the so-called problem of "large numbers". In this context, the problem of integrating the resulting dispersion in knowledge, according to Becker and Zirpoli (2003), can be better managed by containing the size of the problem. They indicate that "*This can be done by decomposing the organisational units that are to provide knowledge integration*

into smaller units. In this way, the problems caused by large numbers, and the lack of overview, are alleviated" (Becker and Zirpoli, 2003, p. 1040).

However, as evidenced through their analysis of the FIAT Auto case, Becker and Zirpoli (2003) indicate that the decomposition strategy can often result in the dispersion of specialist knowledge even further, rather than integrating it. The decomposition of the units that hold certain aspects of a particular knowledge threatens to further disperse their own specialist knowledge, thereby fuelling the necessity of integrating even more specialised knowledge. Thus, they conclude that the decomposition strategy, while alleviating the problems created by the dispersion of specialist knowledge in the short term, aggravates them in the long term.

5. Integration embodied in physical and virtual artefacts: -

The use of artefacts in knowledge integration, as Becker and Zirpoli (2003) highlight, can be in three ways. First: Artefacts represent the knowledge they are composed of, which can facilitate the identification of that knowledge through observing the artefact. Second: Artefacts are considered a reference, which different individuals may hold different knowledge about. In this way, the individuals can share among themselves their respective knowledge regarding the common reference, within a problem-solving process. Third: The sharing of a common reference between holders of dispersed knowledge improves communication and co-ordination amongst them, which facilitates the integration of their knowledge.

After discussing these strategies, it is argued that the basic means for capability development and regeneration remains through the active integration and co-ordination of dispersed and diverse specialist knowledge, which Grant (1996a, 1996b) has developed the organisational mechanisms for facilitating through the "knowledge-based view of the firm". Such a knowledge-based view and the organisational mechanisms emanating from it is considered as a natural outgrowth of the resource-based view of the firm, in terms of its emphasis on the importance of firm-specific assets, particularly intangible ones, in accruing it competitive advantage. Such a view is also considered as an important framework for translating how capabilities can be developed as well as regenerated in view of today's dynamically changing environment, as called for by the dynamic capabilities approach.

2.10 The Relevance of the "Resource-Based" and "Dynamic Capabilities" Approaches to Healthcare

It was explained in section 2.8 that the "dynamic capabilities" approach establishes a duality between *response to change*, and the important role of *resource reconfiguration* in facilitating such response. Such a duality has been emphasised by Chow et al. (1999) to be relevant in the case of healthcare environments. In this context, they indicate that healthcare organisations are coming under increasing pressure from Government, the public and other healthcare organisations to control their costs while maintaining or enhancing service. Chow et al. (1999) express their agreement with Senge (1990), Peters (1994), and Deloitte and Touche et al. (1997), in their emphasis that responding effectively to these pressures often requires healthcare organisations to be able to quickly adapt to changes in the environment, through ensuring that:

- Resources are allocated to their most effective use, and that
- Resources are quickly re-deployed in response to information about unexpected and unfavourable outcomes, impending threats, and emerging opportunities.

The different governmental reform initiatives of the NHS (The Department of Health (1989) White Paper: *Working for Patients*; The Department of Health (1997) White Paper: "*The New NHS: Modern, Dependable*"; The Department of Health (2000) White Paper: "*The NHS Plan: A Plan for Investment. A Plan for Reform*) have sought to advocate the principle that the health service should be a responsive service, one that is sensitive to the needs, requirements and expectations of patients. Lanser (2000) emphasises the importance of responsiveness and flexibility in dealing with changing patients' demands and requirements posed on healthcare delivery today. She highlights, in this context, the growing importance of "patient-centred" / "customer-focused" care, as an approach towards improving consumers' dissatisfaction with care delivered to them. She also explains that responsiveness, flexibility, and collaboration, in addition to respect and emotional support, characterise patient-centred care.

Walters (1999) provides an example of how co-ordination and integration of resources and capabilities can achieve flexibility and responsiveness to patients' needs

and requirements, when she introduces the concept of "Patient Service Centre" (PSC). A PSC, Walters (1999) explains, offers patients a single location, which co-ordinates nearly all their needs, including administrative and most diagnostic and treatment services, in a "one-stop" shop-like setting. By designing the different stages concerned with the delivery of healthcare around patient needs, instead of departmental needs, Walters (1999) indicates that the PSC provides a facility that has built-in flexibility. Also similarly, Oswald (1998) presents the case of a hospital, whose management team have reconfigured its facilities and resources so that it can treat its patients according to the urgency of their needs, by offering a more efficient and specialised care.

Consistent with emphasising the notions of flexibility and responsiveness in healthcare, the proliferation of the terms: "Patient-Focused Care", "Patient-Centred Care", "Hospital Process Re-engineering / Redesign" and others, as Newman (1997) indicates, has signalled the emergence of a new healthcare paradigm concerned with re-examining the processes followed in order to deliver healthcare services to patients. The objective being to reduce as much as possible excessive specialisation, centralisation and compartmentalisation, which organisational processes have built up over the years, in an effort designed to increase flexibility and responsiveness to patients' needs and expectations.

Extending from the important role of co-ordination and integration in facilitating flexibility and responsiveness, as stressed through the "dynamic capabilities" approach, notions of collaboration, consolidation of resources, integrated care, partnerships and alliances have been repeated time and again in recent literature discussing how healthcare organisations can deal with and respond to the changing requirements of today's healthcare environment. Miller and Ahmad (2000) indicate that within the UK, collaboration and partnerships between *agencies*, *professions*, and across *sectors* have emerged as the most efficient way of delivering high quality public services, including health and social care, as well as the most efficient way of ensuring their effectiveness in being responsive to service user needs.

Such an important benefit of collaboration and partnerships in supporting the effective delivery and responsiveness of services is considered as leverage to building competitiveness, as supported by Zairi and Youssef (1998). They state: "*It is widely*

recognised that modern competitiveness has to rely on building strong partnerships with customers and suppliers" (Zairi and Youssef, 1998, p. 299).

In addition to recognising that public services cannot be addressed single-handedly, another reason behind the emergence of collaboration and partnerships as a means for delivering public services is illustrated by the many changes, which public services have been undergoing under consecutive governments, starting from the Thatcher era and including The New Labour Government. As far as the NHS is concerned, the "internal market" reforms have led to the separation of providers from purchasers. Such reforms have joined in their effect the trend already in full swing in other public services, which resulted in the growing trend of delegating the provision of public services to a wide range of public bodies, private firms and the voluntary sector.

This intensifying drive towards the introduction of market-related approaches to delivering health services has resulted in the fragmentation of providers, into a number of smaller and organisationally semi-autonomous service providers, thus causing problems of co-ordination. In addition to problems of co-ordination, Miller and Ahmad (2000) point out that cultural problems have also resulted from these new changes. They quote a number of authors (Walsh, 1995; Ferlie and Pettigrew, 1996; Maddock and Morgan, 1998) as highlighting the emergence of competitive and individualistic rather than collaborative cultures, which have led to a fragmentation of services in many spheres, ranging from resource management to professional decision-making, in addition to undermining staff morale and creating a climate of mistrust.

Thus, the apparent unsuitability of "quasi-market" reforms to the culture of providing healthcare in the NHS, which is inherently based on collaboration and trust, has been first recognised by the outgoing ministers of the last Conservative administration, as Miller and Ahmad (2000) explain. Instead of pushing in favour of a competition-oriented culture in the NHS, these ministers began to de-emphasise the competitive elements within the reforms and started to encourage purchasers and providers to work together within a commissioning framework. Also adding to this drive towards more collaboration and partnership in the NHS, the Secretary of State for Health under the New Labour Government has indicated, within the first six months of

coming to power, that the Government will end competition and will work instead on establishing a new statutory duty for partnership, so that local health services can pull together rather than pull apart. (Guardian, 10/12/1997)

Miller and Ahmad (2000) consider three main forms of collaboration within public services in the UK, including the healthcare services sector (NHS). These include:

1- <u>Inter-agency work</u>: - This concept is closely associated with a geographic place of agencies that work in the same "patch" collaborating to maximise their impact. Inter-agency work, as Miller and Ahmad (2000) explain, can involve sharing information, sharing tasks and/or resources such as training activities, agreeing to joint procedures to address particular problems, reaching joint decisions, for example, on the use of resources, or jointly planning and reviewing policies and procedures.

2- <u>Inter-professional collaboration</u>: - The focus of this concept is on encouraging collaboration between those with different professional roles in any common situation, rather than on organisational boundaries and procedures. As Miller and Ahmad (2000) explain, this concept of collaboration is concerned with acknowledging and maximising the contributions, which different groups of professional workers bring to a set of circumstances. In this way, it is a recognition that exploiting the skills of one professional group adds to the contribution of another.

In this context, Coddington et al. (2000) emphasise the importance of fostering and encouraging collaboration and even partnership between physicians and managers, or what they call: "health system executives". Their emphasis on considering physicians and managers / health system executives as partners comes in the course of their suggestion of twelve characteristics, which they consider as being fundamentally important for the health system of the future. Such a partnership entails that physicians and executives work together to meet the requirements and demands being put on them by patients and various stakeholders, through new clinical services and better responsiveness to demand. In this way, working inter-professionally is an acknowledgement of the complexity of addressing an issue by just one group of professionals, due to the limited and partial knowledge and skill base inherent within any one group. Thus, inter-professionalism resembles a problem-solving approach,

which seeks to integrate and co-ordinate a diverse range of skills, knowledge and experience.

In this context, as Iansiti and Clark (1994) and Lei and Hitt (1996) suggest, the capacity to integrate diverse sets of individual specialised knowledge bases and skills is beneficial to both: successful organisational learning as well as effective problem solving. In turn, these two activities of organisational learning and problem solving provide the foundation for building and renewing capabilities within an organisation, through the integration of multiple knowledge bases. Such an integration of multiple knowledge bases, as argued by Grant (1996a), enables the organisation to adapt to and prosper in a dynamically changing environment. The interrelationships between the integration of a diverse set of knowledge bases, organisational capabilities, and prospering in dynamic environments are discussed in section 2.10.

3- <u>Working in partnership</u>: - Partnerships are usually established in order to involve all stakeholders, including the recipients of any service or programme. Thus, partnerships are considered to be a more inclusive approach to collaboration than the previous two forms of collaboration, as Miller and Ahmad (2000) indicate, quoting Hughes and Carmichael (1998) as stating that partnerships are seen to be a "*more inclusive multi-agency approach which is premised on the bottom-up notion of community consultation, involvement and ultimately ownership*". (Hughes and Carmichael, 1998, p. 1)

One of the benefits of establishing effective partnerships, as suggested by Miller and Ahmad (2000), can be generating information sharing, improved communication, a better understanding of what each stakeholder can offer, the avoidance of duplication, inefficiencies, and the identification of opportunities for the effective sharing of resources. Also, effective partnerships can mobilise external resources, which might not have been available to any of the individual participants, and enable partners to learn from each other both about the nature of problems, their potential role in relation to considering new ways to tackle them.

2.11 <u>Summary and Conclusions</u>

The dynamic environment has been identified as the main driver behind the need for agility. Many writers (Goldman et al., 1995; Goldman, 1998; Hitt et al., 1998; Goldman and Graham, 1999; Volberda, 1996, 1997; Yusuf et al., 1999; Breu et al., 2001) have emphasised such a driving force, which today's dynamic business environment exerts, in requiring organisations to build the capacity to effectively adapt and respond to the continuous and unpredictable changes emanating from it and, thus, thrive.

Accordingly, such an environment has changed the emphasis in the strategic management literature as to building and sustaining competitive advantage, from a "market-based" to a "resource-based" view. This shift has reflected the effect of today's dynamic and unpredictable environmental reality on the way in which strategy is developed, in order to enable organisations to effectively navigate in such turbulent operating conditions.

Recently, the strategic management literature witnessed the emergence of the "Dynamic Capabilities" approach, which stresses the need for the continual development and regeneration of an organisation's capabilities/competencies, so as to effect a dynamic fit between an organisation and the requirements of its external environment. Such an emphasis on nurturing dynamic organisational capabilities, which can respond to dynamic environmental conditions, thus contributes towards making the organisation more agile and responsive to the needs and requirements of its stakeholders. In this way, a pertinent theme to be emphasised is that: "*It is the dynamism of management together with their ability to formulate and implement effective resource-based strategies that are the ultimate sources of sustainable competitive advantage*" (Chaharbaghi and Lynch, 1999, p. 49).

In addition to discussing the aforementioned themes, Chapter Two has also emphasised the importance of knowledge as the foundation of organisational capabilities, as well as the importance of *organisational processes* concerned with integrating diverse knowledge bases, in informing the construct of dynamic capabilities. Figure 2.8 illustrates these themes addressed in this chapter.

Market-Based Strategy

| The Dynamic, Uncertain Environment |

Resource-Based View of Strategy

The Dynamic Capabilities Approach

Highlighting the Need for Organisational Agility
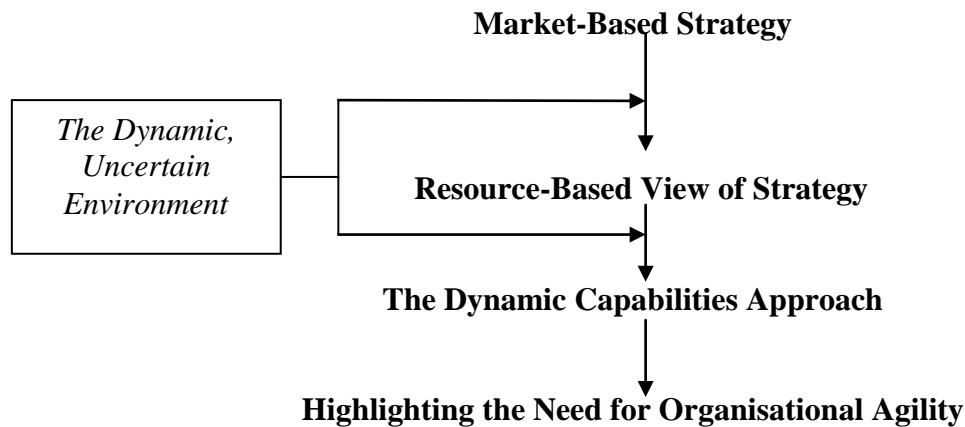
Figure 2.8: A Schematic Outline of the Themes Discussed in Chapter Two.

After having discussed the growing relevance of resource and competence based approaches to strategy development, in view of today's dynamic reality, the chapter argues in favour of the suitability of these approaches in enabling healthcare organisations to better respond and adapt to changes in the requirements and demands placed on them by its external environment, in an effort designed to attain organisational agility. Based on this, the chapter recommends replacing the competitive stance in the NHS, instigated by the internal market reforms, with an emphasis on effective resource investment and leverage as well as effective co-ordination, integration, collaboration and partnership.

Chapter Three

Organisational Agility: Evolution, Concepts, and Enablers

3.1 Introduction

The dynamic and unrelenting pace of changes in today's environmental conditions is necessitating organisations to develop the ability to respond and adapt quickly to unpredictable requirements, pressures, and demands. Such an ability is increasingly being considered as the basis, upon which modern organisations can compete and thrive. This comes as a result of the changing environmental conditions, which have rendered many of the traditional approaches to management and organisation as irrelevant and have, thus, required more dynamic and emergent paradigms. In this way, "*The main argument is that structures and practices which may have been appropriate to the relatively stable environment of the 1960s and 1970s were no longer suitable for organisations operating in the dynamic and unpredictable environment of the 1990s*" (Salauroo and Burnes, 1998, p. 462).

Recognising this reality, many organisations are appreciating the need to make changes in their basic bureaucracies in attempts to enhance the speed, flexibility, as well as agility of their response. In this vein, Dyer and Shafer (1999) state: "*Thus, there is growing interest in an entirely new organisational paradigm - one that views organisational adaptation not as a one-time or even periodic event, but as a continuous process*" (Dyer and Shafer, 1999, p. 148). They indicate that such a paradigm is "Organisational Agility", the products of which are "Agile Organisations". Therefore, agile organisations establish competitive advantage by being among the first to spot threats and opportunities in continuously changing business environments, and by being more adept than current and potential competitors in exploiting the opportunities repeatedly over time.

A review of the literature indicates that the concept of agility has primarily emerged as a new manufacturing paradigm, proposed as a strategy to enable manufacturing enterprises to maintain their competitiveness in the 21st century. Moreover, much of the emphasis in the agility literature is on process and technology in the context of agile manufacturing, or on broad organisational issues within the context of a

manufacturing environment. Despite this, the concept of agility has universal appeal and applicability to all organisations affected by the dynamic and unpredictable environmental reality, not just manufacturing ones (Dyer and Shafer, 1999; Katayama and Bennett, 1999).

Since the application of this research is primarily concerned with healthcare organisations, the various studies addressing conceptualisations as well as enablers of agility are discussed in this chapter with a particular emphasis on widening the debate concerning agility beyond manufacturing contexts, so as to make it relevant / applicable to other organisational contexts, particularly service ones. In this vein, particular emphasis is placed upon highlighting agility as the ability of the organisation to prosper and thrive in an environment of continuous and unpredictable change; a description of the concept coined by Goldman et al. (1995), who are considered one of the main promulgators of agility. Such a definition extends the conceptualisation as well as applicability of agility to other non-manufacturing contexts, particularly service and healthcare ones.

3.2 <u>The Emergence of the Agile Manufacturing Paradigm as the Culmination of the Changing Eras of Manufacturing</u>

Historically, the concept of agility originated from manufacturing research in 1991, by a group of scholars (Goldman, Nagel, Preiss, and Dove) at the Iaccoca Institute of Lehigh University in the United States, and it soon became a focal reference for manufacturing systems studies (Goldman and Preiss, 1991; Yusuf et al., 1999; Breu et al., 2001; Kassim and Zain, 2004). The driving reasons for the Iaccoca 1991 group research were mainly concerned with exploring how the United States could regain its competitive edge in manufacturing, globally. This overarching concern was instigated by the increasing rate of change in the business environment, which was quickly outpacing the ability of traditional manufacturing organisations to adapt, as Hormozi (2001) explains. In this way, Zhang and Sharifi (2000), building on Small and Downey (1996), indicate that increasing turbulence and uncertainty in business environmental conditions became the main cause of failures in manufacturing industry. Thus, organisations still adopting traditional manufacturing practices were unable to take advantage of available opportunities, and this inability to adapt to

changing conditions and exploit emerging business opportunities signalled the possible threat of the demise of such organisations, in the long run, as Roth (1996) explains.

As a result, the research conducted by the Iaccoca 1991 group into the failings of the US manufacturing industry to cope with such a changing market reality, culminated into the "*21st Century Manufacturing Enterprise Strategy*" report, which conveyed an industry-led vision for a possible profound shift in manufacturing paradigm. Such a shift reflected the new foundations of competitiveness, which mainly revolved around the need to respond rapidly to continuous changes. In this way, the radical trend of change has made ground for the emergence of a new business era beyond traditional ones such as mass production and lean production. "*A new manufacturing paradigm, known as "agility", has been proposed as a strategy to enable manufacturing enterprises to maintain their competitive advantages in this new era*" (Zhang and Sharifi, 2000, p. 496). Hence, agility has since been advocated as the 21st century manufacturing paradigm, in that it is seen as a necessary condition for competitiveness in an increasingly fast changing environment (Goldman and Preiss, 1991; Goldman and Nagel, 1993; Cho et al., 1996; Roth, 1996; Gunasekaran, 1999; Yusuf et al., 1999; Hormozi, 2001; Gunasekaran et al., 2002; Jin-Hai et al., 2003).

The emergence of agility as a new manufacturing paradigm is often considered as the culmination of an evolutionary process of manufacturing / production paradigms, which started with the traditional paradigms of craft production and mass production, and have included lean manufacturing (Womack et al., 1990) involving lean supply (Lamming, 1993); mass customisation (Pine et al., 1993); and agile manufacturing (Kidd, 1994). Esmail and Saggu (1996), Hormozi (2001) as well as Gunasekaran et al. (2002) indicate that manufacturing has undergone many evolutionary stages and paradigm shifts, in going from a craft industry to mass production; then to lean manufacturing, and finally, to agile manufacturing.

This development process of manufacturing paradigms, according to Jin-Hai et al. (2003), has reflected the changing patterns of consumer demand, which in turn have progressed from an emphasis on cost effectiveness, to quality, customisation, flexibility and agility. They explain that such an evolutionary process started in the period immediately after the Second World War, which was characterised by

relatively high demand and an inability to supply. Consequently, processing speed and price were the dominant manufacturing factors. This encouraged the extensive automation of production processes, resulting in mass production. The key objective of manufacturing became the mass production of goods at lower prices. During the 1980s, in response to emerging discriminating consumer preferences, organisations pursued quality management. Concepts such as Total Quality Control (TQC), Statistical Process Control (SPC), and Quality Function Deployment (QFD) were developed and applied. Simultaneously, systems such as flexible manufacturing, lean production and world-class manufacturing were incorporated into production systems.

In this way, Jin-Hai et al. (2003) highlight that agile manufacturing is often considered as an evolutionary form of manufacturing system, which synthesises and integrates many prior approaches. Sharp et al. (1999) support such an evolutionary view explaining the emergence of agile manufacturing, through arguing that lean as well as world-class manufacturing are traditionally considered positions in an organisation's migration towards the ultimate goal of agility. van Aseen (2000), based on Dove (1993), indicates that agility as a manufacturing management concept is considered the aftermath of lean manufacturing in the era of world-class manufacturing. In this sense, he explains that agility builds upon the lean system's achievements in terms of streamlining the work processes and continuously improving the quality, while overcoming its limitations through making everything in a production process dynamic. Hence, the philosophy of agility, according to Christopher (2000), has been advocated to address what is seen as a gap in the capabilities of lean thinking. In this regard, he explains that while leanness is seen to focus on economising on unnecessary resource usage or endowments, through the reduction and possible elimination of waste in an effort designed to keep costs to a minimum, agility is regarded as more clearly addressing the need to respond speedily to changes in customer requirements.

Jin-Hai et al. (2003) highlight the point that there are categorical differences between mass production, lean production, and agile manufacturing. Lean manufacturing, which emphasises the efficient use of resources, is simply an enhancement of old mass production methods. In contrast, new agile manufacturing systems break out of the mass production mould and produce highly customised products. Moreover,

Christopher (2000) draws a distinction between the philosophies of "leanness" and "agility". He indicates that agility should not be confused with leanness, which is often used in connection with lean manufacturing espoused by Womack (1990), in that while leanness may be an element of agility in certain circumstances, by itself it will not enable the organisation to meet the precise needs of the customer more rapidly. This is due to the reason that a lean approach makes sense in certain conditions, as Christopher (2000) explains, particularly where demand is predictable and the requirement for variety is low and volume is high. Hence, the problems arise when attempts are made to implant the "lean" philosophy into situations where demand is less predictable and the requirement for variety is high, and volume is low.

Based on this, Christopher (2000) argues that the three critical dimensions of *variety*, *variability* (or predictability), and *volume* determine whether leanness or agility makes greatest sense (see figure 3.1). Thus, he makes the contention that since today's market conditions affecting the operation of many organisations are characterised by volatile and unpredictable demand, such a new environmental reality, in turn, necessitates an increased urgency for the search for agility. Building on such a difference between lean manufacturing and agility, which is illustrated in the contention that agility is better suited to enable organisations to respond to dynamic conditions, he defines agility as: "*the ability of an organisation to respond rapidly to changes in demand, both in terms of volume and variety*" (Christopher, 2000, p. 38).
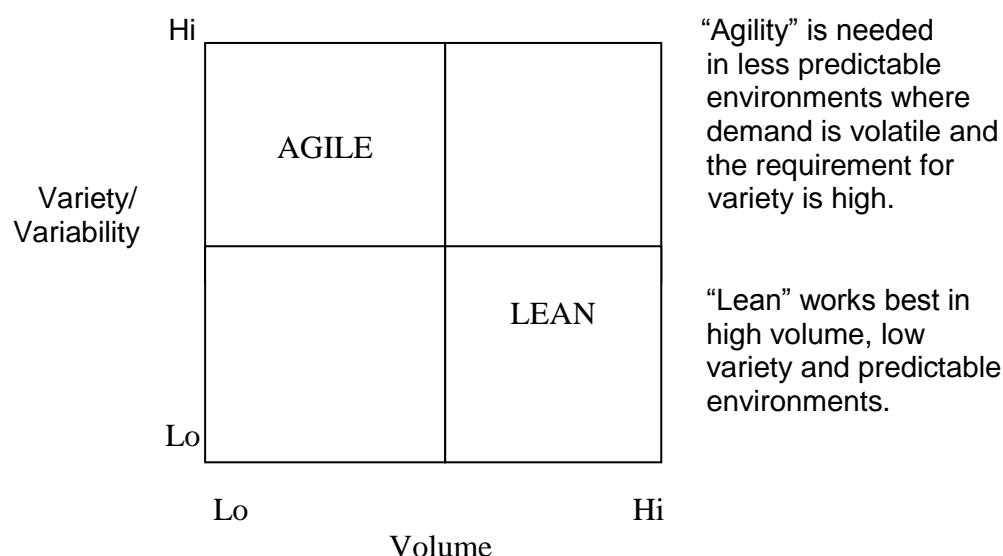
Figure 3.1: "*Agile or Lean*", Christopher (2000) "The Agile Supply Chain: Competing in Volatile Markets", Industrial Marketing Management, Vol. 29, p. 39.

Booth and Hammer (1995) draw further distinctions between lean production and agile manufacturing. They point out that:

- Lean production is regarded by many as simply an enhancement of mass production methods, whereas agility implies breaking out of the mass production mould and producing much more highly customised products.

- In a product line context, agile manufacturing amounts to striving for economies of scope, rather than economies of scale - ideally serving ever-smaller niche markets, but without the high cost traditionally associated with customisation.

- Agile manufacturing requires an all-encompassing strategic view, whereas lean production is typically associated only with the factory floor.

- Agile embodies such concepts as rapid formation of multi-company alliances or even virtual companies to introduce new products to the market.

- A lean company may be thought of as a very productive and cost-efficient producer of goods or services.

- An agile company is primarily characterised as a very fast and efficient learning organisation.

Sharp et al. (1999) show the key differentiators between mass, lean and agile manufacturing (see figure 3.2). With regard to contrasting lean and agile manufacturing, they particularly highlight the point that a lean company may be thought of as a very productive and cost efficient producer of goods and services, whereas, an agile company is primarily viewed as a responsive and efficient learning organisation. Thus, lean production methods are not considered to be suitable for the competitive environment that will face manufacturers during the 21st century. Baker (1996) attributes this to the reason that customers, markets and competitors are becoming increasingly unpredictable, and this does not suit lean production methods such as Just-In-Time (JIT). By contrast, agile manufacturing aims to perform well, both operationally and strategically, in turbulent environments. Thus, Katayama and Bennett (1999) indicate that agility ensures responsiveness to customer requirements, while leanness ensures resource efficiency and high performance. In conclusion, lean or World Class Manufacturing is very good under controllable, predictable conditions, as Maskell (2001) notes. However, due to the increasing dynamism and unpredictability characterising conditions in the new competitive environment, the relevance of and, hence, need for agility, intensify.

	Mass	Lean	Agile
Drivers	• Price • Economy of scales • Stable markets • Demand led	• Market • Economy of waste • Predictable markets • Make to forecast	• Customer • Economy of diversity • Unpredictable markets • Make to order
Focus	• Equipment and Facilities	• Technology and Systems	• People and Information
Suppliers	• Many • Low level of trust • Adversarial Relationship	• Fewer • High level of trust • (Long-term) • Co-operative	• Selection from many • High level of trust • (short-term) • Shared risk/reward
Organisation	• Division of labour • Hierarchical	• Teaming • Flatter organisation	• Multi skilling • Empowerment
Product	• Few options • Inconsistent quality	• Many options • High quality	• Customised • Fitness for purpose
Process	• Rigid • Hands on labour	• Flexible • Automated	• Adapted • Knowledge based
Philosophy	• Authoritative	• Administrative	• Leadership

Figure 3.2:"*Key Differentiators between Mass, Lean and Agile*", Sharp et al. (1999) "Working Towards Agile Manufacturing in the UK Industry", International Journal of Production Economics, Vol. 62, Nos. 1-2, p. 157.

In explaining the growing shift away from the concept of lean manufacturing, towards the new management philosophy of agile production, Kidd (1995) charts the reasons for this shift. He indicates that the market is requiring low volume, high quality, custom and specific products. These products have very short life cycles and, therefore, short development and production lead times. In addition, customers want to be treated as individuals, which necessitates an organisation that is people intensive as well as relationship driven. Also, perfect quality and very high levels of service are expected and required.

Roth (1996) distinguishes among various manufacturing "epochs", which she describes are those strategic moments in which top management perspectives of competitive capabilities shift radically and require revolutionary approaches to change. She illustrates the distinctions between these manufacturing eras by using a strategic map, which outlines production's historical roots (see figure 3.3).

TIMELINE	1920s-1980	1980-1990	1990-1995	1995-2000	2000 & Beyond
MANUFACTURING EPOCH	Mass Production	**Lean Production**		*Agile Manufacturing*	*Strategic Agility*
COMPETITIVE PRIORITIES	COST	**QUALITY**	**DELIVERY**	FLEXIBILITY	**KNOWLEDGE FACTORY**
PROCESS CRITERIA	SCALE EFFICIENCIES	CONTINUOUS IMPROVEMENT	TIME/QUICK RESPONSE	ECONOMIES OF SCOPE/ INTEGRATION	MASS PERSONALISATION
PRIMARY SOURCE OF VALUE-ADDED	CAPITAL/ MUSCLE POWER	LOCAL INFORMATION SYSTEMS/ WORK TEAMS	SUPPLY CHAIN SYSTEMS / CROSS-FUNCTIONAL TEAMS	IT-ENABLED PROCESSES PROCESS EXPERTISE & RELATIONSHIPS	INTELLIGENT SYSTEMS / COMMUNITIES OF PRACTICE

Figure 3.3: "*Evolving Management Perspectives*", Roth (1996) "Achieving Strategic Agility through Economies of Knowledge", Strategy and Leadership, Vol. 24, No. 2,   p. 32.

The evolution of the manufacturing epochs illustrated in figure 3.3 reflects a corresponding evolution in competitive priorities, which refer to the manufacturing-related capabilities that win new customers. Roth (1996) indicates that an emerging body of research suggests that the dominant set of competitive priorities is tied to these manufacturing epochs. Thus, each epoch is characterised by an emphasis on a particular competitive priority, in which the route to achieving competitive advantage lies. In this way:

1. Under *mass production*, investments are made by trading-off competitive capabilities, e.g. quality or cost or flexibility. The primary focus is on achieving

economies of scale, through producing high volumes of fairly standardised products, thus lowering production costs.

2. *Lean production* logic differs. Quality, delivery, and costs are viewed as complementary capabilities, not to be traded-off for one another.

3. Within *agile manufacturing*, flexibility, which is the ability to make product variety with high quality and reliable deliveries at a competitive price, is of paramount importance. Thus, under agile manufacturing, industry leaders hope to use their manufacturing capabilities to overwhelm the marketplace with a wider variety of higher value products.

4. Roth (1996) argues that the 21st century will witness a manufacturing paradigm that is beyond the agile manufacturing one, which she terms: "*Strategic Agility*".

As businesses enter the twenty-first century, they have to cope with an increasingly dynamic and uncertain competitive environment, one that is characterised by products with short and uncertain life cycles, innovative process technologies, customers who simultaneously demand quick response, lower costs, and greater customisation. Therefore, in order to survive and prosper in such a dynamic emerging reality, Ramasesh et al. (2001) contend that "*manufacturing systems must possess extraordinary capabilities that synergistically include, and go beyond, those one finds in flexible manufacturing systems, lean production systems, and firms with mass customisation strategies*" (Ramasesh et al., 2001, p. 534). As a result, agile manufacturing in the twenty-first century, or what Roth (1996) refers to as strategic agility, is promulgated as a paradigm that possesses such capabilities.

Strategic agility, according to Roth (1996), entails the ability to attain all competitive priorities, which she explains is achievable only with competitive strengths in a combined set of generic capabilities, namely quality, delivery, flexibility, and price leadership. In this situation, managers can use one or more capabilities to pre-empt or imitate fast global competitors. Armed with multiple capabilities, manufacturers will be better prepared for the changes ahead. In support of this are Breu et al. (2001) and Gunasekaran et al. (2002), who indicate that agile manufacturing and the challenge to compete in the twenty-first century are driven by the need for meeting widely varied and evolving customer requirements, in terms of price, specification, quality, quantity and delivery, as well as by the fragmentation of mass markets. Moreover, van Aseen

(2000) particularly highlights the contention that agility represents a paradigm geared towards the continual response and achievement of varied customer requirements, through stating: "*Agile manufacturing provides mechanisms to react quickly to changing markets, to produce high quality products, to reduce lead times and to provide a superior customer service, in a dexterous way*" (van Aseen, 2000, p. 142). Hence, such an emphasis on empowering customers and seeking to respond to their ever-changing requirements is a main driver behind the emergence of agility.

Based on this, a major focus of strategic agility is meeting varied customer requirements and expectations, through instilling in the organisation the ability to simultaneously achieve the manufacturing competitive priorities, represented by price, quality, flexibility, speed, innovation and proactivity. In order for an organisation to acquire strategic agility, Roth (1996) indicates that it requires "economies of knowledge" through accelerated enterprise-wide learning. "*Economies of knowledge means that the firm is able to use its business acumen, combined with skilled people and experience with advanced technologies, to create an organisation that consistently identifies, assimilates, and exploits new knowledge more efficiently and effectively than the competition*" (Roth, 1996, p. 30). In this way, Roth (1996) distinguishes strategic agility from agile manufacturing, by highlighting the importance of fostering a knowledge-rich environment in the organisation, through the assimilation and integration of the knowledge, skills, and competencies held by the employees. Thus, Roth (1996) has supported the consideration of the agility paradigm as representing an approach to managing the organisation from a knowledge perspective.

This is in congruence with the conceptualisations of Booth and Hammer (1995), Sharp et al. (1999), and Hormozi (2001). For example, Booth and Hammer (1995) as well as Sharp et al. (1999) both consider an agile organisation to be primarily characterised as a very fast and efficient learning organisation. In particular, Sharp et al. (1999) highlight the point that the main focus of an agile organisation is towards empowering its people, and leveraging their competencies and skills, since its ability to effectively respond to changing requirements and demands essentially relies on exploiting the knowledge bases held by its intellectual capital. Hormozi (2001) also emphasises the importance of benefiting from the combined knowledge and

competencies of employees, in order for an organisation to be agile in its response to changing market conditions. He states: "*Agile organisations are flexible and quick to respond to fast moving market conditions. They increasingly leverage the intellectual power of the employees as opposed to their muscle power*" (Hormozi, 2001, p. 133).

Yusuf et al. (1999) highlight the emphasis on attaining all competitive priorities through economies of knowledge that foster learning. They argue that the emerging paradigm of agility is concerned with the need to achieve the competitive advantages of manufacturing in synergy and without trade-offs. Hence, they reflect such a focus of the agile manufacturing paradigm through their definition of agility, in that "*it is the successful exploration of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment*" (Yusuf et al., 1999, p. 37).

The emphasis on the importance of the role of knowledge and competencies in acquiring strategic agility has led to highlighting the need to transform the organisation into a learning one. Based on this, Roth (1996) states that: "*Strategic agility requires a metamorphosis from the organisation as mechanistic "working machine" to the "Knowledge Factory" - an organic, accelerated learning organisation that produces shared knowledge as a key by-product*" (Roth, 1996, p. 32). In addition, the organisation should transcend the functional manufacturing boundaries and develop enterprise-wide operations, in an effort designed to enable itself to adapt quickly to sudden changes, providing the right product at the right price, anywhere. It is by leveraging co-operation and co-ordination among various organisational departments, as well as between the organisation and its suppliers, competitors and others, that an enterprise can facilitate learning and sharing of knowledge and expertise and, consequently, become truly agile, as Roth (1996) argues.

3.3 Towards a Generic Conceptualisation of Agility, Emphasising Effective Response to Change and Thriving in the Midst of it

Despite the fact that agility has mainly evolved from manufacturing based research, nevertheless, Cho et al. (1996) and Katayama and Bennett (1999) have indicated that the principles of agility are not restricted to manufacturing, but that they can equally apply to other functions of a business and to service industries. In fact, Breu et al. (2001) assert that after the emergence of the agility concept in manufacturing in the early 1990s, it was soon extended into the broader business context. This illustrated the applicability of the concept of agility to various contexts, not just being excluded to manufacturing-based ones. As evidence supporting the broad appeal of the concept of agility, Gunasekaran et al. (2002) indicate that agility in manufacturing does not represent a series of techniques much as it represents a fundamental change in management philosophy. In this way, it differs from traditional manufacturing / production paradigms (e.g. flexible manufacturing, lean manufacturing, computer integrated manufacturing), in that it is neither any one of them individually, but a co-ordination and integration of all of these. Moreover, Gunasekaran et al. (2002) make the argument that although there are a number of research reports discussing the concept of agility in the context of manufacturing, nevertheless, there is a need for a systemic approach to evaluate and study agility in real-world organisations. As such, agility is not about small-scale improvements, but an entirely different way of doing business with a primary emphasis on flexibility and quick response to the changing markets and customer needs.

The reason behind the universal appeal and relevance of the concept of agility to organisations operating in different contexts can be attributed to the shift in the dynamics of the environment affecting all organisations, regardless of the industries or sectors in which they operate. Sharifi and Zhang (1999) illustrate the pervasiveness and relevance of the notion of agility to organisations operating in today's increasingly dynamic and turbulent environment. They describe agility as a necessary ability, particularly in the light of the revolutionary development of the business environment into a turbulent place of competition.

Hence, conceptualisations of agility began to take a wider perspective, encompassing the effect of an ever changing and unpredictable environment on the ability of the organisation to not only survive, but also to prosper and thrive. In this context, van Aseen (2000) states that: *"The key objective of agility is to allow an organisation to thrive in an environment of constant and unpredictable change..."* (van Aseen, 2000, p. 143). Cho et al. (1996) define agile manufacturing as the *"capability of surviving and prospering in a competitive environment of continuous and unpredictable change by reacting quickly and effectively to changing markets, driven by "customer-defined" products and services"* (Cho et al., 1996, p. 323). Gehani (1995) and Kidd (1996) also stress the importance of thriving through effective response to environmental change, by referring to agility as the ability of a business to grow in a competitive market of continuous and unanticipated change, through responding quickly to rapidly changing markets driven by customer-based valuing of products and services. Kassim and Zain (2004) unequivocally relate agility to an effective and proficient response to environmental change, which enables an organisation to thrive. They assert that: *"Generally, agility is the ability of a firm to face and adapt proficiently in a continuously changing and unpredictable business environment"* (Kassim and Zain, 2004, p. 174).

A common theme that permeates the various definitions describing agility is the particular emphasis on the necessity for organisations to effectively adapt and respond to the continuous and unpredictable changes inherent in today's environment, in a manner that can enable them to thrive and, thus, sustain their competitiveness. Hence, particular attention is directed towards the importance of thriving and prospering in a highly dynamic and uncertain environment, through being proactive in exploiting opportunities emanating from changes.

Gunasekaran et al. (2002) express their support to such a conceptualisation of agility, by stating that: *"Agile manufacturing is a new expression that is used to represent the ability of a producer of goods and services to survive and thrive in the face of continuous change"* (Gunasekaran et al., 2002, p. 405). Thus, Kassim and Zain (2004) conclude that the concept of agility comprises two main factors, which have been referred to earlier by Kidd (1995) and Dove (1996). These are proper response to changes, and exploiting and taking advantage of the changes. A number of authors

have voiced their support of these two themes as primarily reflecting the basic conceptualisation of the concept of agility (e.g. Goldman and Nagel, 1993; Goldman et al., 1995; Yusuf et al., 1999; Zhang and Sharifi, 2000; Maskell, 2001; Brown and Bessant, 2003).

For instance, Goldman and Nagel (1993) stress that survivors of the current competitive storm are those organisations that use their proficiency in change as a lever to outperform their competitors. Moreover, Yusuf et al. (1999) have indicated that successful agile organisations must be able to foresee, adapt and respond to change using tactical initiatives to achieve strategic objectives. In addition, it is important for these organisations to engage in creatively initiating change and to become proficient in it. Hence, Brown and Bessant (2003) indicate that agile manufacturing includes the ability to respond quickly and effectively to current market demands, as well as being proactive in developing future market opportunities.

Zhang and Sharifi (2000) particularly highlight these two themes, through their suggestion that agility comprises two main factors: the first is responding to changes (anticipated or unexpected), whereas the second is exploiting changes and taking advantages of these changes as opportunities. In conclusion, the definitions provided by Nagel and Bhargava (1994) and Goldman et al. (1995) capture the essence of these themes, through emphasising that it is the ability to thrive and prosper in an environment of continuous and unpredictable change, which reflects the true meaning of agility.

3.4 Identifying Enablers of Agility

It was explained in the earlier sections that the need for agility primarily stems from the chaotic change inherent in today's market environments. The drivers for such change are emanating from the continuously evolving customer requirements and expectations, the wide availability and access to information, and rapid new product development. Therefore, due to the increasing rapidity of change in the conditions affecting the operation of organisations, Roth (1996) argues that managers must turn upside down the tenets that they held in the past about how to organise work, how to

share work, and how to strategise. Nagel and Bhargava (1994) have supported such a call, by indicating that the emerging agile model of the future requires outgrowing pervasive traditional mindsets and realigning efforts and resources toward making the organisation more agile.

In this way, Gunasekaran (1999) and Gunasekaran et al. (2002) explain that agility addresses new ways of running organisations to meet the challenges emanating from a rapidly changing business environment. They emphasise the point that agility is about changing the patterns of traditional operation, and casting off those old ways of doing things that are no longer appropriate. Thus, Gunasekaran et al. (2002) conclude that in short, agility represents a fundamental change in management philosophy, in that it is often considered as an entirely new way of doing business with a primary emphasis on flexibility and quick response to the changing markets and customer needs.

Shafer et al. (2001) support this notion, and assert that the need to compete in increasingly dynamic environments requires new paradigms to replace the mature, traditional ones that dominate much of today's thinking about business strategies and organisations. Thus, they call for a shift in management philosophy and thinking towards embracing the notion of organisational agility: "*Constant marketplace discontinuities, coupled with an accelerating pace of changes, are making a mockery of traditional business and organisational models, so the search is on for new, more agile paradigms*" (Shafer et al., 2001, page 197). In this vein, Gunasekaran (1999) stresses that in a changing competitive environment, there is a need to develop organisations and facilities that are significantly more flexible and responsive than current existing ones. This can be facilitated by finding the right combination of culture, business practices, and technology that are necessary to make an organisation agile.

Based on such a need to transform organisations into more responsive and adaptive ones, Kassim and Zain (2004) highlight the importance of building a set of capabilities and processes, which can enable an organisation to respond in an agile manner to its environment that will always change in unexpected ways. Gaining further insights and knowledge into the nature of these agility-enabling factors,

according to Yusuf et al. (1999), could be facilitated by looking at the specific and operational issues highlighted in a number of frameworks of the concept.

Many of the frameworks developed for achieving agility derive from and are built on the basis of the four key dimensions of agility, promulgated by Goldman and Nagel (1993), Goldman (1994), Nagel and Bhargava (1994), Goldman et al. (1995), Goldman (1998), and Goldman and Graham (1999), who are often considered the principal advocators of the concept of agility. These four principles underlying the concept of agility are: delivering value to, and thus enriching, the customer; organising to manage change and uncertainty; leveraging the impact of people and information, through valuing human knowledge and skills; and co-operating to enhance competitiveness, through forming virtual partnerships. The following is a detailed discussion of each of these principles defining the scope of the concept of agility, as well as embodying a number of its main enabling capabilities, as explained by the above group of writers:

1. **Enrich the customer**

Competitiveness in the present marketplace is determined by the ability to customise products and services, expedite the time required for developing new products and delivering services, and remain sensitive to customer needs and expectations. This entails a quick understanding of the unique requirements of each individual customer and rapidly providing them. Thus, organisations are required to adopt a value-based strategy to configure their products and services into solutions for their customers. In this way, a high degree of customer focus and the offering of high-value solutions enrich the customer.

2. **Organise to manage change and uncertainty**

The turbulent changes in requirements, expectations, and demands, emanating from a multitude of factors shaping the competitive environment, mean that the successful performance of organisations will be increasingly dependent upon their ability to thrive on change and uncertainty. This, in turn, necessitates from the organisation to structure itself in a corresponding agile manner, which entails the utilisation of a new responsive organisational structure; one that is specifically designed to master change

and uncertainty. In this way, the traditional organisation with a fixed, vertically-integrated hierarchy is changing to a more agile structure featuring fewer levels and the diffusion of authority within the organisational framework, instead of concentrating authority and power in a chain of command, thus stifling initiative and quick response.

Moreover, mastering change and uncertainty requires that the organisation be organised around the integration of the core competencies and skills of its human capital, thus allowing their effective harnessing towards trouble-shooting. Therefore, techniques such as cross-functional teamwork and the replacement of functional departments by taskforces, as well as a much-augmented infrastructure of communication and decision-support systems, would be required. As such, instead of a static organisational structure based on fixed, specialised functional departments, agile organisations have a dynamic structure that is effective in meeting changing goals and objectives.

3. **Leverage the impact of people, information and technology**

Agile organisations are able to manage unpredictability by maximising the scope for human initiative. A knowledgeable workforce, expected to display initiative and provided with the means to exercise it, is the single greatest asset of such an organisation. Continuous workforce education and adherence to the quality of the workforce are long-term investments aggressively pursued by the management of agile organisations. Thus, greater emphasis is placed upon the development of this asset through education, training and empowerment, in an effort designed to attain a multi-skilled, adaptive, and empowered human resource. Moreover, the better able every employee is to assimilate information and to respond creatively to new possibilities suggested by it, the more successful the organisation. In this way, people skills, knowledge, and information become the primary assets of the organisation, while plants and equipment are installed to leverage the impact of these assets.

In addition to a primary focus on education and training, other initiatives to which attention is to be directed in order to build and nurture an open and empowering atmosphere for employees, include the following:

- An agile organisation requires vision-based leadership that clearly defines corporate goals, as well as the direction for achieving them.

- An agile organisation motivates the workforce to effectively solve problems related to organisational goals, and empowers and trains the employees to acquire this capacity.

- Expectations of high levels of employee involvement must be created, sustained, and rewarded. A new kind of social contract between employer and employee is called for. Employees must be tied to the organisation through mutually perceived long-term benefits that anchor their loyalty.

- Information must be open to an unprecedented degree, entailing an atmosphere of trust and openness.

- The compensation of employees is based on the value of their contribution toward the product and/or service. People are rewarded based on their performance as individuals, as well as on their performance as members of teams.

- Decision authority and responsibility are distributed.

- The employees' skill base needs to be constantly evaluated and upgraded. Thus, the organisation must establish and invest in company-wide education and training.

4. **<u>Co-operate in order to enhance competitiveness</u>**

The agility of an organisation is substantially enhanced if it is capable of leveraging knowledge and co-operation, both internally and with other organisations, since then it would be able to selectively co-ordinate and integrate, quickly and efficiently, people and processes, as well as knowledge and skills, regardless of their location, in the vein of supporting the delivery of a constantly changing mix of goods and/or services. The importance of such an ability to co-ordinate dispersed resources becomes evident when recognising the contention expressed by Goldman (1998), in that no organisation, however large, will have within it all the skills, capabilities, or the resources that it needs to take advantage of each opportunity. Therefore organisations will be required to form alliances with others to put together globally distributed resources so as to capitalise on emerging opportunities.

In this way, the "Virtual Organisation" is advocated as a means of responding to market opportunities with minimum dedicated resources and diversified risk. The virtual organisation, thus, is an opportunistic, selective integration of distributed human and physical resources into a purposeful business capability. The virtual organisation model is not alien to the ethics of the agile organisation, which are based on mutual trust, as well as the need to make co-operation a first-choice approach to problem solving, and sharing information throughout the organisation. Trust and mutual responsibility together result in an improved capacity for efficient decision-making, which is a major determinant of agility. Moreover, co-operative initiatives between organisations, and co-operation among functionally divided branches of the same organisation, are central to agile manufacturing. This co-operation includes better intra-organisational co-operation and quite likely will extend to inter-organisational co-operation, such as partnerships with suppliers and may possibly extend to newer, emerging virtual relationships with competing organisations. Therefore, the virtual organisation model is considered a dynamic organisational strategy, which brings together the required capabilities in response to customer opportunities, thus enhancing overall organisational agility.

As mentioned earlier, a number of frameworks for achieving agility have been developed, which essentially revolve around the aforementioned dimensions of the concept of agility. Examples of these frameworks include Volberda (1996, 1997); Hitt et al. (1998); Gunasekaran (1998, 1999); Dyer and Shafer (1999); Sharp et al. (1999); Yusuf et al. (1999); Wright et al. (1999); Zhang and Sharifi (2000); Meredith and Francis (2000); Shafer et al. (2001); and Gunasekaran et al. (2002).

Yusuf et al. (1999) present four underlying concepts of agility. These include *competition based on core competence management, virtual enterprise formation, capability for reconfiguration, and knowledge-driven enterprise*:

1. <u>Core competence management</u>: Core competencies are often associated with the organisation's human resources, which include their skills, knowledge, attitude and expertise, and can be upgraded through investment in training and education, in order to enable effective response to continually changing customer requirements. Core competencies normally develop via corporate-wide learning processes, integration of diverse skills and technologies, and capability for

inter-organisational co-operation. They are usually manifested into valuable products and services.

In the context of managing organisational core competencies, van Aseen (2000) argues that a modern business research perspective that seems to be eligible for providing directions and guidelines for agile management is the internal resource-based perspective, resulting in a phenomenon called competence-based competition. According to this perspective, a stream of research has emerged in the strategy literature, as well as in human resource management literature, by which inimitable and valuable organisational and individual resources, competencies, capabilities, knowledge, culture and skills are postulated as key aspects of an organisation's sustained competitive advantage. A central theme within competence management, as van Aseen (2000) explains, is the ability to learn, unlearn and relearn, on all levels within an organisation. As a result, competence management appears to be appropriate for the provision of directions and guidelines for the creation of an agile organisation, especially when taking into consideration the contention made by Spearmann and Hopp (1996), in that agile manufacturing is largely dependent on the capabilities and competencies of its people, both managers and workers, to learn and evolve with change at all levels in the organisation.

2. <u>Virtual enterprise</u>: Agile organisations form virtual enterprises and co-operate both at the corporate and operational levels. Agile teams work across the partner organisations forming the virtual enterprise, which is considered the climax of co-operative venturing. The "virtual enterprise" model allows resources and diverse skills that are spread across disparate organisations to be harnessed and co-ordinated very quickly in accordance with customer specifications. In this context, Yusuf et al. (1999) indicate that such an exercise of bringing together the core competencies of prospective partners into joint venturing is considered pivotal to achieving the higher level of agility. They refer to such a higher level of agility as "inter-enterprise" or "macro" agility, and consider it to be one of three main levels of agility: agility of individual resources or "elemental agility", agility of the enterprise or "micro-agility", and inter-enterprise agility or "macro-agility". They highlight the point that it is the harmonisation of these three aspects that leads to agility, rather than their respective optimisation.

3. <u>Capability for re-configuration</u>: Agile enterprises can easily make a significant shift in focus, diversify, configure and re-align their business to serve a particular purpose rapidly as the windows of opportunities open. Such a capability for re-configuration can be facilitated by adaptive organisational structures, a multi-skilled workforce, as well as an organisational culture that regards change as an environmental reality, which should be met with effective response and adaptation. In addition, Yusuf et al. (1999) argue that management must invest in technologies that confer operational flexibility in providing products or delivering services, thus supporting the overall organisational capacity for reconfiguration in response to environmental change.

4. <u>Knowledge-driven enterprise</u>: Organisations that intend to become agile should include the development of a well-trained and motivated workforce, with the right set of skills, expertise and knowledge, as an essential element of its strategy. Such organisations are driven by knowledge and information possessed by and available to the workforce. The success of any organisation ultimately depends upon its ability to convert the collective knowledge and skills of its most critical resource, that is people, into products and services.

Gunasekaran (1998) supports Goldman and Nagel (1993), Nagel and Bhargava (1994), and Goldman et al. (1995), in his indication that agility can be defined along four key dimensions: enriching the customer, co-operation to enhance competitiveness, mastery of change and uncertainty, and leveraging the impact of people and information. Building on these dimensions, Gunasekaran (1998) indicates that agility has four underlying principles: *delivering value to the customer, forming virtual partnerships, being ready for change,* and *valuing human knowledge and skills*. These principles are further developed in another framework for building an agile manufacturing system presented by Gunasekaran (1999). This framework is built upon four key dimensions, which include strategies, technologies, systems and people. His focus in developing this framework is on the operating conditions of factories organised as flexible networks. Thus, he pays considerable attention to those factors that are believed to be most suitable to a manufacturing environment and/or organisation, as opposed to a service-based one. The key dimensions of this framework include the following:

1. Strategies: - Under this dimension, Gunasekaran (1999) considers agile manufacturing itself to be a strategy. To achieve it, several sub-strategies are needed without which technologies and systems alone will not be sufficient to achieve agility. These sub-strategies include the following:

- Virtual enterprise: Generally, a single organisation often may not be able to respond quickly to changing market requirements. Thus, temporary alliances or partnerships based on the core competencies of a number of organisations will help improve their flexibility and responsiveness. Kidd (1994) defines a virtual enterprise as the synthesis of a number of enterprises, with each having some core skills or competencies which they bring to a joint venturing operation, thus enabling the co-operative enterprises to adapt and respond quickly to changing customer requirements. Gunasekaran (1998) highlights the role of employee empowerment in improving the co-operative supported work in a physically distributed virtual enterprise. Such empowerment, he explains, can be in the form of developing multidisciplinary empowered and self-directed teams.

- Supply chain: The supply chain management system focuses on resolving business process problems that are important to the customers. A supply chain is the network used to deliver products and services from raw materials to end customers through an engineered flow of information and physical distribution.

- Concurrent engineering: Agile manufacturing demands a manufacturing system to be able to produce efficiently a large variety of products and be reconfigurable to accommodate changes in the product mix and product designs. To achieve this requires a more systematic method of concurrently designing both the product and the downstream processes for production and support. This systematic approach is fundamentally known as concurrent engineering (CE).

2. Technologies: - Agile manufacturing entails rapid changeover from the assembly of one product to the assembly of a different product. This in turn requires agile-enabling technologies, such as virtual machine tolls, robotics, Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM). In addition, Information Technology (IT) can be employed for an effective integration of physically distributed firms and resources. Examples of IT include Enterprise Resource Planning (ERP) and Materials Requirements Planning (MRP).

3. <u>Systems</u>: - The systems for agile manufacturing include software/decision support systems for various planning and control operations, including materials requirements planning, design, manufacturing resource planning, scheduling, and production planning and control.

4. <u>People</u>: - Gunasekaran (1999) indicates that the following key issues related to human resources should be considered in an agile environment: knowledge workers, top management support and employee empowerment, and training and education.

Fliedner and Vokurka (1997) identify numerous internal and external strategic initiatives that promote agility. They cite examples including: reductions in manufacturing cycle times and order response times, partnerships, outsourcing, schedule sharing, supply channel performance improvements, teamwork and cross-functional management teams, employee education, training and empowerment, and Business Process Re-engineering (BPR). Sharp et al. (1999) indicate that in embracing the management philosophy of agile manufacturing, there are a lot of key concepts and enabling technologies that are required to be able to implement agile manufacturing. Hence, they have proposed a conceptual model for organisations to work towards agile manufacturing, which includes the following key enablers:

- Focus on dynamic core competencies.
- Virtual enterprise.
- Rapid prototype.
- Concurrent engineering.
- Empowerment, teamwork, multi skilled and flexible people, who are able to rapidly carry out other tasks.
- Continuous improvement, which refers to the reiterative process of planning, changing, evaluating and improving the organisation's performance.
- Change and risk management. This is the process of changing the organisational culture from one characterised by traditional values and practices, into one that embodies new ideas and beliefs that more in congruence with the new changing environmental reality.
- Information Technology.

Zhang and Sharifi (2000) present a methodology to assist manufacturing organisations to achieve agility. In this vein, they propose a conceptual model for implementing agility in manufacturing organisations, which consists of three main components: **The first** is concerned with "agility drivers", which are the changes in the business environment that necessitate from an organisation to search for new ways of running its business in order to maintain its competitive advantages. **The second** is concerned with "agility capabilities", which are the essential capabilities that the organisation needs in order to positively respond to and take advantage of the changes. **The third** is concerned with "agility providers", which are the means by which the "agility capabilities" could be obtained. These providers, according to Zhang and Sharifi (2000), are to be sought from four major areas of the manufacturing environment, i.e. organisation, people, technology, and innovation.

In this way, "*Based on this model, a manufacturing enterprise experiences a variety of changes/pressures in its business environment, which drives the enterprise to identify "agility capabilities" that need to be acquired or enhanced in order to take advantage of the changes. This in turn forces the enterprise to search for ways and tools to obtain/enhance the required capabilities*" (Zhang and Sharifi, 2000, p. 498).

Therefore, based on the conceptual model explained above, Zhang and Sharifi (2000):

1. Determine the agility capabilities that need to be acquired / enhanced, in order for an organisation to cope with changes in the requirements and demands placed upon it by its environment.

2. Identify a list of business practices, methods, tools, and techniques, generally referred to as agility providers, which could bring about agility capabilities for manufacturing organisations.

First: With regard to the agility capabilities identified, Zhang and Sharifi (2000) provide a generic list of these capabilities, which are divided into four major categories:

a. Responsiveness: This capability refers to the ability to identify changes, respond rapidly to these changes either reactively or proactively, and recover from changes. The following items describe the constituent parts of this capability:

- Sensing, perceiving and anticipating changes.

- Immediate reaction to changes.

- Recovering from changes.

b. Competency: According to Zhang and Sharifi (2000), the capability of competency includes an extensive list of abilities, which provide an organisation with productivity, efficiency, and effectiveness in achieving its aims and goals. These abilities include:

- Strategic vision.

- Appropriate technology, or sufficient technological capability.

- Products/service quality.

- Cost-effectiveness.

- High rate of new product introduction.

- Change management.

- Knowledgeable, competent, and empowered people.

- Operations efficiency and effectiveness (leanness).

- Co-operation (internal and external).

- Integration.

c. Flexibility: This is the ability to carry out different work and achieve different objectives with the same facilities. It consists of items such as:

- Product volume flexibility.

- Product model/configuration flexibility.

- Organisation and organisational issues flexibility.

- People flexibility.

d. Speed: This is the ability to carry out tasks and operations in the shortest possible time. Items include:

- Quickness in new product time-to-market.

- Quickness and timeliness in products and services delivery.

- Quickness in operations (short operational lead-times).

Among the four aforementioned types of capabilities, Zhang and Sharifi (2000) indicate that responsiveness is the essential capability for any organisation that needs to be agile. The other three are considered necessary elements in achieving responsiveness.

Second: With regard to the "agility providers", which comprise methods, tools, and techniques that can be utilised to obtain the required capabilities, Zhang and Sharifi (2000) indicate that these are sought from four major areas of the manufacturing environment, i.e. organisation, people, technology, and innovation. They provide a general list of general business practices associated with these areas, which help provide agility. Such practices include the following:

- Establishing partnerships with suppliers and/or customers.
- Involving suppliers and/or customers in the organisation's planning and product development process.
- Establishing virtual organisation.
- Adoption of advanced technology.
- Facilitating mass-customisation through utilising adequate technology integration of inter-organisational systems, modules and the manufacturing system.
- Building a flexible, responsive to changes, flat, and learning organisation.
- Continuous re-engineering of the organisation and business processes based benchmarking.
- Informal, coaching, and encouraging management style.
- Structured and flexible manufacturing processes.
- Concurrent and team working methods/models.
- Continuous training and education of all people.

Findings emerging from Zhang and Sharifi (2000) study into the implementation of such agility providers show that practices regarding organisation and people are believed to be the most effective as well as the most important for manufacturers.

Despite the fact that agility has emerged as a manufacturing paradigm, Dyer and Shafer (1999) indicate that the basic concept of agility has universal appeal and applicability to all organisations, not just manufacturing ones. They explain that although much of the emphasis in the agility literature is on process and technology in the context of agile manufacturing, or on broad organisational issues within the context of a manufacturing environment, nevertheless, they indicate that the organisational agility literature is growing, although limited. The appeal and applicability of the concept of agility to almost all organisations, according to Dyer and Shafer (1999), is attributed to today's business climate, which is characterised by unprecedented, and largely unpredictable change. Under such circumstances, Dyer and Shafer (1999) explain that an increasing number of organisations stumble and sometimes fall, because the rate of change in their external environments simply outpaces their organisational capacity to keep pace. Recognising this reality, many organisations are appreciating the need to make changes in their basic bureaucracies in attempts to enhance speed and flexibility of response.

"*Thus, there is growing interest in an entirely new organisational paradigm - one that views organisational adaptation not as a one-time or even periodic event, but as a continuous process*" (Dyer and Shafer, 1999, p. 148). They indicate that such a paradigm is "Organisational Agility", the products of which are "Agile Organisations". In this way, agile organisations establish competitive advantage by being among the first to spot threats and opportunities in continuously changing marketplaces, and by being more adept than current and potential competitors in heading off the threats and/or exploiting the opportunities-not just once or a few times, but repeatedly over time. As such, organisational agility, according to Dyer and Shafer (1999), is viewed as a necessary core competence for organisations operating in dynamic external environments. In particular, they argue that agile organisations strive to develop and refine three specific organisational competencies: *reading the market*, *mobilising rapid response*, and *embedding organisational learning*.

Reading the market refers to the ability to scan the environment, locate and analyse emerging developments, and quickly turn the resulting information into actionable decisions. The market in this context refers to the various factors in the external environment affecting the organisation, or stakeholders. In agile organisations,

reading the market and gathering intelligence for decision-making is the concern of everybody at all levels.

Mobilising rapid response is the capacity to quickly and easily make decisions and translate these decisions into action. This involves two main factors: mindset and resource mobility. Mindset refers to a culture characterised by a willingness, even eagerness, to change. Resource mobility refers to the ease and speed with which financial, physical, intangible, and human resources can be moved from less to more promising opportunities.

Organisational learning involves the creation, adaptation, and replication of knowledge to improve organisational performance. It is of two types. The first is adaptive or single-loop learning, which is aimed at making continuous improvement in current operations. The second, referred to as generative or double-loop learning, requires employees at all levels to question and challenge all aspects of the business, including general direction, core values, and fundamental operating principles. More emphasis is placed upon double-loop learning, which can lead to totally new perspectives on work that can lead to fundamental organisational change. Thus, Dyer and Shafer (1999) indicate that agile organisations use ongoing education, dialogue, debate, and experimentation to encourage employees to form new perspectives and ideas to enhance various aspects of work.

Based on these core competencies, upon which agile organisations are built, key challenges revolve around: scanning the environment, processing the resulting information, making rapid decisions, creating temporary mini-organisational infrastructures, mobilising required resources, making effective use of these resources, and sharing and learning insights. Top-level leaders act as the primary custodians of vision and core values, and keep things in motion through a judicious combination of communicating, coaching, and cajoling. Employees at all levels engage in mutual collaboration to do whatever is necessary for the organisation to succeed.

After discussing the three aforementioned organisational competencies necessary for organisational agility, the next issue is how agile organisations can develop and refine these competencies. In this vein, Dyer and Shafer (1999) develop a model of agile organisational capability, which they argue is derived from a number of features that are commonly discussed in the organisational capability literature (e.g. Ulrich and Lake, 1990; Lawler, 1996; Barney, 1997; Ulrich, 1997; Youngblood, 1997). At the centre of the agile organisational capability model developed by Dyer and Shafer (1999) (see figure 3.4) is a core, which consists of shared vision, shared values, and common performance metrics. Around the core are four reconfigurable components, which comprise the organisational infrastructure. These are organisational design, core business processes, supporting technology, and agile people.

"*In practice, the inner core plays a dual role. First, because of its relative stability it helps to keep Agile Organisations (AOs) from devolving into total chaos. Second, and somewhat paradoxically, it provides energy for constant change by incorporating an expansive vision, embracing change as a core value, and including adaptability as a key performance metric. The reconfigurable outer ring, then, serves as the mechanism through which the capacity to evolve, experiment, discover, and adapt is operationalised*" (Dyer and Shafer, 1999, p. 153).
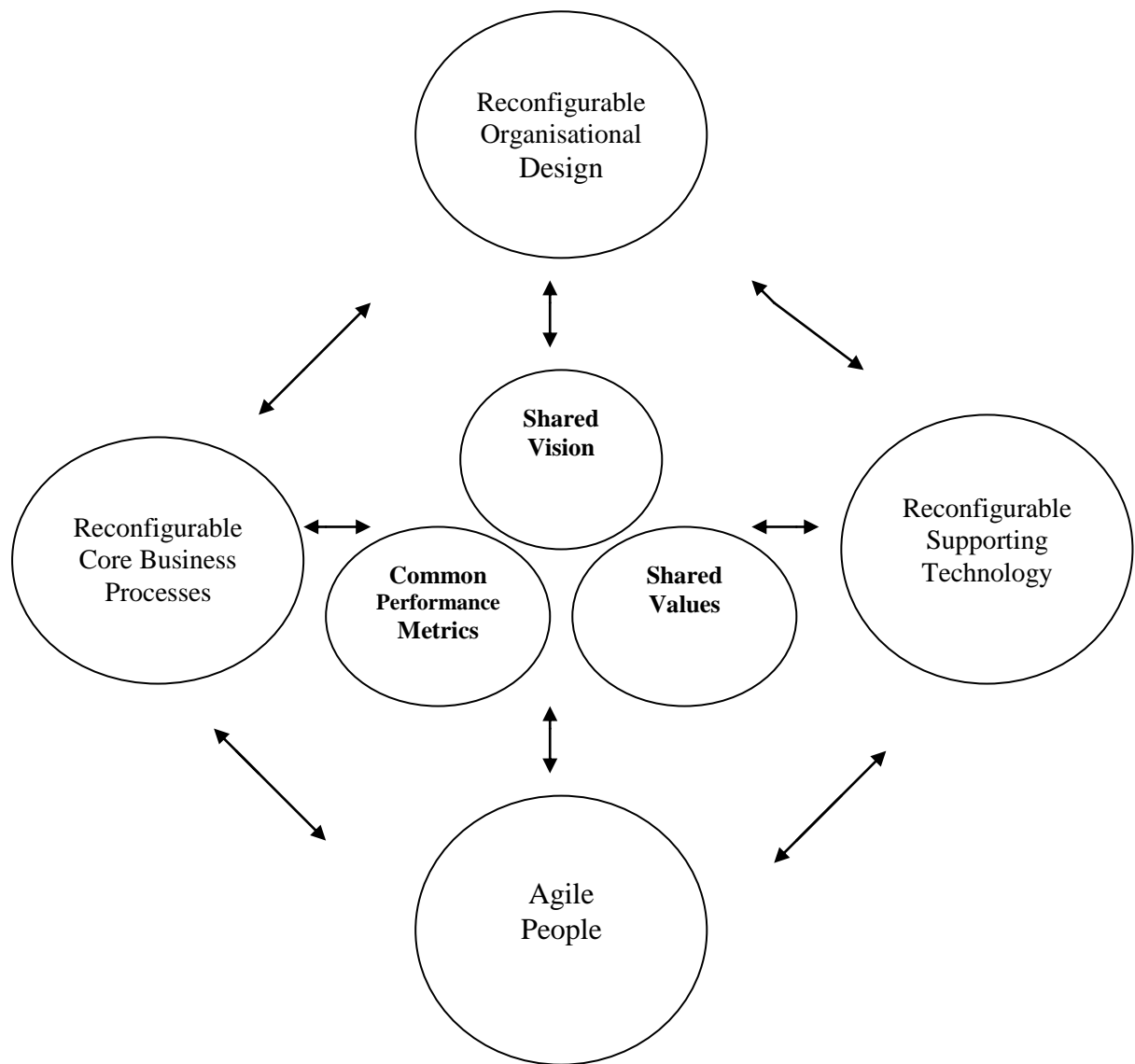
Figure 3.4: "*Agile Organisational Capabilities*" Dyer and Shafer (1999) "From Human Resource Strategy to Organisational Effectiveness: Lessons from Research on Organisational Agility", p. 152.

The organisational infrastructure, according to Dyer and Shafer (1999), consists of four main components:

1. Organisational Design. Dyer and Shafer (1999) argue that rather than being locked into fixed structures, agile organisations tend to create designs that encourage rapid reconfigurability within organisations (e.g. the formation and reformation of temporary teams), as well across organisations (e.g. moving in and out of temporary alliances, including virtual relationships with other, similarly agile, organisations). A group of writers (Ashkenas et al., 1995; Maira and Scott-Morgan, 1996; Sifonis and Goldberg, 1996; Morgan, 1997; Youngblood, 1997)

have been cited by Dyer and Shafer (1999) as eliciting a number of organising principles, which often characterise agile organisations. These include flat, boundaryless, semi structured, customer-focused, process-oriented, and team-based structures.

2. Core Business Processes. Emanating from process-centred organisational designs is the achievement of major improvements in customer responsiveness and speed, through the elimination of the redundancies, miscommunication, and excessive reviews associated with functional or task-oriented organisational structures.

3. Supporting Technologies. According to Dyer and Shafer (1999), agile organisations run on real-time, easily accessible information. A supportive factor in maximising the benefit accrued from information is the presence of a mindset, which facilitates the full and timely flow of virtually all information throughout the organisation in readily usable and flexible formats. Employees, then, can establish their own information needs and, concurrently, access only that information which is needed at a particular point in time.

4. Agile People. It is important to understand the agile attributes or characteristics of the workforce, which are those behaviours and personal competencies that are required in order to foster agile organisations. Such attributes include employees who view themselves and others as owners of fluid assignments and who take individual and collective responsibility for organisational results.

In another study, Wright et al. (1999) conclude from a survey conducted to identify those organisational capabilities that are in need of improvement in the years ahead, that organisational agility emerges as a prerequisite to surviving and prospering in the rapidly changing business environment of today and the future. In this way, the organisational agility paradigm replaces the traditional bureaucratic model, which has been the dominant organisational paradigm under conditions of stability, predictability, and control, since it clearly suffers in guiding organisations operating in turbulent and fluid environments, as Wright et al. (1999) argue. In order to facilitate the attainment of the newly emerging paradigm of organisational agility, respondents to the aforementioned survey have identified a number of supportive

organisational capabilities. They saw an impending need for organisations to focus on effective management of people in a manner that enhances speed, flexibility, and agility, backed by three main configurations of: a visionary and supportive leadership style, cross-functional and fluid core business processes, and distributed information technologies (see figure 3.5).

Leadership:
Visionary
and
Supportive

People

Core Business
Processes:
Cross-functional
and fluid

Information
Technology:
Distributed
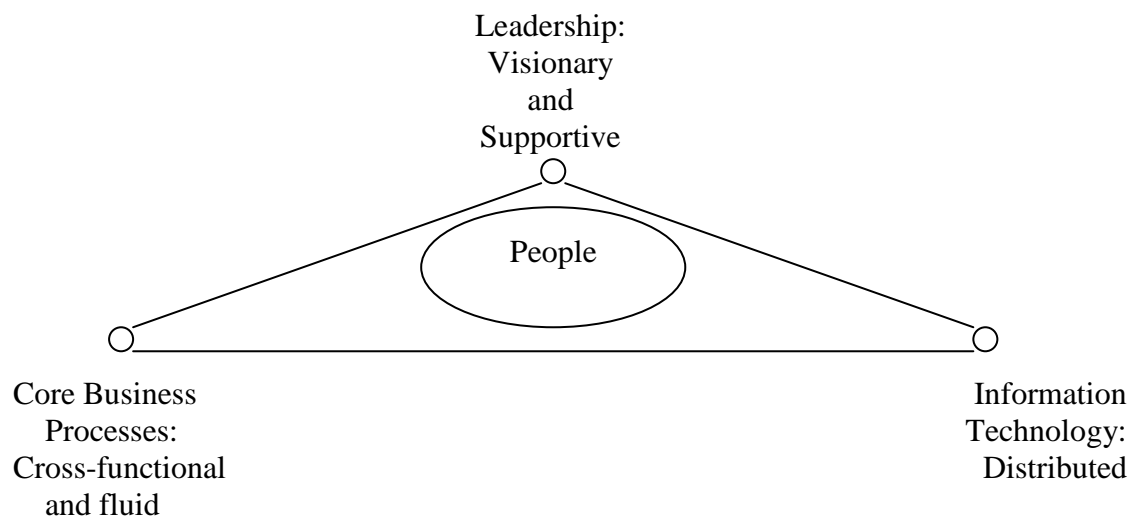
Figure 3.5: "*The Emerging Agile Organisational Infrastructure*" Wright et al. (1999) "Execution: The Critical "what's Next?" in Strategic Human Resource Management", Centre for Advanced Human Resource Studies: Working Paper 99-11, Cornell University, p. 9.

Acting on such findings, Wright et al. (1999) recommend a number of key initiatives focused on enhancing the three infrastructural components supportive of organisational agility. These include:

1) Fostering a new leadership style that is different from that found in traditional bureaucracies. Such a leadership style would be mainly concerned with encouraging individual initiative and self-control; promoting the organisational vision; setting broad strategic direction and domain; instilling a sense of urgency; communicating; and supporting team work.

2) Demolishing barriers to resource mobility. Building agile organisations requires an easy flow of resources (e.g. ideas, money, information, people) across boundaries that traditionally separate organisational layers and functions (inter-departmental integration), and even organisations themselves (forming virtual organisations / virtual organisations). To facilitate this, Wright et al. (1999) argue that employees are

required to take responsibility for overall results and not be confined to their limited, functional responsibilities. They must come to view themselves as owners of fluid assignments who are responsible for doing whatever is required to achieve agreed-upon results.

3) Opening the information valve. In order to ensure that real-time, easily accessible information is provided to all employees throughout the organisation, two issues should be considered: First, the organisation must benefit from up-to-date technology in distributing information to different levels within its structure; Second, issues related to attitudes towards information and its sharing are to be evaluated, so as to establish whether there is a mindset within the culture of the organisation that views information and knowledge as potential sources of organisational rather than personal power, and as resources to be openly shared rather than selectively deployed. Also, Wright et al. (1999) stress the point that employees have the option of determining their own information needs and, thus, accessing only the information that is needed, instead of being overwhelmed with often irrelevant material.

4) Enhancing self-organisation. In order to ensure maximum agility, Wright et al. (1999) argue that the aforementioned key dimensions of organisational infrastructure (i.e. leadership, core business processes, and information technologies) need to adapt and adjust continually as well as spontaneously. This entails that employees at all levels must view such dimensions of organisational infrastructure as a dynamic tool, which can be framed as necessary. For example, everyone has to learn how to create and disband temporary mini-organisational infrastructures such as project teams, and to use them to move resources when and to where they are needed.

As highlighted in their model of the emerging agile organisational infrastructure (see figure 3.5), Wright et al. (1999) clearly emphasise the centrality of people to the pursuit of organisational agility. In this context, they propose a number of actions necessary to foster an agile workforce. *First*, create mindsets that embrace change and see it as not only invigorating, but also as absolutely essential to organisational success. *Second*, educate employees and provide them with all the information they need concerning the organisation's vision and core values, its current and anticipated competitive conditions and targets, and their roles in achieving these objectives. This can help focus and assist employees working in a continually changing business

environment. *Third*, invest in skill development, since in fast changing environments, the usefulness and relevance of skills and competencies becomes limited, which requires their continual renewal. Developing employee skills should not be excluded to firm-specific ones, but also should extend to include investments in more general skills such as communication, problem solving, and decision-making. *Fourth*, empower employees to make decisions in ever-broadening spheres of responsibility and influence.

Meredith and Francis (2000), based upon the preliminary findings of the Agile Manufacturing Research Group (AMRG), highlight that there are two interdependent aspects of agility: strategic and operational. At the strategic level, an outward-looking approach is required. Necessary activities include scanning the environment and assessing the likely impact of industry needs, technology drivers, competitive forces, market changes and market segment dynamics. The operational level relates to what goes on inside the organisation, specifically processes of production, maintenance and process innovation. They also discuss the principles and practices that support agility through the introduction of the agile wheel reference model (AWRM). This wheel is made up of four main quadrants: Strategy, processes, linkages, and people.

The first quadrant "**Agile Strategies**" focuses on strategic aspects of agility and includes four elements. The first element is "*Wide-Deep Scanning*", whose importance emanates from the need to have extensive knowledge and understanding of pivotal change drivers. Without such environmental scanning, it is impossible for organisations to determine an appropriate strategy. "*Strategic Commitment*", the second element, refers to the top management team's willingness to adopt agile policies. Particular emphasis is placed here upon the importance of effective strategic leadership as well as endorsement from the very top levels in the organisation, towards pushing through the "agility agenda". This leads to the third element of "*Full Deployment*", which relates to the extent to which agile policies and practices are adopted by every department, group, and project team. Meredith and Francis (2000) point out that agility is more effective where the linkages between departments, functions, teams and individuals are highly integrated. The final element of the Strategy quadrant is the "*Agile Scoreboard*". It refers to the degree to which the performance management system of the organisation supports agile policies and

practices. This is considered important, because if agile goals are not built-in to an organisation's measurement system, then it is left to chance as to whether or not they are achieved.

The second quadrant of the agile wheel is called "**Agile Processes**", and focuses on organisational processes that support agility. Under this quadrant, four practices are specified. First, "*Flexible Assets and Systems*", which include buildings, production layout, technologies, and control systems, need to have a minimum of waste with an organisation designed to improve the effectiveness of all aspects of the operations. Second, shorter life cycles, demand for greater product variety and narrowing windows of market opportunities, mean that "*Fast New Product Development*" is an important aspect of agility. Third, "*Rapid Problem Solving*" is an important aspect of agility. If an organisation is slow in identifying and solving problems, its creative energies are absorbed in rectification and minor improvements instead of seizing opportunities. Therefore, symptoms of problems need to be identified quickly and sufficient resources allocated to find an effective solution, which can be quickly implemented. Finally, agile organisations require "*Rapid and Frequent Decision-Making*", which necessitates the existence of an effective decision support and communication system. Also, rich information systems help to ensure that decision-making is shared and effective.

The third quadrant is called "**Agile Linkages**", and focuses on outside linkages. Four practices are specified under this quadrant: "*Agility Benchmarking*" provides the comparative background to set agile objectives and compare practices and performance with other similar organisations. "*Deep Customer Insight*" is based on Dove et al. (1996) view that developing and sustaining loyal relationships with customers to a deep level is a generic agility issue, which emanates from Goldman et al. (1995) "enriching the customer" dimension of agility. "*Aligned Suppliers*" are necessary because a slow or non-responsive supply chain markedly degrades the agile capability of the organisation. "*Performing Partnerships*" with other organisations, to form virtual enterprises, offers new or enlarged capabilities through co-ordination.

The fourth and last quadrant is concerned with "**Agile People**", and addresses issues related to human resources. In particular, four practices are specified: "*Adaptable Structure*" refers to the form of the organisation. As Meredith and Francis (2000) argue, the traditional bureaucratic organisational structure is, inherently, non-agile as it depends upon predetermined rules to guide behaviour. Therefore, there is a need to develop adaptable organisational structures, which enable the organisation to become configured to grasp opportunities. In support of this is van Aseen (2000), who describes agility as the organisational capability to re-engineer and adjust to continuous change by empowering employees in a decentralised organisational setting. In addition, he indicates that not only are agile organisations highly decentralised, but that they also have flexible, dynamic, pluralistic and deliberate structures. "*Multi-skilled, Flexible People*", according to Meredith and Frances (2000), are key to developing an agile enterprise. They argue that agile firms are less dependent on systems, and more dependent on the intelligence and opportunism of people. The capability, involvement, commitment and empowerment of people within the manufacturing enterprise is critical to agile manufacturing. The utilisation of peoples' skills, knowledge, judgement, experience and intelligence to their full capacity is a key challenge. Therefore, Christopher (2000) argues that an aid to enhanced agility will be the development of a human resource strategy that leads to multi-skilling and encourages cross-functional working. Team-based management also has been demonstrated to be a highly effective facilitator of organisational agility. Moreover, Hormozi (2001) indicates that agile organisations increasingly leverage the intellectual power of the employees as opposed to their muscle power. He supports the importance of using cross-functional teams.

In addition, "*Rapid, Able Decision-Making*" is important, since speed of response is one of the main characteristics of the agile organisation. In this context, effective information systems allow information to flow throughout the organisation, thereby integrating the organisation and, thus, assisting rapid decision-making. The fourth element addressing the agility of the human resources in an organisation is concerned with "*Continuous Learning*". In this context, Meredith and Francis (2000) encourage organisations to be open to new ideas, and continuously upgrade the skills, knowledge and competencies held by its employees, in order to sustain their competitiveness.

Hence, they state: "*The intensive learning of individuals, collectively, captured, continually built upon, and mobilised is a characteristic of an agile enterprise*" (Meredith and Francis, 2000, p. 142).

In this context of emphasising the importance of nurturing agile human resources, Shafer et al. (2001) identify five key human resource initiatives that can be crafted to foster the successful attainment of organisational agility. These human resource initiatives include:

1. Achieving contextual clarity. A firm grasp of environmental and organisational realities, Shafer et al. (2001) argue, would serve to enhance employees' dedication to the organisation's overall agility and success. This entails ensuring that employees at all levels clearly understand the gist and essentiality of: the vision of the top management team for the organisation; the organisation's progress (or lack thereof) toward achieving the vision; and the links between their individual and collective actions and the performance of the total enterprise. The techniques used to achieve contextual clarity mainly centre on communication channels, including bulletins, newsletters, and workshops.

2. Embedding core values. This initiative entails establishing a set of core values for the organisation, and assuring that all employees knew about, understood, shared, and lived these core values. Shafer et al. (2001) indicate that in a period of constant change, having a shared vision and core values provides an element of stability. In addition, having core values would encourage employees to identify with the organisation as a whole and, thus, to be more business-driven and more comfortable in acting independently and taking personal responsibility. Moreover, the values serve as the centrepiece of a team-building effort.

3. Enriching work. Enriching work initiatives, according to Shafer et al. (2001), mainly involve work redesign experiments that generally take one of three forms:

- Flexible assignments, in which employees continue to use the same or a similar set of technical competencies but apply them in different locations throughout the organisation. The benefits include the broadening of perspectives, enhancing social networks, promoting organisational learning, and encouraging employee flexibility.

- Blended assignments, by which various tasks were compressed into one assignment. Employees would then take responsibility for delivering the full range of such tasks.

- Team-based work. The main purpose behind forming teams would be for the members to provide a full range of routine services, which involves self-management and collective responsibility.

As Shafer et al. (2001) conclude, the aforementioned work design experiments contribute to the development of three main personal competencies. First, they encourage employees to be more collectively focused as they set team priorities and action plans and learn to live with the results. Second, they induce employees to be more generative by making it obvious that current knowledge and skills would be inadequate as work continually evolved. Third, constant experimentation with work redesign serves to reinforce the norm of continuous change and the need for greater employee resilience.

4. Promoting personal growth. Personal growth assumes particular importance in a changing world, according to Shafer et al. (2001), since standing still is equivalent to becoming obsolete and, thus, irrelevant. Therefore, the skills, knowledge and competencies of the organisation's human capital should be continuously developed, not only to enhance performance, but also to prepare for whatever the future might bring. Hence, there is a need to invest heavily in training and education to learn and apply new knowledge quickly.

5. Providing commensurate returns. Providing monetary and non-monetary returns that are perceived as generally equal to the contributions of employees to the organisation serves to reinforce them. Thus, motivation becomes the means for galvanising the commitment as well as efforts of employees towards their organisation, through assuring them that their contributions in enabling the organisation to continuously respond to changing requirements are appreciated and adequately rewarded.

3.5 <u>Summary and Conclusions</u>

This chapter has discussed the concept of organisational agility, which is considered an emerging dynamic paradigm to organisation and management that is arguably more suited to guide organisations in today's turbulent environment characterised by continual change. It charted the development of the concept of agility, beginning with its emergence as a manufacturing paradigm that has been proposed as a means of enabling manufacturing organisations to maintain their competitive advantages as they approach the 21st century. The chapter then sought to broaden the applicability of agility to service organisations, through highlighting a generic conceptualisation of agility that emphasises the importance of thriving in a continually changing environment. This can be facilitated through enablers, which mainly revolve around four key concepts: organising to manage change and uncertainty, enriching the customer, forming co-operative alliances and partnerships, and leveraging the impact of people and information.

The findings reached from Chapter Two and Chapter Three have resulted in the identification of the main enablers of agility, which are reflected in the "agility-enabling" paradigm shown in appendix L. The operationalisation and measurement of the main constructs forming this paradigm are discussed in detail in Chapter Six, which specifically addresses the third research objective concerned with identifying those capabilities that enable organisational agility.

Chapter Four

Research Philosophy, Design and Methodology

4.1 Introduction

As reflected in the title of this thesis, the research has adopted a case study approach to exploring three major themes addressing organisational agility in healthcare, which are reflected in the main objectives of the research. Accordingly, this chapter explains the primary reasons behind such a choice. These reasons mainly emanate from the exploratory nature of this study, being the first known one investigating the concept of organisational agility in the National Health Service (NHS), triggered by the important expected benefits of facilitating agility in healthcare organisations operating within the NHS, as earlier discussed in Chapters One, Two and Three. Building on the exploratory purpose of inquiry characterising this study, a "*case study*" research design was adopted, involving two NHS Hospital Trusts: **Trust A**, which is a *one star, lower performing Trust*, and **Trust B**, which is a *three star, higher performing Trust*, according to the NHS Performance Ratings published by the Commission for Health Improvement (CHI) (2003). A discussion of the main elements of the case study design characterising the research strategy is provided in this chapter.

In addition, the chapter discusses the two main methods employed by this research for primary data collection, namely: *in-depth face-to-face interviews* and *self-completion questionnaires*, in terms of the design, structure as well as content of each primary data collection instrument. These two research instruments were administered in each of the two case NHS Hospital Trusts designated as case study organisations for the purposes of this research.

Procedures undertaken, decisions made, and steps followed in order to designate the two NHS Hospital Trusts involved in this research, as case study organisations, are also explained. These include identifying fifty NHS Hospital Trusts within a particular geographic region in England (Yorkshire and the North region), and consequently contacting these Trusts through sending letters to the Chief Executives as well as Directors of Human Resources / Personnel and Development, working in

these Trusts, explaining the purpose of the study and requesting the kind collaboration of the Trust. As a result, two Trusts were chosen from those, which have expressed initial willingness to participate in the study, and were accordingly designated as case study organisations. A number of meetings were held between the researcher and senior managers and clinicians in each of the two Trusts, in an effort designed to communicate to them the nature of the case study investigation involving them, the phases of data collection required, as well as the expected timetable for undertaking the study. The management population within both Trusts to be targeted with primary data collection, through face-to-face interviews and self-completion questionnaires, was then determined based on studying the various documents provided to the researcher by both Trusts, which outlined the organisational structure and the distribution of various clinical as well as administrative responsibilities. Finally, the rationale for using the statistical methods in the analysis of primary data collected is explained.

Figure 4.1 illustrates the methodological steps informing the process undertaken in the course of conducting this "case study" investigation.

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│              Focus of the Study              │
│     Identification of the Specific Problem Area     │
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┌─────────────────────────────────────────────────────────────────┐
│                      Literature Review of:                       │
│ The main concept subject of investigation (Agility), recent strategy views concerning │
│ competitiveness and the ability to thrive, as well as the context of application (The NHS) │
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┌─────────────────────────────────────────────┐
│           The Major Research Objectives      │
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┌─────────────────────────────────────────────┐
│        Exploratory Nature or Purpose of Study │
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┌─────────────────────────────────────────────┐
│              Mixed Methods Approach           │
└─────────────────────────────────────────────┘
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│          Case Study Research Design           │
└─────────────────────────────────────────────┘
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┌─────────────────────────────────────────────┐
│   Designing and Coordinating In-Depth Interviews │
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┌─────────────────────────────────────────────────────┐
│ Preliminary Analysis of Qualitative Data Collected through Interviews │
└─────────────────────────────────────────────────────┘
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┌─────────────────────────────────────────────┐
│      Design of Self-Completion Questionnaires │
└─────────────────────────────────────────────┘
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┌─────────────────────────────────────────────────────┐
│ Analysis of Quantitative and Qualitative Primary Data Collected through both: │
│              Interviews and Questionnaires            │
└─────────────────────────────────────────────────────┘
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┌─────────────────────────────────────────────┐
│      Triangulation of Quantitative and        │
│         Qualitative Primary Data              │
└─────────────────────────────────────────────┘
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┌─────────────────────────────────────────────┐
│        Research Findings and Discussion       │
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┌─────────────────────────────────────────────┐
│                 Conclusions                   │
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Figure 4.1: Major Steps Informing Research Design and Process.

4.2 Identifying the Specific Problem Area and Formulating the Main Research Objectives

"*The design of a study begins with the selection of a topic and a paradigm. Paradigms 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*" (Creswell, 1994, page 1).

As such, the starting point in deciding on an overall design for the research, which is most appropriate for fulfilling its objectives, is identifying a focus for the study reflected in a statement of its specific problem area. Based on this, the major need for the study was outlined in Chapter One, in order to set the scene for the entire investigation. This was further elaborated upon in Chapters Two and Three, through advancing and highlighting the argument that healthcare organisations operating within the NHS have always been subject to continuous, and most recently, radical changes. Governmental initiatives and plans concerned with the way that the NHS is managed, as well as the ever-increasing and changing requirements, expectations and pressures characterising the operating environment impacting such organisations, have largely emphasised the need for Trusts and other health care organisations to respond flexibly and responsively to change. Such a situation is often exemplified by a spectrum of problems that have become synonymous to the NHS, which are mainly represented by problems related to patient waiting times and best practice in the use of capital and resources.

As a result, the main problem identified is illustrated by changing demands and requirements posed on healthcare organisations, which emanate from stakeholders forming the environment surrounding these organisations. These varied and intensifying demands and requirements are quite often met with lack of efficient response and adaptation. An example of problems that have resulted from such a lack of efficient response and adaptation being the chronic problems of long patient waiting lists and times.

According to Sekaran (2000), when identifying the broad problem area, which a particular research seeks to solve, the concern may be directed towards:

- A problem currently existing that needs to be solved,

- An area in the organisation that is believed to be needing improvement, or

- A conceptual or theoretical issue that needs to be tightened up in order to understand certain phenomena.

This research addresses a problem area from three main angles that are consistent with the ones mentioned above, in that:

a. The major aim of the research is to contribute to new knowledge and better understanding with regard to facilitating organisational agility and responsiveness in healthcare organisations operating within the NHS, thus directly addressing a <u>currently existing problematic area within the NHS</u>. This problematic area revolves around the need to enable hospitals to become more adaptive as well as responsive to the changing needs and requirements of a variety of environmental parties, most particular of which are the users and purchasers of their healthcare services (patients, Health Authorities, General Practitioners, for instance), as well as Governmental targets and initiatives.

b. Although there have been a number of Governmental plans and initiatives focusing on the need for the NHS to become more flexible and responsive to the needs and requirements of its customers or patients, problems such as long waiting lists and times are still prevalent. <u>This serves as an example of a situation needing improvement</u>.

c. Also, there is a need for a rigorous investigation of a conceptualisation and definition of agility that is relevant to a healthcare context, as well as for exploring and understanding what is required to create agile healthcare organisations. These two aspects represent <u>conceptual or theoretical issues in need of empirical exploration and substantiation</u>, to facilitate better understanding of the organisational phenomenon of agility, on the part of healthcare organisations.

Based on the previous identification of the problems encountered by NHS Hospital Trusts, it was concluded from the subsequent review of the relevant literature discussing both: the concept of agility as well as the recent changes in the way, in which the NHS is organised and managed, that the need has arisen more than ever before to investigate the introduction and application of the new "organisational agility" paradigm, in the context of healthcare organisations operating within the NHS. This is due to the reason that the primary purpose behind the emergence of the organisational agility paradigm is to provide guidance for those organisations operating in increasingly turbulent and constantly changing environments (Goldman and Preiss, 1991; Goldman et al., 1995; Dyer and Shafer, 1999; Wright et al., 1999; Zhang and Sharifi, 2000; Shafer et al., 2001). Based on this, the aim of this research is to seek to fulfil the following main objectives: -

1. To explore and identify the conceptualisation, perception and understanding of organisational agility on the part of the NHS Trusts.

2. To explore and identify the perceived need of these Trusts for organisational agility, as essentially being driven by the nature of changes in the environment affecting them.

3. To explore and identify those factors, which can enable such organisations / hospitals to become more agile and flexible in their adaptation and response to changes being posed by the surrounding environment.

4.3 The Research Philosophical Paradigm

After identifying a specific focus for the problem addressed by the research, the next step is to decide on an appropriate design for the research, which details the procedures necessary for obtaining the information needed to structure or solve the particular research problem. In this context, Creswell (1994, 2003) stresses the important linkages between the *design of the study*, which refers to the overall approach followed in seeking a solution for the particular problem subject of investigation, and the *overall paradigm of scientific inquiry*, which sets the philosophical basis for the research according to a number of assumptions addressing how the search for the truth, reflected in the fulfilment of the objectives of the research, is to be attained.

Therefore, two major paradigms are identified, which are discussed widely in the literature. These are: the quantitative (*traditional*; *positivist*; *experimental*; *empiricist*) paradigm and the qualitative (*constructivist*; *interpretative*; *post positivist*; *post modern*) paradigm. Hussey and Hussey (1997) indicate that two general terms are quite often used to refer to these two paradigms, which tend to embody the different titles given by various authors, including the aforementioned ones of **Quantitative** and **Qualitative**. Table 4.1 outlines these different terms used to refer to the two paradigms: **Positivistic** and **Phenomenological**.

Positivistic paradigm	Phenomenological paradigm
Quantitative	Qualitative
Objectivist	Subjectivist
Scientific	Humanistic
Experimentalist	Interpretivist
Traditionalist	

Table 4.1: "*Alternative terms for the main research paradigms*", Hussey and Hussey (1997) Business Research. Hampshire: Macmillan Press Ltd., page 47.

The major difference between the positivistic (quantitative) and the phenomenological (qualitative) paradigms of scientific inquiry can be illustrated through the overall approach followed by each of these paradigms, with regard to the generation of knowledge: *deductive theory testing* and *inductive theory building*. As highlighted by Perry (1998), the deductive approach represents the positivistic paradigm, whereas the inductive approach represents the phenomenological paradigm. In this way, the positivistic paradigm, as Saunders et al. (2000) explain, seeks to develop a theory and hypothesis (or hypotheses) about the relationship between two or more variables from available literature, which is then tested empirically by gathering data on the relevant variables and then applying statistical tests to the data in order to identify significant relationships. The findings may either confirm the theory or result in the modification of the theory in the light of the findings (Hussey and Hussey, 1997). Thus, the fundamental idea of the positivistic paradigm is the belief that studying human behaviour should be conducted in the same way as studies conducted in the natural sciences (Hussey and Hussey 1997). This entails that the social world should be measured by using objective methods rather than being inferred subjectively by using observation, reflection, or intuition.

As a reaction to the emphasis placed by the positivistic paradigm upon making cause and effect links between variables without consideration of the way in which humans interpreted their social world, Hussey and Hussey (1997) indicate that social scientists began to argue against positivism. Thus, the starting point for the phenomenological paradigm is the belief that social practices are not natural phenomena. Instead they are socially constructed and emerge as a result of the social practices of organisational participants. In this way, Easterby-Smith et al. (2002) explain that the philosophy behind the phenomenological paradigm, in investigating social sciences, views the "reality" as not objective and exterior, but as being socially constructed and given meaning by people. Thus, the phenomenological paradigm appreciates the different interpretations and meanings, which people give to various phenomena. People's feelings, thinking, and interpretations of the phenomenon being investigated are fundamental issues in the phenomenological paradigm. This involves thoroughly explaining why and how people see different experiences, rather than searching for external causes and fundamental laws to explain their behaviour (Easterby-Smith et al., 2002).

Based on this, according to the phenomenological paradigm, the context in which a phenomenon is taking place is quite important in explaining such a phenomenon. Therefore, in contrast to the positivistic paradigm, the phenomenological paradigm places particular emphasis upon the need to study a phenomenon in its wider organisational, social and political context. Normally, this is facilitated through devising a case study research design, which employs a variety of data collection methods in order to develop an in-depth and detailed understanding of a particular organisational phenomenon (Eisenhardt, 1989; Creswell, 1994; Yin, 1994; Creswell and Maieta, 2002; Creswell, 2003).

Table 4.2 outlines the assumptions of each of these two paradigms as contrasted along a number of dimensions, including the approach followed in knowledge generation highlighted under "methodological assumption", as follows:

Assumption	Question	Quantitative	Qualitative
Ontological Assumption	What is the nature of reality?	Reality is objective and singular, apart from the researcher	Reality is subjective and multiple as seen by participants in a study.
Epistemological Assumption	What is the relationship of the researcher to that researched?	Researcher is independent from that being researched.	Researcher interacts with that being researched.
Axiological Assumption	What is the role of values?	Value-free and unbiased	Value-laden and biased
Rhetorical Assumption	What is the language of research?	Formal Based on set of definitions Impersonal voice Use of accepted quantitative words	Informal Evolving decisions Personal voice Accepted qualitative words
Methodological Assumption	What is the process of research?	Deductive process Cause and effect Static design-categories isolated before study Context-free Generalisations leading to prediction, explanation, and understanding Accurate and reliable through validity and reliability	Inductive process Mutual simultaneous shaping of factors Emerging design-categories identified during research process Context-bound Patterns, theories developed for understanding Accurate and reliable through verification

**Table 4.2: *"Quantitative and Qualitative Paradigm Assumptions"*, Creswell (1994)
Research Design: Qualitative and Quantitative Approaches. Thousand Oaks,
California: Sage Publications, Inc., page 5.**

A most important decision emerging from *selecting* which paradigm is to be adopted in conducting the study is that, which is concerned with determining the research design and methodology. The importance of determining an appropriate design for the study emanates from the belief that "*an understanding of the fundamental aspects of research design and their components enables the researcher to formulate a design for the research that is appropriate for the problem at hand*" (Malhotra and Birks, 2000, page 71).

Therefore, the differences between the two paradigms in terms of their methodological assumptions are now highlighted, in order to aid in choosing the paradigm that prescribes the most suitable and appropriate methodology for solving the study's problem at hand. According to Creswell (1994), the nature of the research's methodology- that is, the entire process followed in a particular research- emerges as a result of the distinctions between the two quantitative and qualitative paradigms, in terms of the: *nature of reality, relationship between the researcher and that researched, role of values, and the rhetoric of the study*. In this vein:

- Researchers normally approach a quantitative methodology "*by using a deductive form of logic wherein theories and hypotheses are tested in a cause-and-effect order. Concepts, variables, and hypotheses are chosen before the study begins and remain fixed throughout the study. One does not venture beyond these predetermined hypotheses. The intent of the study is to develop generalisations that contribute to the theory and that enable one to better predict, explain, and understand some phenomenon. These generalisations are enhanced if the information and instruments used are valid and reliable.*

- *Alternatively, in a qualitative methodology inductive logic prevails. Categories emerge from informants, rather than are identified a priori by the researcher. This emergence provides rich "context-bound" information leading to patterns or theories that help explain a phenomenon. The question about the accuracy of the information may not surface in a study, or, if it does, the researcher talks about steps for verifying the information with informants or "triangulating" among different sources of information, to mention a few techniques available*" (Creswell, 1994, page 7).

These distinctions between the positivistic and phenomenological paradigms are further supported by Hussey and Hussey (1997), who summarise the distinguishing features between the two paradigms or philosophies (see table 4.3).

Positivistic Paradigm	*Phenomenological Paradigm*
Tends to produce quantitative data	Tends to produce qualitative data
Uses large samples	Uses small samples
Concerned with hypothesis testing	Concerned with generating theories
Data is highly specific and precise	Data is rich and subjective
The location is artificial	The location is natural
Reliability is high	Reliability is low
Validity is low	Validity is high
Generalises from sample to population	Generalises from one setting to another

Table 4.3: "*Features of the Two Main Paradigms*", Hussey and Hussey (1997) Business Research. London: Macmillan, page 54.

In the course of selecting a research paradigm for the overall design of the study, Creswell (2003) identifies a number of guiding criteria, including: **a)** *the researcher's worldview*, in that some researchers see reality as subjective and, thus, favour a close interaction with informants, while others are more inclined towards a more objective stance using a survey or an experiment; **b)** *training or experiences* in one approach, which may influence its choice over the other; **c)** *psychological attributes*, in that a researcher who conducts a quantitative study does so because it offers a low-risked, fixed method of research without ambiguities and possible frustrations. This is compared with a researcher more comfortable with qualitative studies, in which the rules and procedures are not fixed, but rather open and emerging. This, in turn, introduces relatively more risk and ambiguity, as well as requires a lengthy study.

However, relatively more importance is attached to the *nature of the problem*, as a vital criterion used in determining which paradigm is more appropriate for the study at hand. For example, Creswell (2003) indicates that in quantitative studies, the problem evolves from the literature, in that a substantial body of literature exists in terms of known variables and existing theories that may need testing or verification. This serves as a basis, upon which the study can be built. On the other hand, the research problem in qualitative studies needs to be explored because little information exists on the topic. In addition, in qualitative studies, the researcher wants to focus on the context that may shape the understanding of the phenomenon being studied. In this way, and in many qualitative studies, a theory base does not guide the study because those available are inadequate, incomplete, or simply missing. Therefore, Creswell and Maietta (2002) indicate that conventional wisdom in conducting qualitative research is to keep the approach flexible and open-ended to learn the meanings and views held by participants in a study.

Oppenheim (2000) argues that choosing the best design or best method is a matter of appropriateness. No single approach is always or necessarily superior; it all depends on what is needed to be found and on the type of question, which the research seeks to answer. Easterby-Smith et al. (2002) indicate that researchers in the management field adopt a pragmatic view by deliberately combining methods drawn from both philosophies. In this way, Hussey and Hussey (1997) point out that the two paradigms must be viewed as two extremes of a continuum, and that none of these two

paradigms is considered better than the other. The choice of either paradigm is determined partly by the current knowledge of the topic and research problem under investigation.

However, in reality there are very few pure quantitative or qualitative research projects, which adopt one single paradigm and use its implications. Most research projects use a combination of both paradigms (Easterby-Smith et al., 2002; Creswell, 2003). The rationale for this combination is that each philosophy has strengths and weaknesses; therefore, employing aspects of both would maximise strengths and minimise weaknesses. Understanding the strengths and weaknesses gives the researcher helpful insights to choose which methods and aspects are most likely to be helpful in a given research situation. Examples of the strengths of the positivistic philosophy and quantitative methods are that they apply to a wider range of situations, and are faster and more economic than their qualitative counterparts. Weaknesses of the positivistic philosophy and quantitative methods centre on the consideration that they are often inflexible and artificial in understanding processes or the significance that people attach to actions, and that they are not helpful in generating theories.

On the other hand, examples of the strengths of the phenomenological philosophy and qualitative methods are that they have the ability to understand people's interpretations, generate new theories, and provide more depth to the research being investigated compared with their quantitative counterparts. On the weaknesses side, they are more time consuming, costly, and the analysis and interpretation of data may be difficult (Hussey and Hussey, 1997; Easterby-Smith et al., 2002). Therefore, it is beneficial for the researcher to be "pragmatic" in mixing research approaches and methods in a single study of social phenomena. "Pragmatists" do attempt to integrate methods of quantitative and qualitative paradigms in investigating a single study (Creswell, 2003).

The combination of the two paradigms has been described as "triangulation" between paradigms, methodologies and methods of data collection in the study of the same phenomenon. The triangulation concept is built on the assumption that it would reduce biases inherent in particular data collection sources and methods, through using more than one data collection method (Creswell, 2003). Using triangulation in one study has a number of advantages, in that it provides a kind of convergence of

results, complements findings reached from analysing various observations, and enhances the scope and breadth of a study (Creswell, 2003).

In using a combination of quantitative and qualitative approaches the model of the combination design must be determined. Creswell (1994) has conceptualised three models or approaches on combined research designs. **First:** The "two-phase" design approach, according to which the researcher conducts a qualitative phase of the study and a separate quantitative one. **Second:** The "dominant - less dominant" design approach, in which the study is presented within a single, dominant paradigm with one small component of the overall study drawn from the alternative paradigm. **Third:** The "mixed-methodology" design approach, which represents the highest degree of mixing paradigms of the three designs. Using this approach the researcher mixes aspects of the qualitative and quantitative paradigms at all or many methodological steps in the design.

Based on the three aforementioned combined research approaches, this research adopted a "two-phase" mixed paradigm or approach, which is represented by a first qualitative phase involving face-to-face in-depth interviews, followed by a second quantitative one involving self-completion questionnaires. The results that emerged from undertaking the first qualitative phase, involving in-depth interviews, were used in the design of the self-completion questionnaire as well as in seeking to fulfil the first research objective, which is concerned with exploring the conceptualisation of agility in the NHS Trusts. As to the second quantitative phase of the study involving the use of questionnaires, the findings emerging from analysing the quantitative data obtained from these questionnaires represented the dominant approach that was adopted in fulfilling the objectives of this study, particularly the second and third ones. The second objective aimed to identify the need for agility on the part of the NHS Trusts, driven by the nature of environmental change affecting them, whereas the third objective sought to explore those capabilities that enable agility in these Trusts. Based on this:

1. Due to the obvious lack of studies examining agility in healthcare, with none being conducted examining such a recently emerging organisational phenomenon within the context of the National Health Service, the purpose of this study became exploratory. This meant that there was an obvious need to further explore

the issues related to the: conceptualisation of agility, the need for it on the part of healthcare organisation operating within the NHS, as well as how organisational agility can be enabled or facilitated in such organisations. The need for such further exploration was triggered by the fact that little information existed about the topic within the context of healthcare organisations. Moreover, the existing concepts and theories related to agility were in need of further rigorous empirical testing and substantiation. Thus, the intention was to capture the meanings held by individual members of each Trust, as to how they perceived and understood the term: "organisational agility", as well as its relevance and practical implications for a healthcare provider organisation context.

Hence, an initial qualitative phase is believed to allow for the useful capturing and analysis of rich information from informants in an organisational setting, concerning the organisational phenomenon of agility, through conducting *face-to-face in-depth interviews*. As Creswell and Maieta (2002) explain, qualitative research methods are often used when the scientist is interested in obtaining detailed and rich knowledge of a specific phenomenon. This is particularly useful when there is an obvious lack of studies examining the particular subject of investigation. Emanating from this is the exploratory nature of the study, in that it seeks to explore and investigate the introduction and application of the new organisational agility paradigm in NHS Trusts, which has recently emerged to guide organisations operating in increasingly turbulent and constantly changing environments. Therefore, an initial qualitative stage was designed in order to seek better comprehension and understanding of the issues subject to investigation, which are reflected in the main objectives of this study.

2. The review of the literature addressing the concept of organisational agility revealed the existence of a number of studies, which could be used as a basis for developing a theory about those capabilities that can be identified as "enablers" of agility. Although such a body of literature was underdeveloped and somewhat immature, due to the lack of empirical investigations, nevertheless, theoretical scales could be developed from the extant literature. These scales were then subjected to Exploratory Factor Analysis to extract conceptual dimensions, whose reliabilities were calculated by using the alpha cronbach coefficeint (refer to

Chapter Six for a detailed explanation and discussion of these quantitative procedures).

4.4 <u>The Case Study Research Design</u>

The case study research design was chosen as the overall strategy for this research. The primary drivers behind the adoption of a case study research design emanate from the exploratory nature of this study, being the first known study investigating the conceptualisation and enablers of, as well as the need for, organisational agility in the National Health Service (NHS). As such, a case study design allows placing an emphasis upon the particular context, in which the phenomenon of organisational agility is taking place. In this way, a deeper insight can be gained by taking a holistic perspective of the wider organisational, social, and political context of such a phenomenon (Eisenhardt, 1989; Yin, 1994; Creswell and Maieta, 2002). Such a research design allows for the useful capturing and analysis of rich information from informants in a case study setting, concerning the organisational phenomenon of agility, through a number of sources. These mainly include *face-to-face in-depth interviews*, *self-completion questionnaires*, and *archival documents* explaining the organisational structure outlining the various clinical as well as managerial duties and responsibilities attached to it. Such triangulation of different sources of qualitative and quantitative data serves to verify the results reached, thus enhancing the quality of the study.

Therefore, there are two main reasons for choosing a case study research design for studying organisational agility:

1. The manner in which the main objectives of this research are formulated, being to explore and identify issues related to organisational agility in a new context, which is a healthcare one.
2. For a fairly novel subject and research issue as agility, there is a reason for conducting case studies in order to observe and study this organisational phenomenon closely and to identify its main enablers within a single organisational setting.

Based on these two main reasons, two NHS Hospital Trusts were designated as Case Study organisations for the purposes of this research: **Trust A**, which is a *one star, lower performing Trust*, and **Trust B**, which is a *three star, higher performing Trust*, according to the NHS Performance Ratings published by the Commission for Health Improvement (CHI) (2003). Such a multiple case study design, involving the use of in-depth, face-to-face interviews targeting the most senior managers and clinicians in each of the two organisations, as well as the administration of comprehensive self-completion questionnaires, is believed to yield richer data and better knowledge and understanding of the concepts and issues under investigation, thus providing for a more in-depth, exploratory investigation and close-up look regarding organisational agility in healthcare, compared with a survey research design.

4.4.1 <u>Background Information Concerning the Two Case NHS Trusts</u>

It was indicated to respondents from both case NHS Trusts, who participated in the in-depth interviews and completed the self-completion questionnaires, that "responses will be treated as strictly confidential. No reference will be made to any individual or to any hospital by name, and no piece of information will be disclosed to any third party. The researcher, thus, guarantees <u>ABSOLUTE ANONYMITY AND CONFIDENTIALITY</u> and that all information will be dealt with for the sole purposes of this PhD Research Project only". Therefore, the two NHS Trusts designated as case study Trusts for the purposes of this research will be referred to as Trust A and Trust B. In addition, the information concerning these two Trusts will be presented in a manner that will not jeopardise the secrecy and anonymity of their identities.

The First Case NHS Trust

NHS Trust A was established on 1st April 2002 as part of a series of changes in the pattern of NHS organisations serving the communities of Yorkshire. These changes included the establishment of a number of health organisations, which have become responsible for delivering healthcare across two districts within Yorkshire. Such organisations, whose operation and performance are overseen by a Strategic Health Authority, include a Mental Health Services NHS Trust, as well as three Primary Care Trusts (PCTs).

According to Trust A Annual Report (2002/2003), the Trust has responsibility for the acute and general hospital services previously managed by the two NHS Trusts, which merged to form the new NHS Trust A. These two Trusts that existed prior to the formation of Trust A were serving the populations of two districts within Yorkshire. Trust A provides services at three main sites, which include five main hospitals. The Trust provides a full range of outpatient, day patient, diagnostic, and inpatient services for the communities that it serves, with some regional specialties. These services and examples of the specialties and departments that they encompass include the following:

− *Surgery*, involving General Surgery, Theatres, Ophthalmic, Pain Services, Oro-Facial, Plastics, Orthopaedics, Orthodontics, and Oncology.

− *Medicine*, which includes Dermatology, Rheumatology, Cardiology, Neurology, Elderly Medicine, and Endoscopy.

− *Children's Services* encompassing Paediatrics and Neonatology.

− *Clinical Support Services*, which are responsible for such departments as Physiotherapy, Pharmacy, Critical Care, and Dietetics.

− *Specialist Services*, examples of which include Accident and Emergency as well as Anaesthetics.

− *Pathology* and *Radiology Departments*.

Particular emphasis is placed by the management of the Trust upon the need for each of the five hospitals at the three sites, which it comprises, to retain a strong local identity and a local management team, while enjoying close relationships with their local Primary Care Trusts (PCTs), as well as the loyal support of their local communities. In this way, the new Trust aims to build on the strengths and loyalties that the hospitals enjoy, whilst realising the benefits offered by the larger Trust. Such benefits emanate from the main reason for the merger, which was to sustain and develop the quality of health services provided to the communities that the Trust serves. In particular, the separate catchment areas prior to the formation of the new Trust were too small to sustain separate services for a number of specialties. Larger catchment areas are required; the new Trust's resident catchment population of over 500,000 people is widely recognised as the minimum size for "managed clinical networks", including sub-specialisation in the main hospital specialties, as the Chief Executive of the Trust explains in Trust A Annual Report (2002/2003).

The 2002/2003 period signalled the emergence of important and challenging requirements for the Trust. As indicated by the Chairman in his introduction to Trust A Annual Report 2002/2003, the Trust is facing a heavy responsibility for promoting and meeting the healthcare needs of the communities that it serves. It is facing a challenging agenda of change and development at an exciting time for the NHS, with the tasks set by the NHS Plan, opportunities from new ways of providing high quality care, and the extra resources being made available to the NHS. In particular, the Chief Executive of the Trust cited the following factors, which have the greatest influence on the development of services in the Trust:

- The new pattern of organisation resulting from the creation of the Trust, through bringing together five hospitals previously organised under two main NHS Trusts, required effective change management. Thus, attention was directed towards seeking to minimise the impact on services to patients and to frontline staff, as well as alleviating staff concerns as a result of the radical changes that were taking place due to the merger of their respective organisations.

- The need to increase capacity, particularly for inpatient work.

- Improving the physical links between various aspects of the service to improve the quality of clinical care and a desire to rationalise the provision of services to make the most effective use of resources, both in terms of staff and facilities.

- Maintaining and developing services to patients, including the achievement of the important national waiting list and waiting times targets.

- The implementation of a host of new service developments together with new ways of working required by the NHS Plan. This was influenced by the introduction of the national agenda to modernise the health service, particularly through the programme of National Service Frameworks and the development of the "waiting, booking and choice" initiative.

- Encouraging the improvement of quality with accreditation by outside agencies.

- The need to comply with changes to legislation, particularly the European Directive on working time.

- Finally, there is a need maintain progress on developing the buildings containing the hospitals, which are managed by the Trust.

The Chairman highlights in the Trust's Annual Report its strength areas, in that it inherited excellent positions and performance in many areas from its two predecessors. In particular, the Chairman points to three main strength points. These are:

1. The expert, loyal and dedicated staff, which the Trust is able to recruit and, equally important, to retain. At the end of March 2003, the Trust employed 6828 staff, both on full-time as well as part-time basis, in its five hospitals and in services based in the community. The breakdown of the staff employed by the Trust as at 31st March 2003, in percentages according to profession, is as follows:
   - 42% Nursing and Midwifery.
   - 17% Administration and Clerical.
   - 12% Ancillary.
   - 9% Professional and Technical.
   - 9% Medical and Dental.
   - 7% Allied Health Professions.
   - 3% Senior Management.
   - 1% Maintenance.

2. The strong loyalty and support, which the Trust's hospitals enjoy from their local communities.

3. Also, the Trust has made improvements in the times people must wait to use its services. This improvement is reflected in a number of ways. First, at the end of 2003, all outpatients were being seen within 21 weeks of referral by their General Practitioners (GPs). Second, no patients were waiting more than 12 months for hospital treatment. Third, during 2003, the Trust reduced by 40% the number of patients waiting over 9 months for treatment.

However, in terms of weaknesses and challenges that lie ahead, the Chairman explains that there are a number of areas where enhancement and development are needed. For example, he cites a substantial financial deficit currently being addressed buy the Trust. Moreover, there is a continuing need to improve the waiting lists and long waiting times for access to treatment in some services. Also, there are major ongoing projects to develop hospital sites, in order to improve the quality of accommodation for patients and staff.

The Trust was awarded one star in the NHS Performance Ratings published by the Commission for Health Improvement (CHI) (2003). Star ratings are based on a wide range of performance indicators about the Trust covering organisational, financial and systems issues, as well as information about services to patients. According to Trust A Annual Report (2002/2003), the Trust achieved six out of nine key targets covered by the star ratings system, which are:

- Accident and Emergency Admission (A & E) waits (12 hours).
- Rescheduling operations within 28 days for those patients, who had to have their operations cancelled at short notice.
- Hospital cleanliness.
- Improving Working Lives.
- Total time in Accident and Emergency (A & E).
- Two-week cancer wait.

However, the Trust under achieved on three out of nine key targets:

- The Trust significantly under achieved on financial management.
- Three patients had waited longer than the 12 months standard during the year.
- Ten patients waited longer than the 26-week outpatient standard.

Tables 4.4 and 4.5 present a detailed breakdown of the sources of income and expenditure for the Trust, as published in Trust A Annual Report (2002/2003).

Sources of Income	£'Million	%
Primary Care Trusts (PCTs) within the geographic districts covered by Trust A	130	54%
Other PCTs in neighbouring districts	74	31%
Burns/Spinal Consortiums	5	2%
Other Health Bodies	5	2%
Education, Training & Research	5	2%
Other Income	22	9%
Total	**241**	**100%**

Table 4.4: "Sources of Income for Trust A", adapted from the Trust A Annual Report (2002/2003), p. 35.

Sources of Expenditure	£'Million	%
Staff	158	66%
Supplies/Services – Clinical	32	13%
Supplies/Services – General	4	2%
Establishment	5	2%
Premises	7	3%
Depreciation	6	2%
Other NHS Trusts	5	2%
Other NHS Bodies	5	2%
Public Dividend Capital Dividends	9	4%
Other	10	4%
Total	**241**	**100%**

Table 4.5: "Sources of Expenditure for Trust A", adapted from the Trust A Annual Report (2002/2003), p. 35.

The Second Case NHS Trust

NHS Trusts B is a three-star Trust, which was formed in April 2001. This followed the merger of two NHS Trusts within Yorkshire, both 3-star Trusts in their own right. The aim of the merger was to improve the Trust's ability to provide modern high quality healthcare to the communities that it serves. Further changes took place in April 2002 following the creation of four new local health organisations. These included three Primary Care Trusts, which came into being, along with a Mental Health Trust. NHS Trust B works closely with these new organisations. The Trust has four hospitals.

As indicated in Trust B Annual Report (2002/2003), the focus of the Trust is on clinically led services with clinical staff taking the lead role in the management of the organisation. The clinical services are split into four divisions. These are: Children and Women's Services; Medicine and Elderly; Surgery and Anaesthetics; and Diagnostics and Therapeutic Services. A fifth division contains the corporate directorates that support the overall running of the organisation. As is explained in more detail later in this section, the Trust received an income of just over £197 million for the year ending at 31st March 2003. The majority of this income, which is £173.375 million, is derived from the treatment that the Trust provides to local residents covered by three Primary Care Trusts. The following is a breakdown of how

this income received by the Trust (£197 million) has been spent on the services, which it provides:

− 25% Surgery and Anaesthetics.

− 11% Children's and Women's Services.

− 11% Diagnostic and Therapeutic Services.

− 25% Medical / Elderly Services.

− 19% Operations and Facilities.

− 9% Corporate.

NHS Trust B has set for itself a vision as well as a set of underpinning values. The Trust's vision revolves around its aim to be "the hospital and employer of choice". In order to achieve this aim, it has adopted the following values:

• Ensuring that clinical processes are patient centred.

• Attracting and keeping the best staff.

• Developing strong leaders at every level, who practise and encourage healthy behaviours.

• Creating partnerships and improving collaboration with others.

• Having clear arrangements for the development of policy and strategy.

• Having clear performance management processes.

The 2002/2003 period signalled the development of an integrated planning framework between the Trust and its partners (three Primary Care Trusts and a Mental Health Trust), with the following key priorities:

• Ensuring high quality local health services capable of meeting key service and waiting time targets.

• Making further planned progress on modernising clinical services.

• Making best use of the funding and resources available whilst progressing towards a balanced financial position.

• Continuing to carry forward plans in relation to the Trust's acute services reconfiguration strategy and ensuring that all potential benefits are realised.

• Ensuring that patients, carers, service users and all of the Trust's staff are encouraged to and supported in contributing to the Trust's continuing development.

In highlighting the strength areas of the Trust, Trust B Annual Report (2002/2003) indicates that the Trust continued to move successfully in 2002/2003, achieving a number of awards and accreditations, as well as continuing to achieve a three star performance rating. The "Improving Working Lives" and "Investors in People" accreditations are two of those achieved in 2003, and several divisions of the Trust have received awards relating to work in their own areas. Most notable of these, according to the Trust B Annual Report (2002/2003), have been the Diagnostic Imaging and Information Technology teams, who received top awards for their use of Information Technology in a healthcare environment. Other awards have included areas within the Trust receiving "Practice Development" status, a "Baby Friendly" award, and an "Excellence in Modernisation Award". Areas that pose an avenue for improvement include the commencement of work to improve the Accident and Emergency (A&E) department at one of the Trust's hospitals. Also, work on two new operating theatres and a vascular laboratory at the same hospital was scheduled to finish by the end of 2003, in order to help reduce waiting times and improve diagnosis.

A recently exciting opportunity for the Trust has been the decision to submit an application at the end of 2003, to bid to become one of the first wave of NHS Foundation Trusts that will be ready for operation from April 2004. Only three star performing NHS Trusts are eligible to apply for such a Foundation Status. According to the Trust B Annual Report (2002/2003), NHS Foundation Trusts will be modelled on the co-operative societies and mutual organisations, meaning that they will be increasingly accountable to the local communities that they serve. This new form of social ownership will replace central government control. The presence of local people and staff on the Board of Governors will enable the Trust to concentrate more on the needs of its local communities when looking at how to achieve targets for good health. NHS Foundation Trusts will also have more financial freedoms to develop services, whilst remaining fully part of the NHS, delivering NHS services to NHS patients. They will be expected to deliver the vision in the NHS Plan to provide services, which are more responsive to patients. However, the Trust's application to become one of the first wave of NHS Foundation Trusts from April 2004 was not successful. Nevertheless, the Trust is planning to re-apply for the second wave of such Foundation Trusts.

In the context of the standards laid down in the NHS Plan, NHS Trust B has made significant progress towards these throughout 2002-2003, as indicated in Trust B Annual Report (2002/2003). The progress towards meeting such standards includes the following:

− Emergency admission through Accident and Emergency (A&E). The Trust has consistently achieved above national performance standards, in that 92% of patients were either admitted or allowed home in under four hours. Of those patients where a decision was made to admit, 99.5% were given a hospital bed in under four hours.

− Cancelled operations. All of the patients who had to have their operations cancelled at short notice were given new dates and received their operations within 28 days.

− Single sex accommodation. In the recent star ratings, the Commission for Health Improvement (CHI) found the Trust to be "significantly above average" in the steps taken to maintain the privacy and dignity of patients, through the elimination of mixed sex accommodation in general wards.

The following two tables (tables 4.6 and 4.7) present a breakdown of the sources of income for the Trust, as well as a summary of the income and expenditure account for the year 2002/2003.

Source of Income	£'Million	%
Three PCTs and a number of regional Health Authorities	173.375	88%
Other income (including amounts received in respect of medical, and nursing and allied health professionals education and training, together with income from trading activities)	21.672	11%
Other Healthcare	1.97	1%
Total	**197.017**	**100%**

Table 4.6: "Sources of Income for Trust B", Trust B Annual Report for the year 2002/2003, p. 4.

Summary Income and Expenditure Account for Year to 31st March 2003	
Item: Income / (Expenditure)	£'Million
Income	197.017
Expenditure	(190.392)
Operating surplus	6.625
Profit/(loss) on disposal of fixed assets	(.015)
Surplus before interest	6.610
Interest receivable	.233
Interest payable	(.219)
Surplus for the financial year	6.624
Public dividend capital payable	(6.611)
Retained surplus for the year	.013

Table 4.7: "Summary Income and Expenditure Account for Trust B", Trust B Annual Report for the year 2002/2003, p. 5.

4.4.2 The Logic of Generalisation Underlying Case Study Research

Yin (1994) has pointed that the findings emanating from a case study research are generalised to the theory underlying the study. This is known as "**Analytic Generalisation**" and has been contrasted with another way of generalising results, known as "**Statistical Generalisation**". In this context, Yin (1994) explains:

- In statistical generalisation, an inference is made about a population (or universe) on the basis of empirical data collected about a sample. This method of generalising is commonly recognised because research investigators have ready access to formulas for determining the confidence with which generalisations can be made.

- A fatal flaw in doing case studies is to conceive of statistical generalisation as the method of generalising the results of the case. This is because cases are not sampling units and should not be chosen for this reason. Instead, each case should be considered as separate experiment.

Under these circumstances, the method of generalisation followed in the case of this research is *analytic generalisation*, in which the results obtained as a result of analysing the qualitative and quantitative data collected are compared and discussed in view of the literature used in developing the study. A previously developed theory is used as a template with which to compare the empirical results of the case study.

4.4.3 Criteria for Judging the Quality of Research Designs

According to Yin (1994), the Case Study investigator must maximise four aspects of the quality of any design:

1. Construct validity
2. Internal validity (for explanatory or causal case studies only; thus not considered in this *exploratory* research)
3. External validity
4. Reliability.

Several tactics are identified by Yin (1994) for dealing with the four tests used for judging the quality of a research design when doing case studies. Thus, for each of these four tests are recommended case study tactics.

1. **Construct Validity: -** Develop a sufficiently operational set of measures/ operational definitions for the set of factors (variables) that you want to include in your theoretical framework. To meet the test of construct validity, the researcher must cover two steps:

- Select the types of factors/variables to be studied (in relation to the original objectives of the study)

- Demonstrate that the selected measures of these factors do indeed reflect the specific types of factors that have been selected.

As far as the "agility-enabling" capabilities developed conceptually by this research are concerned, in an attempt to fulfil the third objective of this study, the development of items measuring each of these is explained in detail in Chapter Six. This chapter discusses the operationalisation and measurement process related to these seven main constructs. However, with regard to the first and second objectives, construct validity is demonstrated in this research by the application of three main tactics, which Yin (1994) indicates are available to increase construct validity:

1. The use of multiple sources of evidence. (*interviews and questionnaires*)

2. To establish a chain of evidence. That is, to enable the reader to follow the derivation of any evidence from initial research questions / objectives to ultimate case study conclusions. (*This is made possible through chapters Five, Six and*

Seven, which present as well as discuss the results and findings emanating from analysing the primary data collected to fulfil the research objectives)

3. To have the draft case study report reviewed by key informants. (*This tactic related to construct validity will be followed, when the major findings of the study are presented to both of the Trusts that participated in the research. This will be after the conclusion of the study*)

2. **External Validity: -** The external validity problem has been a major barrier in doing case studies. Yin (1994) points that critics typically state that single cases offer a poor basis for generalising. However, such critics are implicitly contrasting the situation to survey research, in which a sample readily generalises to a larger universe. This analogy to samples and universes is incorrect when dealing with case studies. This is because survey research relies on statistical generalisation, whereas case studies rely on analytical generalisation. In analytical generalisation, the investigator is striving to generalise a particular set of results to some broader theory.

2. **Reliability: -** The objective here is to be sure that, if a later investigator followed exactly the same procedures as described by an earlier investigator and conducted the same case study all over again, the later investigator should arrive at the same findings and conclusions. (Note the emphasis is on doing the *same* case over again, not on "replicating the results of one case by doing *another* case study). One prerequisite for allowing this other investigator to repeat an earlier case study is the need to document the procedures followed in the earlier case. In the past, case study research procedures have been poorly documented, making external reviewers suspicious of the reliability of the case study. In this context, Yin (1994) advises future case study researchers that the general way of approaching the reliability problem is to make as many steps as operational as possible and to conduct research as if someone were always looking over your shoulder. Therefore, based on such an importance of the need to demonstrate reliability in a particular case study research, the procedures followed in the case of this study are explained in detail, in **section 4.7**.

4.5 Methods of Primary Data Collection Employed

The empirical research concerning exploring and identifying the three main issues that are reflected in the research objectives aimed at gaining better knowledge and understanding of *Trusts' staff* attitudes, perceptions and views. The methods employed for primary data collection, within the context of each case Trust, included two main primary data collection methods, which are: conducting in-depth, face-to-face interviews (Structured as well as Semi-Structured), administering self-completion questionnaires. This was in addition to document Analysis, as well as holding a number of informal meetings with key senior managers within each Trust, particularly in the stage when the approval for conducting the study was required, on the part of the Trust Ethics Committee.

Particular emphasis was placed upon conducting exploratory in-depth interviews as the first stage of primary data collection, since such interviews are considered to be important in qualitative research designs and, hence, are mostly used in such studies. In particular, the reasons for using interviews in the first main stage of primary data collection are explained as follows:

a. Lack of consensus in the literature, as well as scarcity of relevant studies addressing the issues covered by the three main objectives of this research concerning: the perception of, need for, as well as the enablers of, organisational agility in healthcare organisations, has required that interviews be conducted in order to seek the opinion of professionals working in the NHS as to what their views and perceptions regarding the main issues addressed by the research were.

In this capacity, the interviews served as a means for focusing the design of the self-completion questionnaire on those issues that emerged to be most important and relevant, in an effort designed to pinpoint the second stage of primary data collection, involving the administration of self-completion questionnaires, on the most critical factors influencing the phenomenon under investigation: organisational agility. This was through incorporating the initial feedback gained from the interviews in focusing the design of the self-completion questionnaires.

146

b. As an independent empirical source of primary data, which are analysed qualitatively in order to fulfil the research objectives. This is in addition to the self-completion questionnaires, which are analysed quantitatively to provide support to the results reached through the interviews.

In addition, conversing with people at different levels in the organisation helped the researcher understand some of the issues thought to be affecting the problem being investigated. According to Oppenheim (2000), spending some time interviewing individuals at different levels in the system should generally suffice to get a grasp of the establishment and understand the culture of the organisation.

With regard to the actual conduct of these interviews, a number of practices were adhered to, in order to minimise biases and improve the quality of responses provided. These are illustrated by the following "best practices" cited in the literature:

- The researcher sought to do all that he could to make the respondent feel comfortable enough to give informative and truthful answers without fears of adverse consequences. To this end, and before starting the interview: -

    a) The researcher started each interview by welcoming the interviewee and expressing the meaning reflected in the following paragraph: "*First of all, I would like to thank you very much for agreeing to take part in this interview, and for allocating part of your valuable time for it. I highly appreciate your participation as well as your valued knowledge and experience that you kindly provide to the areas of interest to my Ph.D. research covered in the interview*."

    b) After explaining the general scope of the study and its major aims, the researcher was quick to assure participants in the interviews of complete confidentiality as well as anonymity in transcribing and presenting their responses in the study.

Based on the need to explain the purpose of the interview to those taking part in it, the general themes embodied in the following paragraph were intentionally communicated to them: "The purpose of the interviews is to benefit from the experiences of the respondents in addressing a number of areas concerned with

identifying the factors or capabilities that enable health care organisations/hospitals to adapt and respond to the changes in their environment. This need to adapt and respond to environmental changes emanate from the changing needs and requirements of the customers, represented by: *patients*, *local health authorities*, *GP*s, pressures from other competitors such as *other NHS hospital Trusts, and hospitals in the private sector*" as well as *governmental initiatives and plans.*

- Respondents were told how they were chosen to be one of those interviewed, mainly as a result of the need to interview a mix of senior managers and clinicians, who are primarily concerned with the overall strategic performance of the organisation, in response to the demands and requirements placed on the Trust from patients, purchasers of healthcare, as well as the Government.

- Just before the start of the interview, the researcher sought permission from the interviewees to tape record their responses, using the reason that:
  "*Since there are more than one interview scheduled for the day, recalling from memory who said what becomes more difficult, which can increase sources of error and bias. Therefore, I would appreciate it if you permit me to tape record the interviews. I can ensure you that all information given will be dealt with in absolute confidentiality and anonymity and it will not be disclosed to any one in the organisation. No reference will be made to Trust or person by name.*"

- A considerable amount of probing about the research issues was used, particularly in the unstructured parts of the interview. Probing proved to be quite useful, as a considerable number of those interviewed often talked about their actual work requirements, rather than remaining focused on the particulars of the question.

- Before asking any questions, each interviewee was provided with a list containing six definitions of "organisational agility", in order to familiarise them with the concept and provide them with an idea of what it actually means or refers to, as well as the various viewpoints and perspectives from which it is perceived. These definitions are identical to those contained in the list provided to the respondents of the self-completion questionnaire (see table 5.4).

4.6 The Design, Structure and Content of the Two Main Research Instruments Used for Primary Data Collection

Each of the two main research instruments, namely the Interview Questions Schedule/Protocol and the Self-Completion Questionnaire, has been designed in such a way that it is divided into three main parts, each part corresponding to one of the three main objectives of this research. Thus in this way, and in both: the Interview Questions Schedule/Protocol as well as the Self-Completion Questionnaire, questions have been designed under each part with the aim of providing answers, which seek to fulfil the relevant research objective. In this sense, the first part in each of the interview schedule/protocol and the self-completion questionnaire corresponds to the first research objective, the second part corresponds to the second objective, whereas the third part corresponds to the third objective.

The following discussion is based on each objective, and, thus, includes a detailed explanation of the design, structure as well as content of each part in the "interview questions schedule" as well as "self-completion questionnaire" specifically designed with the purpose of seeking to fulfil that particular objective.

4.6.1 The First Research Objective: To Explore How the Concept of Organisational Agility is Perceived and Understood in NHS Trusts.

The Interview Questions Schedule / Protocol: - The First Part of the Interview Questions Schedule (see Appendix A: The Interview Questions Schedule / Protocol) seeks to establish how the concept of organisational agility is perceived and understood in "healthcare provider" organisations represented by NHS Trusts. Questions under this part have been designed with the aim of seeking to:

1. Explore and identify the *conceptual* as well as the *practical* understanding and perception of the concept of Organisational Agility in NHS Trusts.
2. Assess both:
   - The practical implications of the concept of Organisational Agility, in terms of what it means to, and implies for, a healthcare provider organisation/hospital, and how it affects such organisations and impacts them, in terms of changing their culture and attitudes towards their ways of working, as well as

149

- The relevance of the concept of Organisational Agility to the reality affecting the management and operation of a "healthcare provider" organisation / hospital, and the clarity as well as the suitability of the concept and various definitions of it to a "healthcare provider organisation" context.

These questions include Questions **1.a; 1.b; 1.c; 1.d; 1.e; 1.f** as well as **Question 2**. Before asking the actual questions, a list of various definitions of organisational agility was provided to the interviewees in order to familiarise them with the concept, as well as provide them with an idea of the main themes of agility. This has the advantage of improving the quality of responses given, instead of providing "guess-based" answers. In addition, probing was used frequently by the researcher / interviewer, in order to allow for any questions regarding any ambiguous questions or terms asked.

The Self-Completion Questionnaire: - In a similar fashion to the Interview Questions Schedule, the first part of the Self-Completion Questionnaire also seeks to establish how the concept of Organisational Agility is perceived in "healthcare provider" organisations / hospitals, represented by NHS Trusts (See Appendix B: The Self-Completion Questionnaire). The questions included in this part aim to identify which definition(s) of organisational agility is the most suitable / relevant to the context of enabling "healthcare provider" organisations / hospitals, as organisations concerned with the management and delivery of healthcare services, to respond to change, and which definition is the least suitable. Respondents are also asked to briefly indicate the reason behind their choices.

Based on this, the first part of the self-completion questionnaire includes the following questions: -

- Question 1.1 requires respondents to choose the most suitable/relevant definition of organisational agility.
- Question 1.2 asks respondents to choose the least suitable/relevant definition of organisational agility.
- Question 1.3 asks respondents to indicate the reason behind their choice of most suitable/relevant definition.

- Question 1.4 asks respondents to indicate the reason behind their choice of least suitable/relevant definition.

- Finally, Question 2 presents a suggested definition of organisational agility developed by the researcher, and asks respondents to rate the extent to which they think it is suitable for use within their hospital, for explaining what organisational agility means. The question employs a scale for rating such an extent of suitability, ranging from 1: Not Suitable At All, to 4: Very Suitable.

Question Two asks respondents to indicate the extent to which they think the suggested definition of Organisational Agility, developed by the researcher, is suitable for use within their hospitals, for explaining what Organisational Agility means. The question employs a 4-point Likert scale, which measures the extent of suitability using the following scale:

1: Not Suitable At All.
2: Somewhat Suitable.
3: Suitable.
4: Very Suitable.

For purposes of the analysis, the scale has been reduced from 4 points to 2 points. These 2 points have emerged as a result of merging the following points:

1- Point 1 represents the choice of "Not Suitable", by combining points: 1+2 from the original scale.

2- Point 2 represents the choice of "Suitable", by combining points: 3+4 from the original scale.

The analysis of the responses to the questions comprising the first part of the interview questions schedule will be incorporated with the analysis of the responses to the questions comprising the first part of the self-completion questionnaire. In this manner, the analysis of the responses to questions, which share the same or similar themes/purposes, will be discussed together in order to provide a cohesive and comprehensive discussion of ideas and themes emerging from the analysis. The analysis will be conducted for each Trust so as to compare between the two Case

Trusts, in terms of exploring how professional staff working in NHS Trusts understand and perceive the concept of Organisational Agility.

4.6.2 The Second Research Objective: To Explore and identify the perceived need for organisational agility in the NHS Trusts, as essentially being driven by the nature of changes in the environment affecting such Trusts.

Literature discussing the concept of Organisational Agility has linked the need for Agility on the part of organisations with the nature of external environment, which surrounds and affects their operation. There is ample evidence in the literature that links the need for agility with the presence of an uncertain and turbulent changing environment (Goldman et al., 1995; Goldman, 1998a, 1998b; Hitt et al., 1998; Goldman and Graham, 1999; Volberda, 1999; Yusuf et al., 1999; Breu et al., 2001). In this way, the more uncertain the environment is, the more the need for agility. The uncertainty inherent in a particular environment is informed by two main factors, which are:

♦ The rate or amount of change (Dynamism of Change) taking place in the environmental factors affecting organisations operating within a particular sector / industry environment (The Healthcare sector in England: The National Health Service "NHS" in the case of this research), as well as

♦ The extent to which changes in these environmental factors are predictable (Degree of Unpredictability of Change).

This is implicitly evident from the main descriptions of agility indicated in the literature, in that it has been often described as the ability to adapt and respond to *continuous* and *unpredictable* change(s) in the environment and, thus, thrive in such an environment.

Thus, it has described environmental changes necessitating agility on the part of organisations affected by such changes, by two main dimensions:

a) Changeability (Rate of Change or Dynamism of Change)

b) Unpredictability (Degree of Predictability of Change)

Based on this conclusion, it is argued that these two dimensions collectively determine the degree of uncertainty in the environment (Environmental Uncertainty).

The Questionnaire: - The environment affecting the NHS has been represented by twenty (20) environmental factors categorised under seven (7) main categories. These include: Potential Customers / Purchasers, Potential Competitors / Providers, Governmental / Political and Legislative Factors, Technology, Supply, Social Services, and Demographic Factors. Based on this, three types of questions have been used to address the aforementioned dimensions of change included in this research questionnaire, for each of the environmental factors grouped under the seven (7) main environmental categories. These questions include:

- **Q 2.1: -** This question measures the importance of each environmental factor to the hospital concerned, in terms of its effect on the management and delivery of health services and, thus, the well being of the hospital in responding to changes in that particular environmental factor.
- **Q 2.2: -** This question measures the amount of change that is perceived to be taking place in each of the environmental factors.
- **Q 2.3: -** This question measures the extent to which the rate of change in each of these environmental factors is predictable.

There are two main ways, by which to analyse data received from these questions in order to answer the above research question: -

First: - The need for Agility is determined by the degree of Environmental Uncertainty surrounding these NHS Trusts. Environmental Uncertainty, in turn, is determined by:

a) Dynamism (Amount of Change Taking Place in Environmental Factors) **Q 2.2**
b) Unpredictability of Change. **Q 2.3**

Thus, degree of Uncertainty surrounding each of the environmental factors is calculated according to the following formula:

Environmental Uncertainty = Dynamism (**Q 2.2**) + Unpredictability (**Q 2.3**) / 2, for *each factor*, for each respondent (The score will be on a scale from 1 to 4).

The resulting scores will then represent a new variable/question, which is called *Environmental Uncertainty*. These scores, which represent this new single variable/question, called "Environmental Uncertainty", for each environmental factor and for each respondent or case, can then be analysed.

The discussion concerning the design of those questions / items included in the self-completion questionnaire, which seek to fulfil the third objective, are discussed in a separate chapter, which is *Chapter Six.*

4.6.3 Pilot Study or Stage for the Self-completion questionnaires

The initial draft of the questionnaire was distributed to both:

1- Academic referees, who included in addition to the two PhD holders supervising this research project, four of the researcher's colleagues who were undertaking PhD research in the areas of business and management.

2- Practitioner Referees. Eight copies of the initial draft of the questionnaire were distributed in Trust A, through the internal post with the kind assistance of the liaison officer in that Trust. Respondents were asked to provide any comment, which they felt was needed to improve any aspect of the overall design of the questionnaire, in terms of:

- Phrasing or wording of the questions

- Length

- Terms used and whether managers and clinicians working in a health care organisation understand these terms and feel that they are relevant in their organisational setting.

Four out of the eight questionnaires distributed to those working in Trust A were returned. The feedback given was extremely beneficial, in that it led to minimising the number of pages constituting the questionnaire from 17 to 11. This was strongly believed to promote a higher response rate. Also, comments regarding the phrasing of some of the items in the third part of the questionnaire, in that unknown / unfamiliar terms were used, were acted upon. This was in the form of simplifying the wording of the questions, as well as reducing the size of the actual statements measuring these items.

4.7 Procedures Undertaken and Steps Followed in Designating the Two Case NHS Hospital Trusts

4.7.1 Choosing the NHS In General, and NHS Hospital Trusts in Particular, as the Context of Application for the Research

The empirical research is based on the Health Care Service Sector in the UK; The National Health Service (NHS), and in particular, NHS Hospitals / Trusts. The empirical research will be aiming at gaining better knowledge and understanding of Trusts' staff attitudes, perceptions and acceptance, regarding the issues addressed by the study's objectives.

The identification of the NHS as the population of study involved a literature review (study), which had identified that such Trusts are experiencing both:

- A high degree of uncertainty and change in their external operating environments, primarily due to the changes affecting the NHS, in general, as well as

- An increasing need for organisations operating within the NHS to build adaptive capacities, which will enable them to become more flexible and responsive towards the continually changing needs, requirements as well as expectations of the stakeholders existent in their environment.

These conditions make the National Health Service a prime candidate for the study of organisational flexibility, responsiveness and, hence, agility, due to the extremely useful exploration of the application of such a concept and desired organisational state, in the NHS.

A particular driver for choosing the NHS as the context for this study is the fact that recently, there have been increasing reports on the growing inefficiency of health services provided to patients by the healthcare provider organisations operating within the NHS. The gist of the recent various Governmental initiatives, plans and key targets for the NHS have focused on responsiveness, speed, as well as flexibility in delivering healthcare, thus adding increased pressures on NHS Hospital Trusts to effectively deal with change.

In addition, as earlier argued in Chapter One outlining the need for this study, the different Governmental reform initiatives of the NHS [The Department of Health (1989) White Paper: Working for Patients; The Department of Health (1997) White Paper: The New NHS: Modern. Dependable; The Department of Health (2000) The NHS Plan: A Plan for Investment. A Plan for Reform] have arguably sought to advocate the principle that the health service should be a responsive as well as an agile one, which is sensitive to the needs, requirements and expectations of patients. A particularly illustrative example of the growing need to address the fundamental problems facing the provision of a quality, timely and responsive health service by the NHS, was illustrated, for example, by a crisis resulting from the outbreak of influenza. In this context, the British Prime Minister accepted, in a session held in the House of Commons to discuss the implications of such a crisis on the efficacy of the service provided by the NHS, that "*there are people suffering and not getting the care that they need in parts of the health service*". [*BBC News, 12 January 2000]* http://news2.thls.bbc.co.uk/hi/english/health/newsid_600000/600827.stm#top]

The emphasis was then placed upon the need to search for ways and means that can radically improve the provision of health services, through building on the ongoing initiatives and plans being introduced to modernise the NHS, in an effort designed to transform it into a quality, timely and responsive one.

Despite the selection of the NHS as the main target for this study, it represents the "*general population of study*", and therefore there is a need to identify the "*relevant population of study*" for this research. This is mainly due to the fact that the nature of this study, reflected in its aim, objectives and hypotheses, require a particular type of data that could only be provided by a well-chosen and thought-of setting, which can provide relevant, useful and beneficial data that can add value to the achievement of the main aim and objectives. This becomes important, especially when remembering that the quality of outcomes emerging from this investigation is primarily dependent upon the quality of data provided by the respondents. In addition, cost, effort and time considerations require this elicitation of the research's population, namely the NHS, which is known by its large size.

Such a setting, which is considered the most appropriate part of the NHS that can achieve the objectives of this research, is represented by "***NHS Trusts***". NHS Trusts are chosen as the "relevant population of study" for two main reasons:

1. NHS Trusts are the most prominent part of the NHS that exercises direct and continuous contact and interaction with patients. This is mainly due to the nature of their organisation and operation, in that they provide a wide range of hospital and community based services. They are also found in most large towns and cities, offering a general range of services to meet most people's needs.

2. On the other hand, NHS Trusts employ the majority of the NHS workforce, both in terms of clinicians, management and other support staff.

Therefore, these characteristics often make NHS Trusts the main representative of the National Health Service, reflecting its ethos of providing healthcare to anyone who needs it.

Accessibility to the sample of this study, namely NHS Trust organisations, is believed to be facilitated by the benefit and knowledge, which this research seeks to contribute and deliver to the NHS in general, and NHS hospitals/Trusts in particular. Such benefit and knowledge delivered to the NHS is illustrated in terms of radically improving the provision of health services, through transforming it into a quality, timely and responsive one, through building upon current studies demonstrating the importance of organisational agility. This is supported by previous research undertaken in NHS Trust organisations, which has indicated that they are receptive to providing primary data, providing they can see a benefit for participating in the research, or that ongoing feedback will be available. In this context, Waddington (1995), in his Ph.D. Thesis concerning the development, application and analysis of a Total Quality Management Paradigm in Healthcare, involved eighty-three hospitals/trusts in the primary data collection stage. In addition, Baggott (1994) makes reference to research, undertaken by himself, in NHS Trust organisation.

4.7.2 <u>Initial Contacts with NHS Trusts</u>

Fifty NHS Hospital Trusts were identified within a particular geographic region in England, which was the *<u>Yorkshire, Humberside and the North of England</u>* regions, through using an electronic NHS database, which was accessed through the internet. Each of these Trusts was contacted by telephone, in order to confirm the titles, names and contact addresses of the current Chief Executive as well as the current Director of Human Resources / Personnel and Development / Modernisation and Development. A letter was then designed and consequently sent to each of these titles in each Trust, inviting them to take part in the research study (See Appendix C: Initial Invitation Letter Sent to NHS Hospital Trusts Asking for Participation in the Study). The letter was intended to be brief but also communicative, in terms of introducing the main purpose of the study, and requesting the kind collaboration of the Trust. Although it was stated in the letter that the researcher was seeking to undertake a comparative analysis between English Healthcare Organisations and those in his country Jordan, it was later explained to those who have agreed to take part in the study that after considering the vast amounts of time and effort required to undertake the multiple case study in England, it was decided that including healthcare provider organisations from Jordan would lengthen the time span of the study immensely, which would make the whole study difficult to control and manage within the time constraints that apply to PhD level studies.

As a result, three Trusts have expressed their initial willingness to participate in the study. Since the study was a case study one, the researcher believed from the outset that comparisons between two Trusts would allow for some insights to surface, as far as issues related to organisational agility are concerned. This belief was further supported when the Government announced that it was considering subjecting NHS Trusts in England to a Hospital League table, which rates these Trusts according to a number of key target areas believed by the Government to be the main ones in need of improvement at that time. A three-star to a none star status was to be given to Trusts, according to how their performance is evaluated against the predetermined target areas.

Based on this, and through the meetings held between the researcher and senior managers in the aforementioned Trusts, the researcher gained an idea of how these Trusts perceived they would be rated according to such a Hospital League Table. Two Trusts, which were located in a highly similar geographic area (Yorkshire), in terms of demographic characteristics, income levels, profile of disease and illness, as well as levels of demand, emerged as having different views regarding their expected performance with regard to the proposed league table. While Trust B believed that it was well on its way towards meeting the key target areas announced by the Government, Trust A did not share that similar optimistic view. This gave a strong impression on the researcher that such Trusts would provide some interesting areas for comparison, based on which they were designated as case study organisations for the purposes of this research.

Two main meetings were arranged with each of the two Trusts involved in this study. **First:** A meeting between the Researcher and his Director of Studies on one part, and the *Executive Director of Human Resources at Trust A* on the other. **This was followed** by a meeting between the researcher and his Director of Studies on one part, and the *Chief Executive of Trust B*, on the other.

The aim of these meetings was to further establish as well as strengthen the kind collaboration initially exhibited by each of the Trusts, through gaining a final commitment on the part of the Trusts to go on with their status as "case study organisations". This entailed appointing a contact person or a liaison officer in each Trust, who would co-ordinate all the matters related with the study, with the researcher. This included arranging for the interviews, through sending internal memorandums within each Trust to the people, who were assigned by the researcher as participants in the in-depth interviews, as well as sending the self-completion questionnaires to the people drawn by the researcher.

At the start of each meeting, a brief introduction was given by the Researcher's Director of Studies, in which he introduced himself and the researcher to the senior manager taking part in the meeting, and gave a summary of the main subject of the research project and its main aim. Then, the researcher explained the nature of the research project, in terms of the need for and importance of the study for healthcare

organisations operating within the National Health Service (NHS) in view of the continuous changes affecting the environment surrounding such organisations. The main objectives of the research were then explained, as well as how those objectives were to be achieved through adopting a case study approach into health care organisations in the form of hospitals/trusts, and how their respective Trust could provide co-operation with the research in the form of answering to questions in the form of interviews and questionnaires.

After such an introduction and discussion of the nature of the research and what is involved, the Executive Director of Human Resources at Trust A, as well as the Chief Executive at Trust B had shown a significant and encouraging degree of interest and enthusiasm in the area of the research, namely the areas of organisational agility as well as flexibility and responsiveness management.

A number of meetings were then held between the researcher and the contact person in each of the two Trusts, in an effort designed to communicate to them the nature of the case study investigation involving them, the phases of data collection required, as well as the expected timetable for undertaking the study. Numerous scenarios and arrangements were considered for determining how the people to be interviewed and be targeted with self-completion questionnaires are to be selected. The different ideas addressing this were communicated to the Trusts in the form of a research proposal (see Appendix D: Research Protocol Sent to the Trusts), which was sent to each of them, outlining: -

- The importance of and need for the study.
- The Objectives of the research.
- Research Design and Methodology
- Data Collection Methods Used.
- Sampling procedures.
- Ensuring Absolute Confidentiality and Anonymity.

Finally, after studying the various documents outlining the organisational structure in each Trust, including the recent advent of the Clinical Management Structure in each one of them, the overall management population to be targeted with primary data collection in each Trust was determined, as is explained in detail in sub-section **4.7.3**.

The need to gain the approval of the Research Ethics Committee in each Trust was raised to the researcher after the actual administration of the interviews had begun. As a result, the researcher informed those responsible for such an approval that during the numerous meetings and contacts held with senior managers as well as contact persons, none of them had raised the need for such an approval. However, appreciating the regulations and procedures in these Trusts, the researcher submitted a full application, along with all the necessary documentation, asking the committee in each Trust if they could expedite the process so that the administration of the self-completion questionnaires will not be postponed for a long time. These committees proved to be most co-operative, recognising that the researcher was not informed of such a requirement at the outset of his contact with the respective Trusts.

4.7.3 <u>Determining the Overall Management Population to be Targeted for Primary Data Collection, in each of the Two Case NHS Trusts</u>

The management population within both Trusts to be targeted with primary data collection, through face-to-face interviews and self-completion questionnaires, was then determined based on studying the various documents provided to the researcher by both Trusts, which outlined the organisational structure and the distribution of various clinical as well as administrative responsibilities. The manner, in which the management population in both Trusts was determined, in order to be targeted with primary data collection through interviews and questionnaires, is now explained.

In order to ensure consistency in delineating / outlining the *Overall Management Population* in each of the two NHS Trusts, which were designated as case organisations for the purposes of this research, the same procedures have been followed in determining such a Management Population, in each Trust.

These procedures began with a process of examining and studying a number of management documents and reports published by both Trusts, in an effort designed to seek to identify the guiding source(s) to be used, in order to determine the Management Population and its different levels in each Trust. Such guiding sources have been in the form of Management Documents prepared by each Trust, which outlined the Trust's Organisational Structure, including the main managerial levels as well as the various divisions and directorates embodied within such levels. At the end of this process, a highly similar overall structure was concluded to organise the different managerial and clinical duties and responsibilities within both Trusts. Many of these documents discussing the recent management arrangements in the Trusts are referred to as being "consultation documents", which implies that such management arrangements are still not in their final form. Thus, some interpretation was required on the part of the researcher in order to conclude an overall structure within each Trust, which commonly organises the various managerial and clinical duties and responsibilities within each Trust. A highly similar overall structure was concluded to organise such managerial and clinical duties and responsibilities within both Trusts.

Two main levels were found to comprise such a structure in both Trusts: -

- The most senior level of such a structure mainly consisted of the Executive Management Level, which comprised the Chief Executive and the Executive Directors.

- The other level comprised the main Clinical Divisions / Units within the Trust. These clinical divisions or departments consisted of clinical directors, general managers, matrons, and senior nurses.

- The third level included the managerial support provided to the two aforementioned levels.

Based on this, the following is a detailed description of the organisational structure in each of the two NHS Trusts designated as Case Trusts for the purposes of this research: -

1. The approach that has been followed in determining the overall management population at **Trust A**, which is to be targeted with primary data collection through in-depth interviews as well as self-completion questionnaires, is primarily

based on organising the different managerial and clinical responsibilities within the Trust into three main levels outlined in the Trust's organisation chart:

- **Top or Hospitals Management Executive level**, which consists of the following: -
  - The Chief Executive
  - Director of Finance
  - Director of Nursing
  - Medical Director
  - Director of Planning and Performance
  - Director of Human Resources / Modernisation and Development.
  - Director of Information.

- **The Senior Level of the Clinical Management Structure**, which consists of: -
  - Clinical Directors
  - General Managers responsible for clinical / administrative services.
  - Matrons.

- **The Managerial Support Structure**. This consists of: -
  - Managerial Support Level to Executive Directors. This level mainly comprises Assistants to Executive Directors.
  - Managerial Support to the rest of the Clinical Management Structure (Clinical Directorates).

2. The approach that has been followed in determining the overall management population at **Trust B**, which is to be targeted with primary data collection through in-depth interviews as well as self-completion questionnaires, is primarily based on the organisation structure described/outlined in the Consultation Document titled: "Management Arrangements", which was provided by **NHS Trust B** to the researcher. The main components of such a structure are described as follows: -

1. The Executive Management Board.
2. The Clinical Management Structure.
3. The Managerial Support Structure.

A brief description of the purpose and responsibilities associated with / attached to each Level or Component of this structure is given, as follows. This is to be used in the two sections that follow this one, to justify the inclusion of one or more particular levels of this structure, either as:

1. Part of the relevant population to be targeted with **Interviews**, or as
2. Part of the relevant population to be targeted with **Questionnaires**.

The main components of the organisational structure found at Trust B include the following levels: -

First: - The Executive Management Board (The Top Management Level).

The Executive Management Board is considered the top management level in the Trust, which is responsible for the running of the Trust, and the formulation as well as fulfilment of its strategic objectives.

The Executive Management Board is comprised of *Members of the Executive Management Team*, in addition to the *Divisional Directors of the four main Clinical Divisions, which form the Clinical Management Structure*. The Executive Management Team together with the Divisional Directors are collectively responsible for the formulation of strategic and business objectives that develop the Trust services in response to local needs. These roles and individuals will set the standards of behaviour and business conduct, which will underpin the values of the organisation.

a. **The Executive Management Team** consists, in its membership, of the Executive Directors of the Trust, who include the following members: -
   - The Chief Executive
   - Medical Director
   - Director of Service Development
   - Director of Nursing
   - Director of Finance and Information
   - Director of Operations and Facilities
   - Director of Personnel and Development
   - Head of Organisational Development.

b. In addition to the Executive Management Team specified above, the Executive Management Board also comprises in its membership the *Divisional Directors of the four main Clinical Divisions*, included in the clinical management structure. <u>Thus, the Executive Management Board (12 members) consists in its membership of the following</u>: -

- The Chief Executive and the Executive Directors (8), in addition to

- The Divisional Directors of the Clinical Divisions included under the senior level of the Clinical Management Structure (4).

<u>Second: - <u>The Clinical Management Structure</u></u>: -

A new management structure, which underpins the Executive Management Board, is the newly created Clinical Management Structure.

In its Consultation Document entitled: "*Management Arrangements*"*,* which outlines a new management structure for the Trust, sets out a new vision for the organisation, and identifies supporting values in improving patient care, Trust B indicates that the challenges brought about by the NHS Plan have emphasised the need to move away from a traditional method of service delivery, to a more modernised approach. One of the main facets or characteristics of such a new modern approach to service delivery is the emphasis placed upon the active involvement of clinicians throughout the management structure, and providing the needed support for it.

Thus, the Trust has set as its aim the extension, as well as the encouragement, of the involvement of clinicians in the leadership and management process. A major outcome of this has been the new Clinical Management Structure, in which the role of clinical leaders within the Trust is strengthened to encompass a range of leadership, management and clinical quality functions. In this way, The Trust has demonstrated in its "*Management Arrangements*" Document its model for the new Trust management arrangements, which is mainly centred around:

Strategy: -   Executive Management Board

Clinical/Operational Management: -   Clinical Directors/Directorate Boards and teams

However, the Trust has emphasised the fact that clinicians throughout the organisation will be involved in the development of both services and strategy. To enable this to happen, policy making and strategy must link effectively with operational management and the delivery of services. The best way to achieve that is to move towards a management process, which integrates and develops clinical networks and clinical processes.

In essence, the Senior Level of the Clinical Management Structure is organised around four main Clinical Divisions, which are: ***Children and Women's Services Division***, ***Medicine and Elderly Division***, ***Surgery and Anaesthetics Division***, and ***Diagnostics and Therapeutic Division***.

Each Clinical Division is headed by a *Divisional Director*, and is sub-divided into a number of clinical directorates, each administered by a *Clinical Director*. Also, as part of the senior level of the clinical management structure, there are a number of *General Managers* within each Clinical Division, who are primarily responsible for managing particular clinical / administrative services. In addition, each Division is staffed by its own needs of Matrons, who are basically senior nurses with managerial / administrative duties.

In this way, the senior level of the Clinical Management Structure consists of the following: -

- **Divisional Directors**: - The role of the Divisional Director is to provide the leadership interface between the clinical directors, clinical directorates and the Trust Board (The Trust Executive Team). The Divisional Director will tie together common strands across the clinical directorates and ensure that they are working within the organisational framework, but at the same time recognising the need to address specialty specific issues.

They will facilitate and lead clinical directors colleagues to contribute to policy and strategy development and take forward, on behalf of their colleagues, the agenda of the Organisation.

The Divisional Directors, in their capacity as members of the Executive Management Board, will translate Trust strategy, business and policy development into operational reality. With their Clinical Director colleagues, they will ensure that the Division develops a robust service plan that will contribute to the Trust's service plan and the strategic direction.

It is worthy to note in the context of specifying the main components of the Clinical Management Structure, that since Divisional Directors are also members of the Executive Management Board, which is considered the Top Management Level in the Trust, it was decided that Divisional Directors are to be considered as part of that level (Executive Management Board), for the purposes of delineating the relevant management population to be targeted with interviews and questionnaires. This is to prevent duplication arising from allocating those Divisional Directors twice, *first* as part of the Executive Management Board, and *second* as part of the Senior Level of the Clinical Management Structure.

- **Clinical Directors: -** In its Consultation Document entitled: "Management Arrangements", which outlines a new management structure for the Trust, the Trust indicates that Clinical Directorates constitute an extremely important level of management, since it is the one which interfaces with those involved in direct patient care. Also, it is at this level that government policy and broad strategies are implemented and where a real difference can be made to the quality of patient care.

For each Clinical Directorate there is an appointed Clinical Director, who is accountable to the Divisional Director. The Clinical Director will contribute at a corporate level to the development and implementation of strategy and the supporting service plan. In managerial terms, they will work through and with the Divisional Director in improving clinical services and delivering NHS Plan targets. In this capacity, Clinical Directors are responsible for ensuring that clinical quality issues and resources are managed within the Clinical Directorate.

- **Divisional General Managers**: - As part of the senior level of the clinical management structure, there are a number of General Managers within each Clinical Division, who are primarily responsible for managing particular clinical / administrative services.

- **Nurse Management (Senior Nurses and Modern Matrons): -** According to the "Management Arrangements For Nurses and Midwives", prepared by the Executive Director of Nursing at Trust B (Calderdale and Huddersfield NHS Trust), if the aspiration to devolve decision-making and empower clinical staff is to be real, it is essential that there is good nursing leadership at every level that can facilitate, motivate and develop staff in a manner, which is credible and orientated to action. As a result, senior nursing input is and will be needed, within Divisions, to inform strategic decision-making and to secure and monitor performance improvements.

Nurses have a vital role to play in the ultimate success of the new management arrangements. In particular, specific responsibilities are placed on nurses within the NHS Plan and ever-recent government documents, including the introduction of the Modern Matron. The senior nursing / modern matron structure is re-aligned to support the needs of divisional and clinical directors. As such, they are accountable through the Divisional Structure, which consists of the four main Clinical Divisions, as well as the Clinical Directorates embodied within each of these four Divisions. Thus in this way, modern matrons/senior nurses are considered as an integral part of the Clinical Management Structure.

Therefore, there is an identifiable senior nurse as part of the Divisional team for Surgery, Medicine, and Children's and Women's Services. In particular, the Executive Director of Nursing at Trust B has emphasised in the "Management Arrangements For Nurses and Midwives" document that recognition needs to be given to the implementation of the "*Modern Matron*", when developing the Clinical Management Structure based on the main clinical Divisions.

Based on this, the make up of the Senior Level of the Clinical Management Structure consists of:

- Clinical Directors
- General Managers responsible for clinical / administrative services.
- Modern Matrons.

Third: - The Managerial Support Structure: - As has been indicated by the Consultation Document entitled: "Management Arrangements", which outlines the new management structure for Trust B, the design of a detailed support structure for each Division and Directorate comprising the clinical management structure is underway.

However, the main outlined levels are specified as follows: -

1- Managerial Support Level to Executive Directors. This level mainly comprises Assistants to Executive Directors.

2- Managerial Support to Divisional Directors: - The Divisional Directors are each supported by an Assistant Divisional Director. Finance and Human Resource /Training and Development functions are aligned to provide senior support to the Divisional Directors and their clinical boards. The Assistant Divisional Director is directly accountable to the Divisional Director, and there is a professional line of accountability to the Director of Service Development.

This general management post (Assistant Divisional Directors) will have a strong strategic role. They will provide senior managerial support to the Divisional Director in all respects: -

- At a business level, they will ensure that the Divisional Service Plan is developed, monitored and delivered against appropriate performance criteria.
- They will ensure that service plans reflect the targets and priorities set out in the NHS Plan.
- They will ensure that they support the Divisional Director and Clinical Directors leads in enabling them to comply with corporate performance measures in all respects.

The emphasis will be on creating a general management culture with a strong partnership between full-time managers and those clinicians who are in leadership positions.

3- Managerial Support to the Clinical Management Structure (Clinical Directorates). In essence, these include, for example, such job titles as:

- Team Leader.
- Community Rehabilitation Team Co-ordinator.
- Head of Training and Development.
- Head of Administration Services.
- Finance Manager.
- Technical Development Manager.
- Clinical Specialist.
- Nurse Consultant.
- Information Manager
- Telecommunications and Data Manager.

Based on this, the Overall Management Population comprises people within the Trust with management responsibilities. These are located in a number of levels, which include:

1. **The Executive Management Board** (The Top Management Level), which consists in its membership of the following: -

- The Chief Executive and the Executive Directors, in addition to
- The Divisional Directors of the Clinical Divisions included under the senior level of the Clinical Management Structure.

2. **The Senior Level of the Clinical Management Structure**, which consists of: -

- Clinical Directors
- General Managers responsible for clinical / administrative services.
- Matrons.

3. **The Managerial Support Structure**. This consists of: -

- Managerial Support Level to Executive Directors. This level mainly comprises Assistants to Executive Directors.

- *Managerial Support to Divisional Directors. This consists of Assistant Divisional Directors.*

- Managerial Support to the Clinical Management Structure (Clinical Directorates). In essence, this level includes, for example, such job titles as:

    − Team Leader.

    − Community Rehabilitation Team Co-ordinator.

    − Head of Training and Development.

    − Head of Administration Services.

    − Finance Manager.

    − Technical Development Manager.

    − Clinical Specialist.

    − Nurse Consultant.

    − Information Manager

    − Telecommunications and Data Manager.

4.7.3.1 The Rationale for Choosing the Relevant Population to be targeted with In-depth, Face-To-Face Interviews

The emphasis when targeting members of the management population for in-depth interviews was on choosing those in the Executive Management Board, as well as the Senior Level of the Clinical Management Structure (Executive Directors, Divisional Directors, Clinical Directors, General Managers, and Matrons). This is mainly due to the reason that those include senior directors / managers who are primarily concerned with overseeing the strategic management of the Trust and the achievement of its main objectives. Thus, it is believed that the responses, which they may provide to in-depth, face-to-face interviews lasting a minimum of one hour, and consisting of 12 main questions providing a comprehensive coverage of the research project's main aim, objectives and paradigm, can well provide the researcher with a rich source of primary data, which can be used to seek to fulfil the exploratory nature of the study, being concerned with exploring Agility in Healthcare. Thus, such a Population

embodies the most senior managers in each Trust, who are suitable for providing expert views and opinions (primary data), through exploratory, in-depth interviews.

This research has a strategic focus, in that it is concerned with investigating organisational agility as being an organisational state that is facilitated through the active and continuous strategic leadership as well as involvement of senior managers, from the Top levels in the organisation. Based on this, it was decided that in-depth interviews should target such senior managers in the organisation. These senior managers would include those who are responsible for the formulation of major, long-term management initiatives, which encompass the whole organisation and permeate its different levels, departments and levels of staffing, as well as those who are responsible for driving through their implementation.

Based on this, the criterion adopted in choosing those people to be interviewed as part of this research project focuses on gaining a sample of interviewees, whose job or work responsibilities can be described as strategic in nature. This means that such a sample of interviewees includes a number of directors covering a variety of managerial/administrative and clinical expertise and backgrounds, who occupy the most senior positions within the Trust, which entails that such interviewees have a vital interest in, as well as responsibility and focus towards, ensuring and maintaining the delivery of effective, responsive, and agile healthcare services that meet the needs of the users of the healthcare services provided by the Trust and the hospitals it encompasses, in view of the changing requirements, demands and pressures posed by stakeholders in the environment affecting the operation and management of the Trust.

The strategic nature of the responsibilities associated with the directors comprising the executive management board is due to the responsibilities associated with the board itself, which are concerned with "*the formulation of strategic and business objectives that develop the Trust services in response to local needs. These roles and individuals will set the standards of behaviour and business conduct, which will underpin the values of the organisation*". Such responsibilities of the Executive Management Board are in close relevance to the main objective of this research project, which is concerned with exploring the way in which healthcare organisations can be enabled to respond and adapt flexibly and in an agile manner to changes in

their environment and, thus, thrive in an environment of continuous and unpredictable change.

In this way, such a sample of interviewees can well provide a strategic view that is reflective of the situation in the Trust, concerning factors believed to facilitate organisational agility in healthcare organisations, while providing a main source of valuable, quality and relevant primary data through the responses given to the interview questions and, consequently, to the objectives of the research project. Therefore, one level, upon which particular emphasis has been placed, in terms of targeting when choosing interviewees for the in-depth, face-to-face interviews stage of primary data collection, is the Top Management Level in each Case Trust. This level is represented by the Executive Management Board in each Case Trust, which consists of the Chief Executive, the Executive Directors, and Divisional Directors.

In addition to the Top Management Level, **the senior level of the Clinical Management Structure** has been found to assume crucial supportive duties and responsibilities, in that it acts as the main interface level between the Executive Management Board (Top Management Level) and the rest of the Trust. This structure includes four main Clinical Divisions, which collectively comprise the main clinical healthcare services delivered by the hospitals, which the Trust encompasses. In this capacity, the clinical management structure facilitates the achievement of the Trust's major strategic objectives and goals reflected in its strategic management plans and initiatives, through translating and communicating these to the rest of the Trust represented by the various divisions and departments it encompasses.

Hence, the Clinical Management Structure is responsible for following-up and implementing the plans and projects formulated by the Executive Management Board (Top Management Level). The nature of the level of interface and collaboration between these two levels, in terms of pushing forward and driving through the Trust's strategic thrusts in management initiatives and plans related to the management, provision, and delivery of healthcare, plays a crucial role in facilitating and enabling the Trust to adapt and respond flexibly and in an agile manner to the various pressures, demands and requirements arising from a variety of environmental parties. This becomes particularly important in view of today's dynamic and, often unpredictable and uncertain environment.

Based on such a description of the nature of the linkage between these two levels, the emphasis is placed upon both: The Executive Management Board as well as the senior level of the Clinical Management Structure, in terms of targeting when choosing interviewees for the in-depth, face-to-face interviews stage of primary data collection.

- On this basis, the relevant population to be targeted with in-depth, face-to-face interviews, from the overall management population, consists of: -

1- The Executive Management Board. (The Chief Executive, the Executive Directors, in addition to the Divisional Directors)

2- The Senior Level of The Clinical Management Structure. (Clinical Directors, General Managers, Matrons)

NHS Trust A

1. **The Executive Management Board (The Top Management Level in the Trust)**: - Includes the *Chief Executive*, and the *Executive Directors*.

In-Depth, Face-to-Face Interviews

Number of Those Interviewed	Total Number	Percentage (Proportion)
3 Directors	7	43%

2. **The Clinical Management Structure** (The Senior Level). This includes the following (*excluding the Divisional Directors, who were considered as part of the Executive Management Board: The Top Management Level*):

a) Clinical Directors

b) General Managers responsible for clinical / administrative services.

c) Matrons.

In-Depth, Face-to-Face Interviews

Number of Those Interviewed	Total Number	Percentage (Proportion)
14 (Clinical Directors, General Managers, Matrons)	42	33%

- With regard to determining the Relevant Population to be targeted with Self-completion Questionnaires, from the Overall Management Population, the aim was to target two main audiences: -

1. Those Executive, Divisional, and Clinical Directors, as well as General Managers and Matrons, *__who have not been included in the in-depth interviews__*, and who work in, or belong to:

- The Executive Management Board (The Top Management Level), and
- The Senior Level of the Clinical Management Structure.

2. All those in the Managerial Support Structure, including Assistant Executive Directors, Assistant Divisional Directors and managerial support for the Clinical Directorates.

The Relevant Population and Response Rates, for Questionnaires

Executive Management Board			
Level	**Population Number (Those Not Interviewed): -** **[Total Population for Interviews – No. of those interviewed]**	**Number of Respondents**	**Response Rate**
(Executive Directors and Divisional Directors)	**4** (7 – 3)	**2**	**50%**
Senior Level of the Clinical Management Structure			
Level	**Population Number (Those Not Interviewed): -** **[Total Population for Interviews – No. of those interviewed]**	**Number of Respondents**	**Response Rate**
(Clinical Directors + General Managers + Matrons)	**28** (42 – 14)	**6**	**21.4%**
Managerial Support Structure			
1-Managerial Support to Executive Directors			
Level	**Population Number**	**Number of Respondents**	**Response Rate**
Assistant Executive Directors	**5**	**2**	**40%**

2- Managerial Support to the rest of the Clinical Management Structure (Clinical Directorates)			
Level	**Population Number**	**Number of Respondents**	**Response Rate**
Others, for example: ▪ Head of Strategic Capital Planning. ▪ Lead Infection Control Nurse. ▪ HSDU Advisor. ▪ Midwife. ▪ Head of Midwifery. ▪ Design and Technical Planning Manager. ▪ Access to Records Manager (Legal Services Dept.) ▪ Head of Modernisation and Development. ▪ Manager.	**62**	**13**	**20.96%**
Total Number of Respondents		**23**	

NHS Trust B

- The relevant population to be targeted with in-depth, face-to-face interviews, from the overall management population, consists of: -

  1. The Executive Management Board. (The Chief Executive, the Executive Directors, in addition to the Divisional Directors)

  2. The Senior Level of The Clinical Management Structure. (Clinical Directors, General Managers, Matrons)

1. **The Executive Management Board (The Top Management Level in the Trust)**: - Includes the *Chief Executive*, the *Executive Directors*, in addition to the *Divisional Directors* of the Clinical Divisions included under the Senior Level of the Clinical Management Structure.

In-Depth, Face-to-Face Interviews

Number of Those Interviewed	Total Number	Percentage (Proportion)
6 Directors (Executive and Divisional)	12	50%

2. **The Clinical Management Structure** (The Senior Level). This includes the following (*excluding the Divisional Directors, who were considered as part of the Executive Management Board: The Top Management Level*):

a) Clinical Directors

b) General Managers responsible for clinical / administrative services.

c) Matrons.

In-Depth, Face-to-Face Interviews

Number of Those Interviewed	Total Number	Percentage (Proportion)
11 (Clinical Directors, General Managers, Matrons)	35	31.4%

- <u>With regard to determining the relevant population to be targeted with self-completion questionnaires, from the overall management population, the aim was to target two main audiences:</u> -

1- Those Executive, Divisional, and Clinical Directors, as well as General Managers and Matrons, ***who have not been included in the in-depth interviews***, and who work in, or belong to:

- The Executive Management Board (The Top Management Level), and

- The Senior Level of the Clinical Management Structure.

2- All those in the Managerial Support Structure, including Assistant Executive Directors, Assistant Divisional Directors and managerial support for the Clinical Directorates.

The Relevant Population and Response Rates, for Questionnaires

Executive Management Board			
Level	**Population Number (Those Not Interviewed): -** [Total Population for Interviews – No. of those interviewed]	**Number of Respondents**	**Response Rate**
(Executive Directors and Divisional Directors)	**6** (12 – 6)	**3**	**50%**

Senior Level of the Clinical Management Structure			
Level	**Population Number (Those Not Interviewed): -** [**Total Population for Interviews – No. of those interviewed**]	**Number of Respondents**	**Response Rate**
(Clinical Directors + General Managers + Matrons)	**24** (35 – 11)	**5**	**20.84%**
Managerial Support Structure			
1-Managerial Support to Executive Directors			
Level	**Population Number**	**Number of Respondents**	**Response Rate**
Assistant Executive Directors	**5**	**2**	**40%**
2- Managerial Support to Divisional Directors			
Level	**Population Number**	**Number of Respondents**	**Response Rate**
Assistant Divisional Directors	**4**	**2**	**50%**
3- Managerial Support to the rest of the Clinical Management Structure (Clinical Directorates)			
Level	**Population Number**	**Number of Respondents**	**Response Rate**
Others, for example: ▪ Team Leader. ▪ Community Rehabilitation Team Co-ordinator. ▪ Head of Training and Development. ▪ Head of Administration Services. ▪ Finance Manager. ▪ Technical Development Manager. ▪ Clinical Specialist. ▪ Nurse Consultant. ▪ Information Manager ▪ Telecommunications and Data Manager.	**202**	**48**	**23.76%**
Total		**60**	

4.8   Statistical Methods Used in Data Analysis

In order to fulfil the objectives of the study, a number of statistical techniques were used in primary data analysis. These are:

♦ Descriptive statistics: frequency and mean

♦ Mann Whitney U test

♦ Exploratory Factor Analysis

The following discussion explains the reasons behind using each of these techniques.

4.8.1 Descriptive Statistics: Frequencies and Mean

The use of Descriptive Statistics is mainly due to the reason expressed by de Vaus (1996), in that the first thing to do when all the data are collected is to count how many people gave particular answers to each question. This counting exercise, he indicates, results in frequency distributions. Frequency distributions are represented in tables describing the number of people who provided each possible answer, and with increased emphasis, the percentage of people who gave a particular response.

Frequencies and statistical means were calculated for those questions measuring: -

1. The four main characteristics of the environment affecting the two NHS Trusts: Importance, amount of change, unpredictability, uncertainty;

2. The two questions measuring the perceived current as well as required levels of agility, in addition to;

3. The two questions measuring both: the degree of practising the fourteen "agility-enabling" capabilities, as well the degree of their importance in facilitating organisational agility, in the Trusts.

4.8.2 The Rationale for Using the Mann Whitney U Test

The statistics literature offers a relatively large number of statistical tests to determine whether a difference between two or more groups is significant. (Hair et al., 1998; Field, 2000; Sekaran, 2000; Bryman and Cramer, 2001) Such tests mainly fall into

two categories, which are ***Parametric*** and ***Non-Parametric*** tests. In deciding which is the most appropriate type of statistical test to use, in order to determine whether there are significant differences between two or more groups, the nature of the data to be analysed plays a pivotal role. That is, whether the data is of a _categorical / nominal_ or a _non-categorical / nominal_ nature.

In this context, Bryman and Cramer (2001) indicate that:

- If the data are of a categorical or nominal nature, such as data that refer to the number or frequency of cases, then it is only possible to use what is referred to as non-parametric tests.

- However, if the data are of a non-categorical nature, such as ordinal and interval / ratio data, then a decision has to be made as to whether to use a parametric or a non-parametric test.

Since the comparison between the two NHS Trusts in this study is being conducted according to data of an ordinal / non-categorical nature (i.e. degrees of: **importance**, **dynamism**, **unpredictability**, **uncertainty** of environmental parties, levels of **current** and **required** agility, in addition to degree of **practice / existence** of "agility-enabling capabilities", which are all measured through ordinal Likert scales- see sections **5.4.3** and **6.3.1.2**), a decision has to be made in this case as to whether to use a parametric or a non-parametric test. In such a case, the statistics literature offers two main guidelines in deciding whether to use a parametric statistical test. If the data subject to comparison fulfil such conditions, then a decision is taken to use parametric tests. However, if such data fail to satisfy these conditions, then the cautious decision would be to employ non-parametric statistical tests.

Based on this, the main rule prescribed in the statistics literature (Siegel and Castellan, 1988; Hair et al., 1998; Bryman and Cramer, 2001), is that a parametric test can be used under the following conditions: -

1. If the level or scale of measurement is of equal interval or ratio scaling, that is, more than ordinal.

2. The distribution of the population scores is normal.

As has been stated earlier, the level or scale of measurement, according to which the comparison under the second objective of this research is made, is concerned with measuring degrees of **importance**, **dynamism**, **unpredictability** as well as **uncertainty** of environmental parties, in addition to levels of **current** as well as **required** agility. These are all measured through ordinal Likert scaling, which are less than interval or ratio scaling, and thus require the use of non-parametric statistical tests.

With regard to the distribution of the data, upon which the comparison between the two Trusts is to be based, the Kolmogorov-Smirnov Test (K-S Test) of Normality was conducted in order to establish whether such data are normally distributed. Not all of the variables included in this data had a normal distribution. (See Appendix E: The Results of the Kolmogorov-Smirnov Test (K-S Test) of Normality)

Therefore, the Mann Whitney U test was employed based on the following reasons: -
1. The level or scale of measurement for all the data used as the basis for the comparison between the two NHS Trusts, as mentioned earlier, is ordinal.
2. Not all of the variables representing such data followed a normal distribution.

Based on these two main reasons, a non-parametric test is used to check for significant differences between the two case Trusts. In particular, the Mann-Whitney U Test is used, since it is the one preferred when two unrelated groups (two different NHS Trusts in the case of this research) are to be compared using a non-parametric test.

4.8.3 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is conducted in order to identify and extract the underlying conceptual dimension(s) or component(s), which emanate from each of the seven main "agility-enabling" constructs, developed and designed by this research.

According to Hair et al. (1998), factor analysis is a class of multivariate statistical technique whose main objective is to define the underlying structure in the data matrix. It addresses the interrelationships between variables, such as the items

measuring the aforementioned capabilities, by defining a set of common underlying dimensions. AlKhaldi (2003) indicates that once these dimensions are determined, two main uses for factor analysis can be achieved, which are *summarisation and data reduction*. *Summarisation* refers to the process of describing the data in much smaller number of variables, whereas *data reduction* describes the process of calculating the score for each underlying dimension and substituting them for the original data.

Explanatory factor analysis was used to extract the "agility-enabling" capabilities from each construct developed in this study, according to the criterion that the minimum loading for any item should not be less than 0.5 (Nunnally, 1978; Nunnally and Bernstien, 1994). For the underlying dimensions an internal consistency reliability test (Cornbach's alpha) was used to assess the consistency of the scale.

After ascertaining the reliability of each new resulting component or dimension, the items constituting such a dimension were summated to refer to the new factor. The factor analysis employed the principal component factor analysis method, along with both: Orthogonal rotation in those instances where there were no bases to assume that the items were correlated, and oblique rotation when there were grounds to assume that correlation may exist between the items.

Chapter Five

Organisational Agility: Analysis of Conceptualisation and Need, in the NHS Trusts

5.1 Introduction

The aim of this chapter is to present the results of analysing of the qualitative and quantitative primary data collected from the two NHS Trusts, designated as case study organisations for the purposes of this research, in an effort designed to fulfil the **first** and **second** objectives of this research. Such data was collected through employing two main research instruments, namely: *In-depth Face-To-Face Interviews* and *Self-Completion Questionnaires*.

Based on this, the analysis presented and discussed here primarily seeks to fulfil the following two objectives of the research:

4. To explore and identify how the concept of organisational agility is understood and perceived in the NHS Trusts.

5. To explore and identify the perceived need for organisational agility in the NHS Trusts, as essentially being driven by the nature of the environment affecting such Trusts.

The third research objective builds on such a perceived need for organisational agility, as a crucial requirement in view of an increasingly dynamic and uncertain environment, through seeking to explore and identify those capabilities that underpin organisational agility in healthcare organisations, represented by the case Trusts. However, the analysis of the primary data collected to fulfil the third research objective is presented and discussed in a separate chapter, which is **Chapter Six**, since it is based on the outcomes of a process of operationalising and measuring a number of "agility-enabling" constructs.

The analysis was performed according to the bases described earlier in the "Data Analysis Strategy" section, which is included as part of the previous chapter: "Research Philosophy, Design and Methodology".

5.2 Breakdown of Respondents to the "Self-Completion Questionnaire"

The breakdown of such respondents is in terms of:

- The Job Titles of those respondents, presented for each of the two Trusts.

- Categorising the respondents on the basis of their job titles, into two main areas: Managers and Clinicians. These two categories will be presented for each of the two Trusts. Such categorisation of respondents is made by studying the nature of the responsibilities associated with the description of their Job Titles. Particular attention is paid towards making sure that the job titles that have been categorised as managers and clinicians, for one Trust, have been categorised in the same manner, for the other Trust. Thus by following the same rationale or basis in categorising such job titles, the proportions of managers and clinicians for one Trust can be compared with those for the other to establish whether we are comparing like with like.

1. **Breakdown of respondents to the self-completion questionnaire according to Job Titles, for each Trust.**

NHS Trust A			
Job Title	**Frequency**	**Percent**	**Cumulative Percent**
1. Access To Records Manager (Legal Services Department)	1	4.3	4.3
2. Assistant Director	1	4.3	8.7
3. Assistant Director of Human Resources	1	4.3	13.0
4. Critical Care Network Manager	1	4.3	17.4
5. Design and Technical Planning Manager	1	4.3	21.7
6. Director	1	4.3	26.0
7. Director of Human Resources	1	4.3	30.4
8. General Manager	2	8.7	39.1
9. Head of Midwifery	1	4.3	43.5
10. Head of Modernisation and Performance	1	4.3	47.8
11. Head of Strategic Capital Planning	1	4.3	52.2
12. HSDU Advisor	1	4.3	56.5
13. Lead Infection Control Nurse	1	4.3	60.9
14. Manager	1	4.3	65.2
15. Matron	2	8.7	73.9
16. Midwife	1	4.3	78.2
17. Senior Nurse	1	4.3	82.6
• Number of respondents who have not indicated their Job Title	4	17.4	100.0
Total	23	100.0	

Table 5.1.a: Breakdown of respondents according to Job Titles, for NHS Trust A.

NHS Trust B			
Job Title	**Frequency**	**Percent**	**Cumulative Percent**
1. Lead Infection Control Nurse	1	1.7	1.7
2. Matron	2	3.3	5.0
3. Acting Chief Executive	1	1.7	6.7
4. Acting Podiatry Manager	1	1.7	8.3
5. Acute Rehabilitation Manager	1	1.7	10.0
6. Administration	1	1.7	11.7
7. Allied Health Professional Project Manager	1	1.7	13.3
8. Assistant Director of Operations and Facilities	1	1.7	15.0
9. Assistant Director of Personnel and Development	1	1.7	16.7
10. Assistant Divisional Director / Medicine/Elderly	1	1.7	18.3
11. Assistant Divisional Director / Surgery and Anaesthetics	1	1.7	20.0
12. Cardiology Manager	1	1.7	21.7
13. Caseload Manager	1	1.7	23.3
14. Catering Manager	1	1.7	25.0
15. Catering Manager	1	1.7	26.7
16. Chief Technician / Inpatient Dispensary Manager	1	1.7	28.3
17. Clinical Co-ordinator Therapy Services	1	1.7	30.0
18. Clinical Specialist	1	1.7	31.7
19. Cognitive Behavioural Psychotherapist	1	1.7	33.3
20. Community Rehabilitation Team Co-ordinator	2	3.3	36.7
21. Director of Operations and Facilities	1	1.7	38.3
22. Divisional Support Manager / Lead Manager for Cancer Services	1	1.7	40.0
23. EPR/ICR Programme Manager	1	1.7	41.7
24. Equality / Diversity Manager	1	1.7	43.3
25. Finance Manager	3	5.0	48.3
26. Head Occupational Therapist	2	3.3	51.7
27. Head of Administration Services	1	1.7	53.3
28. Head of Organisational Development	1	1.7	55.0
29. Head of Training and Development	1	1.7	56.7
30. Histology Laboratory Manager	1	1.7	58.3
31. Information Manager-Surgical Division	1	1.7	60.0
32. Lead Nurse Cancer Services	1	1.7	61.7
33. Management	1	1.7	63.3
34. Manual Handling Advisor (Occupational Therapist By Profession)	1	1.7	65.0

NHS Trust B (continued)			
Job Title	Frequency	Percent	Cumulative Percent
35. Manual Handling Advisor / Community Healthcare Agency	1	1.7	66.7
36. Medical Personnel Manager	1	1.7	68.3
37. Medical Staffing Co-ordinator	1	1.7	70.0
38. Non-Executive Director	1	1.7	71.7
39. Nurse	1	1.7	73.3
40. Nurse Consultant	1	1.7	75.0
41. Pathology Manager	1	1.7	76.7
42. Senior Medical Technologist	1	1.7	78.3
43. Senior Midwife / Assistant General Manager	1	1.7	80.0
44. Team Leader- Senior Occupational Therapist	1	1.7	81.7
45. Team Leader	1	1.7	83.3
46. Technical Development Manager / Estates	1	1.7	85.0
47. Telecommunications and Data Manager	1	1.7	86.7
48. Ward Manager	2	3.3	90.0
• Number of respondents who have not indicated their Job Title	6	10.0	100.0
Total	60	100	

Table 5.1.b: Breakdown of respondents according to Job Titles, for NHS Trust B.

2. <u>Categorising the respondents on the basis of their job titles, into two main areas: Managers and Clinicians</u>.

These two categories will be presented for each of the two Trusts. Such categorisation of respondents is made by studying the nature of the responsibilities associated with the description of their Job Titles. Particular attention is paid towards making sure that the job titles that have been categorised as managers and clinicians, for one Trust, have been categorised in the same manner, for the other Trust. For example:

- The job title: Matron has been categorised as a Clinician, for both Trusts.
- The job title: Assistant Director has been categorised as a Manager, for both Trusts.
- The job title: Divisional Director has been categorised as a Clinician, since although Divisional Directors are part of the Executive Management Board, they essentially form the senior level of the Clinical Management Structure, which is made up of a number of Clinical Divisions in each Trust. Each Clinical Division is headed by a Divisional Director, who is a Clinician by profession and who

oversees the management and delivery of healthcare services provided by his/her respective Division. Table 5.2 shows the category (manager or clinician) given to each Job Title, for respondents from each Trust.

NHS Trust A	
Job Title	**Category (Manager or Clinician)**
1. General Manager	Manager
2. Assistant Director	Manager
3. Senior Nurse	Clinician
4. Matron	Clinician
5. Head of Strategic Capital Planning	Manager
6. Director	Manager
7. Lead Infection Control Nurse	Clinician
8. HSDU Advisor	Clinician
9. Director of Human Resources	Manager
10. Midwife	Clinician
11. Head of Midwifery	Clinician
12. Critical Care Network Manager	Manager
13. Design and Technical Planning Manager	Manager
14. Matron	Clinician
15. Access To Records Manager (Legal Services Department)	Manager
16. Head of Modernisation and Performance	Manager
17. Manager	Manager
18. Assistant Director of Human Resources	Manager
19. General Manager	Manager
Number of Respondents who have not indicated their Job Titles	4
Total	23

Table 5.2.a: Categorisation of Respondents according to their Job titles, into Managers and Clinicians, for NHS Trust A.

NHS Trust B	
Job Title	**Category (Manager or Clinician)**
1. Head of Training and Development	Manager
2. Management	Manager
3. Assistant Director of Personnel and Development	Manager
4. Head Occupational Therapist	Clinician
5. Information Manager-Surgical Division	Manager
6. Head Occupational Therapist	Clinician
7. Senior Midwife/Assistant General Manager	Clinician
8. Head of Administration Services	Manager
9. Chief Technician / Inpatient Dispensary Manager	Manager
10. Community Rehabilitation Team Co-ordinator	Manager
11. Community Rehabilitation Team Co-ordinator	Manager

NHS Trust B (continued)	
Job Title	**Category (Manager or Clinician)**
12. Clinical Co-ordinator Therapy Services	Clinician
13. Nurse Consultant	Clinician
14. Senior Medical Technologist	Clinician
15. Lead Infection Control Nurse	Clinician
16. Assistant Director of Operations and Facilities	Manager
17. Manual handling advisor (Occupational Therapist by profession)	Clinician
18. Clinical Specialist	Clinician
19. Team Leader- Senior Occupational Therapist	Clinician
20. Matron	Clinician
21. Technical Development Manager/Estates	Manager
22. Assistant Divisional Director/ Surgery and Anaesthetics	Clinician
23. Cognitive Behavioural Psychotherapist	Clinician
24. Medical Staffing Co-ordinator	Manager
25. Lead Nurse Cancer Services	Clinician
26. Administration	Manager
27. Caseload Manager	Manager
28. Team Leader	Manager
29. Finance Manager	Manager
30. Telecommunications and Data Manager	Manager
31. Allied Health Professional Project Manager	Manager
32. Acute Rehabilitation Manager	Manager
33. Nurse	Clinician
34. Cardiology Manager	Manager
35. Matron	Clinician
36. Catering Manager	Manager
37. Ward Manager	Manager
38. Head of Organisational Development	Manager
39. Acting Podiatry Manager	Manager
40. Finance Manager	Manager
41. Equality / Diversity Manager	Manager
42. EPR/ICR Programme Manager	Manager
43. Divisional Support Manager/Lead Manager for Cancer Services.	Manager
44. Director of Operations Facilities	Manager
45. Manual Handling Advisor / Community Healthcare Agency	Manager
46. Histology Laboratory Manager	Manager
47. Non-Executive Director	Manager
48. Assistant Divisional Director / Medicine/Elderly	Clinician
49. ACTING CHIEF EXECUTIVE	Manager
50. Pathology Manager	Manager
51. Medical Personnel Manager	Manager

NHS Trust B (continued)	
Job Title	**Category (Manager or Clinician)**
52. Finance Manager	Manager
53. Ward Manager	Manager
Number of Respondents who have not indicated their Job Titles	7
Total	60

Table 5.2.b: Categorisation of Respondents according to their Job titles, into Managers and Clinicians, for NHS Trust B.

Based on this, the two categories of Managers and Clinicians are presented for each Trust, including the Job Titles categorised under each. (See tables 5.3.a and 5.3.b)

NHS Trust A	
Managers	**Clinicians**
1. General Manager	1. Senior Nurse
2. Assistant Director	2. Matron
3. Head of Strategic Capital Planning	3. Lead Infection Control Nurse
4. Director	4. HSDU Advisor
5. Director of Human Resources	5. Midwife
6. Critical Care Network Manager	6. Head of Midwifery
7. Design and Technical Planning Manager	7. Matron
8. Access To Records Manager (Legal Services Department)	
9. Head of Modernisation and Performance	
10. Manager	
11. Assistant Director of Human Resources	
12. General Manager	
Four (4) Respondents Have Not Indicated Their Job Titles	

Table 5.3.a: The Two Categories of Managers and Clinicians for NHS Trust A

NHS Trust B	
Managers	**Clinicians**
1. Head of Training and Development	1. Head Occupational Therapist
2. Management	2. Head Occupational Therapist
3. Assistant Director of Personnel and Development	3. Senior Midwife/Assistant General Manager
4. Information Manager-Surgical Division	4. Clinical Co-ordinator Therapy Services
5. Head of Administration Services	5. Nurse Consultant
6. Chief Technician / Inpatient Dispensary Manager	6. Senior Medical Technologist
7. Community Rehabilitation Team Co-ordinator	7. Lead Infection Control Nurse
8. Community Rehabilitation Team Co-ordinator	8. Manual handling advisor (Occupational Therapist by profession)

NHS Trust B (continued)	
Managers	**Clinicians**
9. Assistant Director of Operations and Facilities	9. Clinical Specialist
10. Technical Development Manager/Estates	10. Team Leader- Senior Occupational Therapist
11. Medical Staffing Co-ordinator	11. Matron
12. Administration	12. Assistant Divisional Director/ Surgery and Anaesthetics
13. Caseload Manager	13. Cognitive Behavioural Psychotherapist
14. Team Leader	14. Lead Nurse Cancer Services
15. Finance Manager	15. Nurse
16. Telecommunications and Data Manager	16. Matron
17. Allied Health Professional Project Manager	17. Assistant Divisional Director / Medicine/Elderly
18. Acute Rehabilitation Manager	
19. Cardiology Manager	
20. Catering Manager	
21. Ward Manager	
22. Head of Organisational Development	
23. Acting Podiatry Manager	
24. Finance Manager	
25. Equality / Diversity Manager	
26. EPR/ICR Programme Manager	
27. Divisional Support Manager/Lead Manager for Cancer Services.	
28. Director of Operations Facilities	
29. Manual Handling Advisor / Community Healthcare Agency	
30. Histology Laboratory Manager	
31. Non-Executive Director	
32. ACTING CHIEF EXECUTIVE	
33. Pathology Manager	
34. Medical Personnel Manager	
35. Finance Manager	
36. Ward Manager	
Seven (7) Respondents Have Not Indicated Their Job Titles	

Table 5.3.b: The Two Categories of Managers and Clinicians for NHS Trust B.

After categorising each respondent into either a manager or a clinician, the proportion of managers and clinicians for respondents from each Trust have been calculated. Table 5.4 presents these proportions for each Trust.

NAME of TRUST	Category of Job / Profession	Frequency	Percent	Valid Percent	Cumulative Percent
NHS Trust A	Manager	12	52.2	63.2%	63.2
	Clinician	7	30.4	36.8%	100.0
	Total Number of Responses	19	82.6	100.0%	
	No Responses	4	17.4		
	Total	23	100.0		
NAME of TRUST	Category of Job / Profession	Frequency	Percent	Valid Percent	Cumulative Percent
NHS Trust B	Manager	36	60.0	67.9%	67.9
	Clinician	17	28.3	32.1%	100.0
	Total Number of Responses	53	88.3	100.0%	
	No Responses	7	11.7		
	Total	60	100.0		

Table 5.4: The Proportion of Managers and Clinicians for Respondents from each Trust.

From examining table 5.4, it can be seen that the proportion of Managers and Clinicians for respondents from the first Trust "**NHS Trust A**" (**Managers: 63.2%; Clinicians: 36.8%**) is highly similar to the proportion of Managers and Clinicians for respondents from the second Trust "**NHS Trust B**" (**Managers: 67.9%; Clinicians: 32.1%**). This provides a plausible basis for supporting a comparison between the two Trusts, since a highly similar mix and spread of respondents exists in both Trusts.

The structure, by which the primary data collected through the two main research instruments will be presented and discussed throughout this chapter, is such that the responses received from one Trust, for each question, will be compared to the responses received from the other Trust, for the same question.

5.3 *The First Research Objective*: **To Explore and Identify How the Concept of Organisational Agility is Perceived and Understood in NHS Trusts**

Each of the research instruments, namely the "In-depth, Direct Interview Questions Schedule" and the "Self-Completion Questionnaire", has been designed in such a way that it is divided into three main parts, each part corresponding to one of the three main objectives of this research. Thus in this way, and in both: the In-depth Interview Questions Schedule/Protocol as well the Self-Completion Questionnaire, questions have been designed under each part with the aim of providing answers, which seek to fulfil the relevant research objective.

5.3.1 <u>Assessing the Suitability and Relevance of the Concept of Organisational Agility and Various Definitions of it, to the Context of "Healthcare Provider" Organisations</u>

The first part of the self-completion questionnaire lists six definitions of Organisational Agility under Question 1. Table 5.5 presents these definitions.

DEFINITIONS RELATED TO THE CONCEPT OF ORGANISATIONAL AGILITY
a. An organisation-wide capability to respond rapidly to market changes and to cope flexibly with unexpected change in order to survive unprecedented threats from the business environment.
b. The ability to thrive in an environment of continuous and unpredictable change
c. The successful exploitation of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment.
d. The ability to move or act quickly and easily
e. The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets.
f. A set of capabilities organisations use to respond and adapt to various demands and opportunities that are a part of dynamic and uncertain competitive environments.

Table 5.5: Definitions related to the concept of Organisational Agility, listed in the First Part of the Self-Completion Questionnaire.

- From the list of definitions listed above, Question 1.1 in the "*Self-Completion Questionnaire*" required respondents to choose the definition of Organisational Agility, which they thought is the **most suitable / relevant** to the context of enabling their hospital, as an organisation concerned with the management and delivery of healthcare services, to respond to change. Tables 5.6.a and 5.6.b present the results of the responses to this question, for each Trust.

Most Suitable / Relevant Definition				
NHS Trust A				
Definition	Frequency	Percent	Valid Percent	Cumulative Percent
b. The ability to thrive in an environment of continuous and unpredictable change	10	43.5%	**45.5%**	45.5%
c. The successful exploitation of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment.	2	8.7%	**9.1%**	54.5%
d. The ability to move or act quickly and easily	2	8.7%	**9.1%**	63.6%
e. The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets.	4	17.4%	**18.2%**	81.8%
f. A set of capabilities organisations use to respond and adapt to various demands and opportunities that are a part of dynamic and uncertain competitive environments.	4	17.4%	**18.2%**	100.0%
Total Number of Responses	22	95.7%	**100.0%**	
No Responses	1	4.3%		
Total	23	100.0%		

Table 5.6.a: Most Suitable Definition, for NHS Trust A

Most Suitable / Relevant Definition				
NHS Trust B				
Definitions	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
a. An organisation-wide capability to respond rapidly to market changes and to cope flexibly with unexpected change in order to survive unprecedented threats from the business environment.	1	1.7%	**1.8%**	1.8%
b. The ability to thrive in an environment of continuous and unpredictable change	22	36.7%	**38.6%**	40.4%
c. The successful exploitation of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment.	8	13.3%	**14.0%**	54.4%
d. The ability to move or act quickly and easily	5	8.3%	**8.8%**	63.2%
e. The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets.	17	28.3%	**29.8%**	93.0%
f. A set of capabilities organisations use to respond and adapt to various demands and opportunities that are a part of dynamic and uncertain competitive environments.	4	6.7%	**7.0%**	100.0%
Total Number of Responses	57	95.0%	**100.0%**	
No Responses	3	5.0%		
Total	60	100.0%		

Table 5.6.b: Most Suitable Definition, for NHS Trust B

From examining tables 5.6.a and 5.6.b, it can be seen that **Definition b: "The ability to thrive in an environment of continuous and unpredictable change"** is the definition, which was chosen by the highest percentage of respondents from both Trusts as the most suitable definition, with **45.5%** of respondents from **NHS Trust A** and **38.6%** from **NHS Trust B** choosing definition b as the most suitable definition.

Further analysis suggests that respondents to the self-completion questionnaire from **NHS Trust A** then chose **definitions e and f** as the second most suitable definitions, with **18.2%** for each. However, respondents from **NHS Trust B** clearly chose **definition e: " The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets"** as the second most suitable definition, with a proportion of **29.8%** of respondents.

Based on this, the results of responses from both Trusts evidently indicate that both Trusts clearly favoured **Definition b: "The ability to thrive in an environment of continuous and unpredictable change"** as the most suitable definition of organisational agility, through being chosen by the highest proportion of respondents in both Trusts compared with the other definitions.

When respondents to the self-completion questionnaire were asked to give reasons for their choice of the most suitable definition of Organisational Agility, those who have chosen **definition (b)** as the most suitable one, from each Trust, provided the responses depicted in tables 5.7.a and 5.7.b.

NHS Trust A
Definition b

Reason	
	Short and Succinct
	The organisation has a skill mix to be flexible in constant change
	Organisation is about growing and developing in a constantly changing environment
	Easy to understand. Is apt.
	We live in constant change
	Because: a) It is believed to be the simple truth of the situation. b) Health organisations must be able to respond to continual change politically / technically.
	Applicability to Public Sector.
	Simple. No jargon.

Table 5.7.a: Reasons For Choosing Definition (b) as the Most Suitable / Relevant Definition of Organisational Agility to the Context of Healthcare, for NHS Trust A.

NHS Trust B	
Definition b	
Reason	Complements the dynamic way the NHS is managed at Central Government Level.
	Healthcare services are ever evolving and changing direction, with expectations growing all the time.
	Because I consider that it is important that we do thrive in periods of change.
	Encapsulates change, challenge and the environment succinctly.
	The NHS is constantly changing. This statement is slick, comprehendible and concise.
	I feel the Trust is doing its best in very difficult times. Things change / goal posts move.
	Simple, understandable and reflects reality of NHS.
	As it is, positive and motivated about the change that is ever-present.
	Easier, less wordy, less ambiguous
	Has the least amount of waffle.
	Selected because of the rapid change in NHS.
	NHS changes (are) often dictated by political changes, not natural changes.
	The organisation feels malleable enough to respond to the changes and I feel this (definition) demonstrates this well.
	Gets to the point.
	I feel this is what happens organisation wide, rather than selectively.
	Motivation is high even with continuous change.
	Trust has to be able to cope with change in order to provide high quality, responsive services.
	Thrive through "3 Star Status" and various Human Resource awards, favourable Commission for Health Improvement (CHI) report all point to success. NHS focus of many changes.
	The Trust needs to operate in a centralist political context and compete for limited resources within a changing local health economy.
	It is all about being able to thrive in an ever-changing environment.
	The NHS is continually changing due to research, advances in technology, politics, skill mixes.

Table 5.7.b: Reasons For Choosing Definition (b) as the Most Suitable / Relevant Definition of Organisational Agility to the Context of Healthcare, for NHS Trust B.

From studying the reasons given by respondents, from both Trusts, for choosing **definition (b)** as the most suitable one, two major themes emerge quite evidently: -

1. The first theme is concerned with the belief that the definition reflects the dynamic, changing environment, within which NHS Trusts operate, and the need to adapt and respond to and, thus, thrive in, such an environment.

This is evidenced by the fact that **(50%)** of the responses received from **NHS Trust A** concerning the reasons for choosing Definition b as the most suitable one highlight the constantly changing environment and the need to respond to it as the reason, whereas **(81%)** of the responses received from **NHS Trust B** highlight this as the reason for choosing definition b as most suitable. Building on the continuously changing environment being the overriding reason for choosing definition b as most suitable in both Trusts, responses from both Trusts and particularly NHS Trust B also highlight that the emphasis on the need to be proactive in responding to such continuous change and, thus, thrive in it, which is reflected in definition b, is another reason behind choosing it as their most suitable and relevant one.

This shared theme emerging from the reasons given by respondents in both Trusts, for choosing definition (b), is exhibited by what one of the respondents has stated, in that this definition **"Encapsulates change, challenge, and the environment succinctly"** (Head Occupational Therapist, NHS Trust B). It does so by reflecting today's reality affecting healthcare organisations operating within the NHS, in that **"Healthcare services are ever evolving and changing direction, with expectations growing all the time"** (Assistant Director of Personnel and Development, NHS Trust B), **"The NHS is continually changing due to research, advances in technology, politics, skill mixes"** (Senior Midwife / Assistant General Manager, NHS Trust B), as well as the fact that **"We live in constant change"** (Head of Midwifery, NHS Trust A).

As such, such a dynamic environment affecting NHS organisations/Trusts has influenced the choice of this definition, as one respondent explains: **"Selected because of the rapid change in the NHS"** (Finance Manager, NHS Trust B).

Highlighting the continuous and rapid change characterising the NHS is not the only reason why definition (b) was chosen as providing the most suitable / relevant description of the concept of Organisational Agility. It is also the emphasis placed upon the need to be proactive in adapting and responding to such an ever-changing environment and being able to not only survive, but also _"thrive"_, by continuing to provide quality and responsive healthcare services in the light of such an environment.

The following responses serve as an example of the importance of projecting proactiveness and motivation in responding to continuous change and, consequently, being able to thrive in the midst of it, as a reason for choosing definition b: -

- **"It is all about being able to thrive in an ever-changing environment."** (Medical Personnel Manager, NHS Trust B).

- **"Organisation is about growing and developing in a constantly changing environment"** (Director of Human Resources, NHS Trust A)

- **"Because I consider that it is important that we do thrive in periods of change."** (Head Occupational Therapist, NHS Trust B).

- **"... Health organisations must be able to respond to continual change politically / technically."** (Design and Technical Planning Manager, NHS Trust A)

- **"As it is, positive and motivated about the change that is ever-present."** (Occupational Therapist, NHS Trust B).

- **"The organisation feels malleable enough to respond to the changes and I feel this (definition) demonstrates this well."** (Allied Health Professional Manager, NHS Trust B).

- **"Motivation is high even with continuous change."** (Director of Operations and Facilities, NHS Trust B).

- **"Trust has to be able to cope with change in order to provide high quality, responsive services."** (Non-Executive Director, NHS Trust B).

- **"Thrive through "3 Star Status" and various Human Resource awards, favourable Commission for Health Improvement (CHI) report all point to success. NHS focus of many changes."** (Assistant Divisional Director, NHS Trust B).

2. The second theme emerging from analysing the reasons given for choosing definition b is concerned with the belief that the definition is clear, straightforward, concise, and jargon-free and, thus, easy to understand and be related to by people working in NHS Trusts.

This is evidenced by the fact that the remaining responses received from both Trusts, concerning the reasons for choosing Definition b as the most suitable (**50%** of the responses received from **NHS Trust A** and **19%** of the responses received from **NHS Trust B**), attribute that to the belief that the definition is simple, understandable, straightforward and jargon-free.

The following responses are cited as an example of such reasons highlighting the simplicity and understandability of definition b: -

- **"Short and Succinct."** (Assistant Director, NHS Trust A).
- **"Simple, understandable and reflects reality of the NHS."** (Clinical Co-ordinator, NHS Trust B).
- **"Easy to understand. Is apt."** (Midwife, NHS Trust A).
- **"Simple. No jargon"** (Manager, NHS Trust A).
- **"Has the least amount of waffle"** (Have not indicated job title, NHS Trust B)

Based on this, the analysis of the reasons given by respondents for choosing definition (b), from both Trusts, gives a very clear indication that the culture [of people working] in healthcare organisations is such that it is more readily inclined towards favouring clear, straightforward, concise, and jargon-free terminology or definitions than perhaps is the case in business (service and manufacturing) organisations, which leads to the conclusion that such healthcare organisations are more sensitive to the wording of new concepts being introduced in a healthcare context.

Also, the analysis of such reasons for choosing definition b as the most suitable strongly suggests that the main characteristic of the type of environment, within which NHS Trusts are operating, is one of dynamism, in that it is constantly and rapidly changing. It also highlights the importance of being able to thrive and prosper in such ever-changing environmental conditions, in order to continue to deliver quality, responsive services.

Thus, the fact that Definition b: -

- Clearly highlights the new dynamic reality of today's environment characterised by continuous and unpredictable change, as well as
- Emphasises the importance of the ability to thrive and continue to provide quality and responsive services in light of such an environment,

may well explain why definition b has been chosen as the most suitable definition in both NHS Trusts.

The results of analysing the responses to the "***In-depth Interviews***" highly support the above results arrived at from analysing the responses to the "***Self-Completion Questionnaires***", in that **definition b: "<u>The ability to thrive in an environment of continuous and unpredictable change</u>"** was also chosen by interviewees from both Trusts as a highly suitable/relevant definition of Organisational Agility to a healthcare context, which provides a clear idea of what agility means. Thirty five percent **(35%)** of interviewees from **NHS Trust A** chose definition b as their most suitable, thus coming as <u>a very close second</u> to **Definition e:** "**<u>The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills-regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets</u>"**, which was chosen by **(41%)** of interviewees as the most suitable definition that best provides a clear idea of agility.

As far as **NHS Trust B** is concerned, interviewees there have clearly chosen **definition b** as their first choice for the most suitable definition, with **(59%)** of responses, compared with **(17%)** of interviewees choosing **definition f:** "**A set of capabilities organisations use to respond and adapt to various demands and opportunities that are a part of dynamic and uncertain competitive environments**", as their choice. (See **table 5.8** for an outline of the most suitable definition(s) chosen by each trust, according to <u>method of primary data collection</u>: *Self-Completion Questionnaires* and *In-Depth Interviews*)

Method of Primary Data Collection	NHS Trust A	NHS Trust B
	Definition Chosen as Most Suitable	Definition Chosen as Most Suitable
Self-Completion Questionnaires	Definition **b** (45.5%)	Definition **b** as a first (38.6%)
		Definition e **as a close second** (29.8%)
In-depth Interviews	Definition **e** as a first (41%)	Definition **b** (59%)
	Definition b **as a close second** (35%)	

Table 5.8: The Most Suitable Definition(s) chosen by each Trust, according to Method of Primary Data Collection

The reasons given by *interviewees* from both Trusts for choosing **definition b** as their most suitable definition of organisational agility strongly support those reasons given by *respondents to the self-completion questionnaire*, for choosing the same definition as the most suitable in each Trust. Such strong support lies in that the themes, which emerged from analysing the reasons given by interviewees for choosing definition b, from both Trusts, resemble quite evidently those themes, which had emerged from analysing the reasons given by respondents to the self-completion questionnaire, for choosing the same definition. These similar themes revolve around the belief that: -

1. The definition reflects the dynamic, changing environment, within which NHS Trusts are operating, and the need to adapt and respond to and, thus, thrive in, such an environment.

2. The definition is clear, straightforward, concise, and jargon-free and, thus, is easy to understand and can be related to by people working in NHS Trusts.

These two shared themes emerging from analysing the reasons given by interviewees, from each Trust, for choosing definition (b), are <u>evidenced and illustrated by the following reasons quoted from interviewees, in both Trusts</u>: -

1. The main theme concerned with the belief that definition b reflects the dynamic reality affecting NHS Trusts, and the need to effectively respond to and thrive in such changing environmental conditions, is illustrated by the following:

–   **"In terms of the National Health Service, at this precise moment in this organisation, definition b is probably the most relevant: the ability to thrive in an environment of continuous and unpredictable change.**

The problem here in the NHS is not one so much of a changing market, ….but more importantly, it is about ability to thrive in an environment of continuous and unpredictable change; this is a particular point in the health service: we are moving fast through:

1. **Application of new standards and measurements**
2. **New ways of working**
3. **New approaches to healthcare.**

   …as far as the NHS is concerned, definition b is the key. I would put in the word "**and often unpredictable change**" **there because it is continuous change that is key."**

   (Medical Director, NHS Trust A)

–   **"I think it is** "**the ability to thrive**" **because if you just** "**move quickly and easily**"**, I don't think you would necessarily do it right. To me that implies…. the ability of the organisation to adapt itself to a fast-changing environment so that it can actually take advantage of these changes and use them to its advantage."**

   (Clinical Director of A & E, NHS Trust A)

–   **"Well I think (definition b), because we are very used to changes, and changes are absolutely nothing new. I have been in the NHS for a long time, so I have been through a number of changes, and I think the changes that are happening now are faster than they have ever been. But if the organisation is strong, then it needs to be agile as well and that is why if it is strong it can thrive in an environment of continuous and unpredictable change. You have got to be able to change direction at a drop of a hat if you have to. So that is why I choose that (definition b)."**

   (General Manager, NHS Trust B)

– "And I think definition b is basically right because <u>the word thrive is quite important</u>. You might have a situation where you are reacting to continuous and unpredictable change, but only just coping, and I don't think you are being agile. But if you are able to thrive at that and deliver the goods and prosper, then I think that comes across as agility. An appropriate response."

(Divisional Director, NHS Trust B)

– "… because I think thrive is a word that does not just suggest survive in that continuous change. It is a bit of a victim sort of standpoint. Thrive suggests that you actually have an element of enjoyment about being within that."

(Clinical Director, NHS Trust B)

– "I mean to me, almost (definition b) says it all. What we are here to do is not simply to survive, but to thrive in an environment of continual and unpredictable change. If you have captured that, then you have done it."

(Director of Operations and Facilities, NHS Trust B)

2. The main theme concerned with the belief that definition b is clear, straightforward, concise, and jargon-free, which makes it easy to understand and be related to by people working in NHS Trusts, is illustrated by the following responses given by interviewees, from both Trusts:

– **"Nice and Short."**
(Director of Modernisation and Development, NHS Trust A)

– **"Well, I think it uses words which most people understand"**
(Clinical Director of A & E, NHS Trust A)

– **"I think it is more generalised, it is about what we do, how we do it, it seems to say a lot in a little sentence."**
(Matron, NHS Trust A)

– **"I prefer to keep the definition <u>simple</u> and I think that (definition b) is correct."**
(Divisional Director, NHS Trust B)

– **"I think it explains itself in very few words. It is Dynamic, straight to the point, does not waffle."**
(Matron, NHS Trust B)

In addition to definition b emerging quite strongly as a suitable definition of organisational agility, **definition e**: **"The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets"** has also emerged as a strong suitable definition, <u>in that it has been chosen as a highly suitable definition of organisational agility in two instances (see table 5.8)</u>: -

a. First, by respondents to the *self-completion questionnaires* from **NHS Trust B**, where (**29.8%**) of respondents have chosen **definition e** as their most suitable, thus coming as a close second to definition b, which was chosen by (**38.6%**) of respondents.

b. Second, by participants in the *in-depth interviews* from **NHS Trust A**, where (**41%**) of interviewees have chosen **definition e** as the Trust's most suitable definition of organisational agility.

The analysis of reasons given by these two groups, namely respondents to self-completion questionnaires from NHS Trust B as well as interviewees from NHS Trust A, for such a choice, suggests that this definition of Organisational Agility reflects the nature of the *modern healthcare economy*, within which NHS trusts are operating and are, thus, affected by.

An executive director interviewed at NHS Trust A expresses this conclusion by stating that:

"This definition for me demonstrates the wider economy in which health is working..., in terms of partners, suppliers, etc..".

(Director of Nursing, NHS Trust A)

The nature of such a "modern" healthcare economy reflected in definition (e) highlights the increasing need to have the ability to integrate and co-ordinate various resources and capabilities, whether those resources are held internally by the different departments within the organisation, or distributed externally among other organisations. It demonstrates the need to develop new partnership arrangements, relationships and linkages between different healthcare organisations, in order to

mutually benefit from and share the resources and competencies held by them. All this in the vein of supporting their abilities to continue to deliver healthcare services under ever-changing environmental conditions, in an agile manner.

Such a perception of how to attain agility is illustrated in a number of responses from both Trusts. For example, one respondent states that:

"I believe integration and co-ordination are both vital in the modern healthcare economy, valuing partnership principles."

(Advisor / Community Healthcare Agency, NHS Trust B)

The benefit resulting from such an importance attached to integration within a healthcare setting is considered to be in delivering seamless healthcare services:

"Co-ordination of resources across boundaries is important to deliver seamless care for patients!"

(Have not indicated job title, NHS Trust B)

The emphasis of this definition on co-ordinating across boundaries, whether through being able to integrate different departments within the same organisation, or sharing resources and competencies with other organisations, is thus an important reason behind choosing this definition:

"It fits all settings, because of its emphasis on permeating different boundaries/across boundaries. Working in teams enables on-going adaptation across boundaries."

(Ward Sister, NHS Trust A)

Interviewees explain why this definition of agility, through its embodiment of the themes of co-ordination and integration, is considered to be relevant to healthcare:

"Because the concept is one of co-ordination not command therapy, it is co-ordinated therapy. We don't make it happen just because we said it has to happen, we make it happen because we work, we co-ordinate, we bring skills and knowledge and resources to the problem to fix.

It is this integration of various resources, physical, human, etc.., in order to achieve a common goal."
(General Manager, NHS Trust A)

Emanating from this definition's emphasis on co-ordinating and integrating various resources and capabilities, a number of respondents have shown a particular interest in skills, knowledge and capabilities and their importance in facilitating organisational agility in healthcare:

– **"It seems to cover most of the things that I would understand of organisational agility, ...it talks about skills and knowledge, people and processes, which- I think- are very important in healthcare..."**

(Matron, NHS Trust A)

– **"Because I think it involves quite a lot of things related to people, process, knowledge and skills, regardless of their organisational location: suppliers, partners. It involves everybody, everybody's job is important to everybody else's."**

(Sister, NHS Trust A)

– **"Because as long as you have skills, resources, you can create change/be ready for change, regardless of your profession."**

(Ward Sister, NHS Trust A)

– **"It is relevant for us definitely, because if we don't have the knowledge and the skills to meet the demands then we have another aspect to look at, because we may need to gain that knowledge and that is something we need to look at."**

(Departmental Leader in x-ray/radiology, NHS Trust A)

The findings, which emanate from the previous analysis of responses to the self-completion questionnaires and the in-depth interviews concerning the most suitable / relevant definition of Organisational Agility, are as follows:

Based on table 5.8, it is concluded that two definitions have emerged as being the most suitable / relevant definitions of Organisational Agility to the context of enabling both Trusts, as organisations concerned with the management and delivery of healthcare services, to respond to change. These are:

1. **Definition b: -** "**The ability to thrive in an environment of continuous and unpredictable change**".

2. **Definition e: - "The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets**".

- Definition (b): **"The ability to thrive in an environment of continuous and unpredictable change**", held out as being the first choice of respondents to the self-completion questionnaire from both Trusts. It also was the first choice of interviewees from NHS Trust B and a close second choice for interviewees from NHS Trust A. This clearly suggests that this definition reflects the main understanding and perception of both Trusts, as to what the concept of Organisational Agility means. It also explains the reasons why Organisational Agility, reflected through definition b, is relevant and is needed in healthcare, through highlighting the dynamic, changing environment, within which NHS Trusts are operating, and the need to adapt and respond to and, thus, thrive in, such an environment.

- Definition (e): "**The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets**" was the first choice of interviewees from NHS Trust A, which was followed by definition b. It was also the second choice of respondents to self-completion questionnaires from NHS Trust B, trailing very closely behind definition b.

These findings suggest that in addition to the fact that both: NHS Trust A as well as NHS Trust B view Organisational Agility as the ability to thrive in an environment of continuous and unpredictable change, they believe that the means to achieve this is through co-ordinating and integrating different types of resources, whether those are internal or external to the organisation, in order to thrive in a changing environment by supporting a constantly changing need for its services.

In other words, complementing definition b with definition e, which was evident in both Trusts, suggests that both Trusts believe that the proactive approach of co-ordinating and integrating resources and capabilities wherever they are is required towards seeking to thrive and succeed in an environment of continuous and unpredictable change. This view of agility as requiring such a co-ordination and integration of different types of resources supports the important role of management in being able to dynamically and effectively manage and co-ordinate various types of resources/capabilities, in the vein of maintaining a flexible and responsive delivery of services in a changing environment, thus facilitating and promoting organisational agility.

- Question 1.2 in the self-completion questionnaire required respondents to choose the definition, which they thought is **the least suitable / relevant** to the context of enabling their hospital, as an organisation concerned with the management and delivery of healthcare services, to respond to change. Table 5.9 presents the results of the responses to this question, for each Trust.

	Least Suitable Definition			
	NHS Trust A			
Definition	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
a. An organisation-wide capability to respond rapidly to market changes and to cope flexibly with unexpected change in order to survive unprecedented threats from the business environment.	8	34.8%	**38.1%**	38.1%
c. The successful exploitation of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment.	5	21.7%	**23.8%**	61.9%
d. The ability to move or act quickly and easily	3	13.0%	**14.3%**	76.2%
e. The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets.	3	13.0%	**14.3%**	90.5%
f. A set of capabilities organisations use to respond and adapt to various demands and opportunities that are a part of dynamic and uncertain competitive environments.	2	8.7%	**9.5%**	100.0%
Total Number of Responses	21	91.3%	**100.0%**	
No Responses	2	8.7%		
Total	23	100.0%		

Table 5.9.a: Least Suitable / Relevant Definition, for NHS Trust A.

Least Suitable / Relevant Definition				
NHS Trust B				
Definition	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
a. An organisation-wide capability to respond rapidly to market changes and to cope flexibly with unexpected change in order to survive unprecedented threats from the business environment.	22	36.7%	**39.3%**	39.3%
b. The ability to thrive in an environment of continuous and unpredictable change	4	6.7%	**7.1%**	46.4%
c. The successful exploitation of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment.	5	8.3%	**8.9%**	55.4%
d. The ability to move or act quickly and easily	14	23.3%	**25.0%**	80.4%
e. The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets.	7	11.7%	**12.5%**	92.9%
f. A set of capabilities organisations use to respond and adapt to various demands and opportunities that are a part of dynamic and uncertain competitive environments.	4	6.7%	**7.1%**	100.0%
Total Number of Responses	56	93.3%	**100.0%**	
No Responses	4	6.7%		
Total	60	100.0%		

Table 5.9.b: Least Suitable / Relevant Definition, for NHS Trust B.

From examining tables 5.9.a and 5.9.b, it can be seen that **Definition a: "An organisation-wide capability to respond rapidly to market changes and to cope flexibly with unexpected change in order to survive unprecedented threats from the business environment"** is the definition, which was chosen by the highest percentage of respondents from both Trusts as the least suitable / relevant definition, with **38.1%** of respondents from **NHS Trust A** and **39.3%** from **NHS Trust B** choosing definition a as the least suitable definition.

When respondents to the self-completion questionnaire were asked about the reasons for their choice of the least suitable definition of Organisational Agility, those who have chosen **definition (a)** as the least suitable definition, from both Trusts, provided the responses depicted in table 5.10.

NHS Trust A	
Reasons for choosing Definition (a) as the least suitable definition	Newly Merged Trust take time to be totally responsive
	Not traditional business environment
	Not to do with service delivery, just survival and business.
	The Trust would not survive threats from the business environment with its overspend.
	Not sure that threats emanate from the "Business Environment" in quite the same way this definition suggests.
	I feel that criteria attached to definition (e) are more relevant.
	Does not reflect actual stability in providing basic healthcare to a population.
	Implies threats from competing organisations.
NHS Trust B	
Reasons for choosing Definition (a) as the least suitable definition	More indirect from Public Sector Bureaucracy where quality of service takes precedence over survival or maximisation of profit.
	Don't like the link with business environment.
	Did not like the words "Business Environment" but I understand that we have to become competitive in order to gain business.
	Business environment does not feel relevant to NHS.
	I find the concept of "market changes" to business (irrelevant/unsuitable), for the grass-root care we give.
	Change should not be "inspected" in a service.
	Describe the type of healthcare management (internal market reforms), which hopefully should be long gone. Also, the threats from the business environment are limited.
	We at the moment do not operate in this type of environment.
	Not organisation wide, pockets of capabilities.
	I do not think we will be able to respond as dynamically as this.
	Not always market changes / business environment. Various demands in NHS to do with people resources also.
	NHS not necessarily threatened by business environment.
	NHS not "yet" subject to market forces.
	The threats from the business environment are relatively limited.
	A large organisation, which takes time to be decisive. (organisation-wide responsiveness)
	Unrealistic.
	Whilst it cannot be exhausted for obvious reasons, focus too much on "business".
	The NHS will and cannot ever operate like a business due to its inherent complexity and multi-disciplinary functionality.

Table 5.10: Reasons For Choosing Definition (a) as the Least Suitable / Relevant Definition of Organisational Agility to the Context of Healthcare, for each Trust.

Reflecting the reasons given by respondents for choosing **definition (a)** as the least suitable one, the major theme that emerges quite evidently from respondents in both Trusts is that this definition heavily emphasises the market and business related terms and environments, which respondents feel to be irrelevant to healthcare and the type of environment in which they operate. They highlight the point that:

- **"NHS is not necessarily threatened by business environment"**
  (Manager, NHS Trust B)

- **"NHS not yet subject to market forces"**
  (Manager, NHS Trust B)

- **"Not sure that threats emanate from the "Business Environment" in quite the same way this definition suggests."**
  (Manager, NHS Trust A)

Feelings towards this issue have proved to be quite decisive that at one point, one respondent has made it clear that:

"The NHS will and cannot ever operate like a business due to its inherent complexity and multi-disciplinary functionality"
(Manager, NHS Trust B)

However most of the responses expressed the view that if such a business environment does exist, the threats emanating from it are relatively limited. Thus, instead of focusing too much on threats emanating from competition and the need to survive in a business market type environment, one respondent from *NHS Trust B* indicated that the threats and pressures are **"More indirect from Public Sector Bureaucracy where quality of service takes precedence over survival or maximisation of profit" (Manager, NHS Trust B).**

Respondents from **NHS Trust A** then chose **Definition c: "The successful exploitation of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment**" as the second least suitable / relevant definition, with **23.8%**. However, respondents from **NHS Trust B** clearly chose **Definition d: "The ability to move or act quickly and easily"** as the second least suitable definition, with a proportion of **25%** of respondents.

With regard to the reasons behind choosing **Definition (c)** as the second least suitable definition of Organisational Agility, by 23.8% of respondents from **NHS Trust A**, again, the responses have made it clear that the terminology associated with business service and/or manufacturing contexts are not well-received by people working in healthcare organisations.

Responses given focused primarily on such reasons as: -
- **"Emphasis on Competition / Market"** (Head of Strategic Capital Planning, NHS Trust A)
- **"Only describes the private sector"** (Have not indicated job title, NHS Trust A)
- **"Exploitation is a worrying word!"** (Midwife, NHS Trust A)
- **"Worry about exploitation"** (Head of Midwifery, NHS Trust A)
- **"The organisation does not cope well with change or innovation"** (Critical Care Network Manager, NHS Trust A)

The results of analysing the responses given by *participants in the in-depth interviews*, concerning which definition they believed to be unsuitable or irrelevant to a healthcare context, strongly support the choices made by respondents to the self-completion questionnaires.

41% of interviewees from NHS Trust A and 71% of interviewees from NHS Trust B provided answers to the question asking them whether they believed there were definitions, which were not suitable or relevant to the special context of healthcare organisations in particular, and the healthcare sector in general.

With regard to what these unsuitable definitions actually were, the overwhelming majority of the responses given by such interviewees (**86%** from **NHS Trust A** and **92%** from **NHS Trust B**) have indicated that both of the following definitions were unsuitable as well as irrelevant to the particular environment of healthcare service delivery. These are:

- **Definition a:** "<u>An organisation-wide capability to respond rapidly to market changes and to cope flexibly with unexpected change in order to survive unprecedented threats from the business environment.</u>"

- **Definition c:** "<u>The successful exploitation of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment.</u>"

Again, and with very strong support to the reasons given by respondents to self-completion questionnaires, the main reason for rejecting these two definitions centred on the point that the culture in healthcare organisations- and the healthcare sector in general- is such that the terminology associated with competition, markets and customers, which emanate from business (service and/or manufacturing) contexts is not well-received by people working in healthcare organisations. They acknowledge that although they had to respond to change, such change did not emanate from a free market, but that such change was related to changing objectives and targets being imposed by central Government.

This conclusion or finding is perhaps best expressed by the reason given by one of the interviewees, for rejecting definitions a and c:

"The concept of markets is alien to NHS provision. The concept that we would work to is service rather than market concept. The problem that we have is that we are not a true market player, we are a government-managed monopoly. And it does not mean that we have not got to respond to changes, it is not a free market that we are responding to, we are responding to changing objectives and targets. We are probably becoming more centrally led rather than centrally targeted. It is not a comment on whether it is bad or good, it is purely what we are and what we do. .....There is the clinical element and the non-clinical element working together. And when I describe the non-clinical element I really describe the management capacity and ability to harness the clinical elements."

(General Manager, NHS Trust A)

Based on this extremely important distinction between the special context of healthcare and that of business, a number of interviewees have highlighted the differences between healthcare and business, and emphasised the sensitive context of healthcare organisations, which is reflected in their ethos of care and humane treatment away from considerations of profit or competition. Such ethos represents the fundamental philosophy behind establishing the NHS, which is still deeply engrained within the psyche of professionals working in healthcare to the extent that they react quite sensitively to new concepts being adopted for implementation, from the private sector or business. <u>The following quotations illustrate this theme</u>: -

– **"I think utilising terms such as market changes, using such terms as competitive bases, do in some ways turn healthcare into a commodity, which is in many ways what it is, and in many ways how people look at it. But it takes away the caring aspect of what healthcare is supposed to be about. It is not as Lord Sainsbury said: running a supermarket, putting cans…. you miss out on the fact that you are dealing with people, and people's reactions are not exactly the same as cars engines. People don't work that way. That was my feeling with regards to market changes and competitive bases.. That is very business managerial and I think some of members of the public, some of our client base do feel that you have become too business like. Things need to be run efficiently, effectively and economically but there are other parameters that come."**

   (Clinical Director of A&E, NHS Trust B)

– **"This is all related to business organisations: market change, business environment, competition. None of these things are present in the NHS. They tried to be under the Tory Government, but now competition is now being undermined,… fast changing market environment.. it is not a market in that sense."**

   (Clinical Director of Children's Services, NHS Trust A)

– **"I am looking at definition a here and you have got terms like market changes and competitive bases and so forth. If we were talking to a staff group, that is not terminology that healthcare providing staff are comfortable with and enjoy. Although they can conceptualise that it is a competitive marketplace to a degree, but they are not usually the prime drivers that bring people into healthcare. You have to remember that I am from a <u>clinician background</u>. If you are talking to someone who is coming down the fast track management route, I am sure they would be much more acceptable phrases. …I know if I sat with a group of my clinicians and gave that as a definition, then I would have instant switch off with them."**

   (Clinical Director of Therapy and Rehabilitation, NHS Trust B)

- "The bit that I don't see as relevant is to do with the bit "customer-driven products and services" and the market environment..., because we are not really...I don't think we are in a market. There is no competition. The patients either come and get seen or don't realistically."

     (Clinical Director of Anaesthetics, NHS Trust A)

- "There are also those business terms: we don't have a competitive market, and competition. We compete to be the best. We compete in what we are doing, there is no direct competition."

     (Clinical Director of Paediatrics Services, NHS Trust B)

- "There is mention of customers but there is actually no mention of patients or service users. And obviously we are very different to business, in terms of we are not a profit-making organisation. We are a high cost organisation, it is a very high cost business; health. And it does not matter how much money the Government throws at the NHS, the NHS will always consume all of it and sill say it has not got enough, because there is so much more that we can do if we have the time, the resources to do it."

     (Director of Personnel and Development, NHS Trust B)

As a result of objecting to the terminology used in these two definitions, some interviewees have provided suggestions as to what to delete and/or add to make either definition more reflective of the reality affecting the NHS. For example:

- "I think definition c needs to be a bit softer, instead of the words exploitation, competitive....you know the health service isn't about competition. But it is looking at the things that are key."

     (Manager, NHS Trust A)

- "If you could make it more relevant to the healthcare sector organisations and patients, then it would be. So instead of "in order to survive unprecedented threats from the business environment", if you could make that somehow related to health and the health sector by... threats from political policy, I suppose what threatens us is risk-political policy making, change from the very top level."

     (General Manager, NHS Trust A)

- "I think definitions a and c I would knock on the head now, because we are talking about a fast changing market environment. I think if you would change that into a radical changing political environment, that would be more appropriate. Because the markets do exploit us, it is quite interesting, but the way the markets exploit us is the political machine. Influencing the way the government wants to put something into practice."

(Pathology Services Manager, NHS Trust B)

* Question Two asks respondents to indicate the extent to which they think the suggested definition of Organisational Agility, developed by the researcher, is suitable for use within their hospitals, for explaining what Organisational Agility means. The question employs a four-point Likert scale, which measures the extent of suitability using the following scale: 1: Not Suitable At All; 2: Somewhat Suitable; 3: Suitable; 4: Very Suitable.

For purposes of the analysis, the scale has been reduced from 4 points to 2 points. These 2 points have emerged as a result of merging the following points: Point 1 represents the choice of "Not Suitable", by combining points: 1+2 from the original scale; Point 2 represents the choice of "Suitable", by combining points: 3+4 from the original scale. Table 5.11 presents the results of the responses to this question, for each Trust.

TRUST	Extent of Suitability of Definition	*Frequency*	Percent	Valid Percent	Cumulative Percent
NHS Trust A	Not Suitable	6	26.1	**28.6%**	28.6
	Suitable	15	65.2	**71.4%**	100.0
	Total Number of Responses	21	91.3	**100.0%**	
	No Responses	2	8.7		
	Total	23	100.0		
TRUST	Extent of Suitability of Definition	*Frequency*	Percent	Valid Percent	Cumulative Percent
NHS Trust B	Not Suitable	16	26.7	**29.6%**	29.6
	Suitable	38	63.3	**70.4%**	100.0
	Total Number of Responses	54	90.0	**100.0%**	
	No Responses	6	10.0		
	Total	60	100.0		

Table 5.11: Suitability of the Suggested Definition of Organisational Agility, for each Trust

From table 5.11, it can be seen quite clearly that the suggested definition of Organisational Agility: **"The ability of the organisation to thrive in an uncertain environment that it is characterised by dynamic and unpredictable change, through a set of capabilities which enable it to respond and adapt to various sources of change in the environment"**, has been embraced by both Trusts, with very similar percentages (**71.4%** for **NHS Trust A** and **70.4%** for **NHS Trust B**)

Based on the previous analysis, the following findings are concluded: -

- The culture of people working in NHS / healthcare organisations is such that it favours simple, understandable and jargon-free concepts and terminology, which are sensitive to the basic values and ethos of providing healthcare to anyone who may need it, away from the considerations of profit, competition or customer/client relationship.

- The environment affecting healthcare organisations / NHS Trusts is ever changing and dynamic. Survival is simply not enough. Instead, the ability to thrive and challenge is what truly reflects agility.

- The importance of co-ordinating and integrating various types of resources, capabilities and skills, whether those are located within the organisation or outside of it. Sharing resources among others in a networking manner. This reflects the complexity of the NHS.

5.4 *The Second Research Objective*: To Explore and Identify the Perceived Need for Organisational Agility in the NHS Trusts, as Being Driven by the Nature of Environmental Change

The second research objective is concerned with addressing the suggested link between the continuously changing and, often, unpredictable nature of today's environment affecting healthcare organisations operating within the NHS, and their need for Organisational Agility; a proposition that has been strongly highlighted and supported in the previous section (5.3) by respondents and interviewees from both Trusts. In this way, it addresses the need for agility, as essentially being driven / triggered by the new environmental reality affecting NHS Trusts. Such a reality is increasingly being characterised by continuous and often unpredictable changes in the requirements, expectations, as well as pressures emanating from the stakeholders or

environmental parties, which have vested interests in the operation and performance of the organisation. <u>Addressing such a link will be through exploring, in depth, both</u>: -

- The importance, dynamism, unpredictability as well as uncertainty of *the main environmental parties* suggested to be affecting NHS Trusts and, thus, driving their need for Organisational Agility, for each of the two NHS Trusts designated as case study organisations for the purposes of this research, and
- The perceived current *level of agility* at which each Trust is dealing with changes in each of the main environmental parties affecting it, as well as the perceived needed/required *level of agility* for dealing with such environmental parties, for each of the two NHS Trusts. The *gap* between the current level, at which each Trust is responding to environmental change in an agile manner, and the level of agile response perceived by each to be required / needed, will also be measured/calculated for both Trusts. This is in order to assess whether such NHS Trusts are *sufficiently / insufficiently responding to and dealing with changes in the environment affecting them, in an agile manner*.

Therefore, in order to seek to fulfil the second research objective, responses to the second part of the in-depth interviews are used in designing the second part of the self-completion questionnaire addressing the same research objective. The contribution of interviews to the design of the questionnaire is, thus, in terms of focusing its questions on those items and concepts, which have emerged from responses of interviewees, as being of most relevance and importance to the research objectives. The importance of such a role of interviews, particularly in facilitating and focusing the design of the self-completion questionnaire, derives from the exploratory nature of this research, which emerged as a result of the *paucity* of studies discussing the main issues included as part of the objectives of this research. This was particularly evident in the case of the second research objective, which seeks to explore and establish those environmental factors driving the need for Organisational Agility in the two NHS Trusts.

In this way, the aim of the second part of the in-depth interviews is to identify from responses of interviewees those main environmental factors or parties, which they consider to be the main sources of change affecting the management and operation of their hospital/Trust, and its delivery of healthcare services. Based on the analysis of responses to the second part of the in-depth interviews exploring the main environmental parties affecting NHS Trusts, the second part of the self-completion questionnaire was designed, which lists twenty environmental factors categorised under seven main groups representing such potential drivers behind the need for agility. (See Appendix A: The Self-Completion Questionnaire) <u>In this way, the development of these environmental factors, which each group encompasses, is based on two main sources</u>: -

- The results of analysing the responses received from participants in the in-depth interviews, as earlier explained, in which they indicated those main environmental parties or factors, which they consider to be the main sources of change affecting the management and operation of their hospital/Trust, and its delivery of healthcare services.

- The literature discussing the various stakeholders existent in the NHS environment, particularly literature reflected in the "NHS Plan" and the "White Paper: The NHS: Modern, Dependable."

Accordingly, these environmental factors, as this research suggests, affect the management and delivery of healthcare services on the part of NHS Hospital Trusts. In addition, these factors are also considered as the main sources of potential change in the environment, which may well require these Trusts to acquire or possess the ability to respond in an agile manner to the various requirements, expectations and pressures emanating from such sources of environmental change. Table 5.12 lists these seven main environmental groups comprising the twenty environmental factors, included in the second part of the self-completion questionnaire.

Potential Customers / Users and Purchasers of Secondary Healthcare
1. The Requirements and Expectations of Patients
2. The Demand made by Patients on service(s) provided by the Trust
3. The Requirements and Expectations of General Practitioners
4. The Demand made by General Practitioners on service(s) provided by the Trust
5. The Requirements and Expectations of Primary Care Trusts
6. The Requirements and Expectations of Health Authorities

Potential Competitors / Providers of Secondary Healthcare
1. The Emergence of new Competitors in the form of Private Sector Hospitals
2. The Emergence of new Competitors in the form of Overseas Healthcare Providers
3. The Emergence of new Competitors in the form of Other NHS Trusts/Hospitals

Governmental / Political and Legislative Factors
1. Governmental Policies, Plans and Initiatives
2. The Use and Application of Hospital League Tables
3. Legislation/Directives Pressures (e.g. European Working Time Directive)

Technology
1. Innovations in Medical Technology (e.g. New Drugs; New Methods of Diagnosis and Treatment)

Supply
1. Supplies of Workforce (professional staff including consultants, doctors, nurses)
2. Supply/Availability of Medical Equipment
3. Supply of Financial Resources/Public Funding

Social Services
1. The Impact of Social Services

Demographic Factors
1. Disease/Illness Profile (Emergence/Re-emergence of Diseases/Illnesses)
2. Population/Demographic Profile (Age, Immigration, Distribution of Population)
3. The Media Reporting and Coverage of the NHS

Table 5.12: The seven environmental groups comprising the twenty environmental factors, included in the second part of the self-completion questionnaire.

Each of these environmental groups consists of a number of related environmental factors, which collectively represent a distinct environmental category. This approach of breaking down the environmental factors affecting NHS Trusts, through categorising related environmental factors into a distinct, identifiable environmental dimension or group, has the benefit of facilitating a more focused and meaningful analysis of the environment affecting NHS Trusts. This is instead of just restricting the analysis of the environment affecting NHS Trusts as consisting of one list of a wide array of environmental factors.

Based on these seven main environmental groups collectively comprising twenty environmental factors, the analysis of the second research objective will be according to two main sets of questions. These questions are designed with the purpose of exploring and identifying the nature of the environment affecting the two NHS Trusts and, thus, the main environmental drivers behind the perceived need of these Trusts for organisational agility. These two main sets of questions are included in the second part of the self-completion questionnaire, and consist of the following: -

5.4.1 Exploring *the nature of the environment affecting the two NHS Trusts*

Such an exploration of the environment affecting the Trusts is reflected in the following questions:

1. Question 2.1 asks respondents to rate the **Importance** of each environmental factor, in terms of its effect on the management and delivery of healthcare services provided by the Trust and, thus, the well-being of the Trust, in terms of being able to respond in an agile manner to the various requirements, expectations and pressures emanating from that particular factor.

2. Question 2.2 asks respondents to rate the **Amount of Change / Dynamism of Change**, which they perceive is taking place in each environmental factor.

3. Finally, Question 2.3 asks respondents to rate the extent to which they think change in each environmental factor is Predictable / **Degree of Unpredictability of Change**.

4. In addition to these three dimensions of environmental change, the degree of **Environmental Uncertainty** is another dimension of environmental change, which will be explored for each environmental factor, through calculating the *statistical mean* (referred to throughout this chapter as the *mean*) of responses provided to both: Question 2.2: *Amount of Change,* and Question 2.3: *Degree of Unpredictability*.

The means calculated for each question are based on a 4-point Likert scale that measures the importance, amount of change, as well as degree of unpredictability and uncertainty for each environmental factor and group. It employs the following scale for measuring each of the *importance* and *amount of change*: "1: Very Low; 2: Low; 3: High; 4: Very High". It employs another scale for measuring *degree of unpredictability*: "1: Highly Predictable; 2: Predictable; 3: Unpredictable; 4: Highly Unpredictable". The *degree of environmental uncertainty* is measured according to the following scale: "1: Highly Certain; 2: Certain; 3: Uncertain; 4: Highly Uncertain". Accordingly, the analysis of this part concerned with the second research objective will be presented and discussed according to each of these four main dimensions of environmental change.

5.4.1.1 First Dimension: - <u>The Importance of the Impact of the Environment Affecting Each of the Two NHS Trusts</u>

<u>First</u>: The overall importance of the impact of all environmental factors is presented for each NHS Trust, based on the average of the ratings given by each Trust as to the importance of each environmental factor. Table 5.13 presents the mean representing such overall importance, as well as the proportion of respondents rating such overall importance as high, and the proportion of those rating it as low, for each Trust.

The Overall Importance of the Impact of the Environment				
Trust	**Mean**	**Std. Deviation**	**Percentage of respondents rating the Overall Importance as:**	
			Low	**High**
Trust A	3.2609	.24078	0%	100%
Trust B	3.0609	.38423	8.3%	91.7%

Table 5.13: The Overall Importance of the Environment, for Each Trust.

Table 5.13 clearly shows that both Trusts consider the overall impact of the environment affecting them, represented by all environmental factors, as highly important, with means for both Trusts being above 3, and more than 90% of respondents from each Trust rating such an importance as high. It is also noted that Trust A attaches relatively higher importance to the overall impact of such an environment than Trust B, in that the mean representing such an importance is higher in Trust A (3.2609) than in Trust B (3.0609), and that all respondents from Trust A (100%) have rated the overall impact of the environment as high, compared with (91.7%) of respondents from Trust B.

Second: After gaining an idea about the overall importance of the impact of all environmental factors on each Trust, it is useful to explore in greater detail the relative importance of the environmental groups and factors that make up the overall environment affecting both NHS Trusts, for each Trust. This is in order to provide a more useful and insightful comparison between the two Trusts, in terms of identifying those environmental groups and factors that have the most important effect on each of these Trusts. Therefore, table 5.14 presents the descending means for the *seven environmental groups* listed in the second part of the self-completion questionnaire. Each mean presented in this table represents the importance of each environmental group for each Trust, and is based on the average of the responses rating the importance of each of the environmental factors that are categorised under that particular group. In this way, table 5.14 presents the importance of the environmental groups in a descending order.

The Importance of the Effect of Environmental Groups					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	**Environmental Group**	**Mean**	**Std. Deviation**
1. **Governmental / Political and Legislative Factors**	3.5652	.49681	1. Supply (professional workforce; financial resources; availability of medical equipment)	3.4028	.5500
2. **Supply** (professional workforce; financial resources; availability of medical equipment)	3.5652	.38185	2. **Governmental / Political and Legislative Factors**	3.3944	.5574
3. **Potential Customers / Users and Purchasers of Secondary Healthcare**	3.5536	.37642	3. Technology (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)	3.2881	.7204
4. **Technology** (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)	3.4091	.59033	4. **Potential Customers / Users and Purchasers of Secondary Healthcare**	3.2703	.4900
5. Social Services	3.2609	.86431	5. **Social Services**	3.1316	.9379
6. **Demographic Factors**	3.1594	.51118	6. **Demographic Factors**	2.9266	.6754
7. **Potential Competitors / Providers of Secondary Healthcare**	2.1449	.55801	7. **Potential Competitors / Providers of Secondary Healthcare**	2.0167	.7142

Table 5.14: Descending Means for Environmental Groups, which reflect their relative importance, for each Trust.

From examining table 5.14, it can be seen that the respondents in both Trusts have rated the importance of all but one environmental group as being high. These important groups include: *Governmental and Legislative Factors, Supply, Potential Customers/Users and Purchasers of Secondary Healthcare, Technology, Social Services, and Demographic Factors*, with means ranging from 2.9266 to 3.5652. The "Potential Competitors to NHS Trusts/Other Providers of Secondary Healthcare" group was the only one, whose importance was rated as low by both Trusts (2.1449 in Trust A and 2.0167 in Trust B). Both: "**Governmental / Political and Legislative Factors**" as well as "**Supply**" were chosen as the two most important environmental groups affecting **Trust A**, with a mean of **3.5652** for each one of these groups, whereas the "**Supply**" group was chosen as the single most important one affecting **Trust B**, with a mean of **3.4028**. The "**Supply**" group was chosen as the second most important one affecting Trust B, with a mean of **3.3944**.

The two environmental groups of "**Social Services**" and "**Demographic Factors**" ranked as fifth and sixth for both Trusts, thus coming at the bottom of the list of those groups perceived to have a highly important effect on both Trusts. "Social Services" scored a mean of **3.2609** in **Trust A** and **3.1316** in **Trust B**, whereas "Demographic Factors" scored a mean of **3.1594** in **Trust A** and **2.9266** in **Trust B**.

Further comparison between the two Trusts, in terms of the importance that each Trust attaches to the effect of each of these groups on it, reveals that the actual means representing such an importance were higher for all the environmental groups in the case of **Trust A**, compared with **Trust B.** This clearly indicates that Trust A attaches higher importance to the impact of each of the environmental groups on its management and delivery of healthcare services, than does Trust B. (See table 5.15)

[**Note: - CUST**: Potential Customers; **COMP**: Potential Competitors; **GOVT**: Governmental Factors; **TECH**: Technology; **SUPP**: Supply; **SOSER**: Social Services; **DEMO**: Demographic Factors.]

TRUST	*Statistics*	*CUST*	COMP	GOVT	TECH	SUPP	SOSER	*DEMO*
Trust A	**Mean**	**3.5536**	**2.1449**	**3.5652**	**3.4091**	**3.5652**	**3.2609**	**3.1594**
	Std Deviation	.37642	.55801	.49681	.59033	.38185	.86431	.51118
Trust B	**Mean**	**3.2703**	**2.0167**	**3.3944**	**3.2881**	**3.4028**	**3.1316**	**2.9266**
	Std Deviation	.48997	.71420	.55741	.72041	.55003	.93792	.67542

Table 5.15: Comparison between the two Trusts, in terms of the importance attached to each Environmental Group.

The environmental group representing "**Potential Competitors to NHS Trusts / Other Providers of Secondary Healthcare**" was the only group, whose importance was rated by respondents in both Trusts as being low, with a mean of **2.1449** for **Trust A** and **2.0167** for **Trust B**, out of 4. This indicates that both Trusts did not believe there were significant threats posed against them by other providers of secondary healthcare / hospitals, which provides evidence disclaiming (against) the existence of the notion of competition in the NHS, largely due to the reason that the NHS is often considered as a public service monopoly. This group includes providers in the form of: Private Sector Hospitals; Overseas Healthcare providers; Other NHS Trusts.

Third: After exploring the importance of the effect of the environmental groups, for each Trust, such importance is now explored in more detail, in terms of the twenty environmental factors making up these seven environmental groups listed in the second part of the self-completion questionnaire. Tables 5.17.a, 5.17.b, and 5.17.c classify these environmental factors, according to the means representing their importance, into three main classes: -

- The first class includes those environmental factors, whose importance has been rated as **very high**. This class includes those factors with means above **3.5** (see table 5.16.a).

- The second class includes those factors, which have been rated as having **reasonable to high importance**. This class includes those factors with means ranging from above 2.7 to below 3.5 (see table 5.16.b).

- The third class includes those factors, whose importance has been rated as **low**. This class includes those factors with means below 2.5 (see table 5.16.c).

The aim of classifying these factors, according to their importance, into these classes is to explore in greater detail the relative importance of the impact, which each of these environmental factors has on each of the two Trusts. This has the benefit of generating insights into identifying those environmental factors that have the most important effect, and those that have a less important effect, on each of these Trusts.

Environmental Factors with very high importance					
Trust A			Trust B		
Environmental Factor	Mean	Std. Deviation	Environmental Factor	Mean	Std. Deviation
1. Supply of Financial Resources/Public Funding	3.783	.5184	1. Governmental Policies, Plans and Initiatives	3.733	.5783
2. Governmental Policies, Plans and Initiatives	3.696	.5588	2. Supplies of Professional Workforce	3.650	.6594
3. The Requirements and Expectations of Patients	3.696	.5588	3. Supply of Financial Resources/Public Funding	3.610	.6952
4. The Requirements and Expectations of Health Authorities	3.682	.5679	4. The Requirements and Expectations of Patients	3.567	.6207
5. The Demand made by General Practitioners	3.682	.5679	5. The Demand made by Patients	3.508	.6858
6. Legislation/Directives Pressures (European Working Time Direct.)	3.652	.5728			
7. Supplies of Professional Workforce	3.522	.5931			

Table 5.16.a: Descending Means of The Most Important Environmental Factors, according to each Trust.

From examining table 5.16.a, it can be seen that the effects of four environmental factors have been rated by each of the two Trusts in a highly similar fashion, in that each has rated the importance of the effect of each of these factors as being very high, although with varying rankings. These factors are:

1. Governmental Policies, Plans and Initiatives
2. Supplies of Professional Workforce
3. Supply of Financial Resources/Public Funding
4. The Requirements and Expectations of Patients

The Supply of Financial Resources was the single most important factor as far as Trust A is concerned, whereas this factor has been chosen as the third most important one in Trust B. Instead, Trust B chose Governmental Plans, Policies and Initiatives as the most important environmental factor affecting it. Where Supplies of Professional Workforce were considered as the second most important environmental factor affecting Trust B, this factor has featured as the last most important factor in Trust A.

In addition to these four factors shared by both Trusts as being very important, Trust A has also chosen three other factors as being very important. These are: The Requirements and Expectations of Health Authorities, The Demand made by General Practitioners, and Legislation/Directives Pressures (e.g. European Working Time Directive). On the other hand, Trust B chose the demand made by patients as a very important factor affecting it.

Environmental Factors with reasonable to high importance

Trust A			Trust B		
Environmental Factor	Mean	Std. Deviation	Environmental Factor	Mean	Std. Deviation
1. The Requirements and Expectations of Primary Care Trusts	3.478	.5931	1. Legislation / Directives Pressures	3.317	.8535
2. Innovations in Medical Technology	3.409	.5931	**2. Innovations in Medical Technology**	3.288	.7204
3. The Supply/Availability of Medical Equipment	3.391	.5830	3. The Requirements and Expectations of Primary Care Trusts	3.224	.7957
4. The Demand made by Patients	3.391	.6564	**4. The Demand made by General Practitioners**	3.219	.8915
5. The Population/Demographic Profile	3.391	.4990	**5. The Use and Application of Hospital League Tables**	3.133	.9649
6. The Requirements and Expectations of General Practitioners	3.381	.6690	**6. The Impact of Social Services**	3.132	.9379
7. The Use and Application of Hospital League Tables	3.348	.8317	**7. The Requirements and Expectations of Health Authorities**	3.103	.8923
8. The Impact of Social Services	3.261	.8643	**8. The Media Reporting and Coverage of the NHS**	3.093	.8684
9. The Disease/Illness Profile	3.130	.9197	**9. The Requirements and Expectations of General Practitioners**	3.008	.7041
10. The Media Reporting and Coverage of the NHS	2.957	.9283	**10. The Supply / Availability of Medical Equipment**	2.966	.9462
			11. The Population / Demographic Profile	2.912	.8298
			12. The Disease/Illness Profile	2.728	.8349

Table 5.16.b: Descending Means of Important Environmental Factors, according to each Trust.

Comparing between the two Trusts, in terms of the means representing the importance of the effect of each of the above factors classified as having high to very high importance (tables 5.16.a and 5.16.b), reveals that Trust A attaches higher importance to the effect of all but 4 of the 17 factors included in such a classification, than does Trust B. In this way, Trust B considered the effect of the following 4 factors as having a higher importance on it than Trust A, which included: Demand made by patients, Governmental policies, plans and initiatives, Supplies of professional workforce and the Effect of the media coverage of the NHS.

The Least Important Environmental Factors					
Trust A			Trust B		
Environmental Factor	Mean	Std. Deviation	Environmental Factor	Mean	Std. Deviation
1. The Emergence of new Competitors in the form of Other NHS Trusts/Hospitals	2.391	.7827	**1. The Emergence of new Competitors in the form of Other NHS Trusts/Hospitals**	2.317	.9296
2. The Emergence of new Competitors in the form of Private Sector Hospitals	2.261	.9154	**2. The Emergence of new Competitors in the form of Private Sector Hospitals**	2.133	.9649
3. The Emergence of new Competitors in the form of Overseas Healthcare Providers	1.783	.7952	**3. The Emergence of new Competitors in the form of Overseas Healthcare Providers**	1.576	.7702

Table 5.16.c: Descending Means of The Least Important Environmental Factors, according to each Trust.

In the same way that the environmental group of "Potential Competitors/Providers of Secondary Healthcare" has been rated as the least important group in both Trusts, the factors included as part of that group have also been chosen as the least important ones, by both Trusts, as table 5.16.c shows.

5.4.1.2 Second Dimension: - <u>The Amount of Change / Dynamism Perceived to be Taking Place in the Environment Affecting Each of the Two NHS Trusts</u>

<u>First:</u> The overall amount of change / dynamism, perceived by each Trust to be taking place in the environment affecting it, is presented for each NHS Trust. This is based on the average of the ratings given by each Trust, as to the amount of change perceived to be taking place in each of the environmental factors representing the

overall environment. Table 5.17 presents the mean representing such overall amount of change / dynamism in the environment affecting each Trust. It also indicates the proportion of respondents rating such overall amount of change taking place in the environment as high, and the proportion of those rating it as low, for each Trust.

The Overall Amount of Change in the Environment / Overall Dynamism				
Trust	Mean	Std. Deviation	Percentage of respondents rating the Overall Amount of Change as:	
			Low	High
Trust A	2.7875	.31793	13%	87%
Trust B	2.7010	.39873	28.3%	71.7%

Table 5.17: The Overall Amount of Change / Dynamism of the Environment, for Each Trust.

Table 5.17 shows that both Trusts perceive the overall amount of change taking place in the environment affecting them as reasonably high, with fairly similar means representing such an amount of change rated by each Trust (2.7875 for Trust A and 2.7010 for Trust B). The percentage of respondents rating the overall amount of change in the environment affecting their Trust as high, is relatively higher in the case of Trust A (87%), than in the case of Trust B (71.7%).

Second: A more detailed exploration of the overall amount of change in the environment affecting each Trust is provided in table 5.18, which presents in a descending order the amount of change perceived by each Trust to be taking place in each of the seven environmental groups affecting it. Such an amount of change in each group is represented by the mean of responses received from each Trust, for the environmental factors included in each particular group. In this way, table 5.18 presents these environmental groups in a descending order, starting with the group with the highest amount of change and ending with the one with the lowest amount of change, for each Trust.

The Amount of Change Taking Place in Environmental Groups					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	**Environmental Group**	**Mean**	**Std. Deviation**
1. **Governmental / Political and Legislative Factors**	3.3768	.45287	1. Governmental / Political and Legislative Factors	3.1472	.59430
2. **Technology** (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)	3.1818	.66450	2. Technology **(Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)**	3.0593	.80988
3. **Potential Customers / Users and Purchasers of Secondary Healthcare**	3.0841	.35289	3. Potential Customers / Users and Purchasers of Secondary Healthcare	2.8764	.50684
4. **Supply** (professional workforce; financial resources; availability of medical equipment)	2.7391	.60266	4. **Social Services**	2.7193	.85574
5. Social Services	2.5652	.89575	5. **Supply** (professional workforce; financial resources; availability of medical equipment)	2.7000	.64352
6. **Demographic Factors**	2.5507	.56505	6. **Demographic Factors**	2.5480	.66885
7. **Potential Competitors / Providers of Secondary Healthcare**	1.8551	.57583	7. **Potential Competitors / Providers of Secondary Healthcare**	1.9306	.61471

Table 5.18: Descending Means for Environmental Groups, which reflect their relative amount of change, according to each Trust.

From examining table 5.18, it can be seen that respondents in both Trusts perceive the dynamism of change associated with the environmental groups affecting them in a highly similar fashion, in that they have given such environmental groups highly similar rankings in terms of the amount of change that they perceive is taking place in each one of them. For instance, the first three rankings given by each Trust for those environmental groups perceived to have the highest amount of change from the seven groups listed, are the same for both Trusts. These are: *Governmental and Legislative Factors*, *Technology*, and *Potential Customers/Users and Purchasers of Secondary Healthcare*, with means ranging from **2.8764** to **3.3768**.

Ranks four and five are reversed for both Trusts, in that the "**Supply**" group was considered by respondents from **Trust A** as the *fourth* one experiencing a high amount of change in the factors representing it, with a mean of **2.7391**, whereas this group was considered as the *fifth* highest changing group by **Trust B**, with a mean of **2.7**. "**Social Services**" was the fourth highest changing group in **Trust B**, with a mean of **2.7193**, whereas it ranked fifth in **Trust A** as a moderately changing environmental category, with a mean of **2.5652**.

Both Trusts perceived that a moderate amount of change was taking place in the "**Demographic Factors**" group, which ranked as sixth in both Trusts, with a mean of **2.5507** for **Trust A** and **2.5480** for **Trust B**.

The environmental group representing the emergence of new **potential Competitors to NHS Trusts, in the form of either: private, overseas, or other NHS hospitals / providers of secondary healthcare** was the only group, which was perceived by both Trusts to have a low amount of change, with a mean of **1.8551** for **Trust A** and **1.9306** for **Trust B**, out of 4. This suggests that both Trusts did not believe there were significant threats against them as a result of any continuous or rapid emergence of new providers of secondary healthcare / hospitals. Thus, such a finding again provides evidence, which plays down the possibility of a significant effect being imposed by potential competitors on NHS hospital Trusts, thus supporting the contention that the NHS is often considered as a public service monopoly.

Further comparison between the two Trusts, in terms of the means representing the amount of change perceived to be taking place in the environmental groups affecting them, reveals that the means of all but two of the seven groups listed were higher in the case of **Trust A**, compared with **Trust B**. These groups are: *Potential customers*, *Governmental, political and legislative factors*, *Technology*, *Supply*, and *Demographics*. This suggests that Trust A experiences a relatively higher amount of change in these five groups, than does Trust B.

On the other hand, the means of two groups were comparatively higher for **Trust B** than for **Trust A**, suggesting that Trust B experiences a relatively higher amount of change in these two groups than does Trust A. These groups are: *Potential competitors* and *Social services* (see table 5.19).

[**Note: - CUST**: Potential Customers; **COMP**: Potential Competitors; **GOVT**: Governmental Factors; **TECH**: Technology; **SUPP**: Supply; **SOSER**: Social Services; **DEMO**: Demographic Factors.]

TRUST	*Statistics*	*CUST*	COMP	GOVT	TECH	SUPP	SOSER	*DEMO*
Trust A	**Mean**	**3.0841**	**1.8551**	**3.3768**	**3.1818**	**2.7391**	**2.5652**	**2.5507**
	Std Deviation	.35289	.57583	.45287	.66450	.60266	.89575	.56505
Trust B	**Mean**	**2.8764**	**1.9306**	**3.1472**	**3.0593**	**2.7000**	**2.7193**	**2.5480**
	Std Deviation	.50684	.61471	.59430	.80988	.64352	.85574	.66885

Table 5.19: Comparison between the two Trusts, in terms of the amount of change perceived to be taking place in each Environmental Group.

Third: After exploring the amount of change perceived by each Trust to be taking place in each environmental group, such an amount of change is now explored in more detail, in terms of the factors making up such groups. Tables 5.20.a, 5.20.b, and 5.20.c classify these environmental factors, according to the descending means representing their amount of change, into three main classes: -

- The first class includes those environmental factors, whose amount of change has been rated as **very high**. This class includes those factors with means above **3.5** (see table 5.20.a).

- The second class includes those factors, which have been rated as having **moderate to high** amount of change. This class includes those factors with means ranging from above 2.5 to below 3.5 (see table 5.20.b).

- The third class includes those factors, whose amount of change has been rated as **low**. This class includes those factors with means below 2.5 (see table 5.20.c).

Environmental Factor(s) with very high amount of change					
Trust A			**Trust B**		
Environmental Factor	**Mean**	**Std. Deviation**	Environmental Factor	**Mean**	**Std. Deviation**
1. Governmental Policies, Plans and Initiatives	3.565	.5898	1. Governmental Policies, Plans and Initiatives	3.550	.6223

Table 5.20.a: Descending Means of The Environmental Factor(s) with the highest amount of change, according to each Trust.

From examining table 5.20.a, it can be evidently seen that the "Governmental plans, policies and initiatives" factor was considered by both Trusts to be the environmental factor experiencing the highest amount of change, among all of the twenty environmental factors suggested to be affecting these NHS Trusts, with highly similar means given by each Trust representing such changeability (3.565 in Trust A and 3.550 in Trust B). This strongly supports the contention expressed earlier by interviewees, in that the nature of the continuous changes affecting NHS Trusts in general are overwhelmingly central-government led rather than market-led, and that the targets and objectives emanating from central government level, by which the NHS is quite often driven, are continuously changing.

Environmental Factors with moderate to high amount of change					
Trust A			Trust B		
Environmental Factor	Mean	Std. Deviation	Environmental Factor	Mean	Std. Deviation
1. Legislation / Directives Pressures	3.435	.590	1. The Requirements and Expectations of Patients	3.233	.745
2. The Requirements and Expectations of Health Authorities	3.227	.922	2. The demand made by patients	3.150	.732
3. Innovations in Medical Technology	3.182	.664	3. Innovations in Medical Technology	3.059	.810
4. The demand made by patients	3.130	.548	4. Legislation/ Directives Pressures	3.025	.885
5. The Use and Application of Hospital League Tables	3.130	.815	5. Supplies of Workforce	2.917	.850
6. The Requirements and Expectations of Patients	3.130	.548	6. The Use and Application of Hospital League Tables	2.867	.929
7. The Demand made by General Practitioners	3.045	.722	7. The Supply of Financial Resources / Public Funding	2.805	.938
8. The Requirements and Expectations of Primary Care Trusts	3.043	.767	8. The Requirements and Expectations of Primary Care Trusts	2.797	.901
9. The requirements and expectations of General Practitioners	2.909	.610	9. The Requirements and Expectations of Health Authorities	2.750	.844
10. The Supply of Financial Resources/ Public Funding	2.870	.920	10. The Demand made by General Practitioners	2.724	.894
11. Supplies of Workforce	2.696	.703	11. The Impact of Social Services	2.719	.856

Environmental Factors with moderate to high amount of change (continued)					
Trust A			Trust B		
Environmental Factor	Mean	Std. Deviation	Environmental Factor	Mean	Std. Deviation
12. The Media Reporting and Coverage of The NHS	2.652	.714	12. The Media Reporting and Coverage of The NHS	2.686	.793
13. The Supply/ Availability of Medical Equipment	2.652	.714	13. The Requirements and Expectations of General Practitioners	2.585	.744
14. The Population/ Demographic Profile	2.609	.839			
15. The Impact of Social Services	2.565	.896			

Table 5.20.b Descending Means of The Environmental Factor(s) with moderate to high amount of change, according to each Trust.

Comparing between the two Trusts, in terms of the means representing the amount of change perceived to be taking place in each of the environmental factors presented in tables 5.20.a and 5.20.b, reveals the following:

- After considering the "Governmental plans, policies and initiatives" factor to have the highest amount of change among all the environmental factors, by both Trusts, **Trust A** then considered "**Legislation/Directives Pressures**" to be experiencing the second highest amount of change, with a mean of **3.435**, whereas the second highest changing factor affecting **Trust B** was "**The Requirements and Expectations of Patients**", with a mean of **3.233**.

- While "**The Requirements and Expectations of Health Authorities**" factor was considered by **Trust A** as changing quite rapidly, with a mean of **3.227**, **Trust B** considered this factor to be changing relatively at a much slower pace, with a mean of **2.750**. Also in a similar fashion, while "**The Requirements and Expectations of General Practitioners**" factor was considered by **Trust B** as moderately changing, thus coming in rank 13 in terms of changeability with a mean of **2.585**, **Trust A** considered this factor (**The Requirements and Expectations of General Practitioners**) as highly changing, with a mean of **2.909** and ranking as 9. Based on this, it seems that **Trust A** considers factors associated with purchasers of its healthcare services, particularly *General Practitioners* and *Health Authorities*, as changing at a faster pace than does **Trust B**.

Further comparison between the two Trusts, in terms of the means representing the amount of change perceived to be taking place in the environmental factors affecting them- excluding the four factors that have been considered by both Trusts as having a low amount of change (**the disease/ illness profile, the emergence of private sector hospitals as new competitors, the emergence of other NHS trusts/ hospitals as new competitors, the emergence of overseas healthcare providers as new competitors**)- reveals that the means of nine out of the remaining sixteen factors were relatively higher in the case of **Trust A**, compared with **Trust B**. These environmental factors are: -

- The requirements and expectations of General Practitioners
- The demand made by General Practitioners
- The requirements and expectations of Primary Care Trusts
- The requirements and expectations of Health Authorities
- The use and application of Hospital League Tables
- Legislation/Directives Pressures
- Innovations in Medical Technology
- The Supply of Medical Equipment
- The Population/Demographic Profile.

This suggests that **Trust A** experiences a relatively higher amount of change in these nine factors, than does **Trust B**. Four of these factors, in which **Trust A** experiences a higher amount of change, than does **Trust B**, are related to purchasers of secondary healthcare (General Practitioners, Primary Care Trusts and Health Authorities). This further supports what has been concluded earlier, in that **Trust A** evidently considers factors associated with purchasers of its healthcare services, particularly *General Practitioners* and *Health Authorities*, as changing at a faster pace than does **Trust B**.

On the other hand, the means of three environmental factors were comparatively higher for Trust B than for Trust A, which suggests that **Trust B** experiences a relatively higher amount of change in these three factors than does **Trust A**. These factors are: -

- The Requirements and Expectations of Patients
- Supplies of Professional Workforce
- The Impact of Social Services.

There were no recognisable differences between the two Trusts, in terms of the amount of change that each perceived to be taking place in each of the following four factors: The Demand made by Patients; Governmental Policies, Plans and Initiatives; The Supply of Financial Resources/Public Funding; The Media Reporting and Coverage of the NHS.

Environmental Factors with the least amount of change					
Trust A			Trust B		
Environmental Factor	Mean	Std. Deviation	Environmental Factor	Mean	Std. Deviation
1. The Disease/ Illness Profile	2.391	.891	1. The Population/ Demographic Profile	2.482	.906
2. The emergence of new Competitors (Private Sector Hospital)	2.087	.848	2. The Disease/ Illness Profile	2.439	.750
3. The emergence of new Competitors (Other NHS Trusts/ Hospitals)	1.870	.694	3. The Supply/ Availability of Medical Equipment	2.362	.810
4. The emergence of new Competitors (Overseas Healthcare Providers)	1.609	.583	4. The Emergence of new Competitors (Other NHS Trusts/ Hospitals)	2.117	.825
			5. The emergence of new Competitors (Private Sector Hospital)	2.050	.832
			6. The emergence of new Competitors (Overseas Healthcare Providers)	1.593	.768

Table 5.20.c: Descending Means of The Environmental Factors with low amount of change, according to each Trust.

In the same way that the environmental group of "Potential Competitors/Providers of Secondary Healthcare" has been considered as the one experiencing the least amount of change in both Trusts, the factors included as part of that group have also been chosen as the least changing ones, by both Trusts, as table 5.20.c shows. In addition to these three factors, both Trusts have also considered "The Disease Illness Profile" as having a low amount of change, with a mean of **2.391** for **Trust A** and a mean of **2.439** for **Trust B**. However, **Trust B** has added to these four factors both: **The Population / Demographic Profile** and **The Supply of Medical Equipment**, as two additional factors, which it considers to be experiencing little change, with a mean of **2.482** and **2.362**, respectively. In contrast, both of these factors: **The Population / Demographic Profile** and **The Supply of Medical Equipment**, have been considered by **Trust A** as experiencing moderate change, with means of **2.609** and **2.652**, respectively.

5.4.1.3 Third Dimension: - <u>The Degree of Unpredictability of Change Perceived in the Environment Affecting Each of the Two NHS Trusts</u>

<u>First</u>: The overall degree of unpredictability of change, perceived by each Trust to be characterising the environment affecting it, is presented for each NHS Trust. This is based on the average of the ratings given by each Trust, as to the extent to which change in each of the environmental factors representing the overall environment affecting it, is predictable. Table 5.21 presents the mean representing such overall environmental unpredictability affecting each Trust. It also indicates the proportion of respondents rating such overall unpredictability characterising change taking place in the environment as high, and the proportion of those rating it as low, for each Trust.

The Overall Degree of Unpredictability Characterising the Environment				
Trust	**Mean**	**Std. Deviation**	**Percentage of respondents rating the Overall Degree of Unpredictability as:**	
			Low	**High**
Trust A	2.5256	.30216	43.5%	56.5%
Trust B	2.5621	.35448	50%	50%

Table 5.21: The Overall Environmental Unpredictability Affecting Each Trust.

Table 5.21 clearly shows that both Trusts perceive the overall degree of unpredictability characterising the environment affecting them as moderate, with highly similar means reflecting such a perception for each Trust (2.5256 for Trust A and 2.5621 for Trust B). Such a moderate degree of environmental unpredictability is also illustrated by the percentages given by respondents from each Trust rating such a degree, in that almost half of the respondents from each Trust have rated it as high, and nearly the remaining half have rated it as low.

Compared with the highly important overall effect of the environment, as well as the reasonably high overall dynamism characterising the amount of change taking place in it, as rated by both Trusts affected by such an environment, the overall degree of unpredictability characterising change taking place in this environment emerged as moderate. This evidently suggests that although the impact of the environment affecting NHS Trusts, represented by the factors developed in this research, is considered highly important, in terms of its effect on the well-being of such Trusts in managing and delivering healthcare services, and that the pace of changes occurring in such an environment is perceived as reasonably high, nevertheless, such changes taking place in this environment remain fairly predictable according to both Trusts.

Second: A more detailed exploration of the degree of unpredictability of change, perceived by each Trust to be characterising the environment affecting it, is provided in table 5.22, which presents in a descending order the degree of unpredictability of change characterising each of the seven environmental groups affecting both Trusts. Such a degree of unpredictability in each group is represented by the mean of responses received from each Trust, rating such unpredictability for the environmental factors included in each particular group. In this way, table 5.22 presents these environmental groups in a descending order, starting with the group characterised by the highest degree of environmental unpredictability and ending with the one experiencing the lowest degree of environmental unpredictability, for each Trust.

The Degree of Unpredictability of Change Characterising Environmental Groups					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	**Environmental Group**	**Mean**	**Std. Deviation**
1. **Technology** (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)	2.9091	.75018	1. **Technology** (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)	2.7627	.83746
2. **Demographic Factors** (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS)	2.6522	.39541	2. **Demographic Factors** (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS)	2.6045	.75677
3. **Governmental / Political and Legislative Factors**	2.6232	.65369	3. **Governmental / Political and Legislative Factors**	2.5917	.73353
4. **Potential Customers / Users and Purchasers of Secondary Healthcare**	2.5239	.43880	4. **Potential Customers / Users and Purchasers of Secondary Healthcare**	2.5775	.54826
5. Potential Competitors / Providers of Secondary Healthcare	2.4058	.68133	5. **Supply** (professional workforce; financial resources; availability of medical equipment)	2.5528	.65347
6. **Supply** (professional workforce; financial resources; availability of medical equipment)	2.3623	.64286	6. **Social Services**	2.5351	.73107
7. **Social Services**	2.3043	.92612	7. **Potential Competitors / Providers of Secondary Healthcare**	2.4417	.71691

Table 5.22: Descending Means for Environmental Groups, which reflect their relative degree of unpredictability, according to each Trust.

From examining table 5.22, it can be seen that respondents in both Trusts perceive the degree of unpredictability characterising the nature of changes taking place in four environmental groups affecting them in a fairly similar fashion. For instance, both Trusts have given the first four ranks to the same environmental groups, thus rating them as being the four most unpredictable ones. These are: Technology (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment), Demographic Factors (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS), Governmental, political and legislative factors, and Potential Customers / Users and Purchasers of Secondary Healthcare.

Trust A has given three of these four groups higher means reflecting the unpredictability of changes associated with each one of them, than has Trust B. These groups are: Technology (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment), Demographic Factors (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS), and Governmental, political and legislative factors. This indicates that Trust A considers the extent to which it can predict changes in these groups as being relatively lower than Trust B. On the other hand, both Trusts consider the extent to which each can predict changes in Potential Customers / Users and Purchasers of Secondary Healthcare as being moderate, with highly similar means.

From examining the means ranking the environmental groups according to the *degree of unpredictability characterising change* in each one of them, as perceived by each Trust, it can be seen that such means are relatively lower than those representing either: the *importance* of, or the *amount of change* taking place in, these groups. All but one of the means given by both Trusts rating such a degree of unpredictability of change range from 2.3043 to 2.7627, which reflect a low to relatively moderate degree of unpredictability. Only one mean, which is that given by Trust A for rating the degree of unpredictability of changes in "Innovations In Medical Technology" (2.9091), can be considered as reflecting a clear perception of an unpredictable rate of change.

Also, the ranking of groups in the case of environmental unpredictability has changed, compared with the rankings reflecting the relative importance or amount of change of the same groups. An example would be the group representing changes in Governmental policies and initiatives, which was considered as both: *highly important* (first rank in Trust A with a mean of 3.5652, and second rank in Trust B with a mean of 3.3944), as well as *highly changing* (first rank in both Trusts, with a mean of 3.3768 in Trust A, and 3.1472 in Trust B), but had been considered by both Trusts as being *moderately unpredictable* (third rank in both Trusts, with a mean of 2.6232 in Trust A and 2.5917 in Trust B).

Trust A considered change in three environmental groups to be fairly predictable. These are: Potential Competitors / Providers of Secondary Healthcare, Supply (professional workforce; financial resources; availability of medical equipment), and Social Services, with means of 2.4058, 2.3623 and 2.3043, respectively. However, Trust B has considered only one of these groups, which is that of Potential Competitors / Providers of Secondary Healthcare, to be fairly predictable, with a mean of 2.4417. Instead, Trust B has considered both: Supply (professional workforce; financial resources; availability of medical equipment), and Social Services as moderately unpredictable, with means of 2.5528 and 2.5351, respectively. This discussion concerning such differences between both Trusts, in terms of the means representing the degree of unpredictability of change occurring in each environmental group, is illustrated in table 5.24, which presents a comparison between both Trusts, in terms of such means.

[Note: - CUST: Potential Customers; **COMP**: Potential Competitors; **GOVT**: Governmental Factors; **TECH**: Technology; **SUPP**: Supply; **SOSER**: Social Services; **DEMO**: Demographic Factors.**]**

TRUST	*Statistics*	*CUST*	COMP	GOVT	TECH	SUPP	SOSER	*DEMO*
Trust A	**Mean**	**2.5239**	**2.4058**	**2.6232**	**2.9091**	**2.3623**	**2.3043**	**2.6522**
	Std Deviation	.43880	.68133	.65369	.75018	.64286	.92612	.39541
Trust B	**Mean**	**2.5775**	**2.4417**	**2.5917**	**2.7627**	**2.5528**	**2.5351**	**2.6045**
	Std Deviation	.54826	.71691	.73353	.83746	.65347	.73107	.75677

Table 5.23: Comparison between the two Trusts, in terms of the perceived degree of unpredictability of change occurring in each Environmental Group.

Third: After exploring the degree of unpredictability characterising changes in each environmental group, such unpredictability is now explored in more detail, in terms of the factors making up such groups. Tables 5.24.a and 5.24.b classify these factors, according to the descending means representing their degree of unpredictability of change, into two main classes:

- The first class includes those factors, which have been rated as having **moderate to high** degree of unpredictability. This class includes those factors with means ranging from above 2.5 to below 3.5 (see table 5.24.a).

- The second class includes those factors, whose rate of change is perceived to be predictable, or in other words, whose degree of unpredictability is perceived to be **low**. This class includes those factors with means below 2.5 (see table 5.24.b).

Environmental Factors with moderate to high degree of unpredictability of change (factors with rates of change perceived to be relatively unpredictable)					
Trust A			**Trust B**		
Environmental Factor	**Mean**	**Std. Deviation**	Environmental Factor	**Mean**	**Std. Deviation**
1. The Media Reporting and Coverage of the NHS	3.217	.5184	• **Governmental Policies, Plans and Initiatives**	2.800	1.0176
2. Innovations in Medical Technology (i.e. New Drugs, New Methods of Diagnosis and Treatment)	2.909	.7502	• **The Supply of Financial Resources**	2.797	1.0302
3. The Use and Application of Hospital League Tables	2.773	.8125	• **The Media Reporting and Coverage of the NHS**	2.780	.9661
4. Governmental Policies, Plans and Initiatives	2.739	.7518	• **Innovations in Medical Technology (i.e. New Drugs, New Methods of Diagnosis and Treatment)**	2.763	.8375
5. The Demand made by General Practitioners	2.682	.5679	• **The Requirements and Expectations of Health Authorities**	2.759	.7024
6. The Requirements and Expectations of Health Authorities	2.591	.8541	• **The Requirements and Expectations of Primary Care Trusts**	2.678	.7755
7. The Demand made by Patients	2.565	.9451	• **The Disease/Illness Profile**	2.667	.9322
8. The Requirements and Expectations of General Practitioners	2.524	.6796	• **Supplies of Professional Workforce (e.g. Consultants, Doctors, Nurses)**	2.633	.9382

(Table Continued)					
Trust A			**Trust B**		
Environmental Factor	**Mean**	**Std. Deviation**	Environmental Factor	**Mean**	**Std. Deviation**
9. The Requirements and Expectations of Primary Care Trusts	2.522	.6653	• The Emergence of New Competitors in the Form of Private Sector Hospital	2.619	.8874
			• Legislation/Directives Pressures	2.567	1.0146
			• The Impact of Social Services	2.535	.7311
			• The Demand made by Patients	2.525	.8100
			• The Requirements and Expectations of General Practitioners	2.508	.8104
			• The Requirements and Expectations of Patients	2.508	.6733

Table 5.24.a: Descending Means of the Environmental Factors, with Moderate to High Degree of Unpredictability, according to Each Trust.

Comparing between the two Trusts, in terms of the means representing the degree of unpredictability of change characterising each of the environmental factors classified as having moderate to high degree of unpredictability (table 5.24.a), reveals the following:

- While changes in "**The Media Reporting and Coverage of the NHS**" were considered by **Trust A** to have the highest degree of unpredictability among all the twenty environmental factors affecting both Trusts, with a mean of **3.217**, **Trust B** considered changes in this factor to be much less unpredictable, with a mean of **2.780** and ranking as third. Instead, Trust B considered changes in "**Governmental Policies, Plans and Initiatives**" to be the most unpredictable by it, with a mean of 2.8. **Trust A** gave a similar mean rating the unpredictability of "**Governmental Policies, Plans and Initiatives**" (**2.739**), however, it ranked such a factor lower than Trust B, coming in *fourth place*.

- In a clear contrast between both Trusts, while changes associated with "**The Use and Application of Hospital League Tables**" were considered by **Trust A** to be relatively unpredictable, with a mean of **2.773** and ranking as the **third (3rd)** most unpredictable factor, such a result was not shared by **Trust B**, which considered such changes as relatively predictable, with a mean of **2.408** and ranking **sixteenth (16th)** in terms of the degree of its unpredictability. In a similar reverse of positions, while **Trust B** considered changes in its "**Supplies of Professional Workforce (e.g. Consultants, Doctors, Nurses)**" to be somewhat unpredictable, with a mean of **2.633** and ranking **eighth (8th)** in terms of its degree of unpredictability, such changes were considered to be quite predictable by **Trust A**, with a mean of **2.174** and ranking as the most predictable environmental factor (rank 20 as the least unpredictable factor).

With regard to similarities and differences between the two Trusts, in terms of those environmental factors perceived by each to have a low degree of unpredictability / factors with predictable changes (table 2.24.b), the following findings are concluded:

- Out of the three factors constituting the "Potential competitors / Providers of Secondary Healthcare" group- other NHS hospital Trusts, private sector hospitals, overseas healthcare providers- changes associated with the emergence of two of these providers as competitors to NHS Trusts have been considered as predictable by both Trusts. These two factors are: *Other NHS Hospital Trusts* and *Overseas Healthcare Providers*. However, changes associated with the emergence of *private sector hospitals* as competitors to NHS Trusts have been considered by Trust B as somewhat unpredictable, with a mean of 2.619, whereas Trust A considered such changes associated with this factor as relatively predictable, with a mean of 2.478.

- Changes associated with two other factors have been considered by both Trusts as fairly predictable. These factors are: "The Population / Demographic Profile", with a mean of 2.304 for Trust A and 2.298 for Trust B, and "The Supply of Medical Equipment", with a mean of 2.478 for Trust A and 2.233 for Trust B.

However, differences between the two Trusts are noted, with regard to the extent to which each perceives the predictability of changes associated with the following five factors. These are:

- The Disease / Illness Profile: While Trust A rates the unpredictability of changes in this factor as relatively low, with a mean of 2.435, Trust B considers such unpredictability to be relatively high, with a mean of 2.667.

- The Supply of Financial Resources / Public Funding: Trust A considers the unpredictability of changes in this factor as relatively low, with a mean of 2.435, whereas Trust B ranks this factor as the second highest one, in terms of the unpredictability of changes related to it, with a mean of 2.797.

- Legislation / Directives Pressures: Trust A rates changes in this factor as predictable, with a mean of 2.348, whereas Trust B considers such changes as moderately unpredictable, with a mean of 2.567.

- The Impact of Social Services: The perceptions regarding the predictability of changes associated with the this factor are similar with those regarding the previous factor, in that Trust A considered changes in this factor as predictable, with a mean of 2.304, whereas Trust B considered such changes as slightly less predictable, with a mean of 2.535.

- The Requirements and Expectations of Patients: Similarly, Trust A considered changes in this factor as predictable, with a mean of 2.304, while Trust B considered such changes as slightly less predictable, with a mean of 2.508.

Environmental Factors with low degree of unpredictability of change *(factors with predictable changes)*						
Trust A				**Trust B**		
Environmental Factor	**Mean**	**Std. Deviation**		Environmental Factor	**Mean**	**Std. Deviation**
1. **The Emergence of New Competitors in the Form of Other NHS Hospital Trusts**	2.478	.8458		1. **The Demand made by General Practitioners**	2.438	.7924
2. **The Emergence of New Competitors in the Form of Private Sector Hospitals**	2.478	.8980		2. **The Use and Application of Hospital League Tables**	2.408	.8660
3. **The Supply of Medical Equipment**	2.478	.6653		3. **The Emergence of New Competitors in the Form of Other NHS Hospital Trusts**	2.408	.8462
4. **The Disease/Illness Profile**	2.435	.8958		4. **The Emergence of New Competitors in the Form of Overseas Healthcare Providers**	2.314	1.0541
5. The Supply of Financial Resources/Public Funding	2.435	.8958		5. **The Population / Demographic Profile (i.e. Age, Immigration)**	2.298	.9056
6. **Legislation/Directives Pressures (e.g. European Working Time Directive)**	2.348	.9346		6. **The Supply of Medical Equipment**	2.233	.8177
7. **The Impact of Social Services**	2.304	.9261				
8. **The Population / Demographic Profile (i.e. Age, Immigration)**	2.304	.9740				
9. **The Requirements and Expectations of Patients**	2.304	.7029				
10. **The Emergence of New Competitors in the Form of Overseas Healthcare Providers**	2.261	1.0098				
11. **Supplies of Professional Workforce (e.g. Consultants, Doctors, Nurses)**	2.174	.8869				

Table 5.24.b: Descending Means of the Environmental Factors, with low Degree of Unpredictability, according to Each Trust.

5.4.1.4 Fourth Dimension: - <u>The Degree of Environmental Uncertainty Affecting</u> <u>Each of the Two NHS Trusts</u>

<u>First:</u> The overall degree of environmental uncertainty, perceived by each Trust to be characterising the environment affecting it, is presented for each NHS Trust. This is based on the average of the means reflecting the degree of environmental uncertainty perceived to be characterising each of the environmental factors representing the overall environment affecting each Trust. The calculation of the means reflecting the degree of environmental uncertainty has been explained earlier in **section 5.5.1.1**. Table 5.25 presents the mean representing such overall degree of environmental uncertainty affecting each Trust. It also indicates the proportion of respondents rating such overall uncertainty as high, and the proportion of those rating it as low, for each Trust.

The Overall Degree of Environmental Uncertainty				
Trust	**Mean**	**Std. Deviation**	**Percentage of respondents rating the Overall Degree of Uncertainty as:**	
			Low	**High**
Trust A	2.6576	.26901	17.4%	82.6%
Trust B	2.6327	.28063	33.3%	66.7%

Table 5.25: The Overall Environmental Uncertainty Affecting Each Trust.

Table 5.25 shows that both Trusts perceive the overall degree of uncertainty characterising the environment affecting them as moderately high, with quite similar means reflecting such a perception for each Trust (2.6576 for Trust A and 2.6327 for Trust B). On the other hand, the percentage of respondents rating the overall degree of environmental uncertainty affecting their Trust as high, is clearly higher in the case of Trust A (82.6%), than in the case of Trust B (66.7%).

<u>Second:</u> A more detailed exploration of the degree of environmental uncertainty affecting each Trust is provided in table 5.26, which presents in a descending order the degree of environmental uncertainty characterising each of the seven environmental groups affecting both Trusts. The degree of uncertainty characterising each group is based on the average of the means reflecting the degree of environmental uncertainty perceived to be characterising each of the factors included in each particular group.

In this way, table 5.26 presents these environmental groups in a descending order, starting with the group characterised by the highest degree of environmental uncertainty and ending with the one characterised by the lowest degree of environmental uncertainty, for each Trust.

The Degree of Environmental Uncertainty Characterising Environmental Groups					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	Environmental Group	**Mean**	**Std. Deviation**
1. **Technology** (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)	3.0455	.55440	1. **Technology** (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)	2.9110	.65120
2. **Governmental / Political and Legislative Factors**	3.0000	.46872	2. **Governmental / Political and Legislative Factors**	2.8694	.48333
3. **Potential Customers / Users and Purchasers of Secondary Healthcare**	2.8072	.28448	3. **Potential Customers / Users and Purchasers of Secondary Healthcare**	2.7303	.41918
4. Demographic Factors (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS)	2.6014	.39804	4. **Social Services**	2.6272	.59971
5. Supply **(professional workforce; financial resources; availability of medical equipment)**	2.5507	.47788	5. **Supply** (professional workforce; financial resources; availability of medical equipment)	2.6264	.48845
6. **Social Services**	2.4348	.75835	6. **Demographic Factors** (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS)	2.5763	.52278
7. **Potential Competitors / Providers of Secondary Healthcare**	2.1304	.44369	7. Potential Competitors / Providers of Secondary Healthcare	2.1861	.54101

Table 5.26: Descending Means for Environmental Groups, which reflect their relative degree of Environmental Uncertainty, according to each Trust.

From examining table 5.26, it can be seen that respondents in both Trusts perceive the degree of environmental uncertainty characterising three environmental groups affecting them in a fairly similar fashion. For instance, both Trusts have given the first three ranks to the same environmental groups with means ranging from 2.7303 to

3.0455, thus considering these groups as the main sources of environmental uncertainty affecting them. These are: Technology (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment), Governmental, Political and Legislative Factors, and Potential Customers / Users and Purchasers of Secondary Healthcare. Trust A has given each of these three groups higher means, reflecting the uncertainty associated with each one of them, than has Trust B. This indicates that Trust A perceives that it is experiencing relatively higher environmental uncertainty emanating from each of these groups, compared with Trust B.

Trust A considered the degree of environmental uncertainty associated with two groups to be relatively low. These are: **Social Services** and **Potential Competitors / Providers of Secondary Healthcare**, with means of 2.4348 and 2.1304, respectively. However, Trust B has considered the degree of environmental uncertainty associated with only one of these groups to be low, which is that of **Potential Competitors / Providers of Secondary Healthcare**, with a mean of 2.1861. Instead, Trust B has considered the environmental uncertainty emanating from the **Impact of Social Services** to be relatively higher, with a mean of 2.6272. Table 5.27 provides a comparison between the two Trusts, in terms of the means representing the degree of environmental uncertainty that each Trust attaches to each of these environmental groups.

[**Note: - CUST**: Potential Customers; **COMP**: Potential Competitors; **GOVT**: Governmental Factors; **TECH**: Technology; **SUPP**: Supply; **SOSER**: Social Services; **DEMO**: Demographic Factors.]

TRUST	*Statistics*	*CUST*	COMP	GOVT	TECH	SUPP	SOSER	*DEMO*
Trust A	**Mean**	**2.8072**	**2.1304**	**3.0000**	**3.0455**	**2.5507**	**2.4348**	**2.6014**
	Std Deviation	.28448	.44369	.46872	.55440	.47788	.75835	.39804
Trust B	**Mean**	**2.7303**	**2.1861**	**2.8694**	**2.9110**	**2.6264**	**2.6272**	**2.5763**
	Std Deviation	.41918	.54101	.48333	.65120	.48845	.59971	.52278

Table 5.27: Comparison between the two Trusts, in terms of the perceived degree of Environmental Uncertainty associated with each Environmental Group.

Table 5.27 shows that the means of four of the seven groups are higher in the case of Trust A, compared with Trust B. These groups are: Potential Customers/Purchasers of Secondary Healthcare, Governmental, Political and Legislative Factors, Technology, and Demographic Factors. This suggests that Trust A is experiencing relatively higher environmental uncertainty emanating from each of these groups, than is Trust B. On

the other hand, the means of two groups were comparatively higher for Trust B than for Trust A, which suggests that Trust B is experiencing relatively higher environmental uncertainty emanating from each of these two groups, than is Trust A. These groups are: Supply and Social Services.

Both Trusts have considered the degree of environmental uncertainty emanating from one group, which is that of Potential Competitors / Providers of Secondary of Healthcare, to be low, with quite similar means.

Third: After exploring the degree of environmental uncertainty characterising each environmental group, for each Trust, such uncertainty is now explored in more detail, in terms of the environmental factors making up such groups. Tables 5.28.a and 5.28.b classify these factors, according to the descending means representing their degree of environmental uncertainty, into two main classes: -

- The first class includes those factors, whose degree of environmental uncertainty is perceived to be **moderate to high**. This class includes those factors with means ranging from above 2.5 to below 3.5 (see table 5.28.a).
- The second class includes those factors, whose degree of uncertainty is perceived to be **low**. This class includes those factors with means below 2.5 (see table 5.28.b).

Environmental Factors with moderate to high degree of environmental uncertainty					
Trust A			Trust B		
Environmental Factor	Mean	Std. Deviation	Environmental Factor	Mean	Std. Deviation
1. Governmental Policies, Plans and Initiatives.	3.1522	.53161	1. Governmental Policies, Plans and Initiatives.	3.1750	.61462
2. Innovations in Medical Technology (i.e. New Drugs, New Methods of Diagnosis and Treatment)	3.0455	.55440	2. Innovations in Medical Technology (i.e. New Drugs, New Methods of Diagnosis and Treatment)	2.9110	.65120
3. The Use and Application of Hospital League Tables	2.9565	.54174	3. The Requirements and Expectations of Patients	2.8708	.50943
4. The Media Reporting and Coverage of the NHS	2.9348	.48393	4. The demand made by Patients	2.8375	.61380

Environmental Factors with moderate to high degree of environmental uncertainty (continued)					
Trust A			**Trust B**		
Environmental Factor	**Mean**	**Std. Deviation**	Environmental Factor	Mean	**Std. Deviation**
5. The Requirements and Expectations of Health Authorities	2.9091	.54851	5. **Supply of Financial Resources / Public Funding**	2.8008	.77928
6. **Legislation / Directives Pressures**	2.8913	.62079	6. **Legislation / Directives Pressures**	2.7958	.67097
7. **The demand made by General Practitioners**	2.8636	.56023	7. **Supplies of Professional Workforce (e.g. Consultants, Doctors, Nurses)**	2.7750	.63396
8. **The demand made by Patients**	2.8478	.61116	8. **The Requirements and Expectations of Health Authorities**	2.7543	.59326
9. **The Requirements and Expectations of Primary Care Trusts**	2.7826	.47257	9. **The Requirements and Expectations of Primary Care Trusts**	2.7373	.65064
10. **The Requirements and Expectations of General Practitioners**	2.7273	.50538	10. **The Media Reporting and Coverage of the NHS**	2.7331	.66770
11. **The Requirements and Expectations of Patients**	2.7174	.33119	11. **The Use and Application of Hospital League Tables**	2.6375	.67558
12. **Supply of Financial Resources / Public Funding**	2.6522	.66460	12. **The Impact of Social Services**	2.6272	.59971
13. **Supply of Medical Equipment**	2.5652	.48393	13. **The demand made by General Practitioners**	2.6078	.71499
			14. **The Requirements and Expectations of General Practitioners**	2.5583	.59011
			15. **Disease / Illness Profile**	2.5526	.61553

Table 5.28.a: Descending Means of the Environmental Factors, with Moderate to High Degree of Environmental Uncertainty, according to Each Trust.

Comparison between the two Trusts, in terms of the means representing the degree of environmental uncertainty characterising each of the environmental factors classified as having moderate to high degree of uncertainty (tables 5.28.a and 5.28.b), reveals the following:

- Both Trusts were similar in their perceptions of the two most uncertain environmental factors affecting them, in that both have chosen "**Governmental Policies, Plans and Initiatives**" as the factor characterised with the highest degree of environmental uncertainty, thus ranking number one with a mean of **3.1566** for

Trust A, and **3.175** for **Trust B**. The factor chosen by both Trusts as the one with the second highest degree of environmental uncertainty was the one concerned with "**Innovations in Medical Technology**", with a mean of **3.0455** for **Trust A** and **2.911** for **Trust B**.

- Trust A then chose "**The Use and Application of Hospital League Tables**" as the third most uncertain environmental factor, with a mean of 2.9565 representing a high degree of environmental uncertainty. However, Trust B perceived the degree of environmental uncertainty associated with "**The Use and Application of Hospital League Tables**" to be significantly lower, with a mean of 2.6375 representing a moderate degree of environmental uncertainty.

Environmental Factors with low degree of environmental uncertainty					
Trust A			**Trust B**		
Environmental Factor	**Mean**	**Std. Deviation**	Environmental Factor	Mean	**Std. Deviation**
1. **Population / Demographic Profile**	2.4565	.86488	1. **Population / Demographic Profile**	2.3904	.59951
2. **Supplies of Professional Workforce (e.g. Consultants, Doctors, Nurses)**	2.4348	.64499	2. **The emergence of new Competitors (Private Sector Hospital)**	2.3208	.63628
3. **The Impact of Social Services**	2.4348	.75835	3. **Supply of Medical Equipment**	2.2974	.67450
4. **Disease / Illness Profile**	2.4130	.74852	4. **The emergence of new Competitors (Other NHS Trusts/ Hospitals)**	2.2625	.65971
5. **The emergence of new Competitors (Private Sector Hospital)**	2.2826	.68798	5. **The emergence of new Competitors (Overseas Healthcare Providers)**	1.9534	.76490
6. **The emergence of new Competitors (Other NHS Trusts/ Hospitals)**	2.1739	.49103			
7. **The emergence of new Competitors (Overseas Healthcare Providers)**	1.9348	.60873			

Table 5.28.b: Descending Means of the Environmental Factors, with Low Degree of Environmental Uncertainty, according to Each Trust.

With regard to similarities and differences between the two Trusts, in terms of those environmental factors perceived by each to have a low degree of environmental uncertainty (table 2.28.b), the following findings are concluded:

- Four environmental factors have been considered by both Trusts as having a low degree of environmental uncertainty. These are:
    - **Population / Demographic Profile**
    - **The emergence of new Competitors (Private Sector Hospital)**
    - **The emergence of new Competitors (Other NHS Trusts/ Hospitals)**
    - **The emergence of new Competitors (Overseas Healthcare Providers)**

In addition to these four common factors chosen by both Trusts to be the least uncertain, **Trust B** has also considered "**Supply of Medical Equipment**" as encountering little uncertainty, with a mean of **2.2974**. However in contrast to Trust B, **Trust A** perceives that its **"Supply of Medical Equipment"** is *relatively more uncertain*, with a mean of **2.5652**.

- Another noticeable difference between the two Trusts is how each perceives the degree of environmental uncertainty characterising their "**Supplies of Professional Workforce, e.g. Consultants, Doctors, Nurses**". On one hand, **Trust A** perceives such supplies as being fairly certain, with a mean of **2.4348**, whereas on the other hand, **Trust B** rates the degree of uncertainty associated with its "**Supplies of Professional Workforce, e.g. Consultants, Doctors, Nurses**" as being *comparatively high*, with a mean of **2.7750**. In addition to "**Supplies of Professional Workforce, e.g. Consultants, Doctors, Nurses**", Trust A also chose two other factors as having a low degree of uncertainty, which Trust B did not. These two factors are:
    1. **The Impact of Social Services**: The mean reflecting the degree of uncertainty in this factor for Trust A is 2.4348, whereas it is 2.6375 for Trust B.
    2. **Disease / Illness Profile**: The mean reflecting the degree of uncertainty in this factor for Trust A is 2.4130, whereas it is 2.5526 for Trust B.

Thus, both of these factors were relatively more uncertain for Trust B than they were for Trust A.

5.4.2 Exploring and identifying the perceived need for Organisational Agility, on the part of the two NHS Trusts, as triggered by environmental parties

Such a perceived need for Organisational Agility is measured according to two main dimensions, which are reflected in the following questions:

1. Question 3.1 asks respondents to rate the **Current Level of Agility**, at which their Trust is responding to and dealing with the changes brought about by each of the environmental factors.

2. Question 3.2 asks respondents to rate the **Level of Agility Required / Needed** by their Trust, in order to be able to respond to and deal with the changes brought about by each of the environmental factors.

The means calculated for each question are based on a 4-point Likert scale that measures the *current* as well as the *required / needed* **levels of agility**, in responding to and dealing with the changes brought about by each of the environmental factors and groups. It employs the following scale for measuring each of the **current** and **required / needed** levels of agility: "1: Very Low; 2: Low; 3: High; 4: Very High".

5.4.2.1 The *Current Level* of Agility, as well as the *Required / Needed Level* of Agility, in Responding to and Dealing with Changes in the *Overall Environment*

First: The *overall current level*, at which each Trust is responding to and dealing with the changes in its environment in an agile manner, is presented for each Trust. This is based on the average of the responses given by each Trust, as to the current level at which each is responding to changes in each environmental factor in an agile manner. Table 5.29 presents the mean representing such overall current level of agility, for each Trust. It also indicates the proportion of respondents rating such overall level as high, and the proportion of those rating it as low, for each Trust.

The Overall Current Level of Agility in responding to changes in the environment				
Trust	Mean	Std. Deviation	Percentage of respondents rating the Overall Current Level of Agility as:	
			Low	High
Trust A	2.5845	.46713	56.5%	43.5%
Trust B	2.5801	.41512	40%	60%

Table 5.29: The Overall Current Level of Agility for Each Trust.

Table 5.29 clearly shows that both Trusts rate the current level of agility, at which they are responding to and dealing with changes in their environment, as moderate, with quite similar means representing such a level for each Trust (2.5845 for Trust A and 2.5801 for Trust B). However, the percentage of respondents rating the current level of agility, at which their Trust is responding to changes in the environment, as high, is relatively higher in the case of Trust B (60%), than in the case of Trust A (43.5%).

Second: The *overall level of agility needed / required* by each Trust, in order to be able to respond to and deal with the changes in its environment in an agile manner, is also presented for each Trust. This is based on the average of the responses given by each Trust, as to the level of agility needed / required by each Trust, in order to be able to respond to and deal with changes in each environmental factor. Table 5.30 presents the mean representing such overall needed / required level of agility, for each Trust. It also indicates the proportion of respondents rating such overall level as high, and the proportion of those rating it as low, for each Trust.

The Overall Needed / Required Level of Agility in responding to changes in the environment				
Trust	Mean	Std. Deviation	Percentage of respondents rating the Overall Needed Level of Agility as:	
			Low	High
Trust A	3.2591	.37278	4.3%	95.7%
Trust B	3.1195	.38012	5%	95%

Table 5.30: The Overall Needed Level of Agility for Each Trust.

Table 5.30 clearly shows that both Trusts perceive that a high level of agility is needed or required on their part, in order to be able to respond to and deal with the changes in the environment affecting their management and delivery of healthcare

services. This is illustrated by the fact that the means reflecting such a perception for both Trusts are above 3, and that at least 95% of respondents from each Trust have considered that a high level of agility is needed. It is also noted that Trust A perceives that a higher level of agility is required from it in order to deal with the environmental changes impacting it, compared with Trust B. This is evidenced by the result that the mean reflecting the level of such a need for agility is higher in Trust A (3.2591), than in Trust B (3.1195).

5.4.2.2 Gap Between Current and Required Levels of Agility, in Responding to Changes in the Overall Environment

Based on the results presented in tables 5.29 and 5.30, it is concluded that the current level of agility, at which both Trusts are responding to and dealing with the changes brought about by the environment affecting them, is *moderate* (2.5845 for Trust A and 2.5845 for Trust B), whereas the level of agility required / needed from both Trusts, in order to be able to respond to and deal with such changes, is perceived by both Trusts to be evidently *high* (3.2591 for Trust A and 3.1195 for Trust B).

This strongly suggests that there is a *clear need for a considerably higher level of agility* from both Trusts, in order for them to be able to respond to and deal with changes in the environment affecting them. Such a need for a higher level of agility on the part of these Trusts is further supported by table 5.31, which presents the gap between the level of agility perceived by each Trust to be required in order to respond to and deal with the environment affecting it, and the current level of agility at which it is responding to such an environment.

The Gap between the required and current levels of agility in responding to the overall environment			
Trust	Required Level of Agility	Current Level of Agility	Gap between required and current levels of agility
	Mean	Mean	
Trust A	3.2591	2.5845	.6746
Trust B	3.1195	2.5801	.5394

Table 5.31: The Gap between the required and current levels of agility in responding to the overall environment, for each Trust.

Table 5.31 shows that there is a clear gap between a *considerably high* level of agility perceived by both Trusts to be required, in order to respond to the overall environment affecting both of them, and a *moderate* level of agility, at which these Trusts are currently responding to such an environment. Such a gap, thus, indicates an obvious insufficient response on the part of these Trusts, to changes taking place in environmental parties affecting them.

5.4.2.3 **The *Current Level* of Agility, as well as the *Required / Needed Level* of Agility, in Responding to and Dealing with Changes in the *Environmental Groups***

A more detailed exploration of the current level of agility, at which each Trust is responding to and dealing with environmental change, as well as the level of agility required / needed to deal with such change, is now provided. First, table 5.32 presents in a descending order the means reflecting the ***current level*** of agility, at which each Trust is responding to changes in each *environmental group* affecting it. In this way, table 5.32 presents these environmental groups in a descending order for each Trust, starting with the group, which each Trust perceives that it is responding to changes related to it with the highest level of agility, and ending with the group, which each Trust perceives that it is responding to changes related to it with the lowest level of agility.

The Current Level of Agility in responding to changes in Environmental Groups					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	**Environmental Group**	**Mean**	**Std. Deviation**
1. **Governmental / Political and Legislative Factors**	2.94	.74300	1. **Governmental / Political and Legislative Factors**	3.01	.57814
2. **Potential Customers / Users and Purchasers of Secondary Healthcare**	2.78	.70641	2. **Potential Customers / Users and Purchasers of Secondary Healthcare**	2.69	.56161
3. **Demographic Factors (e.g. disease and population profiles, the media reporting of the NHS**	2.7273	.60541	3. **Technology (Innovations in Medical Technology, i.e. new drugs, new methods of diagnosis and treatment)**	2.6525	.63146
4. **Technology (Innovations in Medical Technology, i.e. new drugs and methods of diagnosis and treatment)**	2.5909	.73414	4. **Social Services**	2.5965	.67108
5. Supply (professional workforce; financial resources; availability of medical equipment)	2.5145	.59652	5. **Demographic Factors (e.g. disease and population profiles, the media reporting of the NHS)**	2.5508	.61608
6. **Social Services**	2.0455	.78542	6. **Supply (professional workforce; financial resources; availability of medical equipment)**	2.5056	.53412
7. **Potential Competitors / Providers of Secondary Healthcare**	1.9697	.64167	7. **Potential Competitors / Providers of Secondary Healthcare**	1.9861	.67946

Table 5.32: Descending Means for Environmental Groups, which reflect the relative current levels of agility at which each Trust is responding to changes.

From examining table 5.32, it can be seen that both Trusts perceive the two environmental groups of "**Governmental / Political and Legislative Factors**" and "**Potential Customers / Users and Purchasers of Secondary Healthcare**" as being the ones, which both Trusts are dealing with and responding to their changes, with the highest levels of agility, compared with the remaining environmental groups. The means reflecting the levels of agility, at which both Trusts are dealing with these two environmental groups, range from 2.6889 to 2.9420.

Trust A considered itself to be responding to and dealing with the changes related to two environmental groups with a low level of agility. These are: "**The Impact of Social Services**" and "**Potential Competitors / Providers of Secondary**

Healthcare", with means of 2.0455 and 1.9697, respectively. Trust B has also considered itself to be responding to and dealing with the changes related to one of these groups with a low level of agility, which is that of "**Potential Competitors / Providers of Secondary Healthcare**", with a mean of 1.9861. The reason explaining why both Trusts have indicated that they exert the least amount of effort in dealing with changes related to the *emergence of new potential competitors in the form of other healthcare providers*, can well be attributed to the findings reached earlier regarding this group, in that:

- Both Trusts considered this environmental group as the only one characterised by a low degree of importance, in terms of its perceived effect on the well-being of NHS Trusts as providers of healthcare;

- Both Trusts considered this group as the only one experiencing a low amount of change, in that both Trusts did not perceive that there were competitive threats posed against them, as a result of any continuous or rapid emergence of new providers of secondary healthcare / hospitals;

- Both Trusts perceived change in this group to be fairly predictable;

- Finally, both Trusts considered the degree of environmental uncertainty associated with this environmental group to be the lowest among all the other ones.

With regard to "**The Impact of Social Services**", Trust B has considered itself to be dealing with and responding to such a group with a higher level of agility, represented by a mean of 2.5965, compared with Trust A, which considered itself to be dealing with "**The Impact of Social Services**" with a considerably lower level of agility, represented by a mean of 2.0455. Table 5.33 provides a comparison between the two Trusts, in terms of the means reflecting the current level of agility, at which each is responding to and dealing with each of these environmental groups.

[**Note: - CUST**: Potential Customers; **COMP**: Potential Competitors; **GOVT**: Governmental Factors; **TECH**: Technology; **SUPP**: Supply; **SOSER**: Social Services; **DEMO**: Demographic Factors.]

TRUST	*Statistics*	*CUST*	COMP	GOVT	TECH	SUPP	SOSER	*DEMO*
Trust A	**Mean**	**2.7754**	**1.9697**	**2.9420**	**2.5909**	**2.5145**	**2.0455**	**2.7273**
	Std Deviation	.70641	.64167	.74300	.73414	.59652	.78542	.60541
Trust B	**Mean**	**2.6889**	**1.9861**	**3.0056**	**2.6525**	**2.5056**	**2.5965**	**2.5508**
	Std Deviation	.56161	.67946	.57814	.63146	.53412	.67108	.61608

Table 5.33: Comparison between the two Trusts, in terms of the current level of agility in dealing with each Environmental Group.

Table 5.33 shows that the means of three of the seven environmental groups are higher in the case of Trust B, compared with Trust A. These groups are: **"Governmental, Political and Legislative Factors", "Technology (Innovations in Medical Technology, i.e. new drugs, new methods of diagnosis and treatment)", and "The Impact of Social Services"**. This suggests that Trust B is exerting relatively more effort in responding to and dealing with changes in these three groups, than is Trust A. On the other hand, the means of two groups were comparatively higher for Trust A than for Trust B, which suggests that Trust A is exerting relatively more effort in responding to and dealing with changes in these groups, than is Trust B. These groups are: "**Potential Customers / Users and Purchasers of Secondary Healthcare**" and "**Demographic Factors**".

There was no noticeable difference between the means representing the current level of agility, at which each Trust is dealing with "**Potential Competitors / Providers of Secondary Healthcare**" (1.9697 for Trust A and 1.9861 for Trust B), which suggests that both Trusts were dealing with changes related to this group, with a similar level of agility. This result was also found in the case of the "**Supply**" group, in that the means reflecting the current level of agility, at which each Trust is dealing with changes related to it were highly similar for both Trusts (2.5145 for Trust A and 2.5056 for Trust B), which suggests that both Trusts were also dealing with changes related to these groups, with a similar level of agility.

Second: Table 5.34 presents in a descending order the means reflecting the ***level of agility required / needed*** by each Trust, in order to be able to respond to and deal with the changes in each *environmental group* affecting it. In this way, table 5.34 presents these environmental groups in a descending order, starting with the group perceived by each Trust to require the highest level of agility on its part, in order for it to be able to respond to changes associated with such a group, and ending with the group perceived by each Trust to require the lowest level of agility on its part.

The Needed/Required Level of Agility in responding to changes in Environmental Groups					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	**Environmental Group**	**Mean**	**Std. Deviation**
1. Potential Customers / Users and Purchasers of Secondary Healthcare	3.5362	.47662	**1. Governmental / Political and Legislative Factors**	3.4100	.62537
2. Social Services	3.5217	.73048	**2. Supply (professional workforce; financial resources; availability of medical equipment)**	3.3167	.44117
3. Governmental / Political and Legislative Factors	3.4783	.53016	**3. Potential Customers / Users and Purchasers of Secondary Healthcare**	3.2543	.43684
4. Supply (professional workforce; financial resources; availability of medical equipment)	3.3986	.35795	**4. Social Services**	3.2193	.68802
5. Technology (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)	3.3636	.58109	**5. Technology (Innovations in Medical Technology, i.e. new drugs, mew methods of diagnosis and treatment)**	3.2034	.65731
6. Demographic Factors (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS)	3.1515	.59741	**6. Demographic Factors (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS)**	3.0932	.56669
7. Potential Competitors / Providers of Secondary Healthcare	2.3030	.75529	7. Potential Competitors / Providers of Secondary Healthcare	2.3361	.72518

Table 5.34: Descending Means for Environmental Groups, which reflect the relative levels of agility needed/required in responding to each group, according to each Trust.

As table 5.34 shows, both Trusts have considered <u>all but one</u> of the seven environmental groups as requiring quite a high level of agility, with means ranging from 3.0932 to 3.5362. This strongly suggests that there is a clear need for a high level of agility on the part of these NHS Trusts, in order to deal with the environment affecting them represented by these six environmental groups. The only environmental group perceived by both Trusts to require a low level of agility in dealing with changes triggered by it was the "**Potential Competitors / Other Providers of Secondary Healthcare**" group, with a mean of 2.3030 for Trust A and 2.3361 for Trust B.

This result, which is illustrated by the perception of both Trusts that all but one of the seven environmental groups require a considerably high level of agility, explains as well supports an earlier one, in which a considerably high level of agility was perceived by both Trusts to be required, in order to deal with and respond to the overall environment affecting them, which comprises these environmental groups (*See table 5.30*). Also, the result reflected in the perception of both Trusts that the "**Potential Competitors / Other Providers of Secondary Healthcare**" group is the only one *requiring* a low level of agility, is similar to the one arrived at, when respondents from both Trusts were asked to rate the *current* level of agility, at which their respective Trusts were responding to changes emanating from each environmental group. Both Trusts have considered that the current level of agility, at which they are responding to changes related to the "Potential Competitors / Other Providers of Secondary Healthcare", as the lowest among all the other environmental groups, represented by a mean of 1.9697 for Trust A and 1.9861 for Trust B.

The reason for such a low rating of the current as well as the required levels of agility, in responding to changes associated with the "Potential Competitors" group, can well be explained by the findings reached earlier regarding this group. From all of the seven environmental groups suggested to be affecting NHS Trusts, respondents from both Trusts have given the lowest ratings to the "Potential Competitors / Providers of Secondary Healthcare" group, in terms of the *four dimensions* used to identify the nature of change in the environment affecting NHS Trusts. Such dimensions include:

- *Degree of the importance of the effect*,

- *Amount of change / dynamism* taking place,

- *Degree of unpredictability,* as well as

- *Degree of environmental uncertainty.*

Thus, it can be concluded that these findings strongly suggest that the nature of changes in the environmental parties affecting NHS Trusts, in terms of the *aforementioned dimensions* (importance, amount of change, unpredictability, uncertainty), plays a crucial role in determining the level of agility needed or required on the part of such Trusts, in order to be able to deal with, and respond to, changes instigated by such environmental changes.

Table 5.34 also shows that there are differences between the two Trusts, in terms of which environmental group each Trust perceives to be requiring the highest level of agility on its part, in order for it to be able to respond to and deal with changes emanating from such a group, which affect the management and delivery of healthcare services. For instance, the environmental group perceived by **Trust A** to be requiring from it the highest level of agility, is the "**Potential Customers / Users and Purchasers of Secondary Healthcare**" group, whereas **Trust B** perceived that the "**Governmental / Political and Legislative Factors"** group was the one requiring the highest level of agility on its part, in order to deal with and respond to changes associated with factors included in that group.

Trust A then considered "**The Impact of Social Services**" as the group requiring the second highest level of agility from it, whereas **Trust B** considered the "**Supply (professional workforce; financial resources; availability of medical equipment)"** group as the one requiring the second highest level of agility from it, in order to be able to deal with changes occurring in such a group.

Table 5.35 provides a comparison between the two Trusts, in terms of the means reflecting the level of agility required by each Trust in order to be able to respond to and deal with the changes in each *environmental group* affecting it.

[**Note: - CUST**: Potential Customers; **COMP**: Potential Competitors; **GOVT**: Governmental Factors; **TECH**: Technology; **SUPP**: Supply; **SOSER**: Social Services; **DEMO**: Demographic Factors.]

TRUST	Statistics	CUST	COMP	GOVT	TECH	SUPP	SOSER	DEMO
Trust A	**Mean**	**3.5362**	**2.3030**	**3.4783**	**3.3636**	**3.3986**	**3.5217**	**3.1515**
	Std Deviation	.47662	.75529	.53016	.58109	.35795	.73048	.59741
Trust B	**Mean**	**3.2543**	**2.3361**	**3.4100**	**3.2034**	**3.3167**	**3.2193**	**3.0932**
	Std Deviation	.43684	.72518	.62537	.65731	.44117	.68802	.56669

Table 5.35: Comparison between the two Trusts, in terms of the level of agility required in order to deal with each Environmental Group.

Table 5.35 reveals that the means reflecting the required / needed levels of agility, in order to deal with six of the seven groups listed, are higher in the case of Trust A, than in the case of Trust B. These environmental groups are: ***Potential customers / Users and purchasers of secondary healthcare***, ***Governmental, political and legislative factors***, ***Technology***, ***Supply***, ***Social Services***, and ***Demographics***. This indicates that, overall, Trust A perceives that a comparatively higher level of agility is required from it, in order to be able to deal with changes in its environment, represented by these six environmental groups, compared with Trust B. On the other hand, the mean of one group, which is that of ***Potential competitors / Providers of secondary healthcare***, was low as well as similar for both Trusts, which suggests that the level of agility required from both Trusts to deal with such a group is low.

5.4.2.4 <u>Gap Between Current and Required Levels of Agility, in Responding to Environmental Groups</u>

In order to explore and identify the extent to which the two NHS Trusts are sufficiently / insufficiently responding to and dealing with changes in the environment affecting them in an agile manner, table 5.36 presents the calculated gaps between:

- The ***current level*** of agility, at which each Trust is responding to and dealing with changes related to each particular group, and

- The level of agility, which each Trust perceives is ***required / needed*** from it, in order to be able to respond to and deal with changes related to that particular environmental group.

Table 5.37, then, ranks/lists these environmental groups in a descending order, according to the gaps between the current level of agility and the level of agility perceived by each Trust to be required, in order to respond to and deal with changes associated with each group. In other words, table 5.37 starts by listing the group with the largest gap between the current and the required levels of agility in dealing with changes related to it (i.e. the group that each Trust perceives it is insufficiently responding to changes related to it in an agile manner, the most), and ends with the group with the smallest gap between the current and the required levels of agility in dealing with changes related to it (i.e. the group that each Trust perceives it is sufficiently responding to changes related to it in an agile manner the most).

[**Note: - CUST**: Potential Customers; **COMP**: Potential Competitors; **GOVT**: Governmental Factors; **TECH**: Technology; **SUPP**: Supply; **SOSER**: Social Services; **DEMO**: Demographic Factors.**]**

The Gap between the required and current levels of agility, for each environmental group

	Trust A				Trust B		
Environmental Group	**Required Level of Agility** **Mean**	**Current Level of Agility** **Mean**	Gap between required and current levels of agility	Environmental Group	**Required Level of Agility** **Mean**	**Current Level of Agility** **Mean**	**Gap between required and current levels of agility**
CUST	3.5362	2.7754	**.7608**	CUST	3.2543	2.6889	**.5654**
COMP	2.3030	1.9697	**.3333**	COMP	2.3361	1.9861	**.3500**
GOVT	3.4783	2.9420	**.5363**	GOVT	3.4100	3.0056	**.4044**
TECH	3.3636	2.5909	**.7727**	TECH	3.2034	2.6525	**.5509**
SUPP	3.3986	2.5145	**.8841**	SUPP	3.3167	2.5056	**.8111**
SOSER	3.5217	2.0455	**1.4762**	SOSER	3.2193	2.5965	**.6228**
DEMO	3.1515	2.7273	**.3742**	DEMO	3.0932	2.5508	**.5424**

Table 5.36: The Gap between the required and current levels of agility, for each Environmental Group, according to each Trust.

Trust A		Trust B	
Environmental Group	Gap between required and current levels of agility	Environmental Group	Gap between required and current levels of agility
1. SOSER	1.4762	1. SUPP	.8111
2. SUPP	.8841	2. SOSER	.6228
3. TECH	.7727	3. CUST	.5654
4. CUST	.7608	4. TECH	.5509
5. GOVT	.5363	5. DEMO	.5424
6. DEMO	.3742	6. GOVT	.4044
7. *COMP*	.3333	7. COMP	.3500

Table 5.37: Descending ranking of environmental groups, according to the Gap between the required and current levels of agility, for each Trust.

Studying table 5.37 reveals that both Trusts are experiencing the highest levels of insufficient agile response (largest gap) in dealing with the changes associated with two main environmental groups, which are: "**The Impact of Social Services**" and "**Supply, i.e. supply of professional workforce, financial resources, and availability of medical equipment**". Such a finding concerning the identification of groups, in which the Trust is experiencing the largest gaps between the required and current levels of agility, gives an indication of those areas, in which the performance of the Trust is lacking, in terms of agility. The environmental group, which both Trusts perceive that they are sufficiently responding to changes associated with it (smallest gap), is the "**Potential competitors / Providers of secondary healthcare**" group.

Comparing between the two Trusts, in terms of the *gaps* between the required and current levels of agility in dealing with each of the seven environmental groups, indicates that the gaps between the required and current levels of agility, in dealing with five of these seven groups, are higher in the case of Trust A, than in the case of Trust B (see table 5.36). These groups are: "**Potential customers / Users and purchasers of secondary healthcare**", "**Governmental, political and legislative factors**", "**Technology**", "**Supply**", and "**Social Services**". This suggests that a relatively higher *amount of insufficient agile response* to these groups exists in the case of Trust A, than in the case of Trust B, which requires from Trust A a higher level of agility in

dealing with each of these groups, compared with Trust B. The identification of such groups, in which an insufficient level of agility exists, gives an indication of those areas, in which the performance of Trust A is lacking, as far as agility is concerned, compared with Trust B.

This finding is further supported by the results presented in table 5.35, which reveals that the *levels of agility required*, in order to deal with six of the seven groups listed, are also higher in the case of Trust A, than in the case of Trust B. These environmental groups are: **Potential customers / Users and purchasers of secondary healthcare**, **Governmental**, **political and legislative factors**, **Technology**, **Supply**, **Social Services**, and **Demographics**. These two results reflected in tables 5.35 and 5.36 clearly indicate that, overall, Trust A perceives that a higher level of agility is required from it, in order to be able to deal with changes in its environment, represented by these environmental groups, compared with Trust B. These results, in turn, further support the finding presented by table 5.30, which illustrates that Trust A perceives that a higher level of agility is required on its part, in order to be able to respond to the overall environment affecting it, compared with Trust B.

On the other hand, the level of agility required from both Trusts to deal with *Potential competitors / Providers of secondary healthcare*, was the lowest among all the other groups. Also in a similar fashion, the gap between the current and required levels of agility in responding to this group was the lowest, for both Trusts.

5.4.2.5 The *Current Level* of Agility, as well as the *Required / Needed Level* of Agility, in Responding to and Dealing with Changes in *Environmental Factors*

A more detailed exploration of the current level of agility, at which each Trust is responding to and dealing with environmental groups, as well as the level of agility required / needed to deal with such groups, is now provided, by breaking up these groups into the environmental factors making them up. First, tables 5.38.a and 5.38.b classify these factors, according to the descending means reflecting the *current level* of agility, at which each Trust is responding to changes in each *environmental factor* affecting it, into two main classes:

- The first class includes those factors, which each Trust is dealing with and responding to with a **moderate** to a **high** *level of agility*. This class includes those factors with means ranging from above 2.5 to below 3.5 (see table 5.38.a).

- The second class includes those factors, which each Trust is dealing with and responding to with a **low** *level of agility*. This class includes those factors with means below 2.5 (see table 5.38.b).

The Environmental Factors, which each Trust is responding to with a moderate to a high level of agility					
Trust A			Trust B		
Environmental Factor	Mean	Std. Deviation	Environmental Factor	Mean	Std. Deviation
1. Governmental Policies, Plans and Initiatives	3.000	.739	1. Governmental Policies, Plans and Initiatives	3.150	.685
2. The Requirements and Expectations of Health Authorities	2.957	.767	2. The Introduction and Application of Hospital League Tables	2.983	.792
3. The Introduction and Application of Hospital League Tables	2.957	.706	3. Legislation/Directives Pressures	2.883	.709
4. The Demand made by General Practitioners	2.913	.793	4. The Demand made by Patients	2.817	.765
5. Legislation/Directives Pressures	2.870	1.014	5. The Requirements and Expectations of Patients	2.792	.755
6. The Population / Demographic Profile	2.864	.774	6. The Requirements and Expectations of Health Authorities	2.750	.865
7. The Requirements and Expectations of Primary Care Trusts	2.826	.887	7. The Demand made by General Practitioners	2.672	.825
8. The Disease/Illness Profile	2.727	.550	8. Innovations in Medical Technology	2.653	.631
9. The Requirements and Expectations of General Practitioners	2.696	.822	9. The Requirements and Expectations of Primary Care Trusts	2.644	.861
10. The Demand made by Patients	2.696	.876	10. The Media Reporting and Coverage of The NHS	2.627	.786
11. Supply /Availability of Medical Equipment	2.630	.643	11. Supply of Financial Resources / Public Funding	2.617	.739
12. Changes in Innovations in Medical Technology	2.591	.734	12. The Impact of Social Services	2.596	.671
13. The Media Reporting and Coverage of The NHS	2.591	.908	13. The Disease/Illness Profile	2.579	.778
14. The Requirements and Expectations of Patients	2.565	.843			
15. Supplies of Workforce	2.522	.898			

Table 5.38.a: Descending Means for Environmental Factors, which each Trust is responding to with a moderate to a high level of agility.

Table 5.38.a clearly shows that both Trusts consider "**Governmental plans, policies and initiatives**" to be the factor, which both are dealing with and responding to with the highest levels of agility. Thus, such a factor ranked first in both Trusts, with a mean of **3** for **Trust A** and **3.150** for **Trust B**.

The most noticeable differences between the two Trusts, with regard to the current levels of agility at which they are responding to these factors, lie in the fact that the means representing the current levels of agility in responding to the **purchasers of secondary healthcare** (*Requirements and expectations of General Practitioners, demand made by General Practitioners, requirements and expectations of Primary Care Trusts, and requirements of Health Authorities*), are all higher in the case of **Trust A**, compared with Trust B. However, **Trust B** scored higher, in terms of the means representing the current levels of agility in responding to **users of secondary healthcare** (*Requirements and expectations of patients, and demand made by patients*), compared with Trust A (see table 5.39).

TRUST	*Statistics*	*The Req and Exp of Patients*	The Demand made by Patients	The Req and Exp of GPs	The Demand made by GPs	The Req and Exp of PCTs	The Req and Exp of HAs
Trust A	**Mean**	2.565	2.696	2.696	2.913	2.826	2.957
	Std Deviation	.8435	.8757	.8221	.7928	.8869	.7674
Trust B	**Mean**	2.792	2.817	2.466	2.672	2.644	2.750
	Std Deviation	.7552	.7645	.6219	.8248	.8613	.8648

Table 5.39: Comparison between the two Trusts, in terms of the current level of agility at which each Trust is responding to changes in each factor making up "Potential Customers/Users and Purchasers of Secondary Healthcare".

The Environmental Factors, which each Trust is responding to with a low current level of agility						
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	Environmental Group	**Mean**	**Std. Deviation**
1. **Supply of financial resources / public funding**	2.391	.7223	1. **Supplies of workforce**	2.492	.890
2. **Competition from other NHS Trusts / Hospitals**	2.318	.7799	2. **The Population / Demographic Profile**	2.483	.778
3. **The impact of social services**	2.045	.7845	3. **The Requirements and Expectations of GPs**	2.466	.622
4. **Competition from Private Sector Hospitals**	1.909	.6838	4. **Supply of Medical Equipment**	2.405	.645
5. **Competition from Overseas Healthcare Providers**	1.682	.7799	5. **Competition from other NHS Trusts / Hospitals**	2.167	.806
			6. **Competition from Private Sector Hospitals**	1.983	.770
			7. **Competition from Overseas Healthcare Providers**	1.767	.807

Table 5.38.b: Descending Means for Environmental Factors, which each Trust is responding to with a low level of agility.

In addition to the three factors representing **"Potential competitors / Providers of secondary healthcare"**, to which both Trusts have indicated that they are responding with a low level of agility, as table 5.38.b shows, **Trust A** has added **"Supply of financial resources"** as well as **"Impact of social services"** as two factors, which it is currently responding to with a low level of agility. Trust B, however, did not share with Trust A this position, in that it indicated that it is currently responding to these factors with a higher level of agility.

Instead, Trust B has added **"Supplies of workforce", "The Population / Demographic Profile", "The Requirements and Expectations of GPs" and "Supply of Medical Equipment"**, as four factors, which it is currently responding to with a low level of agility.

Second, tables 5.40.a, 5.40.b, and 5.40.c classify these factors, according to the descending means reflecting the **level of agility required / needed** by each Trust, in order to be able to respond to and deal with the changes in each *environmental factor* affecting it, into three main classes:

- The first class includes those factors perceived by each Trust to require a **very high** level of agility on its part, in order for it to be able to respond to changes associated with such factors. This class includes those factors with means above 3.5 (see table 5.40.a).

- The second class includes those factors perceived by each Trust to require a **high** level of agility on its part, in order for it to be able to respond to changes associated with such factors. This class includes those factors with means ranging from above 2.9 to below 3.5 (see table 5.40.b).

- The third class includes those factors perceived by each Trust to require a **moderate** to a **low** level of agility on its part. The factors requiring a moderate level of agility have means ranging from 2.5 to 2.6, whereas those requiring a low one have means below 2.5 (see table 5.40.c).

The Environmental Factors, which require a very high Level of Agility in responding to					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	**Environmental Group**	**Mean**	**Std. Deviation**
1. Supply of Financial Resources/ Public Funding	3.795	.3982	1. Govt Policies, Plans and Initiatives	3.667	.5724
2. The Requirements and Expectations of Patients	3.652	.5728	2. Supplies of Workforce	3.525	.6066
3. The Requirements and Expectations of Health Authorities	3.565	.5898			
4. The Demand made by Patients	3.565	.6624			
5. The Impact of Social Services	3.522	.7305			
6. Legislation/Directives Pressures	3.522	.5931			
7. Govt Policies, Plans and Initiatives	3.522	.5108			
8. The Requirements and Expectations of PCTs	3.522	.5108			

Table 5.40.a: Descending Means for the Environmental Factors requiring a very high level of agility, for each Trust.

As can be seen from table 5.40.a, **eight** environmental factors were chosen by **Trust A** as requiring a very high level of agility on its part, in order for it to be able to respond to changes emanating from these factors. However, only **two** factors were perceived by **Trust B** as requiring a very high level of agility from it to deal with changes associated with them. The only environmental factor, which was chosen by both Trusts as a factor requiring a very high level of agility on their parts, is "**Governmental policies, plans and initiatives**", although with two different rankings in each Trust. **Trust B** considered this factor to be the one requiring the highest level of agility, thus ranking it as *first* with a mean of **3.667**. However, **Trust A** ranked "**Governmental policies, plans and initiatives**" as the factor requiring the *seventh* highest level of agility, with a mean of **3.522**. Instead, "**Supply of Financial Resources/ Public Funding**" emerged as the factor requiring the highest level of agility, according to Trust A, with a mean of 3.795.

In addition to "**Governmental policies, plans and initiatives**", the other factor perceived by **Trust B** as requiring a very high level of agility was "**Supplies of Workforce**", ranking it as the second one with a mean of **3.525**. **Trust A** considered "**Supplies of Workforce**" as a factor requiring a high level of agility, with a mean of **3.391**.

The Environmental Factors, which require a high level of agility					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	Environmental Group	Mean	**Std. Deviation**
1. **The Demand made by GPs**	3.478	.7903	1. **Supply of Financial Resources/ Public Funding**	3.483	.5365
2. **The Requirements and Expectations of GPs**	3.435	.7278	2. **The Requirements and Expectations of Patients**	3.483	.5892
3. **Supplies of Workforce**	3.391	.6564	3. **The Demand made by Patients**	3.458	.5770
4. **The Introduction and Application of Hospital League Tables**	3.391	.7827	4. **Legislation/Directives Pressures**	3.330	.7801
5. **Innovations in Medical Technology**	3.364	.5811	5. **The Requirements and Expectations of Has**	3.237	.7506
6. **The Population / Demographic Profile**	3.273	.7025	6. **The Introduction and Application of Hospital League Tables**	3.233	.9088

The Environmental Factors, which require a high level of agility (continued)					
Trust A			**Trust B**		
Environmental Group	**Mean**	**Std. Deviation**	**Environmental Group**	**Mean**	**Std. Deviation**
7. The Disease/Illness Profile	3.273	.7025	7. The Impact of Social Services on The Hosp	3.219	.6880
8. Supply/Availability of Medical Equipment	3.043	.5623	8. Innovations in Medical Technology	3.203	.6573
9. The Media Reporting and Coverage of The NHS	2.909	.8112	9. The Demand made by GPs	3.178	.6136
			10. The Requirements and Expectations of PCTs	3.167	.7628
			11. The Media Reporting and Coverage of The NHS	3.155	.7446
			12. The Disease/Illness Profile	3.105	.7484
			13. The Requirements and Expectations of GPs	3.000	.6695
			14. The Population/Demographic Profile	2.991	.7102
			15. Supply/Availability of Medical Equipment	2.931	.7460

Table 5.40.b: Descending Means for the Environmental Factors requiring a high level of agility, for each Trust.

From studying tables 5.40.a and 5.40.b, which collectively present those environmental factors perceived by each Trust to be requiring a high to a very high level of agility, it can be seen that both Trusts have jointly considered the same *seventeen* environmental factors as requiring a high to a very high level of agility. The three remaining factors, which were not chosen by any Trust as requiring a high to a very high level of agility, are those listed in table 5.40.c, which presents such remaining factors perceived to require a moderate to a low level of agility. Again, the factors making up the "**Potential Competitors**" group were considered by both Trusts as requiring the least level of agility.

This result clearly suggests that both Trusts perceive all but three of the twenty environmental factors representing the overall environment affecting them as requiring quite a high level of agility on their part, thus giving a clear indication of the

need for a high level of agility from these Trusts to be able to deal with and respond to environmental change affecting them.

| The Environmental Factors, which require a moderate to a low level of agility | | | | | |
| Trust A | | | Trust B | | |
Environmental Group	Mean	Std. Deviation	Environmental Group	Mean	Std. Deviation
1. Comp. (Other NHS Trusts/ Hospitals)	2.545	.8579	1. Comp. (Other NHS Trusts/ Hospitals)	2.600	.9010
2. Competition from Private Sector Hospitals	2.318	.8937	2. Competition from Private Sector Hospitals	2.400	.8068
3. Competition from Overseas Healthcare Providers	2.045	.8985	3. Competition from Overseas Healthcare Providers	1.974	.8399

Table 5.40.c: Descending Means for the Environmental Factors requiring a moderate to a low level of agility, for each Trust.

Further comparison between the two Trusts, in terms of the means representing the level of agility perceived by each to be required to deal with each of the twenty environmental factors affecting them, reveals that the means of fourteen out of the twenty environmental factors were relatively higher in the case of **Trust A**, compared with Trust B. This provides evidence supporting the contention that Trust A requires a higher level of agility in dealing with the environment affecting it, compared with Trust B. These environmental factors are presented according to the group, which comprises each one of them, as follows: -

- "*Potential Customers / Users and Purchasers of Secondary Healthcare*". All the factors included in this group were perceived by Trust A to require a higher level of agility on its part, compared with Trust B. These factors are: -
    1. **The Requirements and Expectations of Patients**
    2. **The Demand made by Patients.**
    3. **The Requirements and Expectations of General Practitioners.**
    4. **The Demand Made by General Practitioners.**
    5. **The Requirements and Expectations of Primary Care Trusts.**
    6. **The Requirements and Expectations of Health Authorities.**

- "*Governmental Policies, Plans and Initiatives*". Trust A perceived the following two factors included in this group as requiring a higher level of agility, than Trust B:

1. **The Introduction and Application of Hospital League Tables.**
2. **Legislation / Directives Pressures.**

- "*Innovations in Medical Technology*" was perceived by Trust A to require a higher level of agility, compared with Trust B.

- "*Supply*". Two factors included as part of this group were perceived by Trust A to require a higher level of agility, compared with Trust B:

  1. **Supply / Availability of Medical Equipment.**
  2. **Supply of Financial Resources.**

- "*The Impact of Social Services*" was perceived by Trust A to require a higher level of agility, compared with Trust B.

- Finally, the following two factors included in the "*Demographics*" group were considered by Trust A to require a higher level of agility:

  1. **The Disease / Illness Profile.**
  2. **The Population / Demographic Profile.**

On the other hand, the means of five environmental factors were relatively higher in the case of **Trust B**, which indicates that Trust B perceived that a higher level of agility was required from it to respond to these factors, compared with Trust A. <u>These are</u>: -

1. **Competition from Private Sector Hospitals.**
2. **Competition from Other NHS Trusts / Hospitals.**
3. **Governmental Policies, Plans and Initiatives.**
4. **Supplies of Professional Workforce.**
5. **The Media Reporting and Coverage of the NHS.**

There was no recognisable difference between the two Trusts, in terms of the level of agility perceived by both Trusts to be required in dealing with one factor, which is:

1. **Competition from Overseas Healthcare Providers.**

5.4.2.6 <u>**Gap Between Current and Required Levels of Agility, in Responding to Environmental Factors**</u>

In order to explore and identify the extent to which the two NHS Trusts are sufficiently / insufficiently responding to and dealing with changes in the environment affecting them in an agile manner, table 5.41 presents the calculated gaps between:

- The *current level* of agility, at which each Trust is responding to and dealing with changes related to each particular environmental factor, and

- The level of agility, which each Trust perceives is *required / needed* from it, in order to be able to respond to and deal with changes related to that particular environmental factor.

Table 5.42, then, ranks/lists these environmental factors in a descending order, according to the gaps between the current level of agility and the level of agility perceived by each Trust to be required, in order to respond to and deal with changes associated with each factor.

In other words, table 5.42 starts by listing the factor with the largest gap between the current and the required levels of agility in dealing with changes related to it (i.e. the factor that each Trust perceives it is insufficiently responding to changes related to it in an agile manner, the most), and ends with the factor with the smallest gap between the current and the required levels of agility in dealing with changes related to it (i.e. the factor that each Trust perceives it is sufficiently responding to changes related to it in an agile manner the most).

Note: - <u>The environmental factors are represented by the following terms highlighted in **bold**</u>: -

[**R & E of Patients:** Requirements and Expectations of Patients**; Demand by Patients;**
R & E of GPs: Requirements and Expectations of General Practitioners**;**
Demand by GPs: Demand made by General Practitioners**; R & E of PCTs:** Requirements and Expectations of Primary Care Trusts**; R & E of HAs:** Requirements and Expectations of Health Authorities**; Priv Hosp:** Private Sector Hospitals**; Overs. Prov.:** Overseas Healthcare Providers**; Other NHS:** Other NHS Hospitals/Trusts**; Govt.:** Governmental Policies, Plans, and Initiatives**; Hosp League:** Hospital League Tables**; Legis:** Legislation/Directives Pressures**; Tech.:** Innovations in Medical Technology**; Supp Work:** Supply of Workforce**; Supp Equip:** Supply of Medical Equipment**; Supp Finance:** Supply of Financial Resources**; SOSER:** Impact of Social Services**; DISEASE:** Disease/Illness Profile**; POPU:** Population Profile**; Media:** Media Reporting and Coverage of the NHS**.]**

| The Gap between the required and current levels of agility, for each environmental factor | | | | | | | |
| Trust A | | | | Trust B | | | |
Environmental Factor	Required Level of Agility Mean	Current Level of Agility Mean	Gap between required and current levels of agility	Environmental Factor	Required Level of Agility Mean	Current Level of Agility Mean	Gap between required and current levels of agility
1. R & E of Patients	3.652	2.565	**1.087**	1. R & E of Patients	3.483	2.792	**.691**
2. Demand by Patients	3.565	2.696	**.869**	2. Demand by Patients	3.458	2.817	**.641**
3. R & E of GPs	3.435	2.696	**.739**	3. R & E of GPs	3	2.466	**.534**
4. Demand by GPs	3.478	2.913	**.565**	4. Demand by GPs	3.178	2.672	**.506**
5. R & E of PCTs	3.522	2.826	**.696**	5. R & E of PCTs	3.167	2.644	**.523**
6. R & E of HAs	3.565	2.957	**.608**	6. R & E of HAs	3.237	2.750	**.487**
7. Priv Hosp	2.318	1.909	**.409**	7. Priv Hosp	2.4	1.983	**.417**
8. Overs. Prov.	2.045	1.682	**.363**	8. Overs. Prov.	1.974	1.767	**.207**
9. Other NHS	2.545	2.318	**.227**	9. Other NHS	2.6	2.167	**.433**
10. Govt.	3.522	3	**.522**	10. Govt.	3.667	3.150	**.517**
11. Hosp League	3.391	2.957	**.434**	11. Hosp League	3.233	2.983	**.250**
12. Legis.	3.522	2.870	**.646**	12. Legis.	3.330	2.883	**.447**
13. Tech.	3.364	2.591	**.773**	13. Tech.	3.203	2.653	**.550**
14. Supp Work	3.391	2.522	**.869**	14. Supp Work	3.525	2.492	**1.033**
15. Supp Equip	3.043	2.630	**.413**	15. Supply Equip	2.931	2.405	**.526**
16. Supp Finance	3.795	2.391	**1.404**	16. Supp Finance	3.483	2.617	**.866**
17. SOSER	3.522	2.045	**1.48**	17. SOSER	3.219	2.596	**.623**
18. Disease	3.273	2.727	**.546**	18. Disease	3.105	2.579	**.526**
19. POPU	3.273	2.864	**.409**	19. POPU	2.991	2.483	**.508**
20. Media	2.909	2.591	**.318**	20. Media	3.155	2.627	**.528**

Table 5.41: The Gap between the required and current levels of agility, for each Environmental Factor, according to each Trust.

Trust A	Trust B

Environmental Factor	Gap between required and current levels of agility	Environmental Factor	Gap between required and current levels of agility
1. SOSER	1.480	1. Supply Work	1.033
2. Supply Finance	1.404	2. Supply Finance	.866
3. R & E of Patients	1.087	3. R & E of Patients	.691
4. Demand by Patients	.869	4. Demand by Patients	.641
5. Supply Work	.869	5. SOSER	.623
6. Tech.	.773	6. Tech.	.550
7. R & E of GPs	.739	7. R & E of GPs	.534
8. R & E of PCTs	.696	8. Media	.528
9. Legis.	.646	9. Disease	.526
10. R & E of Has	.608	10. Supply Equip	.526
11. Demand by GPs	.565	11. R & E of PCTs	.523
12. Disease Profile	.546	12. Government	.517
13. Government	.522	13. POPU	.508
14. Hosp League	.434	14. Demand by GPs	.506
15. Supply Equipment	.413	15. R & E of HAs	.487
16. POPU	.409	16. Legis.	.447
17. Priv Hosp	.409	17. Other NHS	.433
18. Overs. Prov.	.363	18. Priv Hosp	.417
19. Media	.318	19. Hosp League	.250
20. Other NHS	.227	20. Overs. Prov.	.207

Table 5.42: Descending ranking of environmental factors, according to the Gap between the required and current levels of agility, for each Trust.

Studying table 5.42 reveals that the environmental factor, which each Trust perceives that it is insufficiently dealing with the most (i.e. the environmental factor perceived by each Trust to have the largest gap between the required and the current levels of agility), is associated with the environmental group, which each Trust has considered itself to be insufficiently dealing with the most (i.e. the group perceived by each Trust to have the largest gap between the required and current levels of agility).

For instance, "**The Impact of Social Services**" has been considered by **Trust A** as the environmental group, which it is insufficiently dealing with the most (see table 5.37). Consistent with this result, Trust A has also chosen the environmental factor of "**Social Services**" as the factor, in which it is experiencing the highest level of insufficient agile response (see table 5.42). In a similar fashion, "**Supply**" has been considered by **Trust B** as the environmental group, which it is insufficiently dealing with the most (see table 5.37), and consistent with this, Trust B has chosen two factors associated with the "Supply" group as the ones, in which it is experiencing the two highest levels of insufficient agile response (see table 5.42). These two factors are: "**Supplies of Professional Workforce**" and "**Supply of Financial Resources**".

Both Trusts were considerably similar, in terms of their choices of those environmental factors, which they perceive themselves as insufficiently responding to the most, in that the first seven environmental factors chosen by each Trust as having the largest gaps between the required and current levels of agility, are the same for both Trusts, although with different rankings. These factors are:

- The Impact of Social Services
- Supply of Professional Workforce
- Supply of Financial Resources
- Requirements and Expectations of Patients
- Demand made by Patients
- Requirements and Expectations of General Practitioners
- Innovations in Medical Technology

Also, the majority of the first ten factors chosen by each Trust as having the largest gaps between the required and current levels of agility, are associated with the "**Supply**", "**Potential Customers / Users and Purchasers of Secondary Healthcare**", "**Social Services**" and "**Technology**" groups.

Both Trusts perceived that the environmental factors, in which they experienced the smallest gaps between the required and current levels of agility in responding to, are associated with the "**Potential Competitors**" group. This indicates that both Trusts were sufficiently responding to pressures emanating from other providers of secondary healthcare included in that group, suggesting that the threats posed by such parties were very little.

Comparing between the two Trusts, in terms of the *gaps* between the required and current levels of agility in dealing with each of the twenty environmental factors, indicates that the gaps between the required and current levels of agility, in dealing with *fourteen* of these twenty factors, are higher in the case of **Trust A**, than in the case of Trust B (see table 5.41). This suggests that a relatively higher amount of insufficient agile response to these fourteen factors exists in the case of Trust A, than in the case of Trust B, which requires from Trust A a higher level of agility in dealing with each of these factors, compared with Trust B. The identification of such factors, in which an insufficient level of agility exists, gives an indication of those areas, in which the performance of Trust A is lacking, as far as agility is concerned, compared with Trust B.

These environmental factors are presented according to the group, which comprises each one of them, as follows: -

- "*Potential Customers / Users and Purchasers of Secondary Healthcare*". The gaps between the required and current levels of agility, in dealing with all the factors included in this group, were higher for Trust A, compared with Trust B. These factors are: -
    1. **The Requirements and Expectations of Patients**
    2. **The Demand made by Patients.**
    3. **The Requirements and Expectations of General Practitioners.**
    4. **The Demand Made by General Practitioners.**
    5. **The Requirements and Expectations of Primary Care Trusts.**
    6. **The Requirements and Expectations of Health Authorities.**

- "*Potential Competitors / Providers of Secondary Healthcare*". The gap between the required and current levels of agility in dealing with one factor in this group, was higher for Trust A than Trust B:
    1. **Overseas Healthcare Providers.**

- "*Governmental Policies, Plans and Initiatives*". The gaps between the required and current levels of agility, in dealing with all the factors included in this group, were higher for Trust A, compared with Trust B:
    1. **Governmental Policies, Plans and Initiatives.**
    2. **The Introduction and Application of Hospital League Tables.**
    3. **Legislation / Directives Pressures.**

- The gap between the required and current levels of agility in dealing with "*Innovations in Medical Technology*" was higher in the case of Trust A, compared with Trust B.

- "*Supply*". The gap between the required and current levels of agility, in dealing with the following factor included in this group, was higher for Trust A, compared with Trust B:
  1. **Supply of Financial Resources.**

- The gap between the required and current levels of agility in dealing with "*The Impact of Social Services*" was higher in the case of Trust A, compared with Trust B.

- "*Demographics*". Finally, the gap between the required and current levels of agility, in dealing with the following factor included in this group, was higher for Trust A, compared with Trust B:
  1. **The Disease / Illness Profile.**

On the other hand, the gaps between the required and current levels of agility, in dealing with the following six environmental factors, were higher for **Trust B**, compared with Trust A. These are: -

1. **Competition from Private Sector Hospitals.**
2. **Competition from Other NHS Trusts / Hospitals.**
3. **Supplies of Professional Workforce.**
4. **Supply of Medical Equipment.**
5. **Population Profile.**
6. **The Media Reporting and Coverage of the NHS.**

This finding is strongly / further supported by results discussed earlier, concerning the levels of agility perceived by each Trust to be required in dealing with the twenty environmental factors, in that the ***levels of agility required***, in order to deal with fourteen environmental factors, are higher in the case of Trust A, than in the case of Trust B. These factors were highly similar to the ones, which Trust A experiences a higher level of insufficient agile response to changes in such factors, compared with Trust B (i.e. the gaps between the required and current level of agility in these fourteen factors are higher in the case of Trust A).

This clearly indicates that, overall, Trust A perceives that a higher level of agility is required from it, in order to be able to deal with changes in its environment, represented by these fourteen environmental factors, compared with Trust B.

On the other hand, the level of agility required from both Trusts to deal with *Potential competitors / Providers of secondary healthcare (Private Hospitals, Overseas Healthcare Providers, Other NHS Hospitals / Trusts)*, was the lowest among all the other factors. Also in a similar fashion, the gaps between the current and required levels of agility in responding to such factors were among the lowest, for both Trusts.

5.4.3 Significant Differences Emerging from Comparison between the Two Case NHS Trusts

The previous two sections (5.4.1 and 5.4.2), which have presented the analysis of the second research objective, included comparisons between the two NHS Trusts. Such comparisons were mainly based on highlighting both: similarities as well as differences between the two Trusts, in the course of:

- Exploring and identifying the degrees of: **importance**, **dynamism**, **unpredictability** as well as **uncertainty**, which each Trust perceives to be characterising the nature of changes in the environmental groups and factors affecting it.

- Exploring and assessing the **current level of agility**, at which each Trust perceives that it is responding to and dealing with the changes brought about by the environmental groups and factors affecting it, as well as the **level of agility** which each Trust perceives is **required/needed** on its part, in order to be able to respond to and deal with such environmental groups and factors.

As has been explained earlier, this research involves a comparison between two NHS Trusts: **Trust A**, which is rated as a "*one star, lower performing*" Trust, and **Trust B**, which is rated as a "*three star higher performing*" Trust, according to the NHS Performance Ratings published by the Commission for Health Improvement (CHI) (2003). Exploring whether there are significant differences between such two differently performing Trusts, in terms of the main concepts and issues concerning Organisational Agility being addressed in this research, provides useful and

interesting insights that may well explain such a difference in performance between these Trusts, from an Organisational Agility perspective/point of view. This in its own right is considered a major contribution of this study.

Based on this, and in order to achieve this purpose, the "Mann-Whitney U test" was employed. This test detects whether there are <u>statistically significant differences</u> between two samples, which are in the case of this research the responses collected from each of the two NHS Trusts. In this way, the test employed here detects whether there is a significant difference between the two Trusts, in terms of the statistical means representing the perceptions of respondents from each Trust, with regard to: each of the aforementioned dimensions characterising the nature of environmental change affecting them, as well as the current and needed/required levels of agility, in responding to such environmental change.

$\Rightarrow$ Note that the rationale for using this test is explained in sub-section 4.8.2: "The Rationale for Using the Mann Whitney U Test".

<u>First: - The Importance of the Effect of the Environment</u>**.**

Mann-Whitney U Test was conducted in order to detect whether there are statistically significant differences between the two Trusts, in terms of the degree of **importance** attached to: the *overall environment*, *environmental groups* making up such an overall environment, as well as the *environmental factors* included under these groups.

The results arrived at from conducting the Mann-Whitney U Test (**see Appendix F: Mann-Whitney U Test Checking for Significant Differences Between The Trusts, in Terms of Importance of the Environment**) show that the two Trusts significantly differ, in terms of the importance that each attaches to the following: -

a. Importance of the Overall Environment

Mann-Whitney U Test reveals that there is a significant difference between Trust A and Trust B, in terms of the importance attached to the effect of the overall environment, on the management and delivery of healthcare services provided by the Trust. Returning to table 5.13, it can be seen that the mean representing such an

importance, as perceived by each Trust, is clearly higher in the case of Trust A, compared with Trust B.

Based on these two results, it is concluded that such a significant difference is in favour of Trust A, in that <u>Trust A attaches a significantly higher importance to the overall effect of the environment, on its management and delivery of healthcare services, than Trust B</u>.

This finding has also been supported by a number of results. For example, table 5.15 presents a comparison between the two Trusts, in terms of the importance that each attaches to the effect of each of the seven environmental groups on it, and reveals that the means representing such an importance were higher for all the environmental groups in the case of **Trust A**, compared with **Trust B.** This clearly indicates that Trust A attaches higher importance to the impact of the overall environment, represented by each of these environmental groups, on its management and delivery of healthcare services, than Trust B. Also, a comparison between both Trusts, in terms of the means representing the importance attached by each Trust to the effect of each of the twenty environmental factors, shows that Trust A attaches higher importance to sixteen of these twenty factors, compared with Trust B that considers the importance of only four of these factors are higher in its case (see tables 5.16.a, 5.16.b, and 5.16.c).

b.   **Importance of Environmental Groups**

From the seven environmental groups representing the overall environment, the Mann-Whitney U Test reveals that there is a significant difference between Trust A and Trust B, in terms of the importance attached to the effect of one of these groups, which is that of the "Potential Customers / Users and Purchasers of Secondary Healthcare".

Returning to table 5.15, it can be seen that the mean representing such an importance is clearly higher in the case of Trust A, than Trust B. Based on this, it is concluded that such a significant difference is in favour of Trust A, in that <u>Trust A attaches higher importance to the effect of *Potential Customers*, represented by users and</u>

purchasers of secondary healthcare, on its management and delivery of healthcare services, than Trust B. In particular, this finding is further supported and elaborated upon when discussing the results of analysing the importance of each of the environmental factors.

c.   Importance of Environmental Factors

With regard to the factors representing potential customers / users and purchasers of secondary healthcare, the Mann-Whitney U Test shows that there is a significant difference between both Trusts, in terms of the importance attached to the effect of three of the four "purchasers of secondary healthcare". These are:

1.   **The requirements and expectations of General Practitioners.**
2.   **The demand made by General Practitioners.**
3.   **The requirements and expectations of Health Authorities.**

Such a difference is in favour of Trust A, in that the means representing the importance attached to each of these factors are all higher for Trust A, than for Trust B (see tables 5.16.a and 5.16.b). Based on this, it is concluded that Trust A attaches a a significantly higher degree of importance to the effect of these purchasers of secondary healthcare, on its management and delivery of healthcare, than does Trust B.

There were no significant differences between the two Trusts, in terms of the importance of the effect of users of their services, represented by patients, in that both had a similar perception of such an importance.

The Mann Whitney U Test also shows that there are significant differences between the two Trusts, in terms of the importance of three other factors, which are:

1.   **Supply of Medical Equipment.**
2.   **The Disease / Illness Profile.**
3.   **The Population Profile.**

The importance of the effect of all of these factors were significantly higher for Trust A, compared with Trust B (see table 5.16.b).

Second: - The Amount of Change Taking Place in the Environment.

Mann-Whitney U Test was conducted in order to detect whether there are statistically significant differences between the two Trusts, in terms of the **amount of change** perceived to be taking place in: the *overall environment*, the *environmental groups* making up such an overall environment, as well as the *environmental factors* included under these groups. The results arrived at from conducting the Mann-Whitney U Test (**see Appendix G: Mann-Whitney U Test Checking for Significant Differences Between the Trusts, in terms of Amount of Change in the Environment**) show that the two Trusts significantly differ, in terms of the following: -

a.   Amount of Change in the Overall Environment

The Mann Whitney U Test shows that there is no significant difference between the two Trusts, in terms of the amount of change that each perceives to be taking place in the overall environment affecting them. This is evidenced by the results presented in table 5.17, which show that both Trusts rated the amount of change taking place in the overall environment in a similar manner, with very similar means representing such an amount of change for each Trust.

b.   Amount of Change in Environmental Groups

From the seven environmental groups representing the overall environment, the Mann-Whitney U Test reveals that there is a significant difference between Trust A and Trust B, in terms of the amount of change perceived to be occurring in one of these groups, which is that of the "Governmental, Political and Legislative Factors".

Returning to table 5.19, it can be seen that the mean representing such an amount of change is clearly higher in the case of Trust A, than Trust B. Based on this, it is concluded that such a significant difference is in favour of Trust A, in that Trust A considers that a higher amount of change is taking place in Governmental, political and legislative factors, compared with Trust B.

c. Amount of change in Environmental Factors

The previous finding concerning Trust A's perception of a higher amount of change in Governmental, Political and Legislative Factors, compared with Trust B, is explained here, in that the Mann-Whitney U Test reveals a significant difference between the two Trusts, in terms of the amount of change perceived to be taking place in "*Legislation / Directives Pressures*", represented by the European Working Time Directive. Such a difference is in favour of Trust A, in that Trust A considers such directives-related pressures to be changing at a significantly higher pace than that perceived by Trust B. This is supported by table 5.20.b, which shows the mean representing such an amount of change for Trust A being higher than that for Trust B.

The Mann Whitney U Test also reveals that there is a significant difference between the two Trusts, in terms of two "purchasers of secondary healthcare", which are: "The requirements and expectations of General Practitioners" and "The requirements and expectations of Health Authorities". Trust A considers the requirements and expectations of both of these factors as changing at significantly higher pace than that perceived by Trust B.

Third: - The Degree of Unpredictability of Change Characterising the Environment.

Mann-Whitney U Test was conducted in order to detect whether there are statistically significant differences between the two Trusts, in terms of the **degree of unpredictability of change** perceived to characterise: the *overall environment*, the *environmental groups* making up such an overall environment, as well as the *environmental factors* included under these groups. The results arrived at from conducting the Mann-Whitney U Test (**see Appendix H: Mann-Whitney U Test Checking for Significant Differences Between the Trusts, in terms of Degree of Unpredictability of Change in the Environment**) show the following: -

a. Degree of Unpredictability of Change Characterising the Overall Environment

The Mann Whitney U Test shows that there is no significant difference between the two Trusts, in terms of the overall degree of unpredictability that each perceives to be characterising changes in the environment affecting them. This is evidenced by the results presented in table 5.21, which show that both Trusts have given a similar rating to such a degree of environmental unpredictability, with very similar means representing such a degree of unpredictability for each Trust.

b. Degree of Unpredictability of Change Characterising the Environmental Groups

In a similar fashion, no significant differences between the two Trusts were detected, in terms of their perceptions of the degree of unpredictability of change characterising each of the seven environmental groups.

c. Degree of Unpredictability of Change Characterising Environmental Factors

The results of the Mann Whitney U Test show that there were significant differences between Trust A and Trust B, in terms of their perceptions of the extent to which changes in three environmental factors are predictable.

- Trust A was significantly different from Trust B, in that it considered the changes in the "Use and Application of Hospital League Tables" to be significantly less predictable on its part, than did Trust B. This is supported by the means reflecting such a perception for each Trust, which are presented in tables 5.24.a and 5.24.b.

- Also, Trust A considered changes in the "Media Reporting and Coverage of the NHS" to be significantly less predictable on its part, than did Trust B. This is supported by the means reflecting such a perception for each Trust, which are presented in table 5.24.a.

- Finally, Trust B was significantly different from Trust A, in that it considered changes in its "Supplies of Professional Workforce" to be significantly less predictable than did Trust A. This is evidenced by the means presented in tables 5.24.a and 5.24.b reflecting such a perception for each Trust.

Fourth: - The Degree of Uncertainty Characterising the Environment.

Mann-Whitney U Test was conducted in order to detect whether there are statistically significant differences between the two Trusts, in terms of the **degree of uncertainty** perceived to characterise: the *overall environment*, the *environmental groups* making up such an overall environment, as well as the *environmental factors* included under these groups. The results arrived at from conducting the Mann-Whitney U Test (**see Appendix I: Mann-Whitney U Test Checking for Significant Differences Between the Trusts, in terms of Degree of Environmental Uncertainty**) show the following: -

a.   Degree of Uncertainty Characterising the Overall Environment

Results show that there is no significant difference between the two Trusts, in terms of the overall degree of environmental uncertainty that each perceives to be characterising the overall environment affecting them. This is evidenced by the results presented in table 5.25, which show that both Trusts have given a similar rating to such a degree of environmental uncertainty, with very similar means representing such a degree of uncertainty for each Trust.

b.   Degree of Uncertainty Characterising the Environmental Groups

In a similar fashion, no significant differences between the two Trusts were detected, in terms of their perceptions of the degree of environmental uncertainty characterising each of the seven environmental groups.

c.   Degree of Uncertainty Characterising Environmental Factors

The results from the Mann Whitney U Test show that there were significant differences between Trust A and Trust B, in terms of their perceptions of the extent of environmental uncertainty surrounding changes in four environmental factors. Such significant differences include the following: -

- The Mann-Whitney U Test shows that Trust A was significantly different compared with Trust B, in that it considered the degree of environmental uncertainty associated with "The Demand made by General Practitioners" to be significantly higher on its part, than did Trust B. This is supported by the means reflecting such a perception for each Trust, which are presented in table 5.28.a.

- Also, the Mann-Whitney U Test shows that Trust A was significantly different compared with Trust B, in that it considered the degree of environmental uncertainty associated with "The Use and Application of Hospital League Tables" to be significantly higher on its part, than did Trust B. This is supported by the means reflecting such a perception for each Trust, which are presented in table 5.28.a.

- Finally, Trust A considered the degree of environmental uncertainty associated with "Supply of Medical Equipment" to be significantly higher on its part, compared with Trust B, as the Mann-Whitney U Test shows. This is supported by the means reflecting such a perception for each Trust, which are presented in tables 5.28.a and 5.28.b.

- On the other hand, the Mann-Whitney U Test shows that Trust B considered the degree of environmental uncertainty associated with its "Supply of Professional Workforce" to be significantly higher than that perceived by Trust A to characterise its supplies of professional workforce. This is supported by the means reflecting such a perception for each Trust, which are presented in tables 5.28.a and 5.28.b.

Fifth: - The Current Level of Agility in Responding to and Dealing with Changes in the Environment.

Mann-Whitney U Test was conducted in order to detect whether there are statistically significant differences between the two Trusts, in terms of the current level of agility at which they are responding to and dealing with changes in: the *overall environment*, the *environmental groups* making up such an overall environment, as well as the *environmental factors* included under these groups. The results arrived at from conducting the Mann-Whitney U Test (see Appendix J: Mann-Whitney U Test Checking for Significant Differences Between the Trusts, in terms of Current Level of Agility in Dealing with the Environment) show the following:

a. Overall Current Level of Agility in Responding to Changes in the Overall Environment

Results from the Mann Whitney U Test show that there is no significant difference between the two Trusts, in terms of the overall current level of agility, at which both Trusts are responding to and dealing with changes in the overall environment affecting them. This is evidenced by the results presented in table 5.29, which show that both Trusts perceive that they are currently responding to and dealing with such changes in a similar manner, with very similar means representing such a current level of agility for each Trust.

b. Current Level of Agility in Responding to Changes in the Environmental Groups

From the seven environmental groups representing the overall environment affecting the Trusts, the Mann-Whitney U Test reveals that there is a significant difference between Trust A and Trust B, in terms of the current level of agility in responding to changes in one of these groups, which is that associated with "The Impact of Social Services".

Returning to table 5.32, it can be seen that the mean representing such an amount of change is clearly higher in the case of Trust B than Trust A. Based on this, it is concluded that such a significant difference is in favour of Trust B, in that Trust B is exerting a higher level of agility in dealing with the impact of social services, compared with Trust A.

c. Current Level of Agility in Responding to Changes in the Environmental factors

Consistent with the finding reported earlier, in that Trust B was exerting a significantly higher level of agility in dealing with the social services group, the Mann-Whitney U Test also shows that Trust B is exerting a significantly higher level of agility in dealing with the factor representing the social services group. Tables 5.38.a and 5.38.b present the means representing such current levels of agility for each trust.

On the other hand, the Mann-Whitney U Test reveals that Trust A is exerting a significantly higher level of agility in dealing with changes in "The Demographic Profile", compared with trust B. Tables 5.38.a and 5.38.b present the means representing such current levels of agility for each trust.

Sixth: - The Required / Needed Level of Agility in order to Respond to and Deal with Changes in the Environment.

The Mann-Whitney U Test was conducted in order to detect whether there are statistically significant differences between the two Trusts, in terms of the level of agility perceived to be required / needed on their parts, in order to be able to deal with and respond to: the *overall environment*, the *environmental groups* making up such an overall environment, as well as the *environmental factors* included under these groups. (**See Appendix K: Mann-Whitney U Test Checking for Significant Differences Between the Trusts, in terms of the Required Level of Agility in Dealing with the Environment**)

a. **Overall Level of Agility Required / Needed in order to Respond to Changes in the Overall Environment**

Results from the Mann-Whitney U Test reveal that there is a significant difference between Trust A and Trust B, in terms of the overall level of agility perceived to be required / needed in order to be able to deal with and respond to changes in the overall environment. Returning to table 5.30, it can be seen that the mean representing such a required level of agility, as perceived by each Trust, is clearly higher in the case of Trust A, compared with Trust B. Based on these two results, it is concluded that such a significant difference is in favour of Trust A, in that Trust A perceives that a significantly higher level of agility is required on its part, in order for it to be able to respond to changes in the overall environment affecting it, compared with Trust B.

This finding has also been supported by a number of results. For example, table 5.35 presents a comparison between the two Trusts, in terms of the level of agility that each perceives is required / needed on its part, in order to respond to changes in each of the seven environmental groups, and reveals that the means representing the required levels of agility in dealing with six of these seven groups are higher in the case of **Trust A**, compared with **Trust B.** This evidently demonstrates that, overall,

Trust A perceives that a comparatively higher level of agility is required from it, in order to be able to deal with changes in its environment, represented by these six environmental groups, compared with Trust B.

Also, comparisons between the two Trusts, in terms of the *gaps* between the required and current levels of agility in dealing with each of the seven environmental groups, indicate that the gaps between the required and current levels of agility, in dealing with five of these seven groups, are higher in the case of Trust A, than in the case of Trust B (see table 5.36). This suggests that a relatively higher *amount of insufficient agile response* to these groups exists in the case of Trust A, than in the case of Trust B, which requires from Trust A a higher level of agility in dealing with each of these groups, compared with Trust B. The identification of such groups, in which an insufficient level of agility exists, gives an indication of those areas, in which the performance of Trust A is lacking, as far as agility is concerned, compared with Trust B.

Further comparisons between the two Trusts, in terms of the means representing the level of agility perceived by each to be required to deal with each of the twenty environmental factors affecting them, reveals that the means of fourteen out of the twenty environmental factors were relatively higher in the case of **Trust A**, compared with Trust B (see tables 5.40.a, 5.40.b, 5.40.c). This provides strong evidence supporting the contention that Trust A requires a higher level of agility in dealing with the environment affecting it, compared with Trust B.

b. Level of Agility Required / Needed in order to Respond to Changes in the Environmental Groups

From the seven environmental groups representing the overall environment affecting the Trusts, the Mann-Whitney U Test reveals that there is a significant difference between Trust A and Trust B, in terms of the level of agility perceived to be required in responding to changes in two of these groups, which are: "Potential Customers / Users and Purchasers of Secondary Healthcare" and "The Impact of Social Services".

Returning to table 5.35, it can be seen that the means representing the levels of agility required in order to respond to each of these groups are clearly higher in the case of **Trust A**, than Trust B. Based on this, it is concluded that such a significant difference is in favour of Trust A, in that **Trust A** perceives that a significantly higher level of agility is required on its part, in order to be able to deal with and respond to changes in both: **"Potential Customers / Users and Purchasers of Secondary Healthcare"** and **"The Impact of Social Services".**

c.   Level of Agility Required / Needed in order to Respond to Changes in the Environmental Factors

Consistent with the finding reached earlier, in that Trust A perceives that a significantly higher level of agility is required on its part, in order to be able to respond to changes in "Potential Customers / Users and Purchasers of Secondary Healthcare", the results also show that there are significant differences between the two Trusts, in terms of the levels of agility perceived to be required in dealing with the purchasers of secondary healthcare included as part of the "Potential Customers" group. These purchasers include the:

1.   **Requirements and expectations of GPs.**
2.   **Demand made by GPs.**
3.   **Requirements and expectations of PCTs.**
4.   **Requirements and expectations of HAs.**

Tables 5.40.a and 5.40.b show that the means representing the levels of agility required to deal with each of these factors are all higher in the case of Trust A, compared with Trust B, which indicates that the significant differences earlier discussed are in favour of Trust A. Thus, Trust A perceives that a significantly higher level of agility is required on its part, in order to be able to deal with and respond to changes in the aforementioned *purchasers of healthcare*, than Trust B.

In addition, results from the Mann Whitney U Test reveal significant differences between the two Trusts, in terms of the levels of agility perceived to be required in dealing with two factors, which are:

1.   **Supply of Financial Resources.**
2.   **Impact of Social Services.**

Tables 5.40.a and 5.40.b show that the means representing the levels of agility required to deal with each of these two factors are higher in the case of Trust A, compared with Trust B, which indicates that the significant differences earlier discussed are in favour of Trust A. Thus, Trust A perceives that a significantly higher level of agility is required on its part, in order to be able to deal with and respond to changes in these two factors, than Trust B.

5.5 Summary and Conclusions

5.5.1 The Perception and Understanding of Organisational Agility

The first research objective is concerned with the basic, but nevertheless vital, issue of the conceptualisation, perception and understanding of organisational agility, on the part of healthcare organisations represented by the case NHS Trusts. A number of major findings have emerged concerning definitions of agility, which appear to be the most suitable / relevant to the context of enabling hospital Trusts, as organisations concerned with the management and delivery of healthcare services, to respond to change, as well as those definitions seen to be the least suitable. These findings are presented as follows: -

First: - Two definitions of organisational agility emerged as being the most suitable / relevant (see table 5.8). These are:

1. **Definition (b): -** "**The ability to thrive in an environment of continuous and unpredictable change**".

2. **Definition (e): -** "**The ability to co-ordinate and integrate selectively physical resources, people and processes, knowledge and skills- regardless of their location: whether within an organisation or in other organisations: suppliers, partners, or even customers themselves- required to create, produce, deliver and support a constantly changing mix of goods and services for changeable markets**".

Choosing the two above definitions of agility as the most suitable and relevant ones to a healthcare organisation context suggests that in addition to the fact that both Trusts perceive organisational agility as the ability to thrive in an environment of continuous and unpredictable change, they believe that the means to achieve this is through

co-ordinating and integrating different types of resources, whether those are internal or external to the organisation, in order to thrive in a changing environment by supporting a constantly changing need for its services. In other words, complementing definition b with definition e, which was evident in both Trusts, suggests that both Trusts believe that the proactive approach of co-ordinating and integrating resources and capabilities wherever they are is required towards seeking to thrive and succeed in an environment of continuous and unpredictable change. This view of agility as requiring such a co-ordination and integration of different types of resources supports the important role of management in being able to dynamically and effectively manage and co-ordinate various types of resources/capabilities, in the vein of maintaining a flexible and responsive delivery of services in a changing environment, thus facilitating and promoting organisational agility.

Second: - Two definitions of organisational agility emerged as being the least suitable / relevant, to the particular environment of healthcare service delivery. These are:

1. <u>**Definition (a)**</u>**: "An organisation-wide capability to respond rapidly to market changes and to cope flexibly with unexpected change in order to survive unprecedented threats from the business environment."**

2. <u>**Definition (c)**</u>**: "The successful exploitation of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment."**

Reflecting the reasons given by these respondents and interviewees for choosing these definitions as the least suitable, the major theme that emerges quite evidently is that such definitions (a and c) heavily emphasise the market and business related terms and environments, which people working in healthcare organisations feel to be irrelevant to healthcare and the type of environment in which they operate. Thus, instead of focusing too much on threats emanating from competition and the need to survive in a business market type environment, one respondent from *NHS Trust B* indicated that the threats and pressures are **"More indirect from Public Sector Bureaucracy where quality of service takes precedence over survival or maximisation of profit"** (Manager, NHS Trust B).

In this way, an important conclusion emerging is that the terminology associated with competition, markets and customers, which emanate from business (service and/or manufacturing) contexts is not well-received by people working in healthcare organisations. They acknowledge that although they had to respond to change, such change did not emanate from a free market, but that such change was primarily related to changing objectives and targets being imposed by central Government, among other parties.

Based on this extremely important distinction between the special context of healthcare and that of business, interviewees from both Trusts have highlighted the differences between healthcare and business, and emphasised the sensitive context of healthcare organisations, which is reflected in their ethos of care and humane treatment away from considerations of profit or competition. Such ethos represents the fundamental philosophy behind establishing the NHS, which is still deeply engrained within the psyche of professionals working in healthcare to the extent that they react quite sensitively to new concepts being adopted for implementation, from the private sector or business.

Third: - The research has developed a definition of organisational agility and subsequently tested its acceptance on the part of the case NHS Trusts participating in this study, through the self-completion questionnaires. Such a testing was in the form of asking respondents to indicate the extent to which they believed such a suggested definition, developed by the researcher, was suitable for use within their hospitals, for explaining what organisational agility means.
This definition is:
"The ability of the organisation to thrive in an uncertain environment that is characterised by dynamic and unpredictable change, through a set of capabilities which enable it to respond and adapt to various sources of change in the environment".

Results have strongly supported such a definition focused on healthcare organisations, in that it has been embraced by both Trusts, with very similar percentages (**71.4%** of respondents from **NHS Trust A** and **70.4%** from **NHS Trust B** indicating that such a definition was most suitable for use within their Trusts, when explaining what organisational agility means).

Based on the previous findings, it is concluded that the importance of reaching a relevant understanding and a definition of this concept, which is suitable as well as sensitive to the special context and nature of organisations operating within a particular industry or sector, is considered to be absolutely essential, if there is to be an effort towards introducing new concepts such as organisational agility into the organisations and seeking to gain the commitment of organisational members towards realising such a desired organisational state.

The basic idea behind that is to ensure that the right words, point of emphases as well as desired end results, related to the conceptualisation of organisational agility, are effectively communicated to members of an organisation operating within a particular industry / sector, in a manner that would be understandable and that would strike a chord with the tacit knowledge, experiences and, hence, cognitive bases of the employees, in an effort designed to acquaintance or familiarise them with the concept and idea of agility, as a first step to motivating and galvanising their efforts and commitment to realising and attaining such an agile organisational state. <u>In particular, the following conclusions were reached</u>: -

- The culture of people working in NHS / healthcare organisations is such that it favours simple, understandable and jargon-free concepts and terminology, which are sensitive to the basic values and ethos of providing healthcare to anyone who may need it, away from the considerations of profit, competition or customer/client relationship.

- The environment affecting healthcare organisations / NHS Trusts is ever changing and dynamic. Survival is simply not enough. Instead, the ability to thrive and challenge is what truly reflects agility.

- The importance of co-ordinating and integrating various types of resources, capabilities and skills, whether they are located within the organisation or outside it. Sharing resources among others in a networking manner is particularly emphasised, since this reflects the complexity of the NHS.

5.5.2 The Need for Organisational Agility, as essentially being triggered by the nature of environmental change

The second research objective addresses the importance of agility and, thus, the need for it, on the part of the two NHS Trusts. This need for agility is linked with continuous and often unpredictable changes in the requirements, expectations, as well as pressures emanating from the stakeholders or environmental parties, which have vested interests in the operation and performance of these Trusts. In this way, the second research objective was concerned with addressing the suggested link between the continuously changing and, often, unpredictable nature of today's environment affecting healthcare organisations operating within the NHS, and their need for Organisational Agility; a proposition that has been highlighted and supported in the course of exploring the suitability and perception of organisational agility, on the part of healthcare organisations, which was earlier addressed through the first research objective.

Such a link between the environment affecting the NHS Trusts and their subsequent need for agility, was addressed through exploring, in depth, both: -

- The importance, dynamism, unpredictability as well as uncertainty of *the main environmental parties* suggested to be affecting the NHS Trusts and, thus, driving their need for Organisational Agility, and

- The perceived current *level of agility* at which each Trust is dealing with changes in each of the main environmental parties affecting it, as well as the perceived needed/required *level of agility* for dealing with such environmental parties, for each of the two NHS Trusts. The *gap* between the current level, at which each Trust is responding to environmental change in an agile manner, and the level of agile response perceived by each to be required, was also measured. This is in order to assess whether the Trusts are *sufficiently / insufficiently responding to and dealing with changes in the environment affecting them, in an agile manner*.

In order to achieve this objective, twenty environmental factors were identified to be affecting the management and delivery of healthcare services on the part of NHS Hospital Trusts, in general. These were categorised under seven main groups. The seven environmental groups and the twenty factors, which they comprise, were

presented in table 5.12. Subsequently, this table is reproduced here for presentation. Note that the word "potential" was used in this context in the description of both: customers and competitors, since business and/or market related notions or terms were found not to be favourably accepted by healthcare organisations, according to the major findings emerging from analysis of the primary data collected to fulfil the first research objective.

Potential Customers / Users and Purchasers of Secondary Healthcare
1. The Requirements and Expectations of Patients
2. The Demand made by Patients on service(s) provided by the Trust
3. The Requirements and Expectations of General Practitioners
4. The Demand made by General Practitioners on service(s) provided by the Trust
5. The Requirements and Expectations of Primary Care Trusts
6. The Requirements and Expectations of Health Authorities
Potential Competitors / Providers of Secondary Healthcare
1. The Emergence of new Competitors in the form of Private Sector Hospitals
2. The Emergence of new Competitors in the form of Overseas Healthcare Providers
3. The Emergence of new Competitors in the form of Other NHS Trusts/Hospitals
Governmental / Political and Legislative Factors
1. Governmental Policies, Plans and Initiatives
2. The Use and Application of Hospital League Tables
3. Legislation/Directives Pressures (e.g. European Working Time Directive)
Technology
1. Innovations in Medical Technology (e.g. New Drugs; New Methods of Diagnosis and Treatment)
Supply
1. Supplies of Workforce (professional staff including consultants, doctors, nurses)
2. Supply/Availability of Medical Equipment
3. Supply of Financial Resources/Public Funding
Social Services
1. The Impact of Social Services
Demographic Factors
1. Disease/Illness Profile (Emergence/Re-emergence of Diseases/Illnesses)
2. Population/Demographic Profile (Age, Immigration, Distribution of Population)
3. The Media Reporting and Coverage of the NHS

5.5.2.1 <u>Major Common Findings Between the Two Trusts</u>

Findings emerging from exploring the nature of the environment affecting the two Trusts, as well as their perceived need for organisational agility, strongly indicate that they both perceive that there is a clear need for a higher level of agile response on their parts, in dealing with the requirements placed on them by an *environment* that is characterised by: a *highly important* overall effect on the well-being of these Trusts in managing and delivering their healthcare services, as well as by reasonably *dynamic* and *uncertain* changes in its requirements and expectations. Specifically, such findings are summarised in table 5.43.

Dimension	Common Findings between the Trusts
Importance of the Effect of the Environment, on the management and delivery of healthcare services provided by the Trust	⇒ Both NHS Trusts consider the overall impact of the environment, in terms of its effect on their management and delivery of healthcare services, as being highly important.
	⇒ Both Trusts have considered the importance of the effect of all but one of the seven environmental groups representing the overall environment as being high.
	⇒ Respondents from both Trusts have also rated the importance of all but three of the twenty environmental factors making up such environmental groups as high.
	⇒ The "*Potential Competitors to NHS Trusts / other providers of secondary healthcare*" group, along with the three factors included in it (*i.e. private sector hospitals, overseas healthcare providers, other NHS Trusts*) were the only ones perceived by both Trusts to have little importance, in terms of the effect on their healthcare management and delivery.
	⇒ The importance of the effect of the following four environmental factors, on the Trusts' management and delivery of their healthcare services, was perceived by both of them to be very high. These factors are: • Governmental Policies, Plans and Initiatives • Supplies of Professional Workforce (consultants, doctors, nurses, for example) • Supply of Financial Resources/Public Funding • The Requirements and Expectations of Patients
Amount of Change Taking Place in the Environment	⇒ Both Trusts perceive the overall amount of change / dynamism taking place in the environment affecting them as reasonably high.
	⇒ Both Trusts considered changes associated with six out of the seven environmental groups, representing the overall environment affecting them, to range from moderate to high.
	⇒ Also, both Trusts considered most of the environmental factors affecting them to experience a moderate to a very high amount of change (sixteen factors for Trust A, thirteen factors for Trust B).
	⇒ Three main groups particularly emerged as experiencing the highest amount of change, as perceived by both Trusts. These are: • Governmental and Legislative Factors (Governmental policies and initiatives concerning the NHS, use and application of Hospital League Tables, legislation/directives pressures i.e. European working time directive) • Technology (Innovations in medical technology, i.e. new drugs, new methods of diagnosis and treatment), and • Potential Customers/Users and Purchasers of Secondary Healthcare (Requirements and expectations of patients, General Practitioners, Primary Care Trusts, Health Authorities)
	⇒ "*Potential Competitors to NHS Trusts / other providers of secondary healthcare*" was the only group considered by both Trusts to experience a low amount of change, in that no rapid emergence of such alternative providers of secondary healthcare was expected.
	⇒ Governmental plans, policies and initiatives concerning the NHS were considered by both Trusts to be the environmental factor experiencing the highest amount of change.
Degree of Unpredictability of change in the Environment	⇒ Both Trusts consider the overall degree of unpredictability characterising changes in their environments as moderate.
	⇒ Both Trusts perceive the nature of changes taking place in four environmental groups to be the most unpredictable. These are: • Technology (Innovations in Medical Technology, i.e. new drugs, new methods of diagnosis and treatment), • Demographic Factors (e.g. disease / illness profile, population / demographic profile, the media reporting and coverage of the NHS), • Governmental, political and legislative factors, and • Potential Customers / Users and Purchasers of Secondary Healthcare.
	⇒ Emergence of private sector hospitals, overseas healthcare providers and other NHS Hospitals as competitors was perceived by both Trusts to be fairly predictable.

Dimension	Common Findings between the Trusts
Degree of Uncertainty surrounding changes in the environment	⇒ Both Trusts consider the degree of uncertainty surrounding changes in their environment as above moderate.
	⇒ Changes associated with three main environmental groups were considered by the Trusts to be the main sources of environmental uncertainty affecting them. These groups subject of these changes are: • Technology (Innovations in Medical Technology, i.e. new drugs, new methods of diagnosis and treatment), • Governmental, political and legislative factors, and • Potential Customers / Users and Purchasers of Secondary Healthcare.
	⇒ Changes associated with the two factors of: Governmental Policies, Plans and Initiatives concerning the NHS, and Innovations in Medical Technology, were considered by both Trusts as being characterised with the highest degrees of uncertainty.
	⇒ The following four factors were not considered by both Trusts to constitute a source of uncertainty. These are: • Population / Demographic Profile • The emergence of new Competitors (Private Sector Hospitals) • The emergence of new Competitors (Other NHS Trusts/ Hospitals) • The emergence of new Competitors (Overseas Healthcare Providers)
The ***Current Level of Agility*** in Responding to and Dealing with Changes in the Environment	⇒ Both Trusts have rated the current level of agility, at which they are responding to and dealing with changes in the overall environment affecting them, as moderate.
The ***Required / Needed Level of Agility*** in order to Effectively Respond to Changes in the Environment	⇒ The level of agility perceived by the Trusts to be required / needed on their part, in order to effectively respond to, and thus thrive in, the overall environment affecting them, was significantly high. ⇒ The Trusts have considered all but one of the seven environmental groups as requiring quite a high level of agility. ⇒ The only group perceived to require the least level of agility in responding to its changes is "Potential Competitors / Providers of Secondary Healthcare". ⇒ Both Trusts perceive all but three, of the twenty environmental factors affecting them, as requiring quite a high level of agility on their part. The remaining three factors requiring the least level of agility are those related to other "Providers of Secondary Healthcare".

Table 5.43: "Common Findings Between The Trusts, in terms of the nature of their environment as well as levels of agility."

5.5.2.2 Major Significant Differences Between the Two Trusts

Table 5.44 summarises the significant differences between the two Trusts, in terms of

each of the dimensions exploring the nature of the environment affecting these Trusts,

as well as their current and required perceived levels of organisational agility.

302

	Significant Differences Between the Trusts	
Dimension	**Trust A** (One Star, Lower Performing Trust)	**Trust B** (Three Star, Higher Performing Trust)
Importance of the Effect of the Environment on the management and delivery of healthcare services provided by the Trust	⇒ A significantly more important impact/effect of the overall environment, on its management and delivery of healthcare services. (A significantly higher importance of the impact/effect of the overall environment, on its management and delivery of healthcare services) ⇒ A significantly more important impact/effect of "Potential Customers/Users and Purchasers of Secondary Healthcare", on its management and delivery of healthcare services. ⇒ A significantly more important impact/effect of the demands and requirements of three *purchasers of secondary healthcare*, on its management and delivery of healthcare services: • The requirements and expectations of General Practitioners. • The demand made by General Practitioners. • The requirements and expectations of Health Authorities. ⇒ A significantly more important impact/effect of: • Supply of Medical Equipment. • The Disease / Illness Profile. • The Population Profile, on its management and delivery of healthcare services.	No significant differences compared with Trust A
Amount of Change Taking Place in the Environment	⇒ Significantly more changes in the requirements and demands placed by "Governmental, Political And Legislative Factors". ⇒ Significantly more changes in the pressures and requirements placed by European Union Directives, i.e. working time directive. ⇒ Significantly more changes in the requirements and expectations of two "Purchasers of Secondary Healthcare": • General practitioners. • Health Authorities.	No significant differences compared with Trust A
Degree of Unpredictability of change in the Environment	⇒ Significantly less predictable changes in two environmental factors: • Use and Application of Hospital League Tables • Media Reporting and Coverage of the NHS	⇒ Significantly less predictable changes in one environmental factor: • Supplies of professional workforce, i.e. consultants, doctors, nurses.
Degree of Uncertainty surrounding changes in the environment	⇒ Significantly more uncertainty surrounding changes in three environmental factors: • The Demand made by General Practitioners • The Use and Application of Hospital League Tables • Supply of Medical Equipment	⇒ Significantly more uncertainty surrounding changes in one environmental factor: - Supplies of Professional Workforce, i.e. consultants, doctors, nurses.

Dimension	Trust A (One Star, Lower Performing Trust)	Trust B (Three Star, Higher Performing Trust)
The *Current Level of Agility* in Responding to and Dealing with Changes in the Environment	⇒ Exerts a significantly higher level of agility in dealing with changes in the "Population / Demographic Profile".	⇒ Exerts a significantly higher level of agility in dealing with the "Impact of Social Services".
The *Required / Needed Level of Agility* in order to Effectively Respond to Changes in the Environment	⇒ Requires a significantly higher level of agility in order to be able to effectively respond to changes in the overall environment affecting it.	
	⇒ Requires a significantly higher level of agility in order to be able to effectively respond to changes in both: • "Potential Customers/Users and Purchasers of Secondary Healthcare". • "The Impact of Social Services".	
	⇒ Requires a significantly higher level of agility in order to be able to effectively respond to changes in the requirements and expectations of its "Purchasers of Secondary Healthcare". These are: • Requirements and expectations of GPs. • Demand made by GPs. • Requirements and expectations of PCTs. • Requirements and expectations of HAs.	Requires a significantly higher level of agility in order to be able to effectively respond to changes in two environmental factors: • Supply of Financial Resources. • Impact of Social Services.

Table 5.44: "Significant Differences between the Case NHS Trusts, in terms of the Nature of the Environment affecting them, as well as their Current and Required / Needed Levels of Agility."