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Impact of Enterprise Social Media Platforms on Integrating Inter-functional Coordination: A Moderated-Mediation effect of Optimising Staff Capabilities 'Empirical Study on ICT SMEs at Gulf Cooperation Council Area'

Emad Tariq

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of Doctor of Philosophy

University of Huddersfield

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Abstract

Academics acknowledged the positive correlation between Market Orientation (MO) Theory and business profitability at Small and Medium Enterprises. Marketing scholars emphasized on the magnitude of Integrating Inter-Functional Coordination in order to improve staff performance, as well as, to create superior customer value. However, the research identified a spotting gap in marketing literature that neglect the topic of Integrating Inter-Functional Coordination (IIFC) with the Market Orientation (MO) theory. Scholars defined the Integration of Inter-Functional Coordination as optimisation of dynamic capabilities such as staff engagement and knowledge sharing to improve performance of interdepartmental functions. In addition, academics posit that Information Technology such as Enterprise Social Media platforms crucially assist to improve staff capabilities through increasing engagement and knowledge sharing among staff. Consequently, the research developed a conceptual framework that aims to evaluate the impact of using Enterprise Social Media platforms to Integrate Inter-Functional Coordination through the inclusion of the indirect interactive moderated-mediation effect of staff capabilities. Online survey questionnaire designed and submitted to Information Technology SMEs at Gulf Cooperation Council area and which consists six countries (Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Oman and Bahrain). Data gathered and screened from total of 684 respondents at ICT SMEs in GCC area. The research adopted Structural Equation Modelling with AMOS for data analysis in order to analyse complex interactions relationship between latent and observed variables at the framework. Four hypotheses are tested and results indicated a full significant indirect interactive moderated-mediation effect of optimizing staff capabilities through the impact of using enterprise social media platforms to integrate inter-Functional coordination. The research contributes to the knowledge of marketing literature through the information technology context with the inclusion of strategic management approach. Interestingly, a recent research identified that one of the main challenges facing the performance of the SMEs is due to the lack of optimisation of staff capabilities. This research presented a theoretical framework and finding that provides an optimization of staff capacities. Therefore, this research may present a second potential contribution to literatures of strategic management through the findings that lead to optimise staff capabilities.

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Chapter One

Introduction

1.1 Preliminary Introduction

This research aims to contribute to the knowledge of the marketing literatures through the context of information technology literatures with the inclusion of the strategic management approach. Nicholson et al. (2018) defines the incremental contribution as “a contribution predicated on incremental originality that is based on a traditional gap spotting approach in reviewing literature” (Nicholson, LaPlaca, Al-Abdin, Breese, & Khan, 2018, p. 208). This research reviews many marketing literatures and identifies a gap that neglect spotting the topic of Integrating Inter-Functional Coordination (IIFC) within the market orientation theory (Al-Nsour, 2017; Grootveld, 2016; Roersen, Kraaijenbrink, & Groen, 2013). Likewise in practice, the International Telecommunication Union (ITU) as a parent organization of the United Nations Economic and Social Council has published a detailed report about the Information and Communication Technology (ICT) enterprises worldwide, and which includes a major challenge in integrating the inter-functional coordination among engineers that working at a rural remote sites for installation and configuration purposes with their supervisors in different location in order to ensure an up to date and compatible process (ITU, 2017, p. 28). Academics emphasize on the magnitude of integrating inter-functional coordination at the market orientation theory that can significantly improves employee performance, as well as, lead to increase financial growth at organizations (Jugend, Araujo, Pimenta, Gobbo Jr, & Hilletofth, 2018; Murillo-Oviedo, Pimenta, Hilletofth, & Reitsma, 2019; Sofijanova, Marjanova, Davcev, & Temjanovski, 2015; Wang et al., 2017). Based on aforementioned, the research aims to contribute to the market orientation theory thought the topic of integrating inter-functional coordination. In other words, the research aims to evaluate the influence of information technology such as Enterprise Social Media Platforms (ESM) in order to contribute to the market orientation theory by achieving integration of inter-functional coordination with the inclusion of the moderated-meditation effect of Optimizing Staff Capabilities (OSC). In addition, the research aims to contribute practically to Information and Communication Technology (ICT) small and medium enterprises with the aim of presenting a solution by integrating inter-functional coordination between engineers who work at rural remote sites with their managers at other locations at Gulf Cooperation Council (GCC) area.

1.2 Background in the Arab Gulf Corporation Council (GCC) Area

The Arab Gulf Cooperation Council (GCC) is an intergovernmental political and economic area which includes six countries (Saudi Arabia, the United Arab Emirates, Qatar, Kuwait, Bahrain, and Oman) (WBG, 2018, p.23). In January 2008, the GCC area established a fully integrated common market considered as a single market (likened to the European Union) which allows free movements to citizens, goods, and access to education and capital among these countries (Hertog, 2012, p.12). The GCC area economically depends on oil export as the main source of national income (Cummings, 2018; Hertog, 2012; Wiseman, 2012). Academic and economic reports indicated that because of a decrease in oil price, the area is facing serious economic challenges that require governments to take necessary actions to maintain economic growth (Aljazeera, 2016; BLOOVO, 2017; Cummings, 2018; UNDP, 2017).

Academics claimed that small and medium enterprises represent 90% of the total number of enterprises in the GCC area and play a crucial role in increasing economic growth (Alaraby, 2017; Gherghina, Botezatu, Hosszu, & Simionescu, 2020; Staples, 2018; Tripathi, 2019; Wehbe, 2017). However, governmental and economic reports claimed that SMEs' contribution in the GCC area represents only 2.5% of the employment rate (2.6 million), while that of small and medium enterprises in the European Union (EU) reached 56% (94 million) in 2017 (DOED, 2017; Jadwa, 2019; NationalFunds, 2018; SMEA, 2018; UNDP, 2017). Scholars and governments admitted that small and medium enterprises in the GCC area require to seek new ideas to develop performance and enhance economic growth (Al Suhaimi, 2018; Rasheed, Siddiqui, Mahmood, & Khan, 2019; Tripathi, 2019). Academics suggested a vital method to increase growth and financial performance for SMEs focusing on developing their marketing (Katsikeas, Morgan, Leonidou, & Hult, 2016; Pizzi, 2018; Van Gijsel, 2012). Philip (2017) posited that marketing has a direct impact on financial performance (Philip, 2017, p.127).

1.3 Small and Medium Enterprise (SMEs)

For the past few decades, Small and Medium Enterprises (SMEs) have been considered the leading engine in worldwide economic development and attracted fundamental consideration by researchers, academics, and practitioners (Gherghina et al., 2020; Love & Roper, 2015; Tripathi, 2019; Zafar & Mustafa, 2017). Gherghina et al. (2020) argued that SMEs are a crucial indicator of a country's economic development that have a significant impact on the country's growth (Gherghina et al., 2020, p.346). Scholars posited that

small and medium enterprises can assist in creating job opportunities and contribute to poverty alleviation in developing countries (Ali, 2013; Maksimov, Wang, & Luo, 2017; SANYAL, HISAM, & BAAWAIN, 2020). The definitions of SMEs differ from one country to another depending on various criteria, such as the number of employees, sales revenue, or total assists (Vaart, 2008, p.6). However, because of confidentiality and the lack of financial data of SMEs in the GCC area, most bodies in the private and public sectors deal with SMEs based on the number of employees (Hertog, 2012, p.9). Table (1.1) below illustrates the categorization of SMEs in GCC area. This research identifies the small and medium enterprises as an entity that includes 5–200 employees in Gulf Cooperation Council (GCC) area. Academics argued that information technology enterprises must be more effective when addressing the factor of implementing innovation technology tools (Mack, Marie-Pierre, & Redican, 2017; Meske, Wilms, & Stieglitz, 2019; Recker, Malsbender, & Kohlborn, 2016).

Mack et al. (2017) claimed that information and communication technology firms are more influential in online innovation platforms adoption than other sectors (Mack et al., 2017, p.122). Interestingly, scholars found that the information and communication technology sector is considered the main gate to introduce innovation technology such as enterprise social media platforms to other business sectors. For example, academics posited that the information and communication technology sector enable industries to make important contributions to economic growth through the implementation of digital platforms that increase the performance of firms (Bianchi, 2017; Henry-Nickie, Frimpong, & Sun, 2019; McGinnis, Goolsby, & Olsen, 2009). Baporikar (2020) found that the information technology has a strong positive impact on developing the health sector (Baporikar, 2020, p.258). In addition, the researcher has 15 years of experience in the information technology sector. Therefore, the research focused on small and medium enterprises at the information and communication technology sector in the GCC area. The sector consists of small and medium enterprises that have activities in telecom, internet, and network service providers, network hardware distributors and wholesalers, hardware resellers, software resellers, computer distributors and wholesalers, and IT consultancy companies.

Table (1.1): The Categorization of SMEs in GCC area

Bahrain	5–49	265,000–2.6M	50–250	2.6M–3.3M
Saudi Arabia	5–49	27,000–1.3M	50–200	1.3M–13.3M
Oman	5–49	65,000–1.0M	50–200	650,000–3.3M
United Arab Emirates	5–49	50,000–1.3M	50–200	1.3M–13.3M
Kuwait	5–49	50,000–1.0M	50–200	1.0M–3.3M

Academics posited that the world wide small and medium enterprises at the GCC area face various challenges such as the lack of financial funds (Al-Nsour, 2017; Al Suhaimi, 2018; Fakieh, Busch, & Blount, 2020; Manville, Papadopoulos, & Garengo, 2019; Nasr & Rostom, 2013; Wehbe, 2017). However, marketing academics argued that small and medium could adopt higher growth rates by adopting new marketing strategies to enhance their performance and financial profits (BLOOVO, 2017; Guastella & Menghi, 2017; Iliev, 2019; Rudawska & Renko, 2018; Simpson, Padmore, Taylor, & Frecknall-Hughes, 2006; C. Wilson & Wilson, 2017). Consequently, small and medium enterprises need to adopt low-cost performance development plans to boost their growth and create better revenue. Scholars acknowledged the magnitude of using information and communication technology platforms to facilitate rapid responses to customers as well as create superior competitive advantage over other SMEs (Dewnarain, Ramkissoon, & Mavondo, 2019; Franco & Garcia, 2017; Gërguri, Ramadani, Abazi-Alili, Dana, & Ratten, 2017; Hagsten & Kotnik, 2019).

Rehm and Goel (2017) claimed that information technology platforms can create integration at work through improving employees' capabilities and which lead to increase performance (Rehm & Goel, 2017, p.450). Giniuniene and Jurksiene (2015) claimed that using innovative information technology tools assists in developing staff capabilities such as staff knowledge sharing, which positively impacts operations in these organisations (Giniuniene & Jurksiene, 2015, p.991). Marketing academics found that information and communication technology tools such as enterprise social media platforms increase employees' performance, which helps to reduce their turnover rate (Yingjie, Deng, & Pan, 2019, p.991). However, other academics argued that 92% of businesses in GCC countries have implemented ESM platforms but are not effectively using such platforms to develop their performance (Bakar, Ahmad, & Ahmad, 2018; King, 2015).

1.4 Diffusion of Innovation (DOI) through Enterprise Social Media (ESM) Platforms

Tresna (2019) found that adopting information and communication technology platforms enhance the performance of small and medium enterprises (Tresna, 2019, p.27). Huda (2019) concluded that using information and communication technology platforms such as enterprise social media platforms will enhance innovation diffusion through staff interactions and improve job performance (Huda, 2019, p.189). Bala and Feng (2019) claimed that ESM platforms have been widely accepted in businesses to facilitate innovation diffusion and interactions that enhance performance at large, small, and medium enterprises (Bala & Feng, 2019, p.118). Academics posited that using enterprise social media platforms has a positive impact on staff job satisfaction (Hanna, Kee, & Robertson, 2017; Lu & Pan, 2019; Nolinske, 2018) and enhances competitive advantage (Bakri, 2017; Singla & Apoorv, 2015; Zafar & Mustafa, 2017). Interestingly, some scholars concluded that using ESM platforms has a positive impact on employees' capabilities, such as increasing engagement as well as improve knowledge sharing among employees (Davison, Chen, Wei, & Rice, 2019; Estell & Davidson, 2019; Lu & Pan, 2019; Zhou, Jeyaraj, Shang, Hu, & Sun, 2019). However, strategic management studies found that such staff knowledge sharing are crucial moderators as well as have a mediation effect on the relationship between using information technology platforms and improving staff performance (Cai, Huang, Liu, & Wang, 2018; Ding, Liu, Huang, & Gu, 2019; Hernández-Linares, Kellermanns, & López-Fernández, 2020).

1.5 Staff Capabilities (SC)

Academics of strategic management found that Staff Capabilities (SC) are vital dynamic elements that improve firms' performance as well as assist in obtaining sustainable competitive advantage (Bitencourt, de Oliveira Santini, Ladeira, Santos, & Teixeira, 2019; Hernández-Linares et al., 2020; Teece, 2019; Ying, Hassan, & Ahmad, 2019). SC are defined as the abilities of employees to perform job tasks through staff engagement and knowledge sharing to achieve the firms' optimal performance (Barrales-Molina, Montes, & Gutierrez-Gutierrez, 2015; Christensen, Dyrstad, & Innstrand, 2018; Johnson, 2017; Jorge, Coelho, & Moutinho, 2018; O'Reilly, Robbins, & Scanlan, 2019). Scholars claimed that the Optimisation of Staff Capabilities (OSC) is crucial to enhance employee performance as well as create superior customer value (Chuang & Lin, 2017; Mishra, Luo, Hazen, Hassini, & Foropon, 2018; Nason & Wiklund, 2018; Wohlgemuth,

Wenzel, Berger, & Eisend, 2019). Other scholars revealed that the Dynamic Capabilities (DC) of employees, such as Staff Knowledge Sharing (SKS) that has a direct vital impact on increasing interactions as well as improving firms' performance (Linden, Bitencourt, & Muller Neto, 2019; O'Reilly et al., 2019; Teece, 2018). Mani and Mishra (2019) claimed that increasing capability of Staff Engagement (SE) is crucial among employees to communicate more efficiently and enhance staff performance (Mani & Mishra, 2019, p.187). Academics focused on the moderator as well as mediation effects of staff capabilities in developing staff performance in firms (Bykova & Jardon, 2018; Danso, Poku, & Agyapong, 2017; Opitz, Chaudhri, & Wang, 2018) and increasing staff satisfaction and loyalty (Ismail, 2017; Seo & Park, 2018; Ullah & Ahmad, 2017). Bolda et al. (2018) posited that staff knowledge sharing crucially mediates the relationship between technical support and sales teams at information and communication technology enterprises (Bodla, Tang, Jiang, & Tian, 2018, p.728). Chen et al. (2018) argued that the influence of using ESM platforms on reducing workload depends on the moderation effect of the engagement level of other staff members (Chen & Wei, 2018, p.94). Consequently, this research aims to test using Enterprise Social Media (ESM) platforms for the Integration of Inter-Functional Coordination (IIFC) through the inclusion of the indirect moderated-mediation effect of Optimizing Staff Capabilities (OSC).

2 Research Context

Academics presented the vital role of marketing performance to increase growth at small and medium enterprises (Katsikeas et al., 2016; Pizzi, 2018; Van Gijsel, 2012). Marketing studies acknowledged the magnitude of the market orientation theory through the impact of integrating inter-functional coordination to improve staff performance as well as create superior customer value at small and medium enterprises (Jugend et al., 2018; Murillo-Oviedo et al., 2019; Sofijanova et al., 2015; Wang & Kim, 2017). Interestingly, the marketing literatures neglect the topic of integrating inter-functional coordination (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Academics defined IIFC as the optimisation of firms' dynamic capabilities and resources to improve staff performance through interdepartmental collaboration (Grootveld, 2016; Mubarak, 2019; Sikkens, 2017; Tomaskova, 2018; Waruiru, Wanjira, & Namusonge, 2019). Consequently, IIFC depends on Optimisation of Staff Capabilities (OSC) and resources such as staff knowledge sharing and staff engagement (Ghobadi & D'Ambra, 2012; Massey & Le Meunier-Fitzhugh, 2019; Mohiuddin, 2018; Nguyen, Ngo, Bucic, & Phong, 2018; Zacher, Chan, Bakker, & Demerouti, 2015).

However, scholars claimed that capabilities have no value without optimisation (Huda, 2019; Lin, Su, & Higgins, 2016; Teece, 2018). Academics presented the importance of information and communication platforms such as enterprise social media platforms to optimise employee performance at firms (Olanrewaju, Hossain, Whiteside, & Mercieca, 2020; Tresna, 2019; Zhang & Li, 2018). Huda et al. (2019) claimed that increasing the adoption of technology application through professionals and managers will positively improve the capabilities of other employees, which helps to optimise performance (Huda, 2019, p.191).

3 Research Problem

The research spotted a gap in marketing literatures by neglecting the topic of Integrating Inter-Functional Coordination (IIFC) within the market orientation theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Academics have emphasized on the magnitude of integrating inter-functional coordination and which significantly improves employee performance, as well as, lead to increase financial growth at organizations (Jugend et al., 2018; Murillo-Oviedo et al., 2019; Sofijanova et al., 2015; Wang et al., 2017). Likewise in a practical perspective, the International Telecommunication Union as a parent organization of the United Nations Economic and Social Council has published a detailed report about information and communication technology organizations worldwide that consists challenges of IIFC among engineers and technicians who work in rural and remote sites with their managers at the different locations, for example, the challenge of integrating the coordination among engineers working at a rural remote sites for installation purposes with their supervisors at the head office in order to ensure an up to date and compatible configuration process (ITU, 2017, p. 28). Based on aforementioned, the research aims to contribute to the theoretical spotted gap that neglects the topic of integrating inter-functional coordination through the contexts of information technology and the inclusion of the strategic management approach.

4 Purpose of the Research

Academics acknowledged the magnitude of IIFC to increase staff performance at small and medium enterprises (Apasieva, 2017; Foerstl, Hartmann, Wynstra, & Moser, 2013; Mohiuddin, 2018; Murillo-Oviedo et al., 2019). The research spotted a gap in marketing literatures by neglecting the topic of Integrating Inter-Functional Coordination (IIFC) in the Market Orientation (MO) theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Academics defined integrating inter-functional coordination as the Optimisation of

Staff Capabilities (OSC) and resources to improve staff performance. Scholars claimed that ESM platforms has technological value to improve the performance of employees (Huda, 2019; Nolte, Guhr, Breitner, Badtke, & Göing, 2019; Wang & Chang, 2019). However, academics of strategic management claimed that staff capabilities such as staff knowledge sharing and staff engagement have interactive moderator as well as mediator effects on the relationship between using information and communication technology platforms and enhancing the performance of other staff members (Chen & Wei, 2018; Hsu & Liao, 2019; Liu & Bakici, 2019; Mikalef, Boura, Lekakos, & Krogstie, 2019; Papa, Dezi, Gregori, Mueller, & Miglietta, 2018). Therefore, the purpose of the research is to evaluate the influence of information technology such as enterprise social media platforms on integrating inter-functional coordination through the inclusion of the moderated-meditation effect of dynamic capabilities such as staff engagement and knowledge sharing. This research aims to contribute to the MO theory through the context of the Diffusion of Innovation (DOI) theory and the inclusion of the Dynamic Capabilities (DC) approach.

5 Significance of the Research

This research is the first attempt to investigate the impact of using information technology context to contribute to the knowledge of marketing literatures thought the inclusion of a moderated-mediation effect of a strategic management approach. The research contributes to the marketing literatures by emphasizing on the topic of integrating inter-functional coordination within the MO theory through the contexts of information technology and the inclusion of the strategic management approach. The research aims to evaluate the influence of information technology such as ESM platforms to contribute to the market orientation theory by achieving integration of inter-functional coordination through the inclusion of the moderated-meditation effect of optimizing staff capabilities. Therefore, the results will offer potential opportunities to future researchers to investigate the influence of other factors, such as social or cultural factors, that can affect the impact of using information and communication platforms to achieve integrating inter-functional coordination. In addition, the research contributes practically to information and communication technology enterprises with the aim of presenting a solution by integrating inter-functional coordination between engineers who work at rural remote sites with their managers at other locations. For example, a government survey indicated that almost 99% of employees use private social media applications during working hours at SMEs in the GCC area (ASMIS, 2017, p.55). Academics argued that

92% of enterprises in the GCC area implement enterprise social media platforms, but employees do not use them efficiently (Bakar et al., 2018; King, 2015). Consequently, this research offers a practical contribution to information technology SMEs in the GCC area by presenting the advantage of using ESM platforms, leading to integrate inter-Functional coordination and increased growth.

6 Research Objective and Questions

The research aims to contribute to the marketing literatures through the information technology context with the inclusion of the strategic management approach. Alvesson and Sandberg (2011) posit that research questions can be constructed through spotting an existing gap at a theory (Alvesson & Sandberg, 2011, p. 266). The research objective is determined based on spotting a gap that neglects the topic of IIFC the MO theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). In addition as a practical perspective, the International Telecommunication Union as a parent organization of the United Nations Economic and Social Council has published a detailed report about information and communication technology organizations worldwide that consists challenges in integrating inter-functional coordination among engineers working at a rural remote sites for installation purposes with their supervisors at the head office in order to ensure an up to date and compatible configuration process (ITU, 2017, p. 28). Based on aforementioned, this research aims to evaluate the impact of information technology on integrating inter-functional coordination through the inclusion of the moderated-mediation effect of a strategic management approach. This research will be the first attempt that theoretically contributes to the marketing literature through achieving integrate inter-Functional coordination at the market orientation theory by proposing a conceptual framework of testing the impact of using enterprise social media platforms to integrate inter-functional coordination with the inclusion of the indirect moderated-mediation effect of optimizing staff capabilities. In addition, the research aims to contribute practically to information and communication technology SME's with the aim of presenting a solution to achieve integrate inter-Functional coordination among engineers working at rural remote sites for installation purposes with their supervisors at the head office in order to ensure an up to date and compatible configuration process. The research focuses on empirical analysis through the following steps: (i) evaluate the interaction between observed and latent variables; (ii) check the signs and magnitude of the relationships among these variables; and (iii) understand whether these relationships are statistically significant. Consequently, the research must answer the following questions:

Q1: Does using ESM platforms lead to IIFC through the indirect moderated-mediation effect of OSC?

Q2: What is the level of the indirect moderated-mediation effect of OSC through using ESM platforms to achieve IIFC?

7 Research Structure

The research is composed of five chapters; each chapter introduces the chapter content, a brief description to set the context as well as explain how it relates to other parts of the research, and a summary of the main points. These chapters are:

1) Chapter 1: Introduction and Overview of the Study
2) Chapter 2: Literature Review
3) Chapter 3: Theoretical Development
4) Chapter 4: Methodology
5) Chapter 5: Data Analysis and Discussions
6) Chapter 6: Implications, Limitations, and Conclusion

The research process will be conducted through five basic stages, which are:

1) Identification of the Research Problem, Objective, and Questions
2) Descriptive Studies and the Development of the Research Framework
3) Design and Development of the Research Questionnaire Survey
4) Selection of the Sample and Pilot of the Survey
5) Date Collection and Quantitative Data Analysis
6) Data Analyses and Discussions
7) Implications, Conclusion, and Limitations

8 The Conceptual Framework

Academics acknowledged the magnitude of integrating inter-functional coordination to increase the growth of small and medium enterprises (Jugend et al., 2018; Murillo-Oviedo et al., 2019; Sofijanova et al., 2015; Wang et al., 2017). However, as previously mentioned, the marketing literature sorely lacks studies on how to achieve IIFC (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Academics defined IIFC as the

collaboration among functions through the optimisation of dynamic capabilities and internal resources to improve performance among employees (Canacott, Ellis, & Tadajewski, 2018; Tsai & Cheng, 2012; Wang et al., 2017; Waruiru et al., 2019). Therefore, integrating inter-functional coordination depends on optimizing dynamic capabilities within the organizational context such as staff capabilities. Academics claimed that dynamic capabilities such as staff capabilities are positively correlated with firms' performance (Gonzalez & Melo, 2019; Hernández-Linares et al., 2020; O'Reilly et al., 2019). However, some scholars also claimed that dynamic capabilities have no value without optimisation (Huda, 2019; Lin et al., 2016; Teece, 2018). Academics posit that ESM platforms have a vital positive impact on improving capabilities of staff engagement and staff knowledge sharing (Davison et al., 2019; Estell & Davidson, 2019; N. Rahman, 2020; Schiller & Meiren, 2018).

Therefore, the research underpinned the Diffusion of Innovation (DOI) theory as it is widely used to disseminate and encourage employees to use innovation through information and communication technology platforms such as ESM platforms (Allcott, Gentzkow, & Yu, 2019; Currie & Spyridonidis, 2019; Kim, Lee, & Contractor, 2019; Pelc, 2017). However, academics claimed that staff capabilities have important moderator as well as mediator effects on the impact of using information and communication platforms on staff performance (Bykova & Jardon, 2018; Sok, Snell, Lee, & Sok, 2017; Song & Liao, 2019). For example, scholars posited that the capability of staff engagement has a positive moderator effect on using ESM and staff productivity (Chen & Wei, 2018; Ferreira, Coelho, & Moutinho, 2018; Liu & Bakici, 2019). Studies on strategic management presented the important mediation role capability of staff knowledge sharing by analysing the relationship between enterprise social media platforms and staff efficiency to participate in and enhance collaboration (Ali, Lodhi, Raza, & Ali, 2019; Bykova & Jardon, 2018; Cai et al., 2018). Consequently, this research underpins the theory of market orientation, as well as, the diffusion of innovation theory along with the inclusion of the dynamic capabilities approach with the context. In other words, this research aims to contribute to the marketing literature through the use of the information and communication context with the inclusion of the moderated-mediation effect of the strategic management approach.

9 Research Methodology

This research has a descriptive nature that adopts the positivism philosophy. Additionally, this research is deductive and adopts the quantitative approach to test the impact of independent variables on dependent variables through the inclusion of moderated-mediation variables. A pilot study was conducted through submitting 67 online questionnaire surveys to staff members in ICT SMEs at the GCC area such as (owners-directors, marketing staff, sales staff, finance staff, HR, operations staff, technical support). The validity and reliability were tested to ensure the feasibility of the online survey (Connelly, 2008, p.137). Furthermore, the questionnaire survey was sent to a total population of 824 IT SMEs for six countries in the GCC area (Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Oman, and Bahrain). In addition, 250 phone calls were made to remind the participants to fill out the online questionnaire. Consequently, 763 IT SMEs in the GCC area responded. After the data were screened, six companies were excluded because the questionnaire had been answered by unprofessional employees (receptionists). In addition, 73 respondents were removed because of their inappropriate responses to the questionnaire items (answered all items at the same scale level, including reverse questions). Consequently, data analysis was carried out from 684 information and communication technology SMEs in the GCC area.

10 Data Analysis and Findings

The research conducted Kaiser-Meyer-Olkin (KMO) test and Bartlett's tests to compare the correlations of the variables as well as identify and reduce dimensionality in the data (Daoud, 2017; Iacobucci, Schneider, Popovich, & Bakamitsos, 2017; Kalnins, 2018). The research adopted the Structural Equation Modelling (SEM) technique for data analysis. Academics claimed that SEM analysis is highly effective in identifying relationship between latent and observed variables, as presented in the conceptual framework (Amoako-Gyampah, Boakye, Adaku, & Famiyeh, 2019; Feng, Zhou, Zhou, & Jiang, 2019). Confirmatory Factor Analysis (CFA) is used to test the hypotheses and identify the relationships among latent and observed variables. Marketing scholars claimed that AMOS statistical software has been widely accepted for measuring the direction and strength of path analysis (Hair, 2014, p.55). Therefore, the research carried out the data analysis process through structural equation modelling with the model of CFA and AMOS analysis software for the purpose of paths analysis, as well as, to evaluate complex interactions between latent and observed variables. Consequently, this research adopts Confirmatory Factor Analysis (CFA) through

running AMOS analysis software to test the indirect impact of the independent variable (X) on the dependent variable (Y) through the interaction effect of moderated-mediation latent variables (moderators). AMOS was used to test the indirect impact of enterprise social media platforms on integrating inter-functional coordination through the interaction of the moderated-mediation effects of optimizing staff capabilities. Four hypotheses were formulated to test the impact of such effects on that between using ESM platforms and achieving the IIFC. In addition, the direct effect of the moderators' such as staff knowledge sharing and staff engagement on the overall direct impact of using ESM platforms on IIFC was tested. Interestingly, the results showed that the interactive positive effects between ESM platforms with two moderators' lead to OSC, and led to have a moderated-mediation effect that achieve integration of inter-functional coordination.

11 Research Contribution

This research aims to contribute to the knowledge of the marketing literatures through the context of information technology literatures with the inclusion of the strategic management approach. Tadajewski and Hewer (2011) claimed that "an intellectual contribution must demonstrates a theoretical contribution to the knowledge of marketing discipline, as well as enriching the marketing practice" (Tadajewski & Hewer, 2011, p. 457). Nicholson et al. (2018) defines gap spotting as a strategy that identifies, as well as, cover a neglected research area or a topic in a theory, construct or methodology in order to show a contribute to the existing knowledge (Nicholson et al., 2018). This research identifies a gap that neglects spotting the topic of Integrating Inter-Functional Coordination (IIFC) within the Market Orientation (MO) theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Likewise in practice, the International Telecommunication Union (ITU) as a parent organization of the United Nations Economic and Social Council, has published a detailed report about Information and Communication Technology (ICT) enterprises worldwide that includes a major challenge of integrating inter-functional collaboration among engineers and technicians who work in rural and remote sites with their managers at the different locations to ensure an up to date and compatible configuration process (ITU, 2017, p. 28). Academics have emphasized on the magnitude of IIFC and which significantly improve employees' performance, as well as, lead to increase financial growth at SMEs (Jugend et al., 2018; Murillo-Oviedo et al., 2019; Sofijanova et al., 2015; Wang et al., 2017). Randhawa et al. (2020) conceptualized the philosophy of market-oriented information technology and communication firms in

relation to its dynamic capabilities, and posit that the firms that adopt innovative technology platforms will be able to fast seizing decisions once the market opportunity was identified and which allow the firms to decide on the timing of reconfiguration and creating creative new business divisions. Based on aforementioned, theoretically the research aims to contributes to the topic of integrating inter-functional coordination at the market orientation theory through the contexts of information technology and the inclusion of the dynamic capabilities approach. In other words, the research aims to evaluate the influence of information technology such as enterprise social media platforms to contribute to the market orientation theory through IIFC and the inclusion of the moderated-meditation effect of dynamic capabilities. In addition, the research contributes to the practice of information and communication technology SMEs with the aim of presenting a solution by achieving integration of inter-functional coordination between engineers who work at rural remote sites with their managers at other locations.

This research will be the first attempt to propose using ESM platforms to integrate inter-functional coordination through the inclusion of the indirect moderated-mediation effect of Optimizing Staff Capabilities (OSC). The research results and recommendations could be used by other researchers and academics for future studies that examine the impact of integrate inter-functional coordination in other countries or different SME sectors such as health, food, transportation. Academics argued that culture can affect the adoption of SNS (Alarcón-del-Amo, Lorenzo-Romero, & Gómez-Borja, 2016, p.299). Therefore, the results of this research offer potential opportunities to future researchers to investigate the influence of other factors, such as social or cultural elements, that can affect the impact of using ESM platforms to achieve IIFC. As practical implication, the results provide a vital advantage ICT SMEs against the challenges of integrating the coordination among engineers working at a rural remote site for installation purposes with their supervisors at the head office in order to ensure an up to date and compatible configuration and which enhance the performance of their employees as well as create a superior competitive advantage. This study provides important practical implications to governmental agencies that deal with SMEs. Based on the findings of this research, governmental agencies will have a better understanding of adopting and encouraging employees to use ESM platforms. This, in turn, can be used in planning and directing future policies of small and medium enterprises, and which can lead to increased focus on using such platforms to optimise staff

capabilities such as staff knowledge sharing and staff engagement among departments such as sales and marketing, technical support, customer service, and operations.

12 Keywords

Enterprise Social Media (ESM), Gulf Cooperation Council (GCC), Integrating Inter-Functional Coordination (IIFC), Optimisation of Staff Capabilities (OSC), Information and Communication Technology (ICT), Small and Medium Enterprises (SMEs).

Chapter Two

Literature Review

2.1 Introduction

This study represents an extension to knowledge of the marketing literatures that contributes to the Market Orientation (MO) theory. This research aims to contribute to the knowledge of the marketing literatures through the context of information technology with the inclusion of the strategic management context. Many literatures cover a wide variety of theories in marketing, strategic management, as well as, information technology. Many academics have focused on the magnitude of Integrating Inter-Functional Coordination (IIFC) to improve employee performance and increase financial growth at small and medium enterprises (Jugend et al., 2018; Murillo-Oviedo et al., 2019; Sofijanova et al., 2015; Wang et al., 2017). Likewise, this research reviews the marketing literatures and provides insight discussions to the market orientation theory and specifically the topic of IIFC. Nicholson e al. (2018) defines the neglect spotting gap as “an intent to focus on neglected or under-researched areas, in which neglect could apply to theories, constructs or methodologies, but could also could refer to areas where papers are substantially conceptual rather than empirical” (Nicholson et al., 2018, p.208).

Consequently, the research identifies a gap that neglects spotting the topic of IIFC at the market orientation theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Based on the definition of integrating inter-functional coordination and which is a blend of marketing and strategic management theories. Okhuysen and Bonardi (2011) presented two relevant dimensions that are proximity and compatibility of assumptions and which help academics to define the relationship and combine different theoretical lenses, in addition, they defined the compatibility of assumptions as “the degree to which theories that are brought together rely on similar individual’s decision making process, organizational mechanisms and process, or other properties in the development of their explanation (Okhuysen & Bonardi, 2011, p. 7). Therefore, this research focuses on the compatibility of assumptions to combine different theoretical lenses through underpinning three main theories that focus on the research objective and which are market orientation theory, the Diffusion of Innovation theory, with the context of the dynamic capabilities approach. Consequently, the chapter discussed literatures in information technology and strategic management areas for the purpose of a

theoretical blending and presented arguments about compatibility of assumptions and which contributes to the knowledge of the market orientation theory. The research aims to evaluate the impact of using Enterprise Social Media (ESM) platforms to contribute to the market orientation theory by achieving Integration of Inter-Functional Coordination (IIFC) with the inclusion of the moderated-meditation effect of dynamic capabilities.

2.2 Theories in Marketing Science

In the early 1970s, management theorists began to search for effective leadership behaviour that focuses on organisational dynamic actions. The Contingency Theory (CT) as a part of the organizational theory emerged as one that embodied a simple concept that enabled significant advancements in improving organisations' performance (McAdam, Miller, & McSorley, 2019; Otley, 2016; Song, Cai, & Feng, 2017). Fiedler (1993) has presented a successful contingency model and which contribute effectively to leadership in organizations and which described as an organizational theory (Fiedler, 1993, p. 336). The CT assumes that no optimal method exists to lead a firm and that any organisation should make decisions based on macro-environment situations (Kranich & Wald, 2018; Sayilar, 2016; Song et al., 2017). In other words, management decisions depend on leaders' internal capabilities as well as resources to maintain flexibly in responding to changes in customer needs as well as to environmental factors (McAdam et al., 2019; Otley, 2016; Taylor & Taylor, 2014). A firm's internal contingencies are identified as its adopted organisational strategies, processes, resources, and technologies (Deng & Smyth, 2013; Netland, 2016; Pourmola, Bagheri, Alinezhad, & Nejad, 2019; Wibowo & Wilhelm Alfen, 2014).

Environmental factors refer to macro variables such as customer needs, the economy, market fluctuation, politics, competition, regulations, culture, and geographic area (Islam, 2012; Minbashrazgah, Zarei, & Ghazvini, 2017; Wadongo & Abdel-Kader, 2014). The theory has vitally contributed to improved performance in organisations (Deng & Smyth, 2013; Pratono, 2016; Sharma, 2017; Song et al., 2017). For example, the contingency approach influences performance through increasing managers' ability in making contingent decisions to respond to external environmental incidents (Islam, 2012; Mohammad & Bujang, 2019; Steinbach, Holcomb, Holmes Jr, Devers, & Cannella Jr, 2017). This theory has been criticised by scholars because it focuses on responding to the macro environment and neglects the interdepartmental process and capabilities that determine the firm's success to respond to customer needs or technology changes (Kranich & Wald, 2018, p.217). In addition, organisation size is one of the challenges faced by the

contingency approach. Quangyyen and Yezhuang (2013) claimed that large enterprises have complex structures as well as more employees with bigger market challenges that lead to bigger complications and that longer time will be required in making contingent decisions (Quangyen & Yezhuang, 2013, p.230). Pratono et al. (2016) argued that the Contingency Theory (CT) has a major disadvantage because it requires frequent changes in the organisation's structure to meet fluctuations in different markets (Pratono, 2016, p.379). The theory presents major disadvantages at large organisations and requires the staff continuous adoption to market changes at high expenditures, especially in large organisations or those with multi-manufacturing processes that require changes in production and manufacturing lines (Jyoti & Sharma, 2012; Lam, Ahearne, & Kraus, 2010). However, the theory provides a significant advantage to increase the performance of SMEs (Hoffman, Spann, Yadav, De Valck, & Thurau, 2013; Mohammad & Bujang, 2019; Song et al., 2017). The Market Orientation (MO) Theory emerged in the 1990s, defined by academics as the creation of superior customer value and competitive advantage through responding adequately and rapidly to customers' needs and market changes (M. Ewing, Caruana, & Ramaseshan, 2015; Nakos, Dimitratos, & Elbanna, 2018; Narver & Slater, 1990; Tay & Tay, 2007).

The MO theory has proven to be a big success in improving the performance and profitability of SMEs (M. Ewing et al., 2015; Huhtala, Vaniala, & Tikkanen, 2016; Kasim, Ekinci, Altinay, & Hussein, 2018; Kero & Sogbossi, 2017). The market orientation theory is unique in effectively linking customers' needs as well as competitors' orientations to interdepartmental performance to respond adequately and quickly to market challenges (Dart & Deng, 2001; M. Ewing et al., 2015; Kasim, Ekinci, Altinay, & Hussein, 2018; Mohiuddin, 2017; Morgan, Vorhies, & Mason, 2009; Narver & Slater, 1990). Marketing studies concluded that customer orientation and competitive orientation are both external elements that consist of market research and analysis as well as emphasise on customer satisfaction and needs (Chebet, Gabriel, & Bonuke, 2018; Jeevan & Jyoti, 2016; Kasim, Ekinci, Altinay, & Hussein, 2018; O'Dwyer & Gilmore, 2019). Academic studies acknowledged the improvement of customer loyalty through implementing an appropriate customer orientation strategy (Frambach, Fiss, & Ingenbleek, 2016; Homburg, Müller, & Klarmann, 2011; Korschun, Bhattacharya, & Swain, 2014). Scholars claimed that focusing on customer orientation assists in building a strong relationship between staff and customers (Park, Jun, Lee, & Lee, 2018, p.106). Adopting customer-oriented behaviour demands substantial coordination among departments to meet customer needs

(Hosseini, Gheysari, & Aqdam, 2017; Park & Tran, 2018; Smirnova, Rebiazina, & Frösén, 2017). Korschun et al. (2014) argued that customer orientation depends on the capability of internal interaction at the organisation (Korschun et al., 2014, p.29). For example, customer orientation depends on interaction between the sales team and technical engineers to ensure appropriate solutions for customers; also, interaction with the management is crucial to obtain support if needed. Academics posited that customer orientation has no impact on business performance but affects the superior performance of integrating inter-functional coordination (Bonney, Ho, Nguyen, Adhikari, & Miles, 2018, p.158). Consequently, improving customer orientation as well as competitive orientation rely on developing the performance of IIFC (Bartošek & Tomášková, 2013; Bouachouch & Chahdi, 2015; Sikkens, 2017; Sousa & Lengler, 2011; Waruiru et al., 2019). IIFC increases corporate social responsibility towards customers (Korschun et al., 2014; Smirnova et al., 2017). Recent studies revealed that interdepartmental interactions have a major mediation effect between the impact of a firm's performance and customer orientation (Feng, Wang, Lawton, & Luo, 2019; Park et al., 2018). IIFC is defined as the integration of firms' capabilities dynamic capabilities and internal resources such as staff capabilities to improve firms' performance (Abbas, Raza, Nurunnabi, Minai, & Bano, 2019; Song & Liao, 2019; Zhang, Kang, & Hu, 2018).

Academics acknowledged that achieving a successful customer orientation strategy essentially depends on staff capabilities such as staff knowledge sharing (Ferraresi, Quandt, dos Santos, & Frega, 2015; Kasim, Ekinci, Altinay, & Hussein, 2018; Tarhini, Masa'deh, & Al-Henzab, 2018). IFC emphasises on optimising collaboration among departments, which leads to increased staff performance, as well as developing employee engagement and knowledge to create competitive advantage (Apasieva, 2017; Chaudhary, Rangnekar, & Barua, 2012; Karanges, Johnston, Beatson, & Lings, 2015; Potoski & Callery, 2018; Welch, 2017). Interdepartmental coordination consists of gaining information, analysing information, and issuing decisions across departments, which directly affects customer satisfaction and loyalty (Mohiuddin, 2017; Wang et al., 2017). Sikkens et al. (2017) concluded that enterprises could achieve success in different markets through an effective integrating inter-functional coordination by enhancing their engagement and interactions (Sikkens, 2017, p.36). Focusing on developing IIFC leads to increased employee loyalty and skills and reduced work bureaucracy (Sisay, Verhees, & Van Trijp, 2017, p.370). Academics concluded that integrating inter-functional coordination improves employees' behaviour towards customer-oriented tasks,

which improves customer satisfaction and loyalty (Gerald & Okechukwu, 2017; Park & Tran, 2018; Peña, Jamilena, & Molina, 2017). Nakos et al. (2018) claimed that interdepartmental coordination mediates the relationship between staff performance and suppliers at SMEs (Nakos et al., 2018, p.608). Competitive orientation is the third element of the MO theory, which focuses on competitors to identify their own weaknesses and take the opportunity to win potential customers (Chen, Xie, & Chang, 2011; Kero & Sogbossi, 2017; O'Dwyer & Gilmore, 2019). Academic focus on the magnitude of staff performance has a vital impact on competitive orientation (Noe, Hollenbeck, Gerhart, & Wright, 2017, p.87). The market orientation theory requires firms to make fast and adequate decisions to respond to market fluctuations in a timely manner. The main advantages in implementing the market orientation theory are the low costs and flexibility in making fast decisions, which more precisely target the specific concrete needs of individual corporate customers (Luño, Saparito, & Gopalakrishnan, 2016; O'Dwyer & Gilmore, 2019).

In addition, this theory emphasises on targeting few customers and ensures meeting their persistent needs rather than targeting a big audience (Joensuu-Salo, Sorama, & Kettunen, 2016; Luño et al., 2016; Pelham, 2015; G. A. Wilson, Perepelkin, Zhang, & Vachon, 2014). However, a one-person decision may negatively affect the process, especially in large organisations, which leads to a negative impact on overall performance (Felcman, 2012; Luño et al., 2016). Scholars claimed that small and medium enterprises depend on few customers and fast decision-making; one person raising the risk of making wrong decisions could lead to the loss of business opportunities (Felcman, 2012, p.3). Nonetheless, the market orientation theory has a major advantage because SMEs have less complicated policies which offer such businesses the privilege to adopt fast changes to meet customer needs as well as create superior competitive advantage (Kasim, Ekinci, Altinay, & Hussain, 2018; O'Dwyer & Gilmore, 2019; Smallbone, Deakins, Battisti, & Kitching, 2012).

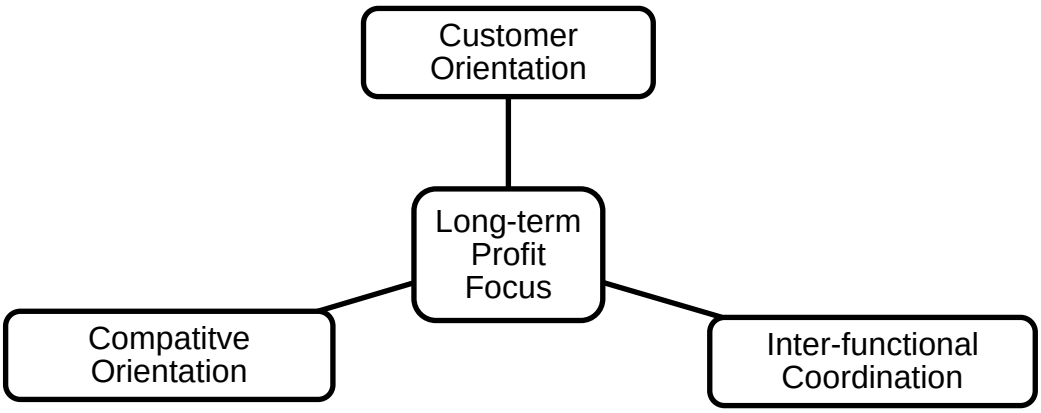
2.2.1 The Market Orientation (MO) Theory

Cadogan (2020) posits that the MO theory has been widely demonstrated by marketing academic journals and the vast majority of the empirical works focus on performance outcome of market orientation such as crating competitive advantage through offering dynamic price competition, as well as, increasing financial profits (Cadogan, 2020, p.67). Situmorang (2019) concluded that "market orientation is the appropriate approach for SMEs in dealing with external environmental factors such as market turbulence, technological

turbulence, and competitive intensity" (Situmorang, 2019, p.171). Scholars concluded that the MO theory has a direct positive correlation with performance of organizational capabilities through a know-what is required at the market and respond adequately to external changes in market environment (Acikdilli, Mintu-Wimsatt, Kara, & Spillan, 2021; Nwokah & Hamilton-Ibama, 2018; O'Dwyer & Gilmore, 2019). Many academics argued whether the market orientation is an approach or a theory. However, Narver, Slater and MacLachlan (2000) highlighted the work of Kohli and Jaworski (1993) that articulated the market orientation approach to a well-constructed theory within the implementation of the marketing concept thorough its contribution that emphasizes on measuring the reactive market orientation (Narver, Slater, & MacLachlan, 2000, p. 26).

In addition, Hunt (2012) reviewed the philosophy foundations of different marketing theories and approaches, and claimed that the MO theory in particular is a theory that is empirically successful in explaining and predicts numerous marketing phenomena (Hunt, 2012, p. 5). Moreover, Jogaratnam (2017) posits that the concept of market orientation is crucially developed and represents the core of a marketing theory (Jogaratnam, 2017, p.106). Likewise, many academics previously have emphasized on the market orientation as a theory at their academic studies (Crick, 2019; Morgan, Vorhies, & Mason, 2016; Tokarczyk, Hansen, Green, & Down, 2007). As represented in the following figure, the MO theory consists of three behavioural components: customer orientation, competitive orientation, and Inter-Functional Coordination (IFC) (Narver & Slater, 1990, p.29).

Figure (2.1): Elements of Market Orientation (MO) Theory



Source: (Narver & Slater, 1990)

Marketing literatures identify both customer and competitive orientation as the external elements that emphasise on competition analysis as well as fulfilling customer requirements (Chebet et al., 2018; Kasim, Ekinci, Altinay, & Hussein, 2018; O'Dwyer & Gilmore, 2019). Scholars considered the inter-functional coordination as the only internal element at the MO theory (Grootveld, 2016; Mohiuddin, 2018; Ruiz-Alba, Guesalaga, Ayestarán, & Mediano, 2019). Al-Abdallah (2015) described the competitive orientation as a continues assessments of competitors' strengths and weaknesses and re-evaluating organisational performance in order to make necessary amendment and remain at competition (Al-Abdallah, 2015, p. 620). Gligor, Gligor and Maloni (2019) define customer orientation as a marketing strategy that emphasizes on maintaining a long term customer-relations by focusing on their needs in order to retain customers' satisfaction (Gligor, Gligor, & Maloni, 2019, p. 83). In addition, scholars defined the Integration of Inter-Functional Coordination (IIFC) as the optimization of firms' Dynamic Capabilities (DC) and internal resources to improve the functional performance of the staff among departments to create superior value to customers, as well as, competitive advantage among competitors (Apasieva, 2017; Canacott et al., 2018; Tsai, Yen, Huang, & Huang, 2007; Waruiru et al., 2019). Academics posits that a market-orientated firm creates superior relationships with customers, as well as, enhances the competitive orientation (Gligor et al., 2019; Hernández-Linares et al., 2020; Kim, 2011; Peña et al., 2017).

Scholars demonstrated the influence of both the MO theory and Relationship Market Orientation (RMO) on business performance, as well as, concluded that both scales are valid and reliable and can be used across a variety of companies, industries, and cultures (Sin, Tse, Yau, Chow, & Lee, 2005). Further academics proposed the Relationship Marketing Orientation (RMO) as a customer-centric marketing concept which primarily focuses on a specific market segment with the aim of retaining customers' satisfaction (Grönroos, 2017; Larentis, Simone Antonello, & Slongo, 2018; Mubushar, Jaafar, & Ab Rahim, 2020) . Van Tonder and Petzer (2018) argued that the MO provides better and faster generation, dissemination, and responsiveness to market intelligence (Van Tonder & Petzer, 2018, p. 972). Moreover, Gummesson (2011) criticised that the strategy of the Relationship Marketing Orientation (RMO) can lead to target a specific business-to-customers segment and which lead to a waste in money and time (Gummesson, 2011, p. 96). Coviello and Brodie (1998) claimed that the Relationship Marketing Orientation (RMO) has a vague marketing plan, as well as, neglects the process of performance monitoring including interdepartmental coordination (Coviello

& Brodie, 1998, p. 108). Larentis et al. (2018) argued that the marketing orientation is a marketing strategy that ignored to focus on the employees and which lead to a high turnover and dissatisfaction among staff (Larentis et al., 2018, p. 56). On the other hands, academics posit that firms' influence on customers as well as creation of competitive advantage depends on their employees' collaboration and performance across departments (Grootveld, 2016; Mohiuddin, 2017; Sikkens, 2017; Waruiru et al., 2019). However, scholars demonstrated an important model that emphasizes on four indicators of market orientation and which management can adopts to achieve better results (Moll, Montaña, Guzman, & Parellada, 2007, p. 864). In other words, the model includes four indicators that focuses of the market needs, absorbing and interpreting information, the effect of IIFC between marketing department and other departments, and adequately fast response to customer requests. Scholars concluded that integrating interdepartmental coordination helps to increase knowledge sharing, which improves firms' performance (Grootveld, 2016; Mohiuddin, 2017; Waruiru et al., 2019). Consequently, the research underpinned the market orientation theory as its more adequate to enhance performance of Small and Medium Enterprises (SMEs). Academics claimed that IIFC improves staff performance through increasing teamwork among employees (Canacott et al., 2018; Massey & Le Meunier-Fitzhugh, 2019; Mohsen & Eng, 2017).

Marketing scholars clamied that IIFC creates superior value to targeted customers (Auh & Menguc, 2011; Grootveld, 2016; Narver & Slater, 1990; Sikkens, 2017; Waruiru et al., 2019) and increases competitive advantage (Chen et al., 2011; Kero & Sogbossi, 2017; Miles, Ho, Nguyen, Adhikari, & Bonney, 2017; Nwokah & Hamilton-Ibama, 2018). Foerstl et al. (2018) posited that IIFC simplifies operational planning and scheduling and enhances coordination towards corporate responsibilities (Foerstl et al., 2013, p.691). Bodla et al. (2018) concluded that integrating inter-functional coordination enhances creativity across functions and creates superior performance (Bodla et al., 2018, p.729). Consequently, marketing scholars acknowledged that IIFC leads to the increase the performance of organisations (Chebet et al., 2018; Kashyap, 2018; Wang et al., 2017; Waruiru et al., 2019). Although scholars have focused on the magnitude of IIFC to improve performance and increase financial growth at SMEs (Jugend et al., 2018; Murillo-Oviedo et al., 2019; Sofijanova et al., 2015; Wang & Kim, 2017), the research identifies a gap that neglects spotting the topic of IIFC within the Market Orientation (MO) theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Therefore, this research aims to test the impact of using Enterprise Social Media (ESM) platforms

on Integrating Inter-Functional Coordination (IIFC) through the inclusion of the indirect moderated-mediation effect of Optimizing Staff Capabilities (OSC) in ICT SMEs at Gulf Cooperation Council (GCC) area.

2.2.2 Integration of Inter-Functional Coordination (IIFC)

Marketing scholars have defined IIFC as the optimization of firms' Dynamic Capabilities (DC) and internal resources to improve the functional performance of departments and create superior value to customers (Apasieva, 2017; Canacott et al., 2018; Tsai et al., 2007; Waruiru et al., 2019). The integration of capabilities is defined as the action of making the best and most effective use of DC and resources to maximise benefits and reduce expenditures (Gonzalez & de Melo, 2019; Schiemann, 2014; Zacca & Dayan, 2018). Belasen and Rufer (2013) posited that "resources and capabilities that are not translated into well-synchronized activities, best practices, or business processes cannot have a positive impact on a firm's performance" (Belasen & Rufer, 2013, p.239). SMEs need to integrate cross-functional coordination to disseminate knowledge and improve skills, which helps to create value to customers through products and services (Murillo-Oviedo et al., 2019, p.184). Studies demonstrated the magnitude of IIFC in increasing customer satisfaction (Danso et al., 2017; Grootveld, 2016; Sofijanova et al., 2015; Tomaskova, 2018) as well as developing management engagement and support to employees (Auh & Menguc, 2011; Canacott et al., 2018; Wang et al., 2017).

Academics posited that improving IIFC leads to the enhanced development of products and services (Danese & Romano, 2004; Tomaskova & Kanovska, 2016; Tsai et al., 2007) and increased staff performance through knowledge sharing as well as interactions among departmental functions (Apasieva, 2017; Bartošek & Tomášková, 2013; Belasen & Rufer, 2013; Mohiuddin, 2017; Sousa & Lengler, 2011). IIFC consists of multiple activities inside firms, such as discussions and knowledge sharing about products' specifications and prices, market analyses, new market opportunities, and customer needs (Bonney et al., 2018; J. Cohen, 2017; Kasim, Ekinci, Altinay, & Hussain, 2018; Pelham, 2015). Wang et al. (2017) argued that interdepartmental coordination enables managers to engage with staff to obtain information, analyse data, and make appropriate decisions, which directly affects customer satisfaction and loyalty (Wang et al., 2017, p.33). Interestingly, Mohiuddin et al. (2017) concluded that integrating inter-functional coordination moderates the impact of firms' performance on customer satisfaction (Mohiuddin, 2017, p.21). Academics claimed that both customer orientation and competitive advantage depends on the interdepartmental

performance of firms (Danso et al., 2017; Grootveld, 2016; Mohiuddin, 2017; Sikkens, 2017). Future scholars defined integrating inter-functional coordination as the integration of firms' internal capabilities and resources to increase the performance of their employees and departments (Massey & Le Meunier-Fitzhugh, 2019; Pellathy, Mollenkopf, Stank, & Autry, 2019; Waruiru et al., 2019). Many studies have emphasised on the magnitude of IIFC to improve firms' performance, as shown below:

Table (2.1): Literature Emphasising on the Integration of Inter-Functional Coordination (IIFC)

Research Title	**Author, Year**	**Findings**
Spurring cross-functional integration for higher new product performance: A group effectiveness perspective	Nakata & Im, 2010	Integrating cross-functional coordination brings together skills, knowledge, and efforts, which contribute to improving new product performance.
Manufacturing and marketing integration from a cumulative capabilities perspective	Paiva, 2010	The integration between manufacturing and marketing functions positively influences the performance of firms.
How will market orientation and external environment influence the performance among SMEs in the agro-food sector in Malaysia?	Aziz & Yassin, 2010	Improving IFC crucially helps to respond to the external environment, which positively influences the performance of SMEs.
The antecedents of process integration in business process outsourcing and its effect on firm performance	Narayanan, Jayaraman, Yadong, & Jayashankar, 2011	The integration of internal functions mediates the impact of firms' performance and customer orientation.
Cross-functional integration of R&D, marketing, and manufacturing in radical and incremental product innovations and its effects on project effectiveness and efficiency	Brettel, Heinemann, Engelen, & Neubauer, 2011	Integrating cross-functional coordination among R&D, marketing, and manufacturing will positively influence the effectiveness and efficiency of new product development.
The impact of product management on SME firm performance	Roach, 2011	Optimising collaboration between technical and marketing functions significantly impacts product management.
Inter-functional coordination at hi-tech firms.	Kanovska & Tomaskova, 2012	IFC helps to integrate employees' efforts and skills and is considered crucial to developing performance.
Using cross-functional, cross-firm teams to co-create value: The role of financial measures	Enz & Lambert, 2012	The integration of cross-functions develops and maintains profitable B2B relationships through creating value to customers.
Knowledge sharing in cross-functional teams: A competitive model	Ghobadi & D'Ambra, 2012	Cross-functional integration is effectively correlated with KS behaviours.

Enhancing inter-functional coordination and marketing performance: Utilisation of the motivation/ability/opportunity	Mohsen & Eng, 2013	Improving IFC is positively correlated with employees' motivations and capabilities, which improves marketing performance.
Cross-functional integration and functional coordination in purchasing and supply management: Antecedents and effects on purchasing and firm performance	Foerstl, Hartmann, Wynstra, & Moser, 2013	The integration of cross-functional coordination positively influences purchasing and supply chain management.
Exploring the integration of sustainability and supply chain management	Winter & Knemeyer, 2013	The integration of the supply chain can be obtained through sustainable integration among functions at firms.
Creating cross-functional strategic consensus in manufacturing facilities	Feger, 2014	Integrating cross-functional coordination positively impacts the strategic consensus of cross-functions.
Inter-functional coordination and entrepreneurial firms' financial performance: A developing economy	Jovanov, Sofijanova, Davcev, & Temjanovski, 2015	Improving IFC significantly impacts financial performance at SMEs.
How do fast-growth SMEs become market oriented?	Tan, Smyrnios, & Xiong, 2015	All functions need to be integrated to serve the needs of the targeted market at SMEs.
The effect of information exchange on inter-functional coordination within hospital supply chain: Case of Moroccan university hospital	Bouachouch & Chahdi, 2015	IIFC helps to increase collaboration and synchronise data and services across the departments of hospitals.
Competitiveness and sustaining performance: Integrating sales and marketing	Madhani, 2016	IIFC between sales and marketing helps to create customer trust and satisfaction.
The complexity of inter-functional coordination when serving different market segments	Sikkens, 2017	IIFC is crucial to avoid mistakes in serving different markets and improving the performance of employees.
Inter-functional coordination: Importance of staff communications in marketing activities of entrepreneurial companies in a developing economy	Apasieva, 2017	The collaboration of IFC provides extensive communication among functions and increases financial revenue.
Streamlining inter-functional coordination in industrial SMEs: Insights from market-oriented managers	Wang et al., 2017	Optimising IFC at industrial SMEs helps to improve managers' performance through improving market-oriented decisions.
Impact of firm's customer orientation on performance: The moderating role of inter-functional coordination and employee commitment	Mohiuddin Babu, 2018	Staff-committed behaviour as well as quick responses to customer needs are positively correlated to the performance of IFC.

The role of cross-functional integration in new product development: Differences between incremental and radical innovation projects	Jugend, Araujo, Pimenta, Gobbo, & Hilletofth, 2018	Integrating cross-functions has a positive impact on new product development.
Inter-functional collaboration and inter-organisational relationships in communications strategy implementation	Canacott, Ellis, & Tadajewski, 2018	Improving IFC positively influences communications inside firms through enhancing the collaboration between sales and marketing functions.
Influence of inter-functional coordination on performance of insurance organisations In Kenya	Waruiru, Wanjira, & Namusonge, 2018	Organisations are able to optimise operations as well as improve performance through IIFC.
Impact of market orientation on performance: An analysis of Indian SMEs using K-mean clustering	Yadav & Tripathi, 2018	At SMEs, IIFC is crucial with respect to responding accurately to market intelligence.
Inter-functional coordination: The role of digitalisation	Morales, Robledo, Guesalaga, & Ayestarán, 2019	IIFC is considered as a strategic driver to improve performance.
Misperceptions in inter-functional supply management: Work-share coordination vs. integrated cooperation	Glas, Lipka, & Essig, 2019	Ensuring the control of IFC helps to optimise cooperation between inter-functional supply management and other functions.
Achieving market orientation through cross-functional integration	Murillo-Oviedo, Pimenta, Hilletofth, & Reitsma, 2019	SMEs need to integrate cross-functional coordination to disseminate knowledge and improve skills, which helps to create value for customers through products and services.

IIFC depends on optimization of staff capabilities through increasing collaboration among departments to improve employee performance (Apasieva, 2017; Potoski & Callery, 2018; Tomaskova, 2018). Canacott et al. (2018) claimed that capabilities of staff knowledge sharing and staff engagement have positive impact on IIFC (Canacott et al., 2018, p.16). Zhang and Guo (2019) argued that capability of staff knowledge sharing enables the diversity of knowledge transfer and improves functional coordination among staff (Zhang & Guo, 2019, p.12). Small and medium enterprises could succeed through different markets by integrating functional capabilities and linking staff collaboration to market requirements (Sikkens, 2017, p.38). Massy and Le Meunier-Fitzhugh (2019) claimed that improving integrating inter-functional coordination increases the collaboration among interdepartmental functions, which reduces business mistakes and customer dissatisfaction (Massey & Le Meunier-Fitzhugh, 2019, p.163). Academics posited that focusing on IIFC leads to increased staff loyalty and reduces their turnover (Tsai et al., 2007, p.169). Consequently, IIFC depends on OSC such as staff knowledge sharing as well as staff engagement

(Apasieva, 2017; Canacott et al., 2018; Zhang & Guo, 2019). IIFC defined as Optimizing Staff Capabilities (OSC) to maximise performance as well as increase profits at firms. Scholars revealed that OSC leads to a better deployment of staff performance among departmental functions (Groenewald & Okanga, 2019 ; Liu, Wang, Li, & Li, 2012; Schiemann, 2014). Academics concluded that IIFC relies on OSC through the enhancement of learning processes and staff knowledge sharing among employees. (Hosseini et al., 2017; Kasim, Ekinci, Altinay, & Hussain, 2018; Mohiuddin, 2017). Staff capabilities provide a positive influence to integrating inter-functional coordination through increasing the capability of staff engagement capability (Apasieva, 2017; Danso et al., 2017; Sousa & Lengler, 2011). While some academics have acknowledged the importance of IIFC to improve firm performance at SMEs (Canacott et al., 2018; Grootveld, 2016; Nsour & Salt, 2013; Roersen et al., 2013; Waruiru et al., 2019), other academics have claimed that increasing interdepartmental collaboration will lead to more conflicts among the staff and the loss of time in communications among functions at large enterprises (Finch, Zhang, & Geiger, 2013; Skarmeas, 2006). Lam et al. (2010) found that integrating inter-functional coordination requires continuous capability of staff knowledge sharing among departments, which is complicated to achieve (Lam et al., 2010, p.79).

Likewise, Canacott et al. (2018) argued that too many departmental communications lead to a loss of centralisation in decision-making, which negatively affects performance (Canacott et al., 2018, p.16). However, Massey and Le Meunier-Fitzhugh (2019) claimed that a skilled and dedicated team can improve coordination among departments to increase performance and reduce time wastage (Massey & Le Meunier-Fitzhugh, 2019, p.24). Nonetheless, academics presented the crucial advantages of improving inter-functional coordination at SMEs, such as the flexibility to adopt to changes and adequately respond to market changes (Hernández-Linares et al., 2020; Mohiuddin, 2017; Wang et al., 2017; Waruiru et al., 2019). In contrast, academics argue that a market oriented firms rely on organizational dynamic capabilities to interpret and respond adequately to the market requirements, for example, a recent study demonstrates that using the innovative technology is crucially depends on the knowledge of staff to interpret and respond fast to customer needs (Christa, Wardana, Dwiatmadja, & Kristinae, 2020). Recently, Randhawa, Wilden and Gudergan (2020) concluded that the mobilization of dynamic capabilities may drive to create new business model at market-oriented SMEs (Randhawa, Wilden, & Gudergan, 2010, p.15). Kurtmollaiev (2020) recommends to optimize interactions and collaboration among managers and employees inside the

organization in order to increase the contribution of staffs' dynamic capabilities at different firm-levels (Kurtmollaiev, 2020, p.16). Consequently, this research aims to IIFC through the OSC by evaluate using Enterprise Social Media (ESM) platforms. This research also offers an alternative explanation for indecisive results in the existing marketing literature about inter-functional coordination in MO theory.

2.3 Theories of Strategic Management

At the beginning of the 1990s, strategic management academics started investigating the influence of a firm's resources on its performance. Barney et al (1991) came up with the Resource-Based View (RBV) that emerged with the aim of improving performance through focusing on the utilisation of firms' internal and external resources (Barney, 1991; Barney & Clark, 2007; Camisón & Villar-López, 2016; Corte, Andrea, & Del Gaudio, 2017). Studies in strategic management claimed that the optimisation of internal and external resources leads to increased financial growth (Camisón & Villar-López, 2016; Goyal, Kamboj, & Rahman, 2015; Lonial & Carter, 2015; Prithwiraj, Subramanian, & Ramakrishnan, 2010). Researchers posited that significant performance can be obtained through an effective integration of non-financial resources such as marketing, operations, and human resources (Liu, Ke, Wei, & Hua, 2013; Trainor, Andzulis, Rapp, & Agnihotri, 2014). The RBV theory is efficient in explaining sustained performance at firms (Barney & Clark, 2007, p.168). Using the RBV effectively improves firm performance by 400% through resource management and implementations of marketing activities (Barney, 2014; Corte et al., 2017; Kozlenkova, Samaha, & Palmatier, 2014).

Academics suggested that firms should exploit unique opportunities that allow integrating intangible resources in novel ways to create growth (Camisón & Villar-López, 2016; Goyal et al., 2015; Nason & Wiklund, 2018). The RBV theory demonstrated a positive influence in developing resources and obtaining sustainable competitive advantage (Kraaijenbrink, Spender, & Groen, 2010; Liu & Liang, 2015; Nason & Wiklund, 2018; Rockwell, 2019). Ying et al. (2019) proposed that managers' capabilities such as engagement and support are considered as valuable dynamic resources to improve performance (Ying et al., 2019, p.527). Scholars identified tangible resources such as technology and intangible resources such as capabilities (Kamasak, 2017; Nguyen, Paswan, & Dubinsky, 2018; Nwachukwu & Chladkova, 2019). Capability of knowledge sharing between technical support and the sales team is considered as a vital intangible resource that improves firm performance (Bontis, Dragonetti, Jacobsen, & Roos, 2016, p.396).

Researchers argued that internal intangible resources have a crucial impact on external intangible resources, such as employee skills influencing customer satisfaction and corporate reputation (Cravens & Oliver, 2008; Nwachukwu & Chladkova, 2019; Rasula, Vuksic, & Stemberger, 2012). Although the RBV theory is considered efficient in expounding sustained performance at firms (Barney & Clark, 2007, p. 281), academics criticised that the RBV theory considers the usage of internal and external resources in a static and equilibrium-based model and ignores environmental dynamic changes in which frequent required changes in internal processes take place (Lin & Wu, 2014; Mwai, Namada, & Katuse, 2018; Sanchez, 2009). In other words, it does not consider dynamic market changes such as customer needs and competition (Kraaijenbrink et al., 2010; Ramanathan, 2018; Rockwell, 2019; Sanchez, 2009). However, this theory has been criticised by few academics because of the lack of studies about how intangible resources could be optimised to improve firm performance (Kraaijenbrink et al., 2010; Ramanathan, 2018). Further scholars suggested theories under the context of strategic management. The Core Competencies (CC) theory emerged and posits that firms' internal core resources are crucial to improving firm performance (Bai & Chang, 2015; Batkovskiy, Kalachikhin, & Georgievna, 2017; Berkman et al., 2018).

Academics proposed that firms should emphasise on core as well as individual competencies that would develop firm performance, such as a unique technical experience and skills (Berkman et al., 2018; Irtaimeh, 2018; Luo, Shen, Lou, He, & Sun, 2016). Academics defined competency as the "unique experience, skill, and ability of an individual to fulfil their current job" (Schilling, 2013, p.117). Studies in strategic management demonstrated that this theory influences the performance of large enterprises (Campion, Fink, Ruggeberg, & Odman, 2011; Luo et al., 2016; Yang, 2015). However, scholars argued that the theory has limited contributions to the performance of SMEs because it focuses on experienced capabilities and skills and ignores the opportunity to develop potential and new capabilities (Hashim, Raza, & Minai, 2018; Hellgren, Yazdanfar, & Abbasian, 2014; Kállay, 2012; Yeh & Chang, 2018). Academics in strategic management and social behaviour claimed that employees have potential values that can be developed through the integration of dynamic capabilities (Arend, 2014; Björk, Boccardelli, & Magnusson, 2010; de Araújo, Pedron, & Bitencourt, 2018; Teece, 2018). Interestingly, Hashem et al. (2018) argued that dynamic capabilities are the main link to develop capabilities and create core competences (Hashim et al., 2018, p.310). In other words, DC have a major mediation effect of creating core competences. However, the CC theory ignores

potential dynamic capabilities as well as complex changes in the macro environment, such as customer needs and competition (Sanchez, 2009; Yang, 2015). Nonetheless, developing CC leads to improved competitiveness and business intelligence (Gökkaya & Özbağ, 2015; Kabue & Kilika, 2016; Pono et al., 2018). Irtaimeh et al. (2018) argued that core competencies are hard to implement because firms require professional periodical and continuous evaluation to identify and develop competencies and increase their performance (Irtaimeh, 2018, p.173). In addition, scholars criticised that core companies require high expenditures to hire competent employees who have unique technical experience and skills (Batkovskiy et al., 2017; Pono et al., 2018; White, 2016). Core competences require high incentives such as salaries to encourage full contribution to the firm through sharing knowledge and interactions (Trencher et al., 2018, p.838). For example, academics concluded that petroleum SMEs in the United Arab Emirates have discovered that hiring people with technical competencies is financially insufficient as this high cost would eliminate potential profits (Al-Daihani, Nandi, & Raza, 2016, p.28).

Interestingly, Brown, George and Mehaffy-Kultgen (2018) claimed that competencies required high proficiency across all organisational levels rather than dynamic capabilities that focuses on any potential capability at all levels (Brown, George, & Mehaffey-Kultgen, 2018). Moreover, scholars posit that the CC theory suggests a stable environment as well as an ideal model of high skilled management behaviours (Bolden & Gosling, 2016; Danneels, 2008; Jamil, 2015; Thistlethwaite et al., 2014). In addition, small and medium enterprises have limited financial support and which makes it very costly to hire skilled core competencies (Al-Daihani et al., 2016; Trencher et al., 2018). Hashim et al. (2018) posit that it is essential that small firms adopt the approach of dynamic capability because small firms usually thrive in highly competitive, turbulent and unpredictable markets, as well as, small firms do not have any influence or control over the markets and to tackle the economic shocks (Hashim et al., 2018, p. 9). Recently, Ceglinski (2020) claimed that that dynamic capabilities cost lower and faster than core competencies in building skills for all employees (Cegliński, 2020, p. 8). Based on the aforementioned, the research finds it more adequate to discusses further the Dynamic Capabilities (DC) approach as follows.

2.3.1 The Dynamic Capabilities (DC) Approach

In the late 1990s, the DC approach emerged to examine and extend the concepts of the Resource Base View (RBV) and Core Competences (CC) theories. Teece et al. (1997) was the first scholar who defined the Dynamic Capabilities (DC) as “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece, Pisano, & Shuen, 1997, p.512). Academics argued that the approach the DC relies on three organizational capacities that are sensing, seizing and transforming (Kump, Engelmann, Kessler, & Schweiger, 2019; Matysiak, Rugman, & Bausch, 2018; Teece, 2018). Teece (2014) defined “sensing as the capacity of an organization to identify, development, and assess potential capabilities in relationship to customer needs, while seizing involves in the capacity of an organization in securing current and new resources to address the potential opportunities, and transforming refers to continuous renewal to the processes in order to maintain customers’ needs (Teece, 2014a, p.332). In other words, DC is the ability of an organization in identifying potential capabilities in order to assess potential resources and optimize it in a way to meet customers’ requirements. Interestingly, Helfat et al. (2009) re-defined the DC as “the capacity of an organization to create, extend, or modify its resource base” (Helfat et al., 2009, p. 46).

Recently, Kurtmollaiev (2020) defined dynamic capabilities as “a certain ability, capability, capacity, or competence” (Kurtmollaiev, 2020, p. 5). Further scholars defined the DC as the ability of organisations to optimise internal capabilities and resources to deliver timely, professional, and market-orientated decisions as well as create superior customer value (Barrales-Molina et al., 2015; Linden et al., 2019; Pisano, 2017). The approach provides vital and positive contributions to firm performance for large, medium, and small enterprises (de Araújo et al., 2018; Hernández-Linares et al., 2020; Song & Liao, 2019; Wilden, Gudergan, Akaka, Averdung, & Teichert, 2019). Academics posited that firms’ dynamic capabilities can assist in building and improving potential knowledge among employees (Bendig, Strese, Flatten, da Costa, & Brettel, 2018; Bontis et al., 2016; O’Reilly et al., 2019). Scholars argued that firms focusing on DC improve efficiency in dealing with turbulence in the macro environment as well as responding efficiently to customers’ needs (Pehrsson & Rollins, 2018; Prieto-Sandoval, Jaca, Santos, Baumgartner, & Ormazabal, 2019; Wilden, Gudergan, Nielsen, & Lings, 2013). Academics posited that the approach distinguished dynamic capabilities as a crucial factor to increase competitive advantage and create better business opportunities (Bendig et

al., 2018; Breznik & Lahovnik, 2016; Pehrsson & Rollins, 2018; Ying et al., 2019). Giniuniene and Jurksiene (2015) claimed that DC has a positive impact on improving operational innovation (Giniuniene & Jurksiene, 2015, p.991). Scholars demonstrated the crucial role of improving DC in order to enhance transferring knowledge and improve the quality of strategic decisions (Mohammed, Hu, Obrenovic, & Aina, 2017; Najmi, Kadir, & Kadir, 2018; O'Reilly et al., 2019). Bykova et al. (2018) claimed that DC has a strong mediation influence between a firm's performance and market orientation (Bykova & Jardon, 2018, p.151). For example, Danso et al. (2017) demonstrated the impact of integrating internal communication with performance (Danso et al., 2017, p.15). Abbas et al. (2019) concluded a significant positive relationship exists between improving the DC and the performance of SMEs (Abbas et al., 2019, p.28). Hernandez-Linares et al. (2020) claimed that a strong dynamic staff capabilities provide a high efficiency business innovative model (Hernández-Linares et al., 2020, p. 33). The approach has been criticised by management academics. For example, Arend and Bromiley (2009) argued that potential dynamic capabilities are difficult to identify and remain hidden until exercised through staff engagement (Arend & Bromiley, 2009, p.77).

Academics argued that some capabilities need time to be discovered and contributed properly (de Araújo et al., 2018; Helfat & Martin, 2014; Kraatz & Zajac, 2011). However, the approach remains superior in improving performance, which creates competitive advantage as well as increases financial growth at SMEs (Hernández-Linares et al., 2020; Jorge et al., 2018; Pehrsson & Rollins, 2018; Teece, 2019). Academics claimed that some of the capabilities are ordinary and which can easily developed through practice and knowledge sharing such as experience (Bloom, Eifert, Mahajan, McKenz, & Roberts, 2013). Helfat aand Martin (2014) emphasized on managers' capabilities to create, extend, and modify the process in order to improve employees' performance (Helfat & Martin, 2014). In addition, scholars have demonstrated the importance impact of micro-foundations of the DC such as leadership engagement on staff performance, for example, Suddadaby,et al. (2020) argue that managers can have the capacity to sense opportunities created by technological developments and the ability to produce effective changes at employees' performance (Suddaby, Coraiola, Harvey, & Foster, 2020). Interestingly, Sprafke, Externbrink and Wilkens (2012) claimed that micro-foundations do not include only the individual actions and interactions of managers but also the staff members without managerial responsibility relate to dynamic capabilities of the organization (Sprafke, Externbrink, & Wilkens, 2012, p. 144). In addition, Helfat and Martin (2015) proposed

the managerial human capital of the dynamic capabilities of which related to managers' knowledge, education, and skills of engagement at the organization (Helfat & Martin, 2015, p. 1287). For example, Wohlgemuth et al. (2019) argues that employees contribution is positively related to their manager' capabilities of engagement at work in SMEs (Wohlgemuth et al., 2019, p. 769). Scholars defined managerial capability as the ability of managers in engagement, sharing knowledge, and decision making to create strong workplace by encouraging employees to participate, as well as, improve their creativity and skills (Helfat & Martin, 2014; Ying et al., 2019; Zacca & Dayan, 2018). In addition, Teece (2014) has demonstrated so called none-routine managerial capabilities such as creativity at work or ability of decision making, and which has vital influence on employees' performance (Teece, 2014b, p. 338). The capabilities of managers and senior employees to improve engagement has a vital positive impact on increasing staff satisfaction and motivation towards work (Irtaimeh, 2018; Najmi et al., 2018; Pitelis & Wagner, 2019). Academics posited that managers' engagement is considered a vital capability that affects staff productivity and performance (Burnett, 2019; Christensen et al., 2018; Owen, Boswell, Opton, Franco, & Meriwether, 2018).

Pimenta, da Silva, and Tate (2016) found that managers' engagement has a direct impact on developing cross-functional processes (Pimenta, da Silva, & Tate, 2016, p.570). Scholars concluded that managers' engagement capacity ensures sustainable process control as well as enhances conflict resolutions at an appropriate period (Ali et al., 2019; Buil, Martínez, & Matute, 2019; Carmeli, Gelbard, & Reiter-Palmon, 2013; Danaher et al., 2014). Ali et al. (2019) found that leader engagement has a vital mediation impact on job satisfaction and staff performance (Ali et al., 2019, p.281). In addition, academics of strategic management focused of the magnitude of improving engagement to positively increase staff knowledge sharing among departments (Buil et al., 2019; Bykova & Jardon, 2018; O'Reilly et al., 2019). For example, Kurtmollaiev (2020) recommends to optimize interactions and collaboration among managers and employees inside the organization and which help to increase the contribution of the staff dynamic capabilities at different firm-levels (Kurtmollaiev, 2020, p.16). Scholars posit that capability of managers' engagement mediates the relationship between employees' productivity and organizational performance (Oostervink, Agterberg, & Huysman, 2016; Opitz et al., 2018). Feng et al. (2019) found that the staff engagement of including managers, as well as, employees moderates the impact of the business strategy and the firm's performance (Feng, Wang, et al., 2019, p.121). Schoenherr and Swink (2012) argued that

developing capabilities of staff such as managers and employees help to improve market orientation (Schoenherr & Swink, 2012, p.104). Cordes-Berszinn (2013) has defined Staff Capabilities are "the qualities, abilities, qualifications, skills and capacities of all the people employed by a particular organization which can be developed to improve performance" (Cordes-Berszinn, 2013, p. 121). Academics posited that capable staff are crucial source in creating competitive advantage as well as superior customer value (Pitelis & Wagner, 2019; Schoemaker, Heaton, & Teece, 2018). Pitelis and Wagner (2019) indicated that enhancing Staff Capabilities (SC) through capability staff engagement provides stable strategic decision-making inside firms (Pitelis & Wagner, 2019, p.233). Academics claimed that staff capabilities have vital positive impact on increasing staff creativity as well as improving their performance (Bitencourt et al., 2019; Gonzalez & Melo, 2019; Jorge et al., 2018). Scholars posited that dynamic capabilities such as staff knowledge sharing mediate the impact of information technology on business performance (Huda, 2019; Peng, Quan, Zhang, & Dubinsky, 2016; Teece, 2018). Scholars emphasised on the capability of staff knowledge sharing and which positively integrate teamwork performance across functions (Gonzalez & Melo, 2019; Lamont, King, Maslach, Schwerdtfeger, & Tienari, 2019; Rafique, Hameed, & Agha, 2018).

The capability of staff knowledge sharing has a crucial positive moderated-mediation influence between supervisor and staff performance through increasing creativity among the staff (Jahanzeb, Fatima, Bouckenooghe, & Bashir, 2019, p.817). Interestingly, Burnett et al. (2019) claimed that increasing the capability of Staff Engagement (SE) has a vital positive correlation with staff performance through increasing job satisfaction (Burnett, 2019, p.57). Academics posited that improving the staff engagement capability among employees will help them to make accurate decisions and increase work productivity (Choudhury & Mohanty, 2018; Mani & Mishra, 2019; Mone & London, 2018). Consequently, scholars claimed that SC such as staff knowledge sharing and staff engagement have a crucial impact on improving IIFC among departments inside SMEs (Mohiuddin, 2017; Nguyen, Ngo, et al., 2018; Zhang & Guo, 2019). For example, Zhang and Guo (2019) claimed that staff knowledge sharing develop inter-functional coordination through increase the exchange of knowledge diversity among functions (Zhang & Guo, 2019, p.111). Danso et al. (2017) demonstrated the impact of staff engagement on collaboration across functions that improve the performance of SMEs (Danso et al., 2017, p.14). Academics concluded that dynamic capabilities have no value without optimization among staff members inside firms (Huda, 2019; Lin et al., 2016). Interestingly,

Kurtmollaiev (2020) recommends to focus of micro-foundations such as optimize the interactions and collaboration among managers and employees inside the organization and which help to increase the contribution of the staff dynamic capabilities at different firm-levels (Kurtmollaiev, 2020, p.16). Cao (2011) posits that optimization of staff capabilities assist to reconfigure and integrate performance towards a turbulent market environment at small and medium enterprises (Cao, 2011, p. 464). Firms need to emphasise on the optimisation of staff capabilities to improve performance. Optimising staff capabilities and internal resources provides staff integrity, improves decision-making, increases self-awareness and self-development, and supports planning and coordination across all levels of organisation (Groenewald & Okanga, 2019 ; Kurtmollaiev, 2020; Lin et al., 2016). Helfat and Martin (2015) proposed so-called 'human capital' dynamic capabilities of which related to staff knowledge, engagement and decision making at the organization (Helfat & Martin, 2015, p. 1287) and as discussed in below section.

2.3.2 Staff Capabilities (SC)

Sprafke, Externbrink and Wilkens (2012) claimed that micro-foundations of dynamic capabilities do not include only the individual actions and interactions of managers but also the staff members without managerial responsibility that relate to dynamic capabilities of the organization (Sprafke et al., 2012, p. 144). Scholars defined Staff Capabilities (SC) as the ability to enhance collaboration through engagement, share knowledge and skills in order to provide effective coordination between staff members and respond effectively within a reasonable time to customer needs and market turbulences (Riswanto, Hurriyati, Wibowo, & Hendrayati, 2020 , p. 155). Other academics defined SC as the ability of managers, as well as, employees to share engage and sharing knowledge in order to enhance their performance inside the firm (Christensen et al., 2018; Johnson, 2017; O'Reilly et al., 2019). Mani and Mishra (2019) claimed that increasing the capability of Staff Engagement (SE) is crucial among employees to communicate with one another more efficiently and enhance staff performance (Mani & Mishra, 2019, p.187). Scholars revealed that increasing productivity can be achieved through staff interactions and Staff Knowledge Sharing (SKS) to solve problems at work (Christensen et al., 2018; Estell & Davidson, 2019). Academics posited that SC are core factors that increase performance inside organisations through enhancing SE and SKS (Diamantidis & Chatzoglou, 2019; Kollenscher, Popper, & Ronen, 2018; O'Reilly et al., 2019; Parker, Verreynne, Hine, & Coote, 2016; Pisano, 2017). The capabilities of managers and senior employees to

improve engagement has a vital positive impact on increasing staff satisfaction and motivation towards work (Irtaimeh, 2018; Najmi et al., 2018; Pitelis & Wagner, 2019). Academics posited that increasing capability of SE assist in improving the staff's ability and capacity to make decisions (Bakker, 2018; Hughes, Swaminathan, & Brooks, 2019; Krishna & Renuka., 2018). Academics defined Staff Engagement (SE) as the ability to take responsibility and increase indications at work under urgent circumstances (Chamberlin, Newton, & LePine, 2018; Diamantidis & Chatzoglou, 2019; Mencl, Wefald, & van Ittersum, 2016). Meanwhile, capability of Staff Knowledge Sharing (SKS) is defined as the ability to enhance knowledge through acquiring and transferring experiences inside the organisation, which increases staff performance (Masa'deh et al., 2019; Nguyen, Ngo, et al., 2018; Song & Liao, 2019). Kwahk and Park (2017) claimed that capability of staff knowledge sharing helps to improve the firm's operational performance (Kwahk & Park, 2017, p.839). Academics acknowledged that staff knowledge sharing positively influences teamwork collaboration among departmental functions through the exchange of ideas and experiences (Corcoran & Duane, 2019; Masa'deh et al., 2019; Nguyen, Ngo, et al., 2018).

Scholars concluded that staff knowledge sharing assists in improving the learning process, which helps to improve staff productivity and reduce mistakes inside the organisations (Aboelmaged, 2018; Kwahk & Park, 2017; Rafique et al., 2018). Academics acknowledged the positive influence of staff knowledge sharing on reducing the knowledge gap through developing a knowledge pool (Nkurunziza, Ntayi, Munene, & Kaberuka, 2019; Salloum, Al-Emran, & Shaalan, 2018; Zhou et al., 2019). Lee et al. (2019) concluded that the staff knowledge sharing of leaders has a crucial positive influence on developing employees' performance through improving self-efficacy (Le et al., 2018, p.1846). Academics posited that managers' engagement is considered a vital capability that affects staff productivity and performance (Burnett, 2019; Christensen et al., 2018; Owen et al., 2018). Krishna and Renuka (2018) argued that staff engagement is a strategic tool for a firm's success through encouraging employees to enhance collaboration and share experiences (Krishna & Renuka., 2018, p.349). Scholars argued that more engaged staff will assist in developing their own learning abilities and skills (Auliah, Anwar, & Hardin, 2019; Bingham, Heimeriks, Schijven, & Gates, 2015; Linden et al., 2019; Rafique et al., 2018). Ali et al. (2019) claimed that high staff engagement facilitates communication among employees and increases staff outreach (Ali et al., 2019, p.256). Interestingly, Nguyen and Ngo (2019) concluded that SKS has a direct positive impact on improving

inter-functional coordination (Nguyen, Ngo, et al., 2018, p.134). Zhang and Guo (2019) found that SKS has a positive influence on developing employees' performance across functions (Zhang & Guo, 2019, p.12). Pimenta, da Silva, and Tate (2016) found that managers' engagement has a direct impact on developing cross-functional processes (Pimenta et al., 2016, p.570). However, Lin et al. (2016) argued that dynamic capabilities has no value without optimisation (Lin et al., 2016, p.865). Academics acknowledged the crucial value of optimising staff capabilities to improve the performance of firms' functions (Huda, 2019; Lin et al., 2016; Teece, 2018). Scholars argued that casual indicators such as responsiveness, capacity, flexibility, and efficiency are important elements that affect capabilities of staff knowledge sharing and staff engagement (Abdelilah, El Korchi, & Balambo, 2018; Ajegbomogun & Diyaolu, 2018; Karampela, Lacka, & McLean, 2018; Lam, Yeung, & Cheng, 2016; Lamont et al., 2019). Academics claimed that the reflective indicator is of crucial importance given its magnitude in influencing the latent variables (Mikulić & Ryan, 2018; Strube, 2015; Willoughby, Kuhn, Blair, Samek, & List, 2017). Mikulić and Ryan (2018) defined the reflective indicator as the variable that is assumed to be caused by as well as influences the same latent variable (Mikulić & Ryan, 2018, p.467).

Scholars defined the responsiveness of staff knowledge sharing as the ability to share the acquired knowledge quickly and effectively to create superior employee performance (Oriarewo, Makurdi, & Kenneth, 2014; Rahimli, 2012). Janssen and Gao (2015) described the responsiveness of staff engagement as the ability to establish quick and balanced participation to both predictable and unpredictable work requirements for the purpose of offering faster solutions or solving problems (Janssen & Gao, 2015, p.1862). The responsiveness of engagement ensures quick interactions throughout the firm's functions to make important decisions during an appropriate period (Gupta, Chopra, & Kakani, 2018; Mencl et al., 2016; Pitelis & Wagner, 2019; Prieto-Sandoval et al., 2019). Senior employees who have proper responsiveness of knowledge sharing positively affect employees' behaviours and ensure increased productivity (Janssen & Gao, 2015; Shore, Thomas, & Strauss, 2006; Song & Liao, 2019). Academics claimed that high responsiveness of SKS provides a significant positive influence to employees' performance (Hassan & Raziq, 2019; Ibrahim, Mohamed, & Abker, 2019; Masa'deh et al., 2015; Nkurunziza et al., 2019; Orziemgbe & Chukwujioke, 2014). Hassan and Raziq (2019) revealed that high responsiveness of staff knowledge sharing will improve innovation adaptability inside small and medium enterprises, which helps to increase

its performance (Hassan & Raziq, 2019, p.105). Scholars defined flexibility as an employee's ability to share knowledge and engage with other staff members constantly and easily (Abdelilah et al., 2018; Gronseth & Hutchins, 2019; Xuejiao, 2018; Yanine, Valenzuela, Tapia, & Cea, 2016). Bernardes and Hanna (2009) found that "flexibility is associated with the availability of choices, while responsiveness is an outcome or use of that capability to address stimuli" (Bernardes & Hanna, 2009, p.34). Gibson, Doty, and Bhattacharya (2005) argued that high flexibility in staff knowledge sharing helps to improve staff skills and consequently organisational performance (Gibson, Doty, & Bhattacharya, 2005, p.624). Academics claimed that flexible staff engagement helps to improve decision-making during critical situations (Anitha, 2014; Kotey, 2017; Sekhar & Vyas, 2018). Kuciapski et al. (2019) posited that flexibility in knowledge transfer increases the staff's intention to learn and develop their own knowledge (Kuciapski, 2019, p.1055). Camps et al. (2016) acknowledged the importance of flexibility in engagement between senior and junior employees, which reduces the knowledge gap among staff and improves performance (Camps, Oltra, Aldás-Manzano, Buenaventura-Vera, & Torres-Carballo, 2016, p.383). Academics posited that the flexible engagement of superiors is crucial to empower employees and improve decision-making at SMEs (Isiaka, 2017; Pitelis & Wagner, 2019; Walker & Bonner, 2018).

North and Kumta (2018) emphasised on the efficiency of SKS to increase creativity at firms (North & Kumta, 2018, p.111). Scholars posited that efficient SE provides a sufficient operational flow through increasing productivity and prioritising workload (Abualoush, Obeidat, Tarhini, Masa'deh, & Al-Badi, 2018; Lekhawipat, Wei, & Lin, 2018; Yeh & Ku, 2019). Academics defined efficiency as the quality of an employee to deliver tasks without wasting effort and time to improve work performance (Bodla et al., 2018; Canacott et al., 2018; Murphy & Sashi, 2018; Nguyen, Ngo, et al., 2018; Tresna, 2019). Academics proposed that the efficient transfer of knowledge ensures value creation through encouraging critical thinking, which improves the staff's learning process (Golden, Henly, & Lambert, 2014; Graban, 2018; Zide, Mills, Shahani-Denning, & Sweetapple, 2017). Lee et al. (2019) posited that seniors who efficiently share knowledge will help to improve the skills of their employees, such as self-efficacy (Le et al., 2018, p.1842). Moreover, Lamont et al. (2019) defined the employee's capacity as their ability to provide the maximum contribution of staff knowledge sharing and staff engagement capabilities to increase performance (Lamont et al., 2019, p.108). Scholars argued that increasing knowledge sharing and engagement capacities will contribute to the firm's

performance through improving staff productivity (Lamont et al., 2019; Rafique et al., 2018; Schlagwein & Hu, 2017). Academics posited that increasing the capacity of engagement is a key factor to improving staff communication and outreach (Choudhury & Mohanty, 2018; Hoque, Awang, Siddiqui, & Sabiu, 2018; Iliev & Stoyanova, 2017). Scholars concluded that managers' engagement capacity ensures sustainable process control as well as enhances conflict resolutions at an appropriate period (Ali et al., 2019; Buil et al., 2019; Carmeli et al., 2013; Danaher et al., 2014). Mone and London (2018) revealed that increasing such a capacity provides continuous supervision and ensures performance development (Mone & London, 2018, p.165). Interestingly, scholars claimed that capabilities of both staff engagement and staff knowledge sharing are positively correlated. For example, Groop, Ketokivim, Gupta, and Holmström (2019) found that increasing the capacity of engagement ensures the enhancement of knowledge transfer among staff (Groop, Ketokivi, Gupta, & Holmström, 2017, p.20). On the other hand, Liu, Zhang, Qi, Wu, and Chen (2019) concluded that enhancing staff knowledge sharing positively impacts staff engagement among functions (Liu, Zhang, Qi, Wu, & Chen, 2019, p.21).

Consequently, Optimizing Staff Capabilities (OSC) provide positive process efficiency and improves business performance (Bitencourt et al., 2019; Linden et al., 2019; Pisano, 2017; Yeow, Soh, & Hansen, 2018). OSC enhances employees' productivity through increasing staff knowledge sharing and staff engagement among staff across functions (Murphy & Sashi, 2018; Potoski & Callery, 2018; Tresna, 2019) as well as improves employee communication and outreach inside the organisation (Ardic, Mylenko, & Saltane, 2013; Hartmann & Germain, 2015; G. Kim, Shin, Kim, & Lee, 2011; Linden et al., 2019). Huang et al. (2017) claimed that a firm that has strong OSC will succeed in achieving Integration of IIFC, which creates a superior competitive advantage (Huang, Wu, Wen, Hsin-Fei, & Hairui, 2017, p.65). Interestingly, Peng et al. (2016) argued that a firm's inter-functional performance could be enhanced through OSC (Peng et al., 2016, p.94). Therefore, this research tests the impact of using Enterprise Social Media (ESM) platforms on IIFC through the inclusion of the moderated-mediation effect of OSC.

2.3.3 The Moderated-Mediation Effect of Staff Capabilities

Muller, Judd, and Yzerbyt (2005) defined the moderated-mediation effect as "the process when the mediating variable that is responsible for producing the effect of the treatment on the outcome depends on the value of a moderator variable" (Muller, Judd, & Yzerbyt, 2005, p.854). Academics identified the

mediation effect as the element or factor that mediates the relationship between dependent and independent variables (MacKinnon, 2012; Nitzl, Roldan, & Cepeda, 2016; Ullah & Ahmad, 2017). Mediation should help to establish a significantly effective relationship between dependent and independent variables (Fairchild & MacKinnon, 2009; Fritz, Taylor, & MacKinnon, 2012; Hayes, 2017). Scholars defined the moderator effect as the third element or factor that affects the interactive strength and direction between two variables (Benitez & Castillo, 2018; Nwachukwu & Chladkova, 2019; J. Smith et al., 2018). In other words, the moderator effect occurs when the correlation between two variables is controlled by a third moderator variable. Studies in strategic management demonstrated the crucial mediation role of staff capabilities in developing staff performance inside firms (Bykova & Jardon, 2018; Danso et al., 2017; Opitz et al., 2018) as well as increasing staff satisfaction and loyalty (Ismail, 2017; Seo & Park, 2018; Ullah & Ahmad, 2017). Capability of managers' engagement mediates the relationship between employees' productivity and organizational performance (Oostervink et al., 2016; Opitz et al., 2018). Academics argued that staff engagement mediates the impact of staff knowledge sharing on the employees' learning process (Auliah et al., 2019; Gregory, Fawkes, Turner, & Montoya-Martinez, 2018; Welch, 2017) as well as that of using information technology and the employees' performance (Abbas et al., 2019; Auliah et al., 2019; Cetinkay & Rashid, 2018).

The responsiveness of engagement mediates the relationship between staff productivity and customer satisfaction (Canacott et al., 2018; Masa'deh et al., 2019; Tresna, 2019). Abbas et al. (2019) concluded that staff knowledge sharing capability has a positive mediation impact between firms' IT implications and employees' performance (Abbas et al., 2019, p.27). Ariasih et al. (2018) claimed that optimisation of staff capabilities mediates the relationship between operational development and business performance through improving management knowledge in adequate decision-making (Ariasih, Yasa, & Rahyuda, 2018, p.12). Interestingly, Song and Liao (2019) claimed that the capability of Staff Knowledge Sharing (SKS) has a moderation effect on IT intelligence and firm performance (Song & Liao, 2019, p.78). Feng et al. (2019) found that the capability of managers in Staff Engagement (SE) moderates the impact of the business strategy and the firm's performance (Feng, Wang, et al., 2019, p.121). Scholars acknowledged that capabilities of SE moderate the impact of innovation technology on firm performance (Jorge et al., 2018; Nolte et al., 2019; Papa et al., 2018). Liu and Bakici (2019) claimed that SKS moderates the influence of

Enterprise Social Media (ESM) platforms through the staff's motivation to learn using such platforms (Liu & Bakici, 2019, p.163). Bolda et al. (2018) posited that staff knowledge sharing crucially mediates the relationship between technical support and the sales team at Information and Communication Technology (ICT) enterprises (Bodla et al., 2018, p.728). Chen et al. (2018) argued that the influence of using ESM platforms on reducing workload depends on the moderation effect of staff engagement of other staff members (Chen & Wei, 2018, p.94). Carvalho and Fernandes (2018) concluded that staff engagement moderates the impact of enterprise social media platforms on employee performance (Carvalho & Fernandes, 2018, p.37). Demircioglu (2018) acknowledged the positive moderation effect of managers' and seniors' engagement on the relationship between using ESM platforms and job satisfaction (Demircioglu, 2018 , p.302).

Table (2.2): Previous Studies Aimed to Test the Moderated-Mediation Effect

Research Title	**Author, Year**	**Research Method**	**Findings**
Effects of inter-organisational compatibility on supply chain capabilities: Exploring the mediating role of inter-organisational information systems (IOIS) integration	Rajaguru & Matanda, 2013	Quantitative (2,000 respondents)	The mediation effect of inter-organisational SC helps to integrate inter-organisational information systems/platforms, which increases the performance of organisations
Examining the role of social media in effective crisis management: The effects of crisis origin, information form, and source on publics' crisis responses	Jin, Liu, & Austin, 2014	Quantitative (338 respondents)	Management engagement moderates the impact of SM and staff satisfaction as well as performance.
Peripheral, central, and coercive routes for promoting enterprise social networks	Alarifi & Sedera, 2014	Quantitative (224 respondents)	Managers' engagement positively moderates the relationship between using ESM platforms and employees' performance.
Brand innovation and social media: Knowledge acquisition from social media, market orientation, and the moderating role of social media strategic capability	Nguyen, Yu, Melewar, & Chen, 2015	Quantitative (357 respondents)	KS moderates the impact of using ESM platforms on brand innovation.
The role of social media in supporting knowledge	Cao, Guo, Liu, & Gu, 2015	Quantitative (262 respondents)	SM helps to integrate KS as a moderator to

integration: A social capital analysis			positively enhance the formation of employees.
What influences employees to use enterprise social networks? A socio-technical perspective	Chin, Evans, Choo, & Tan, 2015	Quantitative (2,600 respondents)	Employees' knowledge moderates the use of ESN, which increases the performance of firms.
Enterprise social networks: A successful implementation within a telecommunication company	Hu, Gu, Liu, & Huang, 2015	Quantitative (524 respondents)	Socio-technical factors such as management engagement as well as employees' KS and multi-cultural experiences can positively moderate the relationship between the usage of ESM platforms and employees' performance at telecom enterprises.
The use of social media in sales: Individual and organisational antecedents and the role of sales engagement in social media	Guesalaga, 2016	Quantitative (220 respondents)	The engagement capability of the sales team has a strong mediation effect on the relationship between ESM and firm performance.
The effect of social media on firm performance	Tajvidi & Karami, 2017	Quantitative (384 respondents)	Employees' marketing capabilities mediate the relationship between the usage of SM and the performance of firms.
Enterprise social media use and impact on performance: The role of workplace integration and positive emotions	Moqbel & Nah, 2017	Quantitative (10,000 respondents)	Using ESM can increase workplace integration through the mediation effect of workers' performance at IT firms.
Social media usage and firm performance: The mediating role of social capital	Kamboj, Kumar, & Rahman, 2017	Quantitative (132 respondents)	The impact of SM on firms' performance is positively mediated by individual obtainable capabilities at IT companies.
The effect of social media on employees' job performance: The mediating role of organisational structure	Cetinkaya & Rashid, 2018	Quantitative (205 respondents)	SM platforms positively moderate employees' job performance, while utilising an organisational structure has a

			positive mediating effect.
The mediating effect of social media marketing adoption between competitive intelligence and SME performance	Faizal, Nor, & Yusoff, 2018	Quantitative (339 respondents)	The capability of engagement in SM platforms mediates the positive relationship between innovation performance and SMEs' performance.
The impact of enterprise social media use on overload: The moderating role of communication visibility	Chen, Wei, & Yin, 2018	Quantitative (7,000 respondents)	Engagement in communications with colleagues moderates the impact of ESM platforms and job performance.
Improving the agility of employees through enterprise social media: The mediating role of psychological conditions	Cai, Huang, Liu, & Wang, 2018	Quantitative (251 respondents)	The relationship between using ESM platforms and employees' performance is mediated by proactivity and engagement.
Managing interdepartmental collaboration of social media relations: Investigating the PR/com role in the leadership and collaboration of social media relations practices across organisations	Whitten, 2018	Quantitative (428 respondents)	Engagement and communication levels positively moderate the influence of SM usage on interdepartmental collaboration.
The impact of social media on internal communications in the Tanzanian telecom industry	Kwayu, Lal, & Abubakre, 2018	Quantitative (153 respondents)	Engagement has a positive moderation effect on the relationship between using SM and the optimisation of internal firm processes at telecom firms.
Affordances for sharing domain-specific and complex knowledge on enterprise social media	Pee (2018)	Quantitative (303 respondents)	KS attributes such as technical knowledge have a crucial moderation effect on ESM affordance and the performance of employees.
The effect of employee participation in enterprise social media on their job performance	Lu & Pan, 2019	Quantitative (237 respondents)	Employees' engagement in ESM platforms moderates the relationship between employees' behaviour in information seeking and their job

			performance at IT firms.
How social media usage affects employees' job satisfaction and turnover intention: An empirical study in China	Zhang, Ma, Xu, & Xu, 2019	Quantitative (298 respondents)	Employees' engagement moderates the relationship between SM usage and job performance.
How do enterprise social media affordances affect social network ties and job performance?	Chen, Wei, Davison, & Rice, 2019	Quantitative (251 respondents)	SE ties moderate the impact of using ESM on job performance.
Enterprise social media usage: The motives and the moderating role of public social media experience	Liu & Bakici, 2019	Quantitative (157 respondents)	SKS positively moderates the relationship between ESM usage and the staff's work motivation.
Social media use and employee innovative performance: Work engagement as a mediator	Cheng, Zhang, Wen, & Wang, 2020	Quantitative (298 respondents)	Work engagement mediates the relationship between using ESM platforms and employees' innovative performance.
Co-creating social media agility to build strong customer–firm relationships	Chuang, 2020	Quantitative (231 respondents)	ESM agility is moderated by internal capabilities such as engagement responsiveness, which positively influences information-processing performance.

Academics posited that staff capabilities such as staff engagement and staff knowledge sharing mediate the impact of using information technology platforms on staff performance (Abbas et al., 2019; Auliah et al., 2019; Cetinkay & Rashid, 2018). Jahanzeb et al. (2019) claimed that employee engagement positively mediates the relationship between implementing technology and staff creativity (Jahanzeb et al., 2019, p.817). Peng et al. (2016) claimed that the staff knowledge sharing of senior employees in operational processes fully mediates the impact of using IT platforms on firm performance at Small and Meduim Enterprises (SMEs) (Peng et al., 2016, p.96). Interestingly, Jahanzeb et al. (2019) concluded that staff knowledge sharing has a positive moderated-mediation effect between using innovation technology and staff creativity as well as firm performance (Jahanzeb et al., 2019, p.817). Sok, Snell, Lee, and Sok (2017) found that employee engagement has a positive moderated-mediation effect between using Information

technology innovations and the performance of the sales team at small firms (Sok et al., 2017, p.249). De Zubielqui and Jones (2019) argued that employees' knowledge sharing has a positive moderated-mediation effect between using ESM platforms and their attitude towards customers (de Zubielqui & Jones, 2019, p.9). While some researchers acknowledged the magnitude of the role of Dynamic Capabilities (DC), other scholars emphasised on the crucial role of information technology platforms in developing DC through implementing information and communication technology platforms (Prieto-Sandoval et al., 2019; Schiller & Meiren, 2018). Academics suggested that firms should invest in information and communication technology platforms to improve dynamic capabilities and firm performance (Mention, Barlatier, & Josserand, 2019; Muninger, Hammedi, & Mahr, 2019; N. Rahman, 2020; Saini & Phoolka, 2020). For example, Randhawa et al. (2020) conceptualized the philosophy of market-oriented information and communication technology firms in relation to deploying dynamic capabilities, and posit that the firms that adopt innovative technology platforms will be able to fast seizing decisions once the market opportunity is identified, as well as, allow the firms to decide on the timing of reconfiguration and creating creative new business divisions (Randhawa et al., 2010, p. 27).

In other words, using innovative technologies improve the time of deploying dynamic capability which considered crucial for market-oriented B2B firms. Huda (2019) posited that firm performance can be improved through enhancing the usage of information technology tools (Huda, 2019, p.189). Scholars concluded that using information technology platforms such as ESM can enhance innovation diffusion through increasing staff interaction as well as improving job performance (Davison et al., 2019; Lu & Pan, 2019; Yingjie et al., 2019). Tresna (2019) found that adopting information technology platforms improves internal communication strategies among employees at SMEs (Tresna, 2019, p.27). Consequently, this research underpins the Diffusion of Innovation (DOI) theory to disseminate the use of ESM platforms across functions at small and medium enterprises. This research also proposes the usage of enterprise social Media platforms for the purpose of optimizing staff capabilities and integrating inter-functional coordination to improve performance at information technology SMEs in the Gulf Cooperation Council (GCC) area.

2.4 Theories of Information Technology

Hagsten and Kotnik (2019) argued that information technology improves profits and reduces expenditures through penetrating potential international markets as well as finding appropriate supply channels (Hagsten

& Kotnik, 2019, p.436). Information technology also has a vital role in increasing staff performance at Small and Medium Enterprises (SMEs) (Bala & Feng, 2019; Gërguri et al., 2017; Hagsten & Kotnik, 2019; Tresna, 2019; Zhang & Li, 2018). Scholars acknowledged the importance of investment in information technology to improve the efficiency of DC (Franco & Garcia, 2017; Teece, 2018; Tresna, 2019). For example, academics posited that using information technology platforms such as ESM provide better potential opportunities to explore hidden capabilities through engagement and sharing ideas among staff (Benitez, Llorens, & Braojos, 2018; Eze, Chinedu, & Bello, 2019; Pérez-González, Trigueros-Preciado, & Popa, 2017). Information technology evolves managers' capabilities in making decisions as well as leads to improved operational business processes (Aydiner, Tatoglu, Bayraktar, & Zaim, 2019; Ying et al., 2019; Yunis et al., 2017). Studies that adopted information technology theories with the aim to contribute to business performance. Davis et al. (1989) demonstrated the Technology Acceptance Model (TAM) theory, which has a crucial advantage to increase performance as well as flexibility to implement TAM at various sizes of enterprises (Chiemeke, Evwiekpaefe, & Haruna, 2018; Davis, Bagozzi, & Warshaw, 1989; Scherer, Siddiq, & Tondeur, 2019).

The TAM theory suggests that users are influenced by Perceived Usefulness (PU) as well as Perceived Ease of Use (PEOU) that determine their motivation to accept new technology. The TAM positively influences organisational performance (Marangunić & Granić, 2015; Scherer et al., 2019; Taherdoost, 2018). However, Baubeng, Yaokumah, and Tarhini (2019) criticised that the theory doesn't consider important factors such as the macro environment like government regulations and social influences such as religion and gender, which can strongly affect technology acceptance processes inside the firm (Buabeng-Andoh, Yaokumah, & Tarhini, 2019, p.651). Perceived Usefulness (PU) is when the employee believes that using a specific technology will improve his job performance (O'Dell & Sulastri, 2019, p.49). Perceived Ease Of Use (PEOU) requires the employee to believe that using new technology is easier and more effortless (Mortenson & Vidgen, 2016, p.1252). Some scholars revealed that the Technology Acceptance Model (TAM) theory is a reliable model in various technology implementations at firms (O'Dell & Sulastri, 2019; Rauniar, Rawski, Yang, & Johnson, 2014; Seuwou, Banissi, & Ubakanma, 2017). Tresna et al. (2019) claimed that user performance can be improved at SMEs through adopting the TAM theory (Tresna, 2019, p.29). Pelc et al. (2017) claimed that SNS positively influence PU and PEOU and are frequently used in

organisations (Pelc, 2017, p.12). In 1990, Tornatzky and Fleisher (1990) proposed the Technology Organisation Environment (TOE) theory (Tornatzky & Fleischer, 1990, p.66). The theory presents a crucial explanation to macro-environmental elements as well as organisational characteristics, such as the firm's structure and technology contexts (Bala & Feng, 2019; Matikiti, Mpinganjira, & Roberts-Lombard, 2018; Tarhini et al., 2018). The Technology Organisation Environment (TOE) theory presents many technological factors that improve productivity at organisations, such as government regulations, the availability of technology, and organisational structure (Alshehri, Rutter, & Smith, 2019; Bala & Feng, 2019; Chiemeke et al., 2018). Hue et al. (2019) criticised that the TOE module is important to increase productivity but only through the moderation effect of technical support, which is considered fundamental in determining the acceptance and use of the TOE theory. This theory has too many internal and external constructs, which makes it difficult to measure the interaction effect among all constructs (de Leeuw, Van Donk, de Koster, Power, & Gruner, 2015; KILSTRÖM, 2016; Mohanty, 2019). However, academics acknowledged the advantage of using TOE through SM adoption, which could improve firm performance (Sugandini, Effendi, Istanto, Arundati, & Rahmawati, 2019, p.884).

Venkatech et al. (2003) developed a previous TAM and proposed the Unified Theory of Acceptance and Use of Technology (UTAUT). The new Unified Theory of Acceptance and Use of Technology (UTAUT) theory investigates the effect of social elements such as age, gender, experience, and voluntary use (Ahmad, 2014; Dwivedi, Rana, Jeyaraj, Clement, & Williams, 2019; Mendoza, Jung, & Kobayashi, 2017). Although the Theory of Acceptance and Use of Technology (UTAUT) theory investigates social elements, recent scholars minimised the importance of such social elements, which could affect the adoption of technology inside firms (Alshehri et al., 2019; Raza, Shah, & Ali, 2019). Consequently, Rogers (2010) presented the Diffusion of Innovation (DOI) theory, considered as a general TAM at organisations (Rogers, 2010, p. 36). The Diffusion of Innovation (DOI) theory demonstrates a novel strategy in disseminating technology through encouraging employees and professional users to rapidly transmit their ideas, experiences, and skills through applications and internet platforms to meet the demands of other users (Currie & Spyridonidis, 2019; Libai, Mahajan, & Muller, 2017; Pelc, 2017). Academics posited that innovation platforms can modify the user's behaviour towards using new technology and over time (English, 2016; Lengyel, Di Clemente, Kertész, & González, 2018; Tajudeen, Jaafar, & Ainin, 2018). Rogers (2010) defined

diffusion as the “sharing of innovation through a particular channel during a specific period to reach a certain level of consensus” (Rogers, 2010, p.119). Scholars argued that the diffusion of innovation occurs through casual interactions to share knowledge and improve skills (Kiwanuka, 2015; Mount, Pitsis, & Zaman, 2019; Pelc, 2017). The DOI theory relies on the concept of people who are more interested in using innovative technologies to obtain better results or solve problems in a cost-effective or time-saving manner. The DOI theory emphasises on the influence of leaders and qualified employees as important elements to increase the diffusion of innovative technology at firms (Currie & Spyridonidis, 2019; Mount et al., 2019). Academics claimed that leaders identified as innovators who are empowered through experience and self-effect and show a high motivation for engagement (Kim et al., 2019; Pelc, 2017; Raman, Vachharajani, & Achuthan, 2018). Interestingly, social media platforms are used to increase visibility and the magnitude of interactions and innovations. Academics posited that adopting or using new platform applications such as ESM platforms inside firms can modify staff behaviour, which is considered as a diffusion of innovation (Allcott et al., 2019; English, 2016; Pelc, 2017). Consequently, the DOI theory has been widely adopted at firms to rapidly disseminate innovations among staff (Kim et al., 2019, p.72). However, the theory has been criticised because it neglects macro-environmental conditions such as cultural habits or beliefs (Pelc, 2017, p.13). For example, scholars argued that cultural conditions such as employees’ beliefs and values positively or negatively affect their behaviour towards DOI (Ax & Greve, 2017; Bankole & Bankole, 2017; Rodriguez, Peterson, & Krishnan, 2018). Given the discussions above and the vital role of implementing information technology tools to improve staff performance, this research uses the DOI theory to test using Enterprise Social Media (ESM) platforms to achieve Integration of Inter-Functional Coordination (IIFC) through Optimizing Staff Capabilities (OSC).

2.4.1 The Diffusion of Innovation (DOI) Theory

The DOI theory emphasises on disseminating innovation by encouraging users to transmit their ideas, experiences, and skills through applications and internet platforms to meet the demands of other users (Libai et al., 2017; Mahajan, 2010; Zhai, Ding, & Wang, 2018). Rogers (2010) defined the concept of the theory as “disseminating novel thoughts, knowledge, skills, or even useful applications” (Rogers, 2010, p.119). Academics posited that innovative technology can modify behaviour towards using new technology over time (English, 2016; Lengyel et al., 2018; Tajudeen et al., 2018). Currie and Spyridonidis (2019) defined

diffusion as the “sharing of innovation through a particular channel during a specific period to reach a certain level of consensus” (Currie & Spyridonidis, 2019, p.1213). Scholars acknowledged that Diffusion of Innovation (DOI) can occur through casual interactions among staff members (Kiwanuka, 2015; Mount et al., 2019; Pelc, 2017). The theory emphasises on managers influencing their employees to use technologies more frequently and significantly impact larger groups (Currie & Spyridonidis, 2019; Mount et al., 2019). Huda et al. (2019) claimed that increasing the adoption of technology applications through leaders will improve the capabilities and performance of other employees (Huda, 2019, p.191). Scholars acknowledged the importance of information technology to improve staff capabilities through enhancing interactions among staff members, which increases staff knowledge share (Huda, 2019; Stone, Deadrick, Lukaszewski, & Johnson, 2015; Zhang, Cao, Wen, Liang, & Zou, 2018). Alexander and Stei (2018) concluded that the DOI theory assists in increasing the intentions of innovation users to engage in knowledge share among staff (Alexander & Stei, 2018, p.315). Pelc (2017) claimed that DOI could be obtained through adopting Social Network Sites (SNS) at firms such as ESM platforms (Pelc, 2017, p.13). Academics claimed that adopting ESM platforms is vital in disseminating innovation through increasing the agility of staff engagement among staff as well as improving staff knowledge sharing (Hjorth & Hinton, 2019; Lu & Pan, 2019; Schiller & Meiren, 2018). Consequently, this research underpins the DOI theory as it supports the adoption and dissemination of information technology platforms, which increases staff knowledge sharing and interactions among employees at SMEs (Alexander & Stei, 2018; Allcott et al., 2019; Kim et al., 2019).

2.4.2 Enterprise Social Media (ESM) Platforms

Leonardi, Huysman, and Steinfield (2013) defined Enterprise Social Media (ESM) platforms as “web-based platforms that allow workers to (i) communicate messages with specific co-workers or broadcast messages to everyone in the organisation; (ii) explicitly indicate or implicitly reveal particular co-workers as communication partners; (iii) post, edit, and sort text and files linked to themselves or others; (iv) view the messages, connections, text, and files communicated, posted, edited, and sorted by anyone else in the organisation at any time of their choosing” (Leonardi, Huysman, & Steinfield, 2013, p.2). Fuchs (2017) defined them as “web-based platforms and applications that allow communication, content-sharing, and collaboration between employees who have the same interests or tasks in business” (Fuchs, 2017, p.117). These platforms are used for corporate strategies in various societies, industries, countries, and cultures

(Aboelmaged, 2018; Estell & Davidson, 2019; Liu & Bakici, 2019). Rehm and Goel (2017) claimed that “IT platforms improve capabilities and create integration at the network level of SMEs” (Rehm & Goel, 2017, p.450). Scholars claimed that web platforms are considered as cost-effective and rapid communication tools among staff and with customers (Bocconcelli, Cioppi, & Pagano, 2017; Johannsen, 2018; Yingjie et al., 2019). Implementing innovation technology platforms such as ESM has been highly suggested by academics to increase focus and enhance the collaboration of interactions among departments through KS (Dewnarain et al., 2019; Franco & Garcia, 2017; Hagsten & Kotnik, 2019; Johannsen, 2018). Bakar el at. (2018) claimed that Enterprise Social Media (ESM) platforms are considered a vital source of information for employees which increases their performance at SMEs (Bakar et al., 2018, p.17). Scholars demonstrated the positive effect of ESM platforms, such as Facebook, which mediates the relationship between customer orientation and employee engagement (Lu & Pan, 2019; Ogilvie, 'Agnihotri, Rapp, & Trainor, 2018; Rodriguez, Peterson, & Ajjan, 2018). Researchers argued that the usage of ESM platforms such as blogging enhances staff motivation towards work as well as job satisfaction (Archer-Brown & Kietzmann, 2018; Leidner, Gonzalez, & Koch, 2018; Özdemir & Aydin, 2020). Scholars claimed that ESM platforms improve employees’ capabilities, knowledge, and engagement, which increases their performance (Parry, Martin, & Dromey, 2019; Potoski & Callery, 2018). Researchers argued that usage of ESM platforms inside the firms led to improve staff innovative behaviour and agility at work (Bala, Massey, & Seol, 2019; Cai et al., 2018; Zhou et al., 2019), and develop staff skills in taking adequate decisions (Aboelmaged, 2018; Archer-Brown & Kietzmann, 2018; Kaur & Misra, 2019). Scholars posit firms that implement ESM platforms improve Staff productivity through interactions and learning (Song, Wang, Chen, Benitez, & Hu, 2019; Sousa & Rocha, 2019), and KS (Archer-Brown & Kietzmann, 2018; Cetinkay & Rashid, 2018; Song et al., 2019).

Studies identified different types of ESM platforms, as follows:

i. Social Networking Sites (SNS): These are online sites that facilitate interaction among users through sharing ideas, knowledge, reviews, and files (High & Buehler, 2019; Kim et al., 2019; Pegg, O'Donnell, Lala, & Barber, 2018). Academics defined this site as “a platform for interactive display and network use, complex systems, and dynamic and hierarchic graphs. Likewise, it allows the management of broad networks” (Castillo De Mesa, Gómez Jacinto, López Peláez, & Palma García,

2019, p.204). SNS keep team members up to date with the latest developments and tasks per project. SNS provide a vital advantage to enterprises because employees can work as one group, and all documents and projects can be stored and available to each team member at any time (Estell & Davidson, 2019; Matur, 2018; Moqbel & Nah, 2017). Facebook is widely adopted at private as well as governmental business sectors as an e-business platform (Hanna et al., 2017; High & Buehler, 2019; Hossain, Dwivedi, Chan, Standing, & Olanrewaju, 2018). Demircioglu and Chen (209) concluded that the Facebook business platform increases work motivation by improving employees' satisfaction with work processes (Demircioglu & Chen, 2019, p.60). Academics posited that SNS are considered a major source of information and KS to employees (Canacott et al., 2018; Estell & Davidson, 2019; Hughes et al., 2019). Scholars claimed that SNS help to optimise capabilities through increasing effective engagement and collaboration among departments to discover issues and find rapid solutions. For example, academics found that the Yammer platform helps to enhance learning capability through KS among employees (Munusamy, Osman, Riaz, Ali, & Mraiche, 2019, p.78). Other examples of SNS are Slack, Zoho Content, and Clarizen.

ii. Blogging: This is an informal web-based platform that involves engagement among employees as well as customers through the discussion of similar topics. Scholars concluded that blogging helps to motivate engagement and increase job satisfaction among employees (E. Brown & Woolston, 2018; Cai et al., 2018; Hughes et al., 2019; Özdemir & Aydin, 2020). Scholars also concluded that blogging positively influences staff commitment and engagement towards work (N. Luo, Guo, Lu, & Chen, 2018, p.89). Brown and Woolston (2018) posited that blogging has a positive impact on increasing KS among senior and junior staff by encouraging the exchange of ideas and solutions (E. Brown & Woolston, 2018, p.137). Carson and Marshall (2019) claimed that WordPress requires employees to perform content updates and develop customised customer requirements of a variety of products and services (Carson & Marshall, 2019, p.5). Scholars found that WordPress is considered an efficient tool in increasing staff assignment and identifying SC as well as developing skills (Limbong, Simarmata, Fauzi, Siagian, & Tarigan, 2018, p.91). Examples of blogging sites are WordPress and Blogger.

iii. Content Communities: These are web-based platform that allow staff to exchange information and multimedia materials, such as slides and training videos. Scholars claimed that content communities have a crucial influence in increasing staff knowledge through sharing information and experiences (Chen, Wang, Hu, & Zhou, 2018; Frank, Beasley, & Kroll, 2019; Lange, 2019). Scholars suggested that YouTube is efficient tool to enhance employees' learning by presenting training videos (Moghavvemi, Sulaiman, Jaafar, & Kasem, 2018, p.39). YouTube is considered as an integrated resource for information seeking and knowledge acquisition (Moghavvemi et al., 2018, p.41). Burgess and Green (2018) concluded that content communities motivate superiors to share their ideas and experiences through videos and slides (Burgess & Green, 2018, p.197). Thelwall and Kousha (2017) claimed that SlideShare ensures KS improvement as well as knowledge acquisition among employees (Thelwall & Kousha, 2017, p.2003). Academics argued that content communities increase EL and positively boost the KS process through interactions (Gugino, 2018; Haman & Hertzum, 2019; Rootman-le Grange & Retief, 2018). Examples of content communities are YouTube, SlideShare, and Flickr.

iv. Document Management Platforms: These are web-based platforms in which documents and projects will be stored and available to each team member at any time (Garyaev & Rybakova, 2018; Kaur & Misra, 2019; Nolinske, 2018). Chan, Guo, and Joeng (2019) argued that such platforms are considered a vital source of knowledge and information seeking to employees (Chan, Guo, & Jeong, 2019, p.43). Scholars acknowledged that document management platforms encourage effective collaboration and interaction among departments to discover issues and find rapid solutions (Chambers & Price, 2019; Garyaev & Rybakova, 2018; Orero & Tor-Carroggio, 2018). Stored documents such as spreadsheets, drawings, presentations, and previous market surveys are valuable assets. Academics posited that document management applications are important to improve KS among employees as well as increase work engagement (Chan et al., 2019; Yingjie et al., 2019; Zhou et al., 2019). Academics posited that cloud services such as Dropbox must be adopted to increase performance through improving knowledge sharing at SMEs (Senarathna, Wilkin, Warren, Yeoh, & Salzman, 2018, p.20). Looser (2020) claimed that Google Docs ensures

staff engagement and encourages them to use innovation, which leads to increased performance (Looser, 2020, p.305).

v. Instant Messaging Applications: These short messaging application platforms deliver messages, short videos, and documents in real time. Scholars claimed that real-time messaging applications are a crucial source of knowledge and information in firms because they provide immediate availability and support as well as offer the opportunity to work as a group in real time across distances (Prieto-Sandoval et al., 2019; Riff, Lacy, Fico, & Watson, 2019; Zhou et al., 2019). Academics revealed the magnitude of instant messaging applications to provide immediate KS, which improves self-efficacy (Ahmad, Abu Bakar, & Ahmad, 2019; Boahene, Fang, & Sampong, 2019; Chugh & Joshi, 2020). ESM messaging applications improve SC through increasing EL between superior and junior employees and helping solve urgent business hurdles (Bala et al., 2019; Mention et al., 2019; Muninger et al., 2019; Nyaribo & Munene, 2018). Tolani, Owoseni, and Twinomurinzi (2019) argued that SM mobile applications facilitate business processes at SMEs (Tolani, Owoseni, & Twinomurinzi, 2019, p.817). Al-Jabri and Al-Busaidi (2018) concluded that SM platforms enhance inter-organisational knowledge transfer (Al-Jabri & Al-Busaidi, 2018, p.349). Examples of instant messaging applications are WhatsApp, Skype, WeChat, and Viber.

Recently, a few academics discussed the disadvantages of using ESM platforms at firms. For example, some scholars demonstrated that the usage of ESM platforms wastes time and distracts employees, which negatively affects their performance (Baccarella, Wagner, Kietzmann, & McCarthy, 2018, p.437). Further scholars argued that using ESM platforms could create tension and neuroticism inside firms (Blackwell, Leaman, Tramposch, Osborne, & Liss, 2017, p70). However, some academics claimed that ESM platforms have a major positive influence on SE among functions and improve the capability of internal communications (Estell & Davidson, 2019; Gregory et al., 2018; Opitz et al., 2018). In addition, ESM platforms improve capability of staff knowledge sharing through interaction and information exchange via various SM platforms (Gilani, Salimi, Jouyandeh, Tavasoli, & Wong, 2019; Muninger et al., 2019; Prasad, Gupta, & Totala, 2018). Consequently, ESM platforms demonstrate sufficient enhancement in staff capabilities, such as improving staff engagement and knowledge sharing among departments (Bakar et al., 2018; Kwahk & Park, 2017; Oostervink et al., 2016; Yingjie et al., 2019).

Academics argued that Staff Capabilities (SC) such as Staff Knowledge Sharing (SKS) and Staff Engagement (SE) have a crucial moderation influence on using enterprise social media platforms. For example, Burnett et al. (2019) claimed that staff engagement positively impacts the usage of ESM platforms (Burnett, 2019, p.85). Scholars acknowledged the positive moderation effect of staff engagement on the impact of using ESM platforms and staff productivity (Buil et al., 2019; M. Ewing, Men, & O'Neil, 2019; Liu & Bakici, 2019). Kaur and Misra (2019) claimed that capability of staff knowledge sharing has a vital mediation impact on the relationship between staff motivation and attitude towards using ESM platforms (Kaur & Misra, 2019, p.570). Researchers revealed that less staff knowledge sharing lead to complexity in interactions via ESM platforms (Chugh & Joshi, 2020; Jahanzeb et al., 2019; Liu & Bakici, 2019). Xu, Li, and Zhou (2019) concluded that the moderation effect of staff knowledge sharing vitally impacts staff collaboration, which affects their use of enterprise social media platforms (Xu & Li, 2019, p.829). Moreover, academics argued that the impact of ESM platforms on employee performance is mediated by their capabilities (Cetinkaya & Rashid, 2018; Hou, Xiong, Jiang, Song, & Wang, 2019; S. U. Rehman, Mohamed, & Ayoup, 2019). Najim et al. (2018) concluded that the impact of enterprise social media platforms on business performance depends on the mediation effect of management capability of engagement, such as agility, fast response, and timely action (Najmi et al., 2018, p.529). Academics posited that the development of firm performance through using ESM platforms depends on staff capabilities such as staff knowledge sharing and staff engagement (Chen & Wei, 2018; Hall, 2019; Liu & Bakici, 2019). In general, scholars concluded that staff capabilities such as staff knowledge sharing and staff engagement have a crucial influence on using ESM platforms and improving the performance of SMEs (Chugh & Joshi, 2020; Jahanzeb et al., 2019; Jorge et al., 2018; Zhou et al., 2019).

2.4.3 Impact of Enterprise Social Media (ESM) on Staff Capabilities (SC)

Reid and Sanders (2019) posited that the 'management must use powerful information system tools to achieve Integration of Inter-Functional Coordination (IIFC) and which improves performance inside organizations' (Reid & Sanders, 2019, p.242). Rehm and Goel (2017) found that information technology platforms improve staff capabilities and create integration at the network level of SMEs (Rehm & Goel, 2017, p.450). ESM platforms have been widely implemented in corporate strategies as well as different industries and corporations of various sizes. Academics suggested adopting the use of information technology

platforms to facilitate rapid responses to customers and create superior competitive advantage (Dewnarain et al., 2019; Franco & Garcia, 2017; Gërguri et al., 2017; Hagsten & Kotnik, 2019). Scholars claimed that ESM platforms crucially enhance interactions among employees in a more dynamic and timely manner (Hall, 2019; Mention et al., 2019; Moqbel & Nah, 2017). Studies demonstrated the positive interaction effect between staff engagement and customer satisfaction through the use of enterprises social media platforms such as Facebook (Estell & Davidson, 2019; Ogilvie et al., 2018; Rodriguez, Peterson, & Ajjan, 2018). Pee (2018) claimed that enterprises social media platforms facilitate the sharing of specific and complex knowledge among employees, such as sharing technical data between engineers and the sales team at information and communication technology firms (Pee, 2018, p.36). Enterprises social media considered as platforms that delivers information quickly and frequently updates sources of information at SMEs (Bala et al., 2019; Gilani et al., 2019; Olanrewaju et al., 2020). Rahman (2020) argued that ESM platforms facilitate the application of knowledge into products and services at organisations (N. Rahman, 2020, p.4896). Interestingly, Saini and Phoolka (2020) claimed that ESM platforms are vital tools among employees which help to optimise the capabilities of staff knowledge sharing (Saini & Phoolka, 2020, p.516).

Benitez et al. (2018) posited that the usage of ESM platforms positively influences staff capabilities through exploring potential knowledge (Benitez et al., 2018, p.522). Parveen et al. (2019) suggested that ESM platforms improve engagement capabilities by facilitating internal communications among managers and employees (Parveen, Jaafar, & Ainin, 2019, p.77). Scholars acknowledged that enterprises social media platforms increase the ability of employees to identify their own potential engagement capabilities (Bakar et al., 2018; Estell & Davidson, 2019; Yingjie et al., 2019). Academics posited that ESM has a positive influence on increasing teamwork and staff productivity (Christensen et al., 2018; Johnson, 2017; Jorge et al., 2018; O'Reilly et al., 2019) and that ESM platforms can improve managers' engagement, which then improves employees' ability to engage with one another anytime and make timely and effective decisions (Archer-Brown & Kietzmann, 2018; Lee, 2016; Parveen et al., 2019). Although some marketing academics claimed that ESM platforms enhance firm performance through increasing collaboration and staff knowledge sharing among employees (Ahmad et al., 2019; Olanrewaju et al., 2020; Song et al., 2019), scholars of strategic management strongly argued that Staff Capabilities (SC) have a crucial moderated-mediation effect on the usage of enterprises social media platforms to improve the performance of employees. For example,

academics posited that managers' engagement crucially moderates the interactive relationship between the impact of enterprises social media platforms and staff productivity (Chen & Wei, 2018; Ferreira et al., 2018; Liu & Bakici, 2019). Scholars of strategic management claimed that the staff knowledge sharing capability of managers has a vital moderation effect on the relationship between using ESM platforms and staff creativity (Jahanzeb et al., 2019; Jorge et al., 2018; Xu & Li, 2019). Studies in strategic management presented the important mediation role of staff engagement, which mediates the relationship between using ESM and staff performance to enhance collaboration (Ali et al., 2019; Bykova & Jardon, 2018; Cai et al., 2018). Song and Liao (2019) concluded that staff knowledge sharing mediates the relationship between using innovation information technology platforms and enhancing learning processes (Song & Liao, 2019, p.77). Sánchez, Morales, and Ramos (2017) found that capacity of staff knowledge sharing has a positive moderated effect on information technology applications for junior employees' knowledge acquisition (Sánchez, Morales, & Ramos, 2017, p.50).

2.5 Research Gap

This research aims to contribute to the knowledge of the marketing literatures through the context of information technology with the inclusion of the strategic management approach. Academics defined neglect spotting gap as "an intent to focus on neglected or under-researched areas, in which neglect could apply to theories, constructs or methodologies, but could also could refer to areas where papers are substantially conceptual rather than empirical" (Nicholson et al., 2018). This research identifies a gap that neglects spotting the topic of Integrating Inter-Functional Coordination (IIFC) at the Market Orientation (MO) theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Marketing academics claimed that the market orientation theory has a direct positive correlation with firm performance and assists in enhancing financial profits at Small and Medium Enterprise (SMEs) (Cadogan, 2020; Hernández-Linares et al., 2020; Nwokah & Hamilton-Ibama, 2018; O'Dwyer & Gilmore, 2019). Academics emphasised on Inter-Functional Coordination (IFC) as a core element of the market orientation theory that relies on employee performance and has a major impact on customer satisfaction (Al-Nsour, 2017; Grootveld, 2016; Mohiuddin, 2018; Sikkens, 2017; Waruiru et al., 2019). Scholars concluded that IIFC has a direct impact on increasing customer satisfaction and creating superior competitive advantage at SMEs (Chebet et al., 2018; Massey & Le Meunier-Fitzhugh, 2019; Mubarak, 2019; Wang et al., 2017). Scholars defined IIFC as the optimisation

of internal capabilities and resources to improve the performance of employees and create superior competitive advantage (Grootveld, 2016; Mubarak, 2019; Sikkens, 2017; Tomaskova, 2018; Waruiru et al., 2019). Many academics have focused on the magnitude of IIFC to improve employee performance and increase financial growth at SMEs (Jugend et al., 2018; Murillo-Oviedo et al., 2019; Sofijanova et al., 2015; Wang et al., 2017). Based on the above discussions, this research aims to contribute to the marketing literature through the inclusion of strategic management and information technology contexts. In addition, the research aims to practically contribute to Information and Communication Technology (ICT) enterprises at Gulf Cooperation Council (GCC) area and which by integrating coordination between engineers working in rural sites with their managers at head offices.

2.6 Summary

This chapter reviewed literatures in marketing, information technology, and strategic management related to the research area as well the identifies a gap that neglects spotting the topic of Integrating Inter-Functional Coordination (IIFC). The market orientation theory is underpinned as the main research theory given its crucial contribution through spotting a neglected topic of IIFC (Cadogan, 2020; Hernández-Linares et al., 2020; Nwokah & Hamilton-Ibama, 2018; O'Dwyer & Gilmore, 2019). Situmorang (2019) posited that the market orientation theory is the appropriate approach for SMEs that rely on employee performance to deal with external environmental factors such as market turbulence, technological turbulence, and competitive intensity (Situmorang, 2019, p.171). The research emphasises on the literature gap by suggesting integrating inter-functional coordination as a core element that influences staff performance and creates superior competitive advantage at SMEs (Apasieva, 2017; Mohiuddin, 2018; Mubarak, 2019; Waruiru et al., 2019). However, academics defined IIFC as the optimisation of firms' Dynamic Capabilities (DC) and internal resources to improve staff performance through integrating interdepartmental coordination (Grootveld, 2016; Mubarak, 2019; Sikkens, 2017; Tomaskova, 2018; Waruiru et al., 2019). Academics claimed that Dynamic Capabilities (DC) such as Staff Capabilities (SC) are positively correlated to firm performance (Gonzalez & Melo, 2019; Hernández-Linares et al., 2020; O'Reilly et al., 2019). However, scholars also claimed that DC have no value without optimisation (Huda, 2019; Lin et al., 2016; Teece, 2018). In addition, scholars acknowledged the magnitude of the moderated-mediation effect of staff capabilities such as Staff Knowledge Sharing (SKS) and Staff Engagement (SE) as well as their important

role in improving IIFC. Consequently, the research underpinned the Dynamic Capabilities (DC) approach to support its findings within a strategic management context. Furthermore, the chapter discussed the importance of information technology platforms to develop firm performance (Olanrewaju et al., 2020; Tresna, 2019; Zhang & Li, 2018). Reid and Sanders (2019) concluded that management must use powerful information technology tools to improve dynamic capabilities which lead to integrated operational processes (Reid & Sanders, 2019, p.242). Rehm and Goel (2017) found that information technology platforms improve capabilities and create optimisation at work levels, which assists in work integration at small and medium enterprises (Rehm & Goel, 2017, p.449). Huda et al. (2019) claimed that increasing the adoption of information technology platforms through professional or senior employees leads to optimization of dynamic capabilities of other employees (Huda, 2019, p.191). Therefore, the research underpinned the Diffusion of Innovation (DOI) theory as it is widely used to disseminate and encourage innovation through enterprise social media platforms (Allcott et al., 2019; Currie & Spyridonidis, 2019; Kim et al., 2019; Pelc, 2017). Scholars claimed that enterprise social media platforms hold crucial technological value to improve the performance of employees (Huda, 2019; Nolte et al., 2019; Wang & Chang, 2019). The chapter discussed studies that highlighted the impact of enterprise social media platforms to improve the performance of employees. Consequently, two theories and one approach were underpinned in this chapter that are the Market Orientation (MO) theory, the Diffusion of Innovation (DOI) theory and the Dynamic Capabilities (DC) approach.

Chapter Three

Theoretical Development

3.1 Introduction

Scholars posited that Integration of Inter-Functional Coordination (IIFC) is positively correlated with customer satisfaction and assists in increasing financial growth (Chebet et al., 2018; Mubarak, 2019; Murillo-Oviedo et al., 2019; Wang & Kim, 2017). As previously mentioned, Rehm and Goel (2017) found that information technology platforms significantly improve staff capabilities and create optimisation at work levels of Small and Medium Enterprises (SMEs) (Rehm & Goel, 2017, p.449). Bala and Feng (2019) claimed that enterprise social media platforms are widely accepted in businesses to facilitate innovation diffusion and interactions that enhance performance at large, small, and medium enterprises (Bala & Feng, 2019, p.118). However, academics claimed that Staff Capabilities (SC) such as Staff Engagement (SE) mediate the impact of using information technology on employees' productivity (Abbas et al., 2019; Auliah et al., 2019; Cetinkay & Rashid, 2018). Liu and Bakici (2019) claimed that the moderator interaction effect of Staff Knowledge Sharing (SKS) on using enterprise social media platforms positively influences employees' motivation to learn and increases staff performance (Liu & Bakici, 2019, p.163). Therefore, this chapter discusses the interaction moderated-mediation effect of staff capabilities such as staff engagement and staff knowledge sharing on employee performance through using information technology platforms. This chapter presents a conceptual framework that aims to test the impact of using enterprise social media platforms on IIFC through the inclusion of the indirect moderated-mediation effect of Optimizing Staff Capabilities (OSC) at information and communication technology SMEs in the Gulf Cooperation Council (GCC) area. Four main hypotheses are formulated, which consist of two sub-hypotheses to test the level of indirect moderated-mediation effect of optimizing staff sapabilities while measuring the overall moderator impact of staff capabilities on the direct impact of ESM platforms on IIFC.

3.2 Theoretical Development

3.2.1 Inter-functional Coordination (IFC)

Inter-functional coordination is one of the most crucial elements of the Market Orientation (MO) theory (Chebet et al., 2018; Mubarak, 2019; Sikkens, 2017; Tomaskova, 2018). Scholars posited that customer satisfaction as well as competitive advantage rely on the performance of IFC (Apasieva, 2017; Canacott et al., 2018; Gnizy, 2019; Park & Tran, 2018). Sikkens et al. (2017) concluded that enterprises could achieve success in different markets through effective Integration of Inter-Functional Coordination (IIFC) (Sikkens, 2017, p.36). Marketing scholars acknowledged that IIFC leads to the increased performance of organisations (Chebet et al., 2018; Kashyap, 2018; Massey & Le Meunier-Fitzhugh, 2019; Wang et al., 2017; Waruiru et al., 2019). The basic principle of integrating inter-functional coordination is that every employee at any department can collaborate to increase their contributions and create superior value (Mohiuddin, 2018; Mubarak, 2019; Tomaskova, 2018). Academics argued that employees' fast adoption to customers' needs leads to competitive advantage through integrating collaboration among functions inside SMEs (Gounaris, Vassilikopoulou, & Chatzipanagiotou, 2014; Grootveld, 2016; Jeevan & Jyoti, 2016; Sikkens, 2017; Tomaskova, 2018).

Scholars acknowledged the magnitude of IIFC to improve the performance of Small and Medium Enterprises (SMEs) and which create unique customer value (Canacott et al., 2018; Pellathy et al., 2019; Wang & Kim, 2017). Academics posited that integrating inter-functional coordination has a direct impact on improving operations such as supply chain management (Bouachouch & Chahdi, 2015; Glas, Lipka, & Essig, 2019; Murillo-Oviedo et al., 2019). Mohiuddin et al. (2018) claimed that IIFC assists in increasing competitive advantage through improving employees' engagement and commitment (Mohiuddin, 2018, p.702). According to Kashyap (2018), a recent business survey revealed that 75% of businesses are considering IIFC as crucial for their business (Kashyap, 2018, p.2). Canacott et al. (2018) concluded that IIFC positively influences internal communication strategies by enhancing the collaboration between sales and marketing functions (Canacott et al., 2018, p.15). Yadava and Tripathi (2018) found that integrating inter-functional coordination is crucial with respect to enhancing employee performance and accurately responding to market intelligence (Yadav & Tripathi, 2018p. 54). Glas et al. (2019) argued that integrating inter-functional coordination helps to develop business performance through optimising the cooperation between supply

management and other functions (Glas et al., 2019, p.101). Madhani (2016) claimed that integrating coordination between functions of sales and marketing helps to create customer trust and increase their satisfaction (Madhani, 2016, p.35). Bouachouch and Chahdi (2015) discussed how IIFC helps to increase staff knowledge sharing and synchronise data and performances across departments (Bouachouch & Chahdi, 2015, p.126). Consequently, IIFC is crucial to increasing employee performance and customer satisfaction at SMEs. Scholars claimed that integrating inter-functional coordination can be achieved through the optimisation dynamic capabilities and resources in organisations (Apasieva, 2017; Glas et al., 2019; Massey & Le Meunier-Fitzhugh, 2019; Mohiuddin, 2018; Nguyen, Ngo, et al., 2018; Tajeddini, Altinay, & Ratten, 2017; Zhang, Cao, et al., 2018). In other words, optimization of staff capabilities is essential to integrating inter-functional coordination. Academics argued that employees' capabilities have no value without optimisation (Huda, 2019; Lin et al., 2016; Teece, 2018). Academics acknowledged that optimization of staff capabilities leads to a better deployment of performance among functions across departments (Groenewald & Okanga, 2019 ; Liu et al., 2012; Schiemann, 2014). Capability of staff engagement plays a vital role in affecting Inter-Functional Coordination (IFC) performance by improving the staff's abilities to make decisions and instruct their colleagues appropriately (Burnett, 2019; Krishna & Renuka., 2018; Mani & Mishra, 2019). Employees' engagement capability helps them to work under pressure to meet the customers' demands (Christensen et al., 2018; Parker et al., 2016; Potoski & Callery, 2018). Optimising capability of Staff Knowledge Sharing (SKS) facilitate the integration of employees' knowledge acquisition abilities across functions (Lamont et al., 2019, p.113). Academics acknowledged that SKS capability positively influences teamwork among the firm's functions through exchanging ideas and experiences (Corcoran & Duane, 2019; Masa'deh et al., 2019; Nguyen, Ngo, et al., 2018).

3.2.2 The Dynamic Capabilities (DC) Approach

Teece, Pisano and Shuen (1997) defined the approach as "the ability of an organization and its management to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (Teece et al., 1997, p.516). Scholars concluded the Dynamic Capabilities (DC) is an approach that is focusing on sensing, seizing and transforming the organizational activities (Engelmann, 2016; Kump et al., 2019; Matysiak et al., 2018). Teece (2014) defined seizing as "identification,

development, co-development and assessment of technological opportunities in relationship to customer needs", seizing involves the "mobilization of resources to address needs and opportunities, and to capture value from doing so", and Transforming refers to a "continued renewal" to the processes in order to maintain market needs (Teece, 2014a, p.332). However, Teece (2014) posits that the DC approach is advanced in the field of the organizational management through creating a substantial efficiency, as well as, knowledge and which applied in the context of the dynamic capabilities-based theory of the multinational enterprise (Teece, 2014a, p. 8). Pisano (2017) argued that the DC is a theory with a strategic perspective and which connects firms' capabilities with market strategies and create competitive advantage (Pisano, 2017, p.755). Academics were able to move the standard value of the DC approach to an advanced conceptualized context and which utilized its nature to a robust theory of dynamic capabilities that supports to organizational performance (Fainshmidt, Pezeshkan, Lance Frazier, Nair, & Markowski, 2016, p.1350). Schriber and Lowstedt (2019) concluded an advance understanding on the traditional DC approach by explaining the new role of for dynamic capabilities in firms' capacity to respond to changing in environments and which explicate a new a strategic assumption to a theory of dynamic capabilities (Schriber & Löwstedt, 2019, p.385).

The dynamic capabilities theory provides a vital contribution in strategic management planning (de Araújo et al., 2018; Hernández-Linares et al., 2020; Song & Liao, 2019; Wilden et al., 2019). Academics defined dynamic capabilities as the ability of organisations to build, reconfigure, and optimise capabilities and resources to improve business performance and increase competitive advantage (Barrales-Molina et al., 2015; Barreto, 2010; Linden et al., 2019; Pisano, 2017; Teece, 2018). In addition, scholars and professionals defined staff capabilities as the ability of an employee to engage with other employees, share knowledge, and use their skills to perform job tasks (Ajayi, Odusanya, & Morton, 2017; Cambridge, 2018; Camps et al., 2016; Maley, 2019). Wonnacott and Dawe (2014) defined the staff as all employees who work at all levels in the same organisation, including workers, supervisors, and owner-directors (Wonnacott & Dawe, 2014, p. 65). Researchers identified staff capabilities as the vital dynamic values of an employee that can help to increase inter-functional coordination (Cheng, Zhang, Wen, & Wang, 2020; Gonzalez & Melo, 2019; Huda, 2019; O'Reilly et al., 2019). Improving staff capabilities assists firms in dealing more efficiently with customers and managing internal processes towards turbulence in market environments (Cao, 2011; Kraatz

& Zajac, 2011; Prieto-Sandoval et al., 2019; Sirmon, Hitt, & Ireland, 2007; Wilden et al., 2013). Academics claimed that staff capabilities such as Staff Engagement (SE) and Staff Knowledge Sharing (SKS) have a crucial influence on developing staff performance (Estell & Davidson, 2019; Teece, 2018; Wohlgemuth et al., 2019). Engaged employees can obtain a better understanding of their job responsibilities as well as present the ability to work under stress at peak times (Chamberlin et al., 2018; Diamantidis & Chatzoglou, 2019; Mencl et al., 2016). Scholars proposed that capability of SE ensures effective time management and workload prioritisation, which leads to improved performance (Irtaimeh, 2018; Najmi et al., 2018; Pitelis & Wagner, 2019). Scholars claimed that increasing SKS will lead to improved business productivity (Christensen et al., 2018; Haddud, Dugger, & Gill, 2016; Nyaribo & Munene, 2018; Pourmola et al., 2019). Improving SKS also leads to developing employees' learning capacity, which enhances their efficiency at work (Lamont et al., 2019; O'Reilly et al., 2019; Rafique et al., 2018). Academics argued that engagement capability helps to improve teamwork and staff creativity (Aboelmaged, 2018; Masa'deh et al., 2019; Salloum et al., 2018). Peng et al. (2016) claimed that a firm's performance could be enhanced through staff capability such as knowledge sharing (Peng et al., 2016, p.94).

Interestingly, scholars of strategic management demonstrated the crucial moderation and mediation effects of staff capabilities on improving firm performance (Hayes, 2018; Sok et al., 2017; Song & Liao, 2019). For example, academics claimed that the flexibility of employees' engagement moderates the relationship between the influence of using Enterprise Social Media (ESM) platforms and employees' productivity (Christensen et al., 2018; Estell & Davidson, 2019; Wohlgemuth et al., 2019). De Zubielqui and Jones (2019) found that capacity of SKS moderates the relationship between implementing new information technology platforms and enhancing junior staff performance (de Zubielqui & Jones, 2019, p.12). Rahman (2020) posited that the relationship between using ESM platforms and the motivation to accomplish job tasks is mediated by SE efficiency at work (N. Rahman, 2020, p.4890). Capacity of SKS crucially moderates the effect of using information technology tools on employees' creativity (Chen & Wei, 2018; Huda, 2019; Liu & Bakici, 2019; Nolte et al., 2019). As discussed in the previous chapter, scholars emphasised on reflective indicators that affect capabilities of staff engagement and staff knowledge sharing, and which are responsiveness, flexibility, capacity, and efficiency (Abdelilah et al., 2018; Rafique et al., 2018; Song & Liao, 2019; Zide et al., 2017). Academics argued that the reflective indicator has an important role given its

magnitude in influencing latent variables through the interchangeability effect (Bollen, 2011; Strube, 2015; Xu, Peng, & Prybutok, 2019). Mikulić and Ryan (2018) defined this indicator as "the variable that is assumed to be caused by as well as influences the latent variable" (Mikulić & Ryan, 2018, p.467). Therefore, this research will test the impact of the four reflective indicators on staff engagement and staff knowledge sharing capabilities. Hassan and Raziq (2019) revealed that high responsiveness of staff knowledge sharing will improve innovation adaptability in SMEs and lead to an increase in performance (Hassan & Raziq, 2019, p.105). Kuciapski et al. (2019) posited that flexibility in knowledge transfer helps to improve employees' intention to learn and develop their knowledge (Kuciapski, 2019, p.1055). Scholars posited that efficient staff engagement provides a sufficient operational flow through increasing productivity as well as prioritising workload (Abualoush et al., 2018; Lekhawipat et al., 2018; Yeh & Ku, 2019). Academics posited that increasing staff engagement capacity is a key factor to improve employee communications and outreach (Choudhury & Mohanty, 2018; Hoque et al., 2018; Iliev & Stoyanova, 2017). Academics found that using enterprise social media platforms helps to increase capacity of staff knowledge sharing in organisations (Zhou et al., 2019). Consequently, information technology scholars argued that using ESM platforms has a positive interaction effect on staff capabilities such as staff knowledge sharing and staff engagement at work (Aydiner et al., 2019; Bala & Feng, 2019; Estell & Davidson, 2019; Song & Liao, 2019).

3.2.3 The Diffusion of Innovation (DOI) Theory

The DOI theory emphasises on professionals and managers who significantly influence a larger group of employees to adopt innovative technologies through Staff Engagement (SE) and Staff Knowledge Sharing (SKS) across functions (Akcigit, Caicedo, Miguelez, Stantcheva, & Sterzi, 2018; Currie & Spyridonidis, 2019; Mount et al., 2019). Academics claimed that such capabilities can be improved through the adoption of information technology platforms (Aydiner et al., 2019; Jia, Hall, Yan, Liu, & Byrd, 2018; Song & Liao, 2019). Academics argued that DOI occurs through casual collaboration among staff members (Akcigit et al., 2018; Kiwanuka, 2015; Mount et al., 2019; Pelc, 2017). Adopting new information technology platforms modifies employees' behaviour, which is considered as DOI (English, 2016; Pelc, 2017). Peng and George (2011) found that the usage of information technology platforms increases staff commitment within different functional areas in the hotel industry (Peng & George, 2011, p.219). Academics claimed that information systems play a key role in facilitating the process of staff knowledge sharing among employees (Salloum

et al., 2018, p.105). Scholars claimed on the dynamic effective role of using Enterprise Social Media (ESM) platforms to develop SE through employees–managers and managers–employees (Hall, 2019; Mention et al., 2019; Moqbel & Nah, 2017). Zhou et al. (2019) concluded that using ESM platforms positively affects SKS, which helps to optimise performance among different functional areas (Zhou et al., 2019, p.233). Aboelmaged (2018) found that using ESM platforms to share internal and external knowledge has a positive significant impact on employee productivity (Aboelmaged, 2018, p.362).

3.3 The Impact of Enterprise Social Media (ESM) Platforms on Staff Capabilities (SC)

ESM platforms have become essential to improve staff performance at various business departments, such as sales, marketing, human resources, operations, and logistics (Ahmad et al., 2019; Hitchen, Nylund, Ferràs, & Mussons, 2017; Leppälä & Espinosa, 2020). Academics posited that enterprise social media platforms have a crucial role in improving employee satisfaction (Cao, Ajjan, Hong, & Le, 2018; He, Wang, & Akula, 2017; Yingjie et al., 2019; Zhang, Ma, Xu, & Xu, 2019). Academics claimed that enterprise social media platforms enhance capability of staff engagement by encouraging employees to make the best possible decisions in the shortest amount of time (Ahmad et al., 2019; Cetinkay & Rashid, 2018; Parveen et al., 2019). Scholars claimed that enterprise social media provides a better opportunity for the staff to improve their learning capabilities through enhancing knowledge sharing among staff (Frank et al., 2019; Garcia-Morales, Martín-Rojas, & Lardón-López, 2018; Hall, 2019). Academics revealed the importance of ESM platforms in developing managers' awareness of business requirements through increasing capability of staff engagement (Allcott et al., 2019; Gilani et al., 2019; Hou et al., 2019). Tajvidi and Karami (2020) argued that ESM platforms have a vital impact on developing employees' ability to work under stress as well as take a certain level of responsibility to meet job tasks through work engagement (Tajvidi & Karami, 2017, p.8). Parveen et al. (2019) concluded that using SM helps to optimise managers' engagement, which then helps to improve employee performance (Parveen et al., 2019, p.77). Moqbel and Nah (2017) found that using ESM platforms leads to increased workplace integration at large organisations (Moqbel & Nah, 2017, p.279). Scholars acknowledged that ESM platforms are vital to improve knowledge transfer among colleagues (Garcia-Morales et al., 2018; Gonzalez & Melo, 2019; Kaur & Misra, 2019). Pee (2018) claimed that ESM platforms facilitate sharing complex knowledge among employees, such as sharing specific technical data between engineers and the sales team at IT firms (Pee, 2018, p.36). ESM platforms provide

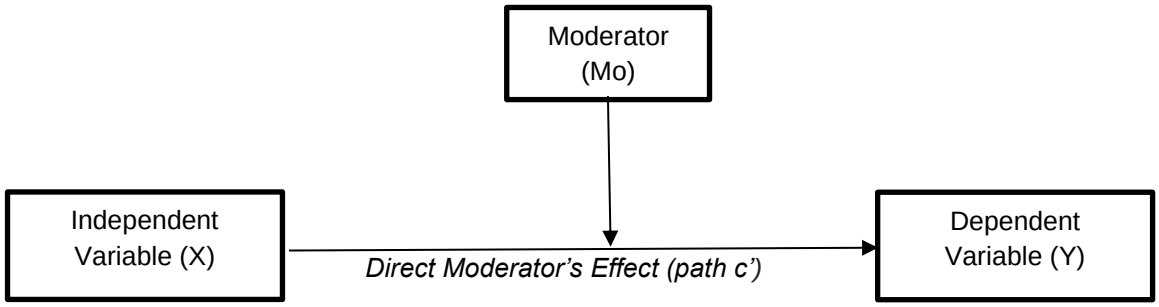
superior workload prioritisation and increase work efficiency to identify urgent Staff Capabilities (SC) at SMEs (Bakar et al., 2018; Hjorth & Hinton, 2019; Johannsen, 2018). Obermayer, Gaál, and Csepregi (2020) claimed that using enterprise social media platforms encourages the utilisation of staff knowledge through the positive interaction effect of staff knowledge sharing (Obermayer, Gaál, & Csepregi, 2020, p.764). Interestingly, academics argued that Staff Capabilities (SC) has crucial moderator and mediation effects on using ESM platforms and improving staff performance (Abbas et al., 2019; Bykova & Jardon, 2018; Estell & Davidson, 2019; Song & Liao, 2019). For example, Cheng et al. (2020) concluded that the flexibility of staff engagement mediates the influence of using enterprise social media platforms on employee satisfaction (Cheng et al., 2020, p.9). Scholars posited that staff knowledge sharing capacity moderates the impact of using ESM platforms and improving employees' capabilities (Garcia-Morales et al., 2018, p.349). Academics claimed that SE capabilities such as seniors' responsiveness have a major moderation effect between implementing ESM platforms and employees' performance (Cai et al., 2018; M. Ferreira & Zambaldi, 2019; Hall, 2019; Hou et al., 2019; Song & Liao, 2019).

Estell and Davidson (2019) claimed that using ESM platforms has a positive effect on integrating staff productivity through the moderator interaction effect of flexibility of staff engagement (Estell & Davidson, 2019, p.2391). Rahman (2019) found that staff knowledge sharing has a crucial mediation impact on the relationship between using ESM platforms and optimising staff innovativeness in developing new services (N. Rahman, 2020, p.4896). Cheng et al. (2020) found that social media platforms have a positive impact on innovation performance through the mediation effect on work engagement (Cheng et al., 2020, p.9). Consequently, marketing academics concluded that enterprise social media platforms have a direct positive influence on increasing workplace integration at large organisations (Ahmad et al., 2019; Ashenbaum, Blair, & Brewer, 2020; Moqbel & Nah, 2017). Moreover, scholars of strategic management claimed that the capabilities of staff engagement and staff knowledge sharing moderate and/or mediate the relationship between using enterprise social media platforms and improving staff performance (Aboelmaged, 2018; Gonzalez & Melo, 2019; Lamont et al., 2019; Saini & Phoolka, 2020; Tassabehji, Mishra, & Dominguez-Péry, 2019).

3.4 The Moderated-Mediation Effect

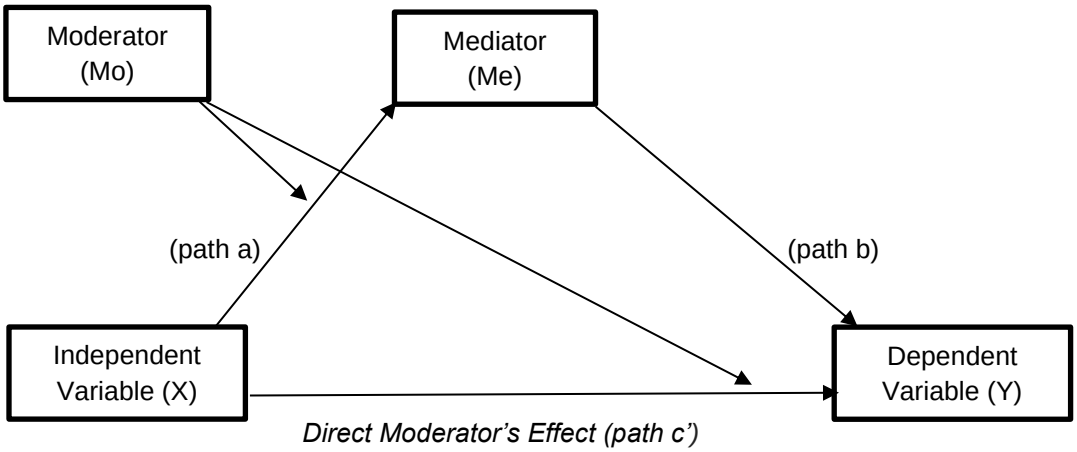
Muller et al. (2005) defined the moderated-mediation effect as ‘a mediating impact that is responsible for producing the effect of the treatment on the outcome depending on the interaction of a moderator variable’ (Muller et al., 2005, p.854). In other words, the relationship between the independent variable (X) and the dependent variable (Y) depends on the effect of a third hypnotical mediated variable (Me), which is influenced by a fourth individual independent moderator variable (Mo). Baron and Kenny (1986) were the first academics to develop a model to test the mediation effect on the relationship between X and Y (Baron & Kenny, 1986, p.1172). Langfred (2004) developed another model of the moderation effect between the variables, in which Mo is engaged with the relationship between X and Me (Langfred, 2004, p.394). Interestingly, Muller et al. (2005) developed a significant model to test the combined moderated-mediation model and mediated-moderation effect based on both the models of Baron and Kenny and of Langfred (Muller et al., 2005, p.854). This model is widely accepted and used by many academics to test the moderated-mediation effect (Das, Agarwal, Malhotra, & Varshneya, 2019; Hsu & Liao, 2019; E. Hu, Zhang, Shan, Zhang, & Yue, 2018; Muller et al., 2005; Sun, Song, & Lim, 2013). Muller et al. (2005) posited three steps to test the moderated-mediation effect: (i) test the strength and direction of the direct moderator effect on the overall direct effect of X on Y (Muller et al., 2005, p.854); (ii) test the interaction effect between Mo and X on Y; and (iii) test the indirect moderated-mediation effect between X and Y with the inclusion of the moderated-mediation variable while controlling the direct moderator effect on the overall direct impact of X on Y (Muller et al., 2005, p.855). Ensuring whether the moderator has a positive or negative effect on the process and measuring the interaction effect of each as well as combined moderators to test the total moderated-mediation effect are necessary (Muller et al., 2005, p.857). As shown in Figure (3.1), Muller et al. (2005) posited testing the simple overall direct effect of X on Y at a particular level of Mo as the first step (Muller et al., 2005, p.854).

Figure (3.1): Direct Moderator's Effect



Second, the indirect moderated-mediation effect between X and the moderator(s), combined with the inclusion of the mediator effect on Y, must be tested, as presented in Figure (3.2).

Figure (3.2): Direct and Indirect Moderated-Mediation Effect



Source: (Muller et al., 2005)

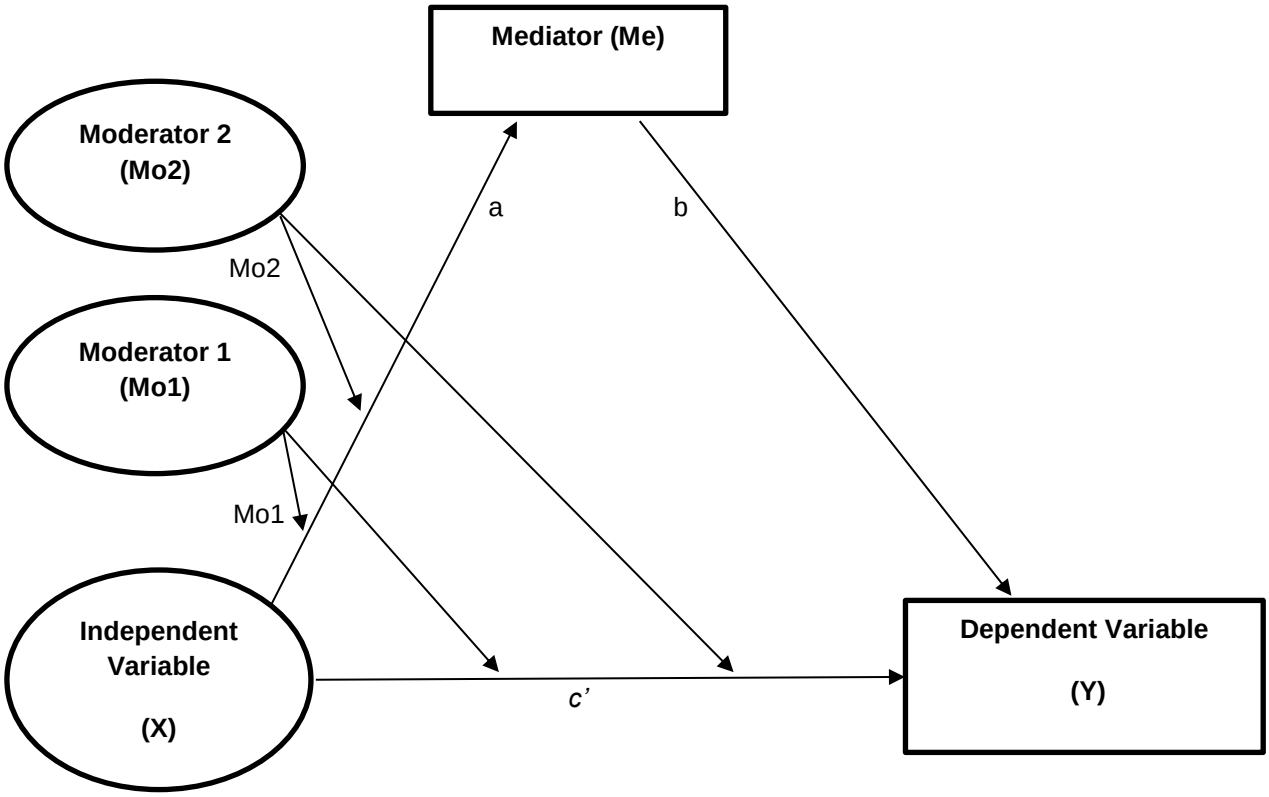
Muller et al. (2005) concluded that a moderated-mediation effect occurs when the interaction effect between paths (a) and (b) produces a significant impact on the relationship between X and Y as well as the direct moderator's effect of X on Y (path c'), which is significantly reduced or equal to zero (Muller et al., 2005, p. 857). Muller et al. (2005) also argued that there are two types of moderated-mediation effects, which are full and partial. When a full moderated-mediation effect occurs, the direct moderator's effect on path (c') is significantly reduced to zero, meaning that the relationship between X and Y is fully impacted through a moderated-mediation variable. However, if a partial moderated-mediation effect occurs, then the direct moderation effect on path (c') is significantly reduced but still has a positive non-zero value, which means

that the relationship between X and Y is partially impacted through a moderated-mediation variable (Muller et al., 2005, p.858). Consequently, Muller et al. (2005) determined four conditions that must exist in the framework to meet the moderated-mediation effect, as follows (Muller et al., 2005, p.853):

i. There must be at least a certain direct moderator's effect on the relationship between X and Y.
ii. There must be a significant interaction effect between X and Mo on Me.
iii. There must be a significant mediation effect on Y depending on the first interaction effect between X and Mo. In other words, a positive interaction effect must exist between X and Mo that affects Me and significantly impacts Y, while, in the same step, the direct moderator's effect on path (c') must be controlled, and the total value of the direct moderator's effect must be smaller than the value of the moderated-mediation effect. In other words, to ensure that a significant moderated-mediation effect occurs, the final value of the direct moderator's effect on the direct impact of X on Y must be significantly reduced or equal to zero.

According to the above discussions on the moderated-mediation effect and the research questions, the researcher formulated the following conceptual framework:

Figure (3.3): Moderated-Mediation Conceptual Framework



Independent variable (X) = Enterprise Social Media Platforms (ESM)

Dependent Variable (Y) = Integration of Inter-functional Coordination (IIFC)

Mediator Variable (Me) = Optimisation of Staff Capabilities (OSC)

Moderator Variables (Mo): Mo1 = Staff Knowledge Sharing (SKS)

Mo2 = Staff Engagement (SE)

3.5 Hypotheses Design and Formulation

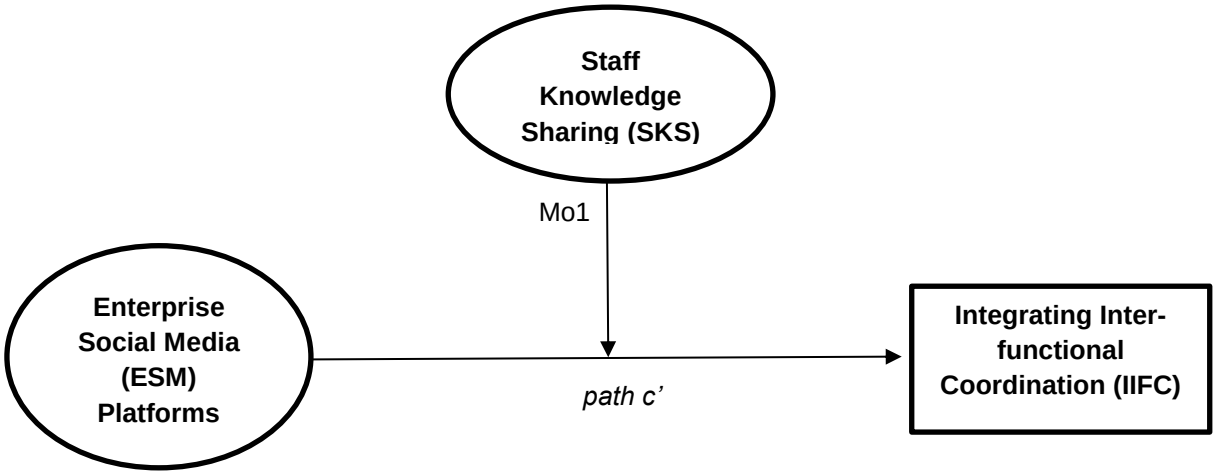
As presented in the conceptual framework, the research aims to test the impact of using Enterprise Social Media (ESM) platforms to Integrate Inter-Functional Coordination (IIFC) through the indirect mediation effect of Optimising Staff Capabilities (OSC) depending on the interaction moderators' effect of Staff Capabilities (SC) such as Staff Knowledge Sharing (SKS) and Staff Engagement (SE). As discussed in Chapter 2, academics acknowledged that using ESM platforms has a positive impact on SC such as SKS and SE, which helps to develop employee performance (Aydiner et al., 2019; Burnett, 2019; Christensen et al., 2018; Mishra et al., 2018; O'Reilly et al., 2019). For example, academics claimed that SE flexibility moderates the relationship between the influence of using ESM platforms and employee productivity (Christensen et al., 2018; Estell & Davidson, 2019; Wohlgemuth et al., 2019). De Zubielqui and Jones (2019) found that staff knowledge sharing capacity moderates the relationship between implementing new information technology platforms and enhancing the performance of junior staff (de Zubielqui & Jones, 2019, p.12). Rahman (2020) posited that the relationship between using enterprise social media platforms and employees' motivation to complete job tasks is mediated by staff engagement efficiency at work (N. Rahman, 2020, p.4890). Academics posited that capacity of staff knowledge sharing crucially moderates the effect of using information technology platforms on employees' creativity (Chen & Wei, 2018; Huda, 2019; Liu & Bakici, 2019; Nolte et al., 2019). In other words, capabilities of SKS and SE have a crucial positive interaction moderation effect on using ESM platforms, which increases staff performance and productivity. Muller et al. (2005) suggested to test the simple overall direct effect of X on Y at a particular level of Mo (Muller et al., 2005, p.855). The first step aims to test the strength and direction of the direct impact of X on Y at a particular level of each Mo. Therefore, the following two hypotheses are formulated to test the strength and direction

of the direct impact of using ESM platforms on Integrating Inter-Functional Coordination (IIFC) at a particular level of each moderator (SKS and SE):

Hypothesis (H1a): Capability of SKS has a certain positive effect on the direct impact of using ESM platforms to achieve IIFC.

Academics demonstrated the direct moderator's effect of Staff Capabilities (SC) on ESM platforms, which leads to improved business performance (Bakar et al., 2018; Davison et al., 2019; Lu & Pan, 2019). Liu and Bakici (2019) argued that ESM platforms impact on improving employees' work motivations through the positive moderator's effects of SKS. Moqbel and Nah (2017) found that using enterprise social media can increase workplace collaboration through the direct influence of staff knowledge sharing at information and communication technology firms (Moqbel & Nah, 2017, p.261). Consequently, the hypothesis aims to test the strength and direction of the overall direct impact of using enterprise social media platforms on integrating inter-functional coordination at a particular level of SKS. Muller et al. (2005) suggested that at least a simple overall direct effect of X on Y must exist at a particular level of Mo; otherwise, the conceptual framework is not significant to test the moderated-mediation effect level (Muller et al., 2005, p.855). In other words, a significant simple direct impact occurs between using ESM platforms and IIFC at a certain level of SKS. This means that the null hypothesis is rejected and that the alternative hypothesis (H1a) is accepted.

Figure (3.4): Model of Testing the Direct Moderation Effect of SKS on the Overall Direct Impact of ESM on IIFC

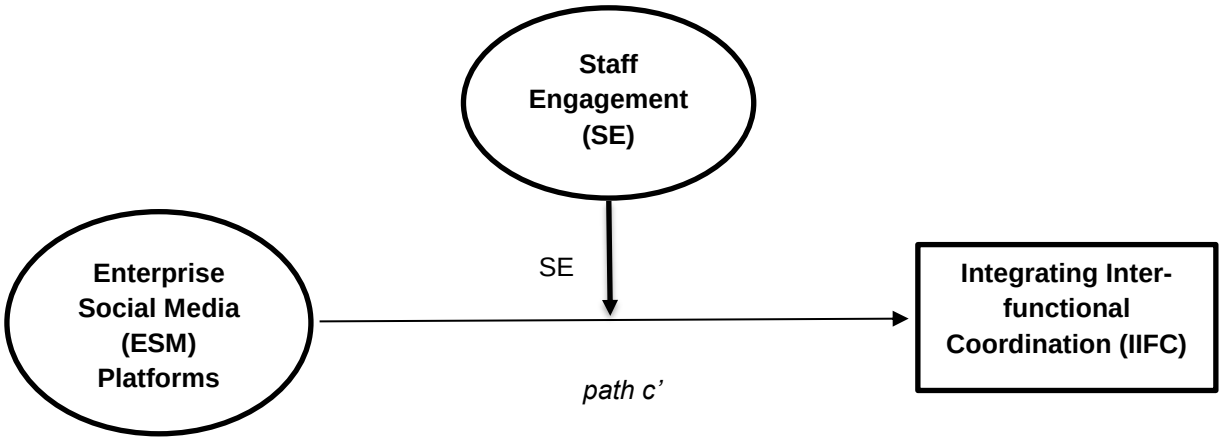


The next step aims to test the strength and direction of the direct impact of X on Y at a particular level of each Mo2. Therefore, the following two hypotheses are formulated to test the strength and direction of the direct impact of using enterprise social media platforms on integrating inter-functional coordination at a particular level of Staff Engagement (SE):

Hypothesis (H1b): Capability of SE has a certain positive effect on the direct impact of using ESM platforms to achieve IIFC.

Guesalaga (2016) claimed that the capability of Staff Engagement (SE) of the sales team have a strong effect on the relationship between using enterprise social media platforms and firm performance (Guesalaga, 2016, p.77). Whitten (2018) proposed that managers' engagement positively moderates the influence of social media usage on managing interdepartmental processes (Whitten, 2018, p.133). Lu and Pan (2019) posited that staff engagement in enterprise social media platforms positively moderates the relationship between employees' behaviours for information seeking and job performance at information and communication technology firms (Lu & Pan, 2019, p.540). Consequently, the hypothesis aims to test the strength and direction of the overall direct impact of using ESM platforms to integrate inter-functional coordination at a particular level of SE. Muller et al. (2005) suggested that at least a simple overall direct effect of X on Y must exist at a particular level of Mo; otherwise, the conceptual framework is not significant to test the moderated-mediation effect level (Muller et al., 2005, p.855). In other words, a significant simple direct impact occurs between using ESM platforms and IIFC at a certain level of SE, which means that the null hypothesis is rejected and that the alternative hypothesis (H1b) is accepted.

Figure (3.5): Model of Testing the Direct Moderation Effect of SE on the Overall Direct Impact of ESM on IIFC



As Muller et al. (2005) suggested, the second step aims to test the indirect moderated-mediation effect between X and Y through the inclusion of the interaction effect of Moderator (Mo) combined with Mediator (Me) (Muller et al., 2005, p.855). In other words, the impact of using ESM platforms to achieve IIFC through the inclusion of the indirect moderated-mediation effect of Optimizing Staff Capabilities (OSC) should be tested. The researcher proposes the following hypothesis to test the interaction effect of paths (a) and (b) in Figure (3.3):

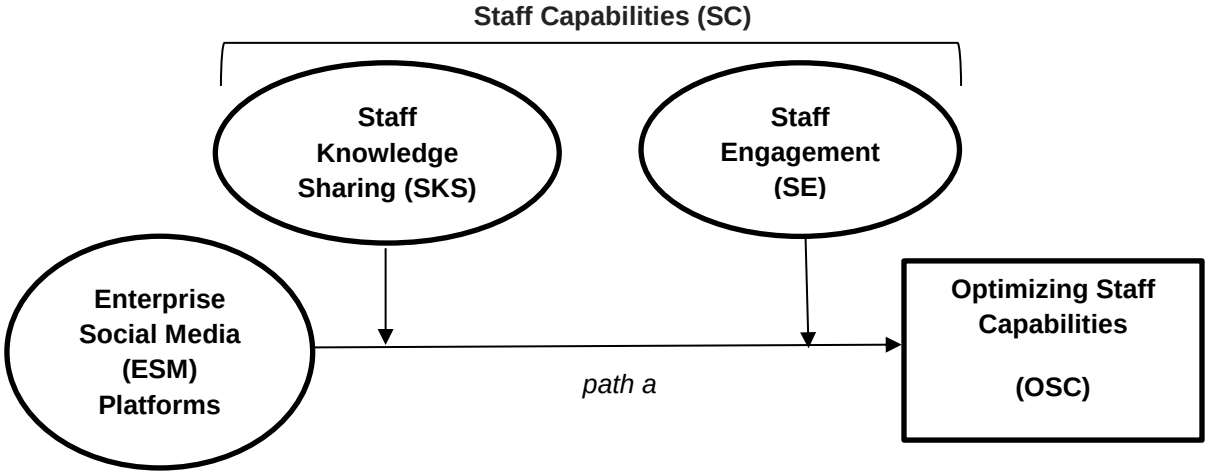
Hypothesis 2: The positive interaction effect between using ESM platforms and SC leads to OSC.

Academics of strategic management claimed that Staff Capabilities (SC) have a vital moderator's interaction effect on the impact of using ESM platforms to improve employees' performance (Leppälä & Espinosa, 2020; Lu & Pan, 2019; N. Rahman, 2020). Liu and Bakici (2019) claimed that SKS moderates the impact of using ESM platforms on employees' work motivation (Liu & Bakici, 2019, p.171). Papa et al. (2018) found that knowledge acquisition and sharing has a strong moderator's interaction effect on using IT platforms and employee retention (Papa et al., 2018, p.16). Scholars concluded that ESM platforms positively enhance job satisfaction through the moderator's interaction effect of employee engagement (Pierce, Carter, Robert, & Alahmad, 2018, p.9). Academics presented various statistical methods to test the multi-interaction effect of two or more moderators with the independent variable, such as Structural Equation Modelling (SEM), regression analysis, two-way ANOVA, and meta-analysis (Aguinis, Gottfredson, & Wright, 2011; Dawson, 2014; Lorenzo-Luaces, DeRubeis, van Straten, & Tiemens, 2017).

Interestingly, Dawson (2014) suggested a process to test the multi-interaction effect between two correlated moderators with the independent variable (Dawson, 2014, p.5). The process consists of testing the interaction effect of Mo1/Mo2 with X as well as the combination of the three interactions among these factors, which includes a two-way interaction effect between both Mo1 and Mo2 (Dawson, 2014, p.6). The hypothesis emulates this process, with Staff Knowledge Sharing (SKS) and Staff Engagement (SE) as the moderators and ESM as the independent variable; the three interactions are as follows: SKS→ESM, SE→ESM, and SKS←→SE→ESM. The research adopts this process to test the moderators' interactions, where the first interaction is between staff knowledge sharing and ESM, the second interaction is between SE and ESM, and the third interaction is between both staff knowledge sharing and staff engagement. Consequently, a combination of these three interactions impacts Me. Interestingly, Dawson (2014) claimed

that the two-way interaction effect between two correlated moderators, such as SKS and SE, must be evaluated to measure the two directions between the first moderator as SKS and the second moderator as SE in the formula (Dawson, 2014, p.6). For example, when the new staff have no knowledge to share with their seniors, they may not be able to increase their knowledge if they have little engagement, but if they display sufficient engagement, them the effects of the knowledge transfer will be influenced by staff knowledge sharing and staff engagement using ESM platforms. In addition, if the staff excel in engagement but do not share knowledge through ESM platforms, then such engagement will be low at firms and affect the usage of ESM platforms. Muller et al. (2005) suggested testing the interaction between X with Mo to evaluate the interaction effect on Me. In other words, the interaction effect between using ESM platforms and the effect of both moderators (SKS and SE) on OSC must be evaluated (Muller et al., 2005, p.857). Consequently, the research adopts the model of Muller et al. (2005) with the above formula by Dawson (2014) to test the strength and direction through the sum of the three interactions, including the two-way interaction effect between both moderators on the independent variable (SKS←→SE, SKS→ESM, SE→ESM, SKS←→SE→ESM).

Figure (3.6): Illustrates the impact of using ESM on OSC through multiple moderators' interaction effects (SKS and SE) on ESM



Muller et al. (2005) claimed that the interaction effect between the moderator with X must be positive to continue to the next step of testing the moderated-mediation effect of the framework (Muller et al., 2005, p.857). In other words, if the interaction effect between any moderator and X has a negative or zero value,

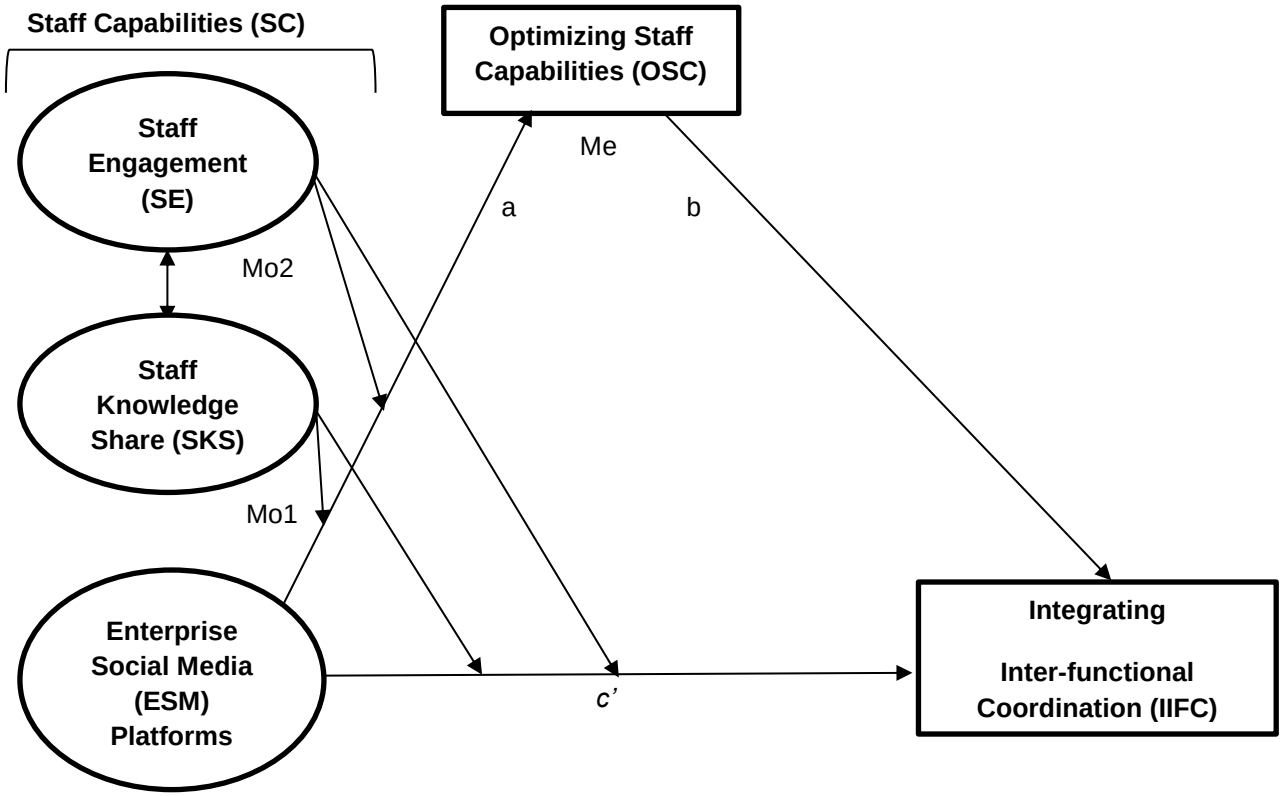
then the research concludes that the interaction lacks the positive moderator's effect on the mediator, which means that the moderator has only a direct positive effect on Y. Consequently, this means that the research framework has no moderator's effect through the interaction of SKS and SE with using ESM platforms to achieve OSC. However, if the combination of the interactions between both moderators (SKS and SE) and using ESM platforms results in a positive effect on OSC, this means that the null hypothesis is rejected and that Hypothesis 2 (H2) is accepted. The final step is to test the indirect moderated-mediation effect that occurs between enterprise social media platforms and integrating inter-functional coordination in the conceptual framework through the inclusion of the mediation effect of OSC as well as to evaluate if the moderated-mediation effect has a full or partial effect on the conceptual framework. Jahanzeb et al. (2019) argued that the staff knowledge sharing of senior staff has a moderated-mediation effect on the impact of enterprise social media platforms and staff creativity (Jahanzeb et al., 2019, p.815). De Zubielqui and Jones (2019) argued that using enterprise social media platforms improves innovation adoption among employees through the moderated-mediation effect of managers' engagement (de Zubielqui & Jones, 2019, p.12). Consequently, the next step aims to test the impact of using enterprise social media platforms on integrating-inter-functional coordination through the indirect moderated-mediation effect of optimising staff capabilities. The following hypothesis is formulated:

Hypothesis 3: The usage of ESM platforms has an indirect impact on IIFC through the positive moderated-mediation effect of OSC.

Academics of strategic management claimed that staff capabilities have vital moderated and mediation effects on the impact of using enterprise social media platforms to improve business performance (Leppälä & Espinosa, 2020; Lu & Pan, 2019; N. Rahman, 2020). Cai et al. (2018) found that capability of staff engagement has a strong moderated-mediation effect on the relationship between using enterprise social media platforms and staff agility at work (Cai et al., 2018, p.63). Cheng et al. (2020) claimed that staff knowledge sharing has a vital moderated-mediation effect on the relationship between using enterprise social media platforms and employees' innovation performance (Cheng et al., 2020, p.8). Muller et al. (2005) suggested combining all the previous steps to test the indirect moderated-mediation effect through the interactions between paths (a) and (b). At the same time, the direct moderator's effect on the overall direct relationship between X and Y on path (c') must be tested (Muller et al., 2005, p.859). Therefore, this

hypothesis aims to test the moderated-mediation effect of OSC on the relationship between using enterprise social media platforms and integrating inter-functional coordination while controlling the direct moderator's effect of each moderator (SKS and SE) on the overall direct impact of enterprise social media platforms on integrating inter-functional coordination. In other words, the hypothesis tests the combination of the moderators' interaction effect (SKS and SE) with ESM platforms (path a) and the mediation effect of OSC on IIFC (path b).

Figure (3.8): Conceptual Framework to Test the Moderated-Mediation Effect of OSC on the Impact of Using ESM Platforms and IIFC



The conceptual framework above represents the indirect moderated-mediation effect through the interaction of paths (a) and (b) while controlling path (c'). Muller et al. (2005) posited that when a full moderated-mediation effect occurs, the value of the direct moderator's effect (path c') must has a significant reduced or zero value. In other words, a full moderated-mediation effect occurs when the value of path (c') is equal to zero. However, if the value of path (c') has a minor reduction in value, this means that the moderated-mediation effect has a partial effect on the conceptual framework (Muller et al., 2005, p.860). In addition, if

the value of the direct moderation effect (path c') has no changes, this means that no moderated-mediation effect occurs in the conceptual model (Darlington & Hayes, 2016; Hayes, 2018; Muller et al., 2005; Preacher, Rucker, & Hayes, 2007). Consequently, if the null hypothesis is rejected and the alternative hypothesis (H3) is accepted, this means that a significant (full or partial) indirect moderated-mediation effect occurs between the impacts of using enterprise social media platforms on integrating inter-functional coordination through optimizing staff capabilities.

3.3 Summary

This chapter presented the magnitude of Integrating Inter-Functional Coordination (IIFC) to improve staff performance as well as identifies a gap that neglects spotting the IIFC at the Market Orientation (MO) theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). Academics posited that optimizing Staff Capabilities (OSC) leads to a better deployment of employees' performance (Groenewald & Okanga, 2019 ; Liu et al., 2012; Schiemann, 2014). Scholars of strategic management claimed that Staff Capabilities (SC) has no value without optimisation (Huda, 2019; Lin et al., 2016; Teece, 2018). In addition, scholars emphasised on the important moderated-mediation role of staff capabilities such as Staff Knowledge Sharing (SKS) and Staff Engagement (SE), which improves business performance (Hernández-Linares et al., 2020; Orgambídez-Ramos & de Almeida, 2017; Saini & Phoolka, 2020; Wilden et al., 2019). On the other hand, Huda et al. (2019) claimed that increasing the adoption of technology applications by seniors and professionals will help to optimise employees' capabilities and improve work integration at SMEs (Huda, 2019, p.173). Scholars acknowledged the important role of information technology platforms to improve work capabilities through enhancing interactions among staff members (Huda, 2019; Stone et al., 2015; Zhang, Cao, et al., 2018). Rehm and Goel (2017) found that information technology platforms improve staff capabilities and can create optimisation at work levels of SMEs (Rehm & Goel, 2017, p.449). Academics claimed that adopting ESM platforms is vital through disseminating Staff Knowledge Sharing (SKS) as well as increasing staff engagement (Hjorth & Hinton, 2019; Lu & Pan, 2019; Schiller & Meiren, 2018). Consequently, this chapter underpin two theories that are the market Orientation (MO) theory, and the Diffusion of Innovation (DOI) theory, as well as underpinned the Dynamic Capabilities (DC) approach. Muller et al. (2005) suggested a module to test the indirect moderated-mediation effect on the relationship between X and Y (Muller et al., 2005, p.854). In addition, Dawson (2014) proposed a process to test the multi-

interactions' effects of the two correlated moderators as well as the interaction of each moderator with X in the conceptual framework (Dawson, 2014, p.5). The chapter adopted the module of Muller et al. (2015) to test the moderated-mediation effect as well as the formula of Dawson (2014) to test the interaction effects of multiple moderators on Me in the module. The chapter presented a conceptual framework and formulated four hypotheses to test the impact of using Enterprise Social Media (ESM) platforms on Integrating _Inter-Functional Coordination (IIFC) through the inclusion of the indirect moderated-mediated effect of Optimizing Staff Capabilities (OSC). This way, the research framework aims to contribute to the marketing, information technology, and strategic management literatures.

Chapter Four

Research Methodology

4.1 Introduction

This research has reviewed several studies and pointed out the importance of Integrating Inter-Functional Coordination (IIFC), which crucially impacts firm performance as well as creates superior competitive advantage (Apasieva, 2017; Chebet et al., 2018; Waruiru et al., 2019). The research has also identified a lack of studies concerning IIFC (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). This study has discussed theories in marketing, strategic management, and information technology as well as underpinned two theories that are Market Orientation (MO) and Diffusion of Innovation (DOI), in addition to the Dynamic Capabilities (DC) approach with the aim to support the conceptual framework and contribute to the marketing literature by discussing IIFC. This chapter discusses different philosophies and adopts the positivism philosophical theory through a deductive approach to examine the conceptual framework and test the developed hypotheses. A quantitative method is adopted with an online questionnaire survey as a method to collect data. The sample is defined and consists of information technology Small and Medium Enterprises (SMEs) in the Gulf Cooperation Council (GCC) area, and a simple random sampling technique is adopted to provide equal opportunity to each participant for the total population**.** In addition, AMOS is used to implement the Structural Equation Modelling (SEM) for data analysis to understand the cause-and-effect relationship as well as test the impact of the independent variable on the dependent variables through a moderated-mediation effect.

4.2 Research Philosophies

A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analysed, and used. It is referred to as the development of knowledge and the nature of that knowledge (Bryman & Bell, 2015, p.38). A research philosophy is crucial and considered as a stepping stone to understand the research design and enable the researcher to fulfil that design beyond their experience (Bryman & Bell, 2015, p.40). The basic assumptions are ontological and epistemological, which have been addressed by many researchers. Slevitch (2011) defined ontology as the nature of reality, while epistemology is how this reality is captured or known (Slevitch, 2011, p.76). Ontological perspective focuses on identifying the overall nature of existence of a particular phenomenon, and epistemological perspective

focuses on how knowledge is gathered and from which sources (Žukauskas, Vveinhardt, & Andriukaitienė, 2018, p.138), while axiology emphasized on the principles and of values such as the ethical context of the research (Hartman, 2011, p.156). Bryman and Bell (2015) enumerated and defined different types of research philosophies, such as pragmatism, realism, positivism, and interpretivism (Bryman & Bell, 2015, p.20). However, Ryan (2015) argued that that the epistemology is a theory of knowledge where it can be seen as empirical and which have several approaches, he added, the positivism and interpretivism philosophies are the most common in business research (Ryan, 2015, p.418). Therefore, this research focuses on these two most distinguished epistemologies.

4.2.1 Positivism

The French philosopher August Comte considered the father of the positivism and the first philosopher of science in the modern sense of the world (Brown, 2013; Hoecker-Drysdale, 2014; Whewell, 2017). August Comte has been inspired in his views by British empiricism philosophers such as John Locke and David Hume (Miller, 1999, p.2). Scotland (2012) posits that the ontology of positivism believes in a single objective reality in the phenomenon, while the epistemology assumes that legitimate knowledge claimed only through facts derived from a scientific method (Scotland, 2012, p.11). In addition, the axiology of positivism deals with the technique of data collection which emphasizes on independency of the researcher (value-free) to preserve objectivity in viewpoint during a high structured data collection process from large sample size (Quinlan & Zikmund, 2015, p.136). Comte (1880) posits that “the idea that intellectual disciplines progress only to the degree that it is grounded based on individual’s experience to obtain observable information that can be interpreted via logic and mathematics” (Comte, 1880, p.32). His philosophy claimed that observable facts of individuals considered the only things that someone can be certain of, namely personal experiences (Brown, 2013; Hoecker-Drysdale, 2014; Whewell, 2017). Academics posit that the positivists believe in facts about the human world which are objectively true and they can be discovered and interpreted through a scientific mathematical methods (Halfpenny, 2014; Jackson & Dolan, 2020; Whewell, 2017). Likewise, positivists have abandoned the idea of metaphysics and which focuses on individual’s intuitive condition of things such as reality of nature (Whewell, 2017, p.212). Halfpenny (2014) posits that behaviors are social facts that can be measured objectively without a bias through independency of researchers (Halfpenny, 2014, p.92). Academics of positivism considered the social world existed objectively and should be

measured using the objective methods (Bryman & Bell, 2015; Park, Konge, & Artino Jr, 2019; Reiners, 2012). Park, Konge and Artino (2020) claimed that positivists believe that individual's behavior can be observed and recorded in a scientific approach like other natural sciences (Park, Konge, & Artino Jr, 2020, p.691). In other words, scientifically the approach has the ability to test phenomenon and replicate it in order to ensure findings are consistent with social science. Brinkmann (2018) posits that the school of positivism is inspired by the deductive logic in the social sciences and which emphasizes on formulating and testing hypothesis through obtained observable data (Brinkmann, 2018, p.179). Quinlan and Zikmund (2015) claimed that positivism uses the deductive logical thinking that relies on hypotheses or a general statement in order to be tested to reach a specific logical conclusion (Bryman & Bell, 2015, p.187). Collins (2018) posits that "positivism depends on quantifiable observations that leads to statistical analysis" (Collins, 2018, p.38). However, Hunt (1990) advocated the critical relativism that emphasizes on human reasons which could override the objectivity of positivism in social research in view of providing better interpretation to the phenomenon (Hunt, 1990, p.9).

Tadajewski (2009) argued that positivists have debilitated the social influence forms which have strong impact on changing individual's behavior such as leadership at work environment (Tadajewski, 2009, p.468). In addition, Hunt (2014) criticized that "positivism has rejected metaphysical concept and which violated the human skepticism" (Hunt, 2014, p.273). Moreover, Early of the twentieth century a group of logical empiricism philosophers and scientists begun so-called the Vienna Circle school at the University of Vienna (Stadler, 2015, p.29). Uebel (1991) claimed that the Vienna school aimed to reconceptualize the theory of empiricism to a logical empiricism by rejecting the metaphysics and emphasized broadly on constructed knowledge through deductive logic with an objective foundation of observation (Uebel, 1991, p.96). Basically the circle focuses on the 'principle of verifiability' to put forward that meaningful statements must reducible by contain observation terms that are capturable in deductive logic (Kraft, 2015; Limbeck-Lilienau, 2019; Miller, 1999). In other words, the school emphasized on the analytic of meaningful statements such as logical and mathematical, however, statements in ethics, religion, aesthetics and metaphysics must be reduced in a way to be explicitly definable in deductive logic, or else it considered as meaningless statements. Smith (1986) posits that the philosophical position of the Vienna Circle basically claimed with the view of Comte's positivism through considering the objective foundation of observation and

knowledge, and rejecting the concept of metaphysics (Smith, 1986, p.96). However, Miller (1999) criticized that the doctrine of logical empiricism considered as a complex philosophical stance because it is impossible to provide a simple, explicit and conclusive definitions to all statements at social sciences (Miller, 1999, p.3). Naraniecki (2010) argued that the Vienna Circle group is tied to unachievable philosophical doctrine that required verification to public empirical statements in order to be meaningful or else it will make nonsense (Naraniecki, 2010, p.514). In addition, Friedman and Michael (1999) argued that the so-called meaningless of metaphysics that is represented by the circle group is only demonstrates their own language of logical positivists (Friedman & Michael, 1999, p.232). On the other hand, academics presented two types of the scientific statements which are analytic and synthetic, namely, the analytic statements represented by logic and mathematics while the synthetic statements are sentences that cannot be defined through lingual meaning but depend on the meaning that is related to the situation and which illustrates the truth (Putnam, 1962; Rey, 2003; Russell, 2008). Quine (1951) posits that there are important logical relationships connected to the synthetic statements and which are complex to be verified empirically (Quine, 1951, p.40). In other words, there is no accurate empirical evidence can determine that the synthetic statement is true or not.

Interestingly, Popper (1959) posits that “the truth of any (synthetic) statement cannot be finally verified nor refuted” (Popper, 1959, p.382). Academics like Karl Popper was initially involved in criticizing, as well as, find an alternative philosophical stance over the positivism theory of August Comte. Popper is a critical rationalist who argued that the core question in a philosophy is distinguishing science from non-science (Thornton, 1997, p.5). Karl Popper is a British philosopher who beliefs that the scientific knowledge is conditional and emphasized on introducing the principle of falsification as the criterion for distinguishing between scientific and nonscientific theories (Adam, 2014; Corry, Porter, & McKenna, 2019; Jackson & Dolan, 2020). Popper has replaced the scientific observational method with the criteria of falsification, namely, in order a theory to be accepted scientifically then it must be inherently disprovable (Popper, 2005, p.276). Academics posit that Karl Popper was one of the first philosophers who disagree with positivists and refutes their continuous support of theoretical hypotheses (Corry et al., 2019; Miller, 1999; Weideman, 2012). Keuth (2005) defined the principle of falsification as “a theory is considered scientific only when its tested and conceivably proven false (Keuth, 2005, p.48). In other words, Popper has presented a

philosophical challenge through the falsification concept as a critique to the foundations of theories that rely on knowledge. Bisel and Adame (2017) claimed that many academics accepted Popper's proposition of falsification as its considered the essential foundation to the majority of scientific theories (Bisel & Adame, 2017, p.13). Moreover, Popper (2005) argued that scientific statements may contain synthetic meaning and can involve contingent truth, however, he claimed that the truth of synthetic statements cannot be finally verified nor refuted because it can contains self-contradiction and tautology (Popper, 2005, p.105). Many academics concluded that scientific statements contain analytic and synthetic meanings terms, as well as, advocate that 'analytic' statements are predictable and represent the true meaning by its term and logically possible in science (Houghton, 2011; Miller, 1999; Popper, 1959; Quine, 1951). However, Ludwig Wittgenstein has attempts to specify the relationship between the synthetic language and reality (Malcolm, Wright, & Wittgenstein, 2001, p.46). Wittgenstein's claimed that natural sciences must consist primary languages and which express all statements including synthetic language, or else its nonsense (Malcolm et al., 2001, p.56).

Likewise, Imre Lakatos a philosopher who was influenced by Karl Popper and Thomas Kuhn, and proposed a sophisticated methodological falsificationism so-called 'Methodology of Scientific Research Programmes', and suggested a modification to Poppoer's criterion by changing the question of how the theories are evaluated to the question of how to evaluate the series of theories (Musgrave & Pigden, 2016, p.45). Kadvany (2001) posits that the main concept of Lakatos's MSRP is a "research program consists a sequence of theories characterized by a shared hard core of central theses that reject irrefutable, or at least, refutation resistant by methodological decree" (Kadvany, 2001, p.16). Namely, Lakatos posits that rather than having an individual falsifiable theory which ought to be rejected as soon as it is refuted. Musgrave and Pigden (2016) posit that the shared hard core of this sequence of theories is often unfalsifiable because its often devoid of empirical consequences (Musgrave & Pigden, 2016, p. 9). In addition, Paul Feyerabend as a famous philosophers particularly criticize the critical rationalism of Karl Popper and claimed that it would inhibit scientific progress by enforcing restrictive conditions on new theories (Lakatos & Feyerabend, 1999, p.87). Lakatos and Feyerabend (1999) have rejected Pooper's idea that there is a single method exist that applies to all science and could account for its progress (Lakatos & Feyerabend, 1999, p.98). Interestingly, Lapid (1989) posits that scholars were proved incapable of either adopting or rejecting the philosophy of the

positivism, and it is still crucial despite the their continues debates (Lapid, 1989, p. 246). Positivists believe that a social phenomenon is measurable and linked with quantitative methods of analysis based on the statistical analysis of quantitative research data (Brinkmann, 2018; Collis & Hussey, 2013; Thomas, 2017). Park et al. (2019) posits that the positivist focuses on how the knowledge can be gathered and from which source (Park et al., 2019, p.9). Caldwell (2015) posits that the positivist philosophers have basic assumptions as follows (Caldwell, 2015, p.112):

i. The research should aims to explain and predict phenomenon.
ii. The research should be an empirical observations with the aim of develop and testing hypotheses during the process.
iii. Common sense is not allowed in order to avoid bias of research findings.
iv. Science must be value-free and should be judged by logic.

As aforementioned, since that data of science can be individually observed, it means we are certain about them as a scientific knowledge. Park et al. (2019) claimed that the society shaped by experiences of individuals that can be used by focusing on objectives and collecting quantifying data through the surveys, comparative data and field experiments methods in order to analyze and test hypothesis (Park et al., 2019, p.15). Scholars described the strengths of positivism quantitative methods as follows (Caldwell, 2015; Saunders, Lewis, & Thornhill, 2016; Turner, 1985):

4.2.1.1 Strengths of Positivist Methods

Scholars have demonstrated the strength of positivism methods for data collection as follows (Hair, Wolfinbarger, Money, Samouel, & Page, 2015; Park et al., 2020; Saunders et al., 2016):

i. Can demonstrate cause and effect relationships and correlations between variables.
ii. Produce quantitative data which is seen as more objective and scientific.
iii. Produce valid and reliable results which allow generalization for different groups at various phenomenon.
iv. A large-scale application which make this method preferred by governments and large organizations because results can help to formulate policies and decision making.

4.2.1.2 Limitations of Positivist Methods

Academics of anti-positivism have criticized the positivism with the following limitations (Henderson, 2011; Pham, 2018; Whewell, 2017):

i. Can lack to validity as it may not represent the views of all being studied, for example, it might demonstrate changes in behavior but doesn't explain the rationality behind the behavioral changes.
ii. To fixed and does not appreciate the social facts such as feelings, cultural and emotional actions of individuals, and focused on structural elements of society.

4.2.2 Interpretivism

Interpretivists assume that people interact with their world through connecting their own subjective and inter-subjective meanings (Bryman & Bell, 2015, p.143). Mcionis and Linda (2011) posit that values and beliefs of individuals cannot fully be removed, therefore, interpretivists believe in looking for meanings through subjective experiences of individuals (Macionis & Linda, 2011, p.32). Interpretivists believe that the process of developing knowledge and building theory starts with inducting ideas from observing and interpreting social constructions (Blumberg, Cooper, & Schindler, 2014; Quinlan & Zikmund, 2015, p.139). While positivists focused on "communicative meaning" and which refer to exploring how expressions such as willingness, value or significance can serve the communicative role (Rudner, 1966. P. 83)**,** interpretivists emphasize on humans shared meanings through investigating the essential signs to all types of communications including feelings and emotional reactions and which can be a sign to produce an interpretive response (Hunt, 2014, P. 277). Ozanne and Hudson (1989) defined the contemporary interpretivism as "exploring the language of consumers and which consists of shared meanings" (Ozanne and Hudson 1989, p. 2). Nonetheless, academics posit that interpretivism methodology shares a striking similarity to that of the positivists in the use of meaning analysis. For example, Hunt (1994) posits that although the position of positivism and interpretivism reaching their decision by different routers, however they share many similar antagonists' views (Hunt, 2014, p.276). Positivists' view that quantum mechanics is just mathematics, and they were sympathetic to quantification in science, in contrast, interpretivism not only avoid the use of mathematics and statistics but consistent with idealism (Alharahsheh & Pius, 2020, p.42). However, Phillips (1987) has reviewed many literatures of social science and claimed that there have

been many exaggerated claims about the “evils” of positivism (Phillips, 1987, p. 94). Anti-positivists claimed that the positivists did not search for causal explanations, namely, did not adopt the metaphor analysis in psychological researches (Pham, 2018, p. 4). Hunt (2014) acknowledged that both models are sufficient in common view of science, however, he argued that the inductive model as in part to be proved consists synthetic language and which its logically difficult in prediction (Hunt, 2014, p.276). In addition, academics concluded that the hypothetico-deductive model focuses on the analytic statements and that can be used to formulate and test hypotheses which is logically acceptable in social science (Houghton, 2011; Miller, 1999; Popper, 1959; Quine, 1951). Bryman and Bell (2015) argued that the interpretivism philosophy focuses more on ‘exploring why people have different experiences and understanding how these differences result in the different constructions and meanings people give to the social world’ and assumed the following (Bryman & Bell, 2015, p.626):

i. Peoples’ meanings should be observed and interpreted based on their point of view about social phenomena.

ii. Social phenomena can only be understood by looking at the entirety.

Based on previous discussions, this research has developed a conceptual framework along with five measurable hypotheses to test the impact of Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the inclusion of the indirect moderated-mediation effect of Optimization of Staff Capabilities (OSC) at Information Technology (IT) SMEs in the Gulf Cooperation Council (GCC) area. This research adopts the positivism philosophy given the purpose of the study to fulfil its main interest, test the conceptual framework, and accept or reject the hypotheses.

Table (4.1): Comparison between Interpretivism and Positivism Philosophies

Principles	**Interpretivism**	**Positivism**
Researcher’s Point of View	The world is subjective and socially constructed.	The world is objective and consists of external elements.
Researcher’s Involvement Level	The researcher is a part of the observed phenomena and	The researcher is independent.

	sometimes could collaborate with such phenomena.	
Influence of Researcher on Results	Human or cultural interests could drive the researcher.	The research is free of value.
Assumptions		
Observations	Interpret subjective meanings	Enumerate quantitative facts and objectives
Developed Knowledge	Investigate new explanations to a phenomenon which are beyond current knowledge	Reduce phenomena to simple elements that represent the social world

4.2.3 Positivism and Marketing Theories

Positivism maintains that knowledge is generated from individuals' experiences and requires verifiable observations and experimentations within the phenomenon at different societies (Harré, 1985, p. 44). Academics posit that human interactions in societies lead to influence humans and create, disseminate and utilize different forms of knowledge such as genuine acquired knowledge or a new knowledge under acquiring process (Fisher & Hammarberg, 2012; Sauer, Nighswonger, & Zaltman, 1982). Hudson and Ozanne (1998) claimed that knowledge is socially constructed through human interactions and can perceived in different ways depending on humans' perceptions, perspectives and experiences (Hudson and Ozanne 1988, p. 509). Subsequently, Peter and Olson (1983) claimed that marketing science has successfully created different forms of knowledge through social exchange and interactions processes (Peter & Olson, 1983, p.119). The evolution of marketing theories is divided into three stages considering the first stage of developing the marketing concept namely the emergence of the mass market ca 1850, as well as, the second stage of articulation consists the topic of marketing mix and related scientific theories (Alderson & Cox, 1948; Bartels, 1951; Borden, 1964)**.** Kotler (1967) presented the third stage through developing the marketing management school and which based on the analytical and mathematical positivist approach including objectives, strategies, analysis and control (Kotler, 1967). Achrol and Kotler

(2012) posit that theories of marketing have been expanding through the implementation of paradigms such as management, marketing networks and relational theory to a wider range of marketing concepts like marketing management, consumer behavior, network marketing and market orientation (Achrol & Kotler, 2012, p.35). Kumar (2015) concluded that marketing is a science that occupies now a much more central role in organizations, as well as, it is crucial to remain percipient about the dynamic changes at the marketing environment such as customer needs, investment decisions, technology developments, and operational guidance (Kumar, 2015, p.6). Marketing academics have presented empirical studies and conceptual articles through scientific methods about the marketing theories with the aim of understanding the frequent changes in customer needs that significantly result greater positive developments in the marketing theories (Achrol & Kotler, 2012; Gummesson, 1998; Morgan & Hunt, 1994). Consequently, Anderson (1983) claimed that the "marketing scholars have adopted the scientific positivists methods through the mathematical and statistical analysis to clarify the analytic language employed in the scientific methods as a common statistical ground" (Anderson, 1983, p.30).

Stove argued that "positivists developed a philosophy that could accommodate a major interpretation of the indeterminism of quantum mechanics, and successfully re-approached a large portions of the philosophical and scientific communities through emphasizing on commonalities at a diverse scientific disciplines" (Stove, 1982, p.387). In addition, positivists have criticized he critical relativism that neglected the mathematical and statistical analysis in marketing theories (Bryman & Bell, 2015; Henderson, 2011; Ryan, 2006). In contrast, post-positivists and interpretivists philosophers have criticized the positivism, for example, Clark (1998) argued the positivists rely on the previous experience and values of the researcher during the analysis process which can influence researcher's decision and produce bias (Clark, 1998, p.1246). Moreover, critical realists argued that positivism is complicated because a phenomenon that includes emotions and feelings cannot be studied and which limits the contribution to knowledge in term of sociological research (Daymon & Holloway, 2010, p.124). Biersteker (1989) argued that the post-positivists rejected the idea of the positivists which focus on observations as the evaluation criteria to understand the social reality, because observations are fallible and result error in findings (Biersteker, 1989, p.267). Hudson (1988) claimed that the the positivists approach is too much loosely to be descriptive for any phenomenon (Hudson, 1988, P.515).

Nonetheless, Holsti (1989) concluded that positivism have given a crucial value and "that no amount of meta-theoretical debate, or perspectivism, or post-modern relativism renders their work less theoretically useful" (Holsti, 1989, p.258). Loughlin (2012) investigates both philosophies and concluded that positivism and post-positivism should be considered as complementary in strengthening the marketing discipline as a whole (Loughlin, 2012, p.5). Hunt (1993) posits that nothing in philosophy of science that dooms objectivity in marketing research, as well as, he confirmed nothing in modern philosophy of science or psychology that makes objectivity either impossible or undesirable (Hunt, 1993, p.87). Rehman and Alharthi (2016) concluded that researchers should adopt a research methodology and paradigm that is most suitable to achieve research objective and properly investigating the phenomenon (Rehman & Alharthi, 2016, p.58). Academics recommended that researchers should "drop their heavy tools of paradigms which are only relevant to their own modes of representation and constitute a largely internal and academic debate" (Lee, Saunders, Davies, & Fitchett, 2005; Weick, 1999).

4.2.4 Marketing Theories and Methodological Pluralism

Academics have historical arguments about which paradigm to be used in marketing theories. Scholars posit that positivism is the dominant paradigm in marketing literatures (Achrol & Kotler, 2012; Churchill Jr, 1979; Hunt, 1991). Likewise, other academics advocated to advantage of the interpretivism paradigm in marketing theories (Belk, Sherry Jr, & Wallendorf, 1988; Egan, 2009; Gummesson, 2003). Lee et al. (2005) posits that literatures in marketing and commercial consumer became more powerful and visible in the position of reliability, as well as, adopting a 'progressive and non-confrontational pragmatic position' is widely accepted in marketing discipline (Lee et al., 2005, p.290). However, the traditional image of marketing science was significantly challenged by Kuhn's Structure of Scientific Revolution. Kuhn (1962) argued that in science the paradigm considered incommensurable and requires a shift if the phenomenon cannot be explained by recent theories (Kuhn, 1977, p.75). In other words, scientific shift occurs when a new paradigm provides better explanation to the phenomenon and which offers a model that is closer to the objective reality. Kuhn's proposition of incommensurability in different paradigms has raised crucial question about the paradigm incommensurability in marketing theories (Lee et al., 2005; Midgley, Nicholson, & Brennan, 2017; Tadajewski, 2008). The explicit relativism of the sociology of scientific knowledge is strongly influenced by Kuhn, as well as, alleged the subjective evaluation to implies methodological relativism and

which significantly provide shifts the academic worldview towards supporting his version in paradigm incommensurability (Grube, 2013, p. 371). Nickles (2003) posits that the marketing science does not developed progressively towards truth, as well as, advocates Kuhn's proposition that such paradigms encounter methodological incommensurability (Nickles, 2003, p. 176). However, Willmott (1993) suggested that studies need solid paradigmatic assumptions that support methodological pluralism within the conceptual frameworks (Willmott, 1993, p.709). Interestingly, Tadajewski (2008) posits that the main challenge in the marketing theory is the paradigm incommensurability due to the continues usage of logical empiricism which is possibly lead to a cognitive bias at the measured phenomenon (Tadajewski, 2008, p. 273). In addition, Tadajewski (2008) has criticized the attempt of academics such as Kuhn, Davies and Fitchett to overcome the methodological incommensurability by claiming that using Kuhn's criteria will necessarily run into the realm of politics due to underdetermination, as well as, using specific methodology is not necessarily tied to any single paradigmatic perspective (Tadajewski, 2008, p.291).

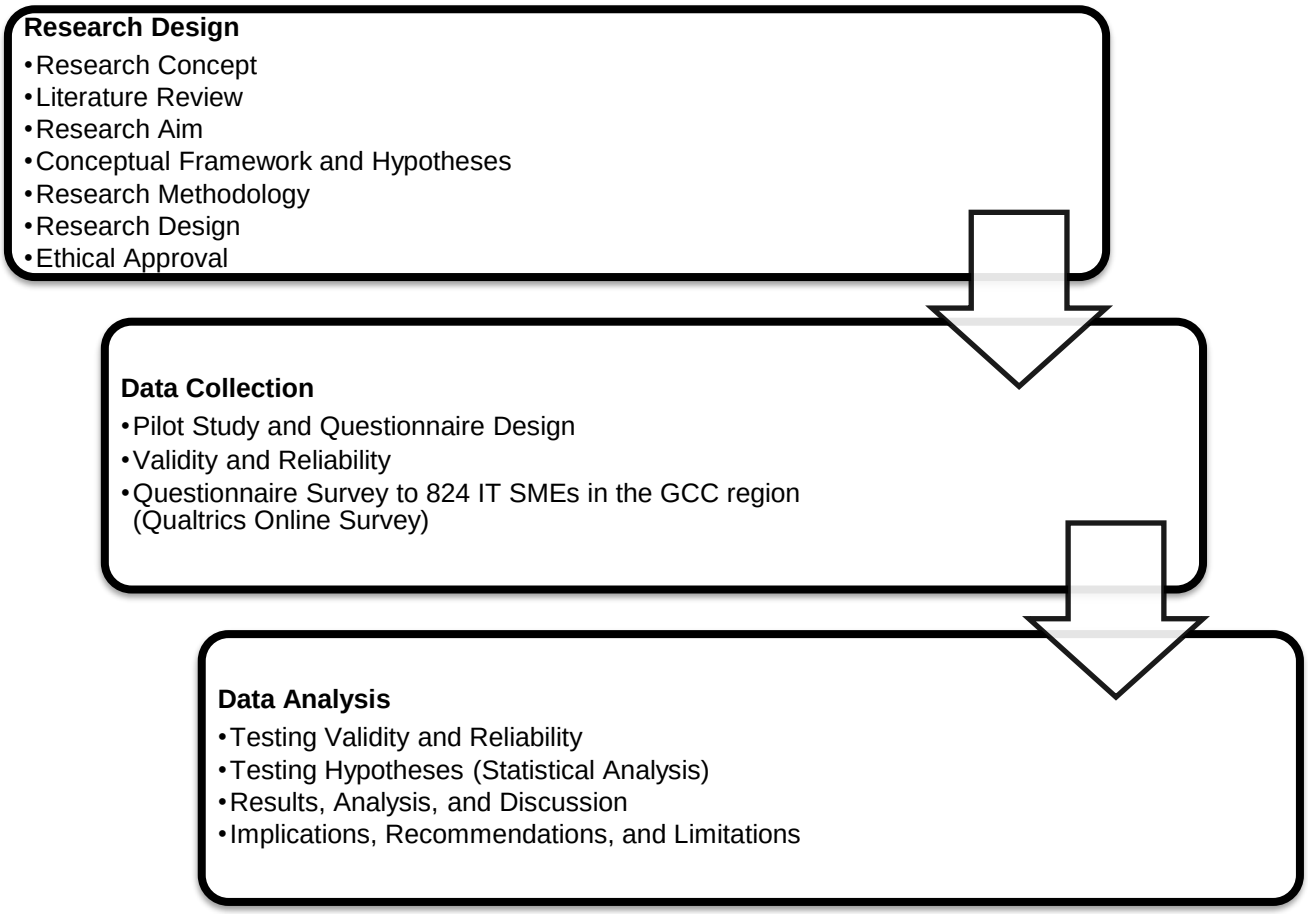
Hung (2017) posits that there are two types of incommensurability that are semantic and methodology, in addition, he highlighted the existence of the methodological incommensurability within the competing marketing theories (Hung, 2017, p.98). Grube (2013) defined methodological incommensurability as the "lack of common measurement to evaluate variations between scientific theories" (Grube, 2013, p. 372). Hunt (1991) claimed that the social science and consumer research are dominated by positivism and which considered appropriate philosophical and methodological foundation, nonetheless, the positivism methodology can adopt a critical pluralism to enhance the possibility of correct interpretation (Hunt, 1993, p.89). Tadajewski et al. (2014) suggested that critical marketing studies need to be more engaged in the subject of paradigm plurality and adopt a multiple paradigmatic approach to provide an alternative way of thinking and reconcile scholars' insights within the marketing research (Tadajewski et al., 2014, p. 1728). Interestingly, Nicholson et al. (2014) demonstrates the importance of critical pluralism by presenting an advanced framework that consists three dimensions (theoretical, methodological and methodical), and which provide insight in using critical pluralism with integrative perspectives at industrial marketing (Nicholson, Brennan, & Midgley, 2014, p.401). Likewise, Novatorov (2012) recommended that marketing literatures need to adopt a methodological pluralism in order to enhance validity and reliability of a research (Novatorov, 2012, p.6). Academics advised to use methodological pluralism that is vital to obtain more

valuable meanings from statistical analysis in marketing research (Lindgreen, Davis, Brodie, & Buchanan-Oliver, 2000, p.305). Academics posit that the methodological pluralism rely on using different methods at the research in order to assist overcoming obstacles of paradigm incommensurability within the marketing theories (Hunt, 1992; Nicholson et al., 2014; Tadajewski, 2008; Tadajewski & Hewer, 2012). Scholars are more focusing the subject of methodological pluralism 'multimethodology' with the aim of enhance the understanding of its value in future debates between marketing scholars (Jackson, 1991; Midgley et al., 2017; Mingers, 1997). Lee et al. (2005) posits that "locating potential solution to incommensurability of paradigms will address potential support to future studies that seek to bridge the gap between specific aspects of research practice in marketing science" (Lee et al., 2005, p.268). Consequently, Midgley, Nicholson and Brennan (2017) have addressed the Philosophical, Psychological and Cultural challenges in adopting methodological pluralism, as well as, presented an interesting learning model that provides a greater understanding to overcome the challenges in the methodological pluralism process and adding a crucial value to future academic discussions within the practice of industrial marketing research (Midgley et al., 2017, p.153).

4.3 Research Design

The research design is defined as a researcher's strategy to answer specific research questions (Bryman & Bell, 2015, p.77) and gives priority to the stages of the research process. For this study, a research conceptual model has been developed, which includes five hypotheses. The research adopts the online questionnaire survey as a data collection method. Initially, a pilot study is conducted to check the reliability and validity and make any required amendments to the designed questionnaire survey. In addition, the targeted population were staff at IT SMEs in GCC countries, which include owners-directors, managers, and employees in finance, technical support, sales, marketing, customer services, and operations. As the first attempt, the online questionnaire survey was submitted to 824 IT SMEs in the GCC area. After two weeks, 250 phone calls followed as the researcher requested feedback on the questionnaire from the participants to check its ability to meet the research objectives. A second questionnaire survey was sent out to the rest of the population, where 763 IT SMEs responded. The data were analysed and discussed at the final stage of the research through Structural Equation Modelling (SEM) using AMOS statistical software.

Figure (4.1): Research Design Process



4.4 Research Paradigm

Academics posit that a research paradigm is a set of assumptions and beliefs that concerned about the ontology, epistemology, and methodology of the research (Alharahsheh & Pius, 2020; Rehman & Alharthi, 2016; Žukauskas et al., 2018). The ontology of positivist paradigm focuses on a single objective reality at a phenomenon and ignores own perspective of the researcher, while their epistemology is a dualism-objectivism an which proposing that the reality can be measured through experiments or surveys as a methods within the deductive approach (Park et al., 2020 , p. 691). Namely, positivists believe in a single objective reality that can be explained and validated through quantitative methods such as surveys, experiments, and correlational studies. On the other hand, post-positivists presented a new paradigm that consists ontology claims about existence of single reality but it's not fully understandable or imperfectly explained and which sometime required interpretation, while their epistemology is a modified objectivity and

assumes that findings probably true and can be measured mainly through quantitative methods and can includes some qualitative analysis (Jackson & Dolan, 2020, p. 82). In contrast, academics posit that the ontology of interpretivism believes in a multiple realities that created by individuals or groups, while their epistemology emphasizes on that reality cannot be known and needs to be interpreted to discover implicit meanings through inductive approach (Alharahsheh & Pius, 2020; Kelly, Dowling, & Millar, 2017; Pham, 2018). Interpretivism assumes that the inductive reasoning is the optimal approach to obtain solid evidences and through a methodological qualitative methods such interviews, focus group, and case study (Knapp, 2019, p. 88). In contrast, positivism adopts the deductive reasoning that starts with general statement or hypotheses formulation in order to be examined and reach a specific logical conclusion by using quantitative scientific methods of data collection like surveys and experiments (Gaur & Kumar, 2018; Pandey, 2019; Quinlan & Zikmund, 2015). The following figure illustrates a comparison between four different paradigms.

Figure (4.2): Comparison between Research Paradigms

	Positivism	**Post-Positivism**	**Interpretivism**	**Pragmatic**
Ontology- How reality is viewed?	Objective reality	Critical reality	Subject reality	Reality can be objective or subjective depending on what is useful to reach a desire outcome
Epistemology- How the nature of knowledge is explained?	Can be explained through validity and reliability measurements	Impossible to be fully explain, need to be partially interpreted to discover underlying meanings	Can be explained by interpreting underlying meanings	Can be explained through any useful way, the best way is the one that solve the problem (a combination of object and subject point of view)

Axiology- Values and roles of research process?	Value- free process, researcher remain independent from the data, objective position	Research bias is unacceptable but its certain	Researcher is essential part of the process, subjective point of view	Researcher adopts both (objective and subjective) point of view, values are essential in interpreting results
Methodology- Which procedure to find out about the topic?	Quantitative, experimental research, survey research	Quantitative, experimental research, survey research	Qualitative, grounded theory, action research, heuristic inquiry	Qualitative and Quantitative (Mixed methods)
Approach- Which type of reasoning we use to outline conclusions?	Deductive reasoning	Mainly deductive reasoning, can use partial inductive reasoning	Inductive reasoning	Mix Deductive/Inductive, or any sperate if useful
Methods- Which technique do we use to find out?	Sampling, Statistical Analysis,	Sampling, Statistical Analysis, Interviews	Observations, in-depth Interviews, Case study	Combination of all

Interestingly and as illustrated in above figure, Saunders et al. (2016) posits that " the pragmatism research philosophy recognizes that there are many different ways of interpreting the world and undertaking research, that no single point of view can ever give the entire picture and that there may be multiple realities" (Saunders et al., 2016, p.173). Namely, the pragmatism research philosophy is a modification to

the two extreme mutually exclusive paradigms (positivism and interpretivism), and which emphasizes on combining both positions of positivist and interpretivism at a single research. In other words, the pragmatism research suggesting to integrate research approaches, research strategies and quantitative/qualitative research methods within the same study in order to achieve the most ideal practical prediction in findings. Nonetheless, academics concluded that the paradigm of positivism is efficient to evaluate causal effect by implementing the deductive approach that consists a priori formulation of hypotheses through quantitative methods based on data collected from a large sample size (Corry et al., 2019; Jackson & Dolan, 2020; Park et al., 2020). This research formulated four hypotheses with the aim of evaluating the causal effect of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) with the inclusion of the indirect moderated-mediation effect of Optimizing Staff Capabilities (OSC). Consequently, the research adopts a positivism paradigm that rely on a deductive reasoning as an approach to outline a research conclusion.

4.5 Research Approach and Method

Academics presented three main research approaches that are deductive, inductive and abductive (Varpio & MacLeod, 2020; Walton, 2014; Žukauskas et al., 2018). Scholars posit that the positivist paradigm adopts a deductive reasoning that rely on formulation and testing hypotheses and theories through quantitative methods such as surveys in order to reach specific logical prediction or conclusion (Corry et al., 2019; Green et al., 2015; Pham, 2018). Park et al. (2020) defined the hypothetico-deductive model as "a scientific model based on forming a testable hypothesis and developing an empirical study to confirm or reject the hypothesis" (Park et al., 2020, p. 690). Academics posit that the deductive approach focuses on a value-free concept, and which exclude researcher's values and opinions during data collection process to ensure unbiased observations and interpretations (Alharahsheh & Pius, 2020; Pandey, 2019; Žukauskas et al., 2018). In contrast, scholars posit that the inductive approach is a systematic procedure of analyzing the qualitative data in order to outline a conclusion derived from the data and reach a solid evidence through the inductive reasoning methods (Alharahsheh & Pius, 2020; Irshaidat, 2019; Ryan, 2018). In other words, the process starts from specific observations at a phenomenon to outline a general conclusion. Alharahsheh and Pius (2020) posit that the inductive approach is vital to investigate, as well as, obtain insight understanding to a particular meanings such as individual behavior or feelings related to a specific gender

(Alharahsheh & Pius, 2020). However, academics argued that the inductive reasoning allows researcher to outline the conclusion based on own understanding and therefore data can be interpreted falsely and mis-lead the truth of conclusion (Irshaidat, 2019; Pham, 2018; Woiceshyn & Daellenbach, 2018). In 19th century, an American academic called Charles Sanders Peirce proposed the abductive approach that rely on logic inference and thought emphasizing first on the observations with the aim of finding a simplest and closest conclusion form the observations (Walton, 2014). In other words, the abductive approach aims to integrate the positivism and interpreters approaches, strategies and quantitative/qualitative methods within the same study in order to achieve the most ideal practical prediction in findings. Scholars claimed that the abductive approach focuses on explaining or investigating a complicated problem in a phenomenon through the best predication that might be true (Awuzie & McDermott, 2017; Bhagavatula et al., 2019; Earl Rinehart, 2020). Varpio and Macleod (2020) defined the abductive approach as a "logic inference through a subjective logic abduction with abductive validation in common practice of hypothesis formation" (Varpio & MacLeod, 2020, p. 689). However, Walton (2014) criticized that the abductive approach consists uncertainty and doubts in expressing the terms of logic inference rigorously such as finding the simplest and closest conclusion, and which can lacks to provide the best explanation at the study (Walton, 2014, p. 207).

The following illustrates a comparison between the three approaches of reasoning to outline a conclusion.

Figure (4.3): Comparison between the Deductive, Inductive and Abductive Approaches

	Starting Point	**Aims**	**Outline Conclusion**	**Remarks**
Deductive Approach	Theoretical framework	Test and evaluate a theory	Specific and definite Conclusion follows premise	Cannot explain specific meanings like feelings and behaviors
Inductive Approach	Empirical observations	Develop a theory	General and suggestive conclusion	Conclusion may not be true due to potential bias

	(absence of theory)			through researcher's interpretation
Abductive Approach	Incomplete observations (diverged from theory)	Develop new predictions/ Explanations	Useful to predict single/multiple explanation for better conclusion	Uncertainty and doubts in logic inference, difficult to express simplest and closest conclusions

However, Varpio and MacLeod (2020) posits that a research with a deductive approach to explore a causal effects can provides an accurate prediction to a theory or phenomena through testing general assumptions derived from the theory, and ultimately the findings from such research are important in contribution to the theory at a specific environment (Varpio & MacLeod, 2020, p. 687). In addition, Woiceshyn and Daellenbach (2018) claimed the deductive approach offers the creditability as of the findings through identifying and evaluating a complicated causal effects among variables (Woiceshyn & Daellenbach, 2018, p.193). In addition, academics have widely adopted the deductive approach with the aim of testing the impact of the independent variables on the dependent variables through the inclusion of the moderated and mediation effect (de Zubielqui & Jones, 2019; Ding et al., 2019; Hernández-Linares et al., 2020). Saunders et al. (2016) claimed that the deductive approach consists quantitative methods that focuses on objective measurements with statistical, mathematical and numerical analysis of data (Saunders et al., 2016, p. 128). Johnson and Yang (2019) posit that quantitative research methods deal in numbers, logic, and an objective stance, as well as, focuses on numeric and unchanging data and detailed, convergent reasoning rather than divergent reasoning (Reed, Johnson, & Yang, 2019, p. 158). Academics concluded that the data can be gathered using structured research tools such as survey (online, kiosk, paper), polls, longitudinal studies and from a larger sample sizes that are representative of the population (Bryman & Bell, 2015; Ewing & Park, 2020; Saunders et al., 2016). Bryman and Bell (2015) posit that the results of a deductive

approach are vital for the generalisability concept, in other words, findings can be used for generalisability and replicated at different times and phenomenon (Bryman & Bell, 2015, p.160). Based on above discussions, this research adopts the deductive approach through a structured online questionnaire survey as a research strategy with a quantitative research method and which is more appropriate to answer the research questions by evaluating the casual effect of using ESM platforms on IIFC with inclusion of OSC.

4.6 The Survey

The aim of a survey is to gather data from a determined sample and analyse the data to generate valid and reliable results which could be generalised to a population (Hair et al., 2015, p.302). Bryman and Bell (2015) claimed that a survey is considered as an essential business research method that allows the researcher to collect a large amount of a quantitative data to identify and test the relationship between dependent and independent variables (Bryman & Bell, 2015, p.184). Nayak and Narayan (2019) concluded that the advantage of using an online questionnaire survey is through facilitating the data collection in a shorter period with less costs, especially for a large population or in a large geographic area, while the disadvantage is that it lacks the ability to clarify and probe answers, such as measuring the level of the participants' emotions (Nayak & Narayan, 2019, p.36). The research aims to test the impact of using Enterprise Social Media (ESM) platforms to Integrate Inter-Functional Coordination (IIFC) through the indirect moderated-mediation effect of Optimizing Staff Capabilities (OSC) at Information and Communication Technology (ICT) SMEs in the Gulf Cooperation Council (GCC) area, which is geographically large and consists of six counties (Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Oman, and Bahrain). Consequently, this research adopts the online questionnaire survey as the data collection method to cover such a large geographic area as well as reduce the cost and time of data collection.

4.7 Sampling and Sample Size

Bryman and Bell (2015) described the quantitative sampling technique as the data collection process from a smaller group which represents a valid alternative to the whole population when limited time and costs prevent the researcher from gathering information from a large population (Bryman & Bell, 2015, p.428). The population of this research is represented by staff at information and communication technology small

and medium enterprises in the GCC area, which consists of six countries (Saudi Arabia, Kuwait, Qatar, the United Arab Emirates, Oman, and Bahrain). Information and communication technology small and medium enterprises include telecom companies, internet and network service providers, network hardware distributors and wholesalers, hardware resellers, software resellers, computer distributors and wholesalers, and information technology consultancy companies. In other words, no group or category is specified in the sampling process, such as age or gender, and the participant can be any staff member who uses ESM platforms. Further data such as email addresses in Information and ICT small and medium enterprises are obtained from various reliable sources through research centres, telecommunication authorities, and academic and government reports in the GCC area. In addition, this research uses internet search engines (e.g. Google, Arabo.com) to find companies via their official ICT manufacturing websites, such as Dell, HP, Cisco, and Microsoft. Academics posited various methods of probability sampling such as systematic sampling, stratified sampling, simple random sampling, cluster sampling, and non-probability sampling techniques such as convenience, quota, snowball, and expert sampling (Quinlan & Zikmund, 2015, p.178). Bryman and Bell (2015) defined convenience sampling as a non-probability technique that allows data to be collected from participants who are easy to reach (Bryman & Bell, 2015, p.204). Academics argued that the main disadvantage of the convenience sampling technique is due to bias, which leads to results that may not be generalised (Etikan, Musa, & Alkassim, 2016, p.4). However, Elliott and Haviland (2007) argued that the probability of bias in a convenience sampling technique can be high only when a study has a large population, such as 1,000–10,000 participants (Elliott & Haviland, 2007, p.211). Fricker Jr (2016) claimed that the convenience sampling technique can be useful in academic research if the results lead to developing hypotheses or identifying potential alternative contributions or another research issue (Fricker Jr, 2016, p.188). Wang, Haining, and Cao (2010) found that the convenience sampling technique is sufficient when collecting difficult data for the sampling process, such as using online web surveys to collect data from anonymous staff members or because of limited time and expenses (Wang, Haining, & Cao, 2010, p.533). In other words, the convenience sampling technique is efficient when the sampling process has a unique nature of the population and resources availability in term of access, time, and money. The population of this research is represented by staff members at ICT small and medium enterprises in there GCC area, where no group or category is specified in the sampling process, such as age or gender, and the participants

can be any staff member who uses Enterprise Social Media (ESM) platforms. In addition, given the research code of ethics and companies' privacy policies, obtaining information about staff members to group them into clusters – such as name, age, gender, and job position – is difficult. Consequently, this research has adopted the convenience sampling technique to offer the opportunity to any available staff member to answer questions related to the research aims**.** Academics argued that the sample size should be adequate to represent the population in the best manner as well as increase the representativeness of the population (Burmeister & Aitken, 2012; Fugard & Potts, 2015; Quinlan & Zikmund, 2015). Academics suggested using the following formula to determine a minimum sample size required to be surveyed, where n is the sample size, N is the population size, e = 5% is the level of precision, and 95% is the confidence level (Glenn, 2002; Yamane, 1967, p.886):

$$n = \frac{N}{1 + N(e)^2}$$

Based on the above formula, the minimum sample size of the research must be 397 IT SMEs, as follows:

$$n = \frac{45293}{1 + 45293(0.05)^2} = 397$$

The research estimates the total number of Information and Communication Technology (ICT) small and medium enterprises in GCC countries as approximately 45,293 in 2018 (DERASAT, 2019; Jadwa, 2019; KISR, 2019; MEC, 2019; MOTC, 2019; NBF, 2019) and uses official government reports to calculate this amount. These official reports are published in the websites of the chambers of commerce as well as telecommunication regulation authorities which belong to the ministry of telecommunication in each of the six countries, as presented in the appendix (Ashrafi & Murtaza, 2017; DERASAT, 2019; MOTC, 2019; MTC, 2019). In addition, the research uses previous academic studies and reports prepared by international organisations such as the United Nations as well as independent market research companies such as BLOOVO (BLOOVO, 2017; CITC, 2018; MEC, 2019; TRA, 2018; UNDP, 2017). The survey includes information and communication technology small and medium enterprises such as those under electronic

and computer equipment manufacturing, wired and wireless telecom activities, networking solutions, internet service providers, computers retailers, ICT equipment distributors and wholesalers, software design and publishing, hardware trading, data processing and hosting, information technology consultancy, web design and portal, ICT equipment trading, and telecom and computer repair services. However, academics claimed that a larger participation of the sample size provides a more reliable estimation about phenomena in quantitative studies and helps to generalise the results to a larger population (Fugard & Potts, 2015; Glenn, 2002; Hill, 2010). Consequently, the research maximises the chance of gathering more information by submitting a questionnaire survey to 824 ICT SMEs to increase the potential to obtain better results generalised to the population. The total responders were 763 ICT small and medium enterprises from the GCC area. The data were screened, and six companies were excluded because the questionnaire had been answered by unprofessional employees (receptionists). In addition, 75 respondents were removed because they had answered the questionnaire items inappropriately (answered all items at the same level, including reverse questions). Consequently, the data were analysed using Structural Equation Modelling (SEM) techniques with AMOS from 684 ICT SMEs in the Gulf Cooperation Council (GCC) area.

4.8 Online Questionnaire

Bryman and Bell (2015) posited that using the Likert scale in quantitative research provides important advantages such as easy-to-understand questions as well as allows participants to take time and naturally answer questions with multi-choice levels (Bryman & Bell, 2015, p.245). Finstad (2010) revealed that seven-point Likert scale questions for data collection offers a wider selection to respondents and better-detailed feedback for researchers (Finstad, 2010, p.108). Academics adopt the seven-point Likert scale because it offers a wider range of multi-choice answers and is commonly used in quantitative surveys (Bassell, Lambert, & Friedman, 2019; Daowd, 2016; Tseng, 2017). A seven-point Likert rating scale is adopted in this study (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree or disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree). In addition, one question was about how often ESM is used inside the company, which adopted a seven-point Likert rating scale (1 = Never, 2 = Rarely, 3 = Sometimes but infrequent, 4 = Neutral, 5 = Sometimes, 6 = Often, 7 = Always). Muller et al. (2005) suggested a model to test the moderated-mediation effect, which is widely adopted by academic researchers (Muller et al., 2005, p.854). This research adopted the model and designed a seven-point online

Likert questionnaire to test the impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the inclusion of the indirect moderated-mediation effect of Optimizing Staff Capabilities (OSC). The questionnaire consists of five constructs, and each construct consists of four items that evaluate the effect of reflective indicators such as responsiveness, flexibility, efficiency and capacity on Staff Knowledge Sharing (SKS), as well as, Staff Engagement (SE) to interact with using Enterprise Social Media (ESM) platforms to Optimise Staff Capabilities (OSC). Construct one consists of four adopted items to measure the overall direct impact of ESM platforms on Integrating Inter-Functional Coordination (IIFC) with the direct moderation effect of capability of Staff Knowledge Sharing (SKS) on the direct impact. Construct two consists of four adopted items to measure the overall direct impact of ESM platforms on IIFC with the direct moderation effect of capability of Staff Engagement (SE) on the direct impact. Construct three consists of four items to evaluate the interactive moderator effect of using ESM platforms with the moderation effect of capability of Staff Knowledge Sharing (SKS) on Optimizing Staff Capabilities (OSC). Construct four consists of four items that evaluate the interaction moderator effect of using ESM platforms and moderation effect of capability of Staff Engagement (SE) on Optimizing Staff Capabilities (OSC). Construct five consists of one item that evaluates the impact of using ESM platforms on Integrating Inter-functional Coordination (IIFC) through the mediation effect of Optimizing Staff Capabilities (OSC)**.** Construct six includes one item that tests the indirect moderated-mediation effect of OSC on the relationship between using ESM platforms and IIFC.

4.9 Research Items

Academics widely adopted Cronbach's alpha (α) to measure the internal consistency of the items (Bonett & Wright, 2015; Raykov & Marcoulides, 2019; Taber, 2018; Tavakol & Dennick, 2011). Oluwatayo et al. (2012) argued that testing the reliability of items (Cronbach's alpha, α) is widely adopted in quantitative research especially in attitude scales such as the Likert scale because it provides the variance of each item from the mean when using scales of scoring points (Oluwatayo, 2012, p.398). Scholars claimed that a reliable research measurement scale must have a Cronbach's alpha (α) greater than 0.70 to ensure internal consistency between scale items (Cohen, Manion, & Morrison, 2008; Haradhan, 2017; Razak, Ma'amor, & Hassan, 2016; Yusoff, Ali, & Khan, 2014). In other words, a scale with a Cronbach's alpha (α) greater than 0.70 ensures that questionnaire items have high reliability in representing respondents' behaviour. The

research reviewed many studies and selected similar items related to quantitative constructs and which have high reliability (Cronbach's alpha > 0.7). The questionnaire constructs were designed based on the moderated-mediation effect of five constructs including 17 questionnaire items. Each of the first four constructs consists of four reflective indicators, which are responsiveness, flexibility, efficiency, and capacity, which might affect Staff Capabilities (SC) such as (SKS and SE) when using Enterprise Social Media (ESM) platforms. The fifth construct evaluates the overall moderated-mediation effect of Optimizing Staff Capabilities (OSC). The following items are adopted based on previous quantitative studies which have tested for reliability and have proven that Cronbach's alpha is greater than 0.7. The research aims to evaluate the impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the inclusion of Optimizing Staff Capabilities (OSC) as follows:

Construct 1 (SKESMDIR): Evaluate the direct moderator's effect of staff knowledge sharing and staff engagement on the overall direct effect of using ESM platforms on IIFC. Scholars presented the impact of social media platforms on improving employee performance through the moderation effect of Staff Knowledge Sharing (SKS) as well as Staff Engagement (SE) (Bakar et al., 2018; Estell & Davidson, 2019; Nguyen, Ngo, et al., 2018; Yingjie et al., 2019). As discussed in Chapter 2, academics claimed that SKS has an important moderation effect on the relationship between using ESM platforms and employee productivity (Feng, Wang, et al., 2019; Irtaimeh, 2018; Najmi et al., 2018; Zhang, Kang, et al., 2018). Scholars posited that capability of Staff Engagement (SE) crucially moderates the relationship between using ESM platforms and function performance (Abdelilah et al., 2018; Bala et al., 2019; Cai et al., 2018). In addition, academics argued that reflective indicators such as responsiveness, capacity, flexibility, and efficiency highly affect Staff Knowledge Sharing (SKS) as well as Staff Engagement (SE) capabilities (Abdelilah et al., 2018; Karampela et al., 2018; Lam et al., 2016; Lamont et al., 2019). This research adopted a high scale of items used in previous studies to test any impact of ESM platforms on IIFC through the direct moderation effect of Staff Capabilities (SC) such as Staff Knowledge Sharing (SKS) and Staff Engagement (SE). The following tables represent the adopted original items and questionnaire items.

Construct 1 (SKESMDIR): Consists of four adopted items that measure the overall direct impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) with the direct

moderation effect of Staff Knowledge Sharing (SKS). The following question and items measure construct 1 (SKESMDIR).

Does Staff Knowledge Sharing positively affect the direct impact of using Enterprise Social Media platforms to achieve Integration of Inter-Functional Coordination?

Original Items	Questionnaire Items	Studies	Item Code
Responsiveness of knowledge sharing has directly improved the performance of cross-functions through social media platforms	Responsiveness of Staff Knowledge Sharing positively affects the direct impact of using Enterprise Social Media platforms on Integration of Inter-Functional Coordination	(Chin, Evans, Choo, & Tan, 2015; Pee, 2018)	KSDIRRES
The impact of using ESM platforms or improving the performance of employees depends on the direct flexibility of knowledge sharing among employees	Flexibility of Staff Knowledge Sharing positively affects the direct impact of using Enterprise Social Media platforms on Integration of Inter-Functional Coordination	(Irani, Sharif, Papadopoulos, & Love, 2017; Jin, Liu, & Austin, 2014)	KSDIRFLX
The impact of social media on the performance of cross-functions is influenced by the efficiency of	The efficiency of Staff Knowledge Sharing positively affects the direct impact of using Enterprise Social Media platforms on Integration	(X. Cao, Guo, Liu, & Gu, 2015; Oostervink et al., 2016)	KSDIREFF

knowledge shared among employees	of Inter-Functional Coordination		
Employees' capacity in sharing knowledge with colleagues positively influences the relationship between using social media and interdepartmental collaboration	The capacity of Staff Knowledge Sharing positively affects the direct impact of using Enterprise Social Media platforms on Integration of Inter-Functional Coordination	(Ma & Chan, 2014; Pee, 2018)	KSDIRCAP

The following construct was designed to evaluate the impact of ESM platforms on IIFC through the direct moderation effect of Staff Engagement (SE).

Construct 2 (SEESMDIR): Consists of four adopted items to measure the overall direct impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-functional Coordination (IIFC) with the direct moderation effect of capability of Staff Engagement (SE). The following question and items measure construct 2 (SEESMDIR).

Does Staff Engagement positively affect the direct impact of using Enterprise Social Media platforms to achieve Integration of Inter-Functional Coordination?

Original Items	Questionnaire Items	Studies	Item Code
Knowledge sharing has a direct positive moderation impact on improving the employees' engagement of	Responsiveness of Staff Engagement positively affects the direct impact of using ESM platforms on IIFC	(Cetinkay & Rashid, 2018; Jin et al., 2014)	SEDIRRES

functions through using social media platforms			
The effect of social media tools on improving the performance of IFC depends on the moderation effect of employees' engagement	Flexibility of Staff Engagement positively affects the direct impact of using ESM platforms on IIFC	(Chen & Wei, 2018; S. Hu, Gu, Liu, & Huang, 2015)	SEDIRFLX
Employees' efficiency of interaction increases inter-function collaboration	Efficiency of Staff Engagement positively affects the direct impact of using ESM platforms on IIFC	(Di Gangi & Wasko, 2016; Jin et al., 2014)	SEDIREFF
Staff Engagement positively affects the direct impact of using ESM platforms on employees performance	Capacity of Staff Engagement positively affects the direct impact of using ESM platforms on IIFC	(Liu et al., 2013; Lu & Pan, 2019)	SEDIRCAP

Muller et al. (2005) suggested testing the interactive moderator effect of capabilities of Staff Knowledge Sharing (SKS) and Staff Engagement (SE) using Enterprise Social Media (ESM) platforms on Optimizing Staff Capabilities (OSC) (Muller et al., 2005, p.856). The following construct tests the interactive effect of the first moderator (SKS) using ESM platforms on OSC.

Construct 3 (MODESMSKS): Consists of four items that evaluate the interactive moderator effect of SKS using ESM platforms on OSC**.** The following question and items measure construct 3 (MODESMSKS).

Does the positive interactive effect of using Enterprise Social Media Platforms platforms with Staff Knowledge Sharing lead to Optimize Staff Capabilities?

Original Items	Questionnaire Items	Studies	Item Code
Responsiveness of knowledge sharing positively influences using Optimize Staff Capabilities platforms and improves employees' capabilities	The positive interaction effect between using Enterprise Social Media platforms and responsiveness of Staff Knowledge Sharing leads to Optimize Staff Capabilities	(Chin et al., 2015; Pee, 2018)	KSRESESM
The interaction effect between using social media and flexibility of knowledge sharing utilises employees' capabilities.	The positive interaction effect between using Enterprise Social Media platforms and flexibility of Staff Knowledge Sharing leads to Optimize Staff Capabilities	(Kwahk & Park, 2016; Song et al., 2019)	KSFLXESM
Efficiency in knowledge sharing positively affects using social media platforms and increases knowledge sharing capability among employees	The positive interaction effect between using Enterprise Social Media platforms and efficiency of Staff Knowledge Sharing leads to	(Davison et al., 2019; Moqbel & Nah, 2017)	KSEFFESM

	Optimize Staff Capabilities		
The positive influence of using social media platforms on improving knowledge sharing among employees depends on the capacity of knowledge sharing	The positive interaction effect between using Enterprise Social Media platforms and capacity of Staff Knowledge Sharing leads to Optimize Staff Capabilities	(Scuotto, Del Giudice, & Carayannis, 2017; Tortoriello, 2015)	KSCAPESM

The following construct tests the interactive effect of the second moderator (SE) using ESM platforms on OSC.

Construct 4 (MODESMSE): Consists of four items that evaluate the interactive moderator effect of capability of Staff Engagement (SE) using Enterprise Social Media (ESM) platforms on Optimizing Staff Capabilities (OSC)**.** The following question and items measure construct 4 (MODESMSE).

Does positive interactive effect of using Enterprise Social Media Platforms with Staff Engagement Lead to Optimize Staff Capabilities?

Original Items	Questionnaire Items	Studies	Item Code
The responsiveness level of engagement affects using social media tools to optimise capabilities among employees.	The positive interaction effect between using Enterprise Social Media platforms and responsiveness of Staff Engagement leads to Optimize Staff Capabilities	(Di Gangi & Wasko, 2016; Lu & Pan, 2019)	SERESESM
The flexibility of engagement level affects using social media tools to	The positive interaction effect between using Enterprise Social Media platforms and	(Kwayu & Abubakre, 2018; Zhang et al., 2019)	SEFLXESM

optimise capabilities among employees	flexibility of Staff Engagement leads to Optimize Staff Capabilities		
The efficiency of engagement positively affects using social media tools and integrates capabilities of employees.	The positive interaction effect between using Enterprise Social Media platforms and efficiency of Staff Engagement leads to Optimize Staff Capabilities	(Chen & Wei, 2018; Di Gangi & Wasko, 2016)	SEEFFESM
The interaction effect between using ESM platforms and capacity of engagement utilises capabilities among employees	The positive interaction effect between using Enterprise Social Media platforms and capacity of Staff Engagement leads to Optimize Staff Capabilities	(S. Hu et al., 2015; Whitten, 2018)	SECAPESM
Reverse question	The negative interaction effect between using Enterprise Social Media platforms and the responsiveness of Staff Engagement leads to Optimize Staff Capabilities	Reverse question	REVERSE

According to Muller et al. (2005), the following two constructs aim to test the impact of the independent variable as Enterprise Social Media (ESM) platforms on the dependent variable as the Integration of Staff Capabilities (IIFC) through the indirect effect level of the mediation variable of Optimizing Staff Capabilities (OSC) with the interactions of moderators (SKS, SE) (Muller et al., 2005, p. 857). Therefore, the next step

is testing the mediation effect of OSC with the interactive moderators' effect of Staff Knowledge Sharing (SKS) and Staff Engagement (SE) on Integrating Inter-Functional Coordination (IIFC).

Construct 5 (OSCMED): Consists of one item that evaluates the impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-functional Coordination (IIFC) through the mediation effect of Optimizing Staff Capabilities (OSC)**.** The following question and item measure construct 5 (OSCMED).

Does Optimization of Staff Capabilities positively influence the relationship between Using Enterprise Social Media Platforms and Integrating Inter-Functional Coordination?

Original Items	Questionnaire Items	Studies	Item Code
Utilising employees' capabilities mediates the impact on using social media tools and employees' performance.	Optimisation of Staff Knowledge Sharing and Staff Engagement can positively mediate the relationship between using ESM platforms and integrating IFC	(Abbas et al., 2019; Moqbel & Nah, 2017)	OSCMED

4.10 Pilot study

The pilot study aimed to assess the survey and determine the weaknesses of the questionnaire to improve questions (Saunders et al., 2016, p.269). The pilot study provided preliminary evidence of the feasibility of the questionnaire and the steps that need to be taken to modify and improve scales within quantitative research (Bassell et al., 2019; Riff et al., 2019; Tseng, 2017). Academics posited that in a quantitative survey, a sample of the pilot study should be 10% of the population (Connelly, 2008; Van Belle, 2011, p.246). Meanwhile, others suggested that 10–30 participants would be sufficient for a quantitative survey in case the population is not large (Hertzog, 2008; Hill, 2010; Isaac & Michael, 1995, p.413; Julious, 2005) with the aim of obtaining the highest feasibility through the pilot study. This research adopted the 10% sample of the population at the pilot study stage. The pilot study was conducted by sending the questionnaire to different employees at SMEs in GCC countries. Participants included owners-directors and staff in technical engineering, sales, marketing, finance, human resources, and operations. The online

survey questionnaire was sent to 67 SMEs specifically related to the IT sector in GCC areas. After one week, 20 short introductory phone calls were made to explain the nature of the survey as well as remind participants to complete the online survey (appendices). In total, 67 questionnaires submitted in the pilot study survey. Participants responded with eight answers were missing and one participant was excluded due to inappropriate answers and which lead to a final screened participant of 58 for the pilot study test (all answers were 'Totally Agree' including the reverse questions), which means they did not read the items of the questionnaire properly. Three companies were also excluded for having the wrong email address. The feedback from the pilot study enabled the validation of the questions to meet research objectives (Quinlan & Zikmund, 2015, p. 288). The results of the pilot study determined whether the questionnaire needs to be amended and sent to the targeted population of approximately 397 information and communication technology SMEs in GCC area. However, Noble and Smith (2015) suggested maximising the sample size to avoid validity and generalisability issues in quantitative research (Noble & Smith, 2015, p.33). Therefore, this research submitted the questionnaire survey to 824 IT SMEs to gather the maximum amount of data as well as to avoid any validity and generalisability issues. The process included 250 phone calls made to random IT SMEs which did not respond to ensure delivery of the questionnaire to appropriate companies (appendices of calls). Consequently, 763 ICT SMEs responded, from which 75 were removed for answering the reverse question (which means they did not read the questionnaire carefully and used same scale for all questions. In addition, four respondents were removed because the questionnaire was filled out by a person who does not have knowledge or is not involved in using ESM platforms, such as a receptionist. Consequently, 684 were analysed through the research.

4.11 Data Collection Platform

The researcher used various instruments to identify a list of Information and Communication Technology (ICT) SMEs in the Gulf Cooperation Council (GCC) area. Mainly, the researcher obtained various lists of ICT SMEs from reliable sources such as the chamber of commerce of each country in the GCC area. Further information was obtained from various reliable sources in the region such as research centres, ministries of communications (telecommunication authorities) as well as government reports. In addition, the researcher used Internet search engine (Google) to find brands in the IT manufacturing sector and allocate their partner in the region as follows:

- Middle East Companies' Directory: www.arabo.com
- HP Manufacturer: www8.hp.com/emea_middle_east/en/store-finder
- Cisco: Telecom and Networking Manufacturer: https://locatr.cloudapps.cisco.com/wwchannels/locatr
- Dell Manufacturer: www.emc.com/partners/partner-finder
- Oracle: https://solutions.oracle.com/scwar/scr/Partners/index.html?logout=true
- Huawei: https://solutions.oracle.com/scwar/scr/Partners/index.html?logout=true
- Motorola: https://www.motorolasolutions.com/en_xu/partner-finder.html
- Juniper: https://www.juniper.net/uk/en/partners/locator/
- https://www.microsoft.com/en-us/learning/partners.aspx

Information Technology (IT) SMEs were selected based on government and private Small and Medium Enterprises (SMEs) with various IT activities such as telecommunications services, network project integrators, Internet services, software design and solutions, computer technologies, Internet of Things (IoT) services, hardware and spare parts suppliers, IT resellers, IT distributors and wholesalers, and IT consultancy enterprises.

4.12 Data Analysis

The research aims to test the indirect effect of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the inclusion of the indirect moderated-mediation effect to Optimizing Staff Capabilities (OSC) depending on interactions between two latent variables, which are Staff Knowledge Sharing (SKS) and Staff Engagement (SE). Hair et al. (2014) posits that marketing literature has widely accepted the use of Covariance-Base Structural Equation Modelling (CB-SEM) technique to test and confirm or reject hypotheses in marketing research (Hair, 2014, p.55). Academics concluded that CB-SEM is appropriate for research that measures the relationship between two correlated latent variables (Hair, 2014; Mia, Majri, & Rahman, 2019; Rahi & Ghani, 2018). Engel, Klien, and Moosbrugger (2017) found that CB-SEM is efficient in testing the relationship between latent and observed variables (Schermelleh-Engel, Klein, & Moosbrugger, 2017, p. 210). Byrne (2012) presented four efficient testing software packages that can be used for Structural Equation Modelling (SEM) that are AMOS, EQS, LISREL and MPLUS (Byrne,

2012, p. 310). Pugesek, Tomer and von Eye (2003) demonstrates a comprehensive comparison between AMOS, EQS, LISREL including data input and management, modelling options, ease of use, understandability of output and path analysis and they concluded that all are similar, as well as, claimed that the selection of a software depends on the way of data analysis at the research (Pugesek, Tomer, & Von Eye, 2003, p. 365). Clayton and Pett (2008) compared between AMOS and LISREL and argued that both are extremely similar, however, they suggested to use AMOS for multi path analysis between observed and latent variables (Clayton & Pett, 2008, p. 290). Recently, Collier (2020) claimed that the main difference between SEM software programs such as AMOS, LISREL, EQS and MPLUS is that AMOS is designed to conceptualized and analyse multi paths models in a graphical interface (Collier, 2020). Ong and Puteh (2017) claimed that using AMOS as a statistical analysis software for SEM to analyse and understand complex path analysis particularly in identifying the causal effects between latent and observed variables (Ong & Puteh, 2017, p.24).

Blunch (2012) concluded that using AMOS statistical software assists in predicting the direction and the strength of the relationship between latent and observed variables (Blunch, 2012, p.169). Academics acknowledged the compatibility of AMOS statistical software in analysing large sample size (Blunch, 2012; Chiao, Chen, & Huang, 2018; Lowry & Gaskin, 2014). Likewise, AMOS is compatible with different scale types such as Likert and metric scales (Hair, Hollingsworth, Randolph, & Chong, 2017, p.136). Scholars argued that AMOS is highly effective for robustness and estimating the measurement of latent models with high accuracy (Chiao et al., 2018; Henseler, Ringle, & Sarstedt, 2014; Ong & Puteh, 2017). Consequently, the research adopted AMOS by running Covariance-Base Structural Equation Modelling (CB-SEM) technique to test the impact between the independent variable (X) and the dependent variable (Y) though the interaction effect of moderated-mediation latent variables as discussed in the previous chapter. The first stage consists of data screening to reduce errors and avoid missing data as well as validity and reliability tests, which include consistency of measurements. The second stage consists of using Covariance-Base Structural Equation Modelling (CB-SEM) technique to test the validity and reliability of hypotheses and whether to accept or reject them.

4.13 Ethics Approval

Research ethics are essential in any scientific research for multiple in order to ensure mutual respect and fairness, respect regulations, and avoid misconduct. Academics defined research ethics as the principles of the procedures and perspectives in which guide the researcher in accordance to the standard regulations within the academic discipline (Macfarlane, 2010, p.27). There are several norms of research ethics to impose respect to the guidance and regulatory, as well as, ensure authenticity and error free research. For example, Resnik (2014) posits that researchers prohibited from breaching the ethics through falsifying, plagiarism and fabricating to reduce error in findings such as manipulating in research materials and misrepresent the analyzed data of the research or copying another author's original language (Resnik, 2014, p. 426). Zukauskas et al. (2018) demonstrates another norm of ethics like trust, accountability, mutual respect, and fairness and which consist preserving copyrights and authorship, confidentiality of participants and policies of data sharing (Žukauskas et al., 2018, p. 105). A conflicts of interest and animal care and use is a third norm of research ethics that must ensure accountability to public, as well as, avoid judgements that result conflicts among primary and secondary interests (Van Scotter & Roglio, 2020, p. 455). In addition, Caddell et al. (2019) emphasized on the moral and social values such as social responsibility, human rights, animal welfare, and public health and safety in order to avoid any type of violations occur during interview and to be compliance with the law and standard regulations (Caddell et al., 2019, p. 77). Consequently, the questionnaire of this research designed in compliance of the standard principles of ethics, as well as, to protect the participants' rights such as the anonymity and provide flexibility in stopping participation after two weeks as well as minimise the risk of harming participants in any circumstances. The questionnaire was sent to the ethics committee, and approved after six weeks of review and amendments, the online questionnaire is attached in the appendix.

4.14 Summary

The research adopted the positivist philosophy and the deductive approach to evaluate the casual effect of the indirect impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the inclusion of the interactive moderated-mediation effect of Optimising Staff Capabilities (OSC). The nature of testing cause and effect between dependent (X) and independent variables (Y) as well as the large geographic area of the Gulf Cooperation Council (GCC) costs more time

and high expenditures. A quantitative method was adopted with an online questionnaire survey to collect data from the region. The research identified approximately 45,293 officially registered Information and Communication Technology (ICT) small and medium enterprises at the Gulf Cooperation Council (GCC) area and through various sources such as government databases as well as manufacturers' websites to locate partners. With the aim of increasing potential respondents, a sample was targeted with 824 information and communication technology SMEs, which represent the population of information technology SMEs in the GCC area. The pilot study involving 67 information and communication technology small and medium enterprises was conducted to test the visibility of the questionnaire. The results of the pilot study tested and presented a high reliability of questionnaire items. An online questionnaire survey as well as an extra 250 phone calls were made to remind participants to fulfil the online survey. Consequently, out of 824 respondents, 763 completed the survey questionnaire, and 75 were removed for answering the reverse question. Four were removed for having missing data (filled out by the wrong person, such as a receptionist). Data from 684 ICT SMEs were analysed through the research. The next chapter consists of data collection and detailed analysis.

Chapter Five

Data Analysis and Discussion

5.1 Introduction

The previous chapter discussed research philosophies and adopted the positivist philosophy as well as the deductive approach to test the developed hypothesis through the conceptual framework. A quantitative research method is selected via the online survey strategy. The online survey questionnaire was designed to collect data to test the impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the inclusion of the moderated-mediation effect of Optimizing Staff Capabilities (OSC). The sample of the online survey questionnaires was determined with 397 IT SMEs at the Gulf Cooperation Council (GCC) area; however, academics argued that a larger sample size provides a more reliable estimation of a phenomenon in quantitative studies as well as helps generalise the results to the larger population (Fugard & Potts, 2015; Glenn, 2002; Hill, 2010). Consequently, the questionnaire sent to a larger sample of 824 IT SMEs to increase the opportunity to obtain better results and generalise to the population. Responses were received from 763 IT SMEs from the GCC area across six countries (Saudi Arabia, Kuwait, United Arab Emirates, Oman, Qatar, and Bahrain). Academics posited that using Covariance-Base Structural Equation Modelling (CB-SEM) technique with AMOS statistical software provides the ability to examine complex relationships between observed and latent variables and offers a good prediction of the relationship between a causal indicator and its latent variables (Hair, Hult, Ringle, & Sarstedt, 2014; Kaplan, 2008; Kline, 2015). Therefore, the research adopted CB-SEM with AMOS software to analyse relationships between observed variables such as using ESM platforms and unobserved variables (latent variables) like Staff Knowledge Sharing (SKS) and Staff Engagement (SE) in the conceptual framework. DeSimone and Harms (2015) claimed that a data screening process must be conducted to ensure data validity and reliability for statistical analysis (DeSimone, Harms, & DeSimone, 2015, p.180). This chapter consists of data screening through SPSS software to check for missing data and delete respondents with inappropriate answers such as answering all questions in the same scale without carefully reading the questions (reverse question) (Ong & Puteh, 2017, p.111). A comprehensive data analysis and tables are included in the chapter, and a discussion of results is presented to test the hypotheses.

5.2 Pilot Study

The pilot study provides preliminary evidence on the feasibility of the questionnaire and the steps that need to be taken to modify and improve scales (Bassell et al., 2019; Riff et al., 2019; Tseng, 2017). Connelly et al. (2008) defined a pilot study as the process of identifying inappropriate items that may affect validity as well as ensure the reliability of items (Connelly, 2008, p.411). Academics posited that highly reliable scale items ensure internal consistency of the questionnaire across items (Haradhan, 2017; Razak et al., 2016; Wong & Cooper, 2017). Scholars suggested that a sufficient sample of the pilot study must be at least 10% of the total population (Connelly, 2008; Glenn, 2002; Hill, 2010; Van Belle, 2011). The research aims to test the impact of using enterprise social media platforms on integrating inter-functional coordination through the inclusion of the moderated-mediation effect of optimising staff capabilities at information and communication technology SMEs in GCC countries (Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Kuwait, and Bahrain). The pilot study is conducted by sending the questionnaire to different employees at SMEs in GCC countries. Participant employees include technicians, sales, marketing, finance, human resources as well as owner-managers. The online survey questionnaire was designed and sent to 67 small and medium enterprises that related specifically to the information and communication technology sector at the GCC area (appendix). After one-week, short introductory phone calls were made to explain the nature of the survey as well as remind participants to complete the online survey. In total, 63 participants responded to the pilot study. Four participants were excluded for inappropriate answers (all answers were 'Totally Agree' include reverse questions), which means the respondents did not read the items of the questionnaire properly. And one company was excluded for using the wrong targeted employee (questionnaire filled out by a receptionist). Consequently, 58 companies properly responded at the pilot study stage. The feedback from the pilot study helps validate the questions as well as ensure reliability of scales to meet research objectives (Quinlan & Zikmund, 2015, p. 288).

5.3 Reliability Measurement

Academics consider reliability as the most desirable technical merit (Crowder, 2017; Razak et al., 2016; Wong & Cooper, 2017). Oluwatayo et al. (2012) defined reliability in quantitative research as "the measure to endure dependability, consistency, reproducibility or replicability of the results over time, over instruments and over groups of respondents" (Oluwatayo, 2012, p.395). Indeed, a reliable research needs to

demonstrate similar results when carried out in a similar context. Reliability in quantitative research is the measurement that ensures stability and consistency that could be replicable over time within a certain limit of random error (Belvedere, Grando, & Bielli, 2013; Bosch, Revilla, DeCastellarnau, & Weber, 2019; Haradhan, 2017). In other words, a reliable quantitative research needs a technique that demonstrates similar results when repeated at a similar context with a similar respondent group. Cohen, Manion, and Morrison (2008) demonstrated two types of reliability in quantitative research: stability and internal consistency (Cohen et al., 2008, p.132). Oluwatayo et al. (2012) defined stability as the ability to test-retest consistency over time within a similar sample and produce similar data. Scholars defined internal consistency (Cronbach's alpha α) as the measures the extent to which item responses correlate with each other. In other words, Cronbach's alpha estimates the proportion of variance that is systematic or consistent in a set of survey responses (Vaske, Beaman, & Sponarski, 2017, p.164).

However, scholars posited that the time between test and retest must not be so long to avoid changes in situational factors and affect the results of reliability (Crowder, 2017; Noble & Smith, 2015; Oluwatayo, 2012). Crowder et al. (2017) defined reliability of internal consistency as a test to provide inter-correlation between items and constructs (Crowder, 2017, p.188). Academics widely adopted Cronbach's alpha (α) to measure internal consistency (Bonett & Wright, 2015; Raykov & Marcoulides, 2019; Taber, 2018; Tavakol & Dennick, 2011). Oluwatayo et al. (2012) argued that testing the reliability of internal consistency (Cronbach's alpha α) is widely adopted in quantitative research specially in attitude scales such as the Likert scale because it provides the variance of each item from the mean when using scales of scoring points (Oluwatayo, 2012, p.398). Scholars claimed that a reliable research measurement scale must have a Cronbach's alpha (α) greater than 0.70 to ensure internal consistency between scale items (Cohen et al., 2008; Haradhan, 2017; Razak et al., 2016; Yusoff et al., 2014). In other words, a scale that has a Cronbach's alpha (α) greater than 0.70 ensures that questionnaire items have high reliability in representing the respondents' behaviour.

5.4 Validity Measurement

Wong and Cooper (2017) defined validity as a measurement scale that accurately represents the targeted phenomenon (Wong & Cooper, 2017, p.46). Scholar claimed that validity is not a measurement but evidence that the test results support the theory (Quinlan & Zikmund, 2015; Razak et al., 2016; Wong & Cooper,

2017). This research defined validity in quantitative studies as the appropriate questionnaire items in data collection that ensure the target phenomenon is measured. Academics identified different types of validity such as internal validity, external validity, criterion-related validity, content validity, systematic validity, and face validity (Cohen et al., 2008; Quinlan & Zikmund, 2015; Saunders et al., 2016). However, this research emphasised content validity, which is crucial for items that measure latent variables such as the capability of Staff Engagement (SE) as well as Staff Knowledge Sharing (SKS) (Alsharo, Gregg, & Ramirez, 2017; Shuck, Adelson, & Reio-Jr, 2017; Wang, Huang, Davison, & Yang, 2018). Oluwatayo et al. (2012) defined content validity as the 'instrument of measurement shows clearly evidence and comprehensive coverage of the area that it purports to cover' (Oluwatayo, 2012, p.393). Scholars argued that all three types of validity required experts' judgement of which helps improve items' content to appropriately represent the measured phenomenon. Consequently, this research ensures a validity check because items are adopted from previous studies, and the questionnaire is reviewed and amended by the academic supervisor. Moreover, an additional validity check was implemented through four managers who were asked about the content of items and level of complexity as well as their clarity and meaning. The results of the pilot study provided a high reliability of scale items as shown in the following table.

Table (5.1): Reliability Test of the Pilot Study

Construct	**Item Code**	**Number of Items**	**Cronbach's Alpha**	**Inter-item Correlation**
KSESMDIR	SKDIRRES	4	0.79	0.82
	SKDIRFLX		0.78	0.80
	SKDIREFF		0.88	0.90
	SKDIRCAP		0.79	0.83
SEESMDIR	SEDIRRES	4	0.70	0.77
	SEDIRFLX		0.79	0.82
	SEDIREFF		0.72	0.75
	SEDIRCAP		0.71	0.73
MODESMSKS	KSRESESM	4	0.84	0.89

	KSFLXESM		0.88	0.93
	KSEFFESM		0.85	0.90
	KSCAPESM		0.90	0.91
MODESMSE	SERESESM	4	0.80	0.86
	SEFLXESM		0.91	0.95
	SEEFFESM		0.87	0.89
	SECAPESM		0.84	0.88
OSCMED	OSCMED	1	0.89	0.92

As presented in the above table, all item constructs have Cronbach's alpha > 0.70, which means acceptable questionnaire items are used to test the impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the inclusion of moderated-mediation effect of Optimizing Staff Capabilities (OSC).

5.5 Descriptive Analysis

The research submitted online survey questionnaires to 824 information and communication technology SMEs in GCC area (Saudi Arabia, Oman, Kuwait, United Arab Emirates, Qatar, and Bahrain). A seven-point Likert rating scale was adopted in this study (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree). In addition, 250 phone calls were made to remind participants about the survey. The total respondents were 763 from ICT SMEs in the GCC area. The collected data went through a screening process, which includes deleting six companies because the questionnaire was answered by inappropriate staff (e.g. receptionist). In addition, 73 respondents were removed for inappropriate answers to questionnaire items (answered all items at the same point scale including the reverse question). Data analysis consists of the remaining 684 information and communication technology SMEs that responded adequately to the research survey. The following table represents the initial descriptive analysis about respondents, such as frequency per country and staff position as well as the mean and mode of the respondents such as country, gender, position, and age of business.

Table (5.2): Frequency of Respondents per Country

Country	Frequency	Percent
Saudi Arabia	230	33.6%
United Arab Emirates	206	30.1%
Qatar	84	12.3%
Kuwait	67	9.8%
Bahrain	52	7.6%
Oman	40	5.8%
Total	684	100%

Table (5.3): Frequency of Respondents per Staff Position

Staff Position	Frequency	Percent
Sales & Marketing	317	46.3%
Technical Support	137	20.0%
Owner-Director	100	14.6%
Finance	86	12.6%
Human Resources	44	6.4%
Total	684	100%

Table (5.4): Frequency of Respondents per Gender

Gender	Frequency	Percent
Male	655	95.8%
Female	29	4.2%
Total	684	100%

As illustrated in the above table, half of the respondents were represented by sales and marketing staff (46.3%) followed by technical support staff (20%), owners or directors of SMEs (14.6%), and human resources staff (6.4%). Over 60% of respondents were from Saudi Arabia and the United Arab Emirates Table (5.2). Interestingly, female respondents represent only 4.2% as illustrated in Table (5.4). The survey questionnaire consists of one question about how often staff use ESM platforms inside the company, which was rated through a seven-point Likert scale (1 = Never, 2 = Rarely, 3 = Sometimes but infrequent, 4 = Neutral, 5 = Sometimes, 6 = Often, 7 = Always). The following table illustrates the responses to the above question.

Table (5.5): Average Usage of ESM Platforms Inside the Company

ESM Platform	Mean	Std. Deviation
Social Network Sites (SNS)	4.82	1.779
Blogging	3.75	1.572
Content Communities	5.17	1.343
Web-based Applications	5.39	1.328
Messaging Applications	6.07	0.672

The results illustrated lower values of the standard deviation and indicated that the data are less spread out from the mean (Wan, Wang, Liu, & Tong, 2014, p.135). Mean values indicated how often respondents are using enterprise social media platforms inside information communication technology SMEs in GCC countries. Messaging applications such as WhatsApp and Skype were used often by respondents (μ = 6.07), followed by web-based applications such as Google Docs and Dropbox (μ = 5.39), as well as content communities such as YouTube and SlideShare (μ = 5.17). However, IT Small and Medium Enterprises (SMEs) in the Gulf Cooperation Council (GCC) area infrequently use blogging platforms such as WordPress and Blogger (μ = 3.75).

Table (5.6): Frequencies of Using ESM platforms

ESM Platform	Messaging Applications	Web-based Applications	Social Network Sites	Content Communities	Blogging
Never	1%	3.2%	6.4%	3.4%	9.5%
Rarely	3%	2.9%	10.7%	3.5%	12.4%
Sometimes but infrequent	1.7%	3.1%	7.7%	4.8%	24.6%
Neutral	7%	5.7%	6.1%	6.3%	17.7%
Sometimes	11.3%	24.4%	18.4%	32.6%	21.1%
Often	64.9%	49.3%	39.9%	42.1%	12.4%
Always	22.4%	11.4%	10.7%	7.3%	2.3%
Total	100%	100%	100%	100%	100%

As illustrated in the above table, 87.3% of respondents often use messaging applications such as Skype and WhatsApp (64.9% often and 22.4% always), and 60.7% use web-based applications such as Dropbox and Google Docs (49.3% often and 11.4% always). The frequency of social network sites such as Facebook and Zoho is 50.6% (39.9% often and 10.7% always). In addition, 49.4% of respondents frequently use content communities such as YouTube and SlideShare (42.1% often and 7.3% always). The least frequently used was blogging sites such as Blogger and WordPress at 14.7% (12.4% often and 2.3% always)

5.6 The Kaiser–Meyer–Olkin (KMO) and Bartlett's Test

Academics suggested measuring sampling adequacy through the Kaiser–Meyer–Olkin (KMO) test to assess whether high dimensionality occurs in the collected data, which reduces the significance of the factor analysis (Daoud, 2017; Iacobucci et al., 2017; Kalnins, 2018). In other words, KMO analysis helps identify dimensionality in the data and reduces it in obtain useful data for analysis (Lin, Zhu, Zheng, Dou, & Zhou, 2019, p.3025). Klanins et al. (2018) claimed that KMO value closer to 1.0 means research data has low

dimensionality and thus appropriate for factor analysis (Kalnins, 2018, p.2312). In addition, scholars recommended Bartlett's test of sphericity to compare the correlation matrix to identity unrelated variables (Napitupulu, Kadar, & Jati, 2017, p.698). Academics posited that the significant value of Bartlett's test must be less than 0.05, which indicates no redundancy between variables and that data is adequate for factor analysis (Lin et al., 2019; Napitupulu et al., 2017; Vitasari, Gustopo, & Fathoni, 2018).

Table (5.7): KMO and Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy		0.894
Bartlett's Test of Sphericity	Approx. Chi-Square	28.78
	Df	55
	Sig.	.021

The table above presents a KMO value near 1.0, which means the research data have no dimensionality, and Bartlett's test value is 0.21 < 0.05, which indicates no redundancy between variables. Consequently, the data are adequate for Confirmatory Factor Analysis (CFA) technique within the Covariance-Base Structural Equation Modelling (CB-SEM).

5.7 Structural Equation Modelling (SEM)

Mueller and Hancock (2018) discussed the magnitude of SEM to test the hypotheses and identify relationships between the independent variable and the dependent variable with the inclusion of the latent variables and determine relationships among observable variables with latent variables (Mueller & Hancock, 2018, p.450). Hair, Gabriel, and Patet (2014) claimed that marketing discipline in particular requires assessment of multiple and complex relationships between latent variables and observed variables and recommended SEM because it has a vital advantage in investigating and evaluating complex relationships between latent and observed variables (Hair, 2014, p.45). Scholars claimed that SEM analysis can be used in complex frameworks that include moderated-mediation effects (Amoako-Gyampah et al., 2019; Feng, Zhou, et al., 2019). Feng et al. (2019) found that SEM has high efficiency in testing the interaction of the moderation effect of dynamic capabilities such as knowledge sharing with the performance or organisations (Feng, Zhou, et al., 2019, p.734). Mekalef et al. (2019) claimed that using SEM in data analysis is more appropriate in testing the mediation effect of dynamic capabilities such as employees' engagement between using innovation tools and employee performance at firms (Mikalef et al., 2019, p.298). Scholars identified

two main types of SEM techniques: Covariance-Based and Partial Least Squares (PLS-SEM) (Hair, 2014; Hair et al., 2017; Lowry & Gaskin, 2014). Hair et al. (2011) recommended Covariance-Based Structural Equation Modelling (CB-SEM) when the research goal is to test hypothesis to confirm or test the theory (Hair, Ringle, & Sarstedt, 2011, p.144). Blunch (2012) concluded that CB-SEM provides an accurate test of the relationships between latent and observed variables (Blunch, 2012, p.146). Consequently, this research adopted CB-SEM to test the interaction moderators' effect as latent variables with the observed variables in the conceptual framework such as capability of Staff Knowledge Sharing (SKS) and Staff Engagement (SE) with Enterprise Social Media (ESM) platforms and mediation impact of Optimizing Staff Capabilities (OSC) to Integrate Inter-Functional Coordination (IIFC). In other words, the research adopted CB-SEM in data analysis because it is more appropriate and efficient in testing the interaction of the moderated-mediation effect of latent variables (SKS, SE) on the relationship between using ESM platforms and IIFC. Hair et al. (2014) divided the Covariance-Base Structural Equation Modelling (CB-SEM) procedure into two steps: Confirmatory Factor Analysis (CFA) to test validity and reliability (Hair, 2014, p.49).

5.7.1 Confirmatory Factor Analysis (CFA)

Academics identified the CFA process as the test to ensure whether measures of the constructs are consistent with the researcher's understanding of the nature of the construct (Husain, Mustapha, Malik, & Mokhtar, 2014, p.8). In other words, the objective of CFA is to test if the data set fits the hypothesised model, which is based on theory and literature. Academics posited that the model of CFA measurement consists of a number of factor leadings that are standardised to zero and represent standardised regression weights or coefficient beta (β), which explains whether there is a negative or positive correlation between independent and dependent variables (observed and latent) (Hair, 2014; Mia et al., 2019; Ong & Puteh, 2017). Scholars suggested two main approaches to assess the model measurement of CFA (Mia et al., 2019; Ong & Puteh, 2017; Rahi & Ghani, 2018) as follows:

i. Testing for construct validity and reliability, which consists of tests for convergent validity, composite reliability, and discriminant validity
ii. Testing for goodness of fit (GOF) indices, and which consists

Academics suggested conducting both approaches to ensure that the items and constructs have validity and reliability and fit the developed hypnotised model (Blunch, 2012; Hair, 2014; Mia et al., 2019; Rahi & Ghani, 2018).

i. Construct Validity, Discriminant Validity, and Composite Reliability

Quinlan et al. (2019) defined reliability as the measurement of internal consistency of items scale (Quinlan & Zikmund, 2015, p.155) while Razak et al. (2016) defined validity as the accuracy of the measurement to represent the real phenomenon (Razak et al., 2016, p.523). In other words, validity represents the accuracy of items to measure a real phenomenon in the same conditions while reliability is the measurement of consistency between items and constructs in the model. Academics emphasised two types of validity test, which are convergent validity and discriminant validity. Convergent validity is described as theoretically related constructs that should be highly correlated to each other in the measurement (Quinlan & Zikmund, 2015, p.132). Academics claimed that convergent validity represents two indicators in AMOS: average variance extracted (AVE), and factor loading (Henseler et al., 2014; Mia et al., 2019; Ong & Puteh, 2017; Rahi & Ghani, 2018). Fornell and Larcker (1981) defined AVE as “the percentage of variance at the constructs that is related to the amount of error in the measurement items to assess convergent validity” (Fornell & Larcker, 1981, p.40). Blunch (2012) defined factor loading as the percentage of the correlation between items and constructs (Blunch, 2012, p.204). Academics suggested the AVE value must be greater than .50, which means the construct explains more than half of the variance in relation to the amount of variance due to measurement error, and the value of factor loading must be greater (> .70), which presents a sufficient correlation with other items (Daowd, 2016; Hair, 2014; Mia et al., 2019; Ong & Puteh, 2017; Rahi & Ghani, 2018). Hair et al. (2014) defined discriminant validity as the test to ensure that unrelated items must remain uncorrelated (Hair et al., 2014, p.176). Academics posited that the value of discriminant validity is calculated by comparing AVE values with the standardised square coefficient beta (β) value of the same two constructs. Academics argued that the value of discriminant validity is considered significant when the AVE value is greater than the standardised square coefficient beta (β) value of the same construct (Blunch, 2012; Daowd, 2016; Rahi & Ghani, 2018). In addition, academics defined composite reliability (CR) as a measure of internal consistency of the constructs (Bian, 2011; Daowd, 2016; Hair, 2014; Rahi & Ghani, 2018). Netemeyer, Bearden, and Sharma (2003) concluded that the CR in SEM is the same value of

Cronbach's alpha (α) in regression analysis (Netemeyer, Bearden, & Sharma, 2003, p.131). Scholars claimed that CR is considered an appropriate criteria to measure internal consistency (Daowd, 2016; Mia et al., 2019; Rahi & Ghani, 2018). Hair et al. (2014) posits that the CR value must be greater than .70 to represent high internal consistency of items in AMOS (Hair, 2014, p.51). Academics acknowledged and implemented the following two formulas to calculate CR and AVE through SPSS AMOS statistical software and as follows (Daowd, 2016; García-Santillán, 2017; Mia et al., 2019; Rahi & Ghani, 2018):

$$AVE = \frac{\sum \lambda_i^2}{\sum \lambda_i^2 + \sum_i \mathrm{var}(\varepsilon_i)}$$

$$CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + (\sum \epsilon_i)}$$

where λ is the factor loading (standardised regression weights)

i is the number of items

δ represents the error variance term for each latent construct

Based on previous studies that adopted the above formulas to calculate AVE, CR, and factor loading. Consequently, this research used the above formulas to test for convergent validity by assessing AVE as well as evaluate internal consistency (reliability) by conducting a CR test. Data analysis is discussed in the following section.

ii. Goodness of Fit Indices (GFI)

The model consists of four constructs with four items each as well as a construct including one item. The constructs are direct SKS (SKESMDIR), direct SE (SEESMDIR), moderate SKS (MODESMSKS), and moderate SE (MODESMSE).

Mia et al. (2019) posited that GFI are used in SEM with AMOS to evaluate the fit of the data to the model (Mia et al., 2019, p.58). In other words, the GFI is to assess whether the sample data actually represents the data of the population. Academics claimed to use the following indices to evaluate goodness of fit of the model (Blunch, 2012; Hair, 2014; Mia et al., 2019; Rahi & Ghani, 2018):

a. Indices to evaluate the direction, strength, and magnitude of the corresponding relationships, such as *p*-value, chi square, and estimated standardised regression coefficient beta (β).

b. Model discrepancy indices, such as relative chi square (CMIN/Df).

c. Indices to measure the model's statistical fit, such as the comparative fit index (CFI) and root mean square error of approximation (RMSEA).

This research emphasised on analysing each path's effects between latent and observed variables and according to the following criteria:

i. *p*-value: academics defined *p*-value as the probability that the null hypothesis is to be rejected (Li, Yeung, Cherny, & Sham, 2012, p.749). In other words, a significant *p*-value indicates a strong evidence to reject the null hypothesis. Mia, Majri, and Rahman (2019) claimed that a low *p-value* represents a large effectiveness of the results and indicates that results have significant theoretical and practical magnitude (Mia et al., 2019, p.59). Scholars claimed that a significant p-value must be less than 0.05 to indicate significance of the results (Hair, 2014; Li et al., 2012; Mia et al., 2019; Ong & Puteh, 2017). In other words, a significant p-value less than 0.05 means the probability of rejecting the null hypothesis is high based on the obtained results.

ii. Relative chi square (X^2/df): Satorra and Bentler (2010) claimed that the relative chi square value is important to test the normality of variables' distribution in the model (Satorra & Bentler, 2010, p.246). Mia et al. (2019) claimed that the relative chi square in AMOS (CMIN/DF) is obtained by dividing the value of the chi square by the degrees of freedom (Mia et al., 2019, p.60). Academics posited that the accepted value range must be less than 5 or ideally less than 3 to confirm that the model has no discrepancy (CMIN/DF<5) (Lomax & Schumacker, 2004; Mia et al., 2019; Satorra & Bentler, 2010; Sharpe, 2015).

ii. Root mean square error of approximation (RMSEA): Blunch (2012) defined the RMSEA model fit indicator as “the value that represents the square root of the average or mean of the covariance residuals; the differences between observed and predicted covariance matrix. Zero value represents a perfect fit of the model, meanwhile, the value must be less than (RMSEA<0.08) to confirm model fit” (Blunch, 2012, p.88).

iii. Comparative fit index (CFI): Mia et al. (2019) defined CFI as “the proportion of variance accounted for by the estimated population covariance to endure the fit of AMOS statistical model” (Mia et al., 2019, p.60). Scholars claimed that a good model fit value must exceed 0.90, and a zero value represents a lack of fit in the AMOS statistical model.

5.8 Structural Equation Modelling (SEM) using AMOS Statistical Software

Software is widely accepted by scholars when the objective is to test and confirm or reject hypotheses to measure the relationship between the latent variable and the observable variable such as using ESM platforms (Ong & Puteh, 2017, p.21). Bian (2011) posited that using SEM through AMOS helps test complex multiple interactions between latent and observed variables (Bian, 2011, p.111). Academics claimed that using AMOS to conduct SEM analysis helps identify the path effect between variables and interactions among variables such as observed and latent ones (Blunch, 2012; García-Santillán, 2017; Ping, 2019; Schumacker, 2017). Scholars argued that AMOS software is highly effective for testing robustness and estimate formative measurement models in high accuracy at quantitative research (Chiao et al., 2018; Henseler et al., 2014; Ong & Puteh, 2017). AMOS is appropriate to be used for large sample sizes and is compatible with different scale types such as Likert and metric scales (Hair et al., 2017, p.136). Consequently, the study adopted AMOS to implement CB-SEM to test the relationship between the independent variable (X) and the dependent variable (Y) though the inclusion effect of a moderated-mediation variable as discussed in the previous chapter. The first stage consisted of data screening to reduce errors and avoid missing data and the validity and reliability test, which includes consistency of measurements. The second stage consists of using CB-SEM to test the validity and reliability of hypotheses and whether to accept or reject them.

5.9 Hypotheses Testing

The research aims to test the impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the indirect mediation effect of Optimizing Staff Capabilities (OSC) depending on the interaction of the moderators' effect of Staff Knowledge Sharing (SKS) and Staff Engagement (SE). In other words, it tests the inclusion of the indirect moderated-mediation effect of OSC with the aim of IIFC by using ESM platforms. Hair et al. (2014) posited that marketing literature has widely accepted the use of CB-SEM to test and confirm or reject hypotheses (Hair, 2014, p.55). Academics concluded that CB-SEM is appropriate for research that measures the relationship between two correlated latent variables (Hair, 2014; Mia et al., 2019; Rahi & Ghani, 2018). Engel, Klien, and Moosbrugger (2017) found that CB-SEM is efficient in testing the relationship between latent and observed variables (Schermelleh-Engel et al., 2017, p. 210). Ong and Puteh (2017) claimed that using AMOS as a statistical analysis software for CB-SEM to analyse and understand the cause-and-effect relationship between dependent and independent variables (Ong & Puteh, 2017, p.24). Academics claimed that AMOS provides detailed explanations for complex numerical results in testing relationships between latent and observed variables (Hair, 2014; Mia et al., 2019; Murtagh & Heck, 2012; Ong & Puteh, 2017).

Scholars argued that AMOS software is highly effective for robustness and estimating formative measurement models with high accuracy (Chiao et al., 2018; Henseler et al., 2014; Ong & Puteh, 2017). As discussed previously, the research adopted specific tests to evaluate validity, reliability, and indices to ensure the model has statistical fit to reject the null hypothesis. Academics acknowledged that the composite reliability (CR) in AMOS is the same value of reliability as Cronbach's alpha (α), which must be greater than .70 to indicate a highly reliable mode with acceptable internal consistency between items and constructs (Daowd, 2016; Netemeyer et al., 2003; Ong & Puteh, 2017; Rahi & Ghani, 2018). Academics claimed that the accepted value of average variance extracted (AVE) must be greater than .50, which means that the model has acceptable convergent validity. In other words, high values of composite reliability (CR > .70) and AVE (> .50) indicate that all items have good internal consistency with each other, and the items are appropriate in measuring the latent variables in the framework (García-Santillán, 2017; Mia et al., 2019; Netemeyer et al., 2003; Rahi & Ghani, 2018). In addition, the research focuses on GFI to ensure that the test model has a high probability of rejecting the null hypothesis. Academics posited that the values of the

following indices must meet statistical criteria to ensure that the model has a goodness of fit such as the comparative fit index (CFI > .90), the root mean square error of approximation (RMSEA < .080), and normed chi square (CMIN/DF < 5) (Daowd, 2016; Hair, 2014; Mia et al., 2019; Ong & Puteh, 2017; Rahi & Ghani, 2018). In other words, the research focuses on these indices, which indicate that the model has high probability to reject the null hypothesis. As proposed in Chapter 3, the research aims to test the impact of using ESM platforms to integrate IFC through the inclusion of the indirect moderated-mediation effect of OSC. Muller et al. (2015) suggested first the direct moderator's effect on the overall direct effect of the independent variable (X) on the dependent variable (Y) (Muller et al., 2005, p.854). The following hypotheses (H1a, H1b) aim to test the individual direct moderator's effect without the interaction of the moderated-mediation effect. In other words, hypothesis 1 suggests that SE and SKS have no interactions between moderators while it has a direct individual moderator's interaction with ESM platforms to integrate IFC. Muller et al. (2005) claimed that a certain individual direct moderator's effect must occur to further test the moderated-mediation effect; otherwise, if the moderator has no effect on the direct impact of the independent variable (X) on the dependent variable (Y), this means that the level of the moderated-mediation effect cannot be tested in the proposed framework (Muller et al., 2005, p.854). Consequently, the following hypotheses are formulated.

Hypothesis (H1a): The capability of SKS has a certain positive effect on the direct impact of using ESM platforms to integrate IFC.

Academics demonstrated the direct moderator effect of Staff Knowledge Sharing (SKS) on ESM platforms, which helps improve business performance (Bakar et al., 2018; Davison et al., 2019; Lu & Pan, 2019). Lu and Pan (2019) posited that SKS through ESM platforms positively moderates the relationship between employees' information-seeking and job performance behaviours in IT firms (Lu & Pan, 2019, p.540). Muller et al. (2005) suggested that a certain effect level of a direct moderator must occur on the overall direct impact of the independent variable (X) on the dependent variable (Y) in the conceptual framework (Muller et al., 2005, p.854). In other words, to assess that the capability of SKS has a certain significant direct positive effect on the overall direct impact of using ESM platform to integrate IFC. If a significant direct moderator effect occurs, it means that the null hypothesis is rejected. The table below represents the statistical analysis for hypothesis (H1a).

Table (5.8): Statistical Analysis for Testing the Direct Impact of SKS on the Overall Direct Impact of ESM Platforms on IIFC

CR = .770 **AVE = .488** **Chi Square = 17.310** **CMIN/DF = 2.471** **Sample Size = 684**	**Factor Loadings (*β*)**	***p*-value**
IIFC<--ESM	.328	.027
IIFC<---SKESMDIR	.252	.052
KSDIRCAP <---SKESMDIR	.269	.047
KSDIREFF <---SKESMDIR	.487	.044
KSDIRFLX <---SKESMDIR	.542	.020
KSDIRRES <--- SKESMDIR	.457	.021

As discussed previously, the above table illustrates a CR value that indicates all items have a statistically significant internal consistency with each other (CR > .77). The AVE value means that the items are statistically significant in measuring the latent variables, which represent acceptable convergent validity in the framework (AVE > .488). Academics posited that the factor loadings (*β*) indicate the sign and the magnitude of the corresponding relationship between the items and constructs, and the *p*-value shows the probability of rejecting the null hypothesis ($p < .05$) (Mia et al., 2019; Ong & Puteh, 2017; Rahi & Ghani, 2018). In addition, based on the values of the factor loadings (*β*) and the *p*-values ($p < .05$) in the above table, there is an average level of positive relationships between the direct moderator's impact of SKS on the overall direct process between using ESM platforms and IIFC (IIFC <--- SKESMDIR*, β = .252, p-value < 0.05)*. In other words, the probability of rejecting the null hypothesis is positively significant.

Moreover, as the reflective indicators illustrated, all items have a positive relationship effect on measuring the construct of direct SKS; for example, the flexibility of direct SKS has the highest positive significant importance on reflecting the effect of direct SKS (KSDIRFLX <--- KSESMDIR, $\beta = .542$, p-value < 0.05). In addition, the efficiency of direct SKS has a positive significant importance on reflecting the effect of direct SKS (KSDIREFF <--- KSESMDIR, $\beta = .487$, p-value < 0.05). The results indicated that the capacity of direct SKS has the least positive significant importance on reflecting the effect of the direct impact of using enterprise social media platforms on direct staff knowledge sharing (KSDIRCAP <--- KSESMDIR, $\beta = .269$, p-value < 0.05). Scholars suggested that research must perform additional tests such as the CMIN/DF to test model discrepancy and GFI to test a model's statistical fit (Hair, 2014; Mia et al., 2019; Rahi & Ghani, 2018; Satorra & Bentler, 2010). Academics posited that a significant SEM test with AMOS must present significant values with no discrepancy of indices such as the normed chi square (CMIN/DF < 5), comparative fit index (CFI > .90), and the root mean square error of approximation (RMSEA < 0.08) (Blunch, 2012; Mia et al., 2019; Ong & Puteh, 2017). Consequently, the study conducted the GFI test to ensure statistical fit and no discrepancy as presented in the table below:

Table (5.9): Goodness of Fit Indices (GFI)

	CMIN/DF	**CFI**	**RMSEA**
Default model	2.471	.986	.046

The above table shows a significant statistical fit with no discrepancy of the model through the direct moderation effect of the capability of SKS on the overall direct relationship between using ESM platforms and IIFC (CMIN/DF = 2.471, CFI = .986, RMSEA = .046). It means that the model is statistically significant to reject the null hypothesis. The next step is testing the direct moderator's effect of Staff Engagement (SE) on the overall direct impact of using ESM platforms to achieve IIFC. Consequently, the second sub-hypothesis is formulated as follows.

Hypothesis (H1b): The capability of SE has a certain positive effect on the direct impact of using ESM platforms to integrate IFC.

Guesalaga (2016) claimed that the engagement capabilities of sales teams has a strong effect on the relationship between using ESM platforms and employees' performance (Guesalaga, 2016, p.77). Whitten (2018) proposed that managers' engagement positively moderates the influence of social media usage on managing interdepartmental collaboration (Whitten, 2018, p.133). This hypothesis aims to test the direct effect of the second moderator (Mo2) on the overall direct impact of the independent variable (X) on the dependent variable (Y). In other words, the purpose of the hypothesis is to ensure that the capability of Staff Engagement (SE) has a certain direct significant positive moderator effect on the overall direct impact of using enterprise social media platforms on integrating inter-functional coordination. If a significant direct moderator effect occurs on the overall direct relationship between ESM platforms and IIFC, it means that the null hypothesis is rejected. Muller et al. (2005) suggested that there must be a certain significant direct moderation effect that occurs on the overall direct impact of the independent variable on the dependent variable in the conceptual framework (Muller et al., 2005, p.854). The table below represents the statistical analysis for hypothesis (H1b).

Table (5.10): Statistical Analysis for Testing the Direct Impact of SE on the Overall Direct Impact of ESM Platforms on IIFC

CR = .696 **AVE = .485** **Chi Square = 27.572** **CMIN/DF = 3.446** **Sample Size = 684**	**Factor Loadings** **(*β*)**	***p*-value**
IIFC<---ESM	.328	.038
IIFC<--- SEESMDIR	.167	.049
SEDIRCAP <--- SEESMDIR	.414	.030
SEDIREFF<--- SEESMDIR	.280	.041

SEDIRFLX <--- SEESMDIR	.313	.046
SEDIRRES <--- SEESMDIR	.343	.043

The above table illustrates the CR value that indicates all items have a statistically significant internal consistency with each other (CR > .696). The value of AVE means that the items are statistically significant in measuring the latent variables and represent acceptable convergent validity in the framework (AVE > .485). Scholars claimed that the factor loadings (*β*) indicate the sign and the magnitude of the corresponding relationship between the items and constructs, and the *p*-value shows the probability of rejecting the null hypothesis ($p < .05$) (Mia et al., 2019; Ong & Puteh, 2017; Rahi & Ghani, 2018). Based on the values of the factor loadings (*β*) and the *p*-values ($p < .05$) in the above table, it is concluded that an average level of positive relationship exists between the direct moderator impact of SE on the overall direct process between using ESM platforms and IIFC (IIFC <--- SEESMDIR*, β = .167, p-value < 0.05)*. In other words, the probability of rejecting the null hypothesis is significant. Moreover, as the reflective indicators illustrated that all items have a positive relationship effect on measuring the construct of direct staff engagement, for example, the capacity of direct SE has the highest positive significant importance in reflecting the effect of direct staff engagement on the direct impact of using enterprise social media platforms to integrate-inter-functional coordination (SEDIRCAP <--- SEESMDIR, *β = .414, p*-value < 0.05). In addition, the responsiveness of direct SE has a positive significant importance in reflecting the effect of direct SE on the direct relationship between using ESM platforms and IIFC (SEDIRRES <--- SEESMDIR, *β = .333, p*-value < 0.05). The results indicated that the efficiency of direct staff engagement has the least positive significant importance on reflecting the effect of direct SE on the direct impact of using enterprise social media platforms to integrate inter-functional coordination (SEDIREFF <--- SEESMDIR, *β = .280, p*-value < 0.05). Academics posited that a significant SEM test with AMOS must present significant values of no-discrepancy relative chi square (CMIN/DF < 5) and the CFI must be greater than .90, and the model has no discrepancy when RMSEA < 0.08 (Blunch, 2012; Mia et al., 2019; Ong & Puteh, 2017). The research conducted the GFI test to ensure a statistical fit with the model as presented in the table below:

Table (5.11): Goodness of Fit Indices (GFI)

	CMIN/DF	CFI	RMSEA
Default model	3.446	.931	. 052

Consequently, the above table shows a significant statistical fit with no discrepancy of the model through the direct moderation effect of the capability of SE on the overall direct relationship between using ESM platforms and IIFC (CMIN/DF = 3.446, CFI = .931, RMSEA = .052). It means that the model is statistically significant to reject the null hypothesis. As a next step, Muller et al. (2005) suggested evaluating the interaction effect of moderators (Mo1, Mo2) with the independent variable (x) on the mediation variable (Me) as well as testing the mediation effect of (Me) on dependent variable (Y) (interaction effect of paths a and b on Y) (Muller et al., 2005, p.855). In other words, testing the moderators' interaction effect between using ESM platforms with the capabilities of SKS and SE on OSC includes the mediation impact of OSC to integrate IFC. However, as discussed in Chapter 3, Dawson (2014) suggested a method to calculate the multi-moderators' interaction effect with the independent variable where both moderators correlate or depend on each other (Dawson, 2014, p.5). Consequently, the following hypothesis aims to test the moderated-mediation effect of staff capabilities (SC).

Hypothesis (H2): The positive interactive effect of using ESM platforms with SC leads to OSC.

Academics of strategic management claimed that staff capabilities have a vital moderated and mediation effect on the impact of using ESM platforms to improve business performance (Leppälä & Espinosa, 2020; Lu & Pan, 2019; N. Rahman, 2020). De Zubielqui and Jones (2019) argued that using enterprise social media platforms positively improves innovation adoption among employees through the moderated-mediation effect of managers' engagement (de Zubielqui & Jones, 2019, p.12). Cheng et al. (2020) claimed that Staff Engagement (SE) has a vital mediation effect on the relationship between using enterprise social media platform and employees' innovation performance (Cheng et al., 2020, p.8). Jahanzeb et al. (2019) argued that knowledge sharing of senior staff has a moderated-meditation effect on the impact of enterprise social media platforms and staff creativity (Jahanzeb et al., 2019, p.815). Cai et al. (2018) found that the capability of SE has a strong moderated-mediation effect on the relationship between using ESM platforms

and staff agility at work (Cai et al., 2018, p.63). The hypothesis aims to test the multi-moderator's interaction effect (Mo1, Mo2) with the independent variable (X) on the dependent variable (Y). As discussed in Chapter 3, Dawson (2014) suggested a process to test the multi-interactions effect between two correlated moderators with the independent variable (Dawson, 2014, p.5). The process consists of testing the interaction effect of each moderator (Mo1, Mo2) with the independent variable (X) and the combination of three interactions (X, Mo1, Mo2), which include a two-way interaction effect between both correlated moderators (Mo1, Mo2) (Dawson, 2014, p.6). Therefore, the following step consists of testing hypothesis 2 by evaluating the interaction effect of each moderator Staff Knowledge Sharing (SKS) and Staff Engagement (SE) with the independent variable (ESM) and the combination of three interactions (ESM, SKS, SE), which include a two-way interaction effect between both correlated moderators (SKS, SE) (SKS → ESM, SE → ESM, SKS ←→ SE → ESM). The research adopted this process to test the multi-moderators' interactions effect through a combination of the three variables' interactions (ESM, SKS, SE) that impacts the dependent variable (OSC). The following statistical analysis represents the multi-moderators' interactions (SKS, SE) with the independent variable (ESM). The following table illustrates the results of the interactions between three variables (ESM, SKS, SE). The following table illustrates the analysis of a multi moderatos' interactions (SKS, SE) with independent variable (ESM) on dependent variable (OSC).

Table (5.12): Test of Multi-moderators' Interaction (SKS, SE) with Independent Variable (ESM)

CR = .916 **AVE = .947** **Chi Square = 29.529** **CMIN/DF = 4.218** **Sample Size = 684**	**Factor Loadings** **(*β*)**	***p*-value**
KSCAPESM <--- MODESMSKS	.917	.022
KSEFFESM <--- MODESMSKS	.961	.015
KSFLXESM <--- MODESMSKS	.937	.020

KSRESESM <--- MODESMSKS	.968	.012
SERESESM <--- MODESMSE	.952	.012
SEFLXESM <--- MODESMSE	.920	.022
SEEFFESM <--- MODESMSE	.955	.019
SECAPESM <--- MODESMSE	.754	.042
ESM<--- MODESMSKS	.824	.026
ESM<--- MODESMSE	.731	.037
OSCMED<---ESM	.812	.029

The above table illustrates a CR value that indicates all items have a high statistically significant internal consistency with each other (CR = .916, CR > .90). The value of AVE means that the items are statistically significant in measuring the latent variables and represent acceptable convergent validity in the framework (AVE = .947, AVE > .50). Interestingly, it is concluded that a significant level of positive interaction relationships occur between the three variables' interactions of SKS and SE with ESM platforms. For example, a positive significant interaction relationship occurs between SKS and ESM through the multi-interaction process (ESM (ESM <--- MODESMSKS*, β = .824, p-value = .026 < .05)* while SE shows a significant positive interaction relationship with ESM platforms through the multi-interaction process (ESM <--- MODESMSE*, β = .731, p-value = .037 < .05)*. Consequently, a multi-interaction effect of the three variables (SKS, SE, ESM) has a statistically significant and positive effect on OSC (OSCMED <--- ESM*, CR = .916, β = .812, p-value = .029 < .05)*. A significant *p-value* indicates a high probability of rejecting the null hypothesis. Moreover, the reflective indicators illustrate that all items have positive relationships that influence measuring the construct of the moderator as SKS; for example, the efficiency of SKS has a high positive significant importance on reflecting its effect on using ESM platforms (KSEFFESM <--- MODESMSKS*, β = .961, p*-value = .020 < 0.05).

In addition, responsiveness of SE has the highest positive significant importance on reflecting the effect of SE on using ESM platforms (SERESESM <--- MODESMSE, *β = .952, p*-value = .012 < 0.05). The results indicate that the capacity of SE has the least positive significant importance on reflecting the effect of SE on using ESM platforms (SECAPESM <--- MODESMSE, *β = .754, p*-value = .033 < 0.05). Academics posit that a significant SEM test through AMOS must present significant values of no-discrepancy relative chi square (CMIN/DF < 5) and the GFI value must be > .90, and the model has no discrepancy when RMSEA < 0.08) (Blunch, 2012; Mia et al., 2019; Ong & Puteh, 2017). The study conducted the GFI test to ensure a statistical fit with the model as presented in the below table.

Table (5.13): Goodness of Fit Indices (GFI)

	CMIN/DF	**CFI**	**RMSEA**
Default model	4.218	.921	. 044

Consequently, the above table shows a significant statistical fit with no discrepancy by evaluating the interaction effect of each moderator (SKS, SE) with the independent variable (ESM) and the combination of three interactions (ESM, SKS, SE) including a two-way interaction effect between both correlated moderators (SKS, SE). The GFI showed that this model has no discrepancy and acceptable goodness of fit (CMIN/DF = 4.218 < 5, CFI = .921 > .90, RMSEA = .044 < .080). It means that the model has a significant probability to reject the null hypothesis. Furthermore, a final step is required to ensure a significant moderated-mediation effect occurs in the conceptual framework, in addition, to measure the moderated-mediation level (full or partial). Muller et al. (2005) suggested as a final step a combination of (i) testing the process of the moderated-mediation to evaluate if the effect occurs through the interaction between paths a and b in the conceptual framework and (ii) identifying if the moderated-mediation process (if it occurs) has a full or partial effect in the conceptual framework (Muller et al., 2005, p.857). In other words, testing the indirect moderated-mediation effect through the interaction of paths a and b includes the test of the direct moderation effect of the on the overall direct relationship between the independent variable (X) and the dependent variable (Y) (path c'). Academics claimed that if a full significant moderated-mediation effect occurs, then the value of the direct moderation effect (path c') must have a significant reduction or be equal to zero (Aguirre-Rodriguez, Bosnjak, & Sirgy, 2012; Bartikowski, Walsh, & Beatty, 2011; A. B. Miller &

Sheridan, 2018; Muller et al., 2005; Müller, Mutz, & Göring, 2019; J. Smith et al., 2018). However, if the value of path c' has a minor reduction, it means that the moderated-mediation effect has a partial effect in the model. In addition, if the value of the direct moderation effect (path c') has no changes, it means no moderated-mediation effect occurs, and the model only has an overall direct moderator effect (Mo) on the overall direct relationship between the independent variable (X) and the dependent variable (Y) in the conceptual model (Darlington & Hayes, 2016; Hayes, 2018; Muller et al., 2005; Preacher et al., 2007). This step is important in determining whether a moderated-mediation effect occurs between using ESM platforms and IIFC through OSC. Consequently, the following hypothesis is formulated to test the moderated-mediation effect of OSC together with the level of effect that occurs through the inclusion of the direct effect in the conceptual framework.

Hypothesis 3: Usage of ESM platforms has an indirect impact on IIFC through the positive moderated-mediation effect of OSC.

According to Muller et al. (2005), a significant positive moderated-mediation effect occurs when path a and b have a major effect on (Y) and produce a significant reduction in the direct moderators' impact on the overall direct effect of the independent variable (X) on the dependent variable (Y) (Muller et al., 2005, p. 858). In other words, a positive moderated-mediation effect occurs when there is a significant positive interaction between using ESM platforms and the moderated OSC on IIFC and a significant reduction in the direct effect of each individual moderator (SKS, SE) on the direct relationship between ESM platforms on IIFC. This hypothesis aims to test the indirect moderated-mediation effect through the interaction of paths a and b including the direct moderation effect on the overall direct impact of (X) on (Y) (path c') to evaluate the level of the moderated-mediation effect in the conceptual framework. Consequently, if a moderated-mediation effect occurs, it means that the null hypothesis is rejected. The following table illustrates the statistical test results of hypothesis (H3).

Table (5.14): Test of the Moderated-Mediation Effect

CR = .794	**Factor Loadings**	***p*-value**
AVE = .826	**(*β*)**	
Chi Square = 26.104		

CMIN/DF = 3.729		
Sample Size = 684		
KSCAPESM <--- MODESMSKS	.917	.022
KSEFFESM <--- MODESMSKS	.961	.015
KSFLXESM <--- MODESMSKS	.937	.020
KSRESESM <--- MODESMSKS	.968	.012
SERESESM <--- MODESMSE	.952	.012
SEFLXESM <--- MODESMSE	.920	.022
SEEFFESM <--- MODESMSE	.955	.019
SECAPESM <--- MODESMSE	.754	.042
ESM<--- MODESMSKS	.824	.026
ESM<--- MODESMSE	.731	.037
OSCMED<---ESM	.812	.029
IIFC<---OSCMED	.774	.044
IIFC<---ESM	.011	.024
KSDIRCAP <--- KSESMDIR	.269	.047
KSDIREFF <--- KSESMDIR	.487	.044
KSDIRFLX <--- KSESMDIR	.542	.020

KSDIRRES <--- KSESMDIR	.457	.021
IIFC <--- KSESMDIR	.000	.036
IIFC <--- SEESMDIR	.010	.044
SEDIRCAP <--- SEESMDIR	.414	.030
SEDIREFF <--- SEESMDIR	.280	.041
SEDIRFLX <--- SEESMDIR	.313	.046
SEDIRRES <--- SEESMDIR	.343	.043

The table above illustrates the moderated-mediation effect of OSC through the impact of using ESM platforms on IIFC while controlling the direct moderator's effect (SKS, SE) on the overall direct impact of ESM platforms on IIFC. Interestingly, the results illustrated a statistical significant reliability and validity of the moderated-mediation effect of OSC (CR = .794, AVE = .826). Academics claimed that the standardised coefficient (β) and *p-values* provide a sign and the importance of relationships among variables in the model and provide a statistical indication about the probability of rejecting the null hypothesis (Hair, 2014; Mia et al., 2019; Rahi & Ghani, 2018). Results indicate that the moderated-mediation effect of OSC has a significant positive magnitude on the relationship between using enterprise social media platforms and integrating inter-functional coordination. In other words, there is a significant positive importance of the moderated-mediation effect of OSC through the indirect impact of using ESM platforms to IIFC (OSCMED <--- ESM, $\beta = .812$, p-value = .029 < 0.05) and (IIFC <--- OSCMED, $\beta = .774$, p-value = .044 < 0.05). However, Muller et al. (2005) claimed that a significant positive moderated-mediation effect occurs when paths a and b have a major effect on (Y) and must produce a significant reduction in the direct moderators' impact on the overall direct effect of the independent variable (X) on the dependent variable (Y) (Muller et al., 2005, p. 858). In other words, the significant positive moderated-mediation effect through OSC occurs only if this effect produces a significant decrease in the value of the direct effect of the moderators (SKS, SE) on the direct relationship between enterprise social media platforms on integrating inter-functional coordination. Consequently, this

step includes the previous evaluation of the direct moderator's effect of staff knowledge sharing and staff engagement on the overall direct impact enterprise social media platforms on integrating inter-functional coordination. Interestingly, the results indicated an interesting reduction in the sign and importance of the direct moderator's effect (SKS, SE) on the direct relationship between ESM platforms and IIFC through path c' (IIFC <--- KSESMDIR*, β = .000, p*-value = .036 < 0.05) and (IIFC <--- SEESMDIR*, β = .010, p*-value = .044 < 0.05). The standardised coefficients (*β*) for both moderators (SKS, SE) are equal to zero, which means that OSC has a *full* moderated-mediation effect on the impact of ESM platforms on IIFC. However, academics posited that a significant SEM test through AMOS must present a significant value of no-discrepancy relative chi square (CMIN/DF < 5) and the GFI through the CFI must be >.90, and the RMSEA < 0.08 (Blunch, 2012; Mia et al., 2019; Ong & Puteh, 2017). The research conducted the GFI test to ensure a statistical fit with the model as presented in the table below.

Table (5.15): Goodness of Fit Indices (GFI)

	CMIN/DF	**CFI**	**RMSEA**
Default model	3.729	.927	. 073

The GFI test showed that this model has no discrepancy and an acceptable goodness of fit (CMIN/DF = 3.729 < 5, CFI = .927 > .90, RMSEA = .073 < .080). This means that the probability of rejecting the null hypothesis is high. Consequently, a full significant positive moderated-mediation effect occurs between using ESM platforms and IIFC through OSC. The AMOS testing model and tables are in the appendices.

5.10 Summary

The aim of the research is to test the impact of using Enterprise Social Media (ESM) platforms on Integrating Inter-Functional Coordination (IIFC) through the mediation effect of Optimizing Staff Capabilities (OSC) depending on interaction moderators' effect of Staff Knowledge Sharing (SKS) and Staff Engagement (SE). In other words, it tests the inclusion of the moderated-mediation effect of optimizing staff capabilities with the aim to achieve integration of inter-functional coordination through the usage of enterprise social media platforms on integrating inter-functional coordination platforms. The research conducted a pilot study by sending an online survey questionnaire with respondents of 58 information and communication SMEs at the

GCC region (Saudi Arabia, Kuwait, Qatar, Oman, United Arab Emirates, and Bahrain). The online questionnaire indicated a high reliability and validity of the pilot study. Consequently, the study sent the online questionnaire survey to 821 information and communication technology SMEs in the GCC area and made 250 phone calls and requests to resubmit the questionnaire. A total of 763 ICT SMEs responded, and data were screened through SPSS to check for missing data and remove respondents with inappropriate answers such as answering all questions at the same scale without carefully reading the questions (reverse question) (Ong & Puteh, 2017, p.111). The research conducted the KMO factor analysis and Bartlett's test to identify data dimensionality and reduce it (Daoud, 2017; Iacobucci et al., 2017; Kalnins, 2018). It adopted SEM with AMOS to conduct the data analysis process. Academics claimed that SEM is highly effective in identifying paths' effects between latent and observed variables (Amoako-Gyampah et al., 2019; Feng, Zhou, et al., 2019; Sánchez et al., 2017). Scholars claimed that using SEM with AMOS helps test complex interactions between latent and observed variables (Bian, 2011; Hair, 2014; Mia et al., 2019; Rahi & Ghani, 2018). Muller et al. (2005) proposed a widely accepted model for testing the moderated-mediation effect, which was adopted by this research (Muller et al., 2005). Four hypotheses were formulated to test the moderated-mediation effect of OSC on the relationship between using ESM platforms and IIFC. In addition, we tested the direct effect of two moderators that are staff knowledge sharing and staff engagement on the overall direct impact of using enterprise social media platforms to acheive integration of inter-functional coordination. Consequently, the research results indicated that using ESM platforms have a positive indirect impact on IIFC through full moderated-mediation effect of OSC at ICT SMEs in the GCC area. In other words, using enterprise social media platforms positively interacts with staff knowledge sharing and staff engagement, which leads to optimize staff capabilities, which then positively influences integration of inter-functional coordination.

Chapter Six

Research Conclusion, Limitations and Recommendations

6.1 Research Conclusion

Academics have emphasized on the magnitude of Integrating Inter-Functional Coordination (IIFC) and which significantly improves employee performance, as well as, lead to increase financial growth at organizations (Jugend et al., 2018; Murillo-Oviedo et al., 2019; Sofijanova et al., 2015; Wang et al., 2017). Likewise at a practical perspective, the International Telecommunication Union is a parent organization of the United Nations Economic and Social Council has published a detailed report that consists a major challenge in integrating inter-functional coordination among engineers and technicians who work in rural and remote sites with their managers at different locations in Information and Communication Technology (ICT) organizations worldwide (ITU, 2017, p. 28). The research identifies a gap that neglects spotting the the topic of Integrating Inter-Functional Coordination (IIFC) at the Market Orientation (MO) theory. This study aims to contribute to the marketing literature through the context of information technology with the inclusion of the dynamic capabilities approach.

Consequently, the research adopted the positivism philosophy and the deductive research approach with quantitative survey method to evaluate the impact of using Enterprise Social Media (ESM) platforms on IIFC through the inclusion of the moderated-mediation effect of Optimizing Staff Capabilities (OSC). In addition, the research implements the online survey as a method for data collection and submitted 824 online questionnaires to the sample of the population represented by Information and Communication Technology (ICT) SMEs at Gulf Cooperation Council (GCC) area. After the process of data screening, 684 participants have responded adequately and processed for data analysis. The research concluded that using Enterprise Social Media (ESM) platforms has a significant positive impact on Integrating Inter-Functional Coordination (IIFC) through a full moderated-mediation effect of Optimising Staff Capabilities (OSC). Consequently, this study has contributed to the knowledge of the market orientation theory through the context of information technology with the inclusion of strategic management approach. In other words, the research theoretically contributed to the topic of IIFC at the Market Orientation (MO) theory through the contexts of diffusion of innovation and the inclusion of the dynamic capabilities approach. Interestingly, a recent study that

conducted by Hisham and Baawain (2020) claimed that there is a gap in the literatures of strategic management that neglects spotting the topic of optimizing staff capabilities and which outlines a major challenge towards improving the performance at small and medium enterprises ((SANYAL et al., 2020, p.288). It is important to mention that this research has demonstrated an implicit contribution to the literatures of strategic management, namely aforementioned topic of optimizing staff capabilities. Due to the fact that as a part of the process to test the moderated-mediation effect at the framework, this study concluded a positive interaction effect occurs between using enterprise social media platforms platforms with two moderators (staff engagement and staff Knowledge sharing) and which lead to optimizing staff capabilities at information and communication technology SMEs in GCC area. Subsequently, this research has demonstrated a potential contribution to the strategic management approach, in particular to the topic of OSC, through the positive interactive multi-moderators' effect with the context of information technology. Theoretically, this potential implicit contribution to the Dynamic Capabilities (DC) approach is important for future investigations and discussions by academics. As a conclusion in practice, the findings explicitly contributed to the major challenge in integrating inter-functional coordination at information and communication technology enterprises which is highlighted at the report of the International Telecommunication Union of the United Nations Economic and Social Council (ITU, 2017, p. 28). In other words, the research contributes practically to information and communication technology enterprises by presenting a solution of using enterprise social media platforms in order to achieve integration of inter-functional coordination between engineers who work at rural remote sites and their managers at other locations in order to ensure compatibility of work process including installations and configurations. In addition, using ESM platforms will enhance the positive interactions between staff members through increasing their engagement and knowledge sharing and which lead to optimize staff capabilities.

6.2 Research Limitations

This research used the online survey method with convenience sampling technique during the data collection process. The convenience sampling technique has major limitations that can affect generalizability of findings to different groups or circumstances, as well as, produce biased results due to the over representation or ignoring the demographic factors. Carminati (2018) argued that generalizability considered a major criteria to evaluate the quality of quantitative research (Carminati, 2018, p. 2096).

Academics defined generalizability in quantitative research as the extent to which the research findings can be generalized from a representative sample to an entire population (Fricker Jr, 2016; Norman, 2017; Schreier, 2018). This research adopted the quantitative research method with the convivence sampling technique. Bryman and Bell (2015) defined convenience sampling as a technique that allows data to be collected from participants who are easy to reach (Bryman & Bell, 2015, p.204). However, Etikan (2016) argued that the main disadvantage of the convenience sampling technique is that it can inherent bias due a non-representative sample to the population, and which leads to prevent generalizability of results (Etikan et al., 2016, p.4). Polit and Beck (2010) claimed that sampling in quantitative studies can lead to over presentation and which undermined the ability to generalize the findings (Polit & Beck, 2010, p. 1455). Nonetheless, Elliott and Haviland (2007) claimed that the probability of bias can be high in a convenience sampling technique only when a study has a large number of participants such as 5,000–10,000 (Elliott & Haviland, 2007, p.211). Fricker Jr (2016) claimed that the convenience sampling technique is useful in academic research when testing hypotheses and results lead to identify potential contributions to the theory (Fricker Jr, 2016, p.188).

Wang, Haining, and Cao (2010) found that the convenience sampling technique is sufficient when collecting data is required from anonymous staff members (Polit & Beck, 2010; Taherdoost, 2016; Wang et al., 2010). Interestingly, Polit and Beck (2020) claimed that convenience sampling technique can approach a conventional statistical generalizability when the study focuses on a purposive sample of participants such as professional employees and staff at organizations (Polit & Beck, 2010, p. 1454). The research focuses on a large geographic area of the GCC consisting of six countries (Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Oman, and Bahrain). Likewise, academics concluded that quantitative online survey with convenience sampling technique is useful in collecting data from a large geographic area because it cost less in time and expenses (Ong & Puteh, 2017; M. S. Rahman, 2016; Schreier, 2018). As another limitation, Elsesser and Lever (2011) argued that the demographic factors such as gender has a strong influence on research findings and can produce a conscious or unconscious bias, for example, a selection process to hire an employee at an organization can require a specific procedure on females and which hinder women's progress in workplace, as well as, results a bias of selection at the hiring process (Elsesser & Lever, 2011, p. 15). Gender can result a significant influence on individual's opinions and affects the research findings.

This research did not consider the difference of gender during the data collection process and which considered as a limitation that can affect generalizability of the findings. Demographic characteristics such as religion, gender and education are crucial factors that must be discussed to ensure generalizability of findings at different periods and circumstances. Based on aforementioned, this research outline a number of recommendations for future investigation and discussions, and which allow researchers to gain insights into the impact of the demographic factors on the findings, as well as, increase the opportunity of generalizability of findings in different phenomenon.

6.3 Recommendations

The research contributed to the knowledge of marketing literatures through the context of information technology with the inclusion of strategic management approach. Addressing the a gap in marketing literatures that neglect spotting the topic of integrating inter-functional coordination within the Market Orientation (MO) theory (Al-Nsour, 2017; Grootveld, 2016; Roersen et al., 2013). This research concluded that using Enterprise Social Media (ESM) platforms have a positive indirect impact on integrating inter-functional coordination through the full moderated-mediation effect of optimizing staff capabilities at information and communication technology SMEs in the Gulf Cooperation Council (GCC) area. The study offers a multi-dimensional range of recommendations for future research in the marketing, strategic management and information technology as well as, to practitioners at information and communication technology SMEs. Academics concluded that replication in a quantitative study is essential to ensure generalization of findings in a different environment and which represents an essential integration to the research design (Hubbard, Vetter, & Little, 1998; Nicholson et al., 2018; Uncles & Kwok, 2013). It is true that academics believe that the information and communication technology sector enables industries to make important contributions to economic growth by implementing digital platforms that increase firm performance (Bianchi, 2017; Henry-Nickie et al., 2019; McGinnis et al., 2009). For example, Baporikar (2020) found that the IT sector has a strong positive impact on developing the health sector (Baporikar, 2020, p.258). Nevertheless, this study recommends to replicate the findings at different circumstances or environment in order to ensure generalizability of the results. In addition, Amo et al. (2016) argued that socio-culture can significantly influence employees' behaviours to adopt using enterprise social platforms (Alarcón-del-Amo et al., 2016, p.299). Pelc (2017) posits that the diffusion of social networking platforms is

crucially depends on the macro environmental factors like demographic, technological, social and cultural (Pelc, 2017, p.13). Scholars concluded that cultural condition such as employees believes and religions can positively or negatively affect user's behavior towards adopting the diffusion of communications platforms (Ax & Greve, 2017; Bankole & Bankole, 2017; Rodriguez, Peterson, & Krishnan, 2018). However, Woodhead (2012) posits that quantitative studies can implement a gender-blind practices in large scale surveys in order to avoid conscious or unconscious bias generated by specific gender or religion (Woodhead, 2012, p. 54). Frank, Connors and Cho (2018) suggested that a diverse representation of people is required including leaders and workers at all levels in organizational surveys, this diversification prevents the gender bias by involving all parties (Frank, Connors, & Cho, 2018, p. 8). Therefore, future researchers are recommended to adopt the inductive or abductive approach with the aim of approaching in-depth sights and investigate the macro environmental factors such as socio-cultural that could influence the decision of adopting enterprise social media platforms at small and medium enterprises. Likewise, academics discussed the disadvantages of using enterprise social media platforms at firms. For example, literatures demonstrated usage of Enterprise Social Media (ESM) platforms as a waste of time and a distraction tools which lead employees to lose their performance (Baccarella et al., 2018, p.437).

Further scholars argued that using Enterprise Social Media (ESM) platforms could create tensioned atmosphere and neuroticism inside firms (Blackwell et al., 2017, p70). Scholars posit that the practice of introducing new innovation tools is more effective in small business environment like SMEs rather than at large enterprises (Spithoven, Vanhaverbeke, & Roijakkers, 2013, p. 537). Lam et al. (2010) claimed that implementing market-orientated strategy is complicated at large enterprises, and because integrating inter-functional coordination requires continuous engagement and knowledge sharing among departments and which is hard to achieve due to large staff members, therefore it can lead to more conflicts between staff and loss of time and communications (Lam et al., 2010, p.79). Moreover, Canacott et al. (2018) argued that too many departmental communications lead to loss of centralization in decision making and which negatively affects performance at large firms (Canacott et al., 2018, p.16). However, Massey and Fitzhugh, (2019) claimed that a skilled dedicated team can improve the coordination between departments in order to increase performance and reduce waste of time (Massey & Le Meunier-Fitzhugh, 2019, p.24). Consequently, this study recommends future researchers to evaluate using ESM platforms to integrate inter-

functional coordination at large enterprises. Moreover, academics claimed that the market orientation has a boundary spanning role and which significantly affects the mechanism in adopting and support the innovation at SMEs (Didonet, Simmons, Díaz-Villavicencio, & Palmer, 2016, p.232). For example, Fleming and Waguespack (2007) emphasized on boundary spanners with the innovation system such as leaders and managers who have the influence on adopting innovation, as well as, integrating the link between organization's internal network with eternal environment (Fleming & Waguespack, 2007, p.165). Therefore, this research recommends to further investigate the boundary spanning role with the MO theory and which can influence the adoption of Enterprise Social Media (ESM) platforms in SMEs. Interestingly, a recent study conducted by Hisham and Baawain (2020) claimed that there is a gap in literatures of strategic management that neglects spotting the topic of optimizing staff capabilities and which outlines a major challenge towards improving the performance at Small and Medium Enterprises (SMEs) (SANYAL et al., 2020, p.288).

However, this research has demonstrated a conceptual framework as a part of testing the moderated-mediation effect and which presented a positive interaction effect between using ESM platforms with two moderators (staff engagement and staff Knowledge sharing) and which lead to optimise staff capabilities at ICT SMEs. This implicit contribution is a unique opportunity for future academics to investigate the interactive effect between using ESM platforms and two or more moderators with the aim of replicating the findings and ensure generalizability at different circumstances. Moreover, it is important that academics move broader and investigate ecosystem and its boundaries at market-oriented firms. Ecosystem can significantly influence market trends and which required new market orientated strategies. For example, Zhang and Watson (2020) recently argued that marketing ecosystems such as socioeconomics, geopolitics, and the environment can significantly influence consumers' behavior and attitude and lead to a fast changes in market requirements (Zhang & Watson IV, 2020, p.304). Therefore, it is recommended to investigate the ecosystem factors which can affect firms' abilities or staff behavior to adopt using ESM platforms at SMEs.

6.4 Research Implications

The research concluded that using enterprise social media platforms will lead to optimize staff capabilities through increasing staff engagement and knowledge sharing and which lead to integrate inter-functional coordination at ICT SMEs in Gulf Cooperation Council (GCC) area. Diffusion of using enterprise social media platforms can increase engagement of staff members and which enhance collaboration between

interdepartmental functions. The implication of enterprise social media platforms provides a substantial improvement of knowledge sharing and increase staff perception and learning process. Moreover, the results encourage the implication of enterprise social media platforms to encourage collaboration among employee functions, which lead to the creation of superior customer value. As a major implication in practice to the International Telecommunication Union at United Nations Economic and Social Council, the findings can be used to overcome the main challenge by integrating inter-functional coordination among engineers and technicians who work in rural and remote sites with their managers at different locations in ICT organizations. Integration of collaboration between staff members at different remote sites is essential to ensure the process of compatibility in installations, configurations and project management. Therefore, the results can be implemented in practice by owners-managers, strategic planners and policy decision makers at governments' agencies and private organizations to emphasize on adopting enterprise social media platforms platforms in order to achieve integration of inter-functional coordination between different departments such as sales and marketing, technical support, customer service, and operations. Moreover, in practice the ESM platforms can be used to achieve IIFC in Small and Medium Enterprises at different businesses sectors such as health, oil, or trade.

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Appendix

Tables and Figures of Chapter 1: Introduction

Figure (1.1): The Gulf Cooperation Council (GCC) Area

Source: GCC Chamber of Commerce (GCC, 2018)

Table (1.1): Criteria to Identify Millions Millions54905355491.0M50549500550,000-1.0M1.0M-13.3MSource: GCC Chamber of Commerce (GCC, 2018)

Table (1.2): Number of Information Technology SMEs in GCC Area

Bahrain	**1,151**
Total	51548

Sources: Government reports, economy reports, newspaper articles and research studies (Al-Suhaimi, 2018; GASTAT, 2019; IDC, 2019; MOTC, 2019; TRA, 2018)

Figure (1.2): Number of Information Technology SMEs per Activity in Saudi Arabia

Table 1 جدول 1

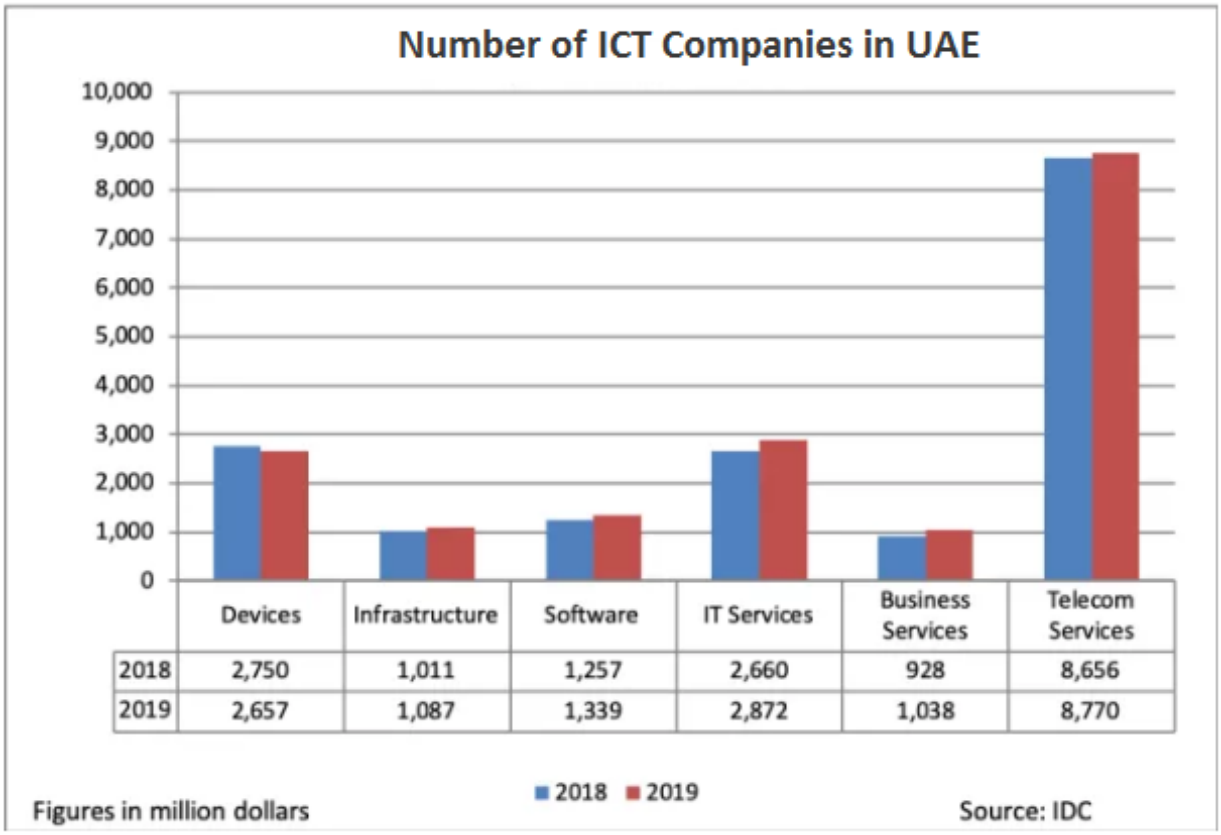
عدد المنشآت حسب النشاط الاقتصادي 2019

Number of IT Establishments by economic activity 2019, Kingdom of Saudi Arabia

Economic activity		عدد المنشآت	النشاط الاقتصادي	
2610	Manufacture of electronic components and boards	21	صنع المكونات واللوحات الإلكترونية	2610
2620	Manufacture of computers and peripheral equipment	9	صنع الحواسيب والمعدات الملحقة	2620
2630	Manufacture of communication equipment	26	صنع معدات الاتصالات	2630
2640	Manufacture of consumer electronics	12	صنع الإلكترونيات الاستهلاكية	2640
2680	Manufacture of magnetic and optical media	6	صنع الوسائط المغناطيسية والبصرية	2680
4651	Wholesale of computers, computer peripheral equipme	1,390	بيع الحواسيب والمعدات الطرفية للحواسيب والبرمجيات بالجملة	4651
4652	Wholesale of electronic and telecommunications equipı	1,053	بيع المعدات الإلكترونية ومعدات الاتصالات وقطع غيارها بالجملة	4652
5820	Software publishing	1,840	نشر البرمجيات	5820
6110	Wired telecommunications activities	623	أنشطة الاتصالات السلكية	6110
6120	Wireless telecommunications activities	964	أنشطة الاتصالات اللاسلكية	6120
6130	Satellite telecommunications activities	584	أنشطة الاتصالات الساتلية	6130
6190	Other telecommunications activities	1,834	أنشطة الاتصالات الأخرى	6190
6201	Computer programming activities	1,988	أنشطة البرمجة الحاسوبية	6201
6202	Computer consultancy and computer facilities manager	2,411	انشطة الخبرة الاستشارية الحاسوبية وإدارة المرافق الحاسوبية	6202
6209	Other information technology and computer service acti	1,159	أنشطة خدمات تكنولوجيا المعلومات والحاسوب الأخرى	6209
6311	Data processing, hosting and related activities	864	تجهيز البيانات واستضافة المواقع على الشبكة وما يتصل بذلك من أنشطة	6311
6312	Web portals	1,266	بوابات الشبكة	6312
9511	Repair of computers and peripheral equipment	2,287	إصلاح الحواسيب والمعدات الملحقة	9511
9512	Repair of communication equipment	1,069	إصلاح معدات الاتصالات	9512
Total		**19,385**	**الجملة**	

Source: Department of Statistics, General Authority for Statistics, Ministry of Economy, Saudi Arabia (GASTAT, 2019)

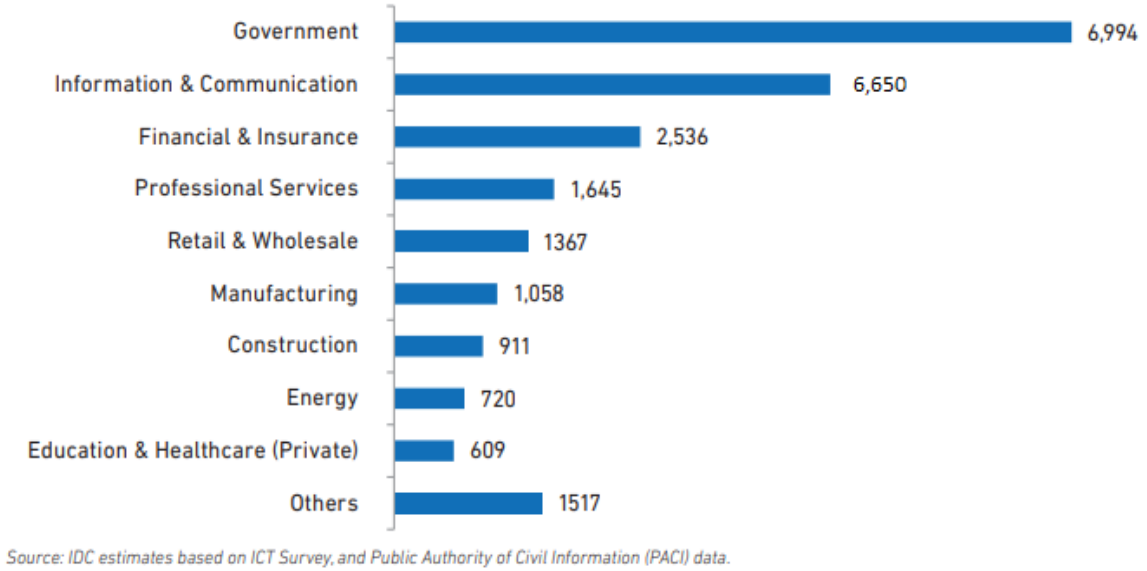
Figure (1.3): Number of IT SMEs in UAE



	Devices	Infrastructure	Software	IT Services	Business Services	Telecom Services
2018	2,750	1,011	1,257	2,660	928	8,656
2019	2,657	1,087	1,339	2,872	1,038	8,770

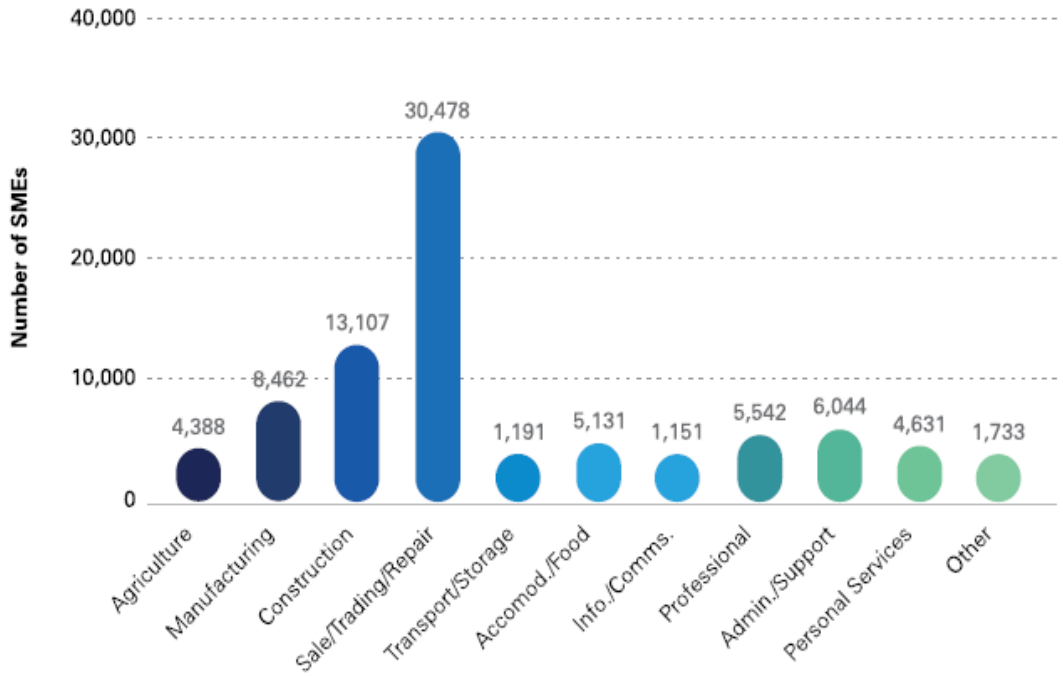
Source: International Data Corporation for Research (IDC, 2019)

Figure (1.4): Number of IT SMEs in Kuwait



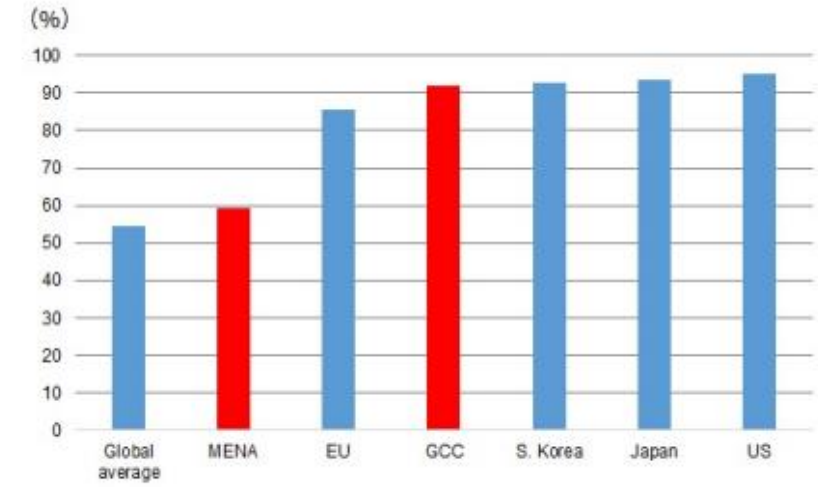
Source: The Central Agency for Information Technology, Ministry of Telecommunication, Kuwait (CAIT, 2016)

Figure (1.5): Number of SMEs by Sector in Bahrain



Source: Ministry of Industry, Commerce and Tourism (DERASAT, 2019)

Figure (1.6): Penetration of Enterprise Social Media Platform in GCC area



Note: MENA includes Turkey.

Source**:** Mitsui & Co. Global Strategic Studies Institute (MGSSI, 2019)

Table (5.1): Reliability Test of Pilot Study

Case Processing Summary

		N	%
Cases	Valid	67	100.0
	Excluded[a]	0	.0
	Total	67	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.925	.942	18

Item Statistics

	Mean	Std. Deviation	N
ESM	6.61	.549	67
KSDIRRES	4.97	.171	67
KSDIRFLX	5.01	.213	67
KSDIREFF	4.97	.171	67
KSDIRCAP	4.97	.171	67
SEDIRRES	4.97	.171	67
SEDIRFLX	5.01	.213	67
SEDIREFF	4.97	.171	67
SEDIRCAP	4.97	.171	67
KSRESESM	5.69	.467	67
KSFLXESM	5.67	.533	67
KSEFFESM	5.69	.528	67
KSCAPESM	5.67	.473	67
SERESESM	5.69	.528	67

SEFLXESM	5.70	.461	67
SEEFFESM	5.67	.533	67
SECAPESM	5.67	.504	67
OSCMED	6.31	.743	67

Table (5.2): **KMO and Bartlett's Test**

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.890
Bartlett's Test of Sphericity	Approx. Chi-Square	28.781
	df	5
	Sig.	.000

Figure (5.1): Model of Evaluating Interaction Relationship of Direct Moderator's Effect (SKS) on Direct Relationship between ESM and IIFC

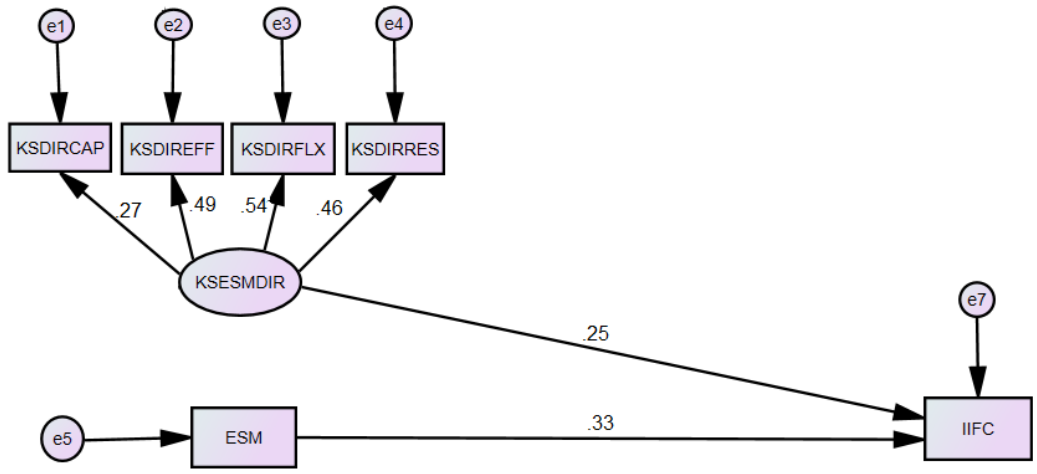


Table (5.3): Test of Composite Reliability (CR) and **Average Variance Extracted (AVE)**

KSESMDIR	Factor Loadings (λ)= (*β*)	λ2	ε=1-λ2	AVE	Reliability (CR)
KSDIRRES<--SKESMDIR	0.457	0.209	0.543	0.488	0.770
KSDIRFLX<---SKESMDIR	0.542	0.294	0.458		
KSDIREFF<---SKESMDIR	0.487	0.237	0.513		
KSDIRCAP<--SKESMDIR	0.269	0.072	0.731		
IIFC<---SKESMDIR	0.252	0.064	0.748		
IIFC<---ESM	0.328	0.108	0.672		

Table (5.4): Statistical Analysis of Standardized Regression Coefficient **Beta (*β*)**

Group 1

Sample size = 684

Standardized Regression Coefficient **Beta (*β*):** (Group number 1 - Default model)

			Estimate (*β*)	S.E.	C.R.	P	Label
KSDIRCAP	<---	KSESMDIR	.269	.048	2.655	.047	par_1
KSDIREFF	<---	KSESMDIR	.487	.068	2.181	.044	par_2
KSDIRFLX	<---	KSESMDIR	.542	.023	2.355	.020	par_3
KSDIRRES	<---	KSESMDIR	.457	.070	1.966	.021	par_4
IIFC	<---	KSESMDIR	.252	.043	2.147	.052	par_5
IIFC	<---	ESM	.328	.034	2.300	.027	par_6

Table (5.5): Goodness of Fit Indices (GFI)

Test of Chi Square (CMIN) and Normed Chi Square (CMIN/DF)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	14	17.295	7	.016	2.471
Saturated model	21	.000	0		
Independence model	6	760.630	15	.000	50.709

Test of Comparative Fit Indices (CFI)

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.977	.951	.986	.970	.986
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Test of the Root Mean Square Error of Approximation (RMSEA)

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.046	.019	.074	.538
Independence model	.270	.254	.286	.000

Figure (5.2): Model of Evaluating Interaction Relationship of Direct Moderator's Effect (SE) on Direct Relationship between ESM and IIFC

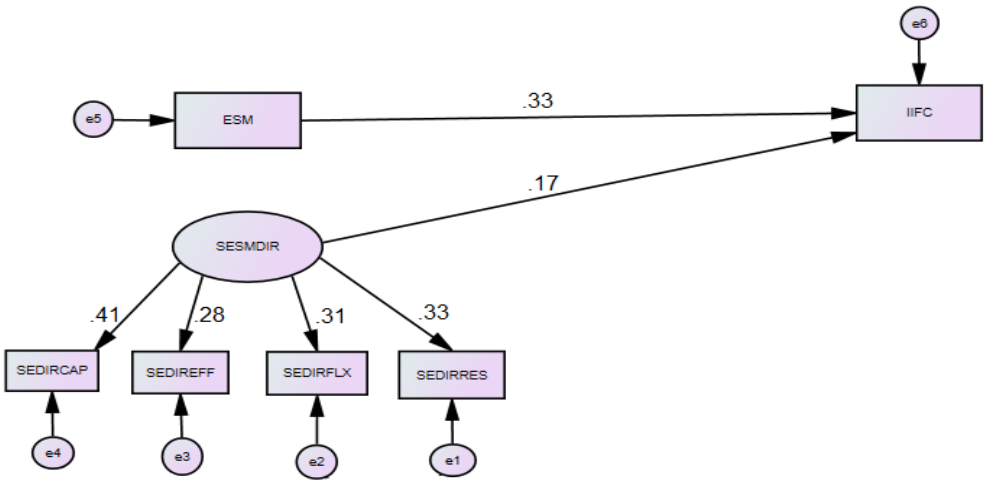


Table (5.6): Test of Composite Reliability (CR) and **Average Variance Extracted (AVE)**

SEESMDIR	Factor Loadings (λ)= (*β*)	λ2	ε =1-λ2	AVE	Reliability (CR)
SEDIRCAP<--- SEESMDIR	0.414	0.171	0.586	.485	0.696
SEDIREFF<--- SEESMDIR	0.280	0.078	0.720		
SEDIRFLX<--- SEESMDIR	0.313	0.098	0.687		
SEDIRRES<---SEESMDIR	0.343	0.118	0.657		
IIFC<---SEESMDIR	0.167	0.028	0.833		
IIFC<---ESM	0.328	0.108	0.672		

Table (5.7): Statistical Analysis of Standardized Coefficient Regression **Beta (*β*)**

Group 2

Sample size = 684

Standardized Regression Coefficient **Beta (*β*):** (Group number 2 - Default model)

			Estimate (*β*)	S.E.	C.R.	P	Label
SEDIRCAP	<---	SEESMDIR	.414	.019	1.894	.030	par_3
SEDIREFF	<---	SEESMDIR	.280	.018	2.228	.041	par_4
SEDIRFLX	<---	SEESMDIR	.313	.015	2.633	.046	par_5
SEDIRRES	<---	SEESMDIR	.343	.015	2.604	.043	par_6
IIFC	<---	SEESMDIR	.167	.022	2.696	.049	par_2
IIFC	<---	ESM	.328	.033	2.214	.038	par_1

Table (5.8): Goodness of Fit Indices (GFI)

Test of Chi Square (CMIN) and Normed Chi Square (CMIN/DF)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	13	27.572	8	.000	3.446
Saturated model	28	.000	0		
Independence model	7	39.307	7	.000	8.472

Test of Comparative Fit Indices (CFI)

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.930	.727	.932	.730	.931
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Test of the Root Mean Square Error of Approximation (RMSEA)

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.052	.036	.068	.000
Independence model	.097	.083	.011	.000

Figure (5.3) **Evaluating Interactions Relationship between Multi Moderators (SKS, SE) with (ESM) on Mediator (OSCMED)**

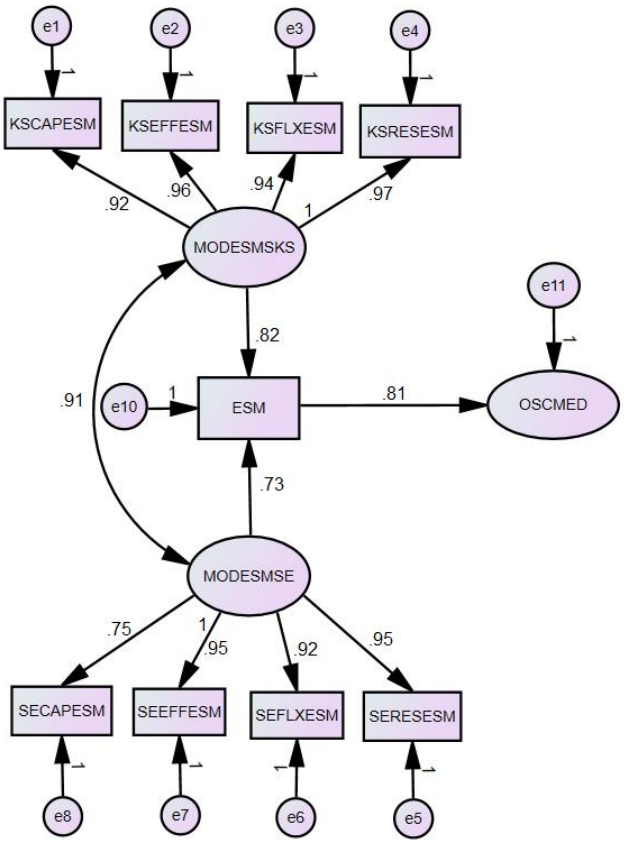


Table (5.9): Test of Composite Reliability (CR) and **Average Variance Extracted (AVE)**

MODESMSKS*MODESMSE*ESM->OSCMED	Factor Loadings (λ)= (*β*)	λ2	ε =1-λ2	AVE	Reliability (CR)
KSRESESM<--MODESMSKS	0.968	0.937	0.032	0.947	0.916
KSFLXESM<--- MODESMSKS	0.937	0.878	0.063		
KSEFFESM<--- MODESMSKS	0.961	0.924	0.039		
KSCAPESM<---MODESMSKS	0.917	0.841	0.083		
SERESESM<--- MODESMSE	0.952	0.906	0.048		
SEFLXESM<---MODESMSE	0.920	0.846	0.080		
SEEFFESM<---MODESMSE	0.955	0.912	0.045		
SECAPESM<--- MODESMSE	0.754	0.569	0.246		
MODESMSE<-->MODESMSKS	0.913	0.834	0.087		
ESM<--- MODESMSKS	0.824	0.679	0.176		

ESM<--- MODESMSE	0.731	0.534	0.269		
OSCMED<---ESM	0.812	0.659	0.188		

Table (5.10): Statistical Analysis of Standardized Regression Coefficient **Beta (*β*)**

Group 3

Sample size = 684

Standardized Regression Coefficient **Beta (*β*):** (Group number 3 - Default model)

			Estimate (*β*)	S.E.	C.R.	P	Label
KSCAPESM	<---	MODESMSKS	.917	.026	1.036	.022	par_1
KSEFFESM	<---	MODESMSKS	.961	.023	1.034	.015	par_2
KSFLXESM	<---	MODESMSKS	.937	.019	1.286	.020	par_3
KSRESESM	<---	MODESMSKS	.968	.020	1.006	.012	par_4
SERESESM	<---	MODESMSE	.952	.025	1.259	.012	Par_5
SEFLXESM	<---	MODESMSE	.920	.022	1.393	.022	par_6
SEEFFESM	<---	MODESMSE	.955	.016	1.279	.019	par_7
SECAPESM	<---	MODESMSE	.754	.032	2.529	.042	par_8
MODESMSE	<--->	MODESMSKS	.913	.018	1.102	.020	par_9
ESM	<---	MODESMSKS	.824	.027	1.963	.026	par_10
ESM	<---	MODESMSE	.731	.094	1.921	.037	par_11
OSCMED	<---	ESM	.812	.045	1.823	.029	par_12

Table (5.11): Goodness of Fit Indices (GFI)

Test of Chi Square (CMIN) and Normed Chi Square (CMIN/DF)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	27	18.235	8	.000	2.279
Saturated model	55	.000	0		
Independence model	10	30.261	6	.000	5.043

Test of Comparative Fit Indices (CFI)

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.981	.969	.984	.974	.984
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Test of the Root Mean Square Error of Approximation (RMSEA)

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.039	.076	.101	.000
Independence model	.053	.054	.056	.000

Figure (5.4): **Evaluating** the Moderated-Mediation Interaction of (OSCMED) Through the Relationship Between (ESM) and (IIFC)

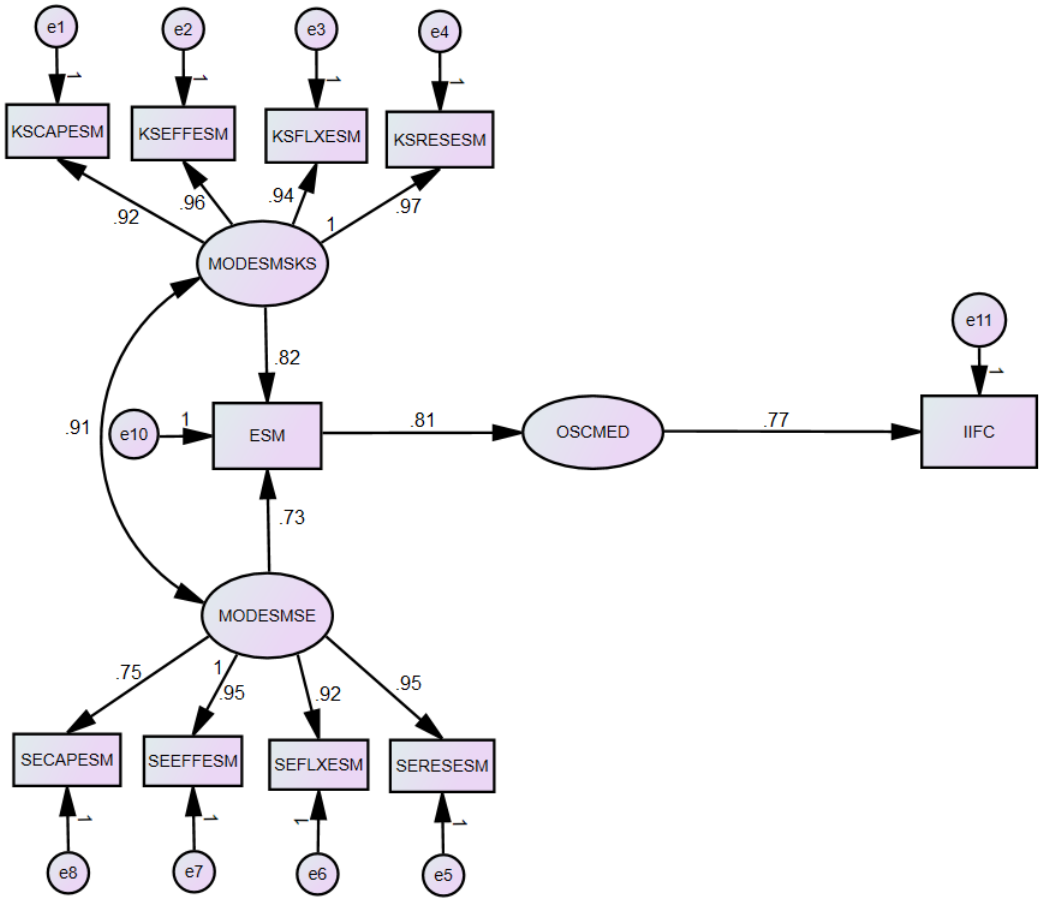


Table (5.12): Test of Composite Reliability (CR) and **Average Variance Extracted (AVE)**

MODESMSKS*MODESMSE*ESM-->OSCMED-->IIFC	Factor Loadings (λ)= (*β*)	λ2	ε =1-λ2	AVE	Reliability (CR)
KSRESESM<--MODESMSKS	0.968	0.937	0.032	0.911	0.910
KSFLXESM<--- MODESMSKS	0.937	0.878	0.063		
KSEFFESM<--- MODESMSKS	0.961	0.924	0.039		

KSCAPESM<--- MODESMSKS	0.917	0.841	0.083		
SERESESM<--- MODESMSE	0.952	0.906	0.048		
SEFLXESM<---MODESMSE	0.920	0.846	0.080		
SEEFFESM<--- MODESMSE	0.955	0.912	0.045		
SECAPESM<--- MODESMSE	0.754	0.569	0.246		
MODESMSE<--->MODESMSKS	0.913	0.834	0.087		
ESM<--- MODESMSKS	0.824	0.679	0.176		
ESM<--- MODESMSE	0.731	0.534	0.269		
OSCMED<---ESM	0.812	0.659	0.188		
IIFC<---OSCMED	.774	0.599	0.226		

Table (5.13): Statistical Analysis of Standardized Regression Coefficient **Beta (*β*)**

Group 4

Sample size = 684

Standardized Regression Coefficient **Beta (*β*):** (Group number 4 - Default model)

			Estimate (*β*)	S.E.	C.R.	P	Label
KSCAPESM	<---	MODESMSKS	.917	.026	1.036	.025	par_1
KSEFFESM	<---	MODESMSKS	.961	.023	1.034	.020	par_2
KSFLXESM	<---	MODESMSKS	.937	.019	1.286	.021	par_3
KSRESESM	<---	MODESMSKS	.968	.020	1.006	.019	par_4
SERESESM	<---	MODESMSE	.952	.025	1.259	.012	Par_5
SEFLXESM	<---	MODESMSE	.920	.022	1.393	0.22	par_6
SEEFFESM	<---	MODESMSE	.955	.016	1.279	.019	par_7
SECAPESM	<---	MODESMSE	.754	.032	2.529	.033	par_8
MODESMSE	<--->	MODESMSKS	.913	.018	1.102	.020	par_9
ESM	<---	MODESMSKS	.824	.007	1.963	.026	par_10
ESM	<---	MODESMSE	.731	.094	1.921	.042	par_11
OSCMED	<---	ESM	.812	.045	1.823	.033	par_12
IIFC	<---	OSCMED	.774	.012	2.280	.044	par_13

Table (5.14): Goodness of Fit Indices (GFI)

Test of Chi Square (CMIN) and Normed Chi Square (CMIN/DF)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	27	29.529	8	.000	4.218
Saturated model	55	.000	0		
Independence model	10	45.225	8	.000	5.653

Test of Comparative Fit Indices (CFI)

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.921	.919	.923	.914	.921
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Test of the Root Mean Square Error of Approximation (RMSEA)

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.044	.046	.101	.000
Independence model	.051	.042	.061	.000

Figure (5.5): **Evaluating** the Moderated-Mediation Effect and Level of (OSCMED) Through the Relationship Between (ESM) and (IIFC)

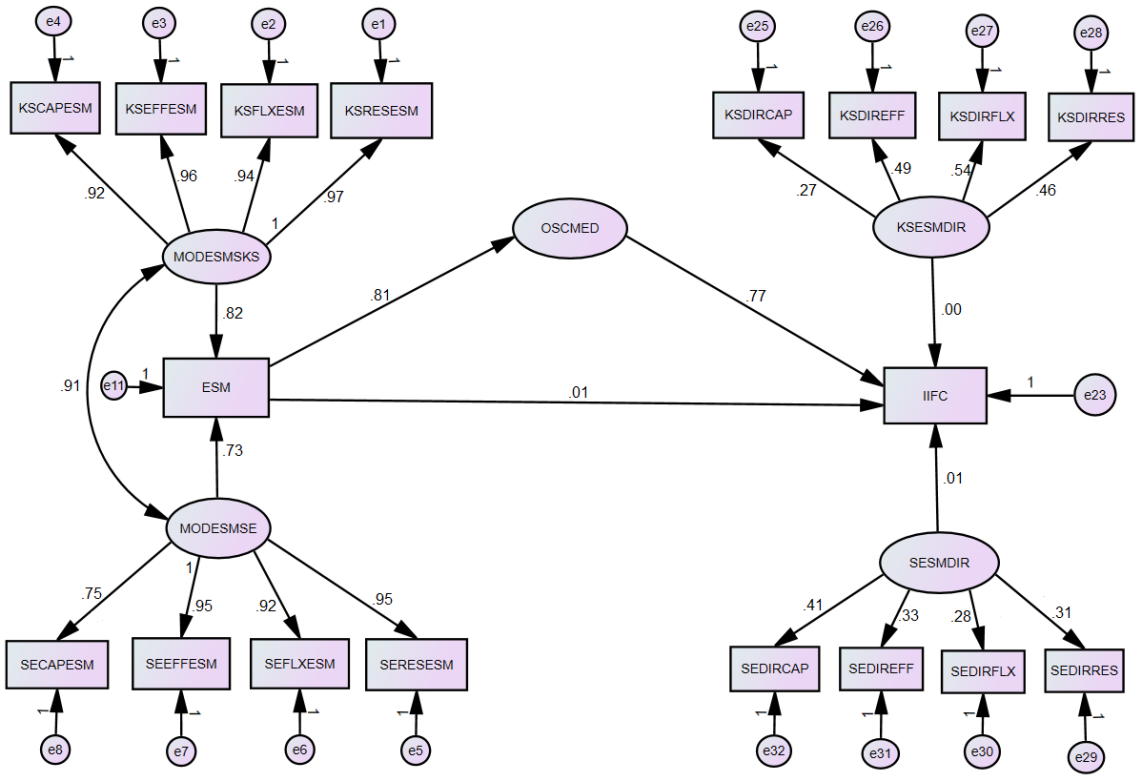


Table (5.15): Test of Composite Reliability (CR) and **Average Variance Extracted (AVE)**

MODERATED-MEDIATION	Factor Loadings (λ)= (*β*)	λ2	ε=1-λ2	AVE	Reliability (CR)
KSRESESM<--MODESMSKS	0.968	0.9409	0.032	0.826	0.794
KSFLXESM<---MODESMSKS	0.937	0.8836	0.063		
KSEFFESM<---MODESMSKS	0.961	0.9235	0.039		
KSCAPESM<--MODESMSKS	0.917	0.8464	0.083		
SERESESM<--- MODESMSE	0.952	0.9025	0.048		
SEEFFESM <--- MODESMSE	0.955	0.9216	0.045		
SEFLXESM<--- MODESMSE	0.920	0.8464	0.080		
SECAPESM <--- MODESMSE	0.754	0.5685	0.246		
MODESMSE<>MODESMSKS	0.913	0.8281	0.087		
ESM<--- MODESMSKS	0.824	0.6724	0.176		
ESM<--- MODESMSE	0.731	0.5329	0.269		
OSCMED<---ESM	0.812	0.6561	0.188		
IIFC<---OSCMED	0.774	0.5929	0.226		
KSDIRCAP<--- KSESMDIR	0.269	0.0723	0.731		
KSDIREFF <--- KSESMDIR	0.487	0.2401	0.513		
KSDIRFLX <--- KSESMDIR	0.542	0.2916	0.458		
KSDIRRES<--- KSESMDIR	0.457	0.2116	0.543		
SEDIRCAP<--- SEESMDIR	0.414	0.1681	0.586		
SEDIREFF <--- SEESMDIR	0.280	0.0784	0.720		
SEDIRFLX <--- SEESMDIR	0.313	0.0961	0.687		
SEDIRRES<--- SEESMDIR	0.343	0.1089	0.657		
IIFC <--- KSESMDIR	0.000	0.0000	1.000		
IIFC <--- SEESMDIR	0.010	0.0001	0.990		
IIFC<---ESM	0.011	0.0001	0.989		

Table (5.16): Statistical Analysis of Standardized Regression Coefficient **Beta (*β*)**

Group N

Sample size = 684

Standardized Regression Coefficient **Beta (*β*):** (Group number 5 - Default model)

			Estimate (*β*)	S.E.	C.R.	P	Label
KSDIRCAP	<---	KSESMDIR	.269	.048	2.655	.047	par_1
KSDIREFF	<---	KSESMDIR	.487	.068	2.181	.044	par_2
KSDIRFLX	<---	KSESMDIR	.542	.023	2.355	.020	par_3
KSDIRRES	<---	KSESMDIR	.457	.070	1.966	.021	par_4
IIFC	<---	KSESMDIR	.000	.010	.974	.036	par_5
IIFC	<---	SEESMDIR	.010	.007	.937	.044	par_6
SEDIRCAP	<---	SEESMDIR	.414	.019	1.894	.030	par_7
SEDIREFF	<---	SEESMDIR	.280	.018	2.228	.041	par_8
SEDIRFLX	<---	SEESMDIR	.313	.015	2.633	.046	par_9
SEDIRRES	<---	SEESMDIR	.343	.015	2.604	.043	par_10
KSCAPESM	<---	MODESMSKS	.917	.026	1.036	.022	par_11
KSEFFESM	<---	MODESMSKS	.961	.023	1.034	.015	par_12
KSFLXESM	<---	MODESMSKS	.937	.019	1.286	.020	par_13
KSRESESM	<---	MODESMSKS	.968	.020	1.006	.012	par_14
SERESESM	<---	MODESMSE	.952	.025	1.259	.012	Par_15
SEFLXESM	<---	MODESMSE	.920	.022	1.393	0.22	par_16
SEEFFESM	<---	MODESMSE	.955	.016	1.279	.019	par_17
SECAPESM	<---	MODESMSE	.754	.032	3.529	.042	par_18
ESM	<---	MODESMSKS	.824	.007	1.963	.026	par_19
ESM	<---	MODESMSE	.731	.094	3.921	.037	par_20
OSCMED	<---	ESM	.812	.045	1.823	.029	par_21
IIFC	<---	OSCMED	.774	.012	3.280	.044	par_22
IIFC	<---	ESM	.011	.017	1.356	.024	par_23

Table (5.17): Goodness of Fit Indices (GFI)

Test of Chi Square (CMIN) and Normed Chi Square (CMIN/DF)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	44	26.104	7	.000	3.729
Saturated model	31	.000	0		
Independence model	21	38.488	8	.000	4.811

Test of Comparative Fit Indices (CFI)

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.968	.946	.976	.855	.927
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Test of the Root Mean Square Error of Approximation (RMSEA)

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.073	.032	.042	.000
Independence model	.084	.036	.044	.000

Survey Questionnaire

Dear valuable participant,

You are thankfully invited to participate in this PhD research, which is supported by the University of Huddersfield. The survey should takes 10 minutes to complete, and your participation is voluntary and you are free to withdraw your participation at any time. By completing and submitting this survey, you will indicate your agreement to participate this research. Kindly note that the answers will be completely confidential and used specifically for this study. And no risk will be associated with your participation***.*** *In addition, a*ll information collected from you during this research will be kept secure for 10 years as a records at the University of Hudedersfiled. And any identifying material such as personal names and business emails will be removed in order to ensure anonymity. It is anticipated that the research may, at some point, be published in a journal or report. However, should this happen, your anonymity will be ensured, although it may be necessary to use your words in the presentation of the findings and your permission for this is included in the consent form.

Please note that this online version does not require participants to complete their personal name and business email. It is only required to fill-in your company name and the country where the company located. Furthermore, any participants have the right to withdraw this project during the survey, or during one week after submitting the online questionnaire. And it is no binding of participant to reveal the reason of withdrawal.

Please send me an email if you have any questions: Emad.Tariq@hud.ac.uk

Your participation is highly valuable and appreciated.

Kind regards,

Emad Tariq

PhD Candidate

University of Huddersfield

Queensgate, Huddersfield HD1 3DH, United Kingdom

Survey Questionnaire

Below are questions about the company, your position and Social Media implementation at the organization.

Kindly read questions carefully and select the appropriate answer.

1. What is your company name? _____
2. The company location? Country?

   ☐ Saudi Arabia ☐United Arab Emirates ☐ Kuwait ☐ Qatar ☐ Oman ☐ Bahrain
3. As a staff member, which department do you work for at the company?

   ☐ Owner-Director ☐ Sales & Marketing ☐ Finance ☐ Technical Support

   ☐ Human Recourses ☐ Operations/Warehouse ☐ Customer Service

   ☐ Other position, please specify_____
4. What's your company business age (Years)?_____
5. How many employees include yourself working at your company? _____
6. Your gender: ☐ Male ☐ Female
7. Do you use Enterprise Social Media Platforms internally at your company? ☐Yes, continue survey

   No, end ☐ survey
8. For how long have you been using the Enterprise Social Media Platforms inside the company? Years_____
9. How often do you use the following platforms at your company?

	Never	Rarely	Sometimes but infrequently	Neutral	Sometimes	Often	Always
Social Networking Sites like Yammer,	☐	☐	☐	☐	☐	☐	☐

Facebook Workplace, Slack, Zoho Content, Clarizen							
Blogging like WordPress and Blogger	☐	☐	☐	☐	☐	☐	☐
Content Communities like YouTube and Slide Share	☐	☐	☐	☐	☐	☐	☐
Web-base document management platforms like Google Docs and Dropbox	☐	☐	☐	☐	☐	☐	☐
Instant Messaging applications like WhatsApp, Skype, WeChat, Facebook	☐	☐	☐	☐	☐	☐	☐

messenger and Viber							

10. Using Enterprise Social Media Platforms is crucial to improve performance of staff inside the company?

	Totally disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Using Enterprise Social Media Platforms is crucial to improve performance of staff inside the company	☐	☐	☐	☐	☐	☐	☐

11. **Does Staff Knowledge Sharing positively affect the direct impact of using Enterprise Social Media platforms to achieve** Integration of Inter-Functional Coordination**?**

	Strongly disagree	Disagree	Somewhat Disagree	Neither agree not disagree	Somewhat Agree	Agree	Strongly Agree
Responsiveness of Staff Knowledge Sharing	☐	☐	☐	☐	☐	☐	☐

positively affects the direct impact of using Enterprise Social Media platforms on Integration of Inter-Functional Coordination							
Flexibility of Staff Knowledge Sharing positively affects the direct impact of using Enterprise Social Media platforms on Integration of Inter-Functional Coordination	☐	☐	☐	☐	☐	☐	☐
Efficiency of Staff Knowledge Sharing positively affects the direct impact of using Enterprise	☐	☐	☐	☐	☐	☐	☐

Social Media platforms on Integration of Inter-Functional Coordination							
Capacity of Staff Knowledge Sharing positively affects the direct impact of using Enterprise Social Media platforms on Integration of Inter-Functional Coordination	☐	☐	☐	☐	☐	☐	☐

12. Does Staff Engagement **positively affect** the direct impact of using **Enterprise Social Media platforms to achieve** Integration of Inter-Functional Coordination?

	Strongly disagree	Disagree	Somewhat Disagree	Neither agree not disagree	Somewhat Agree	Agree	Strongly Agree
Responsiveness of Staff Engagement positively affects the direct impact	☐	☐	☐	☐	☐	☐	☐

of using ESM platforms on IIFC							
Flexibility of Staff Engagement positively affects the direct impact of using ESM platforms on IIFC	☐	☐	☐	☐	☐	☐	☐
Efficiency of Staff Engagement positively affects the direct impact of using ESM platforms on IIFC	☐	☐	☐	☐	☐	☐	☐
Capacity of Staff Engagement positively affects the direct impact of using ESM platforms on IIFC	☐	☐	☐	☐	☐	☐	☐

13. Does **positive interactive effect of using** Enterprise Social Media Platforms **with Staff Knowledge Sharing Lead to Optimise Staff Capabilities?**

	Strongly disagree	Disagree	Somewhat Disagree	Neither agree not disagree	Somewhat Agree	Agree	Strongly Agree
The positive interaction effect between using Enterprise Social Media platforms and responsiveness of **Staff Knowledge Sharing** leads to **Optimize Staff Capabilities**	☐	☐	☐	☐	☐	☐	☐
The positive interaction effect between using Enterprise Social Media platforms and flexibility of **Staff Knowledge Sharing** leads to **Optimize**	☐	☐	☐	☐	☐	☐	☐

Staff Capabilities							
The positive interaction effect between using Enterprise Social Media platforms and efficiency of **Staff Knowledge Sharing** leads to **Optimize Staff Capabilities**	☐	☐	☐	☐	☐	☐	☐
The positive interaction effect between using Enterprise Social Media platforms and capacity of **Staff Knowledge Sharing** leads to **Optimize Staff Capabilities**							

14. Does positive interactive effect of using Enterprise Social Media Platforms with Staff Engagement Lead to Optimise Staff Capabilities?

	Strongly disagree	Disagree	Somewhat Disagree	Neither agree not disagree	Somewhat Agree	Agree	Strongly Agree
The positive interaction effect between using Enterprise Social Media platforms and responsiveness of Staff Engagement leads to Optimize Staff Capabilities	☐	☐	☐	☐	☐	☐	☐
The positive interaction effect between using Enterprise Social Media platforms and flexibility of Staff Engagement leads to	☐	☐	☐	☐	☐	☐	☐

Optimize Staff Capabilities							
The positive interaction effect between using Enterprise Social Media platforms and efficiency of Staff Engagement leads to Optimize Staff Capabilities	☐	☐	☐	☐	☐	☐	☐
The positive interaction effect between using Enterprise Social Media platforms and capacity of Staff Engagement leads to Optimize Staff Capabilities	☐	☐	☐	☐	☐	☐	☐
The negative interaction effect between using	☐	☐	☐	☐	☐	☐	☐

Enterprise Social Media platforms and the responsiveness of Staff Engagement leads to Optimize Staff Capabilities							

15. Does Optimisation of Staff Capabilities positively influence the relationship between Using Enterprise Social Media Platforms and Integrating Inter-Functional Coordination?

	Strongly disagree	Disagree	Somewhat Disagree	Neither agree not disagree	Somewhat Agree	Agree	Strongly Agree
Optimisation of Staff Knowledge Sharing and Staff Engagement can positively mediate the relationship between using ESM platforms and integrating IFC	☐	☐	☐	☐	☐	☐	☐