



Factors Influencing Social Media Adoption in Small and Medium Enterprises (SMEs)

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ABSTRACT

The adoption and use of Information and Communication Technologies (ICTs) is widely regarded as essential in contemporary organisational environments. Such technologies have substantial effects on an organisation's productivity and competitiveness. However, the nature of the effects varies across types of organisation (small to large), by country-context (developed and developing countries) and with the type of ICT adopted. This thesis focuses primarily on Small to Medium Enterprises (SMEs) in a less-researched developing country context, the region of the Gulf Cooperation Council (GCC), with special reference to Oman. In terms of the ICT under investigation, recognising the emergence of more interactive forms of technology, this thesis focuses on social media applications. It is widely recognised that the adoption and use of these applications change the ways in which organisations conduct their activities and represent a critical business opportunity for SMEs. This opportunity will only be realised by SMEs if, and when, social media are adopted in their organisations. This therefore creates a requirement to understand the factors that influence SMEs in making the adoption decision. The research related to such factors is scarce, not least because the technologies are relatively new. By using the Technology-Organisation-Environment (TOE) framework, this study therefore attempted to understand the factors influencing the decision by SMEs to adopt social media. It employed a sequential, exploratory mixed method, where both qualitative and quantitative approaches were combined to meet the research objectives. In the first stage, a preliminary TOE model of 18 factors was developed from the analysis of semi-structured interviews with 18 SMEs owner-managers in Muscat, the capital city of Oman. In the second stage, a survey involving 205 SMEs in Muscat was conducted to examine empirically the preliminary model. The survey data were analysed using logistic regression (LR). Of the factors examined, compatibility, observability, trialability, trust, image, perceived lack of managerial time, market scope, customer pressure and family and friends' support were found to have significant influence on SMEs' decisions to adopt social media. These findings have important implications and value for the research community, SMEs and policy makers (in particular, the Public Authority for SME Development (PASMED)) in terms of formulating improved strategies for social media adoption. The resulting research model proposed in this thesis can improve these stakeholders' understandings of why some SMEs have chosen to adopt social media technologies, while other SMEs which face similar market conditions have not.

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ABBREVIATIONS

Abbreviation	Full term
ANT	Actor Network Theory
B2B	Business to Business
CA	Content Analysis
CRM	Customer Relationship Management
DV	Dependent Variable
EC	E-Commerce
EDI	Electronic Data Interchange
FA	Factor Analysis
GCC	Gulf Countries Council
ICT	Information and Communication Technologies
IS	Information Systems
IT	Information Technology
IV	Independent Variable
Les	Large Enterprises
LR	Logistic Regression
PASMED	Public Authority for Small and Medium Enterprises
SMEs	Small and Medium Enterprises
SEM	Structural Equation Modelling
SNS	Social Networking Services
SPSS	Statistical Package for Social Science
T	Tolerance
TA	Thematic Analysis
TAM	Technology Acceptance Model
TOE	Technology-Organisation-Environment
TPB	Theory of Planned Behaviour
UK	United Kingdom
USA	United States of America
VIF	Variance Inflation Factor

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Chapter 1: Introduction

1.1 Research Background

Small and Medium-sized Enterprises (SMEs) are recognised as the backbone of any economy (Bahaddad, AlGhamdi and Houghton, 2012; Fong, 2011). They play an important role in job creation as well as ensuring a country's economic stability. In fact, the SME sector is viewed as an essential component of modern industrialised societies (Rahayu and Day, 2015; Elasrag, 2011).

In the era of globalization, businesses find themselves in an environment of constant technological change (Skoko, Ceric and Huang, 2008) which creates difficulties in staying competitive in a business environment. As a result they need to incorporate Information and Communications Technologies (ICTs) to support their business activities since Information technology is viewed as an essential tool to enhance economies (Oliveira and Martins, 2011; Olawale and Garwe, 2010) and a fundamental source of competitiveness (Skoko, Ceric and Huang, 2008; Stroeken, 2001).

However, it is widely recognised that in contrast to large organisations, small organisations have limited scope for investment in ICT that is essential to increase sustainability (Fong, 2011; Kapurubandara, 2009). Despite empirical evidence of the significance of technology to their business success (Gibbs, Sequeira and White, 2007), the diffusion process is still slow (Fong, 2011). Thus, in order to survive in the market, businesses need to continue their efforts to develop and implement up-to-date technology/tools (Skoko, Ceric and Huang, 2008; Yang, Lee and Lee, 2007), even where there are limited funds, as may typically be true for SMEs (Beck and Demirguc-Kunt, 2006).

There are many forms of ICT tools available for organisational use, including social media. Social media represent a new and more agile way of doing business (Andzulis, Panagopoulos and Rapp, 2012), and can change the way in which businesses operate and lead to business transformation (Aral, Dellarocas and Godes, 2013). They are increasingly deployed across organisations and such deployment is expected to continue (Andriole, 2010) . Therefore, all types of organisations, regardless of their size and activities, have realised the importance of adopting social media (Nah and Saxton, 2013). Such adoption yields substantial benefits to business (Merrill *et al.*, 2011). In areas such

as advertisement, promotion, branding, customer feedback, market research, product development and promoting word of mouth (Ainin *et al.*, 2015). These benefits are no longer reserved solely for large organisations (He, Wang and Zha, 2014; Verheyden and Goeman, 2013) as social media have become relevant for SMEs as well (Meske and Stieglitz, 2013).

In the context of SMEs, (Kim, Lee and Lee, 2013) have stated that the adoption of Web 2.0 technologies, which includes social media, is gaining momentum. With this in mind, the findings of a recent survey revealed that 77% of surveyed French SMEs' business owners/managers considered social media to be efficient tools. This view might indicate the recognition of the significance of social media to businesses, in particularly SMEs. Consequently, it could help SMEs to combat challenges and seems to offer them plausible solutions to a number of acute needs and problems that SMEs have (Mannonen and Runonen, 2008). Also, the optimistic view of SMEs' owners/managers towards the role of social media suggests that SMEs realise that mere 'likes' in platforms like Facebook translate into tangible and intangible benefits. Despite the potential advantages and the growing numbers of adopters, literature indicates that only a small number of SMEs are convinced about the perceived benefits and added value of social media adoption (Saldanha and Krishnan, 2012). Section 1.2 provides an initial review of current literature related to social media adoption.

1.2 Research Motivation

There are two main research strands surrounding social media adoption. The first strand is concerned with the use and impact of social media on individuals (Humphreys and Wilken, 2015; Lin *et al.*, 2012; Hu and Wang, 2012; Fischer and Reuber, 2011). The second strand is the adoption and impact of social media in the organisational context. In this context, the major part of literature focus on non-profit organisations and public relations departments (Nah and Saxton, 2013; Lovejoy, Waters and Saxton, 2012; Curtis *et al.*, 2010; Golbeck, Grimes and Rogers, 2010). With respect to its adoption in business contexts, a major part of the literature focuses on large enterprises (Meske and Stieglitz, 2013) and little research has been devoted to the study of social media adoption and use by SMEs .

Perhaps as a result of the lack of literature on social media adoption within the SME context (He, Wang and Zha, 2014; Durkin, McGowan and McKeown, 2013), little is known about why small firms engage in or avoid the use of such technologies (Beier and Wagner, 2014). The significance of social media to SMEs (Mannonen and Runonen, 2008) requires further investigation (He, Wang and Zha, 2014) and thus more research

into the adoption and use of social media technology is needed (Kim, Lee and Lee, 2013; Aral, Dellarocas and Godes, 2013; Andzulis, Panagopoulos and Rapp, 2012; Constantinides, Romero and Boria, 2009).

As mentioned previously, there is growing evidence that businesses that engage in social media use gain business value and competitive advantage (Stockdale, Ahmed and Scheepers, 2012). In fact, the advent of social media enables SMEs to access resources that were, until recently, dominated by large enterprises (Kim, Lee and Lee, 2013). This presents unique opportunities for SMEs to compete beyond their local market (Barnes *et al.*, 2012).

Another issue with respect to social media-related studies is that they are confined to developed countries (Durkin, McGowan and McKeown, 2013; Kim, Lee and Lee, 2013; Jones, Packham and Beckinsale, 2013). In developing countries, there has been much less research, with only a few studies on the adoption of new technologies in some Asian countries, such as Malaysia (Ainin *et al.*, 2015).

The SME sector in Oman, which forms the focus of this research effort, is of interest for several reasons. First, it makes a significant contribution to Oman in terms of employment and GDP, which has resulted in recent attention from the government to this vital sector. Second, this sector has not been explored in Oman in terms of its adoption and usage of Information Systems (IS). In fact, there have been very few published papers concerning Oman's state of IS/ICTs with, perhaps surprisingly, only a single study published about ICTs in the SME context. To date, most of the studies related to ICT use in Oman have addressed its impact on government organisations and large businesses, in particular the banking sector (Alkalbani *et al.*, 2013; Sadi, Azad and Noorudin, 2010; Al-Wohaibi, Masoud and Edwards, 2002).

In summary, then, this study is motivated by the scarcity of research on social media adoption and use by SMEs in Oman. It contributes to the current literature on the adoption of technology innovations in the context of developing countries and in SMEs. In addition, this study responds to calls: (i) for further research to study the adoption of social media in SMEs (Jones, Packham and Beckinsale, 2013; Stockdale, Ahmed and Scheepers, 2012; Hopkins, 2012); and (ii) to encourage qualitative study to understand the adoption of social media as its diffusion increases within organisations (Wamba and Carter, 2014).

1.3 Research Context

Oman is a young and fast growing nation with 78% of its population between 18 and 35 years old (Salem, 2012). It has a stable economic condition, ranked as the world's 62nd largest economy (Schwab, 2015). In 1995, the Omani government launched its economic vision 2020 which outlines the need to transform the country into a digital economy, known as e-Oman. In order to achieve the goals of the e-Oman initiative, the government seeks to exploit the potential of ICTs to improve the required level of digital preparation and readiness (ITA, 2014). Its economic stability allows Oman to harness the potential of ICTs for economic growth and sustainable development. Thus, the ICT sector in Oman has started to quickly gain momentum (AlShihi, 2006). Having adequate ICT infrastructure is believed to be essential for establishing a competitive and effective private sector.

SMEs are the most common organisational form in the Omani private sector. Thus, the government has placed an emphasis on the role of SMEs by encouraging young Omani entrepreneurs and providing them with considerable support and assistance. For instance, in 2012 a royal decree was issued to launch an SME development fund with a capital of US\$260 million to support start-ups. In addition, new policies were instituted by the central Bank of Oman (CBO) to grant SMEs wider access to government tenders (Al Barwani *et al.*, 2014), motivated by the view that SMEs represent a key solution to combatting Oman's employment challenges by creating much-needed jobs (Al-Shanfari, 2012). However, despite the government's initiatives to encourage SMEs to adopt ICT, only a small number of SMEs are aware of the benefits of adopting new technologies. Findings from a study on the use and impact of ICT adoption in 51 SMEs in Oman, for example, showed that only 2% of the surveyed SMEs had commercial websites (Ashrafi and Murtaza, 2010). Social media adoption among SMEs in Oman may well follow a similar pattern, suggesting that social media adoption among companies in general in Oman is likely to still be in its early stages. Thus, it seems important to understand the potential factors that influence the adoption of social media among SMEs.

In the innovation adoption literature, factors influencing adoption have been identified and categorised using different theoretical perspectives. Section 1.4 presents a summary of the theoretical framework underpinning the research effort reported in this thesis.

1.4 Theoretical Approach

Studies regarding the adoption of new technologies have identified various theories and models used as foundations to address adoption at individual level and organisational

levels. In their study to review the literature on theoretical models used in the adoption of technologies, Oliveira and Martins (2011) found that the Technology-Organisation-Environment (TOE) Framework is among the two most common theoretical lenses used to explore the adoption and diffusion of new technologies in organisations. This study made use of the TOE framework by (Tornatzky, Fleischer and Chakrabarti, 1990) for two reasons. First, it has been widely used to understand the introduction of new technologies in organisations (Oliveira and Martins, 2011) and offers a solid theoretical foundation and empirical support (Anamuah-Mensah and Marfo, 2009). Second, it has been used to study the adoption of prior technologies in the SME context; the adoption of cloud computing by Alshamaila, Papagiannidis and Li (2013) and the adoption of Enterprise Resources Planning System by Ramdani, Kawalek and Lorenzo (2009) being relatively recent examples.

1.5 Research Aim, Objectives and Questions

Building on arguments made so far in this chapter, the main aim of this study is to contribute to a growing body of research by exploring factors that influence the adoption of social media among SMEs in a developing country context, with Oman chosen as the country of study. It also aims to develop and empirically test a relevant theoretical framework. This may provide better understanding about the potential that social media offers to SMEs, as many remain unconvinced (Merrill *et al.*, 2011). The capital of Oman, Muscat, was chosen as a context of study for two reasons. First, it is the country's commercial hub and a home to a significant proportion of Oman's SMEs. Second, it is the most developed technological infrastructure area in the country (Ashrafi and Murtaza, 2010). In order to address the stated aims of this research, the following objectives were established:

- To contribute to a growing body of the research on social media by studying the SME adoption process in a developing country context.
- To understand the current adoption level of social media among SMEs in Oman.
- To explore SME owners' perceptions of uses and the challenges of social media adoption in relation to their businesses.
- To qualitatively examine the impact of technological, organisational and environmental aspects on the adoption of social media by SMEs.
- To develop and test a framework that guides the adoption process of social media among SMEs.

The research objectives from the following research questions (RQ) for this study:

RQ1: What is the current adoption status and level of social media use by SMEs in Oman?

RQ2: What are the main uses and challenges of social media among Omani SMEs?

RQ3: What are the TOE framework factors that influence the adoption of social media among SMEs in Oman?

RQ4: Does the TOE framework appropriately capture the factors affecting social media adoption among SMEs in Oman?

1.6 Research Design

To address the stated research questions, the study reported in this thesis employed a sequential mixed-methods design. This is a two-phase design where the researcher investigates the topic using a qualitative approach before moving to a quantitative phase. With this in mind, this design aims to generalise the findings of the first phase (qualitative) through the use of a quantitative method. This approach allows the researcher to avoid structuring the study around a limited set of predefined attributes for which previous studies have been criticised. In these studies, researchers were selective in their choice of attributes (Alshamaila, Papagiannidis and Li, 2012; Ramdani and Kawalek, 2007) that had been empirically tested and found to be significant in other studies and with different IS innovations.

The approach followed by previous studies is argued to influence the research in two ways: first, including some attributes which have been significant in other IS innovation may lead to bias. This is because different factors and attributes influence the adoption of IS innovation differently (Ramdani, Kawalek and Lorenzo, 2009a). Second, restricting a study to a certain set of factors may prevent the emergence of new attributes, especially in a different cultural context such as that of developing countries (Sabah, Gholami and Clegg, 2015). With these issues in mind, starting with a qualitative approach is believed to allow participants to articulate relevant motivations according to their own experience with social media.

This research is characterised by its specificity to the Omani context, which lacks existing studies on the adoption and use of social media. Therefore, securing initial qualitative

information from key social media players in Omani SMEs would lead to insightful results. It would also offer more clarity in relation to inconclusive results about internal and external factors that influence the innovation adoption decision by SMEs (Jones, Packham and Beckinsale, 2013).

The study was conducted in two phases and carried out during the period between September 2014 and December 2015. In the first phase, data were collected via semi-structured interviews and a thematic analysis approach was used to analyse the qualitative data. In the second phase, an online administered survey was sent to a sample of SMEs and SPSS software was deployed to analyse data. The population of interest for this study was SMEs who may be adopters or non-adopters of social media, where SMEs are defined in accordance with Ministry of Commerce and Industry (MOCI) and Oman Chamber of Commerce and Industry (OCCI). According to both governmental units, SMEs are firms that have fewer than 250 employees and an annual turnover of less than R.O 1.5 million (Al Barwani *et al.*, 2014).

1.7 Research Significance

The study is believed to be potentially significant for Oman's economy as it aims to highlight the factors influencing the adoption of new technologies (specifically social media) in SMEs. Understanding such factors may help in promoting new entrepreneurial projects and the emergence of more start-ups. Also, it will contribute to the limited literature on social media in Oman. In addition, the findings of the study should yield useful information for Omani entrepreneurs to help improve their entrepreneurial projects. Moreover, the recommendations of the study will help to assist proper and effective use of new technologies. Above all, having a clear idea about the influencing factors of social media adoption should help improve the understanding of the future of these emerging technologies in the Omani SME sector in particular, and in the business sector in general.

1.8 Structure of the thesis

This thesis is structured around seven chapters, of which this is the first. Chapter 2 presents an analysis of related studies on ICT adoption in organisational contexts, and explores the impact of social media and the characteristics of SMEs (including those in the Omani context). Also, the chapter provides an overview of the current knowledge in relation to theories used to investigate ICTs and social media in the organisational context.

Chapter 3 provides a detailed description of the research approach employed and explains the rationale behind the research methodologies used. In addition, it explores the data collection techniques deployed: semi-structured interviews and online survey. The chapter concludes by discussing the sampling methods used as well as the methods of data analysis.

Chapter 4 is devoted to discussing the qualitative phase of the study. It highlights the key analyses and the key findings which are used to develop the conceptual framework to guide the second phase of research. In addition, the findings are discussed at the end of this chapter.

Chapter 5 focuses on reporting the results of the quantitative study. This chapter also discusses the statistical model developed to predict the adoption of social media among Omani SMEs.

Chapter 6 brings together the main findings of this study and presents the revised version of the research model.

Chapter 7 concludes the thesis by discussing the contributions of this research to theory and practice. In addition, the implications of the findings to SMEs owners/managers and policy makers are discussed. The chapter ends by identifying research limitations and possible research extensions.

Chapter 2: Literature Analysis

2.1 Introduction

The previous chapter presented a detailed view of the research background and identified the research gap that the study aims to address. This chapter reviews relevant research in the area of social media adoption, along with the related body of knowledge on technology adoption in general, with a focus on adoption in small and medium enterprises (SMEs).

This chapter is divided into three main sections. Section 2.2 analyses literature in the area of the adoption of ICT innovations in organisational contexts, and particularly in the SME context, and the incentives and barriers associated with adoption, in order to gain a clear understanding of the state-of-the-art in relation to previous technology adoption in the SME context. This is followed by an analysis of literature related to the adoption of emerging technologies, such as social media, and its role in promoting the uptake of new technologies in SME settings. The section aims to provide insights into the factors that influence social media adoption, which are further discussed in the final substantive section of this chapter (section 2.4).

In reviewing the literature on social media in organisations, particularly SMEs, it is clear that the term 'social media' is used interchangeably with other terms, such as Web 2.0. Therefore, section 2.3 defines what is meant by 'social media' and discusses their use in organisational contexts, and in particular in SMEs. This section concludes by discussing the potential benefits of social media for SMEs.

In the chapter's final substantive section (section 2.4), a critical review of factors that may influence the adoption of social media in SME is presented. This comprises an analysis of the various theories and frameworks that are used to study technology adoption in organisations, and the specific factors that they address. Through this analysis, further justification is provided for the selection of the TOE framework as the basis for empirical data collection and analysis in this study. The section ends by providing analysis of the TOE factors that have been found to influence the adoption of various IS innovations by SMEs. Section 2.5 provides a summary of the chapter and its place in the thesis.

2.2 ICT Innovation Adoption

There is a large number of published studies that have considered the adoption of various types of ICT-based innovations. As this chapter aims to review the existing literature on ICT adoption in the SME context, it is important first to have a broad understanding of the general level of adoption in organisational contexts before moving more specifically into a discussion of adoption in the SME context. Hence, section 2.2.1 will provide general information about ICT adoption in organisational contexts. Given that SMEs are the focus of this study, the rest of the literature analysis focuses on the role of ICT in these business units. This includes reviewing studies concerning the adoption of various technologies, including e-commerce, enterprise systems and cloud computing, in the SME context, and including studies that have been conducted in both developed and developing countries. This analysis is structured in four sections. Section 2.2.2 presents analysis of the use and relevance of ICT in the SME context. Sections 2.2.3 and 2.2.4 then go on to consider the incentives and challenges facing SMEs with respect to the use of ICTs. Section 2.2.5 then highlights how the emergence of, and rapid advancements in, new forms of ICT applications may help to address some of the challenges presented in section 2.2.4.

2.2.1 ICT Adoption in Organisational Contexts

In today's digital economy, deployment of ICT-based systems has become of central importance for governments and organisations. In fact, ICT has become a catalyst for organisational change when businesses find themselves in a rapidly technologically-changing environment (Skoko *et al.*, 2006). It is acknowledged that the evolution and widespread use of ICT applications offers numerous opportunities to users, at individual and organisational levels. As such, literature has indicated that the evolution of ICTs has affected businesses in many ways. For example, as Ongori and Migiro (2010) have argued, there are three changes caused by ICT evolution that transform businesses operations. First, ICT evolution affects industry structures and impacts the degree of competition among businesses. Second, businesses which integrate ICT in their processes realise a positive change in their competitive advantage. The third change is associated with direct impacts on businesses operations. These changes have compelled businesses to recognise the opportunities to compete in the global market brought about by ICTs. In fact, ICT innovations have been considered fundamental to economic growth, effectiveness and efficiency (Damanpour and Schneider, 2006). As a result, the role of ICT in business contexts has received persistent attention from academics, and many empirical studies have been conducted in this area. Thus, a considerable number of published studies have paid special attention to the adoption of ICT innovations. This

may explain why ICT adoption is a widely-discussed research stream in the Information Systems (IS) field (Tarutė and Gatautis, 2014; Tehrani and Shirazi, 2014; Low, Chen and Wu, 2011; Venkatesh *et al.*, 2003).

From a business perspective, many studies have suggested that adoption of ICTs can boost efficiency and competitiveness (Manochehri, Al-Esmail and Ashrafi, 2012; Ongori and Migiro, 2010; Damanpour and Schneider, 2006), and it is considered a critical factor for the success of businesses (Kapurubandara and Lawson, 2006; Premkumar, 2003b) and an important contributor to sustainable competitive advantage for small and large enterprises (Abeysinghe and Alsobhi, 2013; O. E. Omosigho and G. Abeysinghe, 2012; Celuch, Murphy and Callaway, 2007). Also, a wide array of ICTs has made substantial contributions in different business areas, including marketing, networking, communication and resource planning (Tarutė and Gatautis, 2014). Extant research suggests that IT adoption can provide a wide range of potential benefits for businesses (Nguyen and Waring, 2013), helping them to meet internal and external business needs (Omosigho and Abeysinghe, 2012) and to achieve business growth (Dibrell, Davis and Craig, 2008). However, it is worth noting that most of the empirical research addressing ICT adoption in organisations has a particular focus on large enterprises (Roy and Dionne, 2014; Alam and Noor, 2009; Premkumar, 2003b; Mehrtens, Cragg and Mills, 2001; Walczuch, Van Braven and Lundgren, 2000; Iacovou, Benbasat and Dexter, 1995) and that less attention has been paid to understanding ICT adoption in the context of small-scale enterprises (Sin *et al.*, 2016; Ghobakhloo, Arias-Aranda and Benitez-Amado, 2011; Drew, 2003). The next section discusses this further by considering the adoption of ICT in SMEs.

2.2.2 ICT Adoption in SMEs

SMEs have unique features that help them to compete with large enterprises, to access and adopt new technologies in their business operations. They are often seen as dynamic organisations and thus are expected to easily adapt to modern ICT technologies (Abdullah, Wahab and Shamsuddin, 2013; Alshamaila, 2013). They are more flexible, adapt to changes better, and are better placed to develop and accept new ideas than larger organisations (Subrahmanya, Mathirajan and Krishnaswamy, 2010; Taylor and Murphy, 2004). Also, they tend, because of their size and nature, to have more flexible and simpler organisational structures than large enterprises, which allows them to be more innovative in their response to changes in the environment (e.g., as a result of rapid technological changes and globalization) (Tarutė and Gatautis, 2014; Yeboah-Boateng and Essandoh, 2014; Lippert and Govindarajulu, 2006; Damanpour, 1992). In this type of enterprise, both operational and strategic decisions may be taken by a single person, the business owner/manager (Elbeltagi *et al.*, 2013; Ghobakhloo and Sai, 2013). Thus, the

attitude, skills and ICT background of owners and managers work as a driving force for the acceptance of, and investment in, ICT. In other words, in SMEs, it is most often a single person's responsibility to establish goals and needs with respect to ICTs, and to judge the potential of ICTs in their enterprises (Rahayu and Day, 2015; Ongori, 2009; Harindranath, Dyerson and Barnes, 2008; Ritchie and Brindley, 2005).

Owing to the above characteristics of SMEs, the introduction of ICT tools, and rapid development in this area, are becoming increasingly important (Kapurubandara, 2009). These tools have become a crucial element in competing on a global scale, with SMEs recognising the central importance of ICT to their success (Taruté and Gatautis, 2014; Ghobakhloo *et al.*, 2011; Dyerson, Harindranath and Barnes, 2009; Harindranath, Dyerson and Barnes, 2008; Hoffman *et al.*, 1998). A wide range of research attests to the significance and relevance of ICT in SMEs (Consoli, 2012) and stresses that failure of ICT adoption is perceived to have a negative impact on accessing international markets, and to contribute to inadequately robust information and improper management of resources (Ongori and Migiro, 2010).

There is substantial evidence that SMEs engage with many technological innovations (Subrahmanya, Mathirajan and Krishnaswamy, 2010). Hence, the SME setting has witnessed the introduction of a range of ICT applications, ranging from basic technologies to more complex and advanced IT capabilities, such as Enterprise Applications (e.g., Enterprises Resource Planning software). In this respect, studies have examined the adoption of different ICT applications over recent decades. For example, Premkumar and Roberts (1999) studied the adoption of seven communication technologies by small rural businesses in the United States of America (USA), including electronic data interchange (EDI), email and the Internet. Similarly, Kuan and Chau (2001) investigated the adoption of EDI by SMEs in Hong Kong. In another study, which set out to determine the factors of e-commerce adoption among small businesses in New Zealand, Al-Qirim (2007a) compared six important e-commerce communication and applications technologies and, more recently, Rahayu and Day (2015) have studied e-commerce adoption in SMEs in Indonesia.

In addition to the these specific ICTs, the use of the Internet by SMEs was explored by Mehtens, Cragg and Mills (2001) to develop a model of its adoption and, in a similar vein, Chang and Cheung (2001) have looked at the use of the World Wide Web (WWW). In a recent study, Ramayah *et al.* (2016) have also attempted to identify determinants of website usage intention among Malaysian SMEs, reflecting an interest in understanding adoption and use in specific country contexts. As new ICTs are developed and made widely available, then, research into their adoption and use by SMEs tends to follow. Initially, the number of reported studies on a specific technology is limited, but over time

the number of such studies grows. This is the case for social media, on which this research effort is focused, and more information on the, albeit limited, corpus of research in the area will be presented in section 2.3. Before moving on to this, though, it is critical to understand the importance and benefits of ICT adoption in relation to SMEs.

2.2.3 Importance and Benefits of ICT Adoption in SME Contexts

It is clearly important that SMEs find ways to harness opportunities offered in local, regional and global markets where they are likely to face intensive competition. Staying competitive represents the top-most priority for SMEs in the era of globalization (Bharati and Chaudhury, 2015; Nguyen, 2009). Considering their limitations (e.g., limited capital) (Zhu, Wittmann and Peng, 2012; Haller and Siedschlag, 2011), SMEs struggle to compete with large enterprises, which have more extensive resources (Stockdale and Standing, 2004). Therefore, SMEs mainly use ICT tools for their survival (Rahayu and Day, 2015; Sadat Safavi, Amini and Javadinia, 2014; Nguyen, 2009; Hashim, 2007), as a fundamental source for competitiveness (Dahnil *et al.*, 2014; Tan, Eze and Chong, 2012; Skoko *et al.*, 2006), and to keep pace with the changing business landscape (Barba-Sánchez, Martínez-Ruiz and Jiménez-Zarco, 2007; Stockdale and Standing, 2004). Many empirical studies on ICT adoption in SMEs have provided evidence of significant links between ICTs and positive business impacts in four different businesses areas (see, for example, Consoli, 2012): performance; growth; expansion; and new products. With this in mind, it has been argued that putting ICTs at the core of business processes offers SMEs many benefits, such as enhancing survival (Olise *et al.*, 2014; Oni and Papazafeiropoulou, 2014), increasing global collaboration (Ross and Blumenstein, 2015), forming new relationships with partners and customers (Grandon and Pearson, 2004; Stockdale and Standing, 2004), enhancing image (Levenburg, Schwarz and Motwani, 2015), improving performance (Manochehri, Al-Esmail and Ashrafi, 2012) and increasing profitability (Luo and Bu, 2016; Dibrell, Davis and Craig, 2008).

The academic literature also highlights several perceived benefits that SMEs gain as a result of deploying ICTs (see Table 2.1). Though most of these benefits are operational in nature rather than strategic (Harindranath, Dyerson and Barnes, 2008), ICTs have been seen as a strategic weapon to reach a wider market and compete with large enterprises (Yeboah-Boateng and Essandoh, 2014; Ongori and Migiro, 2010; Shiels, Mclvor and O'Reilly, 2003; Damanpour, 1992). They have broadened market reach for SMEs, allowing them to participate beyond their local area and move into more distant markets without the need to have a physical presence (Bayo-Moriones, Billón and Lera-López, 2013; Haller and Siedschlag, 2011; Taylor and Murphy, 2004).

No.	Benefit	Source
1	Cost reduction	(Carcary, Doherty and Conway, 2014; Yeboah-Boateng and Essandoh, 2014; Manochehri, Al-Esmail and Ashrafi, 2012; Ongori, 2009; Dholakia and Kshetri, 2004).
2	Competitive advantage	(Yeboah-Boateng and Essandoh, 2014; Harindranath, Dyerson and Barnes, 2008).
3	Wide business reach and accessing international markets	(Taruté and Gatautis, 2014; Ongori and Migiro, 2010; Ongori, 2009; Dholakia and Kshetri, 2004).
4	Customer relationship management	(Manochehri, Al-Esmail and Ashrafi, 2012; Schlagwein and Prasarnphanich, 2011; Burke, 2010; Harindranath, Dyerson and Barnes, 2008).
5	Increase and improve Productivity	(Manochehri, Al-Esmail and Ashrafi, 2012; Ongori, 2009; Harindranath, Dyerson and Barnes, 2008).
6	Profitability	(Levenburg, Schwarz and Motwani, 2015; Carcary, Doherty and Conway, 2014; Manochehri, Al-Esmail and Ashrafi, 2012; Burke, 2010).
7	Improve company's image	(Levenburg, Schwarz and Motwani, 2015).
8	Increase flow of inflammation	(Ongori and Migiro, 2010).
9	Increase operational efficiency	(Ongori and Migiro, 2010; Ongori, 2009; Harindranath, Dyerson and Barnes, 2008; Dholakia and Kshetri, 2004).
10	Efficient management of resources	
11	Improve information and Knowledge management (KM)	(Ongori and Migiro, 2010).
12	Improve external and internal communication	(Taruté and Gatautis, 2014).
13	Improve business performance	(Manochehri, Al-Esmail and Ashrafi, 2012).

Table 2.1 Benefits of ICT adoption

Despite the identified business benefits for SMEs in using different ICT tools, and despite the significance and relevance to them of such tools, studies suggest a reluctance to adopt and/or a subsequent slow rate of adoption in the SME setting (Carcary, Doherty and Conway, 2014; Oni and Papazafeiropoulou, 2014). This may, to some extent, be associated with the fact that SMEs face several adoption challenges, which are discussed in more detail in the following section.

2.2.4 Challenges Facing SMEs in Relation to ICT Adoption

While a generally positive attitude toward ICT (Al-Gharbi and Ashrafi, 2010; Harindranath, Dyerson and Barnes, 2008) and a broad agreement among SMEs owners that it is essential to introduce ICT to their businesses (Kapurubandara and Lawson, 2006) have been reported, there are many internal and external barriers that hinder the ICT adoption process in SMEs. As such, previous research has shown that the adoption rate of ICT by SMEs is still low and that SMEs are less likely to utilise new technologies, suggesting substantial differences between SMEs and large enterprises in these respects (Taruté and Gatautis, 2014; Hashim, 2007; Premkumar, 2003; Damanpour, 1992). While large enterprises are argued to have greater ability to invest in new technologies owing to

greater financial resources and higher levels of technical knowledge (Cesaroni and Consoli, 2015; Damanpour, 1992), SMEs face several challenges, impeding their access to many technologies. For instance, they are prone to a lack of resources, mainly money, expertise and technical IS experience, all of which make it difficult for SMEs to formulate ICT adoption plans and establish their needs and goals with regards to ICT use (Durkin, McGowan and McKeown, 2013; Kannabiran and Dharmalingam, 2012) and this, in turn, may help to explain the low adoption and usage of ICT among SMEs (Taruté and Gatautis, 2014; Hashim, 2007).

With respect to financial limitations, SMEs are less able to risk committing resources to adopt new technologies than their larger counterparts (Haller and Siedschlag, 2011; Drew, 2003). Thus, securing the associated resources may not be not affordable to SMEs, which might explain why they tend to be cautious about such expensive investment (Ghobakhloo, Arias-Aranda and Benitez-Amado, 2011). Also, SMEs are known to be risk averse and have limited capacity to take risk (Bharati and Chaudhury, 2015). Indeed, relevant literature provides strong evidence that financial constraint has been cited as the primary reason that limits the adoption of ICTs in SMEs and inhibits SMEs from investing to acquire new forms of ICTs (Carcary, Doherty and Conway, 2014; Kannabiran and Dharmalingam, 2012; Hoffman *et al.*, 1998). As a result, they tend not to invest in expensive projects, including investment in new technologies (Harindranath, Dyerson and Barnes, 2008).

Another dimension of the financial resources issue facing SMEs is the actual cost of ICTs. Manochehri, Al-Esmail and Ashrafi (2012) and Harindranath, Dyerson and Barnes (2008) found that the cost of acquiring ICTs was a major barrier to their adoption in SMEs. SME owners and managers often perceive ICT as costly and complex and requiring external support (Levenburg, Schwarz and Motwani, 2015; Ongori, 2009; Harindranath, Dyerson and Barnes, 2008; Shiels, Mclvor and O'Reilly, 2003) which is unaffordable. Under such circumstances, SMEs tend to focus on how using ICTs may lead to cost reduction rather than the value added to their businesses (Harindranath, Dyerson and Barnes, 2008; Premkumar, 2003). From this perspective, it has been argued that many SMEs may avoid adopting technologies owing to their inability to justify the associated cost of investment (Levenburg, Schwarz and Motwani, 2015). As far as aspiration to growth is concerned, in practice SMEs are argued to fall into two distinct categories. While some are found to aspire to grow (Kirkwood, 2009), interestingly, other SMEs were found to have limited ambitions to operate across borders (Joyce and Woods, 2003). This has been argued to influence their aspiration for incorporating ICT solutions. For instance, Levy, Powell and Yetton (2002) argued that SMEs' willingness to limit their competition to a local market, in which they are usually deep-rooted (Cesaroni and

Consoli, 2015), could ossify their use of ICTs. Therefore, they tend to show little inclination towards investment in ICT (Hajiha and Hajihashemi, 2008; Levy, Powell and Yetton, 2002). In contrast, they tend to be more likely to invest in new technologies as such investment becomes essential for SMEs to manage growth (Premkumar, 2003; Levy, Powell and Yetton, 2002).

There are other challenges that might be associated with limited adoption of ICTs, including lack of ICT infrastructure and lack of ICT skills. Ongori (2009) argues that SMEs lack the appropriate ICT infrastructure required to adopt ICT tools, and there is significant evidence of deficiencies in IT skills and relevant in-house expertise (see for example, Yeboah-Boateng and Essandoh, 2014; Kannabiran and Dharmalingam, 2012; Ongori, 2009; Ritchie and Brindley, 2005; Mehrtens, Cragg and Mills, 2001). This lack of skills seems to directly influence the level of awareness of SME owners about the potential benefits of ICTs to their enterprises. In other words, despite most commonly being the decision makers with respect to IT investment (Abdullah, Wahab and Shamsuddin, 2013), and because they are often not specialist IT managers, as is the case in large enterprises (Windrum and Berranger, 2003), SME owners/managers tend to lack the required skills and expertise to judge the potential offered by ICTs (Ongori, 2009; Hashim, 2007). SME owners/managers also tend to undertake limited formal planning with respect to both administrative tasks and business decisions (Bharati and Chaudhury, 2015), and lack information about suitable ICT solutions (Ashrafi and Murtaza, 2010). This may explain why SMEs owners/managers often get external help to overcome the ICT capability gap (Carcary, Doherty and Conway, 2014; Kannabiran and Dharmalingam, 2012; Manochehri, Al-Esmail and Ashrafi, 2012; Harindranath, Dyerson and Barnes, 2008; Hashim, 2007). It is, though, noteworthy that SMEs may receive non-professional support, which in turn may lead to a poor ICT strategy and may hinder their ICT investment (Chibelushi, 2008). This may also explain why some SMEs adopt particular ICTs despite having no clear strategic goal and lacking relevant internal capabilities (Spinelli, Dyerson and Harindranath, 2013).

Further, Ongori and Migiro (2010) and Ongori (2009) have reviewed literature on ICT adoption in SMEs and identified other constraints that hinder the adoption of many forms of ICTs, including their lack of relevance to the nature of business operations (e.g., SMEs operating in the construction area often perceive ICT to have no real impact on their business (for more details see Wong and Sloan (2004)), and lack of legal framework (Ongori and Migiro, 2010). Manochehri, Al-Esmail and Ashrafi (2012) found additional barriers, including lack of information with respect to available technologies, lack of time, negative experience with ICT tools, and lack of top management support. Lack of security

is another commonly recognised obstacle to ICT adoption in SMEs (Tan and Eze, 2008; Looi, 2005).

In addition to the above, it is noticeable that there are some context-related challenges that might be associated with the adoption of new technologies. SMEs in developing countries, for example, struggle with other challenges that seem to limit their adoption of ICT tools. Some of these echo more general concerns of SMEs, such as SMEs in developing countries being known for having a severe lack of financial resources, relatively insecure and expensive infrastructure, and lack of ICT knowledge and skills (Ghobakhloo and Sai, 2013; Kapurubandara and Lawson, 2006). The financial constraints are also reflected in the issue of the budgets allocated for ICT investment, with most SMEs in developing countries not having a formal budget to invest in ICT (Kannabiran and Dharmalingam, 2012). In addition, it has been noted that most SMEs in developing countries are challenged by the issues of risk and security with respect to ICT adoption (Ghobakhloo and Sai, 2013; Al-Gharbi and Ashrafi, 2010). Consequently, SMEs in developing countries are found to still have issues with respect to the awareness of, and benefits associated with, ICT adoption (Manochehri, Al-Esmail and Ashrafi, 2012). This is evidenced by the findings of a survey by Kannabiran and Dharmalingam (2012) which revealed that only 17% of Indian SMEs adopt advanced ICT (including intranet, extranet, ERP, SCM and e-commerce). Other studies, such as the work by Golding et al. (2008) and Kapurubandara and Lawson (2006), have confirmed that SMEs in developing countries fall behind developed countries with respect to ICT adoption and hence struggle to keep pace with new technologies. In a similar vein, Hashim (2007) concluded that ICT adoption among SMEs in Malaysia falls below expectations. Equally important, Al-Gharbi and Ashrafi (2010) stated that cultural differences could be viewed as another barrier that contributes to the slow adoption of ICT in developing countries. Their findings, for example, indicate that one third of surveyed businesses in the private sector of Oman have not adopted the Internet in their businesses because they regard face-to-face interactions with customers as the best mode through which to conduct business. Overall, then, given these points, one may suggest that there is a relatively low and slow rate of ICT adoption in SMEs in developing countries compared to those in developed countries.

Despite the challenges, other scholars and researchers argue that small enterprises have higher opportunities than their large counterparts to adopt new technologies because of the characteristics of SMEs. In addition, the evolution and emergence of cost-effective technologies may enable SMEs to overcome at least some of their resource limitations (Oxborrow, 2012; Fink, 1998). The next section provides a brief overview of the evolution of ICTs and their use in SMEs to position the more detailed discussion (in section 2.3) of

social media tools, their benefits and challenges in the SMEs context, which forms the technology context for this research effort.

2.3 The Role of Technology Evolution in SMEs

Given the on-going developments in ICT (Harindranath, Dyerson and Barnes, 2008; Dholakia and Kshetri, 2004), there is an ever-wider range of cost-effective and less complicated forms of technology. For instance, the internet and web-based technologies have caused revolutionary changes in the ICT field as they have helped SMEs to reach international markets (Tan, Eze and Chong, 2012; Hashim, 2007; Tiessen, Wright and Turner, 2001) and have enhanced their awareness of the new market opportunities offered by these technologies (Al-Gharbi and Ashrafi, 2010; Lee, DeWester and Park, 2008). In fact, the internet represents a central part of businesses' strategies as well as offering growth opportunities for many SMEs (Drew, 2003). It is characterised as a low-cost, user-friendly and widely-accessible technology (Khong *et al.*, 2009) which generally requires minimal service provider support (Yeboah-Boateng and Essandoh, 2014). Overall, internet technologies offer SMEs opportunities to overcome limitations that impinge on their ICT uptake (Dholakia, Bagozzi and Pearo, 2004). Conversely, ignorance of the opportunities offered by internet technologies may lead to a competitive disadvantage and would have a severe effect on SMEs (Dahnil *et al.*, 2014; Soto-Acosta, Perez-Gonzalez and Popa, 2014).

There is a growing number of studies on the adoption of internet-based applications in businesses, including SMEs. By drawing on those studies, one can safely suggest that the adoption of internet-based technologies has received significant attention owing to the substantial benefits that these technologies yield to businesses. The literature also suggests that adoption of these technologies in SMEs is no longer a choice (Khong *et al.*, 2009; Gagnon and Toulouse, 1996) but a necessity (Yeboah-Boateng and Essandoh, 2014; Premkumar, 2003), and such consideration must be made and aligned with the decision to adopt any given ICT (Yeboah-Boateng and Essandoh, 2014). Thus, these tools become an integral part of every business, to support and achieve their objectives (Mehrtens, Cragg and Mills, 2001), and are necessary to business success (Tan, Eze and Chong, 2012).

In addition, the cost of acquiring ICTs has dropped drastically since their general introduction in the 1970s (Rahayu and Day, 2015; Kane *et al.*, 2012). Therefore, lack of financial resources is argued by some to be no longer a major inhibitor to the adoption of new technologies in SMEs (Buonanno *et al.*, 2005; Drew, 2003). In addition, empirical evidence has shown that SMEs do not feel greatly disadvantaged by the lack of IT skills

(Mehrtens, Cragg and Mills, 2001) and the level of IT within the enterprise is no longer a challenge since the advent of internet technologies (Mehrtens, Cragg and Mills, 2001). Neither is lack of security perceived now as a main inhibitor to adoption (Kannabiran and Dharmalingam, 2012).

This analysis suggests that the rapid technology developments associated with the internet have provided clear opportunities for SMEs to invest in new technologies. Within this, the emergence of a new wave of web technologies (known as Web 2.0 tools), and their significant uptake by people around the world, offers businesses a great opportunity to exploit the potential and opportunities provided by these tools. The new forms of internet-based applications in this area can transform business operations and affect businesses in many ways. From an SME perspective, these applications have paved the way for small enterprises to gain potential benefits of ICT, such as enhancing customer relationship and leveraging sales and revenues, in addition to those mentioned in section 2.2.3. More details on the use and benefits of social media for SMEs are presented in the next section.

2.3.1 Social Media: Definition and Classifications

Despite the lack of a universal definition of 'social media' in the academic literature (Omosigho and Abeysinghe, 2012; Xiang and Gretzel, 2010), there having been several attempts to define the term. In these attempts, 'social media' has been viewed and defined from different perspectives, including technical, communication and marketing perspectives (see, for example, Culnan, McHugh and Zubillaga, 2010). However, most of these proposed definitions have been described by Treem and Leonardi (2012, p.145) as either "too application focused" or "too broad". With this in mind, several researchers have clearly argued that the concept of social media cannot be understood without first understanding its two related concepts, Web 2.0 and UGC, as the terms represent the foundation of social media (Paquette, 2013; Stockdale, Ahmed and Scheepers, 2012; Kaplan and Haenlein, 2010). Thus, there seems to be a need to view social media in relation to these two terms as this should help to provide some clarification on what social media platforms are.

With respect to Web 2.0, though there is a lack of consensus as to what constitutes Web 2.0 (Chong and Xie, 2011; Constantinides, Romero and Boria, 2009; Constantinides and Fountain, 2008), the term is used to describe a shift in how users use the web (Cormode and Krishnamurthy, 2008). Andersen (2007, p.2) denoted it as the "second phase" in web technology evolution, characterising it as a social phenomenon as it results in a more connected web where everyone is allowed to create, exchange and edit content

(Cestyakara and Surendro, 2013; Constantinides, 2009). It is noteworthy to mention that Web 2.0 technologies have seen an incredible growth (Hew and Cheung, 2012) which has led to the emergence of new technologies, social media, which are built on the ideological and technological foundation of Web 2.0.

In addition to Web 2.0, as already noted, the term social media is also connected to another term, UGC, which represents the key difference between Web 2.0 and Web 1.0. UGC refers to the capability provided by Web 2.0 technologies whereby end-users are enabled with various forms of media content, such as video, audio, images and comments (Kaplan and Haenlein, 2010; Daugherty, Eastin and Bright, 2008). Taking this one step further, with Web 2.0 technologies end-users create and share information rather than passively consuming published content, as was the case with Web 1.0 technologies (Hvass and Munar, 2012; Hanna, Rohm and Crittenden, 2011).

Having argued that social media is highly connected with, and built on, Web 2.0 and UGC, it is important that any suggested definition considers the link between social media and these related terms. Therefore, while acknowledging definitions from other perspectives, this thesis draws heavily on Kaplan and Haenlein's (2010, p.61) definition of social media which clearly associates social media with Web 2.0 and UGC, as shown in Figure 2.1. According to Kaplan and Haenlein (2010, p.61), social media are "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of User Generated Content". Having established the definition to be followed in this thesis, it is important to highlight the features of social media applications in order to decide which applications may be classified as social media and which may not.

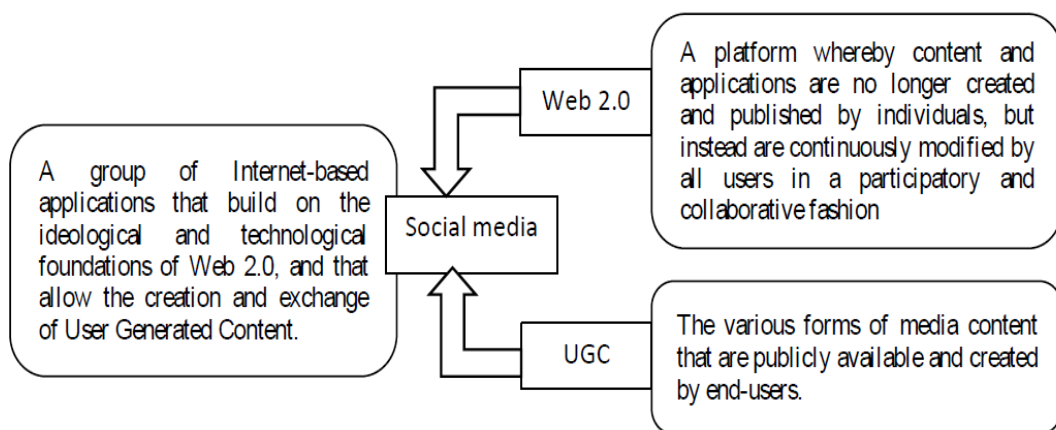


Figure 2.1 A definition of social media (Adapted from Kaplan and Haenlein (2010, p.61))

As noted earlier, social media are known to vary in the features that they offer. In recent years, there has been a rapid evolution in social media with a wide range of applications emerging (Wang, Susarla and Sambamurthy, 2015; Sinclair and Vogus, 2011); this is expected to continue (Culnan, McHugh and Zubillaga, 2010). Also, applications with more sophisticated features are expected to emerge owing to the increased uptake of social media at both individual and organisational levels (Verheyden and Goeman, 2013; Kaplan and Haenlein, 2010). It has been argued to that this causes a challenge in terms of clearly articulating which of the new applications can be classified as a social media platform (Kane *et al.*, 2012). In turn, this has created interest among researchers in providing a broad classification using different dimensions (for more detail see Kaplan and Haenlein (2010), and Kim, Lee and Lee (2013)).

In this thesis, given that it is the first attempt to address adoption of social media in the present study's research context, a broad classification of social media platforms is followed owing to the lack of a priori knowledge about which platforms are commonly used in the context. To put it in another way, in this study social media is used as an umbrella term to include various generic applications, as suggested by Lietsala and Sirkkunen (2008). Thus, the researcher's interest is not to examine the adoption of a particular platform but rather to include various social media platforms. As noted by Verheyden and Goeman (2013), this avoids focusing on a single platform which may have an unknown 'life expectancy'.

Having provided background on the development of social media and set out a definition to be used in this thesis, the following section presents a general overview of the growth and use of social media adoption in organisational contexts with a special emphasis on the SME setting.

2.3.2 The Growth and Use of Social Media in Organisational Context

As stated in section 2.2.5, the development of internet applications and reductions in the cost of associated technologies (Kim, Lee and Lee, 2013; Maguire, Koh and Magrys, 2007) have contributed to the advent of interactive tools, social media, that provide many opportunities to empower both individuals and organisations (Peris *et al.*, 2013). Social media tools were initially designed for individual use, to connect people with each other at a personal level (Schlagwein and Prasarnphanich, 2014), and they have been integrated into people's daily practices (Ellison, 2007). These tools allow individual users to interact with each other regardless of their geographical location (Jagongo and Kinyua, 2013). As such, it is important to briefly discuss the trends associated with the user-base of the main social media platforms before moving on to considering their growth and use at

organisational level. This is important as the increasing user-base provides a key motivation for organisations, and businesses in particular, to deploy these interactive technologies.

Social media platforms connect millions of users and the far-reaching effect of these platforms may not have been anticipated by their founders (Samuel and Ioe, 2016). For instance, Facebook, the most widely used social media platform, has more than 1.65 billion users as of March, 2016 (Facebook, 2016); and Twitter, one of the most popular and largest microblogging services (Jansen *et al.*, 2009), has witnessed a substantial growth to surpass 300 million users as of the first quarter of 2016 (Twitter, 2016). This huge and increasing number of users provides businesses with opportunities to connect with more people and also raises the profile of social media among businesses (Jones, Borgman and Ulusoy, 2015).

Despite this, the utilisation of social media tools in organisational settings is relatively new (Wamba and Carter, 2013; Kane *et al.*, 2012), though, as has been already mentioned, there is a global shift towards their adoption and use in organisational settings. These tools have been found to play a crucial role in the success of businesses today as they allow businesses to have a presence in online 'spaces' that their customers and other stakeholders inhabit (Jagongo and Kinyua, 2013; Kuikka and Äkkinen, 2011; Culnan, McHugh and Zubillaga, 2010). It is unsurprising, then, that literature indicates a growing interest among different types of business, small, medium and large, in utilising the immense opportunities that social media offer to carry out various functions across a wide range of industries.

With this in mind, several researchers have noted that social media are used in different business functions, such as customer relationship management (Omosigho and Abeysinghe, 2012), marketing (Nakara, Benmoussa and Jaouen, 2012) and knowledge management (Soto-Acosta, Perez-Gonzalez and Popa, 2014). In addition, social media have penetrated a wide range of industries, such as manufacturing and retailing, as well as services industries (Kiron *et al.*, 2013; Xiang and Gretzel, 2010; Dyerson, Harindranath and Barnes, 2009). Notably, recently-released reports demonstrate that, each year, the number of businesses that embrace social media increases. For instance, in 2013, McKinsey published the results of a survey of just over 3500 executives from many countries about their companies' use of different forms of Web 2.0 technologies, including social media. The results indicated that 83% of the surveyed executives reported using at least one social media platform in their businesses. As far as the large organisational context is concerned, the Fortune 500, the group of the most successful companies in the US, have recently increased their engagement in social media, mainly Facebook and Twitter, with 74% and 85% respectively being active on these platforms. Culnan,

McHugh and Zubillaga (2010) examined the adoption of four social media platforms – Facebook, Twitter, client-hosted forums and blogs – among the Fortune 500. The results of their study found that, on average, each company has adopted slightly more than one platform, indicating a wide deployment of social media platforms among these large companies.

As has been already mentioned, social media have recently witnessed an uptake in all types of organisations, regardless of the size. This may be at least partially explained by the cost implications of their use. Several empirical studies have confirmed that social media tools do not require large investments (Cesaroni and Consoli, 2015; Michaelidou, Siamagka and Christodoulides, 2011; Kaplan and Haenlein, 2010), suggesting that both large and small enterprises can use these tools. However, on the basis of the available literature, it can be presumed that these tools are particularly useful and relevant to small businesses (Broekemier, Chau and Seshadri, 2015; Dirgijatmo, 2015; Kahar *et al.*, 2012), particularly to overcome some of the limitations associated with their size (Cesaroni and Consoli, 2015).

In addition, from an SME perspective, research has stated that there is a positive attitude towards social media adoption and that SMEs have started to recognise the importance of using these technologies (Cesaroni and Consoli, 2015; He, Zha and Li, 2013). For example, Vlachvei and Notta (2014) reported that about half of the surveyed SMEs have created a presence on four main social media platforms: Facebook; Twitter; YouTube; and LinkedIn. Another study reported slightly more than half (54%) of the surveyed SMEs were using social media applications for various purposes (Broekemier, Chau and Seshadri, 2015). A recent study by Burgess *et al.* (2015), examining social media adoption among Australian SMEs, found that the majority, 85%, engage with customers via Facebook. Similarly, the overwhelming majority of the Inc. 500, the group of the fastest-growing private companies in the U.S., have a presence on social media. The results of nine years of data (2007-2015) revealed that the companies have increased their usage of social media, with 96% reported to have a presence in 2015, compared to only 57% in 2008.

The increasing number of businesses utilising social media platforms is not surprising, considering the increase in the spending on these tools. The Forrester research report 2014, for example, estimated that social media spending in the US will increase from \$8.2 billion in 2014 to \$18.7 billion in 2019 (Migliani, 2014). This expected increase is indicative of the shift towards social media use in businesses, suggesting that the adoption of these technologies is on a par with, or slightly better than, other IT (Lacho and Marinello, 2010; Bughin, 2008).

In summary, it is clear that businesses are taking advantage of using social media to conduct various activities. In fact, recent studies on social media adoption provide empirical evidence to support their potential positive and wide-ranging impacts on SMEs (He *et al.*, 2015; Jones, Borgman and Ulusoy, 2015). There is growing evidence that SMEs benefit from creating a presence on social media – and that such benefit are no longer the sole preserve of large enterprises (Verheyden and Goeman, 2013). The following section provides additional analysis of the potential benefits offered by social media to businesses, including SMEs.

2.3.3 Benefits of Using Social Media

The ongoing growth of social media platforms raises many questions about how these applications might be beneficial in an organisational setting, specifically, given the context of this research, in SMEs. A number of studies have discussed various benefits, providing empirical evidence on the relevance of social media to SMEs (see Table 2.2). In broad terms, the studies suggest that the adoption and use of social media bring SMEs many benefits, including: eWOM branding (Michaelidou, Siamagka and Christodoulides, 2011; Jansen *et al.*, 2009); building brand relationships (Hudson *et al.*, 2015; Dahnil *et al.*, 2014); providing real-time information about products (Vlachvei and Notta, 2014); integrating and enhancing customer relationship management (Broekemier, Chau and Seshadri, 2015; Persaud, Spence and Rahman, 2012); networking and collaboration (Meske and Stieglitz, 2013); increasing awareness (Jones, Borgman and Ulusoy, 2015) as well as advertising and promotion (He *et al.*, 2015; Parveen, 2012).

Besides these areas of potential benefit, researchers have investigated the role of social media in customer knowledge management. For example, Chua and Banerjee (2013) suggested that companies should use social media to gain knowledge about their customers and engage them in knowledge sharing. Via social media tools, businesses are able to form brand-centric communities and engage customers in rich dialogues about their products (Vlachvei and Notta, 2014; Lacho and Marinello, 2010). This rich involvement is argued to promote a culture of sharing and exchanging ideas with customers, which is seen as enriching customers' creativity, can lead to product development (Sigala, 2012) and, more importantly, to creating a unique brand identity (Michaelidou, Siamagka and Christodoulides, 2011). Hence, social media tools strengthen businesses' movement towards making use of internal and external feedback, which ultimately influences their business' performance. This may explain why social media tools have been argued to be the best instrument for businesses to deepen their

connection with customers across the globe and to receive valuable feedback (Vlachvei and Notta, 2014).

Another key benefit of social media is that they represent a source of attraction for SMEs to have more flexible forms of collaboration with each other (Barnes *et al.*, 2012), which is sometimes perceived as the only way to compete with large enterprises (Mannonen and Runonen, 2008). In their exploratory investigation of the potential of social media for collaboration between SMEs, Barnes *et al.*, (2012) provided confirmation for five area of potential collaboration, namely; internal operational efficiency; enhanced capability; external communications; enhanced service offerings; and lifestyle benefits.

In addition to the these benefits, studies have attempted to highlight the financial returns on investment in these tools, which is a contentious issue that has yielded unclear results as: (i) it seems difficult to measure the financial impact of social media on the adopters (Meske and Stieglitz, 2013; Michaelidou, Siamagka and Christodoulides, 2011); (ii) it is something that the overwhelming majority do not assess (Michaelidou, Siamagka and Christodoulides, 2011); and (iii) many practitioners are still sceptical about the fact that social media use leads to profit improvement (Broekemier, Chau and Seshadri, 2015; Cesaroni and Consoli, 2015). However, in his study seeking insights into social media platform usage by small businesses, Ball (2011) surveyed 130 business owners and the results revealed that more than 70% of them claimed that social media has contributed to about 10% of total sales. Another recent study by Ainin *et al.* (2015) has shown a strong impact of Facebook usage on financial performance of SMEs, with Facebook usage having a very strong positive impact on organisational performance as it leads to increases in sales transactions, sales volume, sales enquires and number of customers. This view can be also seen in a study by Jones, Borgman and Ulusoy (2015), which provided empirical evidence on the impact of social media on sales and repeat sales indicated by owners of SMEs in a rural region in the US.

No.	Benefit	Source
1	Enabling eWOM branding	(Michaelidou, Siamagka and Christodoulides, 2011; Bulearca and Bulearca, 2010; Jansen <i>et al.</i> , 2009).
2	Building brand relationship	(Hudson <i>et al.</i> , 2015; Dahnil <i>et al.</i> , 2014; Vlachvei and Notta, 2014; Parveen, 2012; Bulearca and Bulearca, 2010; Jansen <i>et al.</i> , 2009).
3	Providing real time information about products	(Vlachvei and Notta, 2014).
4	Integrating and enhancing customer relationship management	(Broekemier, Chau and Seshadri, 2015; Jones, Borgman and Ulusoy, 2015; Vlachvei and Notta, 2014; Parveen, 2012; Persaud, Spence and Rahman, 2012).
5	Promoting culture of sharing and exchanging ideas with customers	(Sigala, 2012).
6	Networking and collaboration	(Broekemier, Chau and Seshadri, 2015; Meske and Stieglitz, 2013; Bulearca and Bulearca, 2010).
7	Increasing awareness about business	(Broekemier, Chau and Seshadri, 2015; Jones, Borgman and Ulusoy, 2015; Michaelidou,

		Siamagka and Christodoulides, 2011).
8	Advertising and promotion	(Broekemier, Chau and Seshadri, 2015; Parveen, 2012; Persaud, Spence and Rahman, 2012).
9	Improve knowledge management	(Meske and Stieglitz, 2013; Soriano et al., 2012)
10	Increasing sales and revenues	(Ainin et al., 2015; Jones, Borgman and Ulusoy, 2015; Ball, 2011).

Table 2.2 Benefits of social media adoption

Despite of the benefits that social media technologies offer to businesses (see section 2.3.3) and the growing evidence of their relevance to SMEs, the adoption of social media in SMEs is still perceived to be in its infancy (Persaud, Spence and Rahman, 2012; Treem and Leonardi, 2012). In addition, several researchers have noted reluctance among some SMEs to adopt social media due to doubt about the effectiveness of these tools to support brands (Omosigho and Abeysinghe, 2012; Nakara, Benmoussa and Jaouen, 2012; Michaelidou, Siamagka and Christodoulides, 2011).

The literature also indicates that issues of slow adoption and reluctance towards adoption are serious issues for businesses, in particular SMEs, in developing countries (Hashim and Noor, 2014; Schlagwein and Prasarnphanich, 2014; Yeboah-Boateng and Essandoh, 2014). Further, Omosigho and Abeysinghe (2012) have argued that it is therefore important to identify factors that influence organisations to adopt social media as this will help to prepare these organisations to use and benefit from social media. As such, it is clear that there is a need to understand the factors that influence the adoption of social media in SMEs.

Since there is only a limited literature on social media adoption, to achieve this understanding of the factors that influence the adoption of social media in SMEs it is important to review the wider ICT innovation literature in relation to the factors that have influenced the decision to adopt previous ICTs in organisational contexts. From this perspective, several models and theories have been used. Therefore, the next section will analyse these models and theories that have been used to examine the factors influencing ICTs adoption, and justify the most suitable theory to be used in this study.

2.4 IT Adoption Models and Theories

The adoption process of any given IT in an organisational context has been described as complex and multidimensional. This is because it is affected by, and connected with, multiple factors (Abdullah, Wahab and Shamsuddin, 2013) related to the technology characteristics and to both an organisation's internal and external environment (Damanpour and Schneider, 2006). In the broader IT literature, this process has

therefore been researched from multiple theoretical perspectives using a wide range of constructs.

This section aims to review the various models and theories which have been used to understand the factors that influence the adoption of different ICTs in SMEs. As the level of analysis is organisational, theories and models which have been used to study the adoption at individual level are out of scope. To achieve its aim, the section has four subsections. Section 2.4.1 provides a general overview of existing IT adoption theories and models in the organisational context before narrowing down the focus to discuss the major theories and models that have been used to investigate the adoption process in SMEs, discussed in more detail in section 2.4.2. In this section, the strengths and weaknesses of the three identified theoretical perspectives are analysed, covering the Diffusion of Innovation (DoI) Theory, the Technology Acceptance Model (TAM) and the Technology-Organisation-Environment (TOE) Framework. This subsection ends by rationalising the use of the TOE framework to guide this research. Having decided on TOE as a theoretical perspective to underpin this research, analysis of main aspects of the framework is presented in section 2.4.3.

2.4.1 Overview of existing IT adoption models and theories

Studies have employed various theoretical approaches to investigate the use and adoption of different ICT applications in organisations (Parveen, 2012). In their study to review the literature on theoretical models used in the adoption of technologies, Oliveira and Martins (2011) found that there are five widely-used models: the Technology Acceptance Model (TAM); the Theory of Planned Behaviour (TPB); Diffusion of Innovation (DoI); the Unified Theory of Acceptance and Technology Use (UTAUT); and the Technology-Organisation-Environment (TOE) Framework.

These theories and models have differences in their focus as well as each having a particular emphasis. For instance, the Diffusion of Innovation (DOI) theory emphasises the role of the characteristics of the technology on adoption. Other research streams include theoretical perspectives focusing on the influence of behaviour-related characteristics, making TAM or UTAUT more applicable. Some of the theories and models have greater emphasis on the individual technology adoption (TAM, UTAUT, TPB) while others are described as organisational-led theoretical perspectives (TOE and DOI).

Theories are used to explain, understand and make prediction about different subjects. Thus, each of the above-mentioned theories is used to either explain, understand or predict a given issue. For instance, in the context of social media, UTAUT was used by

Khan, Saleh and Nivarthi (2015) to explain social media acceptance and usage behaviour among Australian healthcare professionals' and patients'. Also, Christodoulides, Siamagka and Michaelidou (2015) used TAM to explain how Business-to-Business (B2B) SMEs in the UK accept and use social media platforms.

As mentioned earlier, the identified theories and models have been used to investigate, explain and predict the acceptance of technology at both individual and organisational levels. So far, TAM, TPB and UTAUT (which is an extended version of TAM) have been used to study factors that guide individual decisions to accept new technologies. For instance, Curtis *et al.* (2010) used UTAUT to examine the perception of the credibility of public relations practitioners in relation to social media. In contrast, DOI and TOE framework are mainly used to address adoption at the organisational level (Oliveira and Martins, 2011). For example, Parveen (2012) has employed the TOE framework to investigate factors the influence social media adoption among Malaysian organisations.

Several of the identified theories have been used to identify and categorise factors affecting the adoption of various technologies in the SME setting, the focus of this research effort. Thus, the next section reviews the literature related to the use of these major theories to study the IT adoption process in the SME context. This review is important to rationalise the best theoretical perspective to guide this study.

2.4.2 Overview of major technology adoption theories in SMEs

Based on a review of the existing literature on adoption of IT innovations, the following theories and models have been identified as being the most widely-used and empirically-tested theories in the SME context: the Diffusion of Innovation theory (DoI); the Technology Acceptance Model (TAM) and the Technology-Organisational-Environmental (TOE) framework. Each theory will now be discussed.

Diffusion of Innovation (DoI) theory

DoI, introduced by Rogers to describe the patterns of IT innovation adoption (Tan, Eze and Chong, 2012), has been commonly used to study the adoption of new technologies in organisational contexts, including SMEs. According to Rogers (1962), DoI comprises the internal and external characteristics of organisation that impact the decision to adopt a given technology in an organisation. In his theory, Rogers identified five perceived characteristics of innovation – any “idea, practice, or object that is perceived as new by an individual or other unit of adoption” (Rogers, 2003) –which are: relative advantage; compatibility; complexity; trialability; and observability (these concepts are explained in more detail in Figure 2.3). The characteristics can be used to explain the diffusion

process of an innovation in the organisational context. DoI has been applied to study the adoption of various technologies in the context of SMEs. For instance, Khong *et al.* (2009) used it to investigate the influence of technological characteristics of internet-based ICTs on their adoption by Malaysian SMEs.

Despite its widespread use, DoI has been criticised as it mainly considers the technological characteristics of the innovation being studied and does not encompass other internal and external factors of adoption which may be key. Also, DoI does not take into consideration the impact of organisational and environmental factors (Amin and Hussin, 2014; Tehrani and Shirazi, 2014), and does not include CEO characteristics, which have been found to be influential in many ICT adoption studies which have shown that decisions regarding technology adoption reside in the SME owners/managers (Abdullah, Wahab and Shamsuddin, 2013; Hashim, 2007). Furthermore, research stretching back several decades has criticised the predictive power of DoI (see, for example, Bass (1969)).

Given that the technological and organisational characteristics addressed by DoI are identical to the technology and organisation contexts of the TOE framework (Amin and Hussin, 2014), Oliveira and Martins (2011) have suggested that the inclusion of the environmental aspect in the TOE framework enhances the framework's applicability and suitability compared to DoI. As such, DoI does not appear to be the most suitable choice for this study.

The Technology Acceptance Model (TAM)

TAM is another well-established, robust and highly-cited model that has been used largely to explain technology acceptance (Chuttur, 2009; King and He, 2006). It was introduced by Davis (1989) to predict the behavioural intention to adopt technologies. The model postulates that the acceptance of technology depends mainly on two variables: perceived ease of use (PEU) and perceived usefulness (PU). Owing to its simple structure and few constructs (Agarwal and Prasad, 1999), TAM has been found to be easy to use and has therefore been extensively applied in relation to IT adoption (Abdullah, Wahab and Shamsuddin, 2013; Chuttur, 2009). The extensive use of TAM has led to the model being enhanced by adding other constructs/antecedents. For example, Venkatesh *et al.* (2003) suggested that other constructs (effort expectancy, performance expectancy, social influence and facilitating conditions) directly influence users' intentions to accept technology. Such research has resulted in several derivatives of TAM, such as TAM II and UTAUT (Venkatesh *et al.*, 2003).

In short, TAM is a model used to study individuals' acceptance of a given technology, though there have been some efforts (which are quite fragmented in nature) to use TAM as a basis for analysing organisational technology adoption (Abdullah, Wahab and Shamsuddin, 2013). It is therefore not commonly used to study adoption at an organisational level, the focus of this study. Also, Chuttur (2009) argued that the impressive number of studies which have used TAM has led to a saturation level in the model and limited its practical effectiveness. In addition, considering the predictive power of TAM compared to TOE, the latter is viewed to have more predictive and explanatory power, leading to TAM being deemed as not the most suitable approach to underpin this study. In the following subsection, the rationale behind the selection of the TOE as a theoretical lens to study social media adoption in SMEs is presented.

The Technology-Organisation-Environmental (TOE) framework

TOE is a widely-accepted model for studying IT adoption in organisations, including SMEs. It was first developed by Tornatzky, Fleischer and Chakrabarti (1990) as a theoretical framework to predict the adoption of various forms of IT innovation. Subsequently, it has been extended and developed by further studies such as Oliveira and Martins (2010); Srivastava and Teo (2010); Yee-Loong Chong and Ooi (2008); Pan and Jang (2008); Kuan and Chau (2001); Chau and Tam (1997). Thus, as a valuable analytical framework (Oliveira and Martins, 2008), TOE has broad applicability and possesses exploratory power that is useful in order to study a wide range of technologies (Baker, 2012). It has been viewed as an ideal theoretical framework for predicting and explaining the adoption of any given technology (Ndekwa and Katunzi, 2016; Yeboah-Boateng and Essandoh, 2014; Ramdani, Chevers and Williams, 2013).

Since its inception in 1990, TOE has been used in different contexts, in developed and developing countries, to study the adoption and implementation of various technologies (see Tables 2.3. and 2.4). For example, it has been used to study adoption of cloud computing (Gangwar *et al.*, 2015; Alshamaila, Papagiannidis and Li, 2013), e-commerce (Rowe, Truex and Huynh, 2012; Ghobakhloo, Arias-Aranda and Benitez-Amado, 2011; Al-Qirim, 2007), e-business (Wen and Chen, 2010), and enterprise applications systems (Ramdani, Chevers and Williams, 2013).

The TOE framework has emerged as a well-established and a robust framework to analyse different internal (technological and organisational) and external (environmental) factors that influence the adoption of different types of ICT in the SME setting (Abeyasinghe and Alsobhi, 2013). As shown in Figure 2.2, the TOE framework is best described as an organisational-level theory that comprises three main contexts: technology (T); organisation (O); and environment (E) (Baker, 2012). Each context has a

set of determinants that are believed to impact the adoption of innovation in organisations (and will be discussed in detail in section 2.4.3).

No	Authors	Context	IT innovation	Technology-Organisation-Environment		
				Technology (T)	Organisation (O)	Environment (E)
1	Alshamaila, Papagiannidis and Li, 2013	UK	Cloud computing	Relative advantage*, Uncertainty*, Compatibility*, Complexity*, Trialability*	Size*, Top management support*, Innovativeness*, Prior IT experience*	Competitive pressure, Industry*, Market scope*, Supplier efforts *, External computing support*
2	Premkumar and Roberts, 1999	US	Four ICT Tools: online access, e-mail, Internet and EDI	Relative advantage*, Cost, Complexity, compatibility	Top management support*, IT-expertise, Size of the business*	Competitive pressure*, Vertical linkages, External support*
3	Ifinedo, 2011	Canada	Internet/e business technologies (IEBT)	Relative advantage*, Compatibility*, Complexity	Management support**, Organisational readiness*	External pressures*
4	Chau and Tam, 1997	Hong Kong	Open systems	Perceived benefits, Perceived barriers*, Perceived importance of compliance with standards, interoperability and interconnectivity	Complexity of IT infrastructure, Satisfaction with existing systems, Formalisation of system development and management	Market uncertainly
5	Thong, 1999	Singapore	E-commerce	Relative advantage, Compatibility, Complexity	Business size* Employee's IS knowledge*, Information intensity, CEO's Innovativeness, CEO's IS Knowledge	Competition

Table 2.3 Examples of TOE-based studies (1)

No	Authors	Context	IT innovation	Technology-Organisation-Environment		
				Technology (T)	Organisation (O)	Environment (E)
6	Ramdani, Kawalek and Lorenzo, 2009	UK	Enterprise Systems, (ERP, CRM, SCM and e-procurement))	Relative advantage*, Compatibility, Complexity, Observability, Trialability*	Top Management Support*, Organisational readiness*, IS experience, Size*	Industry, Market scope, Competitive pressure, External IS support
7	Iacovou, Benbasat and Dexter, 1995		EDI	Perceived benefits	Organisational readiness	External pressure
8	Kuan and Chau, 2001	Hong Kong	EDI	Perceived direct benefits*, Perceived indirect benefits	Perceived financial cost*, Perceived technical competence*	Perceived industry pressure*, Perceived government pressure*
9	Scupola, 2009	Denmark & Australia	E-commerce	E-commerce relative advantage, Barriers and benefits, E-commerce related technologies	CEO's Characteristics, Top management support, Employees' IS knowledge and attitude, Resource constraints	Role of government, Technology support infrastructure
10	Al-Qirim, 2007	New Zealand	E-commerce	Relative advantage*, Cost, Compatibility*	Size, Information intensity of Product*, CEO's innovativeness*, CEO's involvement*	Competition, Buyer/Supplier pressure, Support from Technology vendors*
11	Parveen, 2012	Malaysia	Social media	Relative advantage, Compatibility	Top management support, Entrepreneurial orientation	Institutional pressures

Table 2.4 Examples of TOE-based studies (2)

The technology context includes both internal and external technologies. The internal technologies refer to the technologies which are already in use in the organisation, while the external technologies consist of those available in the marketplace but not in use in the organisation. Both internal and external technologies may include either equipment or practice. The organisation context refers to various characteristics of the firm, such as size, intra-firm communication processes and the amount of 'slack' resource. The environment context comprises the structure of the industry, pressure from competitors and partners, and the regulatory environment (Tehrani and Shirazi, 2014; Baker, 2012; Ramdani, Kawalek and Lorenzo, 2009; Zhu, Kraemer and Xu, 2003; Tornatzky, Fleischer and Chakrabarti, 1990). More detail about the three main aspects of the framework is given in section 2.4.3.

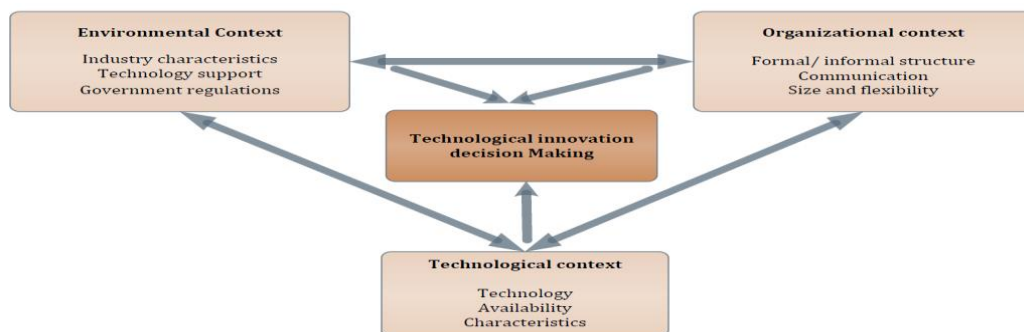


Figure 2.2 The TOE Framework (Tornatzky, Fleischer and Chakrabarti, 1990)

Considering that there is a need to better understand and predict the adoption of social media among SMEs, the TOE framework was chosen as the theoretical framework to underpin this research. There are several reasons for this choice. First, TOE is suitable to study the adoption in an enterprise context, as is the case in the present study where SMEs are the focus. Second, TOE has a clear theoretical basis and consistent empirical support (Amin and Hussin, 2014). Third, it is consistent with other organisational-level IT innovation theories, such as DOI (Jain *et al.*, 2011), which is argued to strengthen and improve the explanatory power of the framework (Al Nahian, Akter and Islam, 2009). Fourth, it is seen as being comprehensive and thus can be applied to study the adoption of any IS technology (Zhu, Kraemer and Xu, 2002). Fifth, the inclusion of the three context (technology, organisation and environment) offers advantages over other models of adoption as TOE provides a holistic picture of factors influencing the IT adoption decision (Gangwar, Date and Raoot, 2014; Zhu, Kraemer and Xu, 2003). Finally, as noted earlier, the TOE framework has been applied to study the adoption of many technologies, suggesting its suitability for studying social media, as well.

For these reasons, the TOE framework seems the most suitable candidate for studying the adoption of social media technologies in SMEs. Next, it is important to discuss and

understand the three contexts of the framework and its main determinants as presented in the academic literature. Therefore, the remainder of this section presents more details on each of TOE's three contexts.

2.4.3 TOE's Contexts

TOE has three contexts: technology; organisation; and environment. This section presents details on the factors corresponding to each context. It is noteworthy that some of the factors are heavily discussed reflecting their extensive examination in the IT adoption literature. Each of the context and their corresponding factors are discussed now.

Technology context

This context describes existing technologies in the organisation as well as the pool of technologies available in the market. A consideration of existing literature on IT adoption using TOE shows that the impact of characteristics of the technology has long been recognised. Many researchers have argued the importance of a set of technological features on the adoption process. Rogers (2010) identified five attributes of technology that may have an influence on the decision to adopt or reject a given technology in organisations: relative advantage; complexity; compatibility; trialability; and observability. These attributes, which represent the core pillars of Roger (1995) Diffusion of Innovation theory, have been widely examined in the IT adoption literature (Ramdani and Kawalek, 2007), and are the core factors in the technology context of TOE. Figure 2.3 provides definitions of the five attributes. Each of these attributes will now be discussed.

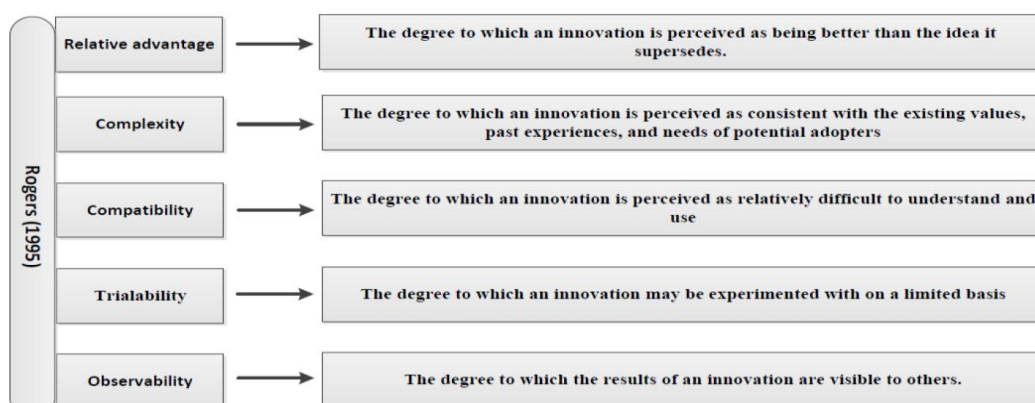


Figure 2.3 Attributes of Innovation (Rogers, 1995)

Relative advantage, sometimes referred to as perceived benefits, is considered as a central factor that stimulates an organisation's decision to adopt technologies. Most IT adoption studies suggests that organisations that have higher levels of recognition of

relative advantage are more likely to adopt a new technology than the ones with lower levels of recognition (see, for example, Rahayu and Day, 2015; Ghobakhloo and Sai, 2013; Ghobakhloo, Arias-Aranda and Benitez-Amado, 2011; Al-Qirim, 2007; Grandon and Pearson, 2004; Chwelos, Benbasat and Dexter, 2001; Poon and Swatman, 1999). It is therefore important for SMEs to be aware of the perceived benefits of new technologies as this will positively motivate the adoption decision in relation to them (Ramdani and Kawalek, 2007). Social media offers many benefits to adopters in terms of building a strong relationship with customers, reducing the promotion and advertisement cost, getting immediate feedback about the products and services, as well as building business brands in a short period of time (see Table 2.2 on page 47 for more detail on the potential benefits of social media technologies). The perceived benefits of social media technologies can be expected to play an important role in the adoption decision in SMEs.

Perceived complexity, sometimes referred to as perceived ease of use, is another technological factor that has been found to be an influential factor in the adoption of new technologies in SMEs (Gangwar *et al.*, 2015; Harindranath, Dyerson and Barnes, 2008; Thong, 1999), suggesting a negative relationship between the perceived complexity of any given IT and the adoption decision. In other words, studies have emphasised the need for new technologies to be easy to use and understood in order to facilitate the adoption decision. In short, SMEs tend to be less likely to adopt technologies that are more challenging to use.

The third factor in the technology context is **perceived compatibility**. Several studies have indicated a positive correlation between the compatibility of a given ICT and the decision to adopt it in SMEs (see, for example, Alshamaila, Papagiannidis and Li, 2013; Ghobakhloo and Sai, 2013; Azam and Quaddus, 2009; Tan *et al.*, 2009; Al-Qirim, 2007; Grandon and Pearson, 2004). It has been argued that introducing new technologies might result in some changes in the organisation's values and may also interrupt the existing processes within the organisation. In addition, it may require changes to the existing technical infrastructure. It is therefore important, particularly for SMEs, that the potential changes are compatible with the organisation's values, needs and work practices as well as consistent with the existing technological infrastructure (Lertwongsatien and Wongpinunwatana, 2003). From an SME owner-manager's perspective, it is essential for a given technology to have a high level of perceived compatibility in order to be adopted.

Observability describes the visibility resulting from a given technology adoption and the impact that it has in the industry. Observability has been found to impact SME owner/managers' decisions to adopt new technologies. Several researchers (for example, Azam and Quaddus, 2009; Hussin and Noor, 2005; Al-Gahtani, 2003; and Seyal and

Rahman, 2003) have found that technologies with a visible impact are more likely to be adopted by SMEs. In contrast, other studies (such as Ramdani, Kawalek and Lorenzo, 2009; Kendall *et al.*, 2001) found no significance for this factor on the decision to adopt new technologies by SMEs. With respect to social media, the increasing number of adopters may reflect the potential impact of these technologies on the adopters, which in turn may motivate increased levels of adoption.

Trialability is TOE's final technological driver of the decision to adopt new technologies in organisations; however, it has not been studied as extensively as the other four technological factors (Ramdani and Kawalek, 2007). Trialability tends to be more significant in the early stages of than in the late stages of adoption. Hence, offering trial versions of ICT tools and providing information on them is suggested to positively influence decisions to adopt these tools by organisations (Tan, Eze and Chong, 2012; Azam and Quaddus, 2009; Boumediene and Kawalek, 2008; Kendall *et al.*, 2001). Since social media is still in its infancy and is known for its newness in the SME setting, trialability may therefore be an important stimulator of the adoption decision.

Organisation context

Organisation characteristics, the second set of determinants in the TOE framework, have, through a considerable number of studies, been found to impact the adoption of new technologies. In case of SMEs, the characteristics of a business have been examined to identify their potential role in the adoption of new technologies. The four organisational factors that have been widely examined are: enterprise size; top management support; CEOs' innovativeness; and prior IS experience. Each of these factors will now be discussed.

Enterprise size is one of the main organisation characteristics that has been frequently studied in the ICT adoption literature. It has been viewed as a good predictor of the adoption of new technologies. Hence, many empirical studies have suggested a strong relationship between size and the likelihood of an enterprise to adopt a new technology (Pan and Jang, 2008; Zhu, Kraemer and Xu, 2003; Premkumar and Roberts, 1999; Thong, 1999). It is often argued that large enterprises are in a better position to adopt new technologies than SMEs as a result of having sufficient organisational and financial resources to invest in technology as well as sufficient IT expertise to experiment with new technologies (Haller and Siedschlag, 2011; Premkumar and Roberts, 1999; Damanpour, 1992). However, there is a different view with regards the significance of the business size on the IT adoption process in SMEs. According to Oliveira and Martins (2011), the simple and flexible managerial structure that characterises SMEs tends to help them to react and adapt quickly to changes in their business environment, including new

technology adoption, compared to large enterprises where the reaction tends to be slow owing to the levels of bureaucracy involved in the decision making process. It has therefore been suggested that being small is no longer a competitive disadvantage in terms of adopting new technologies. For example, Rahayu and Day (2015) found no link between firm size and e-commerce adoption among SMEs, attributing this to the emergence of lower and more affordable technologies.

Top management support has long been at heart of studies examining IT adoption in organisations. It is evident from reviewing the IT adoption literature that top management support has a strong impact on the decision to adopt new technologies within organisations. With respect to SMEs, there are many published studies describing the role of top management support, which is considered a key enabler in the adoption decision for technological innovations in SMEs (Oliveira, Thomas and Espadanal, 2014; Chen *et al.*, 2011; Wang *et al.*, 2010; Kawalek *et al.*, 2009; Boumediene and Kawalek, 2008; Ramdani and Kawalek, 2007; Hussin and Noor 2005; Premkumar, 2003; Scupola 2003; Premkumar and Roberts, 1999). In a recent study, Stieglitz and Dang-Xuan (2011) found that managerial role in SMEs is essential in the introduction of new technologies. This role, played by top management, is seen as being essential to create a supportive environment to facilitate the adoption decision in their enterprises (Al-Qirim, 2004; Premkumar and Roberts, 1999). According to Al-Qirim (2004), top management commitment to, and involvement in, IT initiatives in their enterprise is important to: (i) ensure the required resources for adoption; and (ii) to signal support to internal stakeholders (i.e., owners, line managers and employees) of the importance of adopting new technologies.

CEOs' Innovativeness, being open to new ideas and new products, is another factor affecting organisational adoption of IS innovations. This factor reflects the level of receptiveness shown by an enterprise to new ideas, including new ICTs. In the case of SMEs, given that the SME owner-manager is the main decision-maker in these types of enterprise (Isma'ili *et al.*, 2016; Wilson, Khazaei and Hirsch, 2015; Dahnil *et al.*, 2014; Govindaraju, Chandra and Siregar, 2012; Chang *et al.*, 2011; Fink, 1998), this factor is associated with the receptiveness and attitude of SME CEOs towards new ideas. The factor has been examined in many published studies (see, for example, Christodoulides *et al.*, 2015; Alshamaila, 2013; Ghobakhloo, Arias-Aranda and Benitez-Amado, 2011; Al-Qirim, 2007; Hussin and Noor, 2005; Thong, 1999; and Thong and Yap, 1995). For instance, Thong and Yap (1995) have suggested that small businesses are more likely to adopt IT when they have a CEO who is more innovative with a positive attitude towards adoption of IT. It is therefore expected that CEOs' innovativeness plays an important role in SMEs' decisions to adopt social media.

Prior IS experience is the final important organisational factor that has been found to have a positive and direct impact on the decision to adopt new technologies in organisational settings. As documented in the existing IT adoption literature (for example, Lippert and Forman, 2005; Kuan and Chau, 2001), the accumulated knowledge, experience and familiarity with previous technologies facilitate the future adoption of new forms of technologies within organisations. In the case of social media, familiarity with other internet-based technologies (such as, websites and e-forums) can have a direct influence, facilitating social media adoption in SMEs. Thus, this factor could be expected to play a significant role to drive social media adoption in SMEs.

Environment context

The environment context represents the third set of factors in the TOE framework that has been identified to impact the adoption of IS innovations in SMEs. The IT adoption literature suggests that looking in to the environment in which SMEs operate helps to understand ICT uptake within these types of businesses (Kapurubandara and Lawson, 2006). In fact, it is believed that the arena in which an enterprise operates represents a primary stimulus for the adoption of innovations as organisations respond to changes in the external environment (Alshamaila, Papagiannidis and Li, 2013; Damanpour and Schneider, 2006; Kapurubandara and Lawson, 2006). In reviewing the IT organisational adoption literature, despite there being less research considering factors related to the environment context (Premkumar, 2003), many studies have found factors related to this context to be influential in ICT adoption (for example, Ramdani, Lorenzo and Kawalek, 2009; Jeon, Han and Lee, 2006; Grandon and Pearson, 2004; Kuan and Chau, 2001; Mehtens, Cragg and Mills, 2001). Several environment factors have been identified as affecting an organisation's decision to adopt new technologies, including; competitive pressure; industry type; market scope; external IS support; and customer pressure. Each of these factors will now be discussed.

Competitive pressure is generally viewed as an incentive for organisations within the same industry to adopt new technologies. Much of the IT adoption literature in the organisational context acknowledges that competitive pressure plays a critical role in the adoption process. According to Haller and Siedschlag (2011), organisations are more inclined to adopt new technologies as a response to strong competition in their market as this enables them to enhance their performance and their survival rate. Gaining competitive advantage may have become even more important as many organisations nowadays are exposed to international competition in a global market. In the context of SMEs, several studies have found a strong influence of competitive pressure on the adoption of various types of technology (see, for example Ghobakhloo, Arias-Aranda and Benitez-Amado (2011), Ifinedo (2011), and Premkumar and Roberts (1999)). According

to Ghobakhloo, Arias-Aranda and Benitez-Amado (2011), an increase in the number of technology adopters accelerates the adoption decision among non-adopters, suggesting the significance of this factor on the adoption decision. SMEs must consider introducing new technologies, in particular emerging internet-based technologies, to compete in today's knowledge-based economy (Al-Qirim, 2004). In this sense, it can be expected that competitive pressure is another environmental factor that stimulates SMEs to adopt social media technologies.

Customer pressure is an important environmental factor that impacts new technology adoption. Literature that has considered the adoption of prior ICTs has reported that SMEs' decisions to adopt new technologies are affected by the pressure imposed by customers (Rahayu and Day, 2015; Ghobakhloo, Arias-Aranda and Benitez-Amado, 2011). Premkumar and Roberts (1999) argued that these types of enterprise are more vulnerable to customer pressure than the large enterprises. They attributed this to the fact that SMEs tend to rely economically on bigger customers for their survival in the market place. This view is reinforced by the observations of Zhu, Kraemer and Xu, (2003). Many other studies indicate the significance of this environmental factor in SMEs' decisions to adopt new technologies (Durkin, McGowan and McKeown, 2013; Consoli, 2012; Scupola, 2003; Mehrtens, Cragg and Mills, 2001). However, there are studies which have found no significance for this factor in the adoption decision. For instance, a study by Ifinedo (2011) reported no significant role for customer pressure in the SME decision to adopt e-business. The widespread and the increasing user (customer) base for social media is, though, expected to encourage SMEs to move towards adopting these technologies.

Industry type is another environmental determinate that affects new technology adoption in organisations. In the context of SMEs, previous research has investigated the influence of this factor on the adoption of various types of ICT. Arguably, organisations operating in different business sectors have different needs, including whether to adopt new technologies or not. A positive correlation between industry type and new technology adoption is found in a number of empirical studies (Ramdani and Kawalek, 2007; Thong, 1999). For instance, Ramdani and Kawalek (2007) found significant differences between SMEs operating in three sectors (manufacturing, wholesale and retaining, and services) concerning the adoption of enterprise systems. A similar observation was noted by Oliveira and Martins (2010), who suggested a significant difference between SMEs operating in the telecommunication industry and those in the tourism sector with regards to factors facilitating the adoption of ICT. In contrast, other studies have found no significant relationship between industry type and the adoption of new technologies (see, for example, Nguyen and Waring, 2013; Ramdani and Kawalek, 2007).

Market scope is another environmental factor suggested in the IT adoption literature as affecting organisations' decisions to adopt new technologies. It is defined as "the horizontal extent of a firm's operations" (Zhu, Kraemer and Xu, 2003, p.254) and has been found by several studies to be a significant factor in the adoption of new technology in organisations. It is often argued that organisations with wider market scope are more inclined to adopt new technologies than businesses with a narrow market scope, which tend to have a lower probability of adoption. Zhu, Kraemer and Xu (2003) argued that businesses with a wider market scope are more inclined towards e-business adoption. In contrast, other studies have found no significance for market scope in terms of its influence on new technology adoption (see, for example, Yeboah-Boateng and Essandoh, 2014; Alshamaila, 2013; Ramdani, Kawalek and Lorenzo, 2009; Boumediene and Kawalek, 2008).

Finally, **external IS support** has been identified in the IT adoption literature as a relevant environmental factor. As noted earlier, unlike large enterprises SMEs lack sufficient IT skills to adopt and use new technologies. It has therefore been argued that an increase in the sophistication of technology leads to an increase in SMEs' needs for external support (Abdullah, Wahab and Shamsuddin, 2013). Thus, external support has been found to be significantly related to the adoption of many ICTs in SMEs (see, for example, Ifinedo, 2011; Scupola, 2003; Mehrtens, Cragg and Mills, 2001; Premkumar and Roberts, 1999). Arguably, in terms of social media, SMEs may be encouraged to adopt these technologies if they feel that there is adequate support from third parties, such as consultancy agents.

In short, there is considerable support in the IT adoption literature for the applicability of TOE three contexts in technology adoption in the SME settings. Given the fact that established theories in the ICT adoption have been applied largely to developed economies context, while little is known about their applicability to understand the adoption, including social media, in the context of emerging economies (Talukder, Quazi and Djatikusumo, 2013). Thus, this study is an attempt to understand the applicability of TOE framework to capture the factors that influence the adoption of social media in the developing country context, Oman. Drawing upon the above discussed empirical evidences, literature review and theoretical perspectives discussed earlier, it is believed that the TOE framework is appropriate for studying social media adoption, because social media applications are internet-based technologies that are enabled by technological development of the Internet, driven by internal (organisational) factors and influenced by external pressure from outside the organisation, environmental) factors. As a consequence, TOE is adopted as a theoretical framework to study social media adoption in SME setting. Henceforth, the following section sheds a light on some studies that

identifies factors influencing the adoption of social media in organisational context after identifying theories and models used to study IT adoption in organisations.

2.5 Summary

This chapter aims at reviewing the literature on the ICT adoption in SMEs in general, with special emphases on social media technologies. Hence, the chapter reviewed and presented findings of the existing scholarly work related to factors influencing the adoption of ICTs. It has presented sufficient details and analysed various ICT innovations in the organisational context. In addition to that, detailed discussions on the factors that influence the adoption of different ICT applications were explained. Also, it has offered explanation for theoretical perspectives underpinning research on SME context. Finally, and more importantly, this chapter has provided a rationale behind the choice of the TOE as a theoretical framework underpinning this research. The next chapter describes the research design followed to conduct the present study.

Chapter 3: Research Design Overview

3.1 Introduction

This chapter aims to illustrate the research design employed in this thesis to investigate the motivations behind the use and adoption of social media by SMEs in the private sector of Oman. The chapter examines, first, the researcher's view concerning the philosophical assumptions underpinning the research. This is important in order to define the scope and limitations of the research design and to explore various research traditions in IS from which the choice of research design was made. It goes on to discuss the research approach and to briefly present and justify the selected methods of inquiry. Thus, the importance of this chapter lies in setting the underpinnings from which to then present the research design, which covers the qualitative and quantitative studies that are discussed in more detail in chapters 4 and 5, respectively.

The chapter is divided into five sections. Section 3.2 aims to provide insights into the range of research paradigms before providing further justifications for taking a pragmatic view to underpin this research. This is followed by section 3.3, which aims to discuss the main research approaches. In this section, a brief discussion of the strengths and weaknesses of the main approaches, qualitative and quantitative, is given. This is then followed by a subsection to rationalise the use of a mixed-methods approach in the present study. Having decided on the research approach, an analysis of various mixed-methods research designs is elaborated in section 3.4. In this section, reasons behind the selection of sequential design are explained. This section ends by highlighting the four dimensions to be considered in the sequential research design, which are sequence, dominance, mixing level and theoretical perspective. Section 3.5, provides a summary of the chapter and its place in the thesis.

3.2 Decisions About the Research Paradigm

There are certain terms that a researcher has to consider owing to their central importance to guide the process and influence the practice of the research. This has been argued to have a great impact on the final outcomes of the research and questions asked of the results (Bazeley, 2004; Mingers, 2003). Some of these terms are used interchangeably, such as paradigm, world view and theoretical lens (Doyle, Brady and

Byrne, 2009). 'Paradigm' is used to mean the philosophy of a particular piece of research, and is viewed by Johnson and Onwuegbuzie (2004) as being the research culture, representing a set of beliefs, values and assumptions about the nature and conduct of research. Creswell (2013) and Creswell (1998) simply defines a paradigm as the set of beliefs and practices that guide research inquiry. A similar definition is given by Guba (1990), who states that a paradigm is "a basic set of beliefs that guide action". The research paradigm is particularly shaped by the researcher's view about the development of knowledge (Morgan, 2007).

The choice of appropriate research paradigm is a significant task. In fact, it is pivotal to the whole research effort, from research design, through data collection to data interpretation. In this respect, it has been argued that paradigms influence researchers' knowledge, their interpretation of reality, their values and the methodologies used in the research (Doyle, Brady and Byrne, 2009; Morgan, 2007). From this perspective, Orlikowski and Baroudi (1991) suggest that researchers should be cognizant about research paradigms and adopt a research perspective that is compatible with their studies. This implies that it is essential to have a good understanding of the underlying philosophical assumptions in the field and that researchers should position their research in relation to a selected paradigm (Doyle, Brady and Byrne, 2009; Bazeley, 2004). However, this task is not easy as there are several distinct paradigms. Paradigms are distinguished from one another based on a set of concepts which represent three main, underlying perspectives: ontology (nature of the reality); epistemology (how we know and what we know); and methodology (the process of research) (Creswell, 2013; Doyle, Brady and Byrne, 2009).

Guba and Lincoln (1994) refer to ontology as a belief about the nature of reality and what can be known about reality. In essence, this is about how the researcher views the reality within which the research is undertaken. Literature identifies two main perspectives on reality. The first is that there is a single and independent reality that can be objectively 'obtained'. The second is that there is an evolving nature to reality, suggesting the existence of multiple realities that are socially constructed through interaction. Respectively, these perspectives reflect objective and subjective views on the issue of reality.

The epistemological assumption about knowledge is dictated and imposed by the ontological assumption about the nature of the reality (Morgan, 2007; Guba and Lincoln, 1994). It deals with the creation and obtainment of 'valid' knowledge, and poses questions of how we 'get' the knowledge. It is, then, the philosophical assumption about the relationship between the researcher (investigator) and the research phenomenon (the investigated). Assuming the ontological assumption of an objective reality, the researcher

could gain an ‘outside’ view of the research phenomenon, where no intervention between researcher and phenomenon occurs. On the other hand, assuming a socially constructed reality implies that the knowledge is ‘obtained’ through a subjective view, which requires researcher involvement in the research. Both ontological and epistemological assumptions undertaken by the researcher have a direct influence on the assumption about how knowledge is discovered or generated – the methodological assumption. In this respect, methodology is used to refer to the stance that guides the gathering of data in relation to the research problem.

Based on the ontological, epistemological and methodological perspectives, a range of research paradigms have been suggested in different disciplines, and a set of them have been employed by researchers in the IS field. This could be associated with the fact that IS “can be characterised as diverse and pluralistic” (Goles and Hirschheim, 2000, p.250) and has its roots in multiple disciplines (Mkansi and Acheampong, 2012; Avison and Elliot, 2006; Onwuegbuzie and Leech, 2005; Culnan, 1987). The works of Chen and Hirschheim (2004), Guba and Lincoln (1994) and Orlikowski and Baroudi (1991) provide substantive information about the main paradigms used in IS research. Of these, positivism has dominated studies in the IS discipline for many decades (Chen and Hirschheim, 2004; Goles and Hirschheim, 2000; Orlikowski and Baroudi, 1991; Kaplan and Duchon, 1988).

The prevalence of this research stance has been associated with the fact that IS epistemology draw heavily on the social sciences (Hirschheim, 1985). In addition to positivism, and owing to the increased recognition of social issues related to information technologies in organisations (Walsham, 1995; Walsham, 1993), a non-positivist research paradigm, interpretivism, has been advocated and gained acceptance in the IS discipline alongside the established positivist research tradition (for more details see, Goldkuhl, 2012; Chen and Hirschheim, 2004; Nandhakumar and Jones, 1997; Walsham, 1995; Cheon, Groven and Sabherwal, 1993). Table 3.1 illustrates the dimensions of difference between positivism and interpretivism.

Dimension	Positivist (scientific)	Interpretivist (constructivism)
Ontology (reality)	Single	Multiple
Subjectivity/objectivity	Objective	Subjective
Interpretation	Similar	Different
Researcher	Detached from context	Attached to the context
Emphasis	Numbers	Words and text
Process	Deductive (theory testing)	Inductive (themes to theory)

Table 3.1 Comparison between positivist and interpretivist paradigms

As already noted, positivism and interpretivism have different ontological, epistemological and methodological positions. As a result, there has been an on-going debate, and a

divide (as noted by Mkansi and Acheampong (2012), between their supporters surrounding the primacy of the paradigms (Onwuegbuzie and Leech, 2005; Guba, 1990) and the incompatibility of mixing paradigms (Goldkuhl, 2012; Creswell and Clark, 2007; Onwuegbuzie and Leech, 2005). Thus, many methodologists have argued for the need to take a practical view that draws on strengths, and addresses the weaknesses, of each paradigm (Onwuegbuzie and Leech, 2005; Mingers, 2003).

Supporters of a pragmatic view in the IS field claim that the world is in the 'state of becoming' and that the IS field experiences on-going changes in its practices (Goldkuhl, 2012; Goldkuhl, 2004). Therefore, using a non-singular research approach has been encouraged to address many IS-related issues (Goldkuhl, 2008). Also, pragmatism has been acknowledged by many IS researchers as an opportunity to improve the rigour and relevance of IS research (Goles and Hirschheim, 2000) as well as offering the potential to address certain issues that may not be tackled using a single research approach (Johnson and Onwuegbuzie, 2004). Furthermore, there are complex and multidimensional research situations in the IS field that can benefit from the use of a range of methods from different paradigms (Goldkuhl, 2012; Mingers, 2001).

This pluralist position is supported by (Bazeley, 2004, p.4), who argues that in research less emphasis should be given to paradigms and that "the focus of the researcher is more on the actual methods used and results obtained". Hence, as mentioned, paradigmatic and methodological pluralism have received the support of other scholars in IS, such as Chen and Hirschheim (2004) and Goles and Hirschheim (2000) who mentioned that alternative paradigms or methodologies should be welcomed and promoted as they provide different dimensions for research investigations. From our perspective, and given the objectives of this study (see section 1.5), we are interested in taking a pragmatic view, making use of methods that are appropriate and useful to provide answers to the research questions posed (Goldkuhl, 2012). This view represents a practical and applied research philosophy (Venkatesh, Brown and Bala, 2013) which uses simply what works 'best' to answer the research question(s) in the context under investigation (Zachariadis, Scott and Barrett, 2012; Goldkuhl, 2004).

As such, a pragmatic view is adopted in this research effort; it is a widely accepted position to support the study of complex research phenomenon such as IS adoption in organisational contexts (Wang, Fu and Duan, 2011). With respect to social media adoption in organisations, Jussila, Kärkkäinen and Aramo-Immonen (2014) have suggested the use of a pragmatic research stance as it provides a systematic and holistic picture of the possibilities of social media in organisations. This type of pragmatism is associated with a mixed methods research approach (Howe, 2012; Johnson, Onwuegbuzie and Turner, 2007; Teddlie and Tashakkori, 2003).

This study therefore uses a mixed methods research approach to make use of insights provided by qualitative and quantitative methods in presenting a “workable solution” (Johnson and Onwuegbuzie, 2004, p.16). Details on the research approach that was applied are presented in the next section.

3.3 Research Approach

Having explained the choice of research world view, the most appropriate research approach has to be selected. As this research is positioned as a mixed methods approach, in this part of the chapter a brief discussion of both qualitative and quantitative strands is presented and a rationale behind combining them is established. This is important because having awareness and understanding of a range of qualitative and quantitative research, and their characteristics, enhances the effectiveness of mixed methods research (Jogulu and Pansiri, 2011; Johnson and Onwuegbuzie, 2004).

Broadly speaking, quantitative and qualitative approaches are the two main research enquiry modes across all disciplines (Doyle, Brady and Byrne, 2009). The qualitative approach is largely associated with the interpretivist paradigm (Ritchie *et al.*, 2013), while the quantitative approach is most commonly associated with positivism (Villiers, 2005). Both approaches have distinct purposes and contrasting characteristics (for a detailed description, see Creswell (2013) and Johnson and Onwuegbuzie (2004)). In the last couple of decades, a third, ‘mixed methods’ research approach, that sits between the quantitative and qualitative approaches, has emerged (Johnson and Onwuegbuzie, 2004), incorporating elements of both approaches in a single study (Doyle, Brady and Byrne, 2009). Thus, it has been described as a “natural complement” (Johnson and Onwuegbuzie, 2004), and a logical and a viable alternative to address the weaknesses of qualitative and quantitative research approaches when used individually (Denscombe, 2008; Johnson and Onwuegbuzie, 2004). Unlike the main research approaches, taking a mixed methods approach is in-line with the philosophy of pragmatism (Creswell, 2013; Patterson, 2013; Cameron, 2009; Denscombe, 2008; Tashakkori and Creswell, 2007).

Despite its newness, and only a relatively limited range lack of empirical studies using a mixed methods approach (Östlund *et al.*, 2011; Doyle, Brady and Byrne, 2009; Bazeley, 2004), combining quantitative and qualitative research in a single study is argued to produce more than each could separately (Creswell and Clark, 2007; Morgan, 1998; Greene, Caracelli and Graham, 1989). Mixed methods research, in bringing together the merits of qualitative and quantitative approaches, has gained attention and is seen as fertile ground and a distinctive research approach across many disciplines, including education, sociology, psychology and IS (Östlund *et al.*, 2011; Doyle, Brady and Byrne,

2009; Denscombe, 2008; Greene, 2008; Brannen, 2005). With regards to mixed methods deployment in IS, literature indicates a relatively low uptake of using mixed methods approaches when compared to qualitative and quantitative approaches (Chen and Hirschheim, 2004). The perceived strengths coupled with the relatively low uptake in IS may explain the attempts by IS researchers to extend the adoption of mixed methods research and to illustrate its value in the IS field (Zachariadis, Scott and Barrett, 2012). Indeed, many scholars, such as Venkatesh, Brown and Bala (2013), have clearly stated that there is a need to utilise the strengths of the approach to understand and explain complex organisational and social phenomena with regards to IS studies.

3.3.1 Rationale Behind the Selection of Mixed Methods Research Approach

Given that the exploratory nature of this research, which attempts to understand the adoption and use of social media in the context of SMEs and consequently develop a framework that guides and predicts the adoption process of such emerging technologies, using a qualitative or quantitative approach alone was not thought to be likely to offer a clear picture of the issues for the following reasons.

Despite offering the opportunity for the researcher to gain insights in, and a detailed understanding of, the phenomenon under investigation, a qualitative approach alone does not provide a comprehensive view of the issue being considered (Bryman, 2003). Using this approach, the researcher lacks the ability to randomise a study sample, resulting in two major problems: a lack of repeatability (Schofield, 2002); and limits on the generalizability of the research findings (Saunders, 2011; Gable, 1994).

On the other hand, the quantitative approach is criticised for assuming the passivity of the investigator and independence of reality. In this respect, it has been argued that studies using this approach are restricted to “readily measurable static constructs” and therefore ignore the influence of context on the phenomenon under investigation, as well as social, cultural and political issues (Kaplan and Duchon, 1988, p.537).

With regards to IT innovation adoption, Alshamaila, Papagiannidis and Li (2012) stated that prior studies, in particular studies adopting the TOE framework, have tended to use a quantitative approach leading researchers to be criticised for being selective in terms of the attributes that impact the adoption of technology innovations by organisations. However, IT innovations are highly differentiated technologies, and the factors influencing their adoption vary (Ramdani, Lorenzo and Kawalek, 2009; Damanpour, 1987), making it necessary to consider various stakeholders and contexts involved in adoption issues. As such, a quantitative approach alone would be unable to appropriately explore the issues

that form the focus of this study (Wang, Fu and Duan, 2011), leading to mixed methods strategies being endorsed by several researchers (such as AlGhamdi *et al.*, 2012; Wang, Fu and Duan, 2011; AlGhamdi, Drew and Al-Ghaith, 2011; Greenhalgh *et al.*, 2010)).

Combining quantitative and qualitative approaches helps to 'neutralise' the identified-limitations associated with the individual approaches (Creswell and Clark, 2011; Cronholm and Hjalmarsson, 2011; Onwuegbuzie and Leech, 2005) and exploits the strengths of each approach in order to produce 'superior' and 'effective' research (Cronholm and Hjalmarsson, 2011; Johnson and Onwuegbuzie, 2004).

In relation to the study reported in this thesis, it is believed that using a mixed methods approach provides a better understanding of factors that may influence the adoption of social media through: (i) using a qualitative approach to enable factors to be articulated by participants and to obtain evidence about previously unidentified areas (Hesse-Biber, 2010); and (ii) using a quantitative approach to then test them empirically, seeking generalizability through the engagement of a large, representative sample (Johnson and Onwuegbuzie, 2004). As such, a mixed methods approach offers the best opportunity to effectively answer the research questions posed in chapter 1 and enable the researcher to understand the topic more lucidly (Creswell and Clark, 2007).

In addition to yielding superior research results (Jogulu and Pansiri, 2011; Johnson and Onwuegbuzie, 2004), there are two further reasons for the selection of a mixed methods approach in this study. First, the relative infancy of social media and the limited number of studies that addresses its adoption in organisational settings (Parveen, 2012) suggest that there is a need to undertake deeper examination and develop a better understanding of social media adoption in the SME context.

Second, using a mixed methods approach allows a range of qualitative and quantitative methods to be combined (Brannen, 2005), which is argued to provide a better understanding of the research problem (Creswell, 2013; Creswell and Clark, 2011). It strengthens the confidence in the subsequently developed understanding of the research phenomenon (Jogulu and Pansiri, 2011), as a result offers more trustworthy and relevant findings (Cronholm and Hjalmarsson, 2011; Brannen, 2005).

In summary, by attempting to understand the factors that influence the adoption of social media in SMEs, this research attempts to "fit together the insights provided by qualitative and quantitative research into a workable solution" (Johnson and Onwuegbuzie, 2004, p.16). The following section provides more detail and offers a schematic representation of the research design that was used.

3.3.2 Research Design

Having decided on the philosophical and methodological approach to be used in this study, the next step is aligning the research to a particular design. The research design provides blueprints for researchers to employ mixed methods research (Tashakkori and Teddlie, 2010) and represents the procedures for collecting, analysing, interpreting, and reporting the data of a given study (Creswell and Clark, 2007). Since there are different designs within the mixed methods research approach (for more details see Creswell, 2013; Creswell and Clark, 2007; Onwuegbuzie and Leech, 2005), awareness of the range of design types is essential in order to determine the design that best fits the research and to help organise and provide clear guidance on the combination of specific methods in a study (Creswell, 2013; Bryman, 2006). Broadly speaking, there are four types of mixed methods research designs: triangulation design; embedded design; explanatory design; and exploratory design (for more details on the four research designs, see (Creswell and Clark, 2011)). As far as the study reported in this thesis is concerned, the use of an exploratory, sequential mixed-methods design was seen as most appropriate. Figure 3.1 provides a schematic representation of the research design.

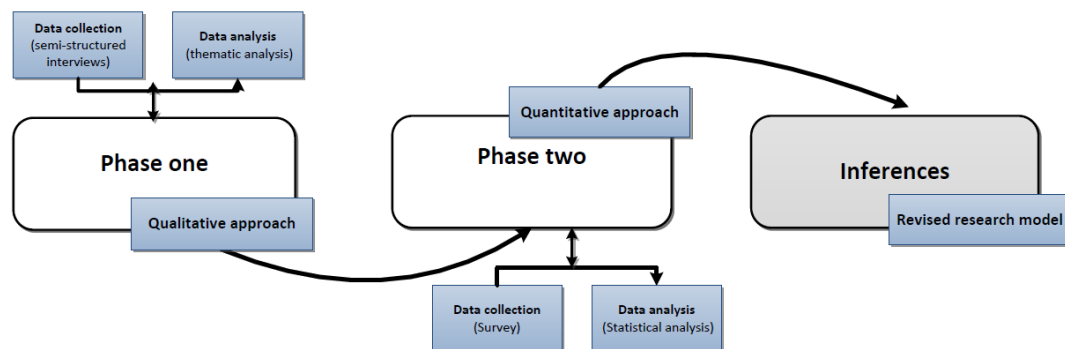


Figure 3.1 A schematic representation of the research design

An exploratory, sequential, mixed methods design is defined by Creswell (2013, p.226) as “a design in which the researcher first begins with qualitative data and analysis and then uses the findings in a second quantitative phase”. According to (Creswell and Clark, 2007), the overall purpose of using this design is the need for exploration and a nuanced understanding of the research problem. To clarify, sequential mixed method approach has the ability to address both exploratory and confirmatory questions within the same research inquiry (Venkatesh, Brown and Bala, 2013). So, whilst constructing and assign

meaning to participants' experience in relation to technology adoption, a questionnaire is used to provide objective confirmation for the initial findings (Jogulu and Pansiri, 2011).

The choice of this approach for the research effort reported in this thesis is supported by the fact that the research problem under investigation requires more than a single phase. It also offers both depth and breadth in relation to the findings (Terrell, 2012). It offers a depth of understanding as it employs a qualitative method to provide a deep insight into the research problem; and it extends the breadth of the findings through generalization by using a quantitative method. In brief, this design enables the research to serve the dual purposes of developing an in-depth understanding of the research study by interviewing a small group, and to improving generalization by then studying a large sample group. In this respect, it can be said that using an exploratory, sequential, mixed methods design enables the researcher to address the inherent limitations of qualitative methods related to generalizing the findings to a wider context by using a quantitative method in a subsequent phase of the research. In this structure, the researcher attempts to learn about the factors on which to focus in the study through qualitative research with a small sample and then examines the identified factors through engaging a large sample of participants.

As illustrated in Figure 3.1, this study was conducted in two distinct phases. Appreciating the core characteristics of qualitative and quantitative research approaches is important to determine significant issues such as the sequence and priority of different phases of the research. Table 3.2 illustrates important dimensions considered in relation to the selected research design. For instance, researchers need to think about the status and precedence of the methods (Palinkas *et al.*, 2011; Johnson and Onwuegbuzie, 2004).

In relation to this study, realising the importance of the context and the potential for new factors to emerge (Johnson and Onwuegbuzie, 2004; Fink, 1998) that are relevant to the adoption of social media by SMEs, and considering the complexity and evolving nature of ICTs (Wang, Fu and Duan, 2011), it was felt that initiating the research with a qualitative phase would be useful for a number of reasons. First, it allows the research phenomenon to be explored when there is limited existing knowledge about the phenomenon (Cronholm and Hjalmarsson, 2011). Second, it is a useful approach where less is known about the important variables to be examined (Creswell and Clark, 2007). Third, it is also useful as an approach to gain more insights before running a large and costly survey. Finally, it can lead to hypotheses generation (Creswell, 2013; Curry, Nembhard and Bradley, 2009).

For these reasons, the research design includes an initial inductive, qualitative phase comprising in-depth interviews with key informants (business owners/managers) in SMEs.

The qualitative phase offers the opportunity for participants' perspectives to emerge, which consequently helps in developing an understanding of the reasons behind the decision to adopt or not to adopt social media technologies in their enterprises. The findings of this phase then serve as a good base for formulating research hypotheses from which to develop a preliminary model.

Similarly, being aware of the major characteristics of quantitative research, such as deduction and hypotheses testing, led to the selection of a quantitative approach for the second phase of the study, since the aim is to test the preliminary model through its constituent factors that are believed to influence the adoption of social media in SMEs. To achieve this, a web-based survey was chosen as the approach to gather quantitative data from a large sample in order to test and revise the model formulated in the previous phase. Further details on the research implementation (the specifics of the instruments, sampling, data collection, data analysis and interpretation) are presented in the chapters 4 and 5, which report phases 1 and 2 of the research, respectively.

Dimension	Definition	Its application in this research
Sequence (implementation)	The order in which the data are used in a study	Sequential design (Qualitative → Quantitative)
Weighing (dominance)	The emphasis given to each approach	Qualitative
Mixing level	The level at which integration of both approaches occurs	Connecting (At the stage of data analysis and interpretation)
Theoretical perspective	The use of the theory in the study	Explicit theory (TOE framework)

Table 3.2 The four dimensions of mixed methods research design

3.4 Summary

In summary, this chapter has discussed the research philosophy used in the study. The discussion set out the distinct differences between existing paradigms prior to arguing the suitability of pragmatism as the best choice to guide this research. Also, it reported the research approach deployed to guide this study and explored various approaches available to IS researchers, before outlining the justification for the choice of a mixed methods research approach. In addition, it presented the selected research design, sequential mixed methods, outlining the two phases deployed in the design of this mixed method approach. As well as presenting a brief discussion on the selection of the research design, this chapter also gave a schematic showing the different phases of the research. In the next chapter, the research implementation of the first phase of the research will be discussed in detail.

Chapter 4: Phase One – The Qualitative Study

4.1 Introduction

Having decided on the research design in the preceding chapter, this chapter aims to report all the activities associated with phase one, the qualitative study. This includes reporting the activities related to the study-set up, data collection and data analysis, as well as discussing the empirical findings of the in-depth qualitative interviews conducted with a sample of research subjects. The importance of this chapter, as discussed in section 3.4, lies in use of the empirical findings to develop hypotheses for the second research phase, the quantitative study (reported in chapter 5).

To achieve the above aim, this chapter is divided into three main sections: study set-up; data collection; and data analysis. Section 4.2 explains the study set-up. As this research phase takes a qualitative approach, it is important to first provide an overview of the broad type of research instrument used in this research phase. Thus, section 4.2.1 argues for the suitability of interviews with respect to the qualitative study. This section ends by justifying the selection of the semi-structured interview approach to collect data from the research subjects. Section 4.2.2 then provides a detailed description of the actual research instrument used, centring on how the instrument was derived and indicating the source of each question area, linking it to the relevant analysis in chapter 2.

Having presented the research instrument, the next step is to discuss how the instrument was applied. Section 4.3 therefore reports the data collection process. This comprises all of the activities related to data collection, including sampling techniques, ethical considerations and approval, and piloting before the actual interviewing process was undertaken. Section 4.3.1 aims to discuss and justify the sampling techniques used to determine the research population. Section 4.3.2 then elaborates on the ethical considerations and the approval procedures that were followed in this phase of the research. Having done that, it is always useful to pre-test the research instrument before going to the field to collect data. Hence, section 4.3.3 describes the piloting procedure and its valuable outcomes in pre-testing the research instrument. Having set the ground for conducting the research, the next step was to gather data from the research participants. Section 4.3.4 begins by discussing the research protocol before describing

the semi-structured interview modes used: face-to-face and telephone interviews. The section ends by discussing the interview process.

In the chapter's final section (section 4.4), a thorough discussion of the data analysis is presented. This section is divided into four subsections. As previously mentioned in section 1.6 and given that the present study uses an a priori theoretical framework (TOE), section 4.4.1 aims to provide a general view of the analysis technique used, thematic analysis. Section 4.4.2 discusses the process and stages of the data analysis and elaborates on the development of themes and categories, as well as describing the coding process. Before moving into presenting and discussing the main findings of the interview data, section 4.4.3 presents a brief description of descriptive analysis and present profiles of both the participants that took part and their SMEs.

Section 4.5 then reports the main findings related to this phase of the research in relation to the three contexts of the TOE framework: technology; organisation; and environment that the research participants perceive to influence their SMEs' adoption of social media. To achieve this, the section is divided into three subsections to present the findings of the factors related to each TOE context, hence sections 4.5.1, 4.5.2 and 4.5.3 present the findings of the technology, organisation and environment respectively. Section 4.6 then provides a discussion on the findings reported by the research participants'. This section is further broken down into three subsections; each explains findings related to one aspect of the TOE framework: section 4.6.1 discusses the findings related to the influence of the technology characteristics; section 4.6.2 then moves to discuss the impacts of organisation characteristics; and section 4.6.3 discusses the findings related to the external environment. Through this discussion, factors found to influence the adoption of social media in the SMEs' settings are identified. The section 4.7 then concludes by formulating the research hypotheses that act as input to the second phase of the research (reported in chapter 5). The chapter ends with section 4.8, which provides a summary of the chapter and its place in the thesis.

4.2 Study Set-up

As stated earlier in chapter 1, and re-iterated in the previous chapter, interviewing was the main data collection technique used in the first phase of the study. Section 4.2 therefore aims to discuss the study set-up, concentrating on the choice and development of the research instrument. To achieve this aim, section 4.2.1 presents a general view of the broad research instrument, the interview, to justify its use as a data collection technique and then proceeds to a more focused discussion of the use of a specific research instrument, semi-structured interviews, as a data collection type. Having decided on the research instrument, section 4.2.2 will then discuss the development of

the actual instrument, drawing on the analysis of relevant literature in chapter 2 to justify each question area.

4.2.1 Interview

As noted above, in this phase of the research, an interview was used as the research instrument to gather data, with the semi-structured interview was chosen as the interview type. The first part of this section elaborates on the interview as a data collection approach and explains its relevance to this phase of the research. In the second part of this section, more details are given to explain the choice of semi-structured interview as the instrument type that was used.

In broad terms, the interview approach is the most widely-used form of research method in qualitative research across various disciplines, including information systems (IS) (Schultze and Avital, 2011; Myers and Newman, 2007; DiCicco-Bloom and Crabtree, 2006). It has been described as a tool for generating rich data in relation to a particular research inquiry (Schultze and Avital, 2011) and is viewed as a powerful tool through which to gather primary research data (Myers and Newman, 2007). In essence, an interview is an interchange of views (Kvale, 2008; Kvale and Kvale, 1996), a learning process (Edwards and Holland, 2013) and a 'social interaction' (Myers and Newman, 2007) between two people – the interviewer (researcher) and the interviewee (research subject) – about a theme of common interest. In brief, the interviewer engages the interviewee in a direct interaction to generate a deeply contextual, nuanced and authentic view about a research problem (Schultze and Avital, 2011; Kajornboon, 2005). This enables the uncovering of the research phenomenon in a deep and rich manner as the researcher gains access to 'depth', 'subtlety' and 'personal feeling' of the interviewee rather than a superficial level of the experience (Schultze and Avital, 2011).

As the aim of this research is to elicit rich information about the factors that influence social media adoption, it was thought that using interviews would be the best research instrument to gather data from the research subjects, SME owner-managers in Oman. Having considered the interview as a research instrument, the next step was to decide the approach to be taken in the interview. Given that there are different approaches to conducting interviews, the section will now discuss the specific interview type employed in this phase of the study.

The research methods literature identifies three different types of interview: structured; semi-structured; and unstructured (Edwards and Holland, 2013; Kajornboon, 2005). Though they share certain common features, the three approaches differ with respect to many issues, including level of flexibility and control (for more information, see (Myers and Newman, 2007; Oates, 2005). In qualitative research, semi-structured and

unstructured are the widely-used types of interview as the structured approach often produces quantitative data (DiCicco-Bloom and Crabtree, 2006) . Of the two qualitative interview approaches, semi-structured interviews are arguably the most-widely used (DiCicco-Bloom and Crabtree, 2006). Owing to its potential advantages, a semi-structured interview approach was chosen as the data collection technique for this phase of the research.

There are many reasons for this choice. One is that, it allows the researcher to untangle the research issue and have a better understanding, and to gain rich information about social media adoption in SMEs. According to Saunders *et al.* (2011), this approach offers an opportunity for the research participants to develop their thoughts about the research phenomenon. Therefore, it allows the researcher to explore the subjects' perceptions (Daymon and Holloway, 2010) and to delve deeply into both relevant personal and social matters (DiCicco-Bloom and Crabtree, 2006). Furthermore, the semi-structured approach is characterised by allowing the researcher to use an interview guide, which includes a predetermined set of open-ended questions (DiCicco-Bloom and Crabtree, 2006). Thus, it is known to offer a high level of flexibility and serves as a useful guide for the researcher to explore participants' perceptions about the core issues related to social media adoption.

In addition to having a pre-determined list of open ended questions, using semi-structured interviews allows the researcher to identify new potential issues related to the investigated research phenomenon (Daymon and Holloway, 2010). Gray (2013) for example, commented that the researcher can use probing questions and ask additional questions for further clarification about particular issues raised during the interview. As a consequence, using semi-structured interviews allows the scope for improvisation rather than limiting the questions to a script prepared beforehand, as is the case with structured interviews (Myers and Newman, 2007).

With respect to this phase of the present study, a semi-structured interview approach seemed appropriate to allow interview candidates to provide in-depth and rich information about issues affecting their decision to adopt or reject social media use in their enterprises. Also, this approach was considered useful as it enables the researcher to interview the key people who are directly involved with the decision-making process in their enterprises. Furthermore, It allows the interviewed candidates to freely express their views about the factors they think are of importance in their own contexts, rather than structuring the discussion around the TOE factors. Thus, it was felt that it would allow the emergence of any new factors that originally were not considered in the framework.

Having provided details on interviews as a data collection method, and one the specific type of interview used in the qualitative study, the next key element to focus on is the development of the instrument itself.

4.2.2 Research Instrument

This section is designed to offer as much detail as possible about the development of the research instrument. It aims to provide information about how the instrument was developed and to indicate the link to the relevant literature analysis presented in chapter 2 (see section 2.4.3).

Given that the semi-structured interview was used as a means of data collection in the first phase, the qualitative study, the researcher developed the interview script beforehand (see Appendix A.1 for the Arabic version of the interview script and Appendix A.2 for the English version of the interview script). The script, which is a paper-based interview guide, includes key questions to guide the conversation (Myers and Newman, 2007). Besides helping to guide the researcher during the interview process, the interview guide ensures consistency and reliability in all interviews as participants are asked similar questions. In designing the interview guide, the researcher must carefully design the questions to ensure a free-flow of interaction. Thus, the questions were designed to elicit answers and avoid leading questions (Stringer and Genat, 2004) and to ensure that the question flow elicited further explanations (Myers and Newman, 2007).

The researcher chose the TOE framework as an appropriate theoretical framework to underpin this research; therefore, it was important to design the instrument to focus on issues related to the three contexts of the framework. As can be seen from Table 4.4, aside from the introductory and concluding questions, the questions comprised three main themes—technology, organisation, and environment—to explore and elicit SME owner-managers' perceptions and views on issues relevant to social media adoption in SMEs. The subsequent paragraphs provide a brief description of the questions related to each theme.

As indicated in Table 4.4, the interview questions are gleaned from the review of the literature on ICT adoption, particularly those related to the main aspects of the TOE framework. The questions on the impact of TOE were drawn primarily from the work of Alshamaila, Papagiannidis and Li (2013) and Alshamaila (2013).

In the technology-themed questions, SME owners-managers were asked to provide their views on the impact of the technology attributes of social media in the adoption decision, 'whether to adopt' or 'not to adopt'. Basically, this theme focused on asking questions to explore the impact of the five technological factors (see Table 4.4) and other potential technology factors that the interviewees might perceive as affecting social media adoption in SMEs. For instance, one question asked about the impact of the relative advantage of social media technologies and whether the perceived benefits of using social media influenced the decisions of SMEs to adopt these technologies.

Questions Theme		Questions Area	Justification (in Literature Review)	Sources
Introduction				
Main Themes	Technology Context	Aims to identify the potential impact of technology factors: Relative Advantage; Compatibility; Complexity; Observability; Trialability.	Section 2.4.3 – Technology context	(Alshamaila, Papagiannidis and Li, 2013; Alshamaila, 2013)
	Organisation context	Aims to identify the potential impact of organisation factors: Business size; Top management support; CEOs' innovativeness; Organisational readiness; Prior IS experience.	Section 2.4.3 – Organisation context	
	Environment context	Aims to identify the potential impact of environment factors: Industry; Market Scope; Competitive Pressure; Customer Pressure; External IS Support; Government Pressure	Section 2.4.3 – Environment context	
Conclusion				

Table 4.1 A Summary of the Qualitative Research Instrument

The organisation-themed questions attempted to understand the role of an SME's characteristics in its decision to adopt social media. It included questions on the impact of organisation factors (including both enterprise characteristics and CEO characteristics). Therefore, these questions sought to capture participants' views on the role of various organisational characteristics (including enterprise size, organisational readiness, CEO innovativeness, and prior IS experience) on the adoption of social media in their enterprises.

The environment-themed questions focused on understanding the role of external environment in deriving the adoption decision of social media in the SMEs setting. This comprises the role of the government, external IS support, and other stakeholders including customers, suppliers, and competitors. Once the instrument is ready, and prior to its actual formulation in the research field, the next step is to discuss procedures related to data collection, which include sampling, ethical consideration, and piloting.

4.3 Data Collection Activities

As noted earlier, data collection is an important process in the research. It includes various activities that should be considered by the researcher prior to the actual implementation of the research instruments. These activities include sampling, ethical considerations and piloting. Thus, the aim of this section is to provide detailed discussion

of these three activities. In order to do this, the section presents the choice of sampling strategy and justifies the use of two sampling techniques: purposive and snowballing. It then moves on to discuss the procedures followed by the researcher to seek, and gain, ethical approval for conducting the research. Then, a discussion of the importance of pre-testing the instrument and validating the interview questions before the actual interviewing process is presented, ending with a thorough discussion of the interviewing process.

4.3.1 Sampling

The process of selecting the research sample is a key element of the research design (Wilmot, 2005; Cresswell, 1998; Marshall, 1996). Its importance lies in the fact that the choice of sampling strategy has a profound effect on the quality of the overall research (Coyne, 1997) and is vital to “provide unbiased and robust results” (Wilmot, 2005, p.1). Despite its importance, developing a sampling strategy to select a subset of participants to represent the entire population of the study is a complicated issue in quantitative and qualitative research approaches (Onwuegbuzie and Collins, 2007; Coyne, 1997). It is even more complex when both approaches are combined in mixed methods research (Collins, Onwuegbuzie and Jiao, 2007) because combined research approaches have different research designs (e.g., sequential, concurrent, etc.) which may require the use of different types of sampling strategies (for more details, see Teddlie and Yu (2007); Collins, Onwuegbuzie and Jiao (2006)). For this reason, careful consideration is needed to construct an effective sampling strategy to ensure that the selected sample in each component of the research is compatible with the overall research design (Collins, Onwuegbuzie and Jiao, 2007).

There may be a wide choice of combinations of sampling methods (Teddlie and Yu, 2007; Sandelowski, 2000), thus it is important carefully to identify potential candidates by selecting the sample from ‘information rich’ (Blandford, 2013; Merriam, 2002) research subjects who ought to be the most knowledgeable about the research issue (Myers and Newman, 2007).

Considering the context of the study, SMEs in Oman, it is essential that the key informants are the decision makers in those enterprises. In the SME setting, the literature suggests that business owner-managers are often responsible for the decision-making process. By and large, they determine the nature and the extent of ICT investments in their enterprises (Harindranath, Dyerson and Barnes, 2008). Therefore, recruiting participants from these well-informed and high-status individuals as participants should ensure accurate and rich information and provide a clearer picture of social media adoption among Omani SMEs.

Chapter 4: Phase One – The Qualitative Study

As previously mentioned, in a mixed-methods study different sampling strategies may be used in different research stages. The aim of this stage is to gain in-depth views of social media adoption in SMEs rather than to produce a statistically representative sample or draw a statistical inference (Wilmot, 2005). With this in mind, several researchers, (e.g., (Devers and Frankel, 2000)) have argued that purposive sampling, also known as judgment sampling or qualitative sampling, is the most often used sampling strategy for carrying out qualitative investigations. Purposive sampling is a non-probability sampling technique whereby the potential candidates are selected based on “specific purposes” (Teddlie and Yu, 2007, p.77) owing to “the qualities they possess” (Tongco, 2007, p.147) in order to provide “the greatest insight into the research questions” (Devers and Frankel, 2000, p.264).

For this reason, it was decided that purposive sampling would be the most appropriate sampling strategy to be used in this phase of the research. However, later in the phase another sampling method, snowballing, was used (see Figure 4.1). At the beginning of the phase, the researcher made a list of the SMEs identified as promising candidates, using the criteria explained below. The candidates were approached via different means (including email, phone calls and social media), yet some were reluctant to participate and others decided not to participate. Some of the participants who were approached did, though, refer the researcher to other candidates with similar characteristics (something noted also by Edwards and Holland, 2013). This led to the use of ‘snowballing’, also known as chain referral, as a more viable sampling method.

It is, however, important to note that the snowballing method has been criticised as it tends to limit sample diversity (Biernacki and Waldorf, 1981). As a result, it is prone to bias because referred candidates may share similar behaviours and attitudes to the initially-approached respondents. It is also important to note that the characteristics of referred candidates were carefully examined to see if they shared the same characteristics, as outlined below in the criteria, as the original candidates.

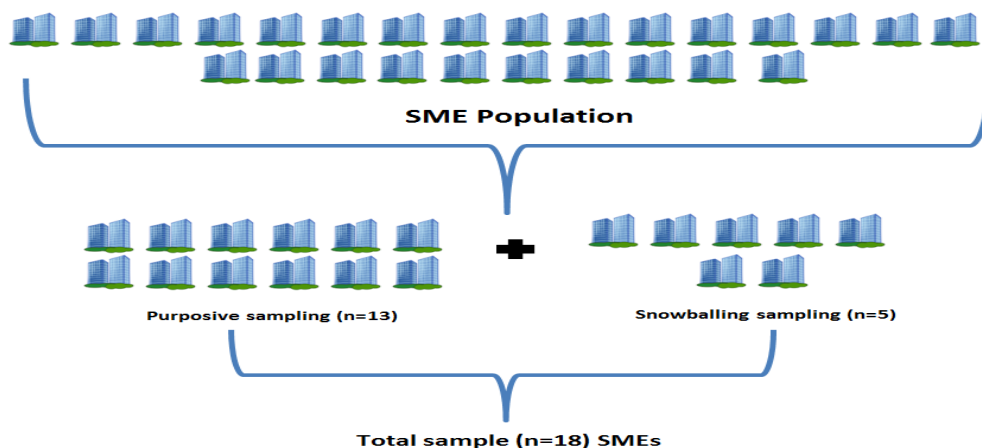


Figure 4.1 Sampling Procedures for phase one, the Qualitative study

In both sampling methods, the identified candidates were contacted and provided with detailed information about the study and the participation process. In total, a group of 18 SMEs were selected as potential candidates. A summary description of these SMEs is presented in Table 4.1. The 18 SMEs were selected from different sectors and were expected to meet the following sampling criteria:

- They should be registered and classified as SMEs with the Public Authority for SMEs Development (PASMED).
- They should be located in the capital city of Oman, Muscat. This choice was made for two reasons. First, Muscat is Oman's commercial hub, where the majority of its SMEs are concentrated. Second, it is the most developed technological infrastructure area in the country (Ashrafi and Murtaza, 2010).
- If possible, selected enterprises should belong to different sectors. This condition was perceived as important because including enterprises that operate in different sectors would lead to richer data than limiting the sample to a single sector (Scupola, 2003). Also, it was seen as important to see differences between industries in order to get a complete picture of adoption in various industries.

In addition to these criteria, the selected SMEs were checked against two further conditions:

- They should have a presence on at least one social media platform. This criterion was used as the study was interested in examining factors that influence the adoption of social media among SMEs.
- A preference was given to those listed and promoted in the PASMED Facebook and Twitter pages. This was because those enterprises were expected to provide insightful results and rich data as a result of their likely level of engagement with social media implied by their PASMED presence.

After having drafted the questions and identified the sampling strategy, it is essential to seek ethical approval to conduct the study before piloting and commencing the main research study/data collection. This is discussed in the next section.

4.3.2 Ethical Considerations

Ethical practices represent a significant concern for researchers. As noted by McAndrew and Jeong (2012), it is a critical part of the research, from its design to its conclusion. In addition, it has been described by Ritchie *et al.* (2013, p.78) as the “heart” of high quality

Chapter 4: Phase One – The Qualitative Study

research. As such, it is important to maintain the ethical standard of the research (Blandford, 2013; Myers and Newman, 2007).

In this study, the researcher followed certain procedures to obtain ethical approval and ensure that this research abided by agreed ethical codes of conducts. The procedure that was followed consisted of two main steps to seek permission to conduct the study. First, a letter was sent to the Public Authority for SME Development (PASMED) in Oman seeking approval to gain their permission and to facilitate access to the SMEs (see Appendix B). The importance of this step was that, although SMEs are totally independent units, PASMED is the central governmental unit responsible for monitoring development in those business units. This approach facilitated access to the SMEs and helped in getting quicker responses. The second step was seeking approval from the Research Ethics Committee (REC) at Brunel University London, where the researcher was based. A written application was submitted to the REC of the University's Department of Computer Science and ethical approval was granted for the research. Appendices C provide documents related to the ethical procedures of this study.

As well as obtaining approval from PASMED and the REC, another central ethical consideration is securing informed consent from potential participants before they take part in the study (Ritchie *et al.*, 2013). Blandford (2013) stressed the importance of the issue of informed consent, stating that the researcher should provide participants with verbal information or a written information sheet describing the purpose of the study, the expected role of participants, the process of data management, and the right to withdraw from the study any time. For this phase of the research, a personal invitation letter was sent to the identified individuals, followed by a call to invite them to participate in the study. During this stage, the candidates received a document that provided a brief on the aims of the research, its overall objectives and what would be expected of them as participants (see appendix C). In addition, the participants were provided with a sample of the questions that would be asked (in Arabic) to allow them to familiarise themselves with the approach and in an attempt to reduce the expected formality of the interview. Follow-up communication was done via email and Facebook messages. In addition, a bilingual consent form (see Appendix D) was attached emphasising sensitive issues such as privacy and anonymity afforded to participating organisations.

As already noted, ethical considerations remain critical throughout the research process, so assuring potential candidates that they would not be harmed as a result of their participation is important when carrying out research (Benbasat, Goldstein and Mead, 1987). In order to ensure the participants' privacy and the confidentiality of the information gathered during the interviewing process, the researcher reassured all of the interviewees about the non-disclosure policy adopted in this study (Myers and Newman, 2007). Participants were assured that interview transcripts and audio-recordings would be used

only for academic purposes. A coding strategy was also used to name the participating enterprises in order to safeguard their confidentiality (more details are provided in section 4.4).

After having drafted the questions, identified the appropriate sampling strategy and followed the required ethical procedures, it is often useful that researchers conduct a pilot study before commencing the main research study. This stage of the research is discussed in the next section.

4.3.3 Pilot Study

Building on the information provided in the preceding sections, it is useful to report the piloting procedures to ensure the integrity of the research. Pilot studies, known as feasibility studies, can be used in both qualitative and quantitative research approaches. According to (Rowley, 2012), the researcher should examine whether the included questions make sense by pretesting them with colleagues, friends and at least one member of the target research group/sample, if possible. One benefit of piloting is to gain prompting/probing skills, particularly if the researcher is inexperienced in interviewing techniques (Bell, 2014). Gudmundsdottir and Brock-Utne (2010) also argue that piloting is advantageous for many reasons, including increasing the reliability and validity of the research. This is achieved by helps to ensure the clarity of the questions asked, remove any ambiguity and improve the flow, increasing reliability and improving validity through participants' feedback (Bulearca and Bulearca, 2010). Through this process, it also enables early changes to the research direction, should the need be identified (Rowley, 2012; Gudmundsdottir and Brock-Utne, 2010).

Owing to its importance, in this research a pilot study was conducted with three groups: (i) peers (five participants); (ii) context experts (three participants); and (iii) SME business owners (three participants). In total, there were therefore 11 participants in the pilot study. The participants of the first group were given a copy of the script of questions to check their face validity and clarity. Other valuable insights were received from the context experts, two of whom were Omani nationals and were aware of the Omani SME context. This group was contacted via email. The third and most important group was the SME owners, the target of this study. Telephone interviews were carried out and aimed at exploring three relevant issues: (i) the time/duration of the interviews; (ii) the participants' perception of the clarity of the semi-structured interview questions; and (iii) the participants' familiarity with, and reaction to, semi-structured interviews.

All in all, piloting was perceived by the researcher as a useful way to improve his interviewing skills and to gain other several advantages. For instance, piloting helped the researcher to improve his social skills and thus improved the capability of the researcher

to carry out the interviews and become more experienced in exchanging ideas with people. Also, it was seen as an important activity through which to gain insightful views and identify other significant issues that may have been ignored or left out of the initial interview script. The received feedback was used to refine and incorporate changes into the interview questions to make them more conversational. Equally important, including SME owners in the pilot study helped to develop an initial understanding of the targeted organisational type and to develop responses to the type of questions that participants might pose. Also, inclusion of this group in the piloting process was useful to estimate the time required for a single interview. More importantly, it helped to prepare the researcher in areas such as how to deal with jargon, whether the questions were understandable, and ensuring smooth flowing conversation (Rowley, 2012). Table 4.2 highlights the characteristics and summarises the areas of useful insight gained from the pilot study.

No.	Group	No. of Participants	Targeted area(s)
1	Peer	5	Clarity, syntax issues and validity
2	Experts	3	Comprehensiveness, clarity and validity
3	SME owner-managers	3	Clarity, estimated time of interviews, familiarity with interviews and any other concerns.

Table 4.2 Issues arising from the pilot study for phase one

4.3.4 Interview process

As noted earlier, this section aims to provide a detailed description of the interview process. Prior to the question session, the researcher endeavoured to have an informal discussion with the participants. The first few minutes were spent re-briefing the participants on the purpose of the study and their expected role. All participants were re-briefed about the research code of conduct and any concern prior to starting the question session (as explained in section 4.4.2). All participants were informed about the right to withdraw their participation from the research at any time. They were assured that the materials gathered during the interview process would only be used for this study and would be discarded after analysis. This seemed to help reduce stress, particularly as the majority of the interviewees had no previous experience with the process. It is noteworthy that all of the participants recognised and clearly stated their utmost interest to participate in the research.

The above-mentioned initial step was also important to build trust and confidence between the researcher and the interviewees, as well as to 'move seamlessly into a more solid performance once the real interview begins' (Myers and Newman, 2007). It was important to improve the quality and the quantity of the revealed disclosure (Myers and Newman, 2007). More importantly, in the present study, this proactive step was necessary to minimise the impact of social dissonance. For instance, four of the interviewed business owners were females. It was, therefore, important to ask about convenience and whether the presence of a male relative or the obtaining of relative

permission was needed. This was essential in the context of a culture like Oman, which is characterised as a high context culture with a high masculinity (Al-Shanfari, 2012). However, this was not perceived as problematic among the selected sample because the interviewed females were well educated, open minded, and participated in local and international business events (as they mentioned during the interviews).

Having setting up the base for commencing the question session, the interview began by moving from general to specific questions to ensure the interview flow and to maintain the interest of the participants (Myers and Newman, 2007). The researcher commenced each interview by asking introductory general questions, which included questions about the overall background of the enterprise, such as the owner(s) and the enterprise's various business activities. These questions were important to stimulate the interviewees' sense making and to provide better insights about the main themes of the interview (TOE themes). Starting with general questions also helped to make the participants feel comfortable (Myers and Newman, 2007) and to establish a rapport with them (DiCiccio-Bloom and Crabtree, 2006).

After the introductory theme, the questions were structured around the three main aspects of the TOE framework. This included questions on the impact of a range of technological, organisational, and environmental factors (as illustrated in Table 4.4). Besides the above-mentioned questions, the researcher asked probing questions based on the responses of previous interviewees. For example, the first interviewee was asked about the influence of support from a group of students on the decision to adopt Facebook. At the end, all of the participants were asked to highlight and uncover any other issues that influenced their decision to adopt or not adopt social media in their enterprises.

In total, 18 interviews were conducted with SME owner-managers operating in a wide range of business sectors. Interviews took place at the sites of the enterprises to 'create a productive atmosphere' that is a 'more informal and quieter setting' (Myers and Newman, 2007, p.13). The interviews lasted between 45 minutes and one and a half hours. The majority of interviews were conducted in Arabic (local language). Only two interviews were conducted in English (as preferred by the participants). Interviews were recorded with the permission of the participants and transcribed for further analysis.

The next section presents the profiles of the research participants and their SMEs, followed by data analysis.

4.4 Data analysis

Using semi-structured interviews, data were collected from 18 SMEs belonging to different sectors and operating in the Capital of Oman, Muscat. This section aims to

report and analyse the responses of participants interviewed. The interviews were exploratory in nature and aimed at in-depth understanding of the factors that are perceived to influence the adoption of social media by SMEs in Oman. More specifically, this exploratory stage aimed at illustrating the main reasons that derive the SMEs decisions to adopt or not to adopt social media based on the perceptions and views of SMEs' owner-managers.

For ease of understanding, this part of the chapter is divided into three main sections. Section 4.4.1 provides a general overview of the thematic analysis, as a data analysis technique. This is then followed by section 4.4.2 which provides a detailed description of the process used in constructing categories and themes from the interview data in more details. Section 4.4.3 presents a description of the profiles of SMEs and their corresponding owner-managers who participated in the interviewing process.

4.4.1 Data Analysis: Thematic Analysis Technique

As noted in section 3.4, the first phase in this research aimed to identify the factors influencing the adoption of social media among Omani SMEs through semi-structured interview with SME owner-managers.

As noted earlier in section 1.6 and illustrated in the schematic representation of the research design (Figure 3.1), thematic analysis (TA) is used to analyse the interview data collected in the phase one of this study. Thus, prior to discussing how the data analysis was done, it is important first to outline the TA approach, explain its advantages, and explain how it was used in this phase of the study.

Analysing qualitative research data is 'not a simple or a quick task' (Pope, Ziebland and Mays, 2000, p.116). In fact, it is a widely recognised fact that, unlike quantitative research, qualitative research produces a large and vast amount of raw data (transcripts and notes) (Grbich, 2012; Liamputtong, 2009; Burnard *et al.*, 2008) making it the most complex, mysterious, time consuming, and labour intensive part of qualitative research process (Cresswell, 2013; Pope *et al.*, 2000). It is a systematic and iterative process, and it is recommended that this process commence at an early stage in the data collection (DiCicco-Bloom and Crabtree, 2006). Hence, to gain a better understanding of the collected data, the data need be 'organised in a meaningful way' (Liamputtong, 2009, p.133).

There are many different types of data analysis methods used to analyse qualitative research, including narrative analysis, discourse analysis, semiotic analysis, content analysis, and TA (Braun, Clarke and Terry, 2014a; Liamputtong, 2009). Among these types, content analysis (CA) and TA are the two commonly used methods in qualitative research inquiry across a range of fields. The two approaches have some similarities and

some differences (see Braun *et al.*, 2014a; Vaismoradi, Turunen and Bondas, 2013; Joffe and Yardley, 2004). One of the main differences is that CA outcomes tend to be quantitative in nature whereas TA outcomes focus on identifying and describing both explicit and implicit ideas (Guest, MacQueen and Namey, 2011; Joffe and Yardley, 2004). This implies that CA is partially quantitative as it involves establishing categories and then counting the frequencies of occurrence within the collected data (Joffe and Yardley, 2004). For phase one of the present study, TA is used to analyse the qualitative data collected via a semi-structured interview instrument.

According to Braun and Clarke (2006), TA is a method for identifying, analysing, and reporting patterns (themes) within data'. It is also defined by Boyatzis (1998) as a process for encoding qualitative information that allows researchers to organise, process, and interpret the data. It provides researchers with a way of seeing and making sense out of seemingly unrelated material/data (Alhojailan, 2012). TA also enables the researcher to sense the themes of the data, develop codes, and interpret the information and themes in the context of the theory (Burnard *et al.*, 2008; Boyatzis, 1998). With this in mind, it provides a rich set of findings (Lamb and Kling, 2003) by focusing on identifiable patterns in the fragment of texts (e.g. interview scripts) (Aronson, 1995). It helps the researcher to gain deep insights to understand complex research phenomena (Smith and Firth, 2011) and to unearth the patterns salient in the collected data (Attride-Stirling, 2001).

As a processing method of qualitative data, TA is regularly and most widely used in qualitative research by researchers in different fields including the IS field (Braun *et al.*, 2014a; Vaismoradi *et al.*, 2013; Grbich, 2012; Guest *et al.*, 2011; Liamputtong, 2009; Braun and Clarke, 2006; Joffe and Yardley, 2004; Pope, Ziebland and Mays, 2000). In light of its recent applications in the IS field, (Abdullah *et al.*, 2012) the researcher employed the TA approach to analyse qualitative interview data collected to examine the factors influencing ICT adoption among Malaysian SMEs. Also, Johnston, Begg and Tanner (2013) used the TA approach to examine factors affecting open source software in South Africa, and by Alsanea (2015) to explore factors influencing cloud computing adoption in Saudi Arabia.

The TA approach was chosen to underpin data analysis of this study for several reasons, primarily based on the advantages identified by several researchers regarding the deployment of TA to analyse qualitative data when compared with other available approaches (see Braun *et al.*, 2014a; Alhojailan, 2012; Guest *et al.*, 2011; Boyatzis, 1998). First, it is a flexible approach. It can be used across a range of research questions, theoretical frameworks, and different sizes of data sets, small or large. In light of this, Braun, Clarke and Terry (2014a) stated that TA enables the researcher to answer different types of research questions, including those related to identify influencing factors, as is the case of this study.

Second, unlike other forms of data analysis approaches, TA is not restricted to limited types of qualitative data and, hence, it can be used to analyse various types of data collection instruments (e.g. interviews, focus groups, qualitative surveys). In this phase of research, as noted previously, the semi-structured interview is used as a data collection instrument result in generating textual data for which TA is been described a suitable data analysis method (Guest *et al.*, 2011). Third, compared to other approaches, TA does not require labour intensiveness because it is easy and quick to learn. Fourth, TA is an accessible analytical approach to novice researchers. Fifth, it provides easy classification of data, presents themes/patterns that relate to data, and identifies the recurring information across cases (Alhojailan, 2012).

Therefore, in this study, it is believed that TA would enable the researcher to detect, identify, and interpret what the research subjects (SME owner-managers) perceive to influence the adoption of social media in the Omani SMEs. In broad terms, TA is a useful approach to identify and reduce data that relate to already decided patterns/themes (Aronson, 1995) and to make sense of the collected interview data (Thorne, 2000). Having chosen to use TA to analyse the interview data collected in the phase one of this study, the next step is to decide the form of TA.

Regarding the forms of TA, there are three different approaches to conducting TA: inductive, deductive, and hybrid (Alhojailan, 2012). To put it simply, the forms are defined with respect to the source of the theme(s). Braun and Clarke (2006) and Ryan and Bernard (2003) identified two main sources of themes: (i) data, and (ii) the investigator's prior theoretical understanding of the phenomenon under investigation. In the inductive analysis, the categories and themes are generated from the data, whereas the deductive analysis is drawn from a theoretically derived/pre-defined set of themes to categorise the research data (Joffe and Yardley, 2004; Pope *et al.*, 2000). The third form is a hybrid approach in which inductive and deductive approaches are integrated to analyse the research data (Fereday and Muir-Cochrane, 2006).

In this study, a hybrid approach (a combination of an inductive and a deductive TA) was employed to guide the data analysis and hence create main themes (categories) and subthemes. On the one hand, data were collected in accordance with the priori framework (TOE) used in this study and analysed in accordance with the three main contexts (technology, organisation, and environment) of the TOE framework. The TOE framework as a priori theory was used to guide the interview questions and the interview protocol. More specifically, the three contexts were identified deductively and thus used to structure the initial level of the coding system (Abdullah *et al.*, 2012; Weston *et al.*, 2001). On the other hand, an inductive approach was used to discover new themes/subthemes within the transcripts, thus allowing the emergence of new concepts to appropriately explore the phenomenon.

Having discussed the suitability of the data analysis technique used and the specific form employed, the next section continues by discussing the steps involved in conducting qualitative data analysis process to search, analyse, and report themes within the collected data based on the work of Miles and Huberman (1994).

4.4.2 Data Analysis Process

As noted earlier (see section 4.1), this discusses the steps undertaken by the researcher to analyse the interview transcripts collected during phase one of this research. The qualitative analysis process was performed according to the general procedures of qualitative data analysis suggested by (Creswell, 2013; Miles and Huberman, 1994) (see Figure 4.2). Miles and Huberman (1994) suggested a three-step TA interactive model to analyse interview data namely, data reduction, data display and conclusion drawing and verification. The three steps represent an ongoing, iterative and simultaneous data analysis process.

However, prior to the commencement of the data analysis, the interviews must be transcribed. In this study (as noted in section 4.3.4), the recorded data of the 18 interviews were transcribed verbatim. Consequently, this has resulted in a vast amount of textual data. Once transcription is complete, the researcher began to analyse the textual data in accordance with the three steps of the analysis process (indicated in the shaded area in Figure 4.5). The activities conducted in each step are explored in greater depth in the subsequent paragraphs.

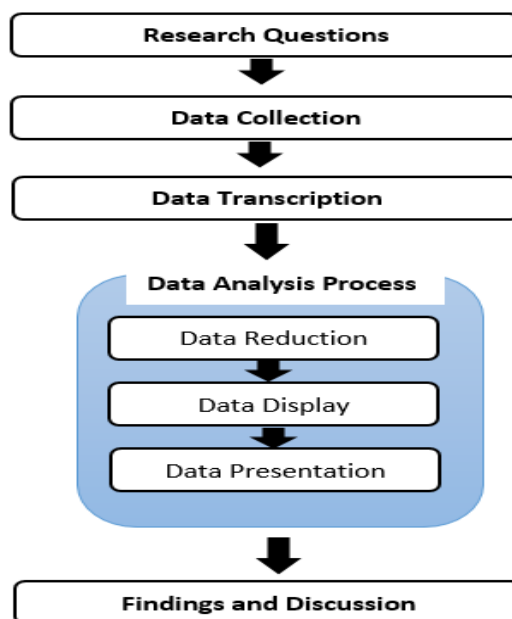


Figure 4.2 The data analysis process (adapted from Miles and Huberman, 1994, p.12)

Data reduction

Data reduction is the first step involved in the qualitative data analysis. According to Miles and Huberman (1994, p.10), it is the “process of selecting, focusing, simplifying, abstracting and transforming the data that appear in written-up field notes or transcription”. In our work, data reduction was achieved by carrying out three activities: iterative reading of the interview data, identification of the themes and subthemes and creation of codes (as illustrated in Figure 4.3).

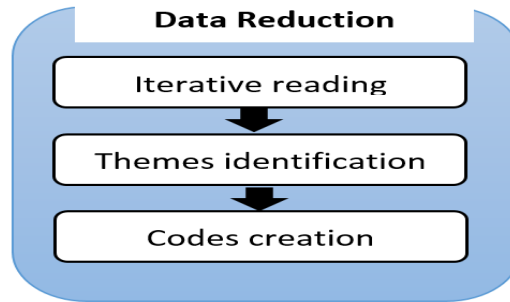


Figure 4.3 The data reduction analysis

At the outset, the researcher carefully and thoroughly read and re-read the interview transcripts. This was found useful for four purposes: (i) to familiarise oneself with the data and make sense out of it, (ii) to gain a holistic overview and a summary of what has been said in each transcript, (iii) to identify data that relates to concepts or ideas identified in the main themes and consequently discard irrelevant data and (iv) to look for potential patterns that emerge from the interview data (Creswell, 2013; Burnard *et al.*, 2008).

The next stage in data reduction is the identification of the main themes. As previously mentioned in the research instrument (section 4.2.2), the interview questions used in this phase of research were structured and guided by the three contexts of the TOE framework. Hence, the identification of the main themes and subthemes was done in accordance to the TOE framework. In other words, technology, organisation and environment contexts were used as the main themes to deductively categorise and organise the contents of the interview data (Creswell, 2013). In order to facilitate the coding procedure, each theme was assigned a code as shown in Table 4.3.

No	Theme	Code
1	Technology context	Tc
2	Organisation context	Oc
3	Environment context	Ec

Table 4.3 Classification of the main themes

Following the identification of the main themes, the third activity done as part of the data reduction was to create initial codes. A code refers to ‘tagging chunks of texts of labels’ (Denzin and Lincoln, 2000, p.804). It is described as a way of organising data to show the relationship and patterns among data (texts or images segments) and thus relating it to

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the main themes (Braun, Clarke and Terry, 2014; Creswell, 2013; Burnard *et al.*, 2008; Braun and Clarke, 2006; Preissle and Le Compte, 1984). This helps the researcher to break down the transcripts data into smaller chunks and to manage the large volume of the interview contents by labelling and sorting the data into codes. Overall, there are three types of codes that can be used by the researcher: (i) codes from the data, (ii) predetermined codes from the theory and (iii) combined codes from data as well as predetermined codes (Creswell, 2013). Because this study employed a hybrid analysis approach, a combined approach to generating codes was used.

Regarding the predetermined codes, in the present study, 14 initial codes referred to throughout the thesis as subthemes were identified in accordance to factors aligned to each context as guided by the interview questions. The subthemes were coded, traced and aligned into the main themes. The list included relative advantage, complexity, compatibility, observability and trialability, which were all connected to the technology context theme. It also included top management support, prior IS experience and size, which were associated with the organisation context theme. Finally, it included market scope, industry, competitive pressure and customer pressure, which were connected with the environment context theme.

S.No	Theme name	Code	Code Abbreviation
1	Technology (Tc)	Relative advantage	RAV
2		Complexity	CPX
3		Compatibility	CPT
4		Trialability	TRB
5		Observability	OBV
6		Image*	IMG
7		Interactivity*	INT
8		Trust*	TRT
9	Organisation (Oc)	Size	SZE
10		Top Management Support	TMS
11		CEO Innovativeness	INV
12		Prior IS Experience	PIE
13		Perceived lack of Managerial Time*	PLT
14	Environment (Ec)	Industry	CSP
15		Market Scope	CMP

16	Competitive Pressure	IND
17	Customer Pressure	MKS
18	Family and friends' Support*	FFI
* New identified sub-themes		

Table 4.4 The subthemes identified to relate the data

Regarding the codes emerging from the data, as a result of the iterative analysis process, five subthemes emerged from the data and were coded and connected to the three main themes (as will be discussed in the stages of the data analysis in the subsequent paragraphs). The first set of the emerged subthemes included image, interactivity and trust. The three subthemes were connected with the technology context theme. Perceived lack of time emerged as a new subtheme and hence, was connected with the organisation context theme. Moreover, the theme of family and friends' support emerged as a new subtheme and was connected with the environment context. As coding is a continual process, after collating codes into potential themes, themes and subthemes were then reviewed and refined (Braun, Clarke and Terry, 2014). These themes were then checked as to whether they form a coherent pattern. Overall, a total of 18 subthemes were identified. Table 4.4 illustrates the subthemes (both deductively identified and inductively emerged) that were used to analyse the 18 interview transcripts.

Having identified the themes and subthemes to organise the interview data, the next step was to undertake a systematic analysis of the contents of each interview transcript. This resulted in having chunks (i.e., pieces of text) of organised texts to understand the data. Therefore, each of the individual extract was coded to make sense of the interview contents and to identify and fit the extracts to the subthemes. Notwithstanding, there were some cases where some extracts were coded more than one time as they showed relevance to more than one subtheme. It was therefore important to connect it to the relevant subthemes. The next step in the analysis process is data display, which focuses on the data as a whole. This is explained in more detail in the subsequent sections.

Data display

Data display is the second step in the data analysis process. It is described by Miles and Huberman (1994, p.11) as “an organised, compressed assembly of information that permits conclusion drawing and action”. It is an important step for the data management and visualization as it enables the researcher to condense a large amount of raw data into a more manageable amount of data (Creswell, 2013; Williamson and Long, 2005). Besides being considered a useful way to communicate, summarise and analyse the qualitative data, data display also is viewed as an effective way to promote the transparency of the analysis process (Williamson and Long, 2005). In other words, this step allows for an easily comprehensible and a visually stimulating representation of the

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analysed data to draw conclusions about the analysis results (Alhojailan, 2012; Williamson and Long, 2005). In this instance, this step takes many forms including tables, charts, decision trees and other geographical formats (Williamson and Long, 2005; Miles and Huberman, 1994; Strauss and Corbin, 1990).

In case of this study, in order to condense the interview data into a more manageable format and to elucidate some aspects of the analysis of the research issue, two basic data displays forms, namely checklist matrix and tables were used. In respect to the checklist matrix, it is used to “provide a way to organise the data into a key theme, variable or a domain of interest” (Williamson and Long, 2005, p.10). In our study, a checklist matrix was constructed for the purpose of organising themes and codes across all cases (see Appendix E). It was used to depict factors influencing social media adoption by SMEs. The column headings of the matrix identified the list of the investigated SMEs (from SME01 – SME18), whereas each row was assigned a factor influencing the decision to adopt social media identified in step one of the analysis process (see Appendix E).

As noted earlier, tables were another data display form to explain the main themes, manage the data and convey the findings of this study. Table 4.5 provides an example of how the interview data of every transcript were organised and summarised in a way that was both meaningful and easy to understand. In order to distinguish between the findings of each interview transcript, a tracking scheme of the extracted segment was used. In another words, each extracted segment of the text was assigned a code that consisted of two main parts: companies pre-identified codes (SME01, SME02 SME18) and subthemes to code the text script. For instance, code SME1 TcRAV is used to refer to the view of the influence of the “relative advantage” by the participant of the first enterprise (see Table 4.5). Similarly, the view of the key informant of enterprise 15 about the “customer pressure” was coded as SME15 OcCSP.

No	Sub-theme	Main theme	Participant	Typical comments	Data Extract Code
1	Relative advantage (RAV)	Technology Context (Tc)	SME11	“When I compare the time before we adopt social media with the period of time we adopt social media, I have got an increase of 55% in the new offers I received and that is attributed to our activity in social media and this is the reason why I want to focus more in social media in 2015”.	SME11 TcRAV
2			SME12	“Surprisingly, and despite our long history in business, many people stated that they did not know about our company and have not heard about it except in the last two years. And I definitely attribute that to social media”.	SME12 TcRAV
3			SME01	“So far we have 16 000 followers within five weeks, they [social media platforms/applications] have become like a website even I feel that I do not	SME01 TcRAV

				need to launch a website".	
4	Customer pressure (CSP)	Environnnet Context (OC)	SME01	"The majority of the inhabitants in this area are students and at this age majority have accounts in social media".	SME01 EcCSP
5			SME03	"People do not us ask about contact numbers or email or even a website rather they tend to ask more about our accounts in Facebook, Twitter and other social media platforms".	SME03 EcCSP

Table 4.5 The Subthemes identified to relate to the data

Once the raw interview data are coded, displayed and organised in a meaningful way, the researcher can then draw conclusions from the findings of the analysed qualitative data, which is discussed in more detail in the subsequent paragraphs.

Conclusion drawing and verification

This is the third step in the iterative process of the qualitative data analysis. In this step, the researcher attempts to assign a meaning to the results and make sense of the data in relation to the context of the issue under investigation. This step consists of two main activities, namely, conclusion drawing and process verification (Miles and Huberman, 1994).

At the outset, the researcher made use of the data displays to draw conclusions about the research issue. In case of this study, the aim at this phase is to gain insight about the TOE factors that influence the decision to adopt social media among the investigated SMEs. The end outcome of these results would be a development of a preliminary model (presented at the end of this chapter), which could then be used to initiate the second phase of the research.

In the second activity, verification, the aim is to establish a rigour and trustworthiness in the qualitative data analysis. This is essential as it helps to identify any possible bias in the analysis process or any potential misinterpretation in describing the research findings. There have been many strategies suggested to verify the credibility of the qualitative analysis results that include, but are not limited to the following (for details see e.g., Denzin and Lincoln, 2000): (i) triangulation (the use of more than one method of data collection, multiple data sets and multiple researchers, multiple time periods), (ii) members checks (asking a smaller number of participants from the original sample-- SMEs owner-managers who took part in the study--to verify the content of the analysed scripts), and (iii) peer check (seeking the help of another person, researcher, to check the data analysis process and verify the accuracy in the analysis process). These ways help to identify any possible bias in the analysis process or potential misinterpretation in describing the research findings. In this study, the analysed data underwent a peer review to examine the credibility of the analysis process and the analysis outcomes and hence, modification was incorporated when the explanations and discussion of the findings was made (will be discussed in the sections 4.5 and 4.6).

Having explained the data analysis process, and prior to reporting the main findings, the following section offers a summary of the profiles of the participating SMEs.

4.4.3 The participating SMEs

This section reports the characteristics of the participating SMEs in the first phase, qualitative study, of this research. In order to avoid the pro-adoption bias (Rogers, 2003), the sample considers both adopting and non-adopting SMEs. Table 4.6 provides a summary of the 18 enterprises that took part in this phase of the research.

No	Industry	Category	Interviewee position	Size	Social media platforms	Other technologies
SME01	Services	Adopters	Owner	12	Facebook, Instagram, Twitter, YouTube and Foursquare	Email
SME02	Manufacturing		Sales and marketing manager	7	Facebook, Twitter and Instagram and Foursquare	Website, email, Blackberry mobile app
SME03	Manufacturing		owner	6	Facebook, Instagram and Twitter	Website, WhatsApp, email
SME04	Retail and Wholesale		Sales and marketing manager	6	Facebook and Instagram	Email, WhatsApp
SME05	Services		Business owner	7	Facebook, Twitter and Instagram	Accounting software
SME06	Services		Owner	5	Facebook, Twitter, Instagram, YouTube and Foursquare	Website, email, WhatsApp
SME07	Manufacturing		Sales and Marketing manager	4	Facebook, Instagram and Twitter (recently adopted)	Email, MS Excel (reports), WhatsApp
SME08	Retail and Wholesale		Operation Manager	5	Facebook and Instagram	Email
SME09	Manufacturing		Owner	2	Facebook, Instagram	Email, WhatsApp
SME10	Services		Owner	35	Instagram, Facebook, Twitter	Email, online order system (Talabat.com)
SME11	Services		Owner	10	Twitter, LinkedIn, Facebook and Instagram	Skype, Email, Website (placed in two servers)
SME12	Services		Owner	8	Facebook, Twitter, Instagram, YouTube and LinkedIn	Official website, design software, email
SME13	Services	Non-adopters	Owner	6	-	Email + Appointment scheduling system
SME14	Retail and Wholesale		Owner	4	-	Email
SME15	Services		Owner	31	-	Email
SME16	Services		Owner	10	-	-
SME17	Services		Owner	6	-	Email
SME18	Services		Owner	6	-	Email

Table 4.6 Profiles of SMEs taking part in the study

The participating SMEs are categorised mainly into two groups: adopters and non-adopters, based on the extent and the level of adoption of social media. The first category, adopters, included SMEs that have adopted social media, including those which adopted social media earlier than others SMEs as well as other SMEs that have recently adopted social media. The second category, non-adopters, included SMEs that have not yet adopted/do not intend to adopt social media. The selected enterprises vary in terms of the sector they belong to. This is because, it is believed that such variance would offer more insights to explore different potential factors in across different sectors. Appendix K provides a summary of the profile of each enterprise that took part in the study.

4.5 Findings of qualitative data

By examining the responses of the SMEs owner-managers of the participating SMEs in relation to the three main categories of the TOE framework, this study explored the factors that influence the adoption of social media, hereinafter referred to SM, by Omani SMEs. The qualitative data presented in the next three sections are based on the technology, organisation and environment contexts. Table 4.6 presents a summary of the findings of phase one (qualitative study) of this research. The next three sections (4.5.1, 4.5.2 & 4.5.3) present the findings of the qualitative data related to the each themes identified in section 4.3.2.

No	Subthemes	Support	Evident in investigated SMEs
Technology Context			
1	Relative advantage	Supported	SME01 – SME12
2	Complexity	Supported	
3	Compatibility	Supported	
4	Observability	Supported	
5	Trialability	Supported	
6	Trust	Supported - Emerged	
7	Interactivity	Supported - Emerged	
8	Image	Supported - Emerged	
Organisation Context			
9	Size	Supported	SME01 – SME12
10	Top Management Support	Supported	SME01 – SME02, SME11
11	CEOs' Innovativeness	Supported	SME01–SME03, SME06, SME10 – SME12
12	Prior IS Experience	Supported	SME01 – SME02, SME09 – SME12
13	Perceived Lack of managerial Time	Supported - Emerged	SME02, SME05, SME13 – SME18
Environment Context			
14	Industry	Supported	SME01 – SME02, SME08, SME13 – SME18
15	Market Scope	Supported	SME01 – SME12, SME13 – SME18
16	Competitive Pressure	Supported	SME01 – SME02, SME13 – SME18
17	Government Pressure	Not - Supported	SME01 – SME08, SME10, SME13 – SME18
18	External IT Support	Not - Supported	SME01 – SME12, SME13 – SME18
19	Customer Pressure	Supported	
20	Family and friends' support	Supported - Emerged	SME02, SME04 – SME12

Table 4.7 The Summary of the Phase One, Qualitative Study, findings

4.5.1 Findings related to the technology context

This section presents the findings related to the technology context theme (Tc). Based on the findings related to this theme, five sub-themes were identified that influenced the adoption of SM. In addition, three new sub-themes emerged as the outcome of the TA analysis, which had a positive impact on the adoption of SM by the Omani SMEs. The subsequent paragraphs present the findings related to each sub-theme in detail.

Relative advantage

Results of the analysis of the qualitative data in phase one of this research show that SM offer adopters (SME01 – SME12) some advantages and that all the adopters were aware of benefits of these technologies. The advantages mentioned by participants included: (i) quick, wide and more frequent reach of customers; (ii) time and money savings; (iii) effective method to find new markets; (iv) relevant and valuable feedback; and (v) cost reduction in terms of advertising and promotion. This suggests that relative advantage is an influential factor for SMEs to adopt SM platforms. For instance, participants of SME01, SME02, SME07 and SME09 commented that SM enabled their enterprises to have a quick, wide and more frequent reach of customers and extended their market reach (to regional and international markets).

I could reach a large group of people. Within a very short period of time, many people they know about my business. (SME09)

Not only (for instance), we have followers from Muscat (Capital City – Oman) but we have followers from Kuwait, Saudi Arabia, Qatar, and recently from Germany and all expressed their willingness to come or to send our products to them, this would have been difficult if we are not in SM. (SME02)

Most interestingly, four adopters (SME07, SME08, SME09 and SME12) mentioned that using SM had an indirect impact on their sales.

I could see the positive impact of being in SM. Many of my customers knew about my enterprise via SM whether directly from our page or through their friends' recommendations via SM platforms. I do not have the exact figure, but I will say that my sales have increased due to being active in SM. (SME07)

This was similar to the perception of the SME09 who expressed that:

Using SM has a positive financial impact on my enterprise. I can say that many people bought from us after viewing our Instagram and Facebook pages and as I said, our sales that comes from Instagram is more than our in-person sales.

From the non-adopters' (SME13-SME18) point of view, the lack of awareness about the perceived benefits of these technologies was a reason for not adopting these technologies in their enterprises. In addition, a majority indicated their satisfaction with the basic systems they have and that their current business operation does not require them to introduce any new systems, including SM.

We are satisfied using email to solve problems and for internal communication. (SME13)

Complexity

The complexity of SM was found to be a strong determinant of its adoption by the SMEs. All the adopters (SME01 – SME12) perceived SM applications as less complicated and easy to use.

SM are easy to be used; it is not complicated at all to the point that even children can use them with ever-comfort. No complexity at all, its use is very easy starting from logging, posting comments and logging out. (SME01)

The easiness of the technology was not only in using them, but also in learning about them and how to incorporate them into their business.

It is also easy to find out information about them and learn about them. (SME02)

Other adopters held similar opinions. For instance, despite that she had accounts on Facebook and Instagram prior to Twitter, the owner of SME07 stated that initially she perceived that Twitter was difficult to use. However, this perception faded once she explored the application and started to learn about Twitter its benefits:

I have read about Twitter and search in Google for information related to it and then created an account for my enterprise but this time without getting the help from my family members or anyone else. I learned by myself.

Besides the aforementioned, low IT skills were not perceived as a barrier to use these applications.

Although I am very weak when it comes to IT and I have a poor background in using technologies, I found SM easy and effective so I adopt them immediately. (SME09)

The simplicity feature of SM compared to previous technologies was argued to lead to hype in the acceptance among enterprises. For instance, the owner of SME03 illustrated the difference between her enterprise's experience with websites and SM by saying that:

So in terms of technicality, it is a little bit complicated when it comes to a website and there are many design issues you have to about. You have to think on how I

am going to design this page, how can I make the fonts, what should I make bigger and smaller and what pictures to put etc. You must have special IT skills to maintain and develop it further. But with respect to Facebook, for example, it is easy, these platforms are made ready so that you just have to open the page and upload photos and videos.

This view was supported by SME02, SME6, SME11 and SME12, suggesting that SM applications are not too complex. Interestingly, four out of six non-adopters showed a good awareness about the low level of complexity of SM applications. However, they have not used it for corporate purposes.

Compatibility

The findings suggest that SM applications are compatible with the participating SMEs. It was expressed by interviewees in terms of the adaptability with current technologies, business values, previous experience and the potential needs of the enterprises. In this study, all the adopters (SME01-SME12) stated that using SM is compatible with their vision to create a good brand in a short period by targeting a large group of people from inside and outside Oman. For instance, the owner of SME06 indicated the need to communicate business ideas, which was not effective via traditional ways:

Sometimes you find yourself in a need to use the technology to let people know about you and your business. So I find myself inclined to use SM to approach someone who really understands my ideas for example, a fashion using 3D technology.

Another participant (SME10) commented on the compatibility of the SM with his business needs:

As a business in the food industry, promoting our products requires visualization; via videos and photos, thus we definitely need to use applications, such as Instagram, to promote our products to a large segment of people via visualization.

In addition to business needs, all the adopters (SME01 – SME12) indicated that SM platforms were characterised by (i) no special infrastructure; (ii) accessibility via different devices, such as mobile phones; and (iii) low network signals. This was the case for the owners of SME09 and SME02 who stated respectively:

With regards to Instagram and SM in general, you can browse them with a 3G or wireless; with low network signals, you can still use them, even when you have 2G.

The most important feature is that users can access them [SM platforms] without special software and you can access and manage them [SM platforms] using a mobile phone device.

By contrast, for the non-adopters, compatibility of SM was perceived as an issue of concern by five non-adopting enterprises. The non-adopters [SME13-SME18] raised different 'compatibility' issues facing their enterprises to embrace SM. Much of the compatibility issues were in regards to working style, business needs and the customers' preference of channel of communication and interaction. It appears that this group of enterprises are comfortable with the existing basic and simple technologies (e.g., basic accounting systems) they have and the current working styles; which some are based on face-to-face interactions.

Currently, we need a simple system for internal communication. Therefore, we use email and we are satisfied with that. (SME18)

Another example was that SME17 designed a simple system to print bills and monitor sales.

We used some basic systems to control our stock and to print bills and monitor our sales figure. For instance, currently, we use a simple sales monitoring program developed via C++. (SME17)

The owner of SME13 shared a similar view concerning the compatibility of SM to his enterprise by stating:

I think that our industry is quite different in nature than other industries and that is why our previous perception that SM is not relevant to our industry.

More specifically, the owner of SME14 stated:

The nature of this business relies more on physical skills; people targeted by our business want to get information in person. So, I do not think that SM is applicable in the current time.

Trialability

Trialability was found to be another important factor that influences the adoption decision. It was reported that having prior personal experience with SM enhanced the decision of SMEs owner-managers to use them in their enterprises. This was the case for all adopters, except SME04 and SME05, who had no personal experience with SM. However, the experience of family and friends presented an important input to accept SM in their enterprises. Thus, the familiarity of SM by relatives and friends contributed to the adoption process.

I have no idea about Instagram and Facebook. It was the idea of two of my brothers who suggested that SM becomes common among people. At the

beginning, two of my brothers were in charge of managing our company presence on Facebook and Instagram and in fact, they had their own personal accounts before creating one for our enterprise. (SME04)

Other adopters stressed the importance of prior experience in SM at a personal level. For instance, the owner of SME06 stated that her personal experience on Facebook enhanced her decision to use it in her enterprise:

I have started first with a personal account on Facebook and later I decided to enjoy the benefits of using the SM to promote my enterprise.

This rationale was similar for other adopters. It appears that experimenting with SM at a personal level helps SMEs to reinforce the adoption process at an enterprise level. This is clearly reflected in the responses of owners of SME03, SME08, SME11 and SME12.

I have used Facebook, Instagram and LinkedIn two years before we created a corporate presence so I have a good familiarity with these tools and I believe that my experience enhance the acceptance decision and made the process easier and quick as I could compare between wide range of technologies we have applied and to determine how SM add value to our business. (SME12)

I did not feel reluctant to be create presence for my enterprise in SM because I have other technologies in place and I have a website and personal accounts. (SME03)

Other adopters relied on the experience of friends and relatives to accept SM:

For SM, I had no knowledge about and no personal accounts but my son and daughter advised me to try Facebook and Instagram and it was a worthy attempt.

My starting point with SM was that I know several people who have their own businesses and have experience in using SM. So I have consulted them in this regard and they did mention that they have seen good results of using SM. With their help, I created accounts for the enterprise and started to engage with people. (SME09).

In the case of non-adopters (SME13 – SME18), it is interesting to note that the owners, except of SME13, were familiar with the use of SM to network with friends.

Few months ago, I have created accounts in Facebook and twitter. However, I avoid using them to promote my business. (SME14)

I like to socialise and network with people using new technologies. For instance, I have accounts in Facebook and Twitter and communicate with friends at work and study. (SME15)

Observability

Observability indicates the extent to which the benefits of adopting SM are visible to the adopters. The findings of this phase of research suggest that observability enhances the decision to embrace SM at the enterprise level. In all cases (SME01 – SME12), adopting SMEs reported seeing SM applications used by many companies within their respective industries. From the point of view of the adopters, all of them reported that the factor or observability played a role in motivating them to accept SM platforms.

You may notice that recently people have inclined to use SM and almost every young person has accounts in SM platforms...People spend more time in SM than websites and forums.

Other adopters (SME01, SME08 and SME12) highlighted the influence of visible international successful adopters' stories on their decision. For instance, the owner of SME08 mentioned that his decision to accept SM in his enterprise was impacted by the experience of international companies:

I follow Nescafe accounts and I really like their page and try to learn from them and apply it to my enterprise page. I do follow also some accounts for local enterprises that are doing really well in SM and established a good presence in a very short span of time.

This was similar to the views of SME01 and SME12. The owner of SME01 echoed the same sentiment regarding the influence of the experience of many international companies in SM on his own decision:

We always read about successful entrepreneurs from outside Oman who are managing their businesses from home and utilise the technology [SM] to do that and they have thousands of followers.

Image

The findings of this study suggest a possible relationship between the adoption of SM and the desire of the business owners to gain social status. Only a minority of adopters (SME03, SME10 and SME11) indicated that the desire to gain a social status influenced their adoption decision. For instance, the owner of SME03 highlighted her ambition to be seen as a successful entrepreneur with a high business profile. She believed that posting some of her personal photos at the enterprise portrayed her sense of pride and achievement.

I have decided to link my photo with my business as I believe it is important to do so and; it gives me a sense of proud achievement.

The same rationale applied to another two adopters, SME12 and SME11. The owner of SME12 valued the prestigious feature that SM offers to the adopters by stating:

I think being in SM has impact us [our enterprise] in a good way. For instance, my photo as a business owner disseminated quickly via SM when I receive a prize in an honouring ceremony. So you feel that you are known to many people and therefore, people will follow you more and you will be the focus of people's attention as owner of a successful company in their perception.

He further emphasised the importance of SM platforms to his enterprise's profile and professionalism in the society.

They [SM] help me to introduce my enterprise as a successful and professional company.

The owner of SME11 offered similar perspectives to the importance of adopting SM in and its impact on the status of the enterprise.

Using Instagram and Facebook has increased the chances for our brand to be viewed as a successful business. Our business profile has improved; and the tribute goes to the wide range of technologies [SM] we use.

Interactivity

The interactive nature of SM platforms and the various options through which SMEs can communicate with their customers were reported to motivate SMEs to adopt them. Further, the participants of some adopting SMEs (SME04, SME07, SME09 and SME10) indicated that SM applications differ from many other technologies (e.g., websites and e-forums) in terms of the embedded interactive features that SM has. For instance, the owner of SME04 stressed the importance of the different options (e.g., video, photos and text) that various SM platforms offered to interact with customers in an effective way.

We have used traditional media but they were not as effective as Instagram and Facebook. With Instagram and Facebook, we can use photos and videos.

A similar view was given by two participants (SME07 and SME09) who clearly asserted the difference between SM applications and webmail. In addition, the sales and marketing manager of SME10 reported the need for his enterprise to be close to customers and to improve their products and services.

We need to use a technology that has a level of interactivity with people and listen to them. And SM has a high level of interactivity with people and this provides us with two advantages: attracting more people and developing our products and services.

Trust

Trust was perceived by some adopters (SME02, SME06 and SME10) as an important factor that had influenced their decision to adopt SM in their enterprises. For example, the owner of SME02 noted that he has full trust in using SM to conduct his business activities.

So far, I have not encountered any technical problem. However, I have heard about problems such as hacking. I believe and trust that the SM providers have the ability to sort out technical issues.

In this regard, the sales manager of SME10 demonstrated that his enterprise uses an application (online order and delivery system) developed by a company based in a neighbouring country. Commenting on the difference between this system and SM platforms in terms of trust, he stated that:

Instagram, Facebook and Twitter are owned by large trusted international organisations, but this system is owned by a company which is not widely known.

Trust was also related to the ability of the service providers to address technical problems. The owner of SME12 indicated the critical importance of trust to adoption by stating:

We do not have qualified team to tackle technical challenges beyond our capabilities, but I think by communicating with the mother company [service providers], we can make use of their facilities and reduce the risk of unexpected challenges.

From non-adopters point of view, two participants (SME15 and SM17) mentioned that trust played a central issue in the decision to adopt SM in their enterprises, in addition to other technological, organisational and environmental factors discussed in this section. For instance, the owner of SME 17 clearly explained his concern about the issue of trust in SM application:

I think email is a formal communication channel. We use the email to receive notifications about money transfers from our customers so the email represents the trust to us; I trust that I got something which I was waiting for. However, with SM still people may not trust them well as it is possible to receive inaccurate information.

In summary, these results provide important insights into the role of technology characteristics in the adoption of SM by SMEs. This phase of the study found that technology context is an important area to study in order to understand the decision to

adopt SM by SMEs (detailed discussion about the findings of this context will be given in section 4.6.1). The influential factors include (i) relative advantage, (ii) complexity, (iii) compatibility, (iv) trialability and (v) observability. In addition, three more attributes emerged from the data, including (vi) image, (vii) trust, and (viii) interactivity. The next section presents the findings related to the organisational factors.

4.5.2 Findings Related to the Organisation Context

As noted earlier, the section presents the findings related to organisational factors that were perceived to influence the adoption of SM by the SMEs. The organisation context, as a main identified theme, included five main subthemes (size, top management support, CEOs' innovativeness, prior IS experience, and perceived lack of managerial time), of which the last subtheme emerged from the interview data. Each of the identified subthemes under the organisation context theme is discussed in detail along with quotes to support the corresponding findings.

Top management support

As expected, there was a general agreement among adopters (SME01-SME12) that top management support played a central role in the adoption of SM by SMEs. In fact, the views of all of the adopters concerning this issue were similar. For example, the owner of SME01 described the support offered by the management team as follows:

Our management team has a good experience in marketing through technologies, but I (the sales manager) personally have a history in the use of IT. I consult them and we work as a team. For example, I get their opinions on the new things I intended to post and I like to discuss with them because everyone give me (come up with) new idea which he may not be able to disseminate it, but at least he gives me a hint about it and then I put it in a correct way.

In addition, the owner of SME02 indicated a high level of receptiveness of the management towards IT adoption, stating:

The management has a positive attitude towards adopting new technologies to promote our enterprise and our products. Our attitude toward new things is to try it as soon as it is launched. We tend to buy and use new applications.

The receptiveness and commitment towards considering SM adoption in SMEs may also be enforced by showing further financial commitments. This may be addressed by putting pressure on the enterprise budget to adopt new technologies, including SM. One of the participants validated the significance of top management support to the adoption in her enterprise:

Sometimes, even I put pressure on our budget to adopt new technologies. For example, although we are a small company with limited resources, we decided to have a website, as we perceive it is highly important to showcase our products and our events.

Additionally, the sales and marketing manager of SME10 highlighted the utmost care given by the owner and the management team to exploit new technologies in their enterprise and to support the adoption of new systems.

All the managers, including the CEO himself, realise the need to use SM and benefits from various features. As management, we attended exhibitions; we visit websites of companies that develop electronic systems and we also regularly refer to fast food companies and restaurants to know about new systems they adopt. With regards to exhibitions, as I told you, it is not only those which take place in Oman but also those outside the country.

Furthermore, the owner of SME12 acknowledged the positive impact of involvement in information technologies and its related issues.

I believe that when someone gets involved into IT and technical stuffs, he or she will come to know the structure of complicated IT-related things, such as codes. And this promotes my understanding about the importance of IT applications; we as a team believe in the power of technology and always try to learn more and more about how to utilise new technologies in a maximum way.

Size

Considering its crucial impact on the adoption of many technologies, the participants were asked to comment on their enterprise size in relation to the adoption of SM. Interestingly, size was not perceived as a barrier. In fact, the findings of the interview data indicated that size enabled all adopters (SME01-SME12) to consider the use of SM.

They are smaller than us but still they make use of the technology. So size is a reason to use and not to reject SM. (SME01)

In fact, being a small company with limited resources motivates us to use affordable technologies, such as SM. (SME02)

These days it is important to create presence on SM regardless of how big or small your company. I think SM applications are more applicable to small companies, as they do not need a good IT infrastructure or specialised IT people. (SME05)

Similarly, other adopters clearly expressed their views that the simple and flexible structure that characterised their enterprises was an important motive for them to adopt SM.

Small companies like us have simple and flexible structures, which make to deploy the technology or reject easy and quick. (SME11)

For enterprises of our size and the medium enterprises, I think the size must be perceived as a motivating factor to be in SM. And Facebook and other platforms are made ready for company of any size to use them. (SME12)

CEO innovativeness

The innovativeness of the main decision makers in the participating SMEs was investigated to evaluate its impact on the decision towards SM adoption. In case of this study, it was declared as an influential factor leading to adoption. According to the data from the interviews of many adopters (SME1-SME03, SME06, SME10-SME12), it was clear that their attempts to exploit new technologies contributed their use of SM.

We try to be innovative and I believe in technology and when I go to a restaurant/café I focus on technologies utilised there even if you have noticed that we have our menu in Tablet devices. (SME01)

We seek to find about new and latest technologies that can be useful to our enterprise. We've participated in internal and external events to promote our business and at the same time to know the new with others and technologies employed by companies are one of the concerns. (SME02)

Other adopters (SME03, SME06, SME07 and SME10) reported to follow similar approaches.

We are effectively exploring new technologies in the market after assessing our business needs. I am very much satisfied that I am open to new ideas and new technologies that emerge in the market and discuss about them with friends and IT specialists. (SME06)

I am very passionate about knowing new idea, new innovation or about new software emerged in the market or new device. I pay more attention toward new things in the market, especially if it is related to our business and help us to do our business in a better way. Every year we update the devices in our company whether to change the hardware, update software or change it. So we use newest software and apply late technologies in available in the market as software or devices. (SME12)

Surprisingly, the owner of SME09 expressed his low level of innovativeness towards exploring new technologies.

I do not pay a lot of attention to technologies. I can say that to some extent, I am good with acquiring and knowing what is new in terms of technological advancement.

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As for the non-adopters, they tended to show a positive attitude towards the adoption of new technologies in their enterprises. However, some of them appeared to be less innovative in seeking to exploit new technologies, including SM.

We do not really seek to exploit new technologies because we develop simple programs using our internal capabilities. (SME16)

Prior IS experience

Regarding the impact of prior IS experience, the adopters were found to have mixed views about the impact of this organisational factor on the adoption of SM. Some adopters (SME01, SME02, SME06 and SME09-SME12) claimed that their decision to adopt SM was highly dependent on their prior experience with other technologies, such as electronic forums and websites.

I think not only trying SM has impacted our decision, but also our personal experience with different networking applications, such as hi5 messenger, e-forums and my previous experience in managing forums. All this cumulative IT knowledge enhances our decision to accept SM. It [prior IS experience] helps us a lot because it increases our belief in using technology and reduced the fear and ambiguity to try new technologies. We have already tried different applications so why not SM. (SME01)

Using previous similar technologies was found to have an impact on the decision to adopt SM platforms. For example, SME02 had experienced with BlackBerry applications prior to the use of SM. This experience motivated the management to use Facebook in their enterprise.

We have recently launched a website and before SM, we had a good experience with different technologies, such as electronic forums and blackberry mobile app to engage and display our products to people. This experience contributed positively to accept and adopt SM in our enterprise.

Prior experience with websites, electronic forums and personal accounts in SM were also found to enhance confidence among adopters to adopt SM. For instance, the owners of SME04, SME07, SME11 and SME12 asserted the role of prior IS experience in their decision to facilitate SMEs decision to adopt SM.

Before SM, I have a basic background about website and using email to communicate with clients and suppliers. I think my background in using website and responding to emails contributes to the acceptance of SM platforms for personal use and also for the enterprise. (SME11)

My previous experiences with websites and forums have helped me a lot to accept SM platforms for personal use and for corporate use. I think my personal basic knowledge on websites, electronic forums and SM really has helped me a lot to adopt SM in enterprise. (SME12)

Other adopters (SME03, SME05 and SME7) did not regard their prior experience with other technologies to have a direct influence on their decision to adopt SM.

It has indirectly facilitated the adoption and made the process quicker, it is only a plus. (SME03)

Perceived lack of time

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Time was perceived by many of the participants as a challenge towards the adoption of SM. However, they attempted to find their own ways to resolve this issue.

The only problem is time. But if you have a clear plan about the time your customers expect you to respond, that is fair enough. (SME02)

Both the owners of SME02, SME03 and SME06 perceived lack of time as an issue only in the first days of using SM.

In the beginning it was like a 24/7 but then you have to decide as I have told that now I meet with (reply to their feedback) people only in the morning because I have to separate my personal life from business life. (SME03)

Surprisingly, the owners of other adopting enterprises (SME09 and SME10) mentioned that they do not involve themselves with SM as they are engaged with the core activities of their businesses. Hence, the management of the accounts are the responsibility of a female relative.

I should take care of other core issues. I believe it is important and good to invest on them [SM], however, I do not want to engage with [SM]. It needs someone who is fully dedicated to the use of SM. (SME05)

It is interesting to note that all non-adopters (SME13-SME18) perceived lack of time as one of the main inhibiting factors. Their responses indicated commitments with two main activities: personal-related activities and work-related activities.

The other challenge is no time to manage the system; we have a lot of work pressure. (SME14)

I lack of time to spend to promote our business online; I am a full time employee staff. (SME15)

In addition to job related activities, the owner of SME13 clearly justified his decision not to adopt SM in his enterprise due to having family commitments.

I felt that SM platforms may intrude on my family life. Due to being busy at work and the work pressure, the only time I have, if I would like invest in SM, is the time when I suppose to be at home with my family. And compromising with the time I spend with my family is very difficult.

In summary, the study found that organisation context represents an important area to examine in order to understand the decision to adopt SM by SMEs (detailed discussion about the findings of this context will be given in section 4.6.2). The influential factors included (i) size, (ii) top management support, (iii) CEO innovativeness and (iv) prior IS experience. In addition, (v) perceived lack of time emerged as a new influential factor from the raw data.

4.5.3 Findings Related to the Environment Context

In addition to the technology and organisation contexts, the environment context forms the final main theme of the a priori framework (as noted in section 2.4.3). This theme includes five main subthemes (industry, market scope, competitive pressure, customer pressure, and family and friends' support), of which the last two subthemes, customer pressure and, family and friends' support emerged from the interview data.

Customer pressure

The findings of this study suggest that customer pressure, also known as coercive pressure, is an influential factor for SMEs to adopt SM. In fact, all the adopters (SME01-SME12) reported that their decision to embrace SM in their enterprises was directly influenced by the pressure received from customers.

We are based in the largest district in the capital, the area is close to the University, private colleges and private schools; the majority of the inhabitants in this area are students, who at this age have accounts in SM. You have to see as a business owner to which today's people lean and which technology suits this generation. And no doubt that this is the time of SM and this generation interacts more via SM. (SEM01)

The trend towards using SM is normal. I mean, SM spread among people and especially youth are now on Facebook, Instagram, Twitter and other platforms and it is necessary to be there if your customers are already there. (SEM02)

The national reports indicate that the majority of Omani youth use SM and this is the current trend, Facebook, Instagram and Twitter. I mean if you ask people about how much time they browse website, I think their answer is relatively low compare to browsing SM accounts. So the intensity of people using these programs, motivate us to target them [via SM] and to get their feedback to develop our products. (SEM05)

In fact, the diffusion rate of certain technologies, including SM, among potential customers was perceived a main criterion to embrace SM. The owner of SME04 clearly

expressed how the number of people using/expected to use a certain technology affects their adoption decision:

For instance, in the current time we focus more on Instagram because the number of users who are active in this application including customers is very high. However, blackberry app is rarely used these days. Thus, we know about [blackberry] but its diffusion rate was very low and therefore we decided not to adopt it.

This has been stated as well by other adopters, the owner of SME08 noted that his products have potential customers in the virtual space, in particular in SM. Thus, he decided to target them via SM.

Sometimes people who visited us ask if we are in Facebook or Instagram. It [questions] becomes quite common in the events and exhibitions and it shows the level of awareness among people about SM. I feel that they do not care much if you have a website but they do expect you to have accounts in Facebook and Instagram.

Another adopter, owner of SME09 justified his enterprise movement towards SM over using electronic forums to market its products, by saying,

As people move to new technologies such as Facebook and Twitter, we create accounts and started to promote our business in these platforms.

In addition, the owner of SME12 highlighted the customers' expectation of his enterprise to have presence in SM.

Our clients expect us to be in SM.

On the contrary, all non-adopters, except SME14, perceived that their customers still rely on traditional techniques, such as word of mouth, and prefer face-to-face interactions.

I think people with regards to construction; they trust friends' opinions and not what we say or show in SM. They want to see the reality. (SME17)

In addition, the findings indicate a mutual agreement among the majority of non-adopters concerning the lack of customers' readiness and pressure.

Our customers have different specifications and require personal sessions to discuss about their projects. I do not see that our customers discussing more about this type of business [construction] in SM compare to other sectors. They still have not reached the level whereby they search for this kind of businesses [construction] using SM. (SME15)

It is not worthy that we open accounts in Facebook, Twitter and Instagram and we start to invest time and post photos and text posts, but people are not willing to move to SM. (SME18)

Competitive pressure

Regarding the influence of competitive pressure on the adoption of SM in the investigated SMEs, the participants expressed a mixture of views, including between the adopters themselves. On one hand, some of adopters (e.g., SME01 and SME02) indicated the positive impact of competitive pressure on the decision to adopt SM, while other adopters (e.g., SME03-SME06) did not credit competitive pressure for their decision to adopt SM. In addition, and as expected, non-adopters (SME13-SME18) perceived fewer adopters among their competitors.

As noted that, some adopters perceived that competitive pressure a main motive to accept SM. For example, the owner of SME01 highlighted the intensive competition in his enterprise industry by saying:

I think in our industry [food services industry] and as many enterprises in this sector, it is essential for us to use technology and to be unique and gain competitive advantage over other enterprises. I mean if these enterprises [competitors] are in SM, we must be there as well. I browsed other restaurants and cafés accounts in SM, thus it was necessary to have presence in SM if our competitors have.

Another view in relation to the impact of competitive pressure was stated by the owner of SME02, who said:

SM enables us to know about our competitors. I sometimes browse their [competitors] pages and check the updates of both local and international competitors. Because we have to know where we are compare to them. And if we do not do that, we will be left behind. If other companies are doing well in SM, why don't we utilise these tools?

However, it is interesting to note that three of the adopters, SME03, SME05 and SME06, did not see any relationship between being in SM and the pressure from other enterprises as they did know about them before using SM.

I do not see any direct link between adopting SM and the competition in the market. I mean we do not use the technology because other businesses are using them. Although, SM gives us a competitive advantage over other companies. (SME05)

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A similar pattern was followed by other adopters (e.g., SME09 – SME12) indicating that these enterprises were not driven by the fact that their competitors have created a presence in SM; however, SM helps them to research their competitors.

I did not know many of them before SM. In fact, I came to know about other local and international companies and connect with them via SM. (SME09)

I do not see competitors as a reason for us to be in SM, although having presence in SM gives us competitive advantage. (SME12)

As expected, non-adopters claimed that SM is not relevant to their industries.

There are few companies who have started that but I do not think that they have succeeded because still people [customers] don't have a clear awareness of getting information related to construction services via the SM. (SME16)

In addition, the owner of SME17 recognised the importance of competitors joining SM as it could be perceived as a main indicator of SM tools in the industry.

There are other companies doing similar business activities but as far as I know, they have not yet joined SM platforms. I think that it would be essential for us to use SM in the enterprise when our competitors start to create a presence in SM; if they have active engagement with people, we will then take similar decision.

Industry

Industry is perceived as another important factor that influenced the adoption of new technologies. The findings reported by key informants of the 18 SMEs varied according to the sector in which they operate. For instance, among the adopters, the owner of SME01 viewed the food services and manufacturing industries, as often witnessing intensive competition among enterprises.

I think in the food industry and as many enterprises in this sector, it is essential for us to use these technologies [SM] to be unique and gain competitive advantage over other enterprises.

The influence of industry on the decision to adopt SM by SMEs is more apparent in the case of non-adopters (SME13-SME18). For instance, the owner of SME17 commented on the difference between his enterprise industry and the other industries (e.g., fashion) to show the irrelevance of SM to their industry.

I mean it is still not like fashion and other similar businesses that sell clothes and other consumable stuff, SM may more applicable to these kind of industries but not yet our industry [construction]. In our industry and its related activities, you do

not expect people to search [using online tools – such as website and SM] for example for contractors or companies that can do the task for them.

Market scope

In terms of the impact of market scope, it was found to be another important factor that motivates SMEs to adopt SM. Thus, this result suggests a possible relationship between the market scope and SM adoption. Although the majority of the investigated enterprises in this study reported that they conducted their business activities in the local market, some of the adopters reported to have a plan to expand locally and some stated their aspiration to target regional and international markets.

Our products target everyone and not limited to the citizens of the capital region but with SM, everyone become a potential customers. (SME02)

On the other hand, all the non-adopters (SME13-SME18) reported that they operate in a narrow circle serving a small group of people. For instance, the owners of SME16 justified their decision not to adopt SM:

The enterprise operates in a small area in the capital and people easily find about the enterprise's activities.

Two of the adopters, SME16 and SME17, explained this further by stating that once their enterprise expands their market scope, they plan to adopt SM.

With the intention to expand our business to cover large areas as we start getting order requests from people outside our business area, we are planning to have accounts in Facebook and Twitter. (SME16)

Influence of family and friends

The support of family and friends emerged as an influential factor on the SMEs decision to adopt SM. Many of the adopters (e.g., SME02, SME04, SME05, SME06, SME07 and SME08) reported to be impacted by the support received from friends and family members.

In the beginning, I have no idea about Instagram and Facebook. It was the idea of two of my brothers who suggested that SM become common among people. So, after that, we all agreed to have accounts in the two famous SM applications, which are Facebook and Instagram. (SME04)

The presence of family members and friends in SM platforms inspired some adopters to use these tools not only for personal use, but for corporate use as well.

Almost all of my brothers, sisters, cousins and other family members have accounts on SM and they support me; their presence form a good support to continue using these channels and adopt them in our enterprise. (SME06)

Equally important, the owner of SME05 assigned the task of managing the SM presence to his relative member.

I was lucky that one of my relative has personal accounts in popular SM channels and I think her experience and knowledge about these channels made the process easy and quick.

With other adopters (e.g., SME07, SME08, SME11 and SME12), the supports received from family and friends was quite different. In those enterprises, family and friends played a major role, as they did not know how to use the new technologies.

At the beginning, I got the help of my son and daughter who helped me to set up accounts on Facebook and Instagram. (SME07)

I took their opinions about being in SM and all have supported me to create presence on SM platforms. They have certainly influenced my decision to use SM and I decided to go a further step to adopt SM in the enterprise. (SME12)

External IT support

Contrary to others forms of ICTs (e.g., e-commerce and cloud computing), external IT support did not influence SMEs' adoption decision. In this study, both adopters (SME01-SME12) and non-adopters (SME13-SME18) emphasised this factor had no significance on their decision to adopt or not to adopt SM.

I see no impact for external support in the acceptance of SM. (SME09)

Another participant indicated that support might be beneficial when the enterprise wants to effectively optimise and use SM applications in the adoption stage.

In the first level, we did not need external support but for make effective engagement you need to apply professional tricks and techniques. (SME11)

Overall, the results presented in this section provide important insights into the role of environmental factors in the adoption of SM by SMEs and it indicates the importance of these factors to understand SMEs' decision to adopt SM (detailed discussion about the findings of this context will be given in section 4.6.3). The influential factors related to this context include: (i) industry, (ii) market scope, (iii) competitive pressure and (iv) customer pressure. In addition, one attribute emerged from the data, which is (v) family and friends' support.

After presenting the findings related to themes of the three contexts, the next immediate step is to form interpretations and obtain meaning from the research findings by comparing them with those gleaned from the literature and those related to the TOE framework. Thus, the next section provides a discussion of the findings of phase one (qualitative study) of this research.

4.6 Discussion

Results from the analysis of the semi-structured interviews with adopters and non-adopters indicate that social media adoption by SMEs is influenced by the following factors: technological (relative advantage, complexity, compatibility, observability, trialability, trust, interactivity and image); organisational (size, top management support, CEOs innovativeness, prior IS experience and perceived lack of managerial time); and environmental (industry, market scope, competitive pressure, customer pressure and family and friends' support). The results are discussed in the next three sections by concentrating on each individual context.

4.6.1 Discussion of the findings related to technology context

In addition to the main technology characteristics (relative advantage, complexity, compatibility, trialability and observability) identified by Rogers (2003), another three factors (interactivity, trust and image) emerged from the interview data as having an impact on the adoption of social media by SMEs. Each factor identified in the technology context (including those that emerged from the interview data) is described below.

Relative advantage

Consistent with previous studies exploring the adoption of other types of ICTs (Safari, *et al.*, 2015; Ifinedo, 2011; Ramdani, Kawalek and Lorenzo, 2009; Khong, *et al.*, 2009; Ramdani and Kawalek, 2007; Grandon and Pearson, 2004; Scupola, 2003; Lertwongsatien and Wongpinunwatana, 2003; Premkumar and Roberts, 1999), relative advantage was found to influence the adoption of social media by SMEs. In respect to social media adoption in the SME setting, the results of this study support the findings of Parveen, Jaafar and Ainin (2015) who indicated that social media managers' of Malaysian' SMEs have highlighted multiple benefits of social media, including a reduction in expenditure on advertising and customer service. In addition, results related to the impact of relative advantage are in agreement with Gangwar *et al.* (2015) who showed that relative advantage has a strong impact on the adoption of cloud computing.

This study confirms this fact as it was clear from participants' answers that the main use of social media was to promote products and services. Further, the results show that few adopters claimed an increase in sales due to being present in social media. The results may suggest that SMEs need to be aware of the benefits of social media for their businesses, as this would help them to adopt these technologies. Interestingly, the results of this study show that few of the non-adopters SMEs were aware of the benefits of social media. This could be attributed to the familiarity of usage on a personal level and the observability of a positive impact for the adopters. Thus, this may further support the trend observed by Coleman, Chandler and Gu (2013) that many companies are seeing the potential value of using social media.

Besides relative advantage, the adopters' decision to adopt social media within their enterprises was influenced by the other four technology characteristics identified by Rogers (2003), which are complexity, compatibility, observability and trialability. This finding is consistent with studies by Jones *et al.* (2013a) and Ramdani and Kawalek (2007) who investigated the adoption of enterprise systems in SMEs.

Complexity

In this study, complexity was found to be an important factor that influences the adoption of social media by SMEs. This finding is in accordance with many previous studies

(Oliveira, Thomas and Espadanal, 2014; Grandon and Pearson, 2004; Thong, 1999; Grover, 1993) indicating that complexity has a direct impact on the adoption of IS innovation. It is also consistent with Ramdani and Kawalek (2007) who found complexity to be significant determinant of Enterprise Systems (EAs) adoption. Interestingly, in this qualitative phase of the study, some of the non-adopting enterprises perceived social media applications as less complex compared to other types of ICTs (e.g., email and websites). This might be due to the widespread uptake of these applications as well as the simple required infrastructure. This also may be explained by the fact that the majority of this study's participants indicated their familiarity with social media on a personal level. Thus, this may suggest that the majority of investigated SMEs perceive social media to be easy to learn and simple to use.

Compatibility

Regarding compatibility, the results of this study show a strong significance of this factor with the SMEs decision to adopt social media. This is consistent with the findings of Ainin, *et al.* (2015), Jones *et al.* (2013), Wang, Wang and Yang (2010), Tan *et al.* (2009), Ramdani and Kawalek (2007) and Grandon and Pearson (2004) which found that compatibility is a significant factor in the adoption of technology. There are two possible explanations for this result. Firstly, it could be because social media platforms are easily adoptable. Secondly, social media is perceived to be accessible with less infrastructure requirements.

Trialability

Unlike its impact found in many types of ICTs, trialability was found to be another technology attribute that influences social media adoption by SMEs. This finding supports the views espoused by the findings of Ramdani and Kawalek (2007). In a social media context, the results of a study by Wong (2012) indicated that personal usage of Facebook is a stronger driver of business usage. The experience and familiarity with social media on a personal level may assist decision makers to adopt them at the corporate level. This means that personal usage of social media applications may facilitate the decision to adopt them in the enterprises. Another possible explanation for the significance of this factor may be attributed to the uncertainty avoidance that characterised the Omani context, hence SMEs owner-managers tend to experiment with the new technologies first before they are convinced of their suitability to their enterprises.

Observability

Observability was found an important factor influencing the adoption of social media by SMEs. This finding supports previous research into IS innovations adoption (e.g., Azam and Quaddus, 2009; Hussin and Noor, 2005; Seyal and Rahman, 2003). It also confirms

the results of Ramdani and Kawalek (2007), suggesting that visibility of Enterprise Systems adoption by others motivates firms to adopt them as well. Although, the literature indicates mixed results concerning the impact of observability on the adoption of many IS innovations, the responses of the participants (both adopters and non-adopters) in the qualitative phase of the study provided evidence on the influential impact of observability.

Trust, interactivity and image

Besides the above five technology attributes identified by Rogers (2003), three factors emerged from the analysis of the interview data. As previously mentioned, the emerged factors were trust, interactivity and image. Notwithstanding, very little was found in the IS innovation adoption literature concerning the impact of these three factors on the ICT adoption decision by organisations.

One important technological factor that emerged from the analysis of this study was **interactivity**. This result matches those observed by earlier studies (Pituch and Lee, 2006; Lee and Kozar, 2004) suggesting that the interactivity feature of the technology has a strong impact on the decision to adopt social media. The result also lends support to the view of a recent study by Ainin *et al.* (2015), which revealed that interactivity is an important factor for Facebook usage among Malaysian SMEs. This result is likely to be related to the perceived interactive nature of social media applications that support two-way of communication with end users in comparison with Web 1.0 technologies.

Trust is another factor that emerged from the analysis of the interview data. This finding is in-line with that of Allart (2015), suggesting that trust in technologies appear to be the most important factor in the adoption of ERP among SMEs in Thailand. In relation to the Omani context, the findings of some studies found trust to be influential in the adoption of information technology. For instance, Al-Hajri and Tatnall (2007) indicated that trust was one of the inhibiting factors to the adoption of internet technology in Omani banks. In another study, trust was found to be a main concern towards the adoption of e-learning in the Oman education system (Al Musawi and Akinyemi, 2002). In the case of this study, trust was reported by some participants as an important factor that affects social media adoption by SMEs. The possible explanation for the significance of trust might be attributed to lack of awareness about legal and regulatory issues concerning the use of information technologies (Ashrafi and Murtaza, 2008); thus, trust may present a concern. Another possible interpretation would be the high uncertainty avoidance that characterises the Omani context; SMEs owner-managers tend to be cautious about the risk involved in new ICTs adoption.

Image emerged as another important factor that influenced the adoption of social media by SMEs. This finding seems to be consistent with the previous research, which suggested that image plays a supplementary role in the adoption of e-commerce among

SMEs in New Zealand (Al-Qirim, 2007). This could be attributed to the perception among SMEs' owners that using new technologies would grant their enterprises a lead in the market.

In a summary, based on the above discussion, eight technological factors were included in the preliminary model (discussed in section 4.7) that will be validated using a large-scale survey study (see chapter 5 for details).

4.6.2 Discussion of the findings related to organisation context

As noted in section 4.5.2, this study reported five organisational factors that have been perceived by participants to influence the decision to adopt social media in their enterprises. Each factor (including the emerged from the interview data as shown in section 4.5.2) is explained in more detail in the subsequent paragraphs.

Size

The link between organisational size and innovation adoption has received a lot of attention by IS researchers (Loukis and Kyriakou, 2015; Oliveira, Thomas and Espadanal, 2014; Herrero and San Martín, 2012; Chang *et al.*, 2011; Low, Chen and Wu, 2011; Boumediene and Kawalek, 2008; Al-Qirim, 2007; Bharati and Chaudhury, 2006; Hussin and Noor, 2005; Premkumar, 2003; Thong, 1999). In this study, the impact of the size of the enterprise was not conclusive; however, the results of this study show less importance of the size as a barrier towards adoption of social media in comparison with the previous types of ICTs. In light of this, mixed results concerning the impact of size on the adoption of information technologies in organisational settings have emerged. On one hand, it was found that size was an important determinant of the adoption of information and communication technologies (Premkumar and Roberts, 1999), cloud computing (Ramdani and Kawalek, 2007), ERP (Pan and Jang, 2008) and enterprise systems (Jones *et al.*, 2013). Interestingly, a recent study by Wamba and Carter (2014) indicated that larger SMEs are more likely to adopt social media than their smaller counterparts.

On the other hand, other studies found no significance of business size on the adoption of technologies. For instance, Ifinedo (2011) was unable to show that firm size had a positive influence on the adoption of Internet and e-business technologies in Canadian SMEs. A similar finding by Goode and Stevens (2000) showed no correlation between size and the adoption of World Wide Web technologies. Notably, in their recent study concerning Twitter adoption by SMEs, Wamba and Carter (2013) found that size does not influence the adoption process. In this study, though the results are not conclusive, the size of the enterprise was found to have less importance as a barrier towards adoption of social media in comparison with other types of ICTs. Overall, it seems that the enterprise size was not perceived by many of the investigated SMEs to inhibit them from adopting

social media. The possible explanation of this is that social media does not require extensive investment. Hence, it may mean that larger firms have no advantage over smaller firms.

Top management support

This study found top management support to be an important determinant of social media adoption by SMEs. Similarly, a strong relationship between IS innovations adoption and top management support has been reported in the IS adoption literature. This finding has been confirmed by the results of many earlier studies (Ifinedo, 2011; Stieglitz and Dang-Xuan, 2011; Pan and Jang, 2008; Ramdani and Kawalek, 2007; Hussin and Noor 2005; Premkumar, 2003; Scupola 2003; Premkumar and Roberts, 1999; Thong and Yap, 1995) in which top management support was considered an influential factor in determining adoption. In addition, this finding corroborates the results of Stieglitz and Dang-Xuan (2011), who suggested that managerial support is essential in the introduction of new technologies in the corporate setting. Hence, this study suggests the central role of top management to facilitate the adoption of social media in their enterprises.

CEO innovativeness

The results of this study show that CEO innovativeness is an important factor influencing SMEs decision to adopt social media. This finding is consistent with previous studies (Christodoulides, Siamagka and Michaelidou, 2015; Stieglitz and Dang-Xuan, 2011; Al-Qirim, 2007a; Thong and Yap, 1995; DeLone, 1988). It is also in accordance with the recent study by Wamba and Carter (2014) indicating that SMEs adoption of Social Networking Services (SNS) is positively affected by the innovativeness of the organisation. Similarly, Al-Qirim (2007) found that the introduction of external email in New Zealand SMEs was dependent upon the level of CEO innovativeness. Hence, the finding of this study suggests that SMEs with innovative owner-managers tend to be more likely to embrace social media. This may also indicate the central role of CEOs in their enterprises in the case of SMEs.

Prior IS experience

Prior IS experience was found to be an important factor to influence SMEs' decision to adopt social media. This finding is in-line with that of Kuan and Chau (2001) and consistent with that of Ramdani and Kawalek (2007), suggesting that having relevant IS experience is an important factor to facilitate SMEs' decision to adopt IS innovations. It may be that the SMEs owner-managers perceive that having prior IS experience with similar technologies (e.g., websites and e-forums) help them to assess the suitability of social media in their enterprises. It can be suggested that prior IS experience is an important factor when deciding about the adoption of social media in SMEs.

Perceived lack of managerial time

The results from the analysis of the interview data shows that perceived lack of time was identified in the participants' responses to be an important factor that influences SMEs' adoption of social media. Furthermore, it was perceived as a chief barrier for the non-adopters to create a social media presence and manage online content. It is worth noting that very little was found in the IS innovation adoption literature about the impact of perceived lack of time on ICT adoption decisions by organisations. This finding is consistent with Kenny and Gunter (2011) who identified that time inhibited the desire of educators to use video games in their classrooms. Similarly, time was reported by health professionals as the most common barrier against using Web 2.0 tools (David, Poissant and Rochette, 2012). Likewise, lack of time was perceived as a barrier to implement web-based courses in the colleges of education in the US (Surry *et al.*, 2009) and ranked as the second barrier to adopting technology for teaching and learning in Oman (Al-Senaidi, Lin and Poirot, 2009).

In addition, the result of a study by Cragg and King (1993) reported a positive relationship between IT growth in small businesses and the considerable amount of senior managerial time. The possible explanation of this result is that all the owners of the non-adopters included in the sample held full-time employment, which they may have perceived to limit their time to engage in social media.

In summary, based on the above discussion that indicated mixed results of the findings, the five organisational factors were included in the preliminary model (discussed in section 4.7).

4.6.3 Discussion of the findings related to environment context

As noted in section 4.5.3, five environmental factors were identified by the investigated SMEs as significant to the adoption of social media. Pan and Jang (2008) argued that adoption of new technologies in organisational settings occurs as a response to external pressures. In this study, participants reported five environmental factors that had an impact on their enterprises' decision to adopt social media. Four of those factors (industry, market scope, competitive pressure and customer pressure) were evident in the quantitative data, whereas support from family and friends emerged from the interview data. External IS support was the only environmental factor that lacked enough support. The results are discussed in more detail in the subsequent paragraphs.

Industry

Regarding the impact of the industry in the adoption decision, the IT adoption literature includes mixed empirical results. On the one hand, it has been argued that the industry in

which the firm operates influences the adoption of IT innovations (Oliveira, Thomas and Espadanal, 2014; Wamba and Carter, 2014; Sinclaire and Vogus, 2011; Al-Qirim, 2007a; Ramdani and Kawalek, 2007; Yang, Wu and Tsai, 2007; Grover, 1993). For instance, the findings of an exploratory study by Sinclaire and Vogus (2011) indicated possible variance of the adoption among the industries. On the other hand, evidence from another study by (Ifinedo, 2011) showed no influence of industry type on the adoption of Internet and e-business technologies in Canadian SMEs.

However, the findings of this study suggest that the industry is significant to the adoption of social media by SMEs. This is in-line with studies by (Oliveira and Martins, 2010; Ramdani and Kawalek, 2007; Thong, 1999). Thus, it is assumed that businesses whose owners believe that the adoption of social media is still irrelevant; prefer to apply a “wait and see” strategy. Some of the participants articulated this strategy by saying that if other companies in their industry adopt social media and the advantages of this step are obvious, the decision to adopt will be taken immediately.

Market scope

This study found a possible link between the adoption of social media and the market scope of SMEs. This supports the results of Levenburg, Magal and Kosalge (2006) indicating that market scope has a significant impact on the motivation to implement e-business. A note of caution is due here as all the SMEs included in this phase of research were found to operate in the local market, though some of them have expressed their intention to target the international market. Therefore, to provide a confirmatory conclusion on its impact on the adoption decision, market scope factor is included in the preliminary model (will be discussed in section 4.7).

Competitive pressure

The analysis of the interview data showed mixed results among adopters concerning competitive pressure. Some of them did not perceive that competitive pressure played a significant role on their decision to adopt social media, whereas other adopters expressed the importance of gaining a competitive advantage in the market. The findings of this study suggest that competitive pressure has a notable effect on SMEs’ decision to adopt social media. This finding is consistent with previous studies (Alqahtani and Fosso Wamba, 2012; Ifinedo, 2011; Scupola, 2009; Al-Qirim, 2007c; Mehrtens, Cragg and Mills, 2001; Thong, 1999). The significance of the competitive pressure in this study may suggest that SMEs tend to adopt social media as a response to pressure to maintain a competitive advantage or gaining recognition within an industry, as suggested by Lippert and Govindarajulu (2015).

Customer pressure

Customer pressure was found to be an important determinant of the adoption of social media by Omani SMEs. This finding is in agreement with that obtained by Sinclair and Vogus (2011) suggesting the importance of customer use in driving enterprises to adopt social media in their organisational setting. In addition, it supports the finding of Al-Qirim (2007a) suggesting that pressure from the buyers drove the adoption of e-commerce (EC) by SMEs' in New Zealand. In addition, it is in-line with the findings of Mehrtens, Cragg and Mills (2001) indicating that decisions to use the internet are influenced by the pressure from the internet users outside of the firm. The study highlights that SMEs were not motivated to create a presence in social media because their customers were not social media driven and were not interested to learn about businesses via social media. This may be attributed to the trend in the increasing number of people embracing social media; hence, SMEs respond to this trend themselves.

Family and friends' support

The support of family and friends emerged as an important factor that affects the adoption of social media in SMEs. This finding is supported by previous studies (Matuschke, 2008; Poon and Swatman, 1997) and is in accordance with more recent studies by Allart (2015) and Derham, Cragg and Morrish (2011a). For instance, the results of the study by Poon and Swatman (1997) found that owners of Australian small businesses relied on external sources, including friends and partners, to learn about the internet. In addition, Derham, Cragg and Morrish (2011) suggested an implied positive role for family members on the decision related to introducing new technologies or other business ideas. A more recent study by Allart (2015) found that SME owners and managing directors in Thailand prefer to rely on personal networks and positive feedback to assess new solutions and to decide whether to adopt them. This may imply that friends and family members represent a valuable source of advice for SMEs owner-managers. It is possible therefore that the Omani SMEs owner-managers lack ICT expertise (as found by Ashrafi and Murtaza, 2008) and hence they seek friends and relatives advice concerning ICT adoption.

External IS support

This study found no evidence for the significance of external support in the adoption of social media by SMEs in Oman. In fact, all the adopters who participated in this study did not attribute any importance to external IS support in the decision-making process. This finding matches previous research by Ramdani, Kawalek and Lorenzo (2009), which suggests that external IS support is insignificant in promoting enterprise systems adoption among SMEs in the Northwest of England. This might be attributed to the perceived ease and less complexity involved in using social media applications. The case could be different with other types of complex ICTs (e.g., cloud computing and ERP) where the level of system complexity may necessitate external technical support. It could be also attributed to the role of the support received from friends and family members. Moreover,

the responses of all participants of both groups (adopters and non-adopters) are indicative of less perceived complexity of social media; thus, they have not sought help from the social media consultancy companies at their current stage. Further, it might be also attributed to the lack of awareness about the availability of social media consultancy agencies among the Omani SMEs owner-managers. Consequently, external support is not included in the preliminary model.

In a summary, based on the above discussion that indicates mixed results of the findings, the five environmental factors were included in the preliminary model (will be discussed in section 4.7).

4.7 Research Hypotheses

The proposed hypotheses under each context are presented in Table 4.7 based on the discussion of the analysis of the interview data concerning the impact of the factors of the three TOE (presented in sections 4.6.1, 4.6.2 and 4.6.3).

Context	Hypothesis	Hypothesis Statement
Technology	H1*	Increased perceived relative advantage of social media positively influences SMEs' decision to adopt social media.
	H2*	Decreased perceived complexity of social media negatively influences SMEs' decision to adopt social media
	H3*	Increased perceived compatibility of social media positively influences SMEs' decision to adopt social media.
	H4*	Trialling social media applications before adoption positively influences SMEs' decision to adopt social media.
	H5*	Increased observability of social media applications positively influences SMEs' decision to adopt social media.
	H6**	Increased interactivity of social media applications influences SMEs' decision to adopt social media.
	H7**	Increased trust of social media applications positively influences SMEs' decision to adopt social media.
	H8**	Increased image of social media applications positively influences SMEs' decision to adopt social media.
Organisation	H9*	The size of the enterprise has a positive impact on the SMEs' decision to adopt social media.
	H10*	Top management support positively influences SMEs' decision to adopt social media.
	H11*	Innovativeness positively influences SMEs' decision to adopt social media.
	H12*	Prior IS experience positively influences SMEs' decision to adopt social media.
	H13**	Lack of perceived managerial time negatively influences SMEs' decision to adopt social media.
Environment	H14*	The industry that an SME operates within influences the decision to adopt social media.
	H15*	The market scope that an SME operates within influences the decision to adopt social media.
	H16*	Competitive pressure positively influences SME decision to adopt social media.
	H17**	Customer pressure positively influences SME decision to adopt social media.
	H18**	Family and friends' support positively influences SME decision to adopt social media.
* Factors based on the TOE framework		
** New factors that emerged from the findings of study one, the qualitative phase		

Table 4.7 TOE Proposed Hypotheses

Similarly, Figure 4.7 offers a schematic representation of the preliminary TOE model that has resulted from the data analysis of the qualitative data collected in phase one. As can be seen from the figure, the preliminary model consists of 18 TOE factors,

which are to be validated through a survey administered to a large sample. More details on the validation of this model are provided in the next chapter, Quantitative Study.

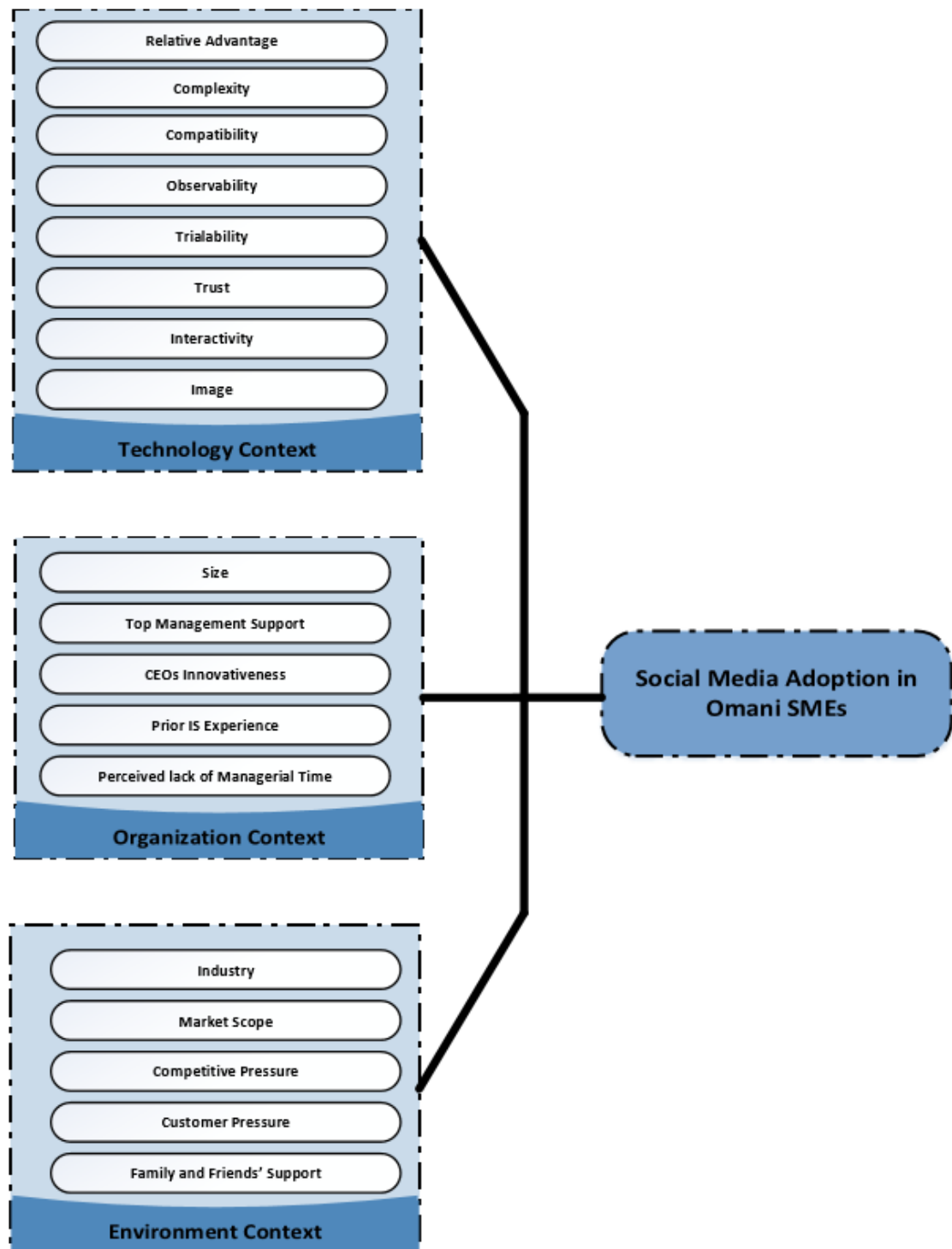


Figure 4.4 The Preliminary Model of Social Media Adoption by Omani SMEs

4.8 Summary

In summary, this chapter has discussed the results of the qualitative phase of the research. It has reported related research activities including study-set up, data collection and data analysis. It has provided the justification for the choice of semi-structured interviews to gather data from the research subject as well as highlighted the procedures followed to conduct the interviews.

In addition, data collection activities including sampling, ethical approval, piloting and the actual interviewing process have been described. This chapter has also justified the use of thematic analysis to analyse the interview data and has reported the undertaken data analysis process. Further, this chapter presented a thorough discussion of the research findings at this stage. Thus, drawing on the analysis of the interview data, a TOE-based framework was developed for predicting social media adoption, incorporating 18 factors related to the three contexts of the framework (eight variables were technological factors, five factors were organisational-related and five factors were environmental-related). The importance of this chapter lies in that the empirical findings are used as an input to develop a preliminary model to be tested in the next research stage, quantitative. Hence, the research implementation of the quantitative phase to validate the preliminary model is discussed in more detail in the next chapter.

Chapter 5: Study 2 – The Quantitative Research Phase

5.1 Introduction

Chapter 4 presented the data collection and reported the findings and results produced in phase one of the research, the qualitative study. Building on these findings, chapter 5 reports the activities related to the study set-up, data collection and data analysis associated with the quantitative study, the online survey used to carry out the second phase of the research. The importance of this chapter lies in its testing of the theoretical model that aims to predict the adoption of social media in SMEs in Oman.

The chapter is divided into three main sections: study set-up; data collection; and data analysis. Section 5.2 explains the study set up, beginning with an overview of the broad type of quantitative research instrument – survey – used in this research phase. Section 5.2.1 argues the suitability of using a survey to carry out this phase of the study and discusses the specific type of survey chosen as a data collection method: an online survey. Having identified the data collection method, section 5.3 discusses the development of the survey instrument that was used for the empirical data collection and highlights the main issues that required careful attention when designing the online survey instrument. It also presents the survey's design and structure, highlighting the relation between the survey questions and the relevant IT innovation adoption literature (which was analysed in chapter 2).

Section 5.4 then goes on to report the activities related to data collection, which includes: sampling; ethical considerations; and the piloting undertaken before launching the survey online. Section 5.4.1 discusses and justifies the sampling technique used to select the survey respondents. Section 5.4.2 then aims to describe the ethical considerations associated with this phase of the study in more detail. Section 5.4.3 then explains the piloting procedure used to check and pre-test the survey instrument before distributing it to the selected sample of respondents. Section 5.4.4 describes the survey distribution procedure.

The final substantive section of this chapter, section 5.5, presents the online survey data and its analysis, describing the steps taken to analyse the quantitative data and test the

model developed in the chapter 4. Section 5.5.1 provides details on the validity and reliability issues associated with the survey. The application of a relevant statistical approach, logistic regression, to test the hypotheses presented in the model is explained in more detail in section 5.5.2. This section justifies the choice of logistic regression. Section 5.5.3, then continues to shed a light on essential issues of consideration when applying logistic regression. This include diagnostic issues required to build a robust logistic regression model that can fit to the dataset. Before moving into a thorough discussion of the survey results, section 5.5.4 presents a descriptive analysis of the survey respondents. Section 5.5.5 then reports the online survey results and presents the findings, looking specifically into technological, organisational and environmental factors that influence the sampled SMEs' adoption of social media. To achieve this, the section begins by providing a discussion of the factors related to each TOE context, paving the way for comparing the results with the relevant IT innovation adoption literature in the next chapter. Section 5.6 provides a summary of the chapter and its position in the thesis.

5.2 Study Set-up

As stated in section 3.4 and re-iterated in chapter 4, this chapter aims to identify the factors that influence SME owner-managers' decisions towards social media adoption in their enterprises. In the previous, qualitative research phase, drawing on the TOE framework, several technological, organisational and environmental factors were identified as being of likely importance in the Omani SME context. Based on the research design presented in chapter 3, the second research phase, reported in this chapter, takes a quantitative approach, surveying a large sample of respondents to gain data on the identified factors and their influence on social media adoption in the SME setting and, as a result, to validate (or otherwise) the model presented in the preceding chapter.

This section therefore discusses the study set-up, mainly the choice of surveying as the research strategy, and online survey, specifically, as the data collection technique. The section also explains the development of the survey instrument, concentrating on its structure and design. Section 5.1 is divided into two sections. Section 5.2.1 discusses and rationalises the choice of the survey research strategy, as well as elaborating on the online survey as an appropriate data collection technique for this phase. Section 5.2.2 provides a detailed description of the research instrument's development, concentrating on the tool used to develop the online survey, the design of the survey itself and the source/provenance of the questions in relation to the IT innovation adoption literature analysed in chapter 2.

5.2.1 Survey

There are many reasons that made using a survey a viable research strategy for this phase of the research. First, it is regarded as an efficient and effective way to assess management perceptions about organisational issues, including adoption (Rogelberg and Stanton, 2007). Given its potential to garner information from a large sample, surveys provide an efficient way to capture data from a significant number of respondents (Fink, 2015; Bakla, Çekiç and Köksal, 2013). Also, survey results contribute to a greater confidence in the generalization of the results to the whole population being considered by the study (Gillham, 2008; Barlett, Kotrlík and Higgins, 2001; Jick, 1979); this was a key aim of this phase of the research. In addition, it has been argued that surveying is the most widely-used research approach in the field, as is particularly popular when addressing IT innovation adoption (Mingers, 2003; Orlikowski and Baroudi, 1991).

Since this phase of research required the use of a research strategy with a deductive capability to test the hypotheses formulated in the qualitative phase (reported in chapter 4) (Cavaye, 1996), the choice of survey seems appropriate. Two other strengths of the survey approach which made it an appropriate option for this research phase were related to cost and time. Surveying is time-efficient and cost-effective when compared to other research strategies, such as interviews (Nardi, 2015; Fowler, 2013; Andres, 2012; Lefever, Dal and Matthiasdottir, 2007).

Given these advantages, the researcher needs to determine the appropriate type of survey to use given the context, including the intended research respondents. Several modes of survey are suggested in the literature, including mail/postal, telephone and online survey (for more details on the strengths and weaknesses of each type, see, for example, Dillman, Smyth and Christian (2014); Vaus (2013); Kelley *et al.* (2003); Pfleeger and Kitchenham (2001)). For the second phase of this research, an online survey was chosen as the method through which to survey respondents. This choice is justified in the remainder of this section.

The internet provides a powerful tool that can help researchers to conduct surveys, supporting two broad types of survey: email and web-based (Bakla, Çekiç and Köksal, 2013; Sue and Ritter, 2012; Buchanan and Hvizdak, 2009; Fleming and Bowden, 2009; Selm and Jankowski, 2006). Despite its relatively short history, the online surveying method has had a profound effect on conducting research (Andreadis, 2015; Couper and Miller, 2008) and is increasing in popularity (Rowley, 2014; Blair, Czaja and Blair, 2013; Sue and Ritter, 2012), being used to study a wide range of topics (Bakla, Çekiç and Köksal, 2013; Buchanan and Hvizdak, 2009; Marshall, 2005) including those that are IS-related (for example, Baltar and Brunet (2012)). Online surveys have been used in many

studies and it has been found to be an acceptable method and an efficient tool to collect primary data (Buchanan and Hvizdak, 2009; Lefever, Dal and Matthiasdottir, 2007). Online surveying was therefore chosen as an appropriate method through which to collect quantitative data in order to test the hypotheses arising from the conceptual framework developed in chapter 4.

There are many notable benefits that made online surveying a more viable and appropriate way in which to collect quantitative data way than other survey modes/types. First, it is an efficient way to reach a large population (Sue and Ritter, 2012; Selm and Jankowski, 2006). Second, it has relatively low administration costs (Olsen, Keltyka and Kimmell, 2011; Dillman and Bowker, 2001; Couper, 2000) as well low costs associated with returning the completed surveys (Blair, Czaja and Blair, 2013; Sánchez-Fernández, Muñoz-Leiva and Montoro-Ríos, 2012) when compared to conventional surveying methods (Couper and Miller, 2008). Third, online surveying offers a wide range of interactive features and visual elements which may attract more responses (Bakla, Çekiç and Köksal, 2013; Sue and Ritter, 2012; Olsen, Keltyka and Kimmell, 2011; Couper, 2001; Crawford, Couper and Lamias, 2001; Dillman and Bowker, 2001) and maximise the clarity of survey items (Fielding, Lee and Blank, 2008; Kitchenham and Pflieger, 2002). Fourth, it supports quick response rates (Blair, Czaja and Blair, 2013) and, fifth, anonymity of respondents (Sue and Ritter, 2012; Lefever, Dal and Matthiasdottir, 2007; Selm and Jankowski, 2006; Sax, Gilmartin and Bryant, 2003). Sixth, it enables easy follow-up and reminders to be sent to improve the response rate (Lefever, Dal and Matthiasdottir, 2007). Finally, it offers an easy process through which to collect, clean and manage the data for subsequent analysis (Bakla, Çekiç and Köksal, 2013; Olsen, Keltyka and Kimmell, 2011; Fleming and Bowden, 2009).

As well as these general advantages of an online survey, there are other contextual issues that justify the use of an online survey as the data collection technique in this phase of the research. First, this technique was appropriate given the lack of a reliable postal system in Oman and the lack of information available about the SMEs (see section 5.3.1 for more detail on this issue), both of which would have made it difficult to distribute a paper-based questionnaire. The researcher was able to use information provided by PASMED, which included email addresses of registered SMEs. Second, to address the social dissonance issue discussed in section 4.3.4, it was felt that an online survey offered a higher level of security and privacy to respondents than a traditional, paper-based survey and, therefore, might help to motivate responses from Omani female business owners. It was felt that this might help to overcome underrepresentation of women in the sample of respondents (Zhang, 2000). Third, the use of an online survey to gather quantitative data from SMEs owner-managers in Oman could make use of the

widespread ownership of smartphone devices, offering greater possibilities and convenience to the respondents when answering the survey (Toepoel and Lugtig, 2015; Dillman, Smyth and Christian, 2014). According to Lefever, Dal and Matthiasdottir (2007) and Sax, Gilmartin and Bryant (2003), the approach also makes it easier for respondents to complete the survey in their free time, which may lead to a higher response rate.

Despite the stated advantages, it is important to note that using online surveys has potential weaknesses (Blair, Czaja and Blair, 2013; Evans and Mathur, 2005; Dillman and Bowker, 2001; Zhang, 2000). One of these major weaknesses is that online surveys tend to produce a low response rate (Blair, Czaja and Blair, 2013; De Vaus, 2013; Kaplowitz *et al.*, 2011). As a result of having a small data sample, the generalizability of the data to the target population can be undermined and the statistical power of the survey can be limited (Rogelberg and Stanton, 2007). Another weakness, or at least challenge, is that online surveys tends to result in a sampling bias, since only respondents with internet access are able to answer the survey (Blair, Czaja and Blair, 2013; Olsen, Keltyka and Kimmell, 2011; Dillman and Bowker, 2001; Zhang, 2000). Though internet access is now relatively pervasive among the target population of this research (Olsen, Keltyka and Kimmell, 2011), this issue could lead to an unrepresentative sample since some individuals may be excluded (Solomon, 2001), which could in turn affect the response rate and the generalizability of the findings (Zhang, 2000). To tackle issues associated with low response rates, several approaches have been suggested, including the use of pre-notifications with a personalised cover letter and follow-up reminders (for more details, see Olsen, Keltyka and Kimmell (2011); Rogelberg and Stanton (2007); Selm and Jankowski (2006); Evans and Mathur (2005); Dillman and Bowker (2001); Solomon (2001); Couper (2001)).

In the next section, detail related to the design and development of the survey is presented.

5.3 Survey Design and Development

This section aims to discuss the development of the instrument used in the second phase of the study. To achieve this aim, the section is broken down into three subsections. In the section 5.3.1, the software tool, Bristol Online Survey (BOS) (BOS, 2015), used to create and design the instrument is discussed in more detail, covering the capabilities of BOS to enhance the layout and overall structure of the instrument. Section 5.3.2 elaborates on the core design issues that require careful attention when designing an online survey instrument and includes discussion on the principles and guidelines that may be used to design a robust, simple and well-presented research instrument. Building

on the understanding of the core design issues, section 5.3.3 discusses the structure and measurement operationalisation of the instrument in relation to the IT adoption literature.

5.3.1 Survey Design Tool

As stated in section 5.2.1, the internet offers researchers opportunities to conduct and design online surveys. As a result, a wide array of survey development tools with various sophisticated options and features can now be used to facilitate the process of creating and conducting a user-friendly online survey (Bakla, Çekiç and Köksal, 2013; Sue and Ritter, 2012; Fielding, Lee and Blank, 2008; Wright, 2005). In this research, the survey was created and designed using Bristol Online Survey (BOS), (BOS, 2015). As a powerful and a flexible online survey, this software has a professional and a simple layout that offers respondents many functions and simple navigation of the created survey pages. It is a well-established, web-based software system used to design and conduct surveys and has a user base of over 300 organisations (BOS, 2015). In fact, many national surveys in the UK have been conducted using BOS (BOS, 2015). It supports multiple browsers and allows different types and formats of question to be asked, including those that elicit open-ended responses. Moreover, it does not require any technical knowledge so is useful for first-time web survey researchers (Bakla, Çekiç and Köksal, 2013).

However, as with any form of survey, using online survey does require adherence to, and demands awareness of, certain design issues in order to develop a robust instrument, improve the response rate and yield useful and relevant information (Patel and Joseph, 2016; Bakla, Çekiç and Köksal, 2013; Hewson and Laurent, 2012; Deutskens *et al.*, 2004). More detailed discussion of a set of useful recommendations and guidelines that were been considered in the design of the online survey developed for this phase of the study is presented in the next section.

5.3.2 Instrument Design

Designing a high-quality survey research instrument is not an easy task; rather it requires a lot of effort (Rowley, 2014; Bakla, Çekiç and Köksal, 2013; Kelley *et al.*, 2003; Dillman, 1994). Andres (2012) describes the process of designing a survey as “daunting” because it is a systematic process that requires, from the outset, the devotion of enough time and attention to develop the instrument (Blair, Czaja and Blair, 2013; Lumsden, 2007; Deutskens *et al.*, 2004). In fact, there is no theoretical base or rule of thumb that guarantees an ‘ideal’ survey instrument (Grover and Vriens, 2006). However, developing a good and effective survey instrument requires that the instrument undergoes a robust

process of design and testing. This is because the design process has impact on the survey results. Additionally, the instrument represents the only means through which the researcher communicates with the respondents (Fielding, Lee and Blank, 2008).

In view of the above, it has been argued that the success of a survey instrument depends heavily on the design phase (Bee and Murdoch-Eaton, 2016; Reynolds, 2006; Crawford, Couper and Lamias, 2001). It is therefore recommended that key design principles be followed to assist in producing a sound survey instrument. Such general principles of 'do's and don'ts' help to reduce design pitfalls by addressing important design issues. In this respect, several design key issues have been identified and associated good practice that can help in handling these issues have been suggested and comprehensively discussed in the survey research literature (see, for example, Rowley, 2014; Brinkman, 2009; Dillman and Bowker, 2001; Goddard and Villanova 1996). Of these core issues, question wording and format, question formulation, layout, question sequencing and the language used were addressed in developing the survey instrument for this research.

With respect to the first issue, drafting and formatting questions require careful consideration in the survey design. In broad terms, there are two main types of question: open-ended and close-ended (Rowley, 2014; Bakla, Çekiç and Köksal, 2013; Sue and Ritter, 2012; Reynolds, 2006; Marshall, 2005). Open-ended questions are those for which respondents are allowed to "use their language and express their own views" (Rowley, 2014, p.314), whereas in closed-ended questions, known as "pre-coded" questions (Seale, 2004, p.83) the respondents are provided with options from which to select (Sue and Ritter, 2012). In deciding what types of question to include in the instrument, Bell (2014) recommended that researchers be aware of the advantages and limitations of each type before incorporating them into the instrument. For the same reason, Brace (2008) asserted that the researcher needs to understand the type of information required as this will help to determine the appropriate types of question to be included.

In this study, a combination of both open-ended and closed-ended questions was used. However, it is worth mentioning that, in practice, open-ended questions were limited to the last section of the survey as the responses to this type of question are difficult to analyse and interpret (Bee and Murdoch-Eaton, 2016; Patel and Joseph, 2016; Brace, 2008). Also, several authors (for example, Galesic and Bosnjak, 2009; Crawford, Couper and Lamias, 2001) have observed that the use of open-ended questions play a role in the abandonment of survey completion, suggesting that limiting their use may be a wise strategy. The remaining sections in the survey used only closed-ended questions, which is a commonly used question type in survey research (Brace, 2008; Gillham, 2008) as they provide quick and easy-to-handle data (Bee and Murdoch-Eaton, 2016). In

particular, four types of closed-ended questions were included: category; list; scale; and dichotomous. The types of question that were used in the study survey instrument are summarised in Table 5.1.

Question Type		Explanation	Examples
Closed-ended	Category	Respondents are provided with many options from which they need to select a single option.	Market scope: four categories were provided: "Local", "National", "Regional" and "International". The respondents must choose the option that represents the market scope of their enterprise.
	List	Respondents are offered a list of options from which they may select one or more applicable option.	Social media platforms: "Facebook", "Twitter", "Instagram", "LinkedIn", "Foursquare", "Myspace", "Vine", "Google+", "Others" (please specify) The respondents may tick one or more box to indicate their use of platforms.
	Scale	Respondents are provided with one statement or a series of statements and are instructed to indicate their level of agreement/disagreement with each statement.	Image: IMG1: "Businesses which use social media applications have more prestige than those who do not", IMG2: "Business which use social media have a high profile"
	Dichotomous	Respondents are provided with only two options for a particular question.	Social media adoption: "Yes" / "No".
Open-ended		Respondents are asked to express their opinions in free text comments.	In section E, respondents were asked to provide additional comments about the research topic.

Table 5.1 Questions types in the survey

Alongside the choice of the types of question, question formulation is another essential part of the design process (Fink, 2015; Reynolds, 2006). In writing survey questions, it is crucial to ensure that each question is related to the research objectives. Also, it is important that each question can be easily read and clearly understood as intended by all respondents. In respect of this issue, several authors (for example, Bryman and Bell, 2015; Kelley *et al.*, 2003; Kitchenham and Pfleeger, 2002) have suggested general guidelines that should be used to help construct simple and clear questions and avoid potential problems. Table 5.2 summarises the general guidelines on question formulation that were followed in the design process of the study instrument.

Kelley *et al.* (2003) also suggested consideration of two further issues when developing a survey instrument: (i) planning the content of the instrument; and (ii) survey layout. With respect to the first issue, Kelley *et al.* (2003) recommended the researcher to conduct a literature search to 'adopt' questions that have been used in existing, tested surveys. Relying on previous studies' instruments may make survey administration easy and ensure content validity and reliability of the instrument items (Hewson and Laurent, 2012; Sue and Ritter, 2012; Kitchenham and Pfleeger, 2002). In the case of the instrument of this study, the researcher conducted an extensive review of the survey instruments used

in previous IT adoption studies. Hence, a series of predefined items in the instrument were from previously tested studies (more details in section 5.3.3).

No	Guideline	Explanation
1	Avoid long questions.	Asking long questions may lead respondents to skip answering them and thus may result in incomplete data and/or may lead to respondents discontinuing to answer the survey (Sue and Ritter, 2012), affecting the response rate. Keeping questions short and simple helps to prevent lowering the response rate.
2	Avoid use of abbreviations, slang and colloquial expressions.	Jargon (e.g., technical terms) are difficult to understand and may cause confusion, lead to missing data and produce low response rates. To avoid this issue, in this study, the researcher provided a glossary of relevant social media-related terms.
3	Avoid doubled-barrelled questions, asking about two variables or more in one question.	This type of question contains two distinct questions but allows one answer. This leads to a non-response or renders data impossible to analyse and interpret (Sue and Ritter, 2012). To avoid this issue, the question should be split into two distinct questions.
4	Avoid very general questions (simple language questions).	The researcher is recommended not to use questions that are too vague or too general; instead, the questions used should be precise and to the point.
5	Avoid leading questions.	A leading question is any question that directs respondents towards a particular answer or implies a certain answer (Sue and Ritter, 2012). This type of question should be avoided.
6	Avoid questions that include negatives.	This type of question may lead to confusion and misinterpretation of the question. As such, this type of question should be avoided.

Table 5.2 General guidelines related to question formulation that were used in the development of the survey

With respect to the second issue, survey layout is another significant element that should be considered in order to ensure a clear and well-presented instrument (Blair, Czaja and Blair, 2013), supporting respondents in navigating and completing the survey in an easy manner (Reynolds, 2006). Reflecting the importance of the issue, Boynton and Greenhalgh (2004) associated good survey layout with an improved response rate. In designing the instrument for this phase of the study, clear instructions were given in relation to each section, appropriate titles and headings were used, and item groupings were considered as they represent good indicators of a well-designed survey layout (Blair, Czaja and Blair, 2013; Reynolds, 2006; Kitchenham and Pfleeger, 2002). In addition, the layout was improved by standardizing responses to ensure a consistent format, with similar question formats being used for related questions. For instance, the use of scaling measures was consistently applied throughout the survey, with scales aligned in the same direction (1 meant strongly disagree, and 5 meant strongly agree). This was important as it has been found to yield two benefits; first, it reduces the time taken to complete the survey (Blair, Czaja and Blair, 2013); second, it enhances the reliability of the instrument (Sue and Ritter, 2012; Boynton and Greenhalgh, 2004).

Another two fundamental design issues that need to be carefully considered when designing a survey are question sequencing and section ordering (Rowley, 2014; Marshall, 2005; Goddard III and Villanova, 1996). With regards to these two issues, the researcher adhered to the two rules suggested in the literature (see, for example, Rowley, 2014; Blair, Czaja and Blair, 2013). The first rule is to commence with general and easy

to answer questions before moving on to more focused questions. This approach helps to establish rapport with respondents and raises their interest in participating in the study (Patel and Joseph, 2016). In this study, the survey therefore started with questions related to demographic information and general social media. The second rule relates to building a sense of flow and logical relationships between questions and sections by grouping questions into sections and clustering items that belong to a particular theme. In the survey instrument for this study, all items related to technology characteristics of social media were asked in one section, so the respondents were more likely to find the questions easy to comprehend as they had a logical sequence. Also, and in a tandem with the logical structure, the instrument was structured into logically-ordered pages where relevant topics were presented on the same page. For instance, pages 7, 8, 9 and 10 of the survey were aligned to ask questions related to technological, organisational and environmental variables, respectively (see appendix F).

The language used is another basic element of the design a good survey instrument. As such, Brace (2008) argued that surveys must be worded in language that can be understood by the target respondents. Having a prior understanding of the characteristics of the population of the study would therefore help to determine the language that should be used within the instrument. Given that this survey aimed to gather information from SMEs owner-managers whose local language was Arabic, the final survey instrument was 'back-translated' into Arabic. This was felt to be essential in order to express the questions in a way that the target respondents would understand and to avoid misinterpretation and confusion.

The length of the survey is another important issue that requires careful attention when designing an online survey (Toepoel and Lugtig, 2015; Selm and Jankowski, 2006). As with a conventional survey, a lengthy online survey is associated with an increased risk of low response rate (see, for example, Gilinsky *et al.*, 2015; Galesic and Bosnjak, 2009; Deutskens *et al.*, 2004). With this in mind, and based on estimated survey completion times in studies in similar contexts (for example, Thi, 2006), it was decided that a survey length that could be completed within 10-15 minutes would be the most suitable in order to obtain a reasonable response rate and response quality.

Having discussed relevant survey design issues and indicated steps taken to address them in this study, the next section explains the structure of the survey instrument in more detail.

5.3.3 Instrument Structure and Measurement Operationalisation

As can be seen in the Survey Roadmap (Appendix G), the final version of the survey was designed to cover the key areas of social media adoption and, more importantly, the TOE-related questions. However, prior to asking the questions, it is important to establish what Goddard and Villanova (1996, p.116) referred to as an “administration protocol”. It is viewed as a highly important element of the survey instrument (Boynton and Greenhalgh, 2004) as (i) it enhances the quality of the responses (Rowley, 2014) and (ii) it works as stimulus to boost response rate (Kaplowitz *et al.*, 2011). In general, the protocol includes important information (such as instructions required by respondents to understand the aim of the survey) that helps the respondents to complete the survey in an effective and efficient way.

For this study, it is important to mention that the first two pages serve as a protocol for the survey, providing a clear articulation of the purpose of the research, its relevance to the respondents and the researcher’s contact information. In addition, respondents were briefly provided with statements indicating the rationale behind their selection as candidates, as well as an estimate of the time it would take to complete the survey. The introductory pages also presented information on the code of conduct followed in this research phase and briefly explained how confidentiality and anonymity of the responses would be guaranteed. Overall, the final version of the survey had five sections and was comprised of 54 questions. Table 5.3 presents an overview of the structure of the survey instrument. Each section will now be briefly introduced and explained.

Section	Area	No. of items
A.	1 Respondent – Demographic information	4
	2 Enterprise – Demographic characteristics	5
	3 Social-media-related general questions	5
B	Technology characteristics	22
C	Organisation characteristics	10
D	Environment characteristics	6
E	Additional comments	2
Total		54

Table 5.3 Overview of the survey structure

Section A: General Information

Including background information about respondents is common practice in survey research (Blair, Czaja and Blair, 2013). Section A was therefore designed to capture demographic information from the respondents, and elicit information on their enterprises/businesses, including their adoption, use and rejection of social media platforms. The section was divided into three areas: A.1 (Respondents demographic information), A.2 (Enterprise demographic information) and A.3 (General information on social media status among the surveyed enterprises). The overwhelming majority of the

measures for items in the three sections were adopted from previously validated studies in the IT innovation literature and more specifically from studies that have been conducted to examine the adoption of various technologies in the organisation context of SMEs.

In the first area, four questions (Q1-Q4) were used to measure respondents' demographics characteristics. All questions were measured using a nominal scale and were included in the main analysis and as the basis for the descriptive analysis. Table 5.4 summarises the questions included in this section, the categories and how each question was coded.

Question (No.)	Demographic information included	Categories
Q1	Gender	"Male" and "Female"
Q2	Age	"Less than 25", "25 – 34 years", "35 – 44 years", "45 – 64 years" and "65 years and over"
Q3	Level of education	"No formal qualification", "Primary school certificate", "Secondary school certificate", "College qualification (diploma)", "Degree", "Postgraduate"
Q4	Mode of employment	"Full-time government sector employee", "Full-time private sector employees", "Self-employed", "Student" and "Other"

Table 5.4 Questions on respondents' demographic information

The second area (A.2) comprised five questions to elicit background information about the enterprise. The included questions were about the enterprise's age, size, annual sales, business activity and scope. These items also were measured using a nominal scale and included in the main analysis and as the basis for the descriptive analysis, mainly cross-tabulation. Items that measured the enterprise's age were adopted from Al Barwani *et al.* (2014). Similarly, the measurement of size was based on the definition of SMEs by PASMED and the Ministry of Commerce and Industry in Oman, as illustrated in Table 5.5. The four categories used to measure market scope were taken from previous work in IT the innovation literature (specifically Alshamaila, 2013; Ramdani, Chevers and Williams, 2013; Buonanno *et al.*, 2005). Table 5.5 summarises the question included in this area of the survey, the categories and how each question was coded.

Question (No.)	Demographic information included	Categories
Q5	Age	"0-1 year", "1-3 years", "More than 5 years"
Q6	A	"Less than five", "5 – 9 employees", "10 – 99 employees"
	B	"Less than 25,000 OMR", "25,000 OMR – 250,000 OMR", "250,000 OMR – 1.5 million OMR"
Q7	Market scope	"Local", "Domestic", "National", "International"
Q8	Industry	"Manufacturing", "Wholesale and Retail", "Professional and Technical Services", "Construction", "Other sectors"

Table 5.5 Questions on SMEs' characteristics

The third area (A.3) comprised a series of questions (Q10- Q15) about adoption and rejection of social media in SMEs to categorise respondents into adopters and non-adopters. The first question in this section was designed to represent the dependent

variable, response outcome: adopt or not adopt. This item was adopted from Premkumar and Roberts (1999), and it was coded as “1” for adopt and “0” for not adopt. In addition to this question, the respondents of adopting enterprises were asked about what social media platforms their enterprises use and the purposes of use. The respondents of non-adopting enterprises were asked about the barriers that hinder the adoption process and their future plans in relation to adoption. Table 5.6 summarises the question included in this area of the survey, the categories and how each question was coded.

Question (No).	Social media adoption	Categories
Q10	Adoption decision	“Yes” and “No”
Q11	Social media platforms	“Facebook”, “Twitter”, “Instagram”, “LinkedIn”, “Foursquare”, “Myspace”, “Vine”, “Google+”, “Others (please specify)”
Q12	Purpose of adopting social media	“Information sharing and search”, “Branding”, “Advertising and promotion”, “Conduct market research”, “Reach new customers”, “Getting referrals (word-of-mouth via likes, shares and followers in Facebook, Twitter, etc.)”, “Develop customer relations”, “Communicate with customers”, “Customer service activities”, “Receive customer feedback”, “Others (please specify)”
Q13	Adoption intention	“intend to adopt social media” , “Do not intend to adopt social media for the foreseeable future”
Q14	Adoption intention plan	“Less than 6 months”, “6 – 12 months”, “13 – 18 months”, “19 – 24 months”, “More than 24 months” and “No plans”
Q15	Barriers of non-adoption	“The enterprise feels that it does not gain any benefit from using social media”, “Social media is a risk for information security”, “Not enough skills to implement social media”, “Not enough time to use social media”, “Not enough (monetary) resources”, “The enterprise does not know how to best utilise social media in business”, “Fear of critique or negative feedback”, “Bad experience of social media” and “The enterprise can do well without social media”

Table 5.6 Questions on social media adoption in SMEs

As illustrated in Table 5.3, sections B, C and D comprised a series of statements representing factors related to the three TOE contexts. In this part of the survey, it was decided to use closed-ended questions as this type of question serves to elicit data in a form that is easy to handle (Bee and Murdoch-Eaton, 2016; Boynton and Greenhalgh, 2004). The measurement of all of the TOE items in the three sections was anchored on a five-point Likert scale, which is the most widely-used rating format to indicate a degree of agreement and disagreement with a statement or set of statements (Croasmun and Ostrom, 2011; Allen and Seaman, 2007; Bertram, 2007). The use of the five-point Likert scaling technique has been recommended by many researchers to assess participants’ opinions and to capture a nuanced range of responses rather than simply eliciting ‘yes’ or ‘no’ responses (Babbie, 2013). The response to each statement is assigned a numerical value ranging from 5 for ‘strongly agree’ to 1 for ‘strongly disagree’. The obtained values of all the responses to the statements of each particular item may then be analysed. The description of sections B, C and D of the survey are given below, with accompanying

tables to illustrate the factors included in each section, the operational measures used and the sources of the measurement from the literature.

Section B: Technology Characteristics

Section B was developed to include technology factors associated with social media adoption in SMEs. This section of the survey included eight multi-item factors (variables) that were identified during the qualitative phase of this research (refer to section 4.4.3). As stated earlier in section 5.3.2, the factors were operationalised from existing measures employed in previous studies in the field that were published in reputable academic journals (for example, Ainin *et al.*, 2015; Premkumar and Roberts, 1999; Moore and Benbasat, 1991). Regarding the factors that emerged from the study (interactivity, trust and image), the researcher searched the IT adoption literature for relevant operational measures for the three constructs. As a result, the items used to measure the three constructs were informed by As such, the items used to measure the three constructs were infromed by Ainin *et al.*, 2015 and Moore and Benbasat, 1991. Table 5.7 presents a summary of the factors representing the technology context.

TOE Context	Construct Name	Operational measure (items)	Sources
Q16 Technology	Relative advantage (RAV)	4	Premkumar and Roberts (1999)
	Complexity (CMX)	2	Premkumar and Roberts (1999)
	Compatibility (CMB)	3	Moore and Benbasat (1991); Ainin <i>et al.</i> (2015)
	Trialability (TRB)	2	Moore and Benbasat (1991)
	Observability (OBV)	3	Moore and Benbasat (1991)
	Interactivity (INT)	3	Researcher defined, informed by Ainin <i>et al.</i> (2015)
	Trust (TRT)	3	Researcher defined, informed by Ainin <i>et al.</i> (2015)
	Image (IMG)	2	Researcher defined, informed by Moore and Benbasat (1991)

Table 5.7 A summary of the technology context factors

Section C: Organisation Characteristics

Section C was designed to understand the perception of SME business owner-managers in relation to a collection of statements indicating the influence of organisational factors on the adoption decision of social media in their enterprises. The enterprise size was determined by two measurements, in accordance with the definition of SMEs by PASMED and Ministry of Commerce and Industry, as mentioned in section 5.3.1. In each measurement, a group of three values was used (as indicated in Table 5.5). This section of the survey also included questions about top management support, innovativeness, prior IS experience and lack of managerial time. Table 5.8 summarises the

operationalisation measurement of the organisational factors used in this study and the corresponding sources of measurement from the literature.

TOE Context	Construct Name	Operational measure (items)	Sources
Q17 Organisation	Size (SZE)	1	Public Authority of SME Development (2015), Ministry of Commerce and Industry (2015)
	Top management support (TMS)	2	Yap, Thong and Raman (1994)
	Innovativeness (INV)	3	Agarwal and Prasad (1998)
	Previous IS experience (PIE)	2	Alshamaila (2013); Lippert and Forman (2005)
	Perceived lack of managerial time (PLT)	2	Researcher defined

Table 5.8 A summary of the organisation context factors

Apart from the fourth variable, perceived lack of managerial time, the remaining factors were drawn from previous work in the IT innovation academic literature (for example, Lippert and Forman, 2005; Agarwal and Prasad, 1998; Yap, Thong and Raman, 1994). Regarding perceived lack of managerial time construct, no validated or established measures was found in the literature. In such cases, (Tharenou, Donohue and Cooper, 2007) argued that the researcher may need to construct a new scale to measure the construct. It was therefore important to ask further questions related to the reasons behind lack of time. This was done by asking the participants to provide further insight into this issue. It was found that participants attribute this issue to time they spend to do work-related and personal-related activities. As a consequence, two items were developed and tested with some participants to evaluate the questions and examine their validity.

Section D: Environment Characteristics

Section D was designed to elicit the views of business owner-managers towards the potential influence of five environment factors – competitive pressure, customer pressure, family and friends’ support, industry and market scope – in the decision to adopt or not to adopt social media in their enterprises. As has been already shown in Table 5.5, the last two factors, industry and market scope, were operationalised using categorical variables. The measurement of the other three factors representing environment context (competitive pressure, customer pressure and family and friends’ support) were derived from Venkatesh *et al.* (2003) and Premkumar and Roberts (1999). The items used to measure these variables are presented in Table 5.9.

TOE Context	Construct Name	Operational measure (items)	Sources
Q18 Environment	Industry (IND)	Five categories	Public Authority of SME Development (2015)
	Market scope (MKS)	Four categories	Alshamaila (2013), Ramdani, Chevers and Williams (2013), Buonanno <i>et al.</i> (2005)

	Competitive pressure (CMP)	2	Premkumar and Roberts (1999)
	Customer pressure (CSP)	2	Alshamaila (2013); Lippert and Forman (2005)
	Family and friends support	2	Venkatesh <i>et al.</i> (2003)

Table 5.9 A summary of the environment context factors

Section E: Additional Comments

In the final section, two open-ended questions were asked. The first question aimed to seek additional comments about the research topic. In the second question, respondents were asked to provide their email address if they wanted to receive a summary of the results of the research. At the end of the instrument, a simple message to thank the respondents for their time and effort in completing the survey was added as this was advocated by Rowley (2014) and Reynolds (2006).

Having explained the development of the instrument and the associated core design issues, the next step is to discuss the ethical procedures that were required in order to carry out this study.

5.4 Data Collection Activities

This section discusses various activities that had to be considered before the implementation of the research instrument, including three main preparatory activities: sampling; addressing ethical considerations; and piloting. The section begins, in section 5.4.1, with a discussion of the sampling technique adopted in this phase of the research and the strategies that were considered in order to tackle issues that arise when using an online survey. It then moves on to discuss, in section 5.4.2, the steps that were undertaken to ensure that ethical considerations were suitably addressed in conducting the study. Section 5.4.3 then discusses the piloting procedure that was used to refine and validate the research instrument before the online survey instrument was launched. Section 5.4.4 then provides a thorough discussion of the process through which the survey was distributed to/accessed by the identified sample of respondents.

5.4.1 Sampling

As noted in section 5.2, an online survey was used as a tool to gather data from a wide range of respondents. Owing to the cost and impracticality of surveying the whole population relevant to the study, it was important to identify a sampling frame to select a representative group of the population (Kelley *et al.*, 2003) . There are many different

ways to identify sampling frames for conducting an online survey (Couper and Miller, 2008). However, the main issue with the use of an online survey is that it prevents random sampling (Toepoel and Lugtig, 2015; Fielding, Lee and Blank, 2008; Buonanno *et al.*, 2005; Kiesler and Sproull, 1986). This is because this type of survey is not based on probabilistic sampling and thus obtaining a random sample is very difficult (Blair, Czaja and Blair, 2013; Baltar and Brunet, 2012; Lefever, Dal and Matthiasdottir, 2007; Andrews, Nonnecke and Preece, 2003). In online surveys, each case within the entire population does not have a known probability of being included in the sample (Rowley, 2014). Thus, the likelihood of including cases that are representative of the whole population is not known. As a consequence, researchers who use online surveys may not be able to know who answers the survey, so the sample cannot be claimed to be representative of the whole population. As far as the sample of this study is concerned, the selected sample represented SMEs operating in five main sectors in Oman.

As mentioned above, five sectors were identified for this study: manufacturing; wholesale and retail; professional and technical services; construction; and other sectors. These sectors represent the main business sectors in Oman (Al-Kharusi, 2003). Recent statistics by PASMED also indicate that these sectors account for the highest number, with slightly more than 80%, of registered SMEs in Oman (Omandaily, 2016). For this study, certain criteria to define the type of SMEs involved in the study were used. SMEs are defined in accordance with the new definition released by PASMED, a dedicated entity whose role is to advocate entrepreneurship and provide support for national entrepreneurs (Muscat daily.com, 2014). According to the PASMED definition, SMEs are classified based on two criteria: (i) employee numbers; and (ii) annual sales. The definition sets an upper limit of 99 employees and R.O1.5million for enterprises to be classified as SMEs; the measures are consistent across all sectors. The definition has recently been adopted by other Omani government bodies and financial institutions, increasing its importance.

There is no single source that provides a complete list of the SMEs in Oman as more than one government unit is responsible for SME development (Al-Shanfari, 2012). Given this situation, the researcher sought to obtain a reliable and updated list of SMEs in Oman in order to serve as a frame from which to draw the sample of respondents (Rea and Parker, 2014; Singh and Mangat, 2013). As this study required the recruitment of the most knowledgeable individuals within SMEs who could offer accurate information on innovation adoption (Blair, Czaja and Blair, 2013), owner-managers of SMEs operating in the five identified sectors were selected as the best individuals to be surveyed. In view of this, a list consisting of 5983 SMEs registered in the PASMED database¹ was seen as the best source of SME information and an adequate initial sampling frame. The list was

released in 2014 and provides information on SMEs that are located in the different regions of Oman, including the capital (PASMED, 2015). The list contains details such as enterprise names, business sector, location and, more importantly, the names of business owners as well as their contact details, including email addresses, which was essential in order to approach the respondents.

It is important to note, however, that the list had some missing data, in particular missing email addresses, and needed to be carefully assessed. In light of the list, only SMEs with a valid email address were identified to serve as the sample frame from which to choose the respondents. In addition to having a valid email address, SMEs that operated in the capital, Muscat, were chosen as the sample frame, for similar reasons stated in section 4.3.1.

Out of the total listed enterprises in the PASMED database, 964 were identified as matching the above-stated criteria. The decision was taken to include in the sample all of the 964 enterprises identified in the sample frame. This was done for two reasons. The first reason was that previous studies conducted on SMEs in Oman had achieved only low response rates (for example, Al Barwani *et al.* (2014) and Ashrafi and Murtaza (2008)). Second, in certain cases, low response rate has been attributed to certain cultural factors in the Arabic context. For instance, a study by Al-Subaihi (2008) found that the response rate to their web survey was significantly lower than that associated with traditional (e.g., telephone and mail) surveys. Interestingly, this study also found that males' participation in web surveys was significantly higher than their female counterparts despite both groups having the same level of internet access. Including all of the identified SMEs in the sample was therefore seen as a way of seeking to mitigate the risk of a low-response rate (Lefever, Dal and Matthiasdottir, 2007).

After determining the appropriate sampling strategy, the next step was to seek ethical approval to conduct the study and the following section will therefore address the ethical processes and practices followed in this phase of the research prior to piloting and distributing the survey.

5.4.2 Ethical Considerations

As already stated in section 4.3.2, ethical considerations are argued by Ritchie *et al.* (2013) as being the “heart of high-quality research”. Thus, highlighting and outlining ethical issues are imperative in all types of survey, including online surveys (Bakla, Çekiç and Köksal, 2013; Buchanan and Hvizdak, 2009; Buchanan, 2004). It was, therefore, essential to ensure that this research complied with the principles of the ethical research and the ethical procedures of the Brunel University London, where the researcher was

based. Ethics approval was therefore sought and obtained (see Appendix C) from the Ethics Research Committee at Brunel University London before the commencement of data collection for this phase of the research. In broad terms, similar ethics guidelines and procedures to those outlined in conducting phase one of research were followed (please refer to section 4.3.2 for more details). However, ethics issues and the code of conduct in this phase of research needed to be carefully addressed owing to the complexity and nature of the online environment via which the survey was conducted (Burns and Burns, 2008; James and Busher, 2007; Buchanan, 2004).

A key consideration in relation to ensuring good ethical practice when conducting an online survey is to familiarise the respondents with the ethical principles and code of conduct followed in the research (Bakla, Çekiç and Köksal, 2013; Hewson and Buchanan, 2013; Kelley *et al.*, 2003). One potential benefit of doing this is to help to establish trust with the respondents (Buchanan and Hvizdak, 2009). It is also vital to pay attention to core ethical issues such as obtaining informed consent from the potential respondents, and being clear in relation to privacy, confidentiality and anonymity concerns (Callegaro, Manfreda and Vehovar, 2015; Fielding, Lee and Blank, 2008; James and Busher, 2007).

Accordingly, in this study, the introductory part of the survey provided explicit information that guided the respondents in relation to the ethical principles and procedures adopted in this phase of the research and provided details about the general nature of the study. (Respondents were also subsequently debriefed about the research and its relevance to them as well as their enterprises). Also, it was explicitly made clear to potential respondents that their participation was voluntary and that they had the right to withdraw at any time with no consequences. Respondents were provided with the contact details of the researcher (and their supervisor), in case further clarifications were required in relation to the research. The consent sheet included an explicit statement so that respondents could explicitly indicate that they had read and understood the consent information.

Confidentiality and anonymity are two other important issues in the conduct of any research (Burns and Burns, 2008; Walford, 2005). In this study, respondents were assured that their identities, as well as their enterprises' information, would be kept confidential, that the anonymity of responses was guaranteed, and that their responses would be used only for research purposes (in line with the recommendations of Bakla, Çekiç and Köksal, 2013; Gideon, 2012)).

Other ethical issues, such as the security of the collected data, data transmission and data storage, are major issues of concern relevant to online survey research for which

careful consideration is required (Buchanan and Hvizdak, 2009; James and Busher, 2007; Evans and Mathur, 2005; Buchanan, 2004). It is, therefore, important to assure respondents that their responses are protected and will be kept securely. In view of this, respondents were given brief information about how the collected data were to be stored and managed and they were invited to visit an online resource that provided more information on the security of the BOS tool (BOS, 2015).

Having designed the instrument and sought, and gained, the ethical approval required to conduct the study, the next step was to undertake an initial assessment of the instrument before releasing it to the target respondents.

5.4.3 Piloting

Having developed the survey instrument (section 5.2.2), it was important to pilot the survey with a small group of volunteers before it was released to the final target respondents (Callegaro, Manfreda and Vehovar, 2015; Boynton, 2004). Piloting is considered a crucial element in any research (Teijlingen *et al.*, 2001) and a useful exercise to identify potential issues. Seale (2004, p.86) sees it as the “essence” of a good survey and Callegaro, Manfreda and Vehovar (2015, p.106) argue that it works as a “dress rehearsal” of the main survey. Further, Blair, Czaja and Blair (2013) and Lumsden (2007) assert that online research instruments must be trialed before distributing them to the research target regardless of whether or not the items that are used in the instrument have been derived from previously published studies.

There were several specific benefits gained by piloting the research instrument and refining it based on the results. First, it helped to enhance the quality of the survey instrument (Andrews, Nonnecke and Preece, 2003), minimise measurement errors and overcome design issues (Merolli, Sanchez and Gray, 2014). In addition, it was useful to test the reliability of the survey and get feedback on whether the questions adequately addressed the issues related to the research phenomenon. Also, as this instrument was designed and disseminated via an online tool, it was important to check the reliability of the online survey when accessed using different browsers and different devices (Bakla, Çekiç and Köksal, 2013; Sue and Ritter, 2012; Fielding, Lee and Blank, 2008; Reynolds, 2006; Granello and Wheaton, 2004).

Piloting was also essential to refine the questions in order to enhance the clarity of the wording used and minimise the ambiguity of questions before distributing it to the full sample (Gillham, 2008; Granello and Wheaton, 2004), and to assess the content validity of the items (Jahanmir and Lages, 2016). Equally important, pre-testing the questions

allowed the time-taken to complete the survey to be better understood – an issue that is relevant to likelihood of achieving a good response rate.

Following a similar approach to that taken in phase one of the research, the online survey was trailed with several individuals, including peers and, more importantly, a small sample of the intended respondents (SMEs business owner-managers), as advocated by several researchers (see, for example, Callegaro, Manfreda and Vehovar, 2015; Rowley, 2014; Kelley *et al.*, 2003).

The html link of the pilot version of the survey was sent to this selected group, which consisted of 20 business owners and a group of seven PhD students. In order to limit the responses to the selected respondents, a five-digit password was provided and required to access the survey. Some respondents were also sent the survey link via the WhatsApp, an instant messaging service, application (WhatsApp, 2015) to provide an alternative option for responses via mobile phones (Blair, Czaja and Blair, 2013) and to check the survey's compatibility with smartphones devices (Rowley, 2014). In addition, an assessment form (see Appendix H) was attached to the email/message sent to the volunteer respondents so that they could evaluate the survey as well as comment on the objectives of the study, its content and design, and its overall structure.

A small number of issues were identified during the pilot and the survey was refined to address them. The responses from the pilot study were excluded from the final sample for analysis.

Having described the piloting activity, the following section presents details of how the final the survey was distributed and explains strategies used to improve the response rate.

5.4.4 Instrument Distribution

For the main survey, a bilingual (Arabic and English) email was sent to the 964 SME owner-managers which had been identified as constituting the valid sample (as outlined in section 5.3.1), inviting the respondents to participate in the study. The invitation contained the URL link to the online survey instrument hosted on BOS. Along with the link, as mentioned in section 5.3, the introductory part of the survey was designed to provide respondents with sufficient information about the research and the code of conduct, which were essential in order for respondents to make an informed decision

about participation (Blair, Czaja and Blair, 2013; Sue and Ritter, 2012; Kaplowitz *et al.*, 2011) (see section 5.2.2 for details of the information provided).

The approval letter obtained from the PASMED was also attached as it was felt that this would help to reassure respondents in relation to security concerns and, consequently, increase the response rate (in line with previous studies, such as Lefever, Dal and Matthiasdottir, 2007)). The survey was launched online on 20 September, 2015, and closed on 10 January, 2016. Reminders emails were sent to motivate participation and increase the response rate (in line with recommendations by Rowley, 2014; Fielding, Lee and Blank, 2008).

Out of 964 surveyed SMEs, 217 responses were received. However, 12 responses were excluded because the business activity of the responding enterprises was in the area of information technology, which had not been included to avoid pro-adoption bias – the literature suggests that enterprises in the IT area are more likely than other enterprises to adopt new technologies. The number of emails returned as having incorrect addresses was 198. Hence, 205 responses were included as valid responses for analysis, representing a 21.26% (205/964) response rate. Table 5.10 summarises the number of surveys sent and received.

Data collection	Number of respondents	Percent of respondents
Sent survey	964	100%
Usable responses	205	21.26%
No response	747	77.64%
Total responses included in analysis	205	

Table 5.10 Survey responses and non-responses

When compared with other studies related to SMEs in Oman, it is important to note that the sample size for the present study is substantially higher. For instance, in his study to understand e-commerce adoption among Omani SMEs, Ashrafi and Murtaza (2008) conducted a survey and obtained only 54 responses. This present study's sample size is also higher than that of the study by Al-Gharbi and Ashrafi (2010) who obtained a sample of only 36 SMEs.

The 205 usable responses were exported from BOS and were coded and analysed using the Statistical Package for Social Science (SPSS) software, IBM SPSS Statistics 2014. The next substantive section provides a description of the analyses process that was

applied to the collected data, including the descriptive analyses of participants and the participating enterprises.

5.5 Analysis

5.5.1 Validity and Reliability

It is well recognised that reliability and validity are two important dimensions of data quality in any research, whether qualitative or quantitative. In quantitative research, however, each term represents an element that is crucial in ensuring the rigour and robustness (Heale and Twycross, 2015), as well as the quality of the data (Pallant, 2013). It was therefore important to consider both concepts when conducting the second phase of this research study in order to communicate the rigour, and enhance the accuracy, of the instrument (Onsman *et al.*, 2010; Kimberlin and Winterstein, 2008). Although the two concepts are separate, it is worth noting that reliability and validity tests are interlinked and are associated with each other (Tavakol, Dennick 2011). However, as the literature suggests, it is possible to have a measure which had a high reliability score but which is not valid, and vice-versa (Jackson, 2014; Zeller and Carmines 1980).

As stated in section 5.3, adopting questions from previous studies is an acceptable and encouraged practice (Blair, Czaja and Blair, 2013; Hyman, Lamb and Bulmer, 2006). It is, therefore, always important to review the literature when drafting a survey instrument as the instruments employed in previous studies are likely to have been tested for validity and reliability (Sue and Ritter, 2012; Marshall, 2005), meaning that some time and effort may be saved where either whole instruments or items within them can be used a part of a new study (Hyman, Lamb and Bulmer, 2006; Boynton and Greenhalgh, 2004). Kimberlin and Winterstein (2008) and Boynton and Greenhalgh (2004) and Albaili (1995) have, though, argued that validity and reliability of research instruments are prone to changes when used in different research contexts or different cultural groups, suggesting that these issues should be addressed for each new research study when existing instruments or items are adopted.

In line with common practice, then, the research instrument developed for the second phase of this research incorporated items from previously-published and -validated studies but steps were taken to ensure that the adopted survey items reached suitable

levels of reliability and validity before their inclusion in the final instrument (Blair, Czaja and Blair, 2013). The following subsections describe these steps.

Reliability

Reliability, or reproducibility as it is sometimes referred to, describes “how far the survey will produce similar results in different circumstances assuming nothing else has changed” (Roberts and Priest, 2006, p.41). Simply, it refers to the repeatability of the survey and is concerned with the level of internal consistency of each factor included in the measurement instrument (Heale and Twycross, 2015; Tavakol and Dennick, 2011; Williams, 2014; Roberts and Priest, 2006; Litwin 1995; Walop *et al.*, 1987). According to Crowther and Lancaster (2012), Pennypacker *et al.* (2010) and Carmines and Zeller (1979), a reliable survey is one that yields consistent results over time, whether used with different samples or by different researchers.

To measure the reliability of the research constructs, Cronbach’s alpha (Cronbach’s α) is one of the most popular statistical tools used (Heale and Twycross, 2015; Tavakol and Dennick, 2011; Santos, 1999). It is measured using a coefficient which ranges between 0 and 1 (Tavakol and Dennick 2011; Gliem and Gliem, 2003), with a coefficient of 0.7 being the recommended threshold to indicate an acceptable level of reliability (Pallant, 2013; Drost, 2011; Cortina, 1993; Nunnally, 1978). It has been argued that calculating and reporting reliability is imperative in studies which employ Likert-type scales (Gliem and Gliem, 2003). Hence, for this study, the composite reliability of each construct, sometimes referred to as the latent variable (Brewerton and Millward, 2001), included in the model was examined through coefficient alpha scores and item-scale correlation, and found to be reliable. As can be seen in Table 5.11, Cronbach’s alpha coefficients for all of the constructs in the model exceeded 0.7, with the coefficients’ scores ranging between 0.751 and 0.934, indicating good internal consistency and hence reliable constructs.

No.	Corresponding Questions No. (in the survey)	Constructs	Reliability (Cronbach's alpha)
Technology			
1	Q15-Q18	Relative Advantage (RAV)	0.804
2	Q19-Q20	Complexity (CMX)	0.850
3	Q21-Q23	Compatibility (CMB)	0.802
4	Q24-Q25	Trialability (TRA)	0.813
5	Q26-Q28	Observability (OBS)	0.751
6	Q29-Q31	Interactivity (INT)	0.828
7	Q32-Q35	Trust (TRT)	0.804
8	Q36-Q37	Image (IMG)	0.821
Organisation			
9	Q38-Q39	Top Management Support (TMS)	0.853
10	Q40-Q42	CEO Innovativeness (INV)	0.886
11	Q43-Q44	Prior IS experience (PIE)	0.798
12	Q45-Q46	Perceived Lack of Time (PLT)	0.847
Environment			

13	Q47-Q48	Competitive Pressure (CMP)	0.788
14	Q49-Q50	Customer Pressure (CSP)	0.868
15	Q51-Q52	Family and friends' Support (FFI)	0.934

Table 5.11 Summary of reliability assessment of instrument constructs

Validity

Validity is another crucial element that plays a part in the quality of the resulting data (Crowther and Lancaster 2012; Tavakol and Dennick, 2011), as well as the overall value of the research (Hartas, 2015). The term is used to describe the extent of “whether the operationalisation is correctly indicating what it’s supposed to” (Nardi, 2015, p.62). In short, it is used to reflect the accuracy of the variable in measuring what the researcher sets out to measure (Drost, 2011; Kimberlin and Winterstein, 2008) and hence should “represent the reality of its intentions” (Mashaw, 2012, p.199). There are several forms of validity in relation to a research instrument, the most common of which are: content validity; convergent validity; and divergent, sometimes known as discriminant, validity (Hartas, 2015; Brewerton and Millward, 2001; Litwin, 1995).

Content validity can be assessed through an iterative process of selection and refinement of the constructs. Unlike the other types of validity, discussed below, content validity is achieved by inspecting the contents of the measurement (Zohrabi, 2013) and “usually depends on the judgment of experts in the field” (Kimberlin and Winterstein, 2008, p.2279), and not by conducting an empirical test (Mashaw, 2012; Pennypacker *et al.*, 2010) or by indicating statistical significance (Drost, 2011; Greco, Walop and McCarthy, 1987). Hence, as Morgan *et al.* (2012) have argued, it is the easiest type of validity to be obtained.

In this study, content validity was established using two approaches. The first was by pre-testing the research instrument to ensure that each item related to the concept they it was aiming to measure. As discussed in section 5.3.3, the instrument was pre-tested by three groups of individuals, one of which is an expert group, which offered an opportunity to improve the instrument’s design and adjust the layout of the instrument and the sequence of the items within it. This approach is recommended to ensure the content validity of the research constructs (Forza, 2002; Wallen *et al.*, 1993). In addition, the overwhelming majority of the constructs were adopted from previous studies in the IT innovation literature in which they had been validated (as explained in the section 5.3.3).

Convergent validity and divergent validity are both sub-types of construct validity, used to measure types of correlation. In a very general sense, the convergent validity is used to measure the intra-correlations of a construct (i.e., between items of the same construct),

while divergent validity measures the inter-correlation of constructs (i.e., between different constructs) (Kimberlin and Winterstein, 2008). It is generally agreed that the correlation between items of the same construct should be high, while lower levels of correlation should exist between two constructs, in order for constructs to be distinct from one from another.

In this study, construct validity was validated using Factor Analysis (FA). According to Matsunaga (2015) and Onsman *et al.* (2010), FA is an important diagnostic tool to develop, refine and evaluate the measures of the instrument. As a method of data reduction, FA aims to rationalise the many variables that may initially be thought to be relevant in an area to a more manageable number by removing any redundancy from the initial set of correlated variables (Brown, 2015).

However, prior to deciding whether to use FA or not, screening procedures must be applied. For this study, using SPSS (2014), and following the approach suggested in the literature, two indicators, were used to determine the factorability, or correlations, among variables: the Kaiser-Meyer-Olkin (KMO) index and Bartlett's Test for Sphericity (BTS) (Field, 2013; Child 2006). The scores of the two tests were used to indicate the suitability of the dataset for conducting FA, and hence determining the appropriateness of the TOE variables to be factorised. With regards to the accepted values of the KMO index and BTS, a KMO value of 0.6 and a large value of BTS with significance level of less than 0.05 are recommended as the relevant cut-off points (Barrett *et al.*, 2014; Field, 2013; Child, 2006; Kaiser 1974).

The analysis of the KMO index and BTS reveals that both indicators yielded values that meet the recommended standards. As shown in Table 5.12, the analysis indicates that the KMO index values associated with the three TOE contexts were well above the suggested minimum value of 0.6. The BTS related to the three contexts also reached had significance level of less than 0.05. The results of the two indicators therefore provided support for conducting FA on the data collected during the study.

Context	Measure	
	Kaiser-Meyer-Olkin (KMO) measure of Sampling Adequacy	Bartlett's Test of Sphericity (BTS)
Technology	.880	2471.462 (p = 0.000, < 0.005)
Orgnization	.792	932.847 (p = 0.000, < 0.005)
Environmnet	.824	784.014 (p = 0.000, < 0.005)

Table 5.12 KMO and BTS values in the TOE contexts

Having checked the suitability of the dataset for the use of FA, it was then important to decide on the method of FA to apply. There are various ways to conduct FA using state-of-the-art statistical tools, of which SPSS is viewed as the most favoured and widely-available (Child, 2006). For instance, in SPSS, researchers can utilise different methods

to conduct FA, such as Principal Component Analysis (PCA), Generalised Least Square (GLS) and Alpha factoring methods. As a commonly-used, effective method (Osborne and Costello, 2009; Kuang *et al.*, 2003), PCA, or Common Factor Analysis as it sometimes referred to, was applied as an extraction method for conducting FA in this study. PCA was used to simplify the analysis process by clustering together highly-correlated variables into a manageable set of factors (Matsunaga 2015), providing evidence for construct validity (Field, 2013; Yong and Pearce 2013).

A separate FA was conducted for each TOE context. This has been argued by Thi (2006) to warrant a stability of factor loadings, which is a statistical method used to determine the effect of each factor on the variable (DeCoster, 1998). As a suggested cut-off point, each item of the construct should have a minimum factor loading of 0.5 so that the construct passes validation conditions (Hair *et al.*, 2006; Nunnally, 1978). In addition, Hair *et al.* (2006) have suggested that no cross-loading should be greater than 0.3 between items belonging to different constructs.

The results indicate that no items significant cross-loadings and that the factor loading scores exceeded 0.5 in all cases, suggesting that the items associated with the TOE variables in this study had factor loadings that were considered significant.

Table 5.13 presents the results of the FA for the variables related to the three TOE contexts. As can be seen from the table, for the technology context, eight factors were identified that accounted for a cumulative variance of 66% of the total variability in the original variables. For the organisation and environment contexts, respectively, four factors accounted for 66% and three factor accounted for 64% of the cumulative variance. Table 5.18 also reports the eigenvalues; factors with eigenvalues greater than 1.0 were extracted, as suggested by Hair *et al.* (1998). The remaining factors with eigenvalues of less than 1.0 were excluded, as a minimum eigenvalue of 1.0 was used a cut-off point (Molla and Licker 2005).

No	Context	No. of Extracted factors
1	Technology	8
2	Orgnization	4
3	Environmnet	3

Table 5.13 Summary results of the Factor Analysis

Having examined the reliability and validity measures of the instrument, the next step is to present the findings by testing the hypotheses.

The next section provides a brief description and justification for the use of logistic regression (LR) as a statistical method to analyse the dataset collected during the second phase of this research.

5.5.2 Logistic Regression

Data modelling is a complex process for which many techniques are used (Cook *et al.*, 2008; King, 2008). As such one modelling technique, regression analysis is an increasingly common and efficient statistical tool that may be used to investigate the relationships among a given set of variables (Chatterjee and Hadi, 2015; Peck *et al.*, 2015; Park, 2013; Stoltzfus, 2011; Winters *et al.*, 2006; Hosmer and Lemeshow, 2004; Sykes, 1993). The wide applicability and versatility of this technique is associated with the fact that it provides a simple method to establish the relationship with, and understand the impact of independent variables (IVs – also commonly referred to as predictors or explanatory variables) on, one or more dependent variables (DVs – also referred to as a response variable or outcome variable) (Chatterjee and Hadi, 2015). The process for undertaking regression analysis to assess and interpret the relationship between variables have been made simpler through the support of software packages such as SPSS (IBM Corporation, 2011) and SAS (Statistical Analysis System) (SAS Institute, 2014), (Krzywinski *et al.*, 2016; Menard, 2002; Hosmer *et al.*, 1997).

Depending on the research objectives and the nature of the dependent/outcome variable, regression analysis can be classified into three different types: multiple regression; linear regression; and logistic regression. Multiple regression is used to test the relationship between independent variable(s) and more than one dependent variable (Burns and Burns, 2008; Cook *et al.*, 2008; Menard, 2002), whereas linear regression, the most frequently used type (Stoltzfus, 2011), is suitable for modelling the relationship between independent variable(s) and a single dependent variable (Maroof, 2012; Hutcheson and Moutinho, 2008; Hosmer and Lemeshow 2000). Linear regression can be only used in cases where the dependent variable is assumed to be continuous and not categorical (Krzywinski *et al.*, 2016; DeMaris and Selman 2013; Cheek *et al.*, 2005). In situations where the dependent variable is not continuous, linear regression does not help to model the relationship with independent variables (Sperandei, 2014; Allison, 2012; Hosmer and Lemeshow, 2004; Jin *et al.*, 2003). In such cases, logistic regression (LR) (also referred to as logit model/regression (Allison, 2012) is suggested by many researchers (see, for example, Chatterjee and Hadi, 2015; Sperandei, 2014; Hosmer, Lemeshow and Sturdivant, 2013; Park, 2013; Boumediene and Kawalek, 2008; Ott and Longnecker, 2008; Premkumar, 2003b; Peng and So, 2002; King and Zeng, 2001; DeMaris, 1995) as a powerful tool to model the non-linear relationship between one or more independent variables and a single dichotomous (binary; 0,1) dependent variable. Independent variables in LR models can take either categorical or continuous values (Barrett *et al.*, 2014; Cheek *et al.*, 2005; Al-Ghamdi, 2002; Sloane and Morgan, 1996).

The use of LR modelling has seen a growth in popularity and usage in social science research in the recent years (Allison, 2012; Cokluk, 2010; Schein and King, 2008; Ungar, 2007; Jin *et al.*, 2003). With respect to its usage in the IS field, and more specifically in the IT adoption literature, LR modelling has numerous application areas and has been employed to predict the adoption of various technologies. For instance, it was used by Kuan and Chau (2001) and Zhu, Kraemer and Xu (2003) to predict the adoption of Electronic Data Interchange (EDI) technologies and e-commerce in organisational settings, respectively. Dholakia, Kshetri (2004) used LR to investigate the factors influencing the adoption of Internet among SMEs in the U.S. in addition, Ramdani, Kawalek and Lorenzo (2009) also used LR to predict the adoption of Enterprise Systems in small businesses. More recently, LR has been used by Alshamaila (2013) to predict the adoption of cloud computing by SMEs in the UK and by Chang *et al.* (2013) to predict cloud adoption by SMEs in Vietnam.

Considering the objectives of the present study (see section 1.5) and the binary, dichotomous, nature of the dependent variable (coded as: 1 = adopt, 0 = do not adopt), logistic regression analysis was seen as an appropriate statistical technique to analyse and describe the impact of TOE-related factors (which represent the independent variables) on the decision to adopt social media by SMEs (which represents the dependent variable).

The basic equation to model the relationship among the set of variables in logistic regression is usually described and represented by a mathematical formula (Chatterjee and Hadi, 2015; Triola, 2008), as follows:

$$\text{logit}(p) = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_kX_k$$

where p denotes the probability of the occurrence of a case in a particular category. In the present study, it denotes the dependent variable and represents the probability of the adoption decision being positive. Simply put, it shows whether SMEs will adopt or not adopt social media. b_0 denotes the coefficient of the intercept, sometimes referred to as constant, of the dependent variable. b_1 , b_2 and b_3 are the coefficients of independent variables included in the model, with b_k representing the coefficient of the last independent variable; k in this study is equal to 15 (the number of constructs in the TOE-related factors – see section 5.3). X_1 , X_2 , X_3 and X_k are the independent variables (as coded in the statistical software); in the present study they represent the 15 TOE-related factors included in the model. As an example of coding, market scope was assigned four

categorical values (X for domestic = 1, national = 2, regional = 3 and international = 4) (see section 5.3 - section A of the survey instrument).

The LR formula is used to calculate the probability of success over the probability of failure, and thus the output of the analysis is in the form of the 'odds' of a specific outcome (p). As a consequence, the output presents the probability of belonging to one of the two categories of the dichotomous variable, which is recommended to be coded as 0 and 1 (see, for example, Hosmer, Lemeshow and Sturdivant (2013); Peng and So (2002)).

Having explained the choice of binary logistic regression as the appropriate analyses technique that fits that collected data, the next section attempts to provide a broad discussion of three issues that have to be considered when applying an LR analysis to build a stable model that may yield valid statistical inferences.

5.5.3 Considerations in Applying Logistic Regression

There are guiding principles that need to be considered in order to understand and report sufficient detail in relation to the outcomes of the LR analysis. These principles represent best practice in building a robust model as well as essential components that are recommended in order to assess the adequacy of the model and to ensure valid statistical inferences (Stoltzfus, 2011). For this study, the researcher followed the principles suggested by several researchers (for example, Hayes and Matthes, 2009; Menard, 2002; Peng and So, 2002) to analyse, evaluate and report the outcomes of the LR. These principles include: (i) an assessment of the predictive accuracy of the model; (ii) an overall evaluation, in terms of goodness-of-fit, of the LR model; and (iii) an assessment of the collinearity between variables. It is worth mentioning that several sophisticated statistical analyses software packages, such as SPSS (IBM Corporation, 2011) and SAS (SAS Institute, 2014), have been developed to enable the researchers to explore tests related to the above-mentioned principles (Chatterjee and Hadi, 2015; Peng and So, 2002). In this study, SPSS IBM 20 (IBM Corporation, 2011) was used to conduct these tests as discussed in the rest of this subsection.

Predictive Accuracy of the LR Model

Assessing its predictive performance is a crucial step in the model's development (Cokluk, 2010; Jin *et al.*, 2003; Pearce and Ferrier, 2000). A common way to measure the predictive power of the LR model is to compare the accuracy figures of two types of model: the baseline model and the full model. The baseline model, or the null model as it is often referred to, is a regression model that contains no predictors/independent

variables (Peng and So, 2002). That is to say, it presents the results prior to the inclusion of coefficients of the predictors (as shown in Table 5.14). In the case of the present study, the null model shows the base rates of both decisions: adopt (yes = 1) and do not adopt (no = 0). According to the figures, the base rate for adopters (yes, 135/205 = 65.9%) and (no, 70/205 = 34.1%) indicating that 65.9% of SMEs had adopted social media, meaning that the baseline model has an overall correction prediction of 65.9%, which probably indicates a good predictive accuracy.

Observed		Predicted		
		Does your enterprise have social media presence?		Percentage Correct
		No	Yes	
Does your enterprise have social media presence?	No	0	70	0
	Yes	0	135	100.0
Overall Percentage		65.9		

Table 5.14 Classification table (Baseline Model)

Unlike the null model, the second type of model, the full model (or saturated model as it is often referred to) includes all predictors/independent variables, used to build the model (Harrell, 2015). For this study, the full model of included all 15 TOE-related variables. As noted above, statistical software packages provide features that simplify the analyses relevant to the estimation of the model's predictive accuracy. SPSS, the package used to analyse the data from the study, produces a two by two table, known as a classification table (see Table 5.15), that can be used to assess the improvement in the predictive power of the LR model.

Observed		Predicted		
		Does your enterprise have social media presence?		Percentage Correct
		No	Yes	
Does your enterprise have social media presence?	No	56	14	80.0
	Yes	9	126	93.3
Overall Percentage		88.8		

Table 5.15 Classification Table (Full Model)

The classification table of the full model shows that the model has a predictive accuracy of 88.8%. As noted earlier, and in an attempt to test the predictive accuracy of the LR model, the predictive accuracy of both models is used to determine if the full model is suitable and fits better owing to having more predictive power (Pearce, Ferrier 2000). Examining the predictive accuracy of both models shows that the correct classification rate has improved by nearly 23% to reach 88.8% for the full model. It can, therefore, be concluded that the full model appears to have a higher predictive accuracy than the baseline model, having about 90% prediction accuracy. More specifically, looking into the data in the classification table, the full model has a good prediction for both adopter and non-adopter categories, correctly predicting more than 93% of adopters and 80% of non-adopters.

Having examined the predictive power of the model, the next step was to assess the goodness-fit of the model.

Goodness-of-fit of the Model

As noted earlier, conducting a diagnostic test for the goodness-of-fit of the model is an essential component in the process of building a parsimonious model that fits the dataset (King, 2008; Archer and Lemeshow, 2006). In addition, the wide availability of statistical software packages offers the researchers opportunities to conduct several diagnostic tests on the appropriateness of the model that fits the sample data as a whole (King, 2008). Specifically, SPSS provides many types of test to indicate how good or bad the model is in predicting the outcome of interest. To achieve a better fit of the model used in the study, four different statistical tests, which represent the *de facto* standard in most statistical analysis packages, were applied: the Likelihood Ratio test; the Hosmer-Lemeshow (H-L) test; the Cox and Snell R-square; and the Nagelkerke test.

The likelihood ratio test (represented as (-2LL) in SPSS) is a commonly-used and routinely reported test of the fit of the model to the data. In this case, a chi-square test (χ^2) is used to determine the statistical significance of the goodness-fit of the model by comparing the deviance of the full model (i.e., with IVs) and the null model (i.e., without IVs) (Sloane and Morgan, 1996). In other words, it calculates the difference in the deviance between the two models, suggesting that the improvement is significant if the deviance value of the new model is less than that of the baseline model (Cheek *et al.*, 2005). As a rule of thumb, a large deviance value in the full model therefore indicates a significant lack of fit in the model (Cook *et al.*, 2008).

For this study, the results of the deviance values of both models indicated a decrease in the value in the new model (see Appendix I). It can be, therefore, be concluded that the new model, with (chi-square (χ^2) = 105.181, df =15, p < .001), provided a more adequate/better fit to the data than the null model and therefore contributes significantly to explain the prediction of social media adoption. To further explore the goodness-fit of the model, another diagnostic test was carried out, using the Hosmer-Lemeshow (H-L) statistical technique.

As has been already mentioned, H-L is another a diagnostic test commonly used to assess the goodness-fit of the LR model (Cokluk, 2010; Archer and Lemeshow, 2006). It is a Pearson chi-square statistical test that compares the observed and the expected frequencies in the LR model (Cheek *et al.*, 2005, Taber *et al.*, 1991). To indicate a good-fit of the model to the data, the H-L test must yield a p-value of more than 0.05. In this

study, the model had H-L chi-square = 4.496, df = 8 and was insignificant (p -value = 0.810, >0.05), suggesting that the model fits the data well (see Appendix I).

In addition, the two above-mentioned tests, SPSS reports two additional descriptive measures to test the goodness-of-fit statistics of the model, which are: the Cox and Snell and the Nagelkerke tests. It is worth noting that these two measures are comparable with the R square measure in the linear regression. Also, it is of note that the Nagelkerke test yields a higher value than the Cox and Snell test. From the analysis of the SPSS output (see Appendix I), both tests yielded positive significance of the research model. With regards to the Cox and Snell test, the value attained in the model was (0.537) suggesting that the model was useful for measuring the response outcome of the study. Similarly, the Nagelkerke test value obtained in the model was (0.743). Looking at both results, it can be concluded that the model is useful in predicting the adoption decision of social media by the sampled SMEs.

After ensuring that the model has a good predictive accuracy and achieves an acceptable goodness-fit, it is highly recommended to conduct a diagnostic test to investigate the effect of correlation between independent variables – referred to as collinearity or multi-collinearity. Owing to its importance in relation to the study findings and the interpretation of the results, the remainder of this section attempts to provide a broad understanding of the effect of multi-collinearity and how it was tackled in this study.

Collinearity (Multi-collinearity) Between the Variables

Collinearity is a statistical term used to describe a situation where two or more predictor variables are linearly related (Elith *et al.*, 2013; Kuang *et al.*, 2003) or when there is an approximate linear relationship between the predictors (Lin 2008, Pallant 2013). In other words, it refers to non-independence among the predictors. Whereas collinearity is used to refer to the existence of a linear relationship between two predictors (Mason, 1987), multi-collinearity is used to denote a linear correlation between more than two predictors (King, 2008). Given that there are 15 predictors (IVs) in the model in this study, the term multi-collinearity is used throughout the remainder of the thesis as many predictors are diagnosed to detect and alleviate any sign of strong correlation.

Multi-collinearity represents an issue of concern for many researchers (Lee *et al.*, 2016; Barrett *et al.*, 2014; Pallant, 2013). According to O'Brien (2007), multicollinearity may result in severe and crippling problems; as a result, it challenges the accuracy of findings and could be misleading in the interpretation of the regression model, and result in unreliable values of coefficients of the predictors being included in the regression model (King, 2008) as well as inappropriate identification of the relevant variables in the model

(Elith *et al.*, 2013). In addition, multi-collinearity tends to inflate the standard error of the coefficients. Where a correlation test indicates an increase in the collinearity among predictors, researchers usually handle the issue by dropping or combining independent variables (Edwards *et al.*, 2010, Myers, 1990).

Given these problems, addressing the issue of collinearity is important to ensure that each predictor variable correctly explain its role in bringing about changes to the dependent outcome (Cheek *et al.*, 2005; Hall *et al.*, 2002). In this respect, statistical software packages offer various techniques to diagnose and assess correlation among predictors. As noted earlier, in this study SPSS was used to analyse the survey data and, within it, the process of inspecting multi-collinearity between the independent variables done in two phases. Phase one was concerned with detecting collinearity among all pairs of predictors; and phase two diagnosed multi-collinearity among all independent variables. Each phase will now be described in more detail.

Phase one attempted to check the existence of first order correlation among predictors. In this phase, the Pearson Product Moment Correlation (Pearson R) was used to examine the correlation coefficients of all pairs of the predictors included in the model. The Pearson R coefficient measures the strength of the linear relationship between predictors where (+1) reflects a strong positive correlation between variables while (-1) indicates a strong negative relationship. Based on Cohen *et al.* (2013), a Pearson R coefficient > 0.9 is considered a sign of a high degree of collinearity.

Appendix J shows the output of Pearson R coefficients between all pairs of predictors in this study, suggesting an acceptable degree of correlation between predictors. The results indicate the highest value of correlation (0.736) occurred between FFI (Family and Friends Support) and Customer Pressure (CSP), which lies in the threshold value of less than 0.9 recommended by Cohen *et al.* (2002). No other correlation exceeded (0.689).

In **phase two**, Variance Inflation Factor (VIF) and Tolerance (TOL) were used to explore the degree of multi-collinearity among the predictors. The aim of using these diagnostic statistical tools is to identify the existence of high correlation between two or more predictors included in the model. It is noteworthy to mention that there is no single formal criterion on the acceptable VIF and TOL scores to judge the existence of multicollinearity (O'Brien 2007). In fact, the literature contains different opinions about the acceptable levels of VIF.

For the purpose of this research, a criterion recommended by Hair (2010) and Myers (1990) was followed. Both suggested a threshold of $VIF > 10$ to indicate harmful multi-collinearity and thus warranting further statistical testing. Conversely, a VIF score of less

than 10 indicates a weak interrelationship among predictors in the model, and therefore reflects no effect of collinearity on the stability of the regression model. With regards to tolerance, the most commonly suggested value is that a TOL value of less than 0.1 suggests a threat of multi-collinearity existing, whereas a value above 0.1 indicates no issue of multi-collinearity (Menard, 2002; Myers, 1990). Table 5.16 summarises and compares this study model results with the acceptable scores.

Measure	Thresholds Used	Model from the Study
Variance Inflation Factor (VIF)	VIF < 10	1.153 < VIF < 3.397
Tolerance (TOL)	TOL score > 0.1	0.294 < T score < 0.883

Table 5.16 Comparison of the chosen thresholds and study model VIF and

Tolerance results

Overall, in case of this study, the VIF scores for all of the predictors fell between 1.153 and 3.397, which signifies that the dataset had no issue of multi-collinearity. Likewise, the TOL scores also indicated an acceptable level of multi-collinearity, with all values exceeding 0.1. Looking at both indicator's values (see Table 5.17), all cases reflect a considerable variation in the degree of multi-collinearity. Therefore, collinearity was not seen as a serious issue with respect to the model, and the degree of collinearity among the predictors should therefore not have a significant impact on the model's ability to predict the adoption of social media among Omani SMEs.

No	independent variable	Multi-collinearity Test	
		Tolerance (TOL)	Variance Inflation Factor (VIF) (1/TOL)
1	Industry (IND)	.844	1.185
2	Size (SZE)	.637	1.571
3	Scope(SCP)	.832	1.202
4	Relative advantage (RAV)	.461	2.167
5	Complexity (CMX)	.454	2.203
6	Compatibility (CMB)	.415	2.412
7	Trialability (TRB)	.356	2.810
8	Observability (OBV)	.379	2.636
9	Interactivity (INT)	.546	1.831
10	Trust (TRT)	.434	2.302
11	Image (IMG)	.507	1.973
12	Top Management Support (TMS)	.438	2.284
13	Innovativeness (INV)	.402	2.488
14	Prior IS Experiences (PIE)	.356	2.812
15	Perceived Lack of Time (PLT)	.882	1.133
16	Competitive Pressure (CMP)	.388	2.579
17	Customer Pressure (CSP)	.277	3.609
18	Family and Friends Support (FFI)	.348	2.872

Table 5.17 The Multi-collinearity Test (in the form of VIF and TOL scores) of the independent variables

Having established the validity and reliability of the instrument, confirmed the predictive accuracy of the LR model and ensured the goodness-fit of the model to the collected data, the next section presents the data analyses and hypotheses testing associated with phase 2 of the study.

5.5.4 Descriptive Analyses

This section presents a descriptive analysis of the responses to the first set of questions presented in the survey instrument. This type of analysis forms the basis of every quantitative study and provides a simple description of the basic features of the collected data (Trochim and Donnelly, 2001). For this study, this includes analyses of: owner-managers' demographic characteristics; SMEs' demographic characteristics; and general questions about social media adoption in the surveyed SMEs. In respect of the demographic characteristics of the owner-managers of the SMEs that participated in this survey, the examined characteristics include age, gender, educational level and mode of employment. Table 5.18 presents a summary of these data and provides analysis of both adopters and non-adopters categories.

Demographics	Frequency	%	Adopters	%	Non-adopters	%
Gender						
Male	176	85.9	110	62.5	66	37.5
Female	29	14.1	25	86.2	4	13.8
Respondents' age						
Less than 25	5	2.4	3	60.0	2	40.0
25 to 34	111	54.1	75	67.6	36	32.4
35 to 44	62	30.2	40	64.5	22	35.5
45 to 54	23	11.2	15	65.2	8	34.8
55 to 64	3	1.5	2	66.7	1	33.3
65 and over 65	1	0.5	0	0.0	1	100.0
Educational qualifications						
No formal qualification	1	0.5	0	0	1	100.0
Primary qualification	2	1	2	100.0	0	0.00
Secondary qualification	47	22.9	27	57.4	20	42.6
College qualification (diploma)	47	22.9	36	76.6	11	23.4
Degree	70	34.1	52	74.3	18	25.7
Postgraduate (Master / PhD)	36	17.6	18	50.0	18	50.0
Others	2	1	0	0.0	2	100.0
Employment						
Full time employee in the Government sector	62	30.2	45	72.6	17	27.4
Full time employee in the private sector	31	15.1	17	54.8	14	45.2
Self employed	108	52.7	70	64.8	38	35.2
Student	3	1.5	2	66.7	1	33.3
Others	1	0.5	1	100.0	0	0.0
Total adopters			135		65.9	
Total non-adopters			70		34.1	

Table 5.18 Cross-tabulation – SMEs owner-managers' demographic characteristics

With respect to gender, the overwhelming majority of the respondents were male (about 85%). The survey data shows that females were under-represented when compared to their male counterparts. This might be owing to the characteristics of the cultural setting of Oman and traditions associated with the concept of women at work. Despite the fact that only a few women take up the entrepreneurial route (Belwal, Belwal and Al Saidi, 2014), women's participation in small business in Oman has grown owing to improvements in the new policies and support programs that are offered. It is possible

that recent attention paid to the development of the SME sector has contributed to boost women-led entrepreneurial projects in a field that had seen lower levels of female participation for many years (McElwee and Al-Riyami, 2003). The results may lend some support to the fact that recent policies to promote the SME sector have had an effect on the participation of Omani business women, helping them to become an important segment of the Omani business community (McElwee and Al-Riyami, 2003).

The survey data also indicated that the majority of the female participants operated micro-businesses, with fewer than five employees. This finding is in-line with previous research indicating that women entrepreneurs in Oman operated in - small-size businesses with two or fewer workers and a capital of less than 25,000 RO (Mathew, 2010). In addition, Omani self-employed women represent only 11% of the total self-employed nationals (Al Kaabi, 2009). The data also show that about two-thirds (65.52%) of the female business owners sampled operated in the service sector. This is in-line with a previous study finding by Mathew (2010) which indicated that the majority of female entrepreneurs in Oman were concentrated in the service sector.

In terms of age group, the results show that respondents aged 25 to 34 years old comprised more than half of the total respondents (54.1%), and those aged 35 and 44 years was the second largest age group (with 30.2%). The other three groups accounted for slightly more than 15% of the sample. These results are not surprising as recent statistics released by the National Centre for Statistics and Information (NCSI) have indicated that the 20-45 age group is the largest in the country (Statistical yearbook, 2015), suggesting a relatively young working-age population (Al Barwani *et al.*, 2014).

On the question of educational attainment, the data show that the educational level of those sampled is generally high. About 23% of the respondents' highest qualification was at secondary level, which was also similar to the proportion of respondents with a college diploma as their highest qualification (22.9%). 34% of respondents held a first degree as their highest qualification and those with postgraduate qualifications accounted for 17.1%. Overall, the data show that about three-quarters of respondents had a minimum of some kind of college-level qualification. Interestingly, of the women in the sample, slightly more than 75% had completed at least a college-level qualification. This may imply that women tend to start businesses after the completion of their studies compared to men who the data may suggest are more likely to run a business before the completion of college-level qualification.

With regards to employment status, of the respondents who completed the survey, more than half were self-employed (52.7%). The proportion of respondents who worked in the government sector double that working in the private sector (30.2% and 15.1%

respectively). In relation to employment status, more than three-quarters of the female respondents were self-employed. This is an indicator showing the suitability of the entrepreneurial projects to female in a society characterised with high context culture and cultural constraints (Chatty, 2000).

In addition to demographic information related to the SME owners/managers, the survey also explored demographic characteristics of the sampled SMEs, including their age, size (number of employees and annual sales), scope and the industry sector in which they operated. Table 5.19 presents the relevant summary data.

Measure		Frequency		%		Adopter		%		Non-Adopter		%	
Employee number (A)	Annual sales (B)	A	B	A	B	A	B	A	B	A	B	A	B
Enterprise size													
Less than five employees	Less than RO. 25,000	87	100	42.4	48.8	60	69						
Between five and nine employees	Between RO 25,000 to RO 250,000	53	81	25.9	39.5	35	57						
Between 10 and 99 employees	Between RO 250,000 to RO 1.5m	65	24	31.7	11.7	40	9						
Enterprise Age													
0 - 1 year		18	8.8	11	8.1	7	10.0						
1 - 3 years		48	23.4	40	29.6	8	11.4						
3 - 5 years		54	26.3	32	23.7	22	31.4						
More than 5 years		85	41.5	52	38.5	33	47.1						
Industry													
Manufacturing		35	17.1	27	20.0	8	11.4						
Wholesale and retail		33	16.1	24	17.8	9	12.9						
Professional and Technical services		33	16.1	23	17.0	10	14.3						
Construction		34	16.6	14	10.4	20	28.6						
Other sectors		70	65.9	47	34.8	23	32.9						
Market Scope													
Local		85	41.5	44	32.6	41	58.6						
National		88	42.9	65	48.1	23	32.9						
Regional		19	9.3	15	11.1	4	5.7						
International		13	6.3	11	8.1	2	2.9						
Total adopters				135				65.9					
Total non-adopters				70				34.1					

Table 5.19 Profile of SMEs in the sample

Given the definition of SMEs in Oman, the highest proportion (42.4%) of the sampled enterprises fell into the micro-business category (fewer than five employees), while the other two categories, small-enterprises (five to nine employees) and medium-enterprises (10 to 99 employees) accounts for 25.9% and 31.7% of the sample, respectively. This finding is in-line with a previous study about SMEs in Oman by Al Barwani *et al.* (2014), indicating that micro-enterprises represent the largest SMEs category in the country. It is also consistent with recently released SME data from PASMED which suggests that nearly 75% of registered SMEs are micro-enterprises (Omandaily.om, 2016). This may be attributed to the recent initiatives of the government to develop SME sector and its endeavour to encourage nationals to start their businesses (Al-Balushi and Anderson, 2015). With this in mind, in 2013 a ministerial decision sanctioning government employees with entrepreneurial projects to have a two years off from their jobs to run their businesses, which would be expected to promote and create a self-entrepreneurial atmosphere.

Among the participant enterprises, (0 – 1) year enterprises accounted for only a small proportion (8.8%) of the total sampled enterprises while the vast majority were businesses that had been in business for more than a year (91.2%). Overall, enterprises that had been operating for more than five years accounted for 41.5% of the sample, while those which had been in business for one to three years and three to five years made up 23.4% and 26.3% of the sample, respectively. These figures are quite similar to the findings of Al Barwani *et al.* (2014).

As far as the make-up of the sample by industry sector is concerned, the survey results indicate that the sample comprised SMEs from manufacturing (17.1%), construction (16.6%), the wholesale and retail sectors (16.1%), and the professional and technical services sector (also 16.1% each). The remaining (majority of the sampled) enterprises were from other sectors (65.9%). Again, these figures are similar to those from the study by Al Barwani *et al.* (2014).

Regarding market scope, the survey data (see Table 5.19) reveals that nearly 85% of the surveyed SMEs focussed their business activities inside the country, with 41.5% having a local scope and 42.9% a national scope. It can be also observed that the percentage of enterprises catered on regional and global markets account slightly more than 15% (with 9.3% and 6.3% respectively), suggesting that Omani SMEs are more likely to cater on domestic and national markets than to expand activities in regional and international markets. This may imply that SMEs in Oman are yet to heavily access regional and international markets; rather they appear to be highly dependent on local and national markets. This is despite SMEs having opportunities to go beyond domestic, and into international markets as a result of recent government intervention to promote SMEs.

The final area of questions in the initial section of the survey addressed social media-related issues. From the 205 responses of 205, 135 were adopters (representing 65.9% of the sample) and 70 were non-adopters cases (representing 34.1%) (See Table 5.20).

Adoption status		Frequency	Percentage (%)
Adopter	(Yes)	135	65.9
Non-Adopter	(No)	70	34.1
Total		205	100

Table 5.20 Cross-tabulation: adoption status (adopters vs. non-adopters)

This may imply a reasonably good level of awareness among Omani SMEs of the role of social media and its impact on their businesses performance. It may also suggest that Omani SMEs are becoming aware of the potential offered by new technologies and have realised the importance of adopting social media.

As mentioned in section 5.2.2, adopters were asked another two questions: the platforms adopted; and the purpose of their use of the adopted platforms. In response to the first question, Table 5.21 and Figure 5.1 show that Facebook, Instagram and Twitter were the three most popular social media platforms adopted by the sampled SMEs in Oman. A significant percentage of SMEs (78.5%) that were surveyed indicated that they had a presence on Facebook. Of the 135 SMEs that had adopted social media, nearly three-quarters of were found to use Twitter. Instagram was the second most widely-adopted platform used by SMEs in Oman, with nearly 65% of the sampled enterprises reporting that they made use of the application.

Platform	Responses		Percent of Cases Percentage (%)
	Frequency	%	
Facebook	106	31.1.	78.5
Twitter	75	22.0	55.6
Instagram	87	25.5	64.4
Linked In	24	7.0	17.8
Google+	37	10.9	27.4
Other platforms	12	3.5	8.9
Total	341	100.0	252.6

Table 5.21 Common social media platforms

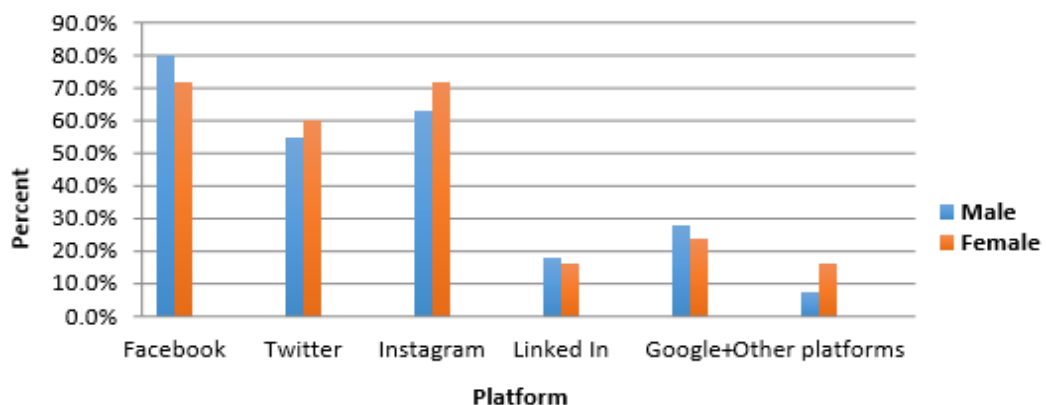


Figure 5.1 Social media platform use by gender

Interestingly, unlike Facebook, the data suggests that Instagram is more widely used in female-owned businesses. This is consistent with the findings of a study by Wally and Koshy (2014) which found that Instagram was seen as an effective tool for home-based business among businesswomen in the UAE as it helped them to provide high exposure for their businesses and requires a minimal conversation with followers, which females tend to favour in such a conservative cultural context. This is an indicator showing the preference for Instagram over Facebook in female-owned SMEs.

The second question asked to the adopting enterprises aimed to elicit information on the purposes of using social media platforms. Figure 5.2 presents the breakdown of the reasons given by respondents. Advertising and promotion were found to be the key reasons for using social media, with 78.5% of the respondents identifying these uses.

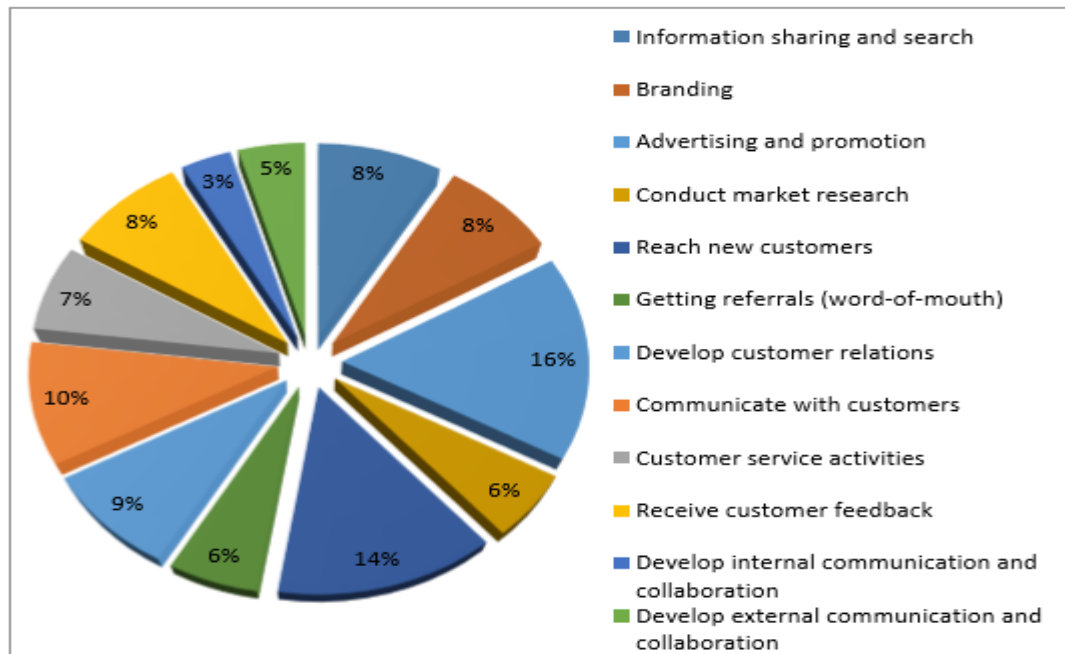


Figure 5.2 Purposes of social media adoption

This result suggests that SMEs consider social media as a tool for promotion and advertising through which to create awareness among consumers. Also, the results indicate a good awareness of the significance of social media to “reach new customers” and “communicate with customers” (66.7% and 47.7%, respectively). In contrast, a smaller percentage of adopters use social media to enhance both internal and external communication (only 3.4% and 4.5%, respectively). Interestingly, none of the group of SMEs that were in their first year of business activity used social media to develop internal communication with employees and they only used in for external communication with customers. This might be attributed to that fact that those SMEs are too small to warrant using social media for internal communication. This might also reveal a lack of social media strategy to allow employees to access social media. Another explanation could be owners-managers’ misconceptions about the negative impact on work productivity of using social media. Considering the newness of social media in the Omani business context, it is interesting to note that a reasonable percentage of SMEs used social media to gain benefits from e-word of mouth as well as to conduct market research, with 27.4% and 26.7% respectively.

The second group of respondents – the non-adopters –were asked two questions, related to their adoption intention plan and the barriers that hindered adoption. As has been previously mentioned, just over 34% of the surveyed SMEs did not have a social media presence. These SMEs were asked to state their intention plan with regards to adoption, making clear whether they intended to adopt or not. Just over two-thirds of the non-adopters stated their intention to adopt social media, and of them, about 55% intended to do so within a year.

An inspection of the survey data shows that all the four female-owned non-adopting SMEs indicated their intention to adopt social media in the foreseeable future. As a final descriptive question in section A, enterprises with no intention to embrace social media were further asked to identify the reasons behind their decision. The most-commonly stated barriers to responding SMEs adopting social media was “lack of time to invest in social media”, reported by nearly half of the non-adopters. “Not enough skills to adopt social media” and “the enterprise can do well without social media” were two other major barriers that were identified. The fear of critique and negative feedback received from customers was also mentioned by respondents as a barrier to adopt social media in their enterprises, but with less frequency (with 5.4%).

Having presented a descriptive analysis of the characteristics of both SMEs and owner-managers who participated in the survey, the next section will present the findings related to the LR analysis with the aim of determining the significant predictors of social media adoption by Omani SMEs.

5.5.5 Findings and Statistical Tests of the Hypotheses

It is important to understand the effect of each independent variable in relation to the regression model results (Krzywinski *et al.*, 2016) in order to choose the most influential variables. In essence, the selection of independent variables when building LR models is important, however, it is not an easy decision (Zhang *et al.*, 2015; Keller *et al.*, 2004). According to Sperandei (2014), researchers using LR models must be cautious when including variables as predictors in the model. As stated in section 5.5.2, a binary LR was used to explore the factors (the independent variables) that influence the adoption of social media by SMEs in Oman (the dependent variable). This section therefore presents the findings related to each independent variable included in the analysis and explains its contribution to the overall model results by calculating the effect of changes to each independent variable. Considering the 18 TOE variables through hypothesis testing, the results of the LR analyses reveal that eight of the variables were supported and found to have a significant influence on the adoption of social media among the surveyed SMEs. These eight variables were therefore included in the regression model.

Table 5.22 presents a summary of the hypotheses testing, showing the relative importance of each of the independent variables in relation to the dependent variable ('adopt' or 'not adopt' social media). More specifically, it gives a summary of the variables that were included in the full model, suggesting the role that they play in influencing the dependent variable. In addition, the table shows the factors that were found to be insignificant, meaning that those variables have no role in the model and no effect on the dependent variable. It is important to mention that a *p*-value of less than 0.05 was used as a limit for the statistical significance of the independent variables on the adoption of social media in SMEs. This means that a *p*-value of less than 0.05 suggests that there is a significant relationship between one independent variable and the dependent variable (adoption of social media). In contrast, a *p*-value of equal than or greater than 0.05 indicates no significant impact of an independent variable on the dependent variable.

Independent variables/ predictors	β	S.E	Wald	df	Sig.	exp(β)	95% C.I.for EXP(β)	
							Lower	Upper
Technology								
Relative advantage	-.861-	.542	2.523	1	.112	.423	.146	1.223
Complexity	-.860-	.521	2.726	1	.099	.423	.152	1.175
Compatibility	1.206	.595	4.110	1	.043**	3.340	1.041	10.717
Trialability	1.565	.715	4.788	1	.029**	4.781	1.177	19.418
Observability	1.124	.511	4.842	1	.028**	3.078	1.131	8.377
Interactivity	.644	.558	1.334	1	.248	1.905	.638	5.685
Trust	.949	.440	4.647	1	.031**	2.582	1.090	6.118
Image	1.138	.545	4.367	1	.037**	3.120	1.073	9.073
Organisation								
Size			.481	2	.786			
Top Management Support	.254	.559	.207	1	.649	1.289	.431	3.854
Innovativeness	-.891-	.492	3.281	1	.070	.410	.157	1.076

Prior IS Experiences	-.602-	.461	1.706	1	.191	.548	.222	1.351
Perceived Lack of Managerial Time	-1.077-	.350	9.463	1	.002*	.341	.171	.676
Environment								
Industry			7.568	4	.109			
Market Scope			10.262	3	.016**			
Competitive Pressure	-.616-	.423	2.116	1	.146	.540	.236	1.239
Customer Pressure	1.603	.702	5.216	1	.022**	4.969	1.255	19.670
Family and friends' support	1.170	.592	3.904	1	.048**	3.221	1.010	10.275
Constant	-5.230	2.653	3.887	1	.049	.005		
Hosmer & Lemeshow = 0,810, Cox & Snell = 0.537, Nagelkerke = 0,743								
Significance: * p < 0.01, ** p < 0.05								
*Dependent variable: 0 = No, 1 = Yes								

Table 5.22 Results of LR analysis

As can be seen from Table 5.22, nine of the TOE variables were shown to have a significant contribution to the research model. The subsequent paragraphs present the findings related to each context of the TOE model in more detail.

Technology Context

As noted earlier, eight technology attributes were included in the LR analysis to determine the factors that influence the adoption of social media by SMEs in Oman: relative advantage; complexity; compatibility; observability; trialability; trust; interactivity; and image. Table 5.23 presents the hypotheses associated with the factors examined in relation to the technology context.

No	Hypothesis
H1	Increased perceived relative advantage of social media positively influences SMEs' decision to adopt social media.
H2	Decreased perceived complexity of social media negatively influences SMEs' decision to adopt social media
H3	Increased perceived compatibility of social media positively influences SMEs' decision to adopt social media.
H4	Trialling social media applications before adoption positively influences SMEs' decision to adopt social media.
H5	Increased observability of social media applications positively influences SMEs' decision to adopt social media.
H6	Increased interactivity of social media applications influences SMEs' decision to adopt social media.
H7	Increased trust of social media applications positively influences SMEs' decision to adopt social media.
H8	Increased Image of social media applications influences SMEs' decision to adopt social media

Table 5.23 Technology context-related hypotheses

Out of the eight variables tested, five – compatibility, observability, trialability, trust and image – were found to be significantly associated with the adoption of social media as each yielded a *p*-value of less than 0.05. However, the remaining three technological variables (relative advantage, complexity and interactivity) were found to be statistically insignificant in relation to the adoption decision. Each of the significant variables within the technology context will now be discussed.

For compatibility, the results suggest that it is statistically significant at the level of 0.05 ($\beta = 1.206, p = .043, < 0.05$). The result indicates that compatibility plays an important role

in the decision of SMEs to adopt social media and its corresponding hypothesis (H3) was therefore accepted. The results also provides support for the positive effect of trialability ($\beta = 1.124$, $p = .028$, < 0.05) on the prediction of social media adoption by SMEs. This findings support hypothesis H5, which suggests that trying social media applications is significant in the decision of SMEs to adopt them.

In addition, observability ($\beta = 1.565$, $p = .028$, $< .05$) was found to contribute positively to the decision of the SMEs to adopt social media. This finding, therefore, leads to the acceptance of hypothesis H4. Image ($\beta = 1.138$, $p = .037 < .05$) was also found to, providing support for hypothesis H8. The findings also indicate that the adoption of social media by SMEs in Oman is significantly impacted by one more technological variable: trust. Trust ($\beta = .949$, $p = .031$, < 0.05) had a positive and significant impact on the decision to adopt social media by the sampled SMEs, leading to the acceptance of hypothesis H7.

When it comes to relative advantage, complexity and interactivity, the results provide no evidence of the significance of these factors in predicting social media adoption. In the case of this study, neither relative advantage ($p = 0.112$, < 0.05) nor complexity ($p = 0.099$, > 0.05) nor interactivity ($p = .248$, < 0.05) were found to be significant factors in SMEs' decision making when it came to the adoption of social media. Thus, the findings lend no support for hypotheses H1, H2 or H6.

Organisation Context

Under the organisation context, the study attempted to explore the effect of five variables: size; top management support; innovativeness; previous IS experience; and perceived lack of managerial time. Table 5.24 shows the hypotheses associated with these five factors. The results of the LR analyses reveal that only one organisation context variable, perceived lack of managerial time, was found to have a notable effect on the adoption of social media by SMEs in Oman. The findings in relation to each of the five variables within the organisation context will now be presented.

No	Hypothesis
H9	The size of the enterprise has a positive impact on the SMEs' decision to adopt social media
H10	Top management support positively influences SMEs' decision to adopt social media
H11	Innovativeness positively influences SMEs' decision to adopt social media
H12	Prior IS experience positively influences SMEs' decision to adopt social media
H13	Lack of perceived managerial time negatively influences SMEs' decision to adopt social media

Table 5.24 Organisation context-related hypotheses

Perhaps the most surprising finding is that perceived lack of managerial time ($\beta = -1.077$ -, $p = 0.002$, < 0.05) emerged as a strong predictor that influences the adoption of social media by the Omani SMEs; it was inversely related, with a negative sign coefficient,

suggesting that this factor plays a key role in the lack of adoption of social media by SMEs in Oman. This result lends support to the acceptance of the hypothesis (H13) corresponding to this factor.

The remaining four organisational factors – size; top management support; innovativeness; and previous IS experience – were found not to be significant in relation to the adoption decision. In light of this, neither size ($p = .786$), top management support ($p = 0.649$), innovativeness (.070), nor previous IS experience (0.191) yielded significance levels greater than 0.05, indicating lack of significance in terms of their impact on the social media adoption decision in the sampled SMEs. It can, therefore, be concluded that the findings of the study provide no support for hypotheses H9, H10, H11 or H12.

Environment Context

Five environment factors were tested in the LR model: industry; market scope; competitive pressure; customer pressure; and family and friends' support. Table 5.25 presents the hypotheses associated with these five environmental factors. Out of the five variables tested, three – customer pressure, family and friends' support, and market scope – were found to be significant in relation to the adoption of social media. The other two factors – industry and competitive pressure – returned no evidence of significant effect on the adoption decision. The findings in relation to each of the significant variables within the environment context will now be presented.

No	Hypothesis
H14	The industry that an SME operates within influences the decision to adopt social media.
H15	The market scope that an SME operate within influences the decision to adopt social media.
H16	Competitive pressure positively influences SME decision to adopt social media.
H17	Customer pressure positively influences SME decision to adopt social media.
H18	Family and friends' support positively influences SME decision to adopt social media.

Table 5.25 Environment context-related hypotheses

For, customer pressure, the results show statistical significance ($\beta = 1.603$, $p = 0.022$), suggesting that customer pressure is an important attribute for predicting social media adoption by SMEs in Oman. This finding supports the acceptance of hypothesis H17. The results also provide support for positive effect of family and friends' support ($\beta = 1.170$, $p = 0.048$, < 0.05) on the decision to adopt social media by the sampled SMEs. Consequently, this finding lends support to hypothesis H18.

A positive and significant impact on the adoption of social media by SMEs is also evident in relation to market scope ($p = 0.022$, < 0.05). This finding, therefore, provides evidence for the acceptance of the corresponding hypothesis (H15).

As far as the industry and competitive pressure are concerned, the results shown no statistically-significant association for either factor in relation to the social media adoption decision for the sampled SMEs. Both factors yielded p-values greater than 0.05 ($p = 0.146$ and $p = 0.109$, respectively). There was therefore no support for hypotheses H14 or H16, and both hypotheses were rejected.

In summary, the results of the LR analyses provide evidence that nine factors – compatibility, observability, trialability, trust and image from the technology context; perceived lack of managerial time from the organisation context; and market scope, customer pressure and family and friends' support from the environment context – from the TOE framework had a statistically-significant relationship with the adoption of social media by the sampled SMEs. Of these nine factors, perceived lack of managerial time was found to be the most strongly significant factor, having a negative effect on the adoption of social media by SMEs in Oman. Table 5.26 provides a summary of the acceptance or rejection of the hypotheses arising from the LR analysis.

Hypothesis No.	Corresponding variable	Decision
Technology		
H1	Relative advantage	Not supported
H2	Complexity	Not supported
H3	Compatibility	Supported
H4	Trialability	Supported
H5	Observability	Supported
H6	Interactivity	Not supported
H7	Trust	Supported
H8	Image	Supported
Organisation		
H9	Size	Not supported
H10	Top Management Support	Not supported
H11	Innovativeness	Not supported
H12	Prior IS Experiences	Not supported
H13	Perceived Lack of Managerial Time	Supported
Environment		
H14	Industry	Not supported
H15	Market Scope	supported
H16	Competitive Pressure	Not supported
H17	Customer Pressure	Supported
H18	Family and Friends Support	Supported

Table 5.26 Summary of Hypotheses

5.6 Summary

This chapter has discussed the second phase, the qualitative study, of the research. It has reported the related research activities including data collection, data analysis and data analysis. It has provided the justifications for the choice of online survey to gather data from the research subject as well as has highlighted the procedures followed to conduct the survey. It has reported data collection activities including sampling, ethical approval, piloting and survey distribution process. Also, it has reported and justified the use of logistic regression (LR) to identify factors influencing the adoption of social media by the investigated SMEs.

Drawing upon the LR results of the hypothesised model, nine TOE factors were perceived to be associated with social media adoption by SMEs (five were technological, one organisational and three environmental factors). In the next chapter, a detailed discussion of the LR results is provided.

Chapter 6: Discussion

6.1 Introduction

The preceding chapter presented the data collection and reported the findings and results produced in phase two of the research, the quantitative study. Building on these findings, this chapter aims to discuss those findings. The importance of this chapter is twofold. First, it provides a thorough discussion of the TOE-related factors that influence the adoption of social media in SMEs in Oman. It brings together the findings and compares the results with the relevant IT innovation adoption literature. Second, it develops and explores the extent to which the model can be used to predict the adoption of social media in SMEs in Oman.

The chapter is divided into two main sections: discussion and model refinement. Section 6.2 provides a substantive discussion of factors related to the three TOE aspects. For ease of discussion, the entire section is further broken down into three subsections; each explains findings related to one aspect of the TOE framework: section 6.2.1 discusses the findings related to the eight technology attributes included in the model; section 6.2.2 then moves to discuss the results of organisation characteristics used in the model; and section 6.2.3 discusses the findings related to the external environment.

Section 6.3 then presents the refined model that can be used to predict which SMEs is more likely to adoption of social media. It provides a brief comparison between the proposed version of the model (which was developed in chapter 5) and the modified version of model presented in this chapter. Section 6.4 then provides a summary of the chapter and its position in the thesis.

6.2 Discussion of TOE Contexts

This chapter attempts to attach meaning to the principal findings reported in chapter 5. It aims to explain the meanings of the results and relate the findings of this study to the previously published studies, reported in chapter 2. Overall, the results of the study suggest that the TOE is a robust framework to examine the determinants of the adoption of social media in the SME setting as it indicates the relevant importance of various technological and environmental factors as important predictors of social media adoption.

However, the results suggest that organisational factors are of less importance when compared to technological and environmental factors.

As the aim of this study revolves around understanding the impact of the three contexts of TOE on predicting social media adoption in SME setting, the discussion of the findings is divided into three sections, with each section discussing the results related to a specific context.

6.2.1 Technology Context

Despite being essential for the adoption of various innovations in the SME setting (as extensively discussed in the literature review chapter – section 2.4.3), unexpectedly, in this study, relative advantage did not significantly impact social media adoption. In fact, the findings from this study appear to challenge prior literature which has found relative advantage to be a strong predictor across a range of ICTs in SMEs in developed country contexts (such as the US, UK, Greece and Australia) (see, for example, Oliveira, Thomas and Espadanal, 2014; Alshamaila, Papagiannidis and Li, 2013; Alshamaila, 2013; Ifinedo, 2011; Shah Alam, 2009; Azam and Quaddus, 2009; Al-Qirim, 2007; Gibbs and Kraemer, 2004; Grandon and Pearson, 2004; Scupola, 2003; Chwelos, Benbasat and Dexter, 2001; Mehrtens, Cragg and Mills, 2001; Raymond, 2001; Poon and Swatman, 1999). However, the finding of the present study in relation to relative advantage does agree with that of Shaharudin *et al.* (2012) investigation of factors influencing ICT adoption among Malaysian SMEs. Also, it confirms the findings of studies of the adoption of different IS innovations in developing country contexts (Such as Malaysia, Taiwan and Brunei) (see, for example, Chong *et al.*, 2009; Kurnia *et al.*, 2009; Tsao, Lin and Lin, 2004; Seyal and Rahman, 2003). This implies that, in general, unlike SMEs in developed countries, SMEs in developing countries may lack awareness, as well as an understanding, of the benefits of IS innovations.

Based on the above, there are two possible explanations for the statistical insignificance of this factor in relation the adoption of social media by the Omani SMEs. First, this study was conducted in a developing country and, as such, the SMEs may lack an awareness of the benefits of social media for their businesses, meaning that further time and exposure may be needed in order for them to properly exploit the potential of social media. Second, the factor's lack of significance could be associated with the novelty of social media in the SME setting. As a result, the SMEs may not be clear about the underlying benefits of social media for adopters at this stage of adoption (Cesaroni and Consoli, 2015; Meske and Stieglitz, 2013). This has been found to be the case in the past with different IS innovations, such as e-commerce, ERP and CRM (Kannabiran and

Dharmalingam, 2012; Kurnia *et al.*, 2009) and may stem from SME owner-managers not being aware that they “must be patient with the return of their social media efforts” (Wang, Susarla and Sambamurthy, 2015, p.9). To some degree, this result therefore corroborates the view that SMEs in Oman lack awareness of the benefits of new technologies (Al-Gharbi and Ashrafi, 2010; Ashrafi and Murtaza, 2008), and suggests that this may be the case for social media, specifically.

Complexity, as reported in section 5.5.5, was not significant in predicting the adoption of social media by the sampled SMEs. This finding corroborates the results of a number of published studies that have considered IT innovation in SMEs (such as Alshamaila, 2013; Omar *et al.*, 2012; Kawalek *et al.*, 2009; Siong *et al.*, 2009; Boumediene and Kawalek, 2008; Tung *et al.*, 2001). However, it is inconsistent with the findings of other published studies (such as Alshamaila, Papagiannidis and Stamati, 2013; Oliveira and Martins, 2010; Wang, Wang and Yang, 2010; Azam and Quaddus, 2009; Al-Qirim, 2007; Hussin and Noor, 2005; Grandon and Pearson, 2004). This may be related to differences in the technology contexts of the two groups of studies. For the present study, for example, the finding can be attributed to the fact that social media is one where the tools/applications/platforms are user-friendly technologies that can be easily managed with no need for sophisticated technical experience, in contrast to previous technologies, such as website and e-commerce applications (Cesaroni and Consoli, 2015), which require an established IT infrastructure with appropriate expertise (Al-Qirim, 2007).

The finding in relation to complexity may also be attributed to the fact that Omani SMEs are familiar with other similar, interactive technologies, such as websites and electronic forums, mainly the Omania.net forum, which is an electronic forum through which many SMEs advertise their products and services. In short, then, the results for this factor are likely to be related to the type of innovation, with regards to the level of technical experience required to use and learn about it.

Regarding the significance of compatibility, the finding from the present study confirms those of research by Azam and Quaddus (2009) concerning factors that influence the adoption of cloud computing in SMEs, and Tung *et al.* (2001) regarding e-commerce adoption among SMEs in Singapore. Other studies have also provided consistent results that suggest that compatibility is an essential determinant of innovation adoption in SMEs (see, for example, Alshamaila, Papagiannidis and Li, 2013; Jones *et al.*, 2013; Tan *et al.*, 2009; Al-Qirim, 2007; Al-Gahtani, 2003). This position is further supported by the findings of a study by Parveen *et al.* (2015) on the factors influencing Facebook adoption among SMEs in Malaysia, which showed that compatibility plays a significant role in the decision to adopt Facebook among the sampled SMEs.

However, the identified significance of compatibility contradicts other published studies, such as those of: Wang, Wang and Yang (2010); Ramdani, Kawalek and Lorenzo (2009); Hussin and Noor (2005); Premkumar (2003); Kendall *et al.* (2001); Thong (1999); and Cooper and Zmud (1990). The mixed findings from the literature in relation to compatibility makes it difficult to interpret the result from the present study related to this factor and may give weight to Karahanna *et al.*'s (2006) suggestion to revisit the compatibility construct.

In case of this study, though, one possible reason behind the significance of compatibility is that SMEs in Oman use many basic applications and thus show concern about the compatibility of social media with these other applications. To some degree, this matches the idea of Ashrafi and Murtaza (2008) who have suggested that the majority of SMEs in Oman use a number of technologies to automate their business functions, such as Enterprise Resource Planning (ERP), Inventory Management Software (IMS) and Customer Relationship Management (CRM), in addition to having informational websites, non-commercial websites used to display information about the enterprises and their activities. The compatibility factor result could be also interpreted in terms of Omani SMEs being more likely to adopt social media if the tools/platforms are compatible with their business processes, existing infrastructure, and the SMEs' values and beliefs. This may reflect a level of strategic thinking among Omani SME owner-managers about the importance of these applications being compatible with their current business, as well as being aligned with any future integration with new applications.

In the current study, interestingly, the data showed that trialability is a significant factor with respect to social media that leads to the adoption of these tools in the Omani SME setting. This result is in line with the findings of prior studies, such as those of Kawalek *et al.* (2009), Azam and Quaddus (2009), Boumediene and Kawalek (2008), Seyal and Rahman (2003), and Tung *et al.* (2001). However, it is inconsistent with those of Alshamaila (2013) and Siong *et al.* (2009) which revealed that experimenting with an innovation was not a significant factor affecting its adoption by SMEs. The current study's finding of trialability as a significant factor may suggest that SMEs with greater opportunity, or necessity, to experiment with social media have a higher tendency to adopt.

In the study's context, a lack of information about relevant and effective ICT solutions among Omani SMEs (Ashrafi and Murtaza, 2008) may have made it necessary for them to go through an "assessment stage" (Durkin, McGowan and McKeown, 2013, p.725) in order to determine the suitability of social media applications by trying them prior to making an adoption decision. Another possible explanation is that Omani SMEs are known for lacking internal IT skills (Al-Gharbi and Ashrafi, 2010), which may encourage

them to seek to judge the suitability of any proposed ICTs before using them within the enterprise, leading owner-managers to resort to, and value, the option of experimenting with social media technologies, which is highly important for SMEs in a developing country contexts (as argued by Yeboah-Boateng and Essandoh (2014)). In addition, given that Oman is known for a high context culture with high uncertainty avoidance (Hofstede, 1984), SME owner-managers may be cautious about introducing new technologies unless they are convinced about their suitability for their enterprises.

The results of the analysis, presented in section 5.5.5, indicate that observability is a significant predictor of social media adoption. The wide adoption of social media technologies by individuals, as well as organisations across the country (Al-Mukhaini, Al-Qayoudhi and Al-Badi, 2014; Mehmood and Taswir, 2013; Kuzma, 2010), is perceived as being important in motivating SMEs to adopt these technologies (Chatzithomas *et al.*, 2014). Though the finding of observability as a significant predictor reinforces the results of previous studies (such as those of Azam and Quaddus (2009); Hussin and Noor (2005); Al-Gahtani (2003); and Seyal and Rahman (2003)), all of which were conducted in a similar context (that of developing countries), we cannot be certain that the significance of observability is caused by the context as the literature identifies other possible reasons. This makes it difficult to explain the result through comparisons with studies which, on the surface, found the same significance in relation to observability.

There is also contradictory evidence in the literature in this area (see, for example, Kawalek *et al.* (2009) and Kendall *et al.* (2001)). The differences in findings may be attributable to differences in operationalisation of the observability construct in studies that employ the TOE framework. As such, future studies may wish to on this construct and its operationalisation to more complete explanations of findings related to the construct.

Even though social media providers are well-known, with consistent and common features of a platform being offered to all users, the results of the analysis of this study show that trust plays an important role in the adoption of social media in Omani SMEs. This finding is in-line with that of Chan and Lee (2003), indicating that trust is an important requirement in ICT adoption by SMEs. One interpretation for trust being shown to be significant in the present study is its association with the cultural dimension of uncertainty avoidance. In other words, being in a high-context culture (Hofstede, 1984), Omani SMEs owner-managers tend to be cautious about the uncertainty and risk involved with ICT adoption. The significance of trust could be further attributed to a lack of awareness about the legal and regulatory issues and information technology law. According to Ashrafi and

Murtaza (2008), legal and regulatory issues represent a major barrier that deter the adoption of ICT among SMEs in Oman.

The final technology context factor is image. As noted in section 5.5.5, image was found to be a strong predictor of social media adoption by the SMEs in this study's sample. This result echoes that from the study by Al-Qirim (2007), which suggested that image was perceived as an important factor in the adoption of websites by SMEs in New Zealand. It is also in agreement with findings obtained by Ramayah *et al.* (2013), which indicated that perceived image is positively related to technology adoption among SMEs. Thus, the results of the LR analysis of this study add weight to the evidence that image plays an important role in the adoption of IS innovations, including social media, in the SME setting. This implies that SMEs perceive social media as enhancing their profile in society, which may play a part in the consequent adoption decision. In this case, the finding could be interpreted as SME owner-managers perceiving that having a presence in relation to social media will position their enterprises at a higher status than those SMEs with no presence.

Given that social media technologies are characterised by offering interactive features (Sashi, 2012), it was expected that interactivity would be a significant factor in the adoption decision. However, the results from the present study provided no evidence of significance in relation to this factor. This finding is consistent with the outcome of the study by Herrero and San Martín (2012) which indicated that interactivity is not an important determinant of website adoption by small businesses. As such, SMEs may lack awareness/knowledge about the interactive features offered owing to the novelty of these technologies, suggesting that as SMEs increased their exposure to social media applications/platforms they will be in a better situation to understand embedded features of these technologies. This may imply the importance of interactivity in the post-adoption stage, as found in the study by (Parveen, Jaafar and Ainin, 2015). However, the present study considers the pre-adoption stage, which may at least partially explain the lack of significance of interactivity on the adoption decision. Another possible explanation may arise from the sampled SMEs reporting use of more than one social media application. This may have limited the SMEs' ability to explore the interactive features associated with individual applications. If this was the case, it may imply that sufficient time is required to understand the interactive features embedded in these tools in order to support their effective implementation and use by SMEs to carry out various business activities.

Having discussed the technology factors that influence the adoption of social media by SMEs, the next section discusses the organisational factors from the TOE model.

6.2.2 Organisation Context

As stated in section 5.5.5, apart from a perceived lack of managerial time, in this study organisational factors were found to be insignificant discriminators between adopters and non-adopters of social media among SMEs. In this section, the results related to each factor are discussed.

The analysis of the results show that the sampled SMEs did not recognise business size as a factor that affects the social media adoption decision. This finding is in-line with studies by Al-Somali, Gholami and Clegg (2013); Jeon, Han and Lee (2006); and Scupola (2003) who argued that there is no relationship between IT adoption and the size of the enterprise. It is also in line with Vlachvei and Notta, (2014), concerning the adoption of social media in Greek SMEs, and Wamba and Edwards' findings (2014), regarding the adoption of Twitter by SMEs, demonstrating agreement with some of the limited number of studies that specifically consider social media adoption in SMEs.

However, the outcome is contrary to the results of many previously published studies, conducted in different contexts (both developed countries, including the USA, UK, and New Zealand, and developing countries, for example, Malaysia, Korea, and Vietnam) and concerning various technologies (for example, e-commerce, cloud computing, ERP, and websites). These results show a significant correlation between the size of the enterprise and IT adoption, suggesting that the larger the business size, the higher the propensity to adopt a given innovation (Loukis and Kyriakou, 2015; Oliveira, Thomas and Espadanal, 2014; Verheyden and Goeman, 2013; Herrero and Martín, 2012; Chang *et al.*, 2011; Low, Chen and Wu, 2011; Boumediene and Kawalek, 2008; Pan and Jang, 2008; Al-Qirim, 2007; Bharati and Chaudhury, 2006; Hussin and Noor, 2005; Premkumar, 2003; Premkumar and Roberts, 1999; Thong, 1999).

The difference in the finding from the present study and those mentioned above may be attributed to the fact that social media platforms are less complex and more affordable technologies for smaller businesses when compared with more sophisticated and expensive technologies (e.g., e-commerce, cloud computing, ERP, and websites); this is important as SMEs have limited financial and technical resources that inhibit the uptake of more sophisticated technologies (Kannabiran and Dharmalingam, 2012). Many smaller enterprises therefore face difficulties in dedicating the resources required for the adoption and use of more complex technologies.

In SMEs, it is commonly believed that various decisions, including those related to IT adoption, are directly influenced by the top management (Isma'ili *et al.*, 2016; Wilson, Khazaei and Hirsch, 2015; Dahnili *et al.*, 2014; Govindaraju, Chandra and Siregar, 2012;

Chang *et al.*, 2011; Jeyaraj, Rottman and Lacity, 2006; Fink, 1998). Nevertheless, in reviewing the literature on the impact of TOE factors on the IT adoption decision, this result differs from many earlier studies pertaining to the new technologies adoption among SMEs which stress that top management support is critical for IT adoption (Wilson, Khazaei and Hirsch, 2015; Oliveira, Thomas and Espadanal, 2014; Govindaraju, Chandra and Siregar, 2012; Chen *et al.*, 2011; Wang *et al.*, 2010; Kawalek *et al.*, 2009; Boumediene and Kawalek, 2008; Ramdani and Kawalek, 2007; Hussin and Noor 2005; Premkumar, 2003; Scupola 2003; Premkumar and Roberts, 1999).

However, unexpectedly, this study found no correlation between social media adoption and top management support, indicating the lack of significance of this factor. This finding reflects those of Alshamaila (2013); Thong, Yap and Raman (1997); Thong, Yap and Raman (1993).

One explanation for the insignificance of top management support may be that SME owner-managers do not think that their support is essential in the initial stage of IT adoption. Given the novelty of social media in many business organisations, including Omani SMEs, top management may perceive that social media adoption is in its infancy stage and does not therefore require additional attention or strong commitment from their side. Top management support generally comes in the form of committing financial and organisational resources and engaging in the adoption decision process, which, as argued by Oliveira, Thomas and Espadanal (2014), is not required in the initial stage of IT adoption for technologies such as social media because investing in such types of technologies does not require extensive financial and organisational resources.

Another explanation might be associated with the lack of social media strategy in these types of businesses and the perception that adoption of these tools is not a strategic necessity that requires the involvement of top management. In addition, it has been argued that the role of top management in the adoption of sophisticated technologies, including enterprise applications, e-commerce, and cloud computing, goes beyond the normal financial and organisational commitment to also involve interaction and negotiation with trading partners and service providers in relation to the adoption and training issues (Jones *et al.*, 2013). However, with social media, particularly in the early stages of adoption, these commitments appear not be required.

With respect to the third organisational factor, innovativeness was not identified as a statistically significant discriminator between the adopters and non-adopters of social media among SMEs in Oman. This finding concurs with those of Tehrani and Shirazi, (2014); however, a remarkable difference exists between the finding of this study and those of many previous studies, such as Christodoulides *et al.* (2015), Alshamaila (2013),

Hussin and Noor (2005), Thong (1999), and Thong and Yap (1995). It also contradicts the findings of Ghobakhloo, Arias-Aranda and Benitez-Amado (2011), Al-Qirim (2007) and Al-Qirim (2006), which signified the importance of innovativeness on the adoption of enterprise computing technologies (including websites and email).

The lack of significance of innovativeness has two possible explanations. The first is that the level of innovativeness is closely associated with the amount of investment required to adopt a certain technology. In other words, technologies that require substantial investment are a risky venture for SMEs (Thong, 1999), given that SMEs are constrained by their financial resources. As a result, the adoption of many previous technologies required SME owner-managers to take risks as they required significant changes to existing organisational practices. However, in the case of social media, risk taking may not be of great concern, as these technologies do not require substantial investment. As a result, their adoption may not necessitate significant changes to existing organisational practices.

Second, despite the fact that risk taking is an important characteristic of SME owner-managers, as argued by Thong (1999), the cultural characteristics of a country may directly influence the impact of this managerial element and “discourage technological development and innovation” (Chatzithomas *et al.*, 2014, p.76). In developing countries, the avoidance of high uncertainty has been argued to influence the level of innovativeness. For instance, Chang *et al.* (2011) examined the adoption of ERP among Taiwanese SMEs and revealed that SMEs were less likely to adopt ERP owing to their lower tolerance for risk-taking. Further, they suggested no notable impact of innovativeness on the adoption of new technologies in SMEs. In relation to this study, the cultural characteristic of high uncertainty avoidance Hofstede (1984) in Oman may contribute to the lack of significance of innovativeness and risk taking in the adoption of social media.

Prior IS experience was also not found to be a significant predictor of social media among SMEs in Oman. This finding supports those of many previous studies (Alshamaila, Papagiannidis and Li, 2013; Ramdani, Kawalek and Lorenzo, 2009; Boumediene and Kawalek, 2008; Daniel, Wilson and Myers, 2002; Kuan and Chau, 2001).

This lack of significance of prior IS experience may be attributed to the fact that this factor tends to be more important in the later stages, rather than in the early stages, of adoption (Daniel, Wilson and Myers, 2002). The influence of the level of complexity and ease of use of the technology may also be a factor, and this may have lessened the importance of having previous IS experience in adopting social media. This may suggest that social

media applications are a type of technology that does not require SMEs to have experience in using previous technologies.

In relation to the final organisational factor, the study provides empirical evidence that a perceived lack of managerial time is significant in explaining the decision to adopt social media. This finding fits those of Gligorijevic and Leong (2011) who reported that a lack of time represents a major barrier for SMEs to create and maintain a presence in social media. In the case of this study, this finding may be attributed to the fact that the owners of a large number of the investigated SMEs are full-time Omani government employees – hence it would be difficult for the owner-managers to spare the time to engage with their customers on social media platforms owing to their job-related commitments. The significance of a lack of managerial time may also be related to the high level of social and family commitments perceived by SME owner-managers as individuals living in the high-context culture of Oman (Dechant and Lamky, 2005).

The next section continues the discussion of the empirical results, moving on to consider the environment factors.

6.2.3 Environment Context

Three environmental factors (market scope, competitive pressure, and family and friends' support) were found in the study to significantly influence the decision of SMEs to adopt social media. The other two factors in this context – industry type and customer pressure – were not found to be significant. Discussion in relation to each of the variables within this context will now be presented.

The first environmental factor to be considered is industry type. Unlike the adoption of many previous technologies (such as cloud computing and enterprise applications (EAs)) in the SME setting, adoption of social media appears to not be industry-dependant. The findings of this study indicate that the type of industry is not a significant factor in the decision of SMEs to adopt social media. This finding is consistent with Boumediene and Kawalek (2008), who found that industry type did not affect SMEs' willingness to adopt Enterprise Systems (ES), and Nguyen and Waring (2013), who revealed that industry type was not a significant predictor of Customer Relationship Management (CRM) adoption by SMEs. Further support for the finding is offered by Teo (2007), regarding the adoption of internet technologies. In respect of the social media adoption literature, the lack of significance of industry type is supported by Wamba and Edwards (2014), who considered factors influencing the adoption of Twitter by SMEs, and Vlachvei and Notta (2014), who considered factors affecting the adoption of social media among SMEs in Greece.

In the case of the present study, the lack of significance found in relation to market scope, and the lack of any apparent difference between the adopters and non-adopters, may suggest that social media technologies enable all types of industries. The distribution of the study's sample shows that a relatively large percentage was drawn from wholesale and retail, manufacturing, and professional and technical services industries, which are known for having more interest in the adoption of new technologies, perhaps owing to the nature of their business activities and the availability of IT competence (Ramdani and Kawalek, 2007; Levenburg, Magal and Kosalge, 2006; Daniel, Wilson and Myers, 2002). Interestingly, it is often believed that SMEs in the construction industry have been slow to adopt new technologies, but the results of this study indicate that this is not the case. In general, it seems that social media technologies are relevant to industries, and that they could be beneficial to all types of industry, which would suggest that this environmental factor would not affect the adoption of social media by SMEs.

In relation to its impact in the technology adoption in SMEs, market scope, the second environmental factor, shows mixed results in the IT adoption literature. Whilst the literature generally suggests that SMEs which operate in a wide market area are more likely to adopt new technologies than those which serve a narrow market (see, for example, Alshamaila, Papagiannidis and Li (2013); Ramdani and Kawalek (2007)), the findings of some studies show no significant role for this factor on the adoption decision (see, for example, Yeboah-Boateng and Essandoh (2014); Alshamaila (2013); Ramdani, Kawalek *et al.* (2009); Boumediene and Kawalek (2008)).

In this study, market scope was found to be a significant predictor for social media adoption in the sampled SMEs. Specifically, the findings show that SMEs with a narrower scope appear to be more likely to adopt social media than those with a wider scope. The study's finding therefore reinforces those of Isma'ili *et al.* (2016) and Levenburg, Magal and Kosalge (2006). It can therefore be assumed that SMEs with a narrower market scope are more likely to adopt social media technologies than those that serve a wider market scope. However, since only a relatively small number of the investigated SMEs serve both regional (i.e. narrower scope) and international (i.e., wider scope) markets, this result should be interpreted with caution. It is felt that further research is needed to confirm and understand these findings.

One of the most significant environmental factors, which has been shown to be critical for the adoption decision in relation to many IS innovations, is competitive pressure. The results of many previous studies (such as Oliveira, Thomas and Espadanal (2014); Alshamaila, Papagiannidis and Li (2013); Kannabiran and Dharmalingam (2012); Chang *et al.* (2011); Oliveira and Martins (2010); Boumediene and Kawalek (2008); Ramdani and Kawalek (2007); Wymer and Regan (2005); Scupola (2003); Premkumar and

Roberts (1999); and Thong (1999)) have emphasised that the decision process associated with new technology adoption in SMEs is influenced by competitive pressure. However, there are studies (such as those of Ramdani, Kawalek and Lorenzo (2009); Pan and Jang (2008); and Jeon, Han and Lee (2006) that revealed no significance for this factor in predicting the adoption of IS innovations.

In the present study, competitive pressure was not found to be a significant predictor for social media adoption in the sampled SMEs. One possible explanation of the lack of significance of competitive pressure is that, unlike in large enterprises, the focus of many SMEs is to survive in the business environment rather than to grow and compete with large enterprises. Thus, adopting social media may not be perceived by SME owner-managers as a reason for competition, but rather a necessity for survival. Several researchers (see, for example, Wymer and Regan (2005); Diochon and Wright (2003)) have argued that recognising and valuing the strategic importance of new technology by adopters increases as a result of usage. So, social media may not yet be considered by the sampled SMEs as a strategic necessity for competing in the marketplace as the significance of these tools in offering a competitive advantage may still be unclear.

Another possible explanation is that the business environments in which the investigated SMEs operate may not be seen as competitive, meaning that SMEs do not constantly scan or adopt new technologies because of the competitive environment, as in the case reported by Lertwongsatien and Wongpinunwatana (2003). This view is supported by Harindranath, Dyerson and Barnes (2008) and Lee (2004) who argued that SMEs place more emphasis on the outcomes of the adoption than on the competitive power. The insignificance of competitive pressure might also be attributed to the fact that the sampled SMEs were influenced by the 'bandwagon effect' with regards to social media adoption, implying that non-adoption might be simply attributed to following "a wait-and-see attitude", as argued by Pan and Jang (2008).

Moving on to the next environmental factor – customer pressure – the result shows that adopters evidently perceive pressure from customers to be more critical than non-adopters, which indicates the significance of this environmental factor in relation to the adoption of social media. This finding supports those obtained by many researchers (see, for example, Góngora, 2016; Consoli, 2012; Scupola, 2003; Mehrtens, Cragg and Mills, 2001) indicating that SMEs are more likely to adopt new technologies if their customers are users of those technologies, or as a response to satisfy a demand from their customers. It also supports the finding of a study by Durkin, McGowan and McKeown (2013, p.722) who indicated that the decision to adopt social media among Irish SMEs was driven by the level of demand from their customers in the form of "enquiries" or "mentions". There are, though, contradictory findings in this area such as

that of Rahayu and Day (2015) who found that the decisions of Indonesian SMEs to adopt IS innovations were not influenced by the pressure received from customers. The lack of significance of customer pressure in this context might be attributed to customers' behaviour in relation to e-commerce in Indonesia, whereby customers were found only to use the companies' websites to browse the products, but placed their orders using more conventional channels (e.g., telephone or face-to face). As a result, these SMEs did not see customer pressure as influential in extending e-commerce capabilities or adopting sophisticated types of e-commerce technologies.

One possible explanation for the significance of 'customer pressure' in this study is that the sampled SMEs comes from Oman's capital city where many exhibitions are held that offer SMEs the chance to interact with potential customers. In addition, the geographical location from which the sample was taken may contribute to higher levels of customer pressure since the capital is a hub for many universities and colleges. Since the adoption and use of social media among the younger, IT savvy generation is gaining popularity (Martins *et al.*, 2014), they are likely to play a role in demanding that businesses, including SMEs, adopt social media, too. In addition, the significance of customer pressure may be attributed to the nature of the technology, as argued by Martins *et al.* (2014), which is built upon collaborative and 'social' features through which users' develop and maintain relationships. Thus, it is likely that SMEs that receive greater pressure and demand from their customers in this area will tend to be those that adopt social media in their businesses.

The final environmental factor, family and friends' support was found to significantly affect the SMEs' decision to adopt social media. This is in-line with similar studies reported in the literature, such as those of Carter (2014), Omar *et al.* (2012), and Dyerson *et al.* (2008). It also reflects the findings of Simpson and Doherty (2004), who identified that support for the adoption of IS innovations in SMEs could come from knowledgeable friends and family.

This finding also provides support for the observation by Ashrafi and Murtaza (2008) that SMEs' owner-managers in Oman lack strong IT backgrounds to assess the significance of ICT for their businesses. It is possible, therefore, that SME owner-managers seek ICT-related advice and support from friends and family (Harindranath, Dyerson and Barnes, 2008; Gibbs, Sequeira and White, 2007). This view is supported by Al Barwani *et al.* (2014) who reported that 64% of the Omani SME owner-managers use family, friends and relatives as their main sources of advice. There may well be a cultural dimension to this; family ties in Oman are known to be strong, so it is perhaps unsurprising that SMEs'

decisions, including those related to technology adoption, are affected by their social circle.

Having discussed the study's results related to the three TOE contexts, the next section presents a revised version of the TOE model used to predict the adoption of social media by SMEs in Oman.

6.3 Revision of the Research Model

As discussed in section 2.4, the review of the IT adoption literature related to SMEs has identified and explored the influence of a wide spectrum of factors on the adoption of various IT applications. In this tradition, and as a key outcome of this research effort, it is therefore important to identify the factors that have been found in this study to be significant to the adoption of social media in the Omani SME setting.

The schematic representation of this study research design (presented in section 3.4) shows that the study comprised two phases: the qualitative study (phase one) and the quantitative study (phase two). As noted in section 1.6, the aim of the phase one was to explore the factors that affect the decision to adopt social media by conducting semi-structured interviews with a small sample of SME owner-managers. A preliminary model, as shown in Figure 6.1, was developed based on the results presented in section 4.4.3. As Figure 6.1 clearly shows, the preliminary model consists of 18 factors grouped under the three contexts of the TOE framework.

In the phase two of the research, preliminary was tested with a larger sample to provide quantitative evidence of the significance of each of the 18 factors in relation to the adoption of social media technologies by SMEs in Oman. As a result, a revised model (shown in Figure 6.2) of social media adoption by SMEs was developed based on the findings of the LR analysis presented in section 5.5.5. In the revised model, nine TOE factors are identified as having a significant impact on the adoption of social media technologies by SMEs in Oman.

A comparison of Figures 6.1 and 6.2 shows that the results indicate greater importance for technological and environmental factors in the final model, and less importance for organisational factors. This provides support for the argument made in section 1.6 that different technologies are influenced by different factors, with the factors that influence SMEs' adoption of social media seeming to differ from those affecting the adoption of many previously-studied IS innovations.

The revised model of social media adoption supports the importance of five technological factors on the adoption decision: compatibility; trialability; observability; trust; and image. It is worth noting that some researchers found no significance for technological factors; for instance, Thi (2006) reported no importance found for technological factors, with more importance for organisational factors and a notable effect of external factors.

With regards to organisational factors, however, five factors were tested but only one seemed to influence the decision to adopt social media by the sampled SMEs. The model, therefore, has been revised to suggest that aspects of the organisation have less importance on the adoption decision. This stance appears to be different from most of the previous studies on the adoption of various technologies, as indicated in the IT adoption literature (see section 2.4.3) and as re-iterated in the discussion section relating to organisation context in the present study (see section 6.2.2).



Figure 6.1 The Preliminary TOE model for social media adoption in Omani SMEs (originally presented as Figure 4.4, page 104)

Conversely, the revised model shows the importance of the environmental, external, factors on the decision to adopt social media by the SMEs. Here, three factors were found to be significant, whereas two factors were identified as not playing an important

role in the adoption decision. The revised model is, therefore, among the few TOE-based models to support the importance of environmental factors; indeed, some previous studies have suggested no importance for this set of determinants on the adoption of new technologies in the SME setting. For instance, the study of Ramdani, Kawalek and Lorenzo (2009) found that environmental factors had no significant influence on the adoption of enterprise systems (ES) in SMEs.

In broad terms, the research objective of this study was to determine, from the sampled SMEs, the factors influencing the decision to adopt social media. The resulting model could be used to guide SMEs in their adoption of social media technologies by helping them to identify and understand the most influential TOE factors that influence the decision to adopt these emerging technologies. More details of the benefits of the revised model to SMEs are discussed in section 7.4.2 which addresses the research implications of the research for SMEs.

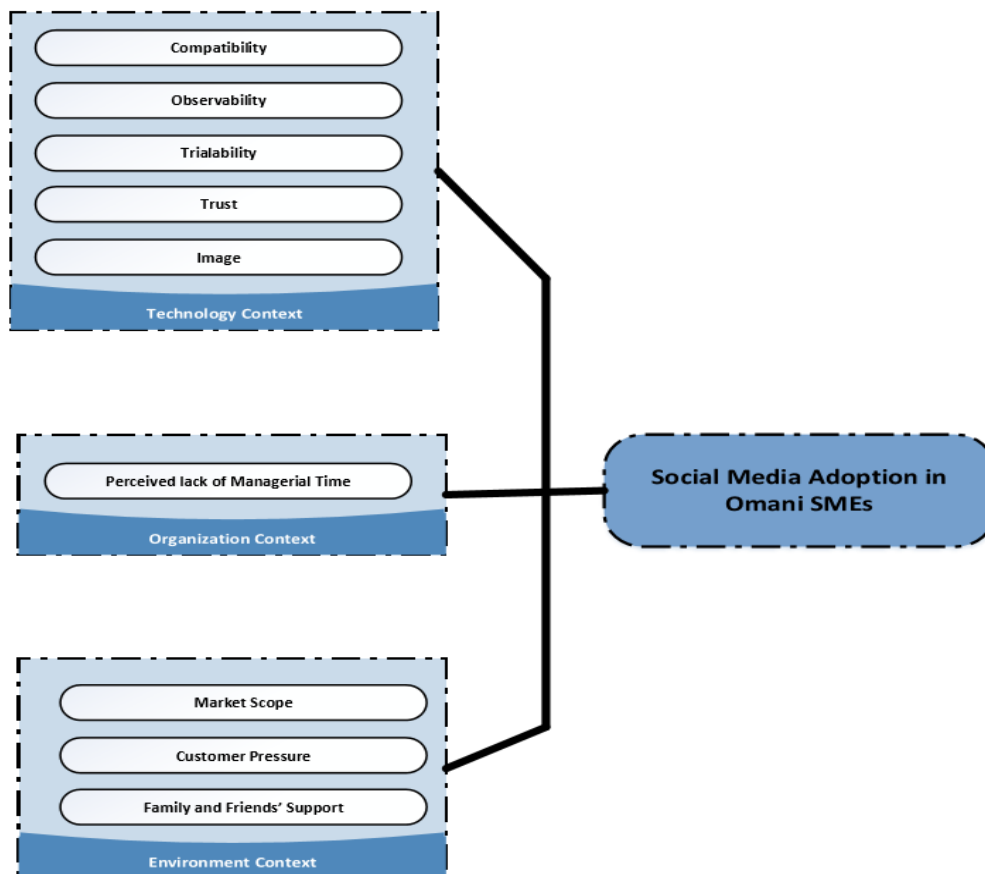


Figure 6.2 The Revised TOE model of social media adoption in Omani SMEs

6.4 Summary

This chapter has discussed the findings related to the factors influencing the decision to adopt social media by Omani SMEs. The discussion of the results indicated the value of using of the TOE framework in studying social media adoption by the investigated SMEs and, more specifically, emphasised the importance of particular technological and environmental factors on the adoption decision. The chapter build on the finding to present a revised version of the research model based on the outcomes from the data analysis presented in chapter 5. The next chapter serves as the conclusion of the thesis, presenting answers to the research questions defined in chapter 1, detailing the research contributions made by the thesis, and discussing implications and limitations of the research, as well as highlighting avenues for future work.

Chapter 7: Conclusion

7.1 Introduction

Chapter 6, thoroughly discussed the findings and results of the phase two of the research quantitative study. In this final chapter, the aim is to present an overall summary of the research effort. The importance of this chapter lies in presenting the contributions of the research; exploring its implications, highlighting its limitations and proposing avenues for future work.

The chapter is divided into five sections. Section 7.2 provides a brief description of the major findings of this research. Section 7.3 elaborates on the theoretical contributions of the research. Section 7.4 aims to explain the contributions to practice by discussing the implications of the research findings to specific groups of stakeholders. This section is therefore divided into three subsections: section 7.4.1 examines implications for academics; section 7.4.2 presents implications for SMEs owner-managers as well as entrepreneurs; and section 7.4.3 briefly discusses the implications of the findings for the policy makers in Oman. This is then followed by section 7.5, which aims to discuss the limitations of the research. Section 7.6, follows on from this, proposing areas for future research. Section 7.7 provides a summary of the chapter and its position in the thesis.

7.2 Summary of Findings

This section presents a summary of the research findings organised in relation to the research questions presented in section 1.6, divided into subsections that address each of the four research questions.

7.2.1 Research Question 1

What is the current adoption status and level of social media use by SMEs in Oman?

The results indicate a good awareness of the significance of social media for SMEs in Oman. Among the 205 SMEs that were included in the sample, about 66% were adopters of at least one social media platform, suggesting that social media is gaining wide acceptance among SMEs in Oman with a reasonably good level of awareness about

the significance and impact of these tools on the SMEs performance. This is supported by the fact that of the 34% of non-adopting SMEs, two-thirds stated that they intended to adopt social media in the foreseeable future.

The results also show that a reasonable number of SMEs have a presence on more than one social media platform/application. The result further shows that social media adoption is evident in Omani SMEs in different sectors.

7.2.2 Research Question 2

What are the main uses and challenges of social media among Omani SMEs?

The main uses of, and challenges or barriers to, social media adoption among SMEs in Oman were also investigated. A list of uses and barriers was identified through the qualitative study (phase one of the research) and was then used to explore the significance of these issues with a large number of respondents in the quantitative phase of the research.

Regarding the main uses of social media applications/platforms by SMEs, the study examined 10 reasons why SMEs use social media applications/platforms. The results suggest that SMEs use social media mainly as a tool for promotion and advertising to create awareness among consumers. In addition, the results show a good level of awareness about the significance of social media “to communicate with customers” as well as “to reach new customers”. Despite the novelty of social media technologies in the business context, interestingly, the results show that a reasonable percentage of Omani SMEs use social media for getting referral (e-word of mouth) (27.4%) and for conducting market research (26.7%).

Of the 11 barriers identified as being faced by SMEs with regards to social media, perceived lack of time was seen by nearly half of the non-adopting SMEs as the main reason hindering their decision to adopt these technologies. In addition, perceived lack of skills and the perception that the enterprise could do well without social media technologies were two further barriers identified by non-adopting SMEs. Fear of receiving negative feedback was also identified as a barrier to adopting social media by SMEs, though with a lower frequency.

7.2.3 Research Question 3

What are the TOE framework factors that influence the adoption of social media among SMEs in Oman?

The study has developed a TOE-based model for social media adoption by Omani SMEs. As noted in section 5.5.2, logistic regression analysis was used to examine the impact of the initially-identified 18 TOE factors (in the qualitative study of this research – see section 4.4) on the adoption of social media technologies by Omani SMEs. The statistical analysis revealed that nine factors were found to significantly impact the adoption decision (see section 6.3). Of the nine, five technology attributes (compatibility, observability, trialability, trust and image) were found to play a significant role in the adoption decision. Lack of managerial time was the only organisational factor that was found to affect SMEs' decisions to adopt social media technologies. In respect of the environmental factors, the study revealed that three factors (market scope, customer pressure, and family and friends' support) were identified as playing an important role in driving SMEs to adopt these technologies. The study found that three technological factors (relative advantage, complexity and interactivity), four organisational factors (size, top management support, CEOs' innovativeness and prior IS experience) and two environmental factors (competitive pressure and industry) were not significant with respect to social media adoption.

7.2.4 Research Question 4

Does the TOE framework appropriately capture the factors affecting social media adoption among SMEs in Oman?

The empirical results of this study support the applicability of the TOE framework in the adoption of social media in Omani SMEs. The results reinforce the importance of the TOE framework as a robust and holistic theory for understanding the adoption of technologies in different organisational and country contexts. The study identified the significance of specific technological, organisational and environmental factors, demonstrating the applicability and usefulness of the TOE framework for studying social media adoption in a developing country context.

Having presented a summary of the research findings against the research questions, the next section discusses the theoretical contributions of the research.

7.3 Theoretical Contributions of The Research

This study offers two broad areas of theoretical contribution: contributions in relation to the TOE model; and contributions in relation to the IT adoption literature. The contributions are discussed in detail in the following subsections.

7.3.1 Contributions in Relation to the TOE Model

This study builds on existing literature in IS innovation adoption in the organisation context which has argued that the adoption of technologies is influenced by various factors. More particularly, the study builds on the technology-organisation-environment (TOE) framework to study factors affecting social media adoption in the organisation context of SMEs. In this respect, this study offers three contributions, associated with: (i) identifying new critical factors; (ii) offering insights into the three contexts of the TOE framework; and (iii) reinforcing, through empirical evidence, the appropriateness of the TOE framework to study ICT adoption. Each of these contributions will now be discussed.

This study contributes to enhancing our understanding about the factors influencing the adoption decision of an emerging technology, social media, in SMEs. In this respect, the study has extended the TOE model by adding five factors identified in the first phase of the research, the qualitative study: trust; interactivity; image; perceived lack of managerial time; and family and friends' support. Apart from interactivity, the other four factors were confirmed, in the subsequent quantitative study, to be significant factors in relation to adopting social media in SMEs (as discussed in section 6.3). It can be therefore said that this study has provided an improved understanding of the factors that influence the adoption of social media in SMEs. More particularly, 'perceived lack of managerial time' and 'friends and family support' had not been identified in the existing IT adoption literature. In this study, these two factors were identified as critical factors for SMEs when considering adopting social media technologies, at least in the context of this study.

Further, the study adds to the existing body of knowledge concerning the adoption of IS innovations in SMEs. It has enhanced our understanding of the importance of the three contexts in the adoption of a specific technology, social media, in the SME organisation context. More specifically, unlike many previous studies, this study has developed a model that takes into account different factors related to the three contexts (see section 6.3). The developed model stresses the importance of environmental factors when studying the adoption of new technologies in developing country contexts, offers insights into the role of organisational factors in the adoption decision, and highlights the significance of technological factors in SMEs' decisions to adopt social media technologies.

The major contribution of this study is developing a statistically-validated TOE model for social media adoption among SMEs in Oman. It has identified the critical TOE factors that lead an SME to become a social media adopter (see section 6.3 for more details on these factors). Overall, this study reinforces the importance of the TOE model as a generic

theory for understanding the adoption of IS innovations in the organisation context. It reinforces the conclusions of many previous studies (such as Alshamaila, 2013; Alshamaila, Papagiannidis and Li, 2013; Oliveira and Martins, 2011; and Ramdani, Kawalek and Lorenzo, 2009) concerning the fact that TOE offers a solid theoretical basis to study the adoption of various IS innovations and has garnered consistent empirical support.

7.3.2 Contribution in relation to the ICT adoption literature

The study has also contributed in three areas to ongoing research on the adoption of IS innovations in SMEs: (i) the specific context of the study – the Omani context; (ii) the developing country context; and (iii) the general IS adoption literature.

In terms of the specific context, this is (to the best of the researcher's knowledge) the first empirical study to examine SMEs' adoption of social media in the Omani context. There have been a few attempts to study the adoption of other technologies in this context, including empirically examinations of internet and website technology adoption (see Al-Gharbi and Ashrafi, 2010; Ashrafi and Murtaza, 2008). However, these studies had limitations. In addition to being descriptive in nature (with no theoretical base used to underpin either study), the studies were limited to a small sample size. Overall, then, the current study contributes to the limited literature on IT adoption by SMEs in Omani, and, we believe, is the first study of social media adoption in the Omani context.

Related to the previous point, this study has also added to the limited body of knowledge on SMEs' adoption of IS innovations in developing countries. In reviewing the IT adoption literature, it was clear there was a lack of empirical research in this context when compared to developing countries (see section 2.4). By studying an IS innovation (social media) in a developing-country context (Oman), this study has added to the limited knowledge of IT adoption in the SME context in developing countries. As such, this study is a response to the calls of many researchers (Rahayu and Day, 2015; Kapurubandara and Lawson, 2006) suggesting the need to advance our understating of IS innovation adoption in SME settings in developing countries.

Finally, the research reported in this thesis has contributed to the general knowledge related to social media adoption in organisational settings. By researching the adoption of these emerging technologies in the SME setting, this study has contributed to the growing body of academic research on social media adoption in organisations.

In the next section, contributions to practice are discussed in more detail, including the implications of the research to academics, SMEs and policy makers.

7.4 Research Implications

The findings of the present study have a number of implications for several groups of stakeholders including: academic researchers; government agencies responsible for the overall development of SMEs, particularly for promoting new technology adoption in these crucial business units; and for the business owner-managers. The next three sections provide a thorough discussion on the implications relevant to each group.

7.4.1 Implications for Academics

The findings of this study are of a great value, and have significant implications to the research community. These implications can be classified into three perspectives: “literature/context related”, “methodology-related” and “model/research-findings”.

From a literature/context-related perspective, this study has several implications. First of all, as has already been stated before, major part of IT adoption literature tend to concentrate mainly on the adoption of sophisticated technologies such as e-commerce and cloud computing, with relatively a small percentage of studies on social media adoption in organisations. In case of the present study, it sought to extend the limited body of academic knowledge in the IT adoption in SMEs, mainly in respect to social media technologies. It can be, therefore, said that this study serves as a starting point for researchers to carry out and continue other social media adoption research, particularly in the developing countries.

In addition, major part of IT adoption studies on SMEs have generally focused on IS innovations adoption in the developed countries. This study extended the knowledge of IT adoption in organisational setting to SMEs in the developing countries. As such, this study would help researchers to gain a better insight into the adoption of new technologies in a less researched context, developing countries.

Besides, the interest and significance of this research is, not only limited to the academics working to understand the adoption in the Omani context, but also useful to those interested to understand the adoption of these technologies in the other parts of the world, including the Gulf Co-operation Council (GCC) region. In fact, this would yield a twofold benefit. First, it would enable the researchers to have a better understanding of social media adoption among SMEs in the GCC region as this group of countries share similar cultural and economic conditions (Akaaboune and Sandra, 2016). Second, it would allow the researchers to compare the adoption trends between developing and developed countries contexts and compare it with the majority of literature that address these issues in many developed countries.

Another implication stemmed from the previous implication for the research community is that this study is one among few studies that empirically test the adoption of social media adoption in the GCC countries and the first to empirically examine the adoption of social media in the Omani SME setting. It is, therefore, a good idea to use this study as a guideline for future studies that aim to study the adoption of these emerging technologies in developing countries, particularly in GCC region.

Furthermore, the review of the prior work in this study has not only attempted to identify factors influencing the adoption of IT applications in the Omani context, as studies related to this context are scarce, but, it has also looked into factors found in the studies that were carried out in both developed and developing countries. Thus, it is hoped that this study will encourage academics in both contexts to explore and understand factors that affect the adoption of various technologies when conducting a research on IS innovations adoption in organisations.

From a methodological perspective, this study has two implications. First, it has successfully used a two-phase research design, sequential exploratory mixed methods approach, to study IS innovations adoption, social media, in an organisation context. It is, therefore, hoped that IS researchers are encouraged to employ various research methods to produce a richer and reliable results (Mingers, 2001) and offer an insightful perspective on social media adoption in organisation context.

The second implication is that, unlike major part of research on IS innovations adoption in SMEs, this study started by exploring the phenomenon of interest, social media adoption, by conducting a qualitative method, semi-structured interviews, which is then followed by quantitative method, survey, to confirm the findings of the qualitative method. In doing so, the researchers would ensure uncovering new issues might not be considered if quantitative method is only used.

From a model/research-findings perspective, this study has also several implications for the research community. First, the empirical findings of this study highlighted the importance of assessing certain environmental factors regarding the adoption decision of new technologies by SMEs, in case of this study SMEs decision to adopt social media technologies. In other words, the findings indicated significant role of customers and, family and friends on the decision to adopt social media. In addition, as could be inferred from the qualitative data, the potential adoption of social media technologies could be influenced by the support received from emerged social media consultancy agencies in the Omani market. Thus, academic researchers may have a stake to examine the impact of such factors (discussed in more details in section 7.6). This is, thereby encouraging

academics, particularly those interested to study the adoption of new technologies in SMEs, to pay attention to the potential impacts of the environmental factors.

Second, the study has also produced a model, which assists in understanding the adoption of social media technologies in the Omani SMEs based on the three contexts of the TOE framework. In this respect, the study reaffirms that applicability of TOE framework to study the IS innovations adoption in organisational setting in developing countries context.

This study has also implications for SMEs as well, which are discussed in the next section.

7.4.2 Implications for SMEs Owner-Managers

The study's empirical findings could also have useful implications for SMEs from four perspectives: general; technological; organisational; and environmental. Each area will now be discussed.

General implications

There are two general implications arising from the empirical findings. The most obvious is the development of a model that can be used by Omani SMEs to evaluate the technological, organisational and environmental conditions under which social media technologies are adopted. SME owner-managers could make use of the TOE-based model developed in this study: (i) to assess the conditions under which social media may be adopted; and (ii) to increase awareness of the different factors influencing the decision to adopt these technologies. The model may also serve as a point of reference for other SMEs that are interested in considering social media adoption in the foreseeable future by raising awareness of which factors influence the adoption of these technologies in the SME setting.

Another important general implication, raised by some of the interviewees in phase one of the research study, is that SMEs should consider adoption of social media at an early stage rather than following a 'wait and see' strategy. Being an early adopter has been suggested to be advantageous in the case of any IS innovation as SMEs will be able to reach customers and expand their market share (Lertwongsatien and Wongpinunwatana, 2003).

Technology implications

This study's findings also have implications in relation to the technology context. In broad terms, the findings highlight the importance of five technology attributes which are significant in relation to the social media adoption decision: compatibility; observability; trialability; image; and trust. For instance, the findings suggest that experience with social media was found to play a significant role and to facilitate adoption within SMEs. SMEs should therefore consider experimenting with different social media platforms to help them understand the potential of social media before making a formal decision to adopt.

Also important is the implication arising from the finding that complexity was not an important technological factor in the sampled SMEs' adoption of social media. As noted earlier (see sections 4.4.3 and 6.2.1), previous technologies were perceived to be complex to adopt and to learn about, but the findings of this study suggest that social media are seen as user-friendly technologies, implying that it is important that SMEs do not see complexity as an obstacle to social media adoption.

Organisation implications

This study has two implications in relation to the empirical findings associated with organisation context. First, the empirical analysis of this study suggests that the size of the enterprise does not prevent SMEs from utilising social media as these technologies do not require high initial investment, which may not be affordable by SMEs, when compared with many previous technologies (e.g., e-commerce and Enterprise Resource Planning (ERP) Systems). This, therefore, implies that SMEs should not perceive "smallness" as an obstacle to adopt social media technologies in their premises.

The second implication is associated with the empirical finding on the importance of lack of managerial time on SMEs' decisions to adopt social media. Here, the results suggested that SMEs should reflect on the fact that lack of managerial time was perceived as being a barrier to adoption. SME owner-managers with a full government job are entitled to a two-years of paid leave to focus on their businesses. This could help SMEs to overcome the perceived lack of time with regards to adopting and using social media and may help SME owner-managers to allocate time to adopt and employ social media to interact with their customers. Another way to support this goal is to assign clear responsibility to a dedicated staff member in the enterprise to manage its social media profiles. Finally, SME owner-managers could seek to identify the optimum time to respond to customers as well as to evaluate the best platforms to use rather than dividing their efforts across different platforms.

Environment implications

The study's findings also highlight the impact of specific environmental factors. From a managerial standpoint, family and friends' support were found to play an important role in the adoption decision, suggesting that SMEs should identify and evaluate the potential of any support from these external sources to assist them in the adoption decision.

It is also imperative for SME owner-managers to respond to demand from their customers. Customers' widespread use of social media appears to be an important indication of the readiness of this important segment to interact with SMEs via social media platforms. Customers should be seen as important actors that drive SMEs to adopt social media platforms. This suggests that pressure received from customers may drive the adoption of social media technologies and that SMEs should therefore recognise the power of interacting with customers, as suggested by Chatzithomas *et al.* (2014).

Another implication arising from the environment perspective is the influence of the industry in the adoption decision. Since the analysis of the results showed no difference between SMEs belonging to different industries with regards to the adoption of social media, SME owner-managers should realise that these platforms are not specific to certain industries. Rather, they are useful to different types of industry, implying that SMEs should not perceive the type of the industry in which they operate as an obstacle to adopting social media technologies.

The empirical findings related to the environment context also indicate that market scope is an important predictor of social media adoption by SMEs. This finding suggests that SMEs that operate only within their country are more likely to adopt these technologies in their enterprises, which was not the case with many previous technologies where a narrow business scope was found to limit adoption in small businesses. Accordingly, SME owner-managers should not perceive a narrow business scope as an obstacle to the adoption of social media technologies.

Having considered the implications of the study's finding to SMEs, the next section presents implications for policy makers.

7.4.3 Implications for Policy Makers

As noted in section 4.3.1, PASMED is the main government player/policy maker responsible for the development of SMEs in Oman. One of its objectives, objective 6, made clear the responsibility of PASMED to support innovation and the use of modern

technologies among Omani SMEs (PASMED, 2016). In line with this objective, and given the implications of the study's findings, it is important for PASMED to benefit from the findings of this study to promote and enhance the adoption of social media among SMEs in Oman. The implications related to policy makers can be seen from two perspectives: general and specific. Within each, several implications may be identified.

General implications

General implications are those broadly associated with the findings related to the research model and the descriptive analysis (presented in section 5.5.4). The most significant implication in this category is associated with the development of a robust TOE-based model of factors influencing social media adoption among Omani SMEs. In particular, this model has made clear the influence of nine technological (compatibility, observability, trialability, trust and image), organisational (lack of managerial time) and environmental (market scope, customers pressure and family and friends' support) factors on the decision to adopt these technologies. The model can help PASMED to formulate strategies to increase its understanding of why some SMEs in the Omani private sector adopt social media while others with similar characteristics, operating in the same market and facing similar market conditions do not/have not yet.

In addition, the descriptive analysis of this study has shown that most the sampled Omani SMEs, regardless of their corresponding industry sector and business size, are either adopters of social media or have the intention to adopt in the foreseeable future. If PASMED were to make use of this finding to promote social media adoption, it could help to increase the use of social media in Omani SMEs and put other SMEs in a better position effectively to adopt these technologies.

Also, the study identified issues that owner-managers of non-adopting SMEs perceived as hindering their decision to adopt social media technologies, including a lack of time and a lack of required skills. By being aware of these barriers, PASMED and other government agencies should be in a good position to help SMEs to overcome them. For example, lack of time to invest in social media was perceived by some SME owner-managers in the study as the major barrier to adopting social media, so efforts should be made to limit its impact by providing corresponding support (details are given in the specific implications section that follows).

In addition, in terms of addressing perceived skills gaps, PASMED could coordinate and develop partnerships with the emerging social media consultancy agencies to accelerate the adoption of social media among SMEs and develop strategies for applying best practices with regards to social media adoption.

Another important issue for policy makers is the finding of significant differences between SMEs in terms of the types of social media platform that they use. This observation appears to be useful to accelerate SMEs' adoption of particular social media platforms. For instance, the descriptive analysis (see section 5.5.4) indicates that SMEs owned/managed by females seem to be more likely to use Instagram in their businesses than other platforms. Knowing this may help to accelerate the adoption of social media among female-owned businesses by introducing them to, and encouraging uptake of, this specific application.

Specific implications

Specific implications are those that stem from specific TOE factors examined in the study. The first is that the empirical findings suggest that SMEs (both adopters and non-adopters) seem to lack awareness of the business benefits of social media. PASMED should seek to address this as it might have a positive effect on adoption rates. PASMED could offer workshops, organise symposia and conduct training sessions dedicated to SMEs owner-managers to create higher levels of awareness in relation to the important issues that influence social media adoption. Such actions have been argued to be key to diffusing ICT innovations among SMEs (Kapurubandara and Lawson, 2006).

The findings of this study also indicate that lack of managerial time is a significant factor associated with lack of social media adoption by SMEs. This finding highlights the need to provide training and support in time management to help SME owner-managers. PASMED might also seek to formulate a strategy that makes use of the 2013 Government decision allowing full-time government employees to take two-years of paid leave to focus on their businesses.

Observability was also found to be significant to the adoption of social media in the sampled SMEs. An implication of this finding, which could be included as part of PASMED's social media strategy, is that it would be helpful to share with SMEs (both adopters and non-adopters) cases from successful adopters so that SME owner-managers may reflect on the impact of adopting social media tools and improve their awareness of the benefits of these technologies for SMEs. In addition, this would help to provide relevant and important information about social media technologies and their significance for SMEs. As a consequence, competition between SMEs to adopt and effectively engage via social media may be enhanced.

The results of the study also indicate that trust is an important issue; this has significant implications for policy makers. Efforts should be made to enhance trust and raise awareness about the efforts made by social media service providers to improve this

issue. It is expected that this would help to encourage adopters to go beyond their current use of social media (e.g., promotion and advertising, communicating and reaching new customers) to other areas where trust is critical, such as accepting online payments. In addition, this finding suggests that there is a need to raise awareness about laws that are relevant to transacting business in the online environment. In addition to the role that should be played by PASMED in creating the required awareness among SMEs, other government organisations (such as the Information Technology Authority (ITA)) should sponsor training sessions and launch campaigns directed towards improving SMEs' knowledge about the existing legal framework covering cybercrimes and data protection in the online environment. There may also be a need to revisit existing legislation in these areas.

In addition, other TOE factors (compatibility, trialability, image, market scope, customers' pressure and family and friends support) are important factors to facilitate the adoption of social media by SMEs; PASMED may well wish to clarify issues related to this factors as this would certainly help to increase the adoption.

Having discussed the implications of this research for different stakeholders, the following section presents its limitations.

7.5 Limitations of the Research

This study has attempted to advance our knowledge of the factors influencing the adoption decision of social media among SMEs in Oman. The study has successfully achieved its aims and objectives and answered the research questions that were identified in section 1.5. However, it is important to interpret the findings in light of the study's limitations, which will be discussed in this section. In total, nine limitations have been identified in the present study. For the sake of clarity and ease of discussion, the limitations are grouped and structured around three themes: methodological; contextual/focus-related; and general limitations. The subsequent paragraphs present the limitations related to each theme in more detail.

7.5.1 Methodological limitations

There are three limitations that are relevant to this theme. The first limitation concerns the selection of the sample frame for the second phase of this research. As noted in section 5.4.1, the likelihood of including cases that are representative of the whole population was not known. However, efforts were made to ensure a careful assessment of the study's sample (as extensively discussed in section 5.4.1).

The second limitation under this theme is related to the types of relationship examined between the factors in the present study. Although this study aims to indicate the relative significance of each independent variable included in the research model in relation to the dependent variable (see objectives 4 and 5 in section 1.5), assessing the intra-relationships among the independent variables was outside the scope of this study. Rather, the study sought to explore the relationships between the factors related to the three contexts (Technology, Organisation and Environment – TOE) on the dependent variable (adoption of social media). The impact of the TOE factors on each other within the same context or with factors contained within other contexts was not, therefore, not considered in this study. For instance, in the current study, the impact of the complexity (a technological factor) of social media technologies on their trialability (a technological factor) in the SME setting was not considered. Similarly, the effect of family and friends' support (an environmental/external factor) on the trialability (a technological factor) of social media adoption by SMEs was not considered. While it is the norm for studies that make use of the TOE framework to take the approach used in this study, considering only the impact of the independent variables (TOE factors) on the dependent variable (decision to adopt/not to adopt), some researchers, such as Ramdani, Lorenzo and Kawalek (2009), have called for future research to explore the intra-relationships among the independent variables. This is an issue that will be returned to in section 7.6.

The third limitation of note under the methodological theme is that this study only focused on factors that influence the adoption decision of social media and not its subsequent implementation. This is because it was felt that it was imperative first to understand issues related to adoption, prior to understanding determinants related to implementation. In addition, as noted in section 2.5, little research has been undertaken in relation to social media adoption in SMEs, making it important to study this area empirically.

7.5.2 Context/focus-related Limitations

Four limitations were identified under this theme. The first limitation is that this study used a sample with a possible geographical bias as it focused on SMEs located in one geographical area of Oman, the Muscat Governorate, Oman's capital city; this introduces difficulties in generalizing the results to other SMEs in the remaining governorates and regions of Oman. The decision to confine the sample of SMEs to one geographical area was taken because fewer details were available with respect to SMEs in the other geographical areas of the country. This was as a result of a lack of local databases containing SMEs' information (Neelufer and Al Amri, 2014), which in turn may be attributed to the fact that the authority in charge of SMEs in Oman has only recently been launched. Nevertheless, considering the similar cultural and economic conditions faced

by SMEs throughout the country, it is believed that the impact of restricting the choice of the investigated SMEs to only those located in the capital was limited.

The second limitation associated with this theme is that the scope of the study was limited to SMEs in Oman, as a developing country context, which means that caution should be exercised in generalizing the results to SMEs in the other developing countries, including the neighbouring Gulf Cooperation Council (GCC) countries, which share similar economic and cultural conditions. The findings may, though, provide a useful starting point for exploring social media adoption in these countries given the similarities in context.

The third context/focus-related limitation is that this study considered the adoption of social media in several industries rather than confining the research to a single industry sector. Although studying adoption in different industries could cause issues of generalizability, it is believed that taking this approach enabled the researcher to gain a holistic perspective with respect to adoption in various industries as well as to reduce the bias of limiting the study to one industry. In doing so, this study offers an initial step towards understanding social media adoption in a single industry context that could be taken forward in future work. It is widely recognised that each industry has its own characteristics and requirements which make them unique with respect to various issues, including adoption. In particular, it has been argued that certain social media platforms/applications are, to some extent, sector-dependent. For instance, Instagram was found to be more relevant and useful in the fashion industry (Cestyakara and Surendro, 2014) which, to a certain degree, supports some of the indications by participants in phase one of this research.

The fourth limitation in this theme is related to the choice of social media platforms/applications included in the study. This study considered the adoption of social media applications in general, rather than studying a single platform, such as Facebook, Twitter or Instagram. At the outset, and owing to the lack of studies and information on the common social media platforms with which businesses engage, a set of platforms/applications were identified in the first phase of research. Thus, in the second phase of this research these identified platforms/applications were included to ensure wide participation as this study included SMEs across several industries. In its findings,

the study does not, therefore, differentiate the factors that influence the adoption of each of these platforms/applications.

7.5.3 General Limitations

Finally, two general limitations were identified. The first limitation is that, in both phases of the present research, data were collected from a single source for each SME, the SME owner-manager, as he/she represented the key decision maker in the enterprise. This approach to data collection is the common practice in the majority of the IT adoption literature addressing SMEs. As noted in sections 4.4.1 and 6.2.2, SME owner-managers were chosen as the primary source of data collection owing to their dominant role with regards to the adoption of IT in their enterprises. However, the reliance on a single source of information may lead to some factors not being raised and thus their impact being not considered. Taking into account the view of additional 'actors' with the enterprises may have raised others issues and provided further information that might, in turn, have provide other insights into the adoption issues.

The second general limitation is related to the lack of direct consideration of socio-cultural issues in this study. Although efforts were made to drawn on relevant socio-cultural issues related to the Omani context in interpreting the results (as discussed in sections 6.2.1, 6.2.2 and 6.2.3), the impact of cultural factors was not explicitly considered in this study. The results of this study suggest that further consideration should be given to the cultural characteristics prevailing in Oman to further develop the picture of their potential impact on social media adoption.

The third general limitation is related to the approach used in this study, which may restrict the findings of the study in relation to the TOE framework. Using a purely inductive approach, using grounded theory (Strauss and Corbin, 1990), may offer insights into the impact of the context of the study, Oman, and the type of technology, social media, that were considered in this study. Given the limitations of the adopted approach, the TOE-based model presented in this study may be criticised as the factors identified in the model may well be context-dependant or technology-related, making it difficult to identify the specific impact(s) of the context or technology on the study's findings. In other words, the model may be specific to the Omani context, or it could be that some of the factors may be influenced by the type of the technology considered in this study. As such, further research would be needed to develop a better understanding of these issues. This is considered further in section 7.6.3, which considers area for future research.

Having identified the key limitations of the work, recommendations for future research including those to address the identified limitations, are discussed in the next section.

7.6 Directions for Future Research

While this study has met the aim and objectives initially set out in section 1.5, there is a need for further empirical research to build on the research findings and to address the limitations identified in section 7.5. To better understand the directions for future research, the suggested areas are classified into three key areas, which will be discussed in the remainder of this section: generalizability and replicability; focus/scope; and other avenues. Within these areas, 10 specific strands of future research are detailed.

7.6.1 Generalizability and replicability

There are four strands of future research which would enhance the generalizability and increase replicability of the research findings presented in this thesis. The first strand concerns the replication of the study in other parts of Oman. Given that the research has examined the adoption of social media among SMEs in only one region in Oman, future research is needed to replicate the study in other regions of the country to help to assess the generalizability of the results and to understand potential differences between SMEs in rural and urban areas.

The second strands of future research in this area would be to carry out cross-national/cross-regional studies. Conducting cross-national/cross-regional studies would deepen our knowledge about adoption in SME settings, offering opportunities to more deeply consider the role of cultural differences in adoption decisions. Further studies that compare SMEs in developed and developing countries may also reveal different adoption behaviours.

The third strands of future research in this area would be to aim to replicate this study in large-sized enterprises (LEs), using the same theoretical lens and methodology that was employed in the study reported in this thesis, in order to seek useful insights into differences across organisations of varying size.

Finally, as the results of this study appear to contradict previous research, identifying SMEs as regarding technological and environmental factors as being more important than organisational factors, a final direction for future research would be to investigate whether this trend continues or changes over time.

7.6.2 Focus/scope

Three strands of future research arising from this study have been identified to address issues related to its limited scope with regards to the examined stage of adoption,

explored industries and the interrelationship between the included factors. The first strand would focus move on from looking at the pre-adoption phase, seeking a more holistic view of adoption issues by exploring the post-adoption phase.

The second strand of future research arising from the current study's scope/focus is related to the sector under consideration. It would be interesting to repeat the study in order to examine the adoption of social media in a single industry sector (e.g., manufacturing, wholesale and retail, or tourism). The aim would be to gain deeper insights into the industry-specific factors that influence the decision to adopt social media (Osman *et al.*, 2016).

The third strand of future study in this area would focus on exploring the interaction/interrelationship between the independent variables to examine the influence of each variable on the others. It would also be useful to understand how the factors related to one context interact with factors from other contexts, and also to examine the effect on factors within the same context (for example, the impact of complexity on the level of trust or the effect of trialability on complexity). To this end, future research could use structural equation modelling (SEM) (Riemenschneider, Harrison and Mykytyn, 2003) to explore interactions between TOE factors.

7.6.3 Other avenues

This section detail three further topics that seem fruitful areas for future research. These topics includes further research to consider the wider views of various stakeholders and to emphasise the potential role of social media consultancy agencies.

The first strand would be to widen the range of individuals within the SMEs who provided input to the empirical work. This study was limited to the views of one person in each enterprise, the owner-manager. Future research could seek the views of other stakeholders, including employees, suppliers, customers and government units in charge of innovation adoption. This may offer deeper insights into the factors affecting social media adoption and lead to an improved understanding of the adoption decision in SMEs.

As indicated in the discussion of the findings from the qualitative phase of this study (see section 4.4.3), a new form of business, providing social media consultancy services, has

emerged in recent years. A strand of research addressing the role of these companies in the adoption and subsequent use of social media by SMEs may also be worthwhile.

Having noted that the TOE-based model developed in this study may have been impacted by the context in which the study took place, as well as being influenced by the technology considered, future studies may be needed to gain a better understanding of these impacts and influences. For example, studies using an alternative approach, such as grounded theory, may provide further insights into the impact of the context and provide further opportunities to understand the influences of social media.

The final suggested strand of future research would be to explore the potential impact of socio-cultural factors and cultural dimensions on social media adoption by SMEs (drawing on Hofstede's cultural dimensions, for instance) to further enrich our understanding of the area.

7.7 Summary

This study has contributed to the understanding as well as to the limited knowledge on social media adoption, as it has examined the adoption of these technologies using a mixed method approach, in a highly important type of businesses, SMEs, in a context with limited studies, namely developing countries context.

This study has employed a mixed method approach in order to have a better understanding of the technological, organisational and environmental factors that influence the adoption of social media by SMEs. As these new technologies are gaining popularity and wide acceptance among businesses, it is believed the research into the adoption and implementation of these technologies will become increasingly important. It can be said, therefore, that this study is a step in that direction as it had an exploratory objective to generate a comprehensive picture about social media adoption among SMEs in Oman.

References

- A. Hajiha and L. Hajihashemi (2008) 'Understanding electronic commerce adoption decision in Iranian small and medium enterprises: Integrating current theories', *2008 IEEE International Engineering Management Conference*, 1-5.
- Abdullah, N.H., Shamsuddin, A., Wahab, E. and Hamid, N.A. (2012) 'Preliminary qualitative findings on technology adoption of Malaysian SMEs', *Humanities, Science and Engineering (CHUSER), 2012 IEEE Colloquium on. IEEE*, 15-20.
- Abdullah, N.H., Wahab, E. and Shamsuddin, A. (2013) 'Exploring the Common Technology Adoption Enablers among Malaysian SMEs: Qualitative Findings', *Journal of Management and Sustainability*, 3(4), pp. 78.
- Abeysinghe, G. and Alsobhi, A.Y. (2013) 'Social media readiness in small businesses', *Proceedings of the International Conference Information Systems*, 267-272.
- About WhatsApp (2015) WhatsApp. <https://www.whatsapp.com/about/>. Accessed 25 November 2015
- Agarwal, R. and Prasad, J. (1999) 'Are individual differences germane to the acceptance of new information technologies?', *Decision sciences*, 30(2), pp. 361-391.
- Agarwal, R. and Prasad, J. (1998) 'A conceptual and operational definition of personal innovativeness in the domain of information technology', *Information systems research*, 9(2), pp. 204-215.
- Ainin, S., Parveen, F., Moghavvemi, S., Noor, I.J. and Nor Liyana, M.S. (2015) 'Factors influencing the use of social media by SMEs and its performance outcomes', *Industr Mngmnt & Data Systems*, 115(3), pp. 570-588.
- Al Barwani, K.M., Al Jahwari, M.R., Al Saidi, A.S. and Al Mahrouqi, F.S. (2014) 'Towards a Growing, Competitive and Dynamic Small and Medium-Sized Enterprises Sector in Oman: Strategy and Policies', .
- Al Musawi, A. and Akinyemi, A. (2002) 'Issues and prospects of e-learning in Oman', *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications*.
- Al Nahian Riyadh, M., Akter, S. and Islam, N. (2009) 'The adoption of e-banking in developing countries: A theoretical model for SMEs', *International review of business research papers*, 5(6), pp. 212-230.
- Alam, S.S. and Noor, M.K.M. (2009) 'ICT adoption in small and medium enterprises: An empirical evidence of service sectors in Malaysia', *International Journal of Business and Management*, 4(2), pp. P112.
- Albaili, M.A. (1995) 'An Arabic version of the study process questionnaire: reliability and validity', *Psychological reports*, 77(3 suppl), pp. 1083-1089.
- Al-Balushi, R.A. and Anderson, A.R. 'Entrepreneurship in Oman; policies and practices', *The 8th International Conference for Entrepreneurship, Innovation and Regional Development*. Citeseer, 554.
- Al-Gahtani, S.S. (2003) 'Computer technology adoption in Saudi Arabia: Correlates of perceived innovation attributes', *Information Technology for Development*, 10(1), pp. 57-69.
- Al-Ghamdi, A.S. (2002) 'Using logistic regression to estimate the influence of accident factors on accident severity', *Accident Analysis & Prevention*, 34(6), pp. 729-741.
- AlGhamdi, R., Drew, S. and Al-Ghaith, W. (2011) 'Factors influencing e-commerce adoption by retailers in Saudi-Arabia: A qualitative analysis', *The Electronic Journal of Information Systems in Developing Countries*, 47.
- AlGhamdi, R., Nguyen, J., Nguyen, A. and Drew, S. (2012) 'Factors Influencing e-commerce Adoption by Retailers in Saudi Arabia: A quantitative analysis', *International Journal of Electronic Commerce Studies*, .

References

- Al-Gharbi, K. and Ashrafi, R. (2010) 'Factors Contribute To Slow Internet Adoption in Omani Private Sector Organizations', *Communications of the IBIMA*, 2010, pp. 1-10.
- Al-Hajri, S. and Tatnall, A. (2007) 'Inhibitors and enablers to internet banking in Oman-a comparison with banks in Australia', *International Review of Business Research Papers*, 3(5), pp. 36-43.
- Alhojailan, M.I. (2012) 'Thematic analysis: A critical review of its process and evaluation', *West East Journal of Social Sciences*, 1(1), pp. 39-47.
- Alkalbani, S., Rezgui, Y., Vorakulpipat, C. and Wilson, I.E. (2013) 'ICT adoption and diffusion in the construction industry of a developing economy: The case of the sultanate of Oman', *Architectural Engineering and Design Management*, 9(1), pp. 62-75.
- Al-Kharusi, Abdulaziz .2003. "Financing small business in Oman" (PhD, Thesis) Loughborough University.
- Allart, H. (2015) 'Adoption Factors and Implementation Strategies of on-Premise and Cloud Based ERP Systems by SMEs in Thailand', *ASEAN Journal of Management & Innovation*, 1(2).
- Allen, I.E. and Seaman, C.A. (2007) 'Likert scales and data analyses', *Quality Progress*, 40(7), pp. 64.
- Allison, P.D. (2012) *Logistic regression using SAS: Theory and application*. SAS Institute.
- Al-Mukhaini, E.M., Al-Qayoudhi, W.S. and Al-Badi, A.H. (2014) 'Adoption of social networking in education: A study of the use of social networks by higher education students in Oman', *Journal of International Education Research*, 10(2), pp. 143.
- Alqahtani, S. and Fosso Wamba, S. (2012) 'Exploring Technological-Organizational and Environmental Characteristics Related to RFID Adoption Intention in the Saudi Arabia's Retail Industry', *IEEE International Conference on RFID-Technology and Applications, Nice, France*.
- Al-Qirim, N. (2007a) 'E-Commerce Adoption in Small Businesses: Cases from New Zealand', *Journal of Information Technology Case and Application Research*, 9(2), pp. 28-57.
- Al-Qirim, N. (2007b) 'An empirical investigation of a usage model of e-commerce technologies in small businesses in New Zealand: theory extension and implications', *International journal of electronic business*, 5(1), pp. 42-64.
- Al-Qirim, N. (2006) 'Personas of e-commerce adoption in small businesses in New Zealand', *Journal of Electronic Commerce in Organizations*, 4(3), pp. 18.
- Al-Qirim, N.A. (2004) 'A framework for electronic commerce research in small to medium-sized enterprises', *Electronic Commerce in Small to Medium-Sized Enterprise: Frameworks, Issue and Implications*, .
- Al-Qirim, N. (2007c) 'The adoption of eCommerce communications and applications technologies in small businesses in New Zealand', *Electronic Commerce Research and Applications*, 6(4), pp. 462-473.
- Alsanea, M., 2015. Factors Affecting the Adoption of Cloud Computing in Saudi Arabia's Government Sector (Doctoral dissertation, University of London).
- Al-Senaidi, S., Lin, L. and Poirot, J. (2009) 'Barriers to adopting technology for teaching and learning in Oman', *Computers & Education*, 53(3), pp. 575-590.
- Alshamaila, Y.Y. (2013) 'An empirical investigation of factors affecting cloud computing adoption among SMEs in the North East of England', .
- Alshamaila, Y., Papagiannidis, S. and Li, F. (2013) 'Cloud computing adoption by SMEs in the north east of England: A multi-perspective framework', *Journal of Enterprise Information Management*, 26(3), pp. 250-275.
- Alshamaila, Y., Papagiannidis, S. and Stamati, T. (2013) 'Cloud computing adoption in Greece', *Proceedings of UK Academy for Information Systems Conference*, ., 1-17.

References

- Alshamaila, Y., Papagiannidis, S. and Li, F. (2012) 'Cloud computing adoption: An exploratory study', *8th International Conference on Web Information Systems and Technologies, WEBIST 2012*. Porto, 18 April 2012 through 21 April 2012. , 518-524.
- Al-Shanfari, D.A. (2012) 'Entrepreneurship in Oman: A snapshot of the main challenges', Proceedings of the United Nations conference on trade and development: Multi-year expert meeting on enterprise development policies and capacity-building in science, technology and innovation (STI)(fourth session), Geneva, Switzerland: Geneva.
- AlShihi, H. (2006) *Critical Factors in the Adoption and Diffusion of E-government Initiatives in Oman*, .
- Al-Somali, S.A., Gholami, R. and Clegg, B. (2013) 'An investigation into the adoption of electronic commerce among Saudi Arabian SMEs', *E-Commerce for Organizational Development and Competitive Advantage*, , pp. 126.
- Al-Subaihi, A.A. (2008) 'Comparison of web and telephone survey response rates in Saudi Arabia', *The Electronic Journal of Business Research Methods*, 6(2), pp. 123-132.
- Alton Y.K Chua and Banerjee, S. (2013) 'Customer knowledge management via social media: the case of Starbucksnull', *J of Knowledge Management*, 17(2), pp. 237-249.
- Al-Wohaibi, M.A., Masoud, F.A. and Edwards, H.M. (2002) 'Fundamental risk factors in deploying IT/IS projects in Omani government organisations', *Journal of Global Information Management*, 10(4), pp. 1-22.
- Anamuah-Mensah, E. and Marfo, G. (2009) 'E-business adoption in the banking industry in Ghana', .
- Andersen, P. (2007) *What is Web 2.0?: ideas, technologies and implications for education*. JISC Bristol, UK.
- Andreadis, I. (2015) 'Web Surveys Optimized for Smartphones: Are there Differences Between Computer and Smartphone Users?', *The Collection of Survey Data using Mixed Devices*, , pp. 213.
- Andres, L. (2012) *Designing and doing survey research*. Sage.
- Andrews, D., Nonnecke, B. and Preece, J. (2003) 'Electronic survey methodology: A case study in reaching hard-to-involve Internet users', *International Journal of Human-Computer Interaction*, 16(2), pp. 185-210.
- Andriole, S.J. (2010) 'Business impact of Web 2.0 technologies', *Communications of the ACM*, 53(12), pp. 67-79.
- Andzulis, J., Panagopoulos, N.G. and Rapp, A. (2012) 'A review of social media and implications for the sales process', *Journal of Personal Selling & Sales Management*, 32(3), pp. 305-316.
- Aral, S., Dellarocas, C. and Godes, D. (2013) 'Introduction to the Special Issue—Social Media and Business Transformation: A Framework for Research', *Information Systems Research*, 24(1), pp. 3-13.
- Archer, K.J. and Lemeshow, S. (2006) 'Goodness-of-fit test for a logistic regression model fitted using survey sample data', *Stata Journal*, 6(1), pp. 97-105.
- Aronson, J. (1995) 'A pragmatic view of thematic analysis', *The qualitative report*, 2(1), pp. 1-3.
- Ashrafi, R. and Murtaza, M. (2010) 'ICT adoption in SME in an Arab GCC Country Oman', *E-strategies for Resource Management Systems: Planning and Implementation*, , pp. 371-376.
- Ashrafi, R. and Murtaza, M. (2008) 'Usages and effects of information and communication technologies on small and medium sized enterprises in Oman', *CONF-IRM 2008 Proceedings*, , 60.
- Ashrafi, R. and Murtaza, M. (2008) 'Use and Impact of ICT on SMEs in Oman', *The electronic journal of information systems evaluation*, 11(3), pp. 125-138.
- Attride-Stirling, J. (2001) 'Thematic networks: an analytic tool for qualitative research', *Qualitative research*, 1(3), pp. 385-405.

References

- Avison, D. and Elliot, S. (2006) 'Scoping the discipline of information systems', *Information Systems: The State of the Field*, , pp. 3-18.
- Azam, M. and Quaddus, M. (2009) 'Adoption of e-commerce by the SMEs in Bangladesh: the effects of innovation characteristics and perceived risk', *Proceedings of the Australian and New Zealand Marketing Academy Conference (ANZMAC)*.
- Babbie, E.R. (2013) *The basics of social research*. Cengage Learning.
- Bahaddad, A.A., AlGhamdi, R. and Houghton, L. (2012) 'To What Extent Would E-mail Enable SMEs to Adopt E-Commerce?', *arXiv preprint arXiv:1211.2402*, .
- Baker, J. (2012) 'The technology–organization–environment framework', in *Information systems theory*. Springer, pp. 231-245.
- Bakla, A., Çekiç, A. and Köksal, O. (2013) 'Web-based surveys in educational research', *International Journal of Academic Research*, 5(1), pp. 5-13.
- Ball, L. (2011) 'Small Business and Social Media', *Air Conditioning, Heating & Refrigeration News*, 242(13), pp. 11.
- Baltar, F. and Brunet, I. (2012) 'Social research 2.0: virtual snowball sampling method using Facebook', *Internet Research*, 22(1), pp. 57-74.
- Barba-Sánchez, V., Martínez-Ruiz, M.d.P. and Jiménez-Zarco, A. (2007) 'Drivers, benefits and challenges of ICT adoption by small and medium sized enterprises (SMEs): A literature review', *Problems and Perspectives in Management*, 5(1), pp. 104-115.
- Barlett, J.E., Kotlik, J.W. and Higgins, C.C. (2001) 'Organizational research: Determining appropriate sample size in survey research', *Information technology, learning, and performance journal*, 19(1), pp. 43.
- Barnes, D., Clear, F., Dyerson, R., Harindranath, G., Harris, L. and Rae, A. (2012) 'Web 2.0 and micro-businesses: an exploratory investigation', *Journal of Small Business and Enterprise Development*, 19(4), pp. 687-711.
- Bass, F.M. (1969) 'A new product growth model for consumer durables. Management Sci. 15 215-227.. 1980. The relationship between diffusion rates, experience curves, and demand elasticities for consumer durable technological innovations', *J.Bus*, 53, pp. 51-67.
- Bayo-Moriones, A., Billón, M. and Lera-López, F. (2013) 'Perceived performance effects of ICT in manufacturing SMEs', *Industrial Management & Data Systems*, 113(1), pp. 117-135.
- Bazeley, P. (2004) 'Issues in mixing qualitative and quantitative approaches to research', *Applying qualitative methods to marketing management research*, , pp. 141-156.
- Beck, T. and Demircuc-Kunt, A. (2006) 'Small and medium-size enterprises: Access to finance as a growth constraint', *Journal of Banking & Finance*, 30(11), pp. 2931-2943.
- Beier, M. and Wagner, K. (2014) 'Individual and Corporate Decisions to Adopt Social Media: Perception of Risks and Benefits in Small Firms', *Available at SSRN 2384900*, .
- Bell, J. (2014) *Doing Your Research Project: A guide for first-time researchers*. McGraw-Hill Education (UK).
- Belwal, S., Belwal, R. and Al Saidi, F. (2014) 'Characteristics, Motivations, and Challenges of Women Entrepreneurs in Oman's Al-Dhahira Region', *JMEWS: Journal of Middle East Women's Studies*, 10(2), pp. 135-151.
- Benbasat, I., Goldstein, D.K. and Mead, M. (1987) 'The Case Research Strategy in Studies of Information Systems', *MIS Quarterly*, 11(3), pp. 369-386.
- Bertram, D. (2007) 'Likert scales', *Retrieved November, 2*, pp. 2013.

References

- Bewick, V., Cheek, L. and Ball, J. (2005) 'Statistics review 14: Logistic regression', *Critical Care*, 9(1), pp. 1.
- Bharati, P. and Chaudhury, A. (2015) 'SMEs and competitiveness: the role of information systems', *Bharati, P. and Chaudhury, A. (2009), "SMEs and Competitiveness: The Role of Information Systems", International Journal of E-Business Research*, 5(1).
- Bharati, P. and Chaudhury, A. (2006) 'Studying the current status: Examining the extent and nature of adoption of technologies by micro, small and medium sized manufacturing firms in the greater Boston area', *Communications of the ACM*, 49(10), pp. 88-93.
- Biernacki, P. and Waldorf, D. (1981) 'Snowball sampling: Problems and techniques of chain referral sampling', *Sociological methods & research*, 10(2), pp. 141-163.
- Blair, J., Czaja, R.F. and Blair, E.A. (2013) *Designing surveys: A guide to decisions and procedures*. Sage Publications.
- Blandford, A. (2013) 'Semi-structured qualitative studies', .
- Boumediene, R. and Kawalek, P. (2008) 'Predicting SMEs Willingness to Adopt ERP, CRM, SCM & E-Procurement Systems', *ECIS 2008 Proceedings, Paper*, 115, pp. 214-227.
- Boyatzis, R.E. (1998) *Transforming qualitative information: Thematic analysis and code development*. Sage.
- Boynton, P.M. and Greenhalgh, T. (2004) 'Selecting, designing, and developing your questionnaire', *Bmj*, 328(7451), pp. 1312-1315.
- Boynton, P.M. (2004) 'Administering, analysing, and reporting your questionnaire', *BMJ (Clinical research ed.)*, 328(7452), pp. 1372-1375.
- Brace, I. (2008) *Questionnaire design: How to plan, structure and write survey material for effective market research*. Kogan Page Publishers.
- Brannen, J. (2005) 'Mixed methods research: A discussion paper', .
- Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative research in psychology*, 3(2), pp. 77-101.
- Braun, V., Clarke, V. and Terry, G. (2014) 'Thematic analysis', *Qual Res Clin Health Psychol*, , pp. 95-114.
- Brewerton, P.M. and Millward, L.J. (2001) *Organizational research methods: A guide for students and researchers*. Sage.
- Brinkman, W. (2009) 'Design of a questionnaire instrument', *Handbook of mobile technology research methods*, , pp. 31-57.
- Broekemier, G., Chau, N.N. and Seshadri, S. (2015) 'Social Media Practices Among Small Business-to-Business Enterprises', *Small Business Institute Journal*, 11(1), pp. 37.
- Brown, T.A. (2015) *Confirmatory factor analysis for applied research*. Guilford Publications.
- Bryman, A. (2006) 'Integrating quantitative and qualitative research: how is it done?', *Qualitative research*, 6(1), pp. 97-113.
- Bryman, A. (2003) *Quantity and quality in social research*. Routledge.
- Bryman, A. and Bell, E. (2015) *Business research methods*. Oxford University Press, USA.
- Buchanan, E.A. (2004) *Readings in virtual research ethics: Issues and controversies*. IGI Global.

References

- Buchanan, E.A. and Hvizdak, E.E. (2009) 'Online Survey Tools: Ethical and Methodological Concerns of Human Research Ethics Committees', *Journal of Empirical Research on Human Research Ethics*, 4(2), pp. 37-48.
- Bughin, J. (2008) 'The rise of enterprise 2.0', *Journal of Direct, Data and Digital Marketing Practice*, 9(3), pp. 251-259.
- Bulearca, M. and Bulearca, S. (2010) 'Twitter: a viable marketing tool for SMEs', *Global Business and Management Research: An International Journal*, 2(4), pp. 296-309.
- Buonanno, G., Faverio, P., Pigni, F., Ravarini, A., Sciuto, D. and Tagliavini, M. (2005) 'Factors affecting ERP system adoption: A comparative analysis between SMEs and large companies', *Journal of Ent Info Management*, 18(4), pp. 384-426.
- Burke, K. (2010) 'The impact of internet and ICT use among SME agribusiness growers and producers', *Journal of Small Business & Entrepreneurship*, 23(2), pp. 173-194.
- Burnard, P., Gill, P., Stewart, K., Treasure, E. and Chadwick, B. (2008) 'Analysing and presenting qualitative data', *British dental journal*, 204(8), pp. 429-432.
- Burns, R.P. and Burns, R. (2008) *Business research methods and statistics using SPSS*. Sage.
- Callegaro, M., Manfreda, K.L. and Vehovar, V. (2015) *Web survey methodology*. Sage.
- Carcary, M., Doherty, E. and Conway, G. (2014) 'The adoption of cloud computing by irish smes—an exploratory study', *Electronic Journal Information Systems Evaluation Volume*, 17(1).
- Carmines, E.G. and Zeller, R.A. (1979) *Reliability and validity assessment*. Sage publications.
- Carter, J. (2014) 'Social Media Strategies in Small Businesses', .
- Cavaye, A.L.M. (1996) 'Case study research: a multi-faceted research approach for IS', *Information Systems Journal*, 6(3), pp. 227-242.
- Celuch, K., Murphy, G.B. and Callaway, S.K. (2007) 'More bang for your buck: Small firms and the importance of aligned information technology capabilities and strategic flexibility', *The Journal of High Technology Management Research*, 17(2), pp. 187-197.
- Cesaroni, F.M. and Consoli, D. (2015) 'Are Small Businesses Really Able to Take Advantage of Social Media?', *Electronic Journal of Knowledge Management*, 13(4).
- Cestyakara, A. and Surendro, K. (2013) 'Social media adoption model for smart entrepreneur', *ICT for Smart Society (ICISS), 2013 International Conference on*. IEEE, 1-7.
- Cestyakara, A. and Surendro, K. (2014) 'Bandung towards Smart City — A study in SMEs for social media adoption and determinant factors', *Information, Communication Technology and System (ICTS), 2014 International Conference on*. , 171-176.
- Chan, J.K. and Lee, M.K. (2003) 'SME e-procurement adoption in Hong Kong-The roles of power, trust and value', *System Sciences, 2003. Proceedings of the 36th Annual Hawaii International Conference on*. IEEE, 10 pp.
- Chang, B., Hai, P.H., Seo, D., Lee, J. and Yoon, S.H. (2013) 'The determinant of adoption in cloud computing in Vietnam', *Computing, Management and Telecommunications (ComManTel), 2013 International Conference on*. IEEE, 407-409.
- Chang, M.K. and Cheung, W. (2001) 'Determinants of the intention to use Internet/WWW at work: a confirmatory study', *Information & Management*, 39(1), pp. 1-14.
- Chang, S., Hung, S., Yen, D. and Lee, P. (2011) 'Critical factors of ERP adoption for small-and medium-sized enterprises: An empirical study', *International Comparisons of Information Communication Technologies: Advancing Applications: Advancing Applications*, , pp. 205.

References

- Chatterjee, S. and Hadi, A.S. (2015) *Regression analysis by example*. John Wiley & Sons.
- Chatzithomas, N., Boutsouki, N., Chatzithomas, L. and Zotos, Y. (2014) 'Social media advertising platforms: a cross-cultural study', *International Journal of Strategic Innovative Marketing*, 1(2), pp. 74-90.
- Chau, P.Y. and Tam, K.Y. (1997) 'Factors affecting the adoption of open systems: an exploratory study', *Mis Quarterly*, , pp. 1-24.
- Chen, W. and Hirschheim, R. (2004) 'A paradigmatic and methodological examination of information systems research from 1991 to 2001', *Information Systems Journal*, 14(3), pp. 197-235.
- Cheng, J., Edwards, L.J., Maldonado-Molina, M.M., Komro, K.A. and Muller, K.E. (2010) 'Real longitudinal data analysis for real people: building a good enough mixed model', *Statistics in medicine*, 29(4), pp. 504-520.
- Cheon, M.J., Groven, V. and Sabherwal, R. (1993) 'The evolution of empirical research in IS: a study in IS maturity', *Information & Management*, 24(3), pp. 107-119.
- Chibelushi, C. (2008) 'ICT industry challenges in adopting ICT: a case study from the West Midlands, UK', *CONF-IRM 2008 Proceedings*, , 32.
- Child, D. (2006) *The essentials of factor analysis*. A&C Black.
- Chong, A.Y., Lin, B., Ooi, K. and Raman, M. (2009) 'Factors affecting the adoption level of c-commerce: An empirical study', *Journal of Computer Information Systems*, 50(2), pp. 13-22.
- Chong, E. and Xie, B. (2011) 'The use of theory in social studies of Web 2.0', *System Sciences (HICSS), 2011 44th Hawaii International Conference on*. IEEE, 1-10.
- Christodoulides, G., Siamagka, N. and Michaelidou, N. (2015) 'A Model For The Adoption of Social Media by B2B Organizations', in *Ideas in Marketing: Finding the New and Polishing the Old*. Springer, pp. 578-581.
- Chuttur, M.Y. (2009) 'Overview of the technology acceptance model: Origins, developments and future directions', *Working Papers on Information Systems*, 9(37), pp. 9-37.
- Chwelos, P., Benbasat, I. and Dexter, A.S. (2001) 'Research report: Empirical test of an EDI adoption model', *Information systems research*, 12(3), pp. 304-321.
- Clear, F., Dyerson, R., Harindranath, G., Harris, L. and Rae, A. (2012) 'Web 2.0 and micro-businesses: An exploratory investigation', .
- Cohen, J., Cohen, P., West, S.G. and Aiken, L.S. (2013) *Applied multiple regression/correlation analysis for the behavioral sciences*. Routledge.
- Cokluk, O. (2010) 'Logistic Regression: Concept and Application.', *Educational Sciences: Theory and Practice*, 10(3), pp. 1397-1407.
- Coleman, L.J., Chandler, K. and Gu, J. (2013) 'Social Media - A Moving Target', *Journal of Marketing Development and Competitiveness*, 7(1), pp. 73-77.
- Collins, K.M., Onwuegbuzie, A.J. and Jiao, Q.G. (2007) 'A mixed methods investigation of mixed methods sampling designs in social and health science research', *Journal of mixed methods research*, 1(3), pp. 267-294.
- Collins, K.M.T., Onwuegbuzie, A.J. and Jiao, Q.G. (2006) 'Prevalence of Mixed-methods Sampling Designs in Social Science Research', *Evaluation & Research in Education*, 19(2), pp. 83-101.
- Consoli, D. (2012) 'Literature Analysis on Determinant Factors and the Impact of ICT in SMEs', *Procedia - Social and Behavioral Sciences*, 62(0), pp. 93-97.
- Constantinides, E. (2009) 'Social Media/Web 2.0 as marketing parameter: An introduction', *Proceedings of 8th International Congress Marketing Trends*.

References

- Constantinides, E. and Fountain, S.J. (2008) 'Web 2.0: Conceptual foundations and marketing issues', *Journal of direct, data and digital marketing practice*, 9(3), pp. 231-244.
- Constantinides, E., Romero, C.L. and Boria, M.A.G. (2009) 'Social media: a new frontier for retailers?', in *European Retail Research*. Springer, pp. 1-28.
- Cooper, R.B. and Zmud, R.W. (1990) 'Information technology implementation research: a technological diffusion approach', *Management science*, 36(2), pp. 123-139.
- Cormode, G. and Krishnamurthy, B. (2008) 'Key differences between Web 1.0 and Web 2.0', *First Monday*, 13(6).
- Cortina, J.M. (1993) 'What is coefficient alpha? An examination of theory and applications.', *Journal of applied psychology*, 78(1), pp. 98.
- Couper, M.P. (2000) 'Review: Web surveys: A review of issues and approaches', *Public opinion quarterly*, , pp. 464-494.
- Couper, M.P. and Miller, P.V. (2008) 'Web survey methods introduction', *Public opinion quarterly*, 72(5), pp. 831-835.
- Couper, M.P. (2001) 'Web survey design and administration', *Public opinion quarterly*, 65(2), pp. 230-253.
- Coyne, I.T. (1997) 'Sampling in qualitative research. Purposeful and theoretical sampling; merging or clear boundaries?', *Journal of advanced nursing*, 26(3), pp. 623-630.
- Cragg, P.B. and King, M. (1993) 'Small-Firm Computing: Motivators and Inhibitors', *MIS Quarterly*, 17(1), pp. 47-60.
- Crawford, S.D., Couper, M.P. and Lamias, M.J. (2001) 'Web surveys perceptions of burden', *Social Science Computer Review*, 19(2), pp. 146-162.
- Cresswell, J.W. (1998) 'Qualitative inquiry and research design: Choosing among five traditions', .
- Creswell, J.W. (2013) *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Creswell, J.W. (1998) 'Qualitative inquiry and research design: Choosing among five designs', .
- Creswell, J.W. and Clark, V.L.P. (2007) 'Designing and conducting mixed methods research', .
- Creswell, J. and Plano Clark, V. (2011) 'Designing and conducting mixed methods research', .
- Croasmun, J.T. and Ostrom, L. (2011) 'Using Likert-type scales in the social sciences', *Journal of Adult Education*, 40(1), pp. 19.
- Cronholm, S. and Hjalmarsson, A. (2011) 'Experiences from sequential use of mixed methods', *The Electronic Journal of Business Research Methods*, 9(2), pp. 87-95.
- Crowther, D. and Lancaster, G. (2012) *Research methods*. Routledge.
- Culnan, M.J. (1987) 'Mapping the intellectual structure of MIS, 1980-1985: a co-citation analysis', *Mis Quarterly*, , pp. 341-353.
- Culnan, M.J., McHugh, P.J. and Zubillaga, J.I. (2010) 'How large US companies can use Twitter and other social media to gain business value', *MIS Quarterly Executive*, 9(4), pp. 243-259.
- Curry, L.A., Nembhard, I.M. and Bradley, E.H. (2009) 'Qualitative and mixed methods provide unique contributions to outcomes research', *Circulation*, 119(10), pp. 1442-1452.

References

- Curtis, L., Edwards, C., Fraser, K.L., Gudelsky, S., Holmquist, J., Thornton, K. and Sweetser, K.D. (2010) 'Adoption of social media for public relations by nonprofit organizations', *Public Relations Review*, 36(1), pp. 90-92.
- Dahnil, M.I., Marzuki, K.M., Langgat, J. and Fabeil, N.F. (2014) 'Factors Influencing SMEs Adoption of Social Media Marketing', *Procedia-Social and Behavioral Sciences*, 148, pp. 119-126.
- Damanpour, F. (1992) 'Organizational size and innovation', *Organization Studies*, 13(3), pp. 375-402.
- Damanpour, F. (1987) 'The adoption of technological, administrative, and ancillary innovations: Impact of organizational factors', *Journal of management*, 13(4), pp. 675-688.
- Damanpour, F. and Schneider, M. (2006) 'Phases of the adoption of innovation in organizations: Effects of environment, organization and top Managers¹', *British Journal of Management*, 17(3), pp. 215-236.
- Daniel, E., Wilson, H. and Myers, A. (2002) 'Adoption of E-Commerce by SMEs in the UK Towards a Stage Model', *International Small Business Journal*, 20(3), pp. 253-270.
- Daugherty, T., Eastin, M.S. and Bright, L. (2008) 'Exploring consumer motivations for creating user-generated content', *Journal of Interactive Advertising*, 8(2), pp. 16-25.
- David, I., Poissant, L. and Rochette, A. (2012) 'Clinicians' expectations of Web 2.0 as a mechanism for knowledge transfer of stroke best practices', *Journal of medical Internet research*, 14(5), pp. e121.
- Davis, F.D. (1989) 'Perceived usefulness, perceived ease of use, and user acceptance of information technology', *MIS quarterly*, , pp. 319-340.
- Daymon, C. and Holloway, I. (2010) *Qualitative research methods in public relations and marketing communications*. Routledge.
- De Vaus, D. (2013) *Surveys in social research*. Routledge.
- De Villiers, M. (2005) 'Three approaches as pillars for interpretive information systems research: development research, action research and grounded theory', *Proceedings of the 2005 annual research conference of the South African institute of computer scientists and information technologists on IT research in developing countries*. South African Institute for Computer Scientists and Information Technologists, 142-151.
- Dechant, K. and Lamky, A.A. (2005) 'Toward an understanding of Arab women entrepreneurs in Bahrain and Oman', *Journal of Developmental Entrepreneurship*, 10(02), pp. 123-140.
- DeCoster, J. (1998) 'Overview of factor analysis', .
- Del Greco, L., Walop, W. and McCarthy, R.H. (1987) 'Questionnaire development: 2. Validity and reliability', *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne*, 136(7), pp. 699-700.
- DeLone, W.H. (1988) 'Determinants of Success for Computer Usage in Small Business', *MIS Quarterly*, 12(1), pp. 51-61.
- DeMaris, A. (1995) 'A tutorial in logistic regression', *Journal of Marriage and the Family*, , pp. 956-968.
- DeMaris, A. and Selman, S.H. (2013) 'Logistic regression', in *Converting Data into Evidence*. Springer, pp. 115-136.
- Denscombe, M. (2008) 'Communities of practice a research paradigm for the mixed methods approach', *Journal of mixed methods research*, 2(3), pp. 270-283.
- Denzin, N.K. and Lincoln, Y. (2000) 'Qualitative research', *Thousand Oaks ua*, , pp. 413-427.
- Derham, R., Cragg, P. and Morrish, S. (2011) 'Creating value: An SME and social media', .

References

- Deutskens, E., De Ruyter, K., Wetzels, M. and Oosterveld, P. (2004) 'Response rate and response quality of internet-based surveys: An experimental study', *Marketing Letters*, 15(1), pp. 21-36.
- Devers, K.J. and Frankel, R.M. (2000) 'Study design in qualitative research--2: Sampling and data collection strategies', *Education for Health*, 13(2), pp. 263.
- Dholakia, R.R. and Kshetri, N. (2004) 'Factors impacting the adoption of the Internet among SMEs', *Small Business Economics*, 23(4), pp. 311-322.
- Dholakia, U.M., Bagozzi, R.P. and Pearo, L.K. (2004) 'A social influence model of consumer participation in network-and small-group-based virtual communities', *International Journal of Research in Marketing*, 21(3), pp. 241-263.
- Dibrell, C., Davis, P.S. and Craig, J. (2008) 'Fueling innovation through information technology in SMEs*', *Journal of Small Business Management*, 46(2), pp. 203-218.
- DiCicco-Bloom, B. and Crabtree, B.F. (2006a) 'The qualitative research interview', *Medical education*, 40(4), pp. 314-321.
- Dillman, D.A. (1994) *How to conduct your own survey*. John Wiley & Sons Inc.
- Dillman, D.A. and Bowker, D.K. (2001) 'The web questionnaire challenge to survey methodologists', *Online social sciences*, , pp. 53-71.
- Dillman, D.A., Smyth, J.D. and Christian, L.M. (2014) *Internet, phone, mail, and mixed-mode surveys: the tailored design method*. John Wiley & Sons.
- Diochon, D. and Wright, D. (2003) 'Information Technology in Small Businesses: An Overlooked Opportunity?', *Proceedings of the 2003 Information Resources Management Association International Conference*. Idea Group Publishing Philadelphia, PA, 102-105.
- Dirgiatmo, Y. (2015) 'Analysis of the Potential Use of Social Networking for the Success of Strategic Business Planning in Small and Medium-Sized Enterprises', *Mediterranean Journal of Social Sciences*, 6(2 S2), pp. 233.
- Dormann, C.F., Elith, J., Bacher, S., Buchmann, C., Carl, G., Carré, G., Marquéz, J.R.G., Gruber, B., Lafourcade, B. and Leitão, P.J. (2013) 'Collinearity: a review of methods to deal with it and a simulation study evaluating their performance', *Ecography*, 36(1), pp. 27-46.
- Doyle, L., Brady, A. and Byrne, G. (2009) 'An overview of mixed methods research', *Journal of Research in Nursing*, 14(2), pp. 175-185.
- Drew, S. (2003) 'Strategic Uses of E-Commerce by SMEs in the East of England', *European Management Journal*, 21(1), pp. 79-88.
- Drost, E.A. (2011) 'Validity and reliability in social science research', *Education Research and Perspectives*, 38(1), pp. 105.
- Durkin, M., McGowan, P. and McKeown, N. (2013) 'Exploring social media adoption in small to medium-sized enterprises in Ireland', *Journal of Small Business and Enterprise Development*, 20(4), pp. 716-734.
- Dyerson, R., Harindranath, G. and Barnes, D. (2009) 'National survey of SMEs' use of IT in four sectors', *The electronic journal information systems evaluation*, 12(1), pp. 39-50.
- E. Loukis and N. Kyriakou (2015) 'Organizational Factors Affecting Propensity to Adopt Cloud Computing', *System Sciences (HICSS), 2015 48th Hawaii International Conference on*, , 4230-4239.
- Edwards, R. and Holland, J. (2013) *What is qualitative interviewing?* A&C Black.
- Elasrag, H. (2011) *Enhancing the competitiveness of the Arab SMEs*. Available at SSRN 1586454. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1586454

References

- Elbeltagi, I., Al Sharji, Y., Hardaker, G. and Elsetouhi, A. (2013) 'The Role of the Owner-Manager in SMEs' Adoption of Information and Communication Technology in the United Arab Emirates', *Journal of Global Information Management (JGIM)*, 21(2), pp. 23-50.
- El-Gohary, H. (2012) 'Factors affecting E-Marketing adoption and implementation in tourism firms: An empirical investigation of Egyptian small tourism organisations', *Tourism Management*, 33(5), pp. 1256-1269.
- Ellison, N.B. (2007) 'Social network sites: Definition, history, and scholarship', *Journal of Computer-Mediated Communication*, 13(1), pp. 210-230.
- Evans, J.R. and Mathur, A. (2005) 'The value of online surveys', *Internet research*, 15(2), pp. 195-219.
- Fereday, J. and Muir-Cochrane, E. (2006) 'Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development', *International journal of qualitative methods*, 5(1), pp. 80-92.
- Field, A. (2013) *Discovering statistics using IBM SPSS statistics*. Sage.
- Fielding, N.G., Lee, R.M. and Blank, G. (2008) *The SAGE handbook of online research methods*. Sage.
- Fink, A. (2015) *How to conduct surveys: A step-by-step guide*. Sage Publications.
- Fink, D. (1998) 'Guidelines for the successful adoption of information technology in small and medium enterprises', *International Journal of Information Management*, 18(4), pp. 243-253.
- Fischer, E. and Reuber, A.R. (2011) 'Social interaction via new social media:(How) can interactions on Twitter affect effectual thinking and behavior?', *Journal of business venturing*, 26(1), pp. 1-18.
- Fleming, C.M. and Bowden, M. (2009) 'Web-based surveys as an alternative to traditional mail methods', *Journal of environmental management*, 90(1), pp. 284-292.
- Fong, M.W., 2011. Chinese SMEs and information technology adoption. *Issues in Informing Science and Information Technology*, 8, pp.313-322.
- Forza, C. (2002) 'Survey research in operations management: a process-based perspective', *International journal of operations & production management*, 22(2), pp. 152-194.
- Fosso Wamba, S. and Edwards, A. (2014) 'Factors Related to Social Media Adoption and Use for Emergency Services Operations: The Case of the NSW SES', .
- Fowler Jr, F.J. (2013) *Survey research methods*. Sage publications.
- Fraenkel, J.R., Wallen, N.E. and Hyun, H.H. (1993) *How to design and evaluate research in education*. McGraw-Hill New York.
- Gable, G.G. (1994) 'Integrating case study and survey research methods: an example in information systems', *European journal of information systems*, 3(2), pp. 112-126.
- Gagnon, Y. and Toulouse, J. (1996) 'The behavior of business managers when adopting new technologies', *Technological Forecasting and Social Change*, 52(1), pp. 59-74.
- Galesic, M. and Bosnjak, M. (2009) 'Effects of questionnaire length on participation and indicators of response quality in a web survey', *Public opinion quarterly*, 73(2), pp. 349-360.
- Gangwar, H., Date, H., Ramaswamy, R., Irani, Z. and Irani, Z. (2015) 'Understanding determinants of cloud computing adoption using an integrated TAM-TOE model', *Journal of Enterprise Information Management*, 28(1).
- Gangwar, H., Date, H. and A.D. Raoot (2014) 'Review on IT adoption: insights from recent technologiesnull', *Journal of Ent Info Management*, 27(4), pp. 488-502.

References

- Gangwar, H., Date, H. and Ramaswamy, R. (2015) 'Understanding determinants of cloud computing adoption using an integrated TAM-TOE model', *Journal of Ent Info Management*, 28(1), pp. 107-130.
- Ghobakhloo, M., Arias-Aranda, D. and Benitez-Amado, J. (2011) 'Adoption of e-commerce applications in SMEs', *Industrial Management & Data Systems*, 111(8), pp. 1238-1269.
- Ghobakhloo, M., Sabouri, M.S., Hong, T.S. and Zulkifli, N. (2011) 'Information technology adoption in Small and Medium-sized Enterprises; An appraisal of two decades literature', *interdisciplinary Journal of Research in Business*, 1(7), pp. 53-80.
- Ghobakhloo, M. and Sai, H.T. (2013) 'The role of owner/manager in adoption of electronic commerce in small businesses: The case of developing countries', *Jrnl of Small Bus Ente Dev*, 20(4), pp. 754-787.
- Gibbs, J.L. and Kraemer, K.L. (2004) 'A cross-country investigation of the determinants of scope of e-commerce use: An institutional approach', *Electronic markets*, 14(2), pp. 124-137.
- Gibbs, S., Sequeira, J. and White, M.M. (2007) 'Social networks and technology adoption in small business', *International Journal of Globalisation and Small Business*, 2(1), pp. 66-87.
- Gideon, L. (2012) *Handbook of survey methodology for the social sciences*. Springer.
- Gilinsky Jr, A., Stanny, E., McCline, R.L. and Eyer, R. (2015) 'Does size matter? An empirical investigation into the competitive strategies of the small firm', *Journal of Small Business Strategy*, 12(2), pp. 1-13.
- Gillham, B. (2008) *Developing a questionnaire*. A&C Black.
- Gliem, R.R. and Gliem, J.A. (2003) 'Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales', Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education.
- Gligorijevic, B. and Leong, B. (2011) 'Trust, Reputation and the Small Firm: Building Online Brand Reputation for SMEs.', *ICWSM*.
- Goddard III, R.D. and Villanova, P. (1996) 'Designing surveys and questionnaires for research', *The psychology research handbook: A guide for graduate students and research assistants*, , pp. 85-97.
- Golbeck, J., Grimes, J.M. and Rogers, A. (2010) 'Twitter use by the U.S. Congress', *Journal of the American Society for Information Science and Technology*, 61(8), pp. 1612-1621.
- Golding, P., Donaldson, O.A., Tennant, V.M. and Black, K. (2008) 'An Analysis of Factors Affecting the Adoption of ICT By MSMEs in Rural and Urban Jamaica.', *ECIS*, , 1286-1297.
- Goldkuhl, G. (2012) 'Pragmatism vs interpretivism in qualitative information systems research', *European Journal of Information Systems*, 21(2), pp. 135-146.
- Goldkuhl, G. (2008) 'What kind of pragmatism in information systems research', *AIS SIG Prag Inaugural Meeting*.
- Goldkuhl, G. (2004) 'Meanings of Pragmatism: Ways to conduct information systems research', *Action in Language, Organisations and Information Systems*, .
- Goles, T. and Hirschheim, R. (2000) 'The paradigm is dead, the paradigm is dead...long live the paradigm: the legacy of Burrell and Morgan', *Omega*, 28(3), pp. 249-268.
- Goode, S. and Stevens, K. (2000) 'An analysis of the business characteristics of adopters and non-adopters of World Wide Web technology', *Information technology and Management*, 1(1-2), pp. 129-154.
- Govindaraju, R., Chandra, D. and Siregar, Z. (2012) 'Stakeholder role in e-commerce adoption by small and medium enterprises', *Management of Innovation and Technology (ICMIT), 2012 IEEE International Conference on*. IEEE, 430-435.

References

- Grandon, E.E. and Pearson, J.M. (2004) 'Electronic commerce adoption: an empirical study of small and medium US businesses', *Information & Management*, 42(1), pp. 197-216.
- Granello, D.H. and Wheaton, J.E. (2004) 'Online data collection: Strategies for research', *Journal of Counseling & Development*, 82(4), pp. 387-393.
- Gray, D.E. (2013) *Doing research in the real world*. Sage.
- Grbich, C. (2012) *Qualitative data analysis: An introduction*. Sage.
- Greene, J.C. (2008) 'Is mixed methods social inquiry a distinctive methodology?', *Journal of mixed methods research*, 2(1), pp. 7-22.
- Greene, J.C., Caracelli, V.J. and Graham, W.F. (1989) 'Toward a conceptual framework for mixed-method evaluation designs', *Educational evaluation and policy analysis*, 11(3), pp. 255-274.
- Greenhalgh, T., Stramer, K., Bratan, T., Byrne, E., Russell, J. and Potts, H.W. (2010) 'Adoption and non-adoption of a shared electronic summary record in England: a mixed-method case study', *BMJ (Clinical research ed.)*, 340, pp. c3111.
- Grover, R. and Vriens, M. (2006) *The handbook of marketing research: uses, misuses, and future advances*. Sage Publications.
- Grover, V. (1993) 'An Empirically Derived Model for the Adoption of Customer-based Interorganizational Systems*', *Decision sciences*, 24(3), pp. 603-640.
- Guba, E. (1990) 'The alternative paradigm dialog (pp. 17--30)', *The Paradigm Dialog*, .
- Guba, E.G. and Lincoln, Y.S. (1994) 'Competing paradigms in qualitative research', *Handbook of qualitative research*, 2, pp. 163-194.
- Gudmundsdottir, G.B. and Brock-Utne, B. (2010) 'An exploration of the importance of piloting and access as action research', *Educational Action Research*, 18(3), pp. 359-372.
- Guest, G., MacQueen, K.M. and Namey, E.E. (2011) *Applied thematic analysis*. Sage.
- Guido, J.J., Winters, P.C. and Rains, A.B. (2006) 'Logistic regression basics', *MSc University of Rochester Medical Center, Rochester, NY*, .
- Hair, J.F. (2010) *Multivariate data analysis*. Pearson College Division.
- Hair, J.F., Anderson, R.E., Tatham, R.L. and William, C. (1998) 'Black (1998), Multivariate data analysis', .
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006) 'Multivariate data analysis (Vol. 6)', .
- Haller, S.A. and Siedschlag, I. (2011) 'Determinants of ICT adoption: evidence from firm-level data', *Applied Economics*, 43(26), pp. 3775-3788.
- Hanna, R., Rohm, A. and Crittenden, V.L. (2011) 'We're all connected: The power of the social media ecosystem', *Business horizons*, 54(3), pp. 265-273.
- Harindranath, G., Dyerson, R. and Barnes, D. (2008) 'ICT adoption and use in UK SMEs: A failure of initiatives', *Electronic journal of information systems evaluation*, 11(2), pp. 91-96.
- Harrell Jr, F.E. (2015) 'Regression modeling strategies', .
- Hartas, D. (2015) *Educational research and inquiry: Qualitative and quantitative approaches*. Bloomsbury Publishing.

References

- Hashim, J. (2007) 'Information communication technology (ICT) adoption among SME owners in Malaysia', *International Journal of Business and Information*, 2(2), pp. 221-240.
- Hashim, N.A. and Noor, S.M. (2014) 'An Investigation of Key Adoption of E-Commerce in SMEs in Malaysia', *Proceedings of the 26th International Business Research Conference*. April. , 7-8.
- Hayes, A.F. and Matthes, J. (2009) 'Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations', *Behavior research methods*, 41(3), pp. 924-936.
- He, W., Wang, F., Chen, Y. and Zha, S. (2015) 'An exploratory investigation of social media adoption by small businesses', *Information Technology and Management*, , pp. 1-12.
- He, W., Wang, F. and Zha, S. (2014) 'Enhancing social media competitiveness of small businesses: insights from small pizzerias', *New Review of Hypermedia and Multimedia*, 20(3), pp. 225-250.
- He, W., Zha, S. and Li, L. (2013) 'Social media competitive analysis and text mining: A case study in the pizza industry', *International Journal of Information Management*, 33(3), pp. 464-472.
- Heale, R. and Twycross, A. (2015) 'Validity and reliability in quantitative studies', *Evidence-based nursing*, 18(3), pp. 66-67.
- Herrero, Á and San Martín, H. (2012) 'Developing and testing a global model to explain the adoption of websites by users in rural tourism accommodations', *International Journal of Hospitality Management*, 31(4), pp. 1178-1186.
- Hesse-Biber, S.N. (2010) *Mixed methods research: Merging theory with practice*. Guilford Press.
- Hew, K.F. and Cheung, W.S. (2012) 'Use of Web 2.0 technologies in K-12 and higher education: The search for evidence-based practice', *Educational Research Review*, .
- Hewson, C. and Buchanan, T. (2013) 'Ethics guidelines for internet-mediated research', The British Psychological Society.
- Hewson, C. and Laurent, D. (2012) 'Research design and tools for Internet research', *SAGE Internet research methods*, 1.
- Hirschheim, R. (1985) 'Information systems epistemology: An historical perspective', *Research methods in information systems*, , pp. 13-35.
- Hoffman, K., Parejo, M., Bessant, J. and Perren, L. (1998) 'Small firms, R&D, technology and innovation in the UK: a literature review', *Technovation*, 18(1), pp. 39-55.
- Hofstede, G. (1984) 'Cultural dimensions in management and planning', *Asia Pacific journal of management*, 1(2), pp. 81-99.
- Hongyu Gao, Jun Hu, Tuo Huang, Jingnan Wang and Yan Chen (2011) 'Security Issues in Online Social Networks', *Internet Computing, IEEE*, 15(4), pp. 56-63.
- Hopkins, J.L. (2012) 'Can Facebook be an effective mechanism for generating growth and value in small businesses?null', *J of Systems and Info Tech*, 14(2), pp. 131-141.
- Hosmer Jr, D.W. and Lemeshow, S. (2004) *Applied logistic regression*. John Wiley & Sons.
- Hosmer Jr, D.W., Lemeshow, S. and Sturdivant, R.X. (2013) *Applied logistic regression*. John Wiley & Sons.
- Hosmer, D.W., Hosmer, T., Le Cessie, S. and Lemeshow, S. (1997) 'A comparison of goodness-of-fit tests for the logistic regression model', *Statistics in medicine*, 16(9), pp. 965-980.
- Hosmer, D.W., Taber, S. and Lemeshow, S. (1991) 'The importance of assessing the fit of logistic regression models: a case study', *American Journal of Public Health*, 81(12), pp. 1630-1635.

References

- Howe, K.R. (2012) 'Mixed methods, triangulation, and causal explanation', *Journal of Mixed Methods Research*, 6(2), pp. 89-96.
- Hu, H. and Wang, X. (2012) 'How people make friends in social networking sites—A microscopic perspective', *Physica A: Statistical Mechanics and its Applications*, 391(4), pp. 1877-1886.
- Hudson, S., Roth, M.S., Madden, T.J. and Hudson, R. (2015) 'The effects of social media on emotions, brand relationship quality, and word of mouth: An empirical study of music festival attendees', *Tourism Management*, 47, pp. 68-76.
- Humphreys, L. and Wilken, R. (2015) 'Social media, small businesses, and the control of information', *Information, Communication & Society*, 18(3), pp. 295-309.
- Hussin, H. and Noor, R.M. (2005) 'Innovating business through e-commerce: Exploring the willingness of Malaysian SMEs', *Proceedings of the Second International Conference on Innovation in IT*. Citeseer.
- Hvass, K.A. and Munar, A.M. (2012) 'The takeoff of social media in tourism', *Journal of Vacation Marketing*, 18(2), pp. 93-103.
- Hyman, L., Lamb, J. and Bulmer, M. (2006) 'The use of pre-existing survey questions: implications for data quality', *Proceedings of the European Conference on Quality in Survey Statistics*.
- Iacovou, C.L., Benbasat, I. and Dexter, A.S. (1995) 'Electronic data interchange and small organizations: adoption and impact of technology', *MIS quarterly*, , pp. 465-485.
- IBM corporation (2011) 'IBM SPSS Statistics for Windows (20)', .
- Ifinedo, P. (2011) 'Internet/e-business technologies acceptance in Canada's SMEs: an exploratory investigation', *Internet Research*, 21(3), pp. 255-281.
- Isma'ili, A., Li, M., He, Q. and Shen, J. (2016) 'Cloud computing services adoption in australian SMEs: a firm-level investigation', .
- ITA, 2014. Digital Society. [ONLINE] Available at: http://www.ita.gov.om/ITAPortal/Info/FAQ_DigitalSociety.aspx. [Accessed 22 February 2016].
- Jackson, S.L. (2014) *Research methods: A modular approach*. Cengage Learning.
- Jagongo, A. and Kinyua, C. (2013) 'The social media and entrepreneurship growth (a new business communication paradigm among SMEs in Nairobi)', .
- Jahanmir, S.F. and Lages, L.F. (2016) 'The late-adopter scale: A measure of late adopters of technological innovations', *Journal of Business Research*, 69(5), pp. 1701-1706.
- Jain, M., Le, A.N., Lin, J.Y. and Cheng, J.M. (2011) 'Exploring the factors favoring mcommerce adoption among indian msme: A TOE perspective', *東海管理評論*, 13(1), pp. 147-188.
- James, N. and Busher, H. (2007) 'Ethical issues in online educational research: protecting privacy, establishing authenticity in email interviewing', *International Journal of Research & Method in Education*, 30(1), pp. 101-113.
- Jansen, B.J., Zhang, M., Sobel, K. and Chowdury, A. (2009) 'Twitter power: Tweets as electronic word of mouth', *Journal of the American Society for Information Science and Technology*, 60(11), pp. 2169-2188.
- Jeon, B.N., Han, K.S. and Lee, M.J. (2006) 'Determining factors for the adoption of e-business: the case of SMEs in Korea', *Applied Economics*, 38(16), pp. 1905-1916.
- Jeyaraj, A., Rottman, J.W. and Lacity, M.C. (2006) 'A review of the predictors, linkages, and biases in IT innovation adoption research', *Journal of Information Technology*, 21(1), pp. 1-23.
- Jick, T.D. (1979) 'Mixing qualitative and quantitative methods: Triangulation in action', *Administrative Science Quarterly*, 24(4), pp. 602-611.

References

- Joffe, H. and Yardley, L. (2004) '4. Content and thematic analysis', *Research methods for clinical and health psychology*. California: Sage, , pp. 56-68.
- Jogulu, U.D. and Pansiri, J. (2011) 'Mixed methods: A research design for management doctoral dissertations', *Management research review*, 34(6), pp. 687-701.
- Johnson, R.B. and Onwuegbuzie, A.J. (2004) 'Mixed methods research: A research paradigm whose time has come', *Educational researcher*, 33(7), pp. 14-26.
- Johnson, R.B., Onwuegbuzie, A.J. and Turner, L.A. (2007) 'Toward a definition of mixed methods research', *Journal of mixed methods research*, 1(2), pp. 112-133.
- Johnston, J.M., Pennypacker, H.S. and Green, G. (2010) *Strategies and tactics of behavioral research*. Routledge.
- Johnston, K., Begg, S. and Tanner, M. (2013) 'Exploring the factors influencing the adoption of Open Source Software in Western Cape schools', *International Journal of Education and Development using Information and Communication Technology*, 9(2), pp. 64.
- Jones, N., Borgman, R. and Ulusoy, E. (2015) 'Impact of social media on small businessesnull', *Jrnl of Small Bus Ente Dev*, 22(4), pp. 611-632.
- Joyce, P. and Woods, A. (2003) 'Managing for growth: decision making, planning, and making changes', *Jrnl of Small Bus Ente Dev*, 10(2), pp. 144-151.
- Jussila, J.J., Kärkkäinen, H. and Aramo-Immonen, H. (2014) 'Social media utilization in business-to-business relationships of technology industry firms', *Computers in Human Behavior*, 30, pp. 606-613.
- Kahar, R., Yamimi, F., Bunari, G. and Habil, H. (2012) 'Trusting the Social Media in Small Business', *Procedia - Social and Behavioral Sciences*, 66(0), pp. 564-570.
- Kaiser, H.F. (1974) 'An index of factorial simplicity', *Psychometrika*, 39(1), pp. 31-36.
- Kajornboon, A.B. (2005) 'Using interviews as research instruments', *E-journal for Research Teachers*, 2(1).
- Kane, G.C., Alavi, M., Labianca, G.J. and Borgatti, S. (2012) 'What's different about social media networks? A framework and research agenda', *MIS Quarterly*, forthcoming, .
- Kannabiran, G. and Dharmalingam, P. (2012) 'Enablers and inhibitors of advanced information technologies adoption by SMEs: An empirical study of auto ancillaries in India', *Journal of Enterprise Information Management*, 25(2), pp. 186-209.
- Kaplan, A.M. and Haenlein, M. (2010) 'Users of the world, unite! The challenges and opportunities of Social Media', *Business horizons*, 53(1), pp. 59-68.
- Kaplan, B. and Duchon, D. (1988) 'Combining qualitative and quantitative methods in information systems research: a case study', *MIS quarterly*, , pp. 571-586.
- Kaplowitz, M.D., Lupi, F., Couper, M.P. and Thorp, L. (2011) 'The Effect of Invitation Design on Web Survey Response Rates', *Social Science Computer Review*, .
- Kapurubandara, M. (2009) 'A framework to e-transform SMEs in developing countries', *The Electronic Journal of Information Systems in Developing Countries*, 39.
- Kapurubandara, M. and Lawson, R. (2006) 'Barriers to Adopting ICT and e-commerce with SMEs in developing countries: an Exploratory study in Sri Lanka', *University of Western Sydney, Australia*, .
- Karahanna, E., Agarwal, R. and Angst, C.M. (2006) 'Reconceptualizing compatibility beliefs in technology acceptance research', *MIS quarterly*, , pp. 781-804.

References

- Kelley, K., Clark, B., Brown, V. and Sitzia, J. (2003) 'Good practice in the conduct and reporting of survey research', *International journal for quality in health care : journal of the International Society for Quality in Health Care / ISQua*, 15(3), pp. 261-266.
- Kendall, J.D., Tung, L.L., Chua, K.H., Ng, C.H.D. and Tan, S.M. (2001) 'Receptivity of Singapore's SMEs to electronic commerce adoption', *The Journal of Strategic Information Systems*, 10(3), pp. 223-242.
- Kenny, R. and Gunter, G. (2011) 'Factors affecting adoption of video games in the classroom', *Journal of Interactive Learning Research*, 22(2), pp. 259.
- Kerr, A.W., Hall, H.K. and Kozub, S.A. (2002) *Doing statistics with SPSS*. Sage.
- Khan, I., Saleh, M.A. and Nivarthi, S. (2015) 'Understanding the adoption of Social media in the Australian Healthcare Sector: A Meta Analytical Approach', *World*, 6(2).
- Khong, S.T., Siong, C.C., Lin, B. and Uchenna, C.E. (2009) 'Internet-based ICT adoption: evidence from Malaysian SMEsnull', *Industr Mngmnt & Data Systems*, 109(2), pp. 224-244.
- Kiesler, S. and Sproull, L.S. (1986) 'Response Effects in the Electronic Survey', *The Public Opinion Quarterly*, 50(3), pp. 402-413.
- Kim, H.D., Lee, I. and Lee, C.K. (2013) 'Building Web 2.0 enterprises: A study of small and medium enterprises in the United States', *International Small Business Journal*, 31(2), pp. 156-174.
- Kimberlin, C.L. and Winterstein, A.G. (2008) 'Validity and reliability of measurement instruments used in research', *Am J Health Syst Pharm*, 65(23), pp. 2276-2284.
- King, G. and Zeng, L. (2001) 'Logistic regression in rare events data', *Political analysis*, 9(2), pp. 137-163.
- King, J.E. (2008) 'Binary logistic regression', *Best practices in quantitative methods*, , pp. 358-384.
- King, W.R. and He, J. (2006) 'A meta-analysis of the technology acceptance model', *Information & management*, 43(6), pp. 740-755.
- Kirkwood, J. (2009) 'To grow or not? Growing small service firms', *Journal of Small Business and Enterprise Development*, 16(3), pp. 485-503.
- Kiron, D., Palmer, D., Phillips, A.N. and Berkman, R. (2013) 'Social business: Shifting out of first gear', *MIT Sloan Management Review*, 55(1), pp. 1.
- Kitchenham, B.A. and Pfleeger, S.L. (2002) 'Principles of survey research: part 3: constructing a survey instrument', *ACM SIGSOFT Software Engineering Notes*, 27(2), pp. 20-24.
- Kuan, K.K. and Chau, P.Y. (2001) 'A perception-based model for EDI adoption in small businesses using a technology-organization-environment framework', *Information & management*, 38(8), pp. 507-521.
- Kuikka, M. and Äkkinen, M. (2011) 'Determining the challenges of organizational social media adoption and use', .
- Kurnia, S., Alzougool, B., Ali, M. and Alhashmi, S.M. (2009) 'Adoption of Electronic commerce technologies by SMEs in Malaysia', *System Sciences, 2009. HICSS'09. 42nd Hawaii International Conference on. IEEE*, 1-10.
- Kuzma, J. (2010) 'Asian government usage of Web 2.0 social media', *European Journal of ePractice*, (9), pp. 1-13.
- Kvale, S. (2008) *Doing interviews*. Sage.
- Kvale, S. and Kvale, S. (1996) 'Interviews: an introduction to qualitative research interviewing', .
- Lacho, K.J. and Marinello, C. (2010) 'How small business owners can use social networking to promote their business', *The Entrepreneurial Executive*, 15, pp. 127.

References

- Lamb, R. and Kling, R. (2003) 'Reconceptualizing users as social actors in information systems research', *MIS quarterly*, , pp. 197-236.
- Lee, S., DeWester, D. and Park, S.R. (2008) 'Web 2.0 and opportunities for small businesses', *Service Business*, 2(4), pp. 335-345.
- Lee, Y. and Kozar, K. (2004) 'Developing a theory of website usability: an exploratory study to identify constructs and nomological networks', *ICIS 2004 Proceedings*, , pp. 51.
- Lee, C. (2004) *Asian Journal of Communication*, 14, pp. 68.
- Lefever, S., Dal, M. and Matthiasdottir, A. (2007) 'Online data collection in academic research: advantages and limitations', *British Journal of Educational Technology*, 38(4), pp. 574-582.
- Lertwongsatien, C. and Wongpinunwatana, N. (2003) 'E-commerce adoption in Thailand: An empirical study of Small and Medium Enterprises (SMEs)', *Journal of Global Information Technology Management*, 6(3), pp. 67-83.
- Levenburg, N.M., Schwarz, T.V. and Motwani, J. (2015) 'Understanding adoption of internet technologies among SMEs', *Journal of Small Business Strategy*, 16(1), pp. 51-70.
- Levenburg, N., Magal, S.R. and Kosalge, P. (2006) 'An exploratory investigation of organizational factors and e-business motivations among SMFOEs in the US', *Electronic Markets*, 16(1), pp. 70-84.
- Lever, J., Krzywinski, M. and Altman, N. (2016) 'Points of Significance: Logistic regression', *Nature Methods*, 13(7), pp. 541-542.
- Levy, M., Powell, P. and Yetton, P. (2002) 'The dynamics of SME information systems', *Small Business Economics*, 19(4), pp. 341-354.
- Liamputtong, P. (2009) 'Qualitative data analysis: conceptual and practical considerations', *Health Promotion Journal of Australia*, 20(2), pp. 133-139.
- Lietsala, K. and Sirkkunen, E. (2008) *Social media. Introduction to the tools and processes of participatory economy*.
- Lin, F. (2008) 'Solving multicollinearity in the process of fitting regression model using the nested estimate procedure', *Quality & Quantity*, 42(3), pp. 417-426.
- Lin, J.-., Peng, W., Kim, M., Kim, S.Y. and LaRose, R. (2012) 'Social networking and adjustments among international students', *New Media and Society*, 14(3), pp. 421-440.
- Lippert, S.K. and Forman, H. (2005) 'Utilization of information technology: Examining cognitive and experiential factors of post-adoption behavior', *Engineering Management, IEEE Transactions on*, 52(3), pp. 363-381.
- Lippert, S.K. and Govindarajulu, C. (2015) 'Technological, organizational, and environmental antecedents to web services adoption', *Communications of the IIMA*, 6(1), pp. 14.
- Lippert, S.K. and Govindarajulu, C. (2006) 'Technological, organizational, and environmental antecedents to web services adoption', *Communications of the IIMA*, 6(1), pp. 146-157.
- Litwin, M.S. (1995) *How to measure survey reliability and validity*. Sage Publications.
- Liu, R., Kuang, J., Gong, Q. and Hou, X. (2003) 'Principal component regression analysis with SPSS', *Computer methods and programs in biomedicine*, 71(2), pp. 141-147.
- Looi, H.C. (2005) 'E-commerce adoption in Brunei Darussalam: A quantitative analysis of factors influencing its adoption', *Communications of the Association for Information Systems*, 15(1), pp. 3.
- Lovejoy, K., Waters, R.D. and Saxton, G.D. (2012) 'Engaging stakeholders through Twitter: How nonprofit organizations are getting more out of 140 characters or less', *Public Relations Review*, 38(2), pp. 313-318.

References

- Low, C., Chen, Y. and Wu, M. (2011) 'Understanding the determinants of cloud computing adoption', *Industr Mngmnt & Data Systems*, 111(7), pp. 1006-1023.
- Lumsden, J. (2007) 'Online-questionnaire design guidelines', *Handbook of research on electronic surveys and measurements*, , pp. 44-64.
- Luo, Y. and Bu, J. (2016) 'How valuable is information and communication technology? A study of emerging economy enterprises', *Journal of World Business*, 51(2), pp. 200-211.
- M. R. Amin and H. Hussin (2014) 'E-commerce adoption in SME retail sector: A conceptual model', *Information and Communication Technology for The Muslim World (ICT4M), 2014 The 5th International Conference on.* , 1-6.
- Maguire, S., S.C.L. Koh and Magrys, A. (2007) 'The adoption of e-business and knowledge management in SMEsnull', *Benchmarking*, 14(1), pp. 37-58.
- Mannonen, P. and Runonen, M. (2008) 'SMEs in social media', *Proceedings of NordiCHI 2008 Workshop: How Can HCI Improve social Media Development, Lund.* , 86-91.
- Manochehri, N., Al-Esmail, R. and Ashrafi, R. (2012) 'Examining the impact of information and communication technologies (ICT) on enterprise practices: A preliminary perspective from Qatar', *The Electronic Journal of Information Systems in Developing Countries*, 51.
- Maroof, D.A. (2012) 'Binary logistic regression', in *Statistical Methods in Neuropsychology*. Springer, pp. 67-75.
- Marshall, G. (2005) 'The purpose, design and administration of a questionnaire for data collection', *Radiography*, 11(2), pp. 131-136.
- Marshall, M.N. (1996) 'Sampling for qualitative research', *Family practice*, 13(6), pp. 522-525.
- Martins, J., Goncalves, R., Pereira, J., Oliveira, T. and Pérez Cota, M. (2014) 'Social networks sites adoption at firm level: A literature review', *Information Systems and Technologies (CISTI), 2014 9th Iberian Conference on.* , 1-6.
- Mashaw, B. (2012) 'A model for measuring effectiveness of an online course', *Decision Sciences Journal of Innovative Education*, 10(2), pp. 189-221.
- Mason, G. (1987) 'Coping with collinearity', *Can J Program Eval*, 2, pp. 87-95.
- Mathew, V. (2010) 'Women entrepreneurship in Middle East: understanding barriers and use of ICT for entrepreneurship development', *International Entrepreneurship and Management Journal*, 6(2), pp. 163-181.
- Matsunaga, M. (2015) 'How to Factor-Analyze Your Data Right: Do's, Don'ts, and How-To's.', *International Journal of Psychological Research*, 3(1), pp. 97-110.
- Matthew B. Miles and A. Michael Huberman (1994) *Qualitative data analysis: An expanded sourcebook*. Sage.
- Matuschke, I. (2008) *Evaluating the impact of social networks in rural innovation systems: An overview*. Intl Food Policy Res Inst.
- McAndrew, F.T. and Jeong, H.S. (2012) 'Who does what on Facebook? Age, sex, and relationship status as predictors of Facebook use', *Computers in Human Behavior*, 28(6), pp. 2359-2365.
- McElwee, G. and Al-Riyami, R. (2003) 'Women entrepreneurs in Oman: some barriers to success', *Career Development International*, 8(7), pp. 339-346.
- Mehmood, S. and Taswir, T. (2013) 'The effects of social networking sites on the academic performance of students in college of applied sciences, Nizwa, Oman', *International Journal of Arts and Commerce*, 2(1), pp. 111-125.

References

- Mehrtens, J., Cragg, P.B. and Mills, A.M. (2001) 'A model of Internet adoption by SMEs', *Information & Management*, 39(3), pp. 165-176.
- Menard, S. (2002) *Applied logistic regression analysis*. Sage.
- Merolli, M., Sanchez, F.J.M. and Gray, K. (2014) 'Social media and online survey: tools for knowledge management in health research', *Proceedings of the Seventh Australasian Workshop on Health Informatics and Knowledge Management-Volume 153*. Australian Computer Society, Inc., 21-29.
- Merriam, S.B. (2002) 'Introduction to qualitative research', *Qualitative research in practice: Examples for discussion and analysis*, , pp. 3-17.
- Merrill, T., Latham, K., Santalessa, R. and Navetta, D. (2011) 'Social Media: The Business Benefits May Be Enormous, But Can the Risks-Reputational, Legal, Operational-Be Mitigated', *ACE Limited*, 13.
- Meske, C. and Stieglitz, S. (2013) 'Adoption and use of social media in small and medium-sized enterprises', in *Practice-Driven Research on Enterprise Transformation*. Springer, pp. 61-75.
- Michaelidou, N., Siamagka, N.T. and Christodoulides, G. (2011) 'Usage, barriers and measurement of social media marketing: An exploratory investigation of small and medium B2B brands', *Industrial Marketing Management*, 40(7), pp. 1153-1159.
- Miglani, J. (2014) *Forrester Research Social Media Forecast, 2014 To 2019 (US), Q3 2014 Update*. Forrester Research database: Forrester Research.
- Miles, M.B. and Huberman, A.M. (1994) *Qualitative data analysis: An expanded sourcebook*. Sage.
- Mingers, J. (2003) 'The paucity of multimethod research: a review of the information systems literature', *Information Systems Journal*, 13(3), pp. 233-249.
- Mingers, J. (2001) 'Combining IS research methods: towards a pluralist methodology', *Information systems research*, 12(3), pp. 240-259.
- Mkansi, M. and Acheampong, E.A. (2012) 'Research philosophy debates and classifications: Students' dilemma', *Electronic Journal of Business Research Methods*, 10(2), pp. 132-140.
- Molla, A. and Licker, P.S. (2005) 'eCommerce adoption in developing countries: a model and instrument', *Information & management*, 42(6), pp. 877-899.
- Montgomery, D.C., Peck, E.A. and Vining, G.G. (2015) *Introduction to linear regression analysis*. John Wiley & Sons.
- Moore, G.C. and Benbasat, I. (1991) 'Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation', *Information Systems Research*, 2(3), pp. 192-222.
- Morgan, D.L. (2007) 'Paradigms lost and pragmatism regained methodological implications of combining qualitative and quantitative methods', *Journal of mixed methods research*, 1(1), pp. 48-76.
- Morgan, G.A., Leech, N.L., Gloeckner, G.W. and Barrett, K.C. (2012) *IBM SPSS for introductory statistics: Use and interpretation*. Routledge.
- Morgan, D.L. (1998) 'Practical strategies for combining qualitative and quantitative methods: applications to health research', *Qualitative health research*, 8(3), pp. 362-376.
- Mrs, A. and Sandra, E. (2016) 'Branding SMEs in the UAE's Emerging Market', .
- Myers, M.D. and Newman, M. (2007) 'The qualitative interview in IS research: Examining the craft', *Information and organization*, 17(1), pp. 2-26.
- Myers, R. (1990) 'Classical and modern regression with applications PWS and Kent Publishing Company', *Inc., Boston*, .

References

- Nah, S. and Saxton, G.D. (2013) 'Modeling the adoption and use of social media by nonprofit organizations', *New Media & Society*, 15(2), pp. 294-313.
- Nakara, W.A., Benmoussa, F. and Jaouen, A. (2012) 'Entrepreneurship and social media marketing: evidence from French small business', *International Journal of Entrepreneurship and Small Business*, 16(4), pp. 386-405.
- Nandhakumar, J. and Jones, M. (1997) 'Too close for comfort? Distance and engagement in interpretive information systems research', *Information systems journal*, 7(2), pp. 109-131.
- Nardi, P.M. (2015) *Doing survey research*. Routledge.
- Ndekwa, A.G. and Katunzi, T.M. (2016) 'Small and Medium Tourist Enterprises and Social Media Adoption: Empirical Evidence from Tanzanian Tourism Sector', *International Journal of Business and Management*, 11(4), pp. 71.
- Neelufar, A. and Al Amri, S. 'CHALLENGES AND BARRIERS ENCOUNTERED BY THE SMES OWNERS IN MUSCAT Blossom Christina', .
- Nguyen, T.H. (2009) 'Information technology adoption in SMEs: an integrated frameworknull', *Int Jnl of Ent Behav & Res*, 15(2), pp. 162-186.
- Nguyen, T.H. and Waring, T.S. (2013) 'The adoption of customer relationship management (CRM) technology in SMEs: An empirical study', *Jnl of Small Bus Ente Dev*, 20(4), pp. 824-848.
- Nunnally, J. (1978) 'Psychometric theory 2nd ed', .
- O. E. Omosigbo and G. Abeysinghe (2012) 'Evaluating readiness of organizations to adopt social media for competitive advantage', *Information Society (i-Society)*, 2012 International Conference on. , 16-21.
- O'brien, R.M. (2007) 'A caution regarding rules of thumb for variance inflation factors', *Quality & Quantity*, 41(5), pp. 673-690.
- Oates, B.J. (2005) *Researching information systems and computing*. Sage.
- Olawale, F. and Garwe, D., 2010. Obstacles to the growth of new SMEs in South Africa: A principal component analysis approach. *African Journal of Business Management*, 4(5), pp.729-738.
- Olise, M.C., Anigbogu, T.U., Edoko, T.D. and Okoli, M.I. (2014) 'Determinants of ICT adoption for improved SME's performance in Anambra state, Nigeria', *American International Journal of Contemporary Research*, 4(7), pp. 163-176.
- Oliveira, T. and Martins, M.F. (2010) 'Understanding e-business adoption across industries in European countries', *Industrial Management & Data Systems*, 110(9), pp. 1337-1354.
- Oliveira, T. and Martins, M.F.O. (2008) "A comparison of web site adoption in small and large Portuguese firms", *Ice-B 2008: Proceedings of the International Conference on E-Business*, pp. 370-377, Oporto, Portugal, July.
- Oliveira, T. and Martins, M.F. (2011) 'Literature review of information technology adoption models at firm level', *The Electronic Journal Information Systems Evaluation*, 14(1), pp. 110-121.
- Oliveira, T., Thomas, M. and Espadanal, M. (2014) 'Assessing the determinants of cloud computing adoption: An analysis of the manufacturing and services sectors', *Information & Management*, 51(5), pp. 497-510.
- Olsen, D., Kelytyka, P. and Kimmell, S. (2011) 'Web Surveys In Business Research: Use, Design And Construction Issues', *Review of Business Information Systems (RBIS)*, 7(4), pp. 93-100.
- Omosigbo, O. and Abeysinghe, G. (2012) 'Evaluating readiness of organizations to adopt social media for competitive advantage', *Information Society (i-Society)*, 2012 International Conference on. , 16-21.

References

- Ongori, H. (2009) 'Role of information communication technologies adoption in SMES: evidence from Botswana', .
- Ongori, H. and Migiro, S.O. (2010) 'Information and communication technologies adoption in SMEs: literature review', *Journal of Chinese Entrepreneurship*, 2(1), pp. 93-104.
- Oni, O. and Papazafeiropoulou, A. (2014) 'Diverse views on IT innovation diffusion among SMEs: Influencing factors of broadband adoption', *Information Systems Frontiers*, 16(4), pp. 729-747.
- Onwuegbuzie, A.J. and Collins, K.M. (2007) 'A typology of mixed methods sampling designs in social science research', *The qualitative report*, 12(2), pp. 281-316.
- Onwuegbuzie, A.J. and Leech, N.L. (2005) 'On Becoming a Pragmatic Researcher: The Importance of Combining Quantitative and Qualitative Research Methodologies', *International Journal of Social Research Methodology*, 8(5), pp. 375-387.
- Orlikowski, W.J. and Baroudi, J.J. (1991) 'Studying Information Technology in Organizations: Research Approaches and Assumptions', .
- Ortega Góngora, M. (2016) *Study of the factors influencing the adoption of social media in SMEs*, .
- Osborne, J.W. and Costello, A.B. (2009) 'Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis', *Pan-Pacific Management Review*, 12(2), pp. 131-146.
- Östlund, U., Kidd, L., Wengström, Y. and Rowa-Dewar, N. (2011) 'Combining qualitative and quantitative research within mixed method research designs: a methodological review', *International journal of nursing studies*, 48(3), pp. 369-383.
- Ott, R.L. and Longnecker, M.T. (2008) *An introduction to statistical methods and data analysis*. Cengage Learning.
- Oxborrow, N.J. (2012) 'Social Media Helps Small Businesses', .
- Palinkas, L.A., Aarons, G.A., Horwitz, S., Chamberlain, P., Hurlburt, M. and Landsverk, J. (2011) 'Mixed method designs in implementation research', *Administration and Policy in Mental Health and Mental Health Services Research*, 38(1), pp. 44-53.
- Pallant, J. (2013) *SPSS survival manual*. McGraw-Hill Education (UK).
- Pan, M. and Jang, W. (2008) 'Determinants of the adoption of enterprise resource planning within the technology-organization-environment framework: Taiwan's communications', *Journal of Computer information systems*, 48(3), pp. 94.
- Paquette, H. (2013) 'Social Media as a Marketing Tool: A Literature Review', .
- Park, H. (2013) 'An introduction to logistic regression: from basic concepts to interpretation with particular attention to nursing domain', *Journal of Korean Academy of Nursing*, 43(2), pp. 154-164.
- Parveen, F. (2012) 'Impact Of Social Media Usage On Organizations', .
- Parveen, F., Jaafar, N.I. and Ainin, S. (2015) 'Social media usage and organizational performance: Reflections of Malaysian social media managers', *Telematics and Informatics*, 32(1), pp. 67-78.
- Patel, H. and Joseph, J. (2016) 'Questionnaire Designing Process: A Review', *J Clin Trials*, 6(255), pp. 2167-0870.1000255.
- Patterson, B.J. (2013) 'A mixed methods investigation of leadership and performance in practice-based research networks', .
- Paul Jones, Prof Gary Packham, Dr Martin Beckinsale, Dr, Spinelli, R., Dyerson, R. and Harindranath, G. (2013) 'IT readiness in small firms', *Journal of Small Business and Enterprise Development*, 20(4), pp. 807-823.

References

- Paul Jones, Professor Gary Packham and Dr Martin Beckinsale, Dr, Ramdani, B., Chevers, D. and A. Williams, D. (2013) 'SMEs' adoption of enterprise applications: A technology-organisation-environment model', *Journal of Small Business and Enterprise Development*, 20(4), pp. 735-753.
- Pearce, J. and Ferrier, S. (2000) 'Evaluating the predictive performance of habitat models developed using logistic regression', *Ecological Modelling*, 133(3), pp. 225-245.
- Peng, C.J. and So, T.H. (2002) 'Logistic regression analysis and reporting: A primer', *Understanding Statistics: Statistical Issues in Psychology, Education, and the Social Sciences*, 1(1), pp. 31-70.
- Peris, M., Blinn, N., Nuttgens, M., Lindermann, N. and von Kortzfleisch, H. (2013) 'Acceptance of Professional Web 2.0 Platforms in Regional SME Networks: An Evaluation Based on the Unified Theory of Acceptance and Use of Technology', *System Sciences (HICSS), 2013 46th Hawaii International Conference on. IEEE*, 2793-2802.
- Persaud, A., Spence, M. and Rahman, M. (2012) 'Social media implementation in small service firms', *International Journal of E-Business Development*, .
- Pfleeger, S.L. and Kitchenham, B.A. (2001) 'Principles of survey research: part 1: turning lemons into lemonade', *ACM SIGSOFT Software Engineering Notes*, 26(6), pp. 16-18.
- Pituch, K.A. and Lee, Y. (2006) 'The influence of system characteristics on e-learning use', *Computers & Education*, 47(2), pp. 222-244.
- Poon, S. and Swatman, P.M. (1999) 'An exploratory study of small business Internet commerce issues', *Information & management*, 35(1), pp. 9-18.
- Poon, S. and Swatman, P.M. (1997) 'Small business use of the Internet: Findings from Australian case studies', *International Marketing Review*, 14(5), pp. 385-402.
- Pope, C., Ziebland, S. and Mays, N. (2000) 'Qualitative research in health care. Analysing qualitative data', *BMJ (Clinical research ed.)*, 320(7227), pp. 114-116.
- Preissle, J. and Le Compte, M.D. (1984) *Ethnography and qualitative design in educational research*. Academic Press.
- Premkumar, G. (2003) 'A meta-analysis of research on information technology implementation in small business', *Journal of organizational computing and electronic commerce*, 13(2), pp. 91-121.
- Premkumar, G. and Roberts, M. (1999) 'Adoption of new information technologies in rural small businesses', *Omega*, 27(4), pp. 467-484.
- Rahayu, R. and Day, J. (2015) 'Determinant Factors of E-commerce Adoption by SMEs in Developing Country: Evidence from Indonesia', *Procedia - Social and Behavioral Sciences*, 195, pp. 142-150.
- Ramayah, T., Ling, N.S., Taghizadeh, S.K. and Rahman, S.A. (2016) 'Factors influencing SMEs website continuance intention in Malaysia', *Telematics and Informatics*, 33(1), pp. 150-164.
- Ramayah, T., man Mohamad, O., Omar, A., Marimuthu, M. and Leen, J.Y.A. (2013) 'DETERMINANTS OF TECHNOLOGY ADOPTION AMONG MALAYSIAN SMES: AN IDT PERSPECTIVE', *Journal of ICT*, 12, pp. 103-119.
- Ramdani, B. and Kawalek, P. (2007a) 'Exploring SMEs adoption of broadband in the northwest of England', *Handbook of research on global diffusion of broadband data transmission.Hershey, PA: IGI Global*, .
- Ramdani, B. and Kawalek, P. (2007b) 'SME Adoption of Enterprise Systems in the Northwest of England', in *Organizational dynamics of technology-based innovation: Diversifying the research agenda*. Springer, pp. 409-429.
- Ramdani, B., Kawalek, P. and Lorenzo, O. (2009) 'Predicting SMEs' adoption of enterprise systems', *Journal of Enterprise Information Management*, 22(1/2), pp. 10-24.

References

- Ramdani, B., Lorenzo, O. and Kawalek, P. (2009) 'Information systems innovations adoption and diffusion among SMEs: Current status and future prospects', *International Journal of E-Adoption (IJEa)*, 1(1), pp. 33-45.
- Ramdani, B., Chevers, D. and Williams, D.A. (2013) 'SMEs' adoption of enterprise applications: A technology-organisation-environment model', *Jrnl of Small Bus Ente Dev*, 20(4), pp. 735-753.
- Raymond, L. (2001) 'Determinants of web site implementation in small businesses', *Internet Research*, 11(5), pp. 411-424.
- Rea, L.M. and Parker, R.A. (2014) *Designing and conducting survey research: A comprehensive guide*. John Wiley & Sons.
- Reynolds, R.A. (2006) *Handbook of research on electronic surveys and measurements*. IGI Global.
- Riemenschneider, C.K., Harrison, D.A. and Mykytyn, P.P. (2003) 'Understanding IT adoption decisions in small business: integrating current theories', *Information & management*, 40(4), pp. 269-285.
- Ritchie, B. and Brindley, C. (2005) 'ICT adoption by SMEs: implications for relationships and management', *New Technology, Work and Employment*, 20(3), pp. 205-217.
- Ritchie, J., Lewis, J., Nicholls, C.M. and Ormston, R. (2013) *Qualitative research practice: A guide for social science students and researchers*. Sage.
- Roberts, P. and Priest, H. (2006) 'Reliability and validity in research', *Nursing standard (Royal College of Nursing (Great Britain) : 1987)*, 20(44), pp. 41-45.
- Rogelberg, S.G. and Stanton, J.M. (2007) 'Introduction: Understanding and Dealing With Organizational Survey Nonresponse', *Organizational Research Methods*, 10(2), pp. 195-209.
- Rogers Everett, M. (1995) 'Diffusion of innovations', *New York*, , pp. 12.
- Rogers, E. (1962) 'The Diffusion of Innovations', .
- Rogers, E.M. (2010) *Diffusion of innovations*. Simon and Schuster.
- Rogers, E.M. (2003) *Diffusion of Innovations*. Simon and Schuster.
- Ross, P.K. and Blumenstein, M. (2015) 'Cloud computing as a facilitator of SME entrepreneurship', *Technology Analysis & Strategic Management*, 27(1), pp. 87-101.
- Rowe, F., Truex, D. and Huynh, M.Q. (2012) 'An empirical study of determinants of e-commerce adoption in SMEs in Vietnam: An economy in transition', *Journal of Global Information Management (JGIM)*, 20(3), pp. 23-54.
- Rowley, J. (2012) 'Conducting research interviews', *Management Research Review*, 35(3/4), pp. 260-271.
- Rowley, J. (2014) 'Designing and using research questionnaires', *Management Research Review*, 37(3), pp. 308-330.
- Roy, A. and Dionne, C. (2014) 'Social Media: How Small and Medium-sized Enterprises Perceived and Used Them?', *ECSM2014-Proceedings of the European Conference on Social Media: ECSM 2014*. Academic Conferences Limited, 449.
- Ryan, G.W. and Bernard, H.R. (2003) 'Techniques to Identify Themes', *Field Methods*, 15(1), pp. 85-109.
- Sabah, A.A., Gholami, R. and Clegg, B. (2015) 'A stage-oriented model (SOM) for e-commerce adoption: a study of Saudi Arabian organisations', *Jnl of Manu Tech Mnagmnt*, 26(1), pp. 2-35.
- Sadat Safavi, N., Amini, M. and Javadinia, S.A. (2014) 'The Determinant of Adoption of Enterprise Resource Planning for Small and Medium Enterprises in Iran', *International Journal of Advanced Research in IT and Engineering (IJARIE)*, 3(1), pp. 1-8.

References

- Safari, F., Safari, N., Hasanzadeh, A., Irani, Z. and Irani, Z. (2015) 'The adoption of software-as-a-service (SaaS): ranking the determinants', *Journal of Enterprise Information Management*, 28(3).
- Saifullah Sadi, A.H.M., Azad, I. and Noorudin, M.F. (2010) 'The prospects and user perceptions of M-Banking in the sultanate of Oman', *Journal of Internet Banking and Commerce*, 15(2), pp. 1-11.
- Saldanha, T.J.V. and Krishnan, M.S. (2012) 'Organizational Adoption of Web 2.0 Technologies: An Empirical Analysis', *Journal of Organizational Computing and Electronic Commerce*, 22(4), pp. 301-333.
- Salem, F. (2012) 'Social Media, Employment and Entrepreneurship: New Frontiers for the Economic Empowerment of Arab Youth', *Employment and Entrepreneurship: New Frontiers for the Economic Empowerment of Arab Youth (October 3, 2012)*, .
- Samuel, B.S. and Ioe, S. (2016) 'Social Media and Entrepreneurship', *The Social Sciences*, 11(5), pp. 639-644.
- Sánchez-Fernández, J., Muñoz-Leiva, F. and Montoro-Ríos, F.J. (2012) 'Improving retention rate and response quality in Web-based surveys', *Computers in Human Behavior*, 28(2), pp. 507-514.
- Sandelowski, M. (2000) 'Focus on research methods combining qualitative and quantitative sampling, data collection, and analysis techniques', *Research in nursing & health*, 23, pp. 246-255.
- Santos, J.R.A. (1999) 'Cronbach's alpha: A tool for assessing the reliability of scales', *Journal of extension*, 37(2), pp. 1-5.
- SAS Institute (2014) *SAS 9.4 Output Delivery System: User's Guide*. SAS institute.
- Sashi, C. (2012) 'Customer engagement, buyer-seller relationships, and social media', *Management decision*, 50(2), pp. 253-272.
- Saunders, M.N. (2011) *Research methods for business students, 5/e*. Pearson Education India.
- Saunders, M., Saunders, M., Lewis, P. and Thornhill, A. (2011) 'Research methods for business students, 5/e: Pearson Education India', .
- Sax, L.J., Gilmartin, S.K. and Bryant, A.N. (2003) 'Assessing response rates and nonresponse bias in web and paper surveys', *Research in higher education*, 44(4), pp. 409-432.
- Schein, A.I. and Ungar, L.H. (2007) 'Active learning for logistic regression: an evaluation', *Machine Learning*, 68(3), pp. 235-265.
- Schlagwein, D. and Prasarnphanich, P. (2011) 'Cultural determinants of organizational social media adoption', .
- Schlagwein, D. and Prasarnphanich, P. (2014) 'Social Media Around the GLOBE', *Journal of Organizational Computing and Electronic Commerce*, 24(2-3), pp. 122-137.
- Schofield, J.W. (2002) 'Increasing the generalizability of qualitative research', *The qualitative researcher's companion*, , pp. 171-203.
- Schultze, U. and Avital, M. (2011) 'Designing interviews to generate rich data for information systems research', *Information and Organization*, 21(1), pp. 1-16.
- Schwab, K. (2015) 'World Economic Forum's Global Competitiveness Report, 2014-2015', Retrieved from http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf.
- Scupola, A. (2009) 'SMEs'e-commerce adoption: perspectives from Denmark and Australia', *Journal of Enterprise Information Management*, 22(1/2), pp. 152-166.
- Scupola, A. (2003) 'The adoption of Internet commerce by SMEs in the south of Italy: An environmental, technological and organizational perspective', *Journal of Global Information Technology Management*, 6(1), pp. 52-71.
- Seale, C. (2004) *Social research methods: A reader*. Psychology Press.

References

- Seyal, A.H., Noah Abd Rahman, M. and Awg Yussof Hj Awg Mohammad, Hj (2007) 'A quantitative analysis of factors contributing electronic data interchange adoption among Bruneian SMEs: A pilot study', *Business Process Management Journal*, 13(5), pp. 728-746.
- Seyal, A.H. and Rahman, M.N.A. (2003) 'A preliminary investigation of e-commerce adoption in small & medium enterprises in Brunei', *Journal of Global Information Technology Management*, 6(2), pp. 6-26.
- Shah Alam, S. (2009) 'Adoption of internet in Malaysian SMEs', *Journal of Small Business and Enterprise Development*, 16(2), pp. 240-255.
- Shaharudin, M.R., Omar, M.W., Elias, S.J., Ismail, M., Ali, S.M. and Fadzil, M.I. (2012) 'Determinants of electronic commerce adoption in Malaysian SMEs' furniture industry', *African Journal of Business Management*, 6(10), pp. 3648.
- Shiels, H., Mclvor, R. and O'Reilly, D. (2003) 'Understanding the implications of ICT adoption: insights from SMEs', *Logistics Information Management*, 16(5), pp. 312-326.
- Sigala, M. (2012) 'Social networks and customer involvement in new service development (NSD): The case of www.mystarbucksidea.com', *Int J Contemp Hospitality Mngt*, 24(7), pp. 966-990.
- Sin, K.Y., Osman, A., Salahuddin, S.N., Abdullah, S., Lim, Y.J. and Sim, C.L. (2016) 'Relative Advantage and Competitive Pressure towards Implementation of E-commerce: Overview of Small and Medium Enterprises (SMEs)', *Procedia Economics and Finance*, 35, pp. 434-443.
- Sinclair, J.K. and Vogus, C.E. (2011) 'Adoption of social networking sites: an exploratory adaptive structuration perspective for global organizations', *Information Technology and Management*, 12(4), pp. 293-314.
- Singh, R. and Mangat, N.S. (2013) *Elements of survey sampling*. Springer Science & Business Media.
- Skoko, H., Ceric, A. and Huang, C. (2008) 'ICT adoption model of Chinese SMEs', *International Journal of Business Research* 4(8): pp. 161-165.
- Skoko, H., Krivokapic-Skoko, B., Skare, M. and Ceric, A., 2006. ICT adoption policy of Australian and Croatian SMEs. *Managing Global Transitions*, 4(1), p.25
- Sloane, D. and Morgan, S.P. (1996) 'An Introduction to Categorical Data Analysis', *Annual Review of Sociology*, 22, pp. 351-375.
- Smith, J. and Firth, J. (2011) 'Qualitative data analysis: the framework approach', *Nurse researcher*, 18(2), pp. 52-62.
- Solomon, D.J. (2001) 'Conducting Web-Based Surveys. ERIC Digest.', .
- Soriano, D., Garrigos-Simon, F.J., Lapiedra Alcamí, R. and Barberá Ribera, T. (2012) 'Social networks and Web 3.0: their impact on the management and marketing of organizations', *Management Decision*, 50(10), pp. 1880-1890.
- Soto-Acosta, P., Perez-Gonzalez, D. and Popa, S. (2014) 'Determinants of Web 2.0 technologies for knowledge sharing in SMEs', *Service Business*, 8(3), pp. 425-438.
- Sperandei, S. (2014) 'Understanding logistic regression analysis', *Biochemia medica*, 24(1), pp. 12-18.
- Spinelli, R., Dyerson, R. and Harindranath, G. (2013) 'IT readiness in small firms', *Journal of Small Business and Enterprise Development*, 20(4), pp. 807-823.
- SPSS, I. (2014) *SPSS Statistical software*, .
- Srivastava, S.C. and Teo, T.S. (2010) 'E-government, e-business, and national economic performance', *Communications of the association for information systems*, 26(1), pp. 14.
- Stephenson, B., Cook, D., Dixon, P., Duckworth, W., Kaiser, M., Koehler, K. and Meeker, W. (2008) *Binary response and logistic regression analysis*, .

References

- Stieglitz, S. and Dang-Xuan, L. (2011) 'Adoption and Use of Corporate Wikis in German Small and Medium-sized Enterprises', .
- Stockdale, R., Ahmed, A. and Scheepers, H. (2012) 'Identifying Business Value From The Use Of Social Media: An Sme Perspective.', PACIS. , 169.
- Stockdale, R. and Standing, C. (2004) 'Benefits and barriers of electronic marketplace participation: an SME perspective null', *Journal of Ent Info Management*, 17(4), pp. 301-311.
- Stoltzfus, J.C. (2011) 'Logistic regression: a brief primer', *Academic Emergency Medicine*, 18(10), pp. 1099-1104.
- Strauss, A. and Corbin, J. (1990) *Basics of qualitative research*. Newbury Park, CA: Sage.
- Stringer, E.T. and Genat, W. (2004) *Action research in health*. Merrill Prentice Hall.
- Stroeken, J.H. (2001) 'The adoption of IT by SMEs: The Dutch case', *Journal of Enterprising Culture*, 9(01), pp. 129-152.
- Subrahmanya, M., Mathirajan, M. and Krishnaswamy, K. (2010) *Importance of technological innovation for SME growth: Evidence from India*. Working paper/World Institute for Development Economics Research.
- Sue, V.M. and Ritter, L.A. (2012) *Conducting online surveys*. Sage.
- Surry, D.W., Grubb, A.G., Ensminger, D.C. and Ouimette, J. (2009) 'Implementation of web-based learning in colleges of education: Barriers and enablers', *Canadian Journal of Learning and Technology/La revue canadienne de l'apprentissage et de la technologie*, 35(3).
- Sykes, A.O. (1993) 'An introduction to regression analysis', .
- Talukder, M., Quazi, A. and Djatikusumo, D. (2013) 'IMPACT OF SOCIAL INFLUENCE ON INDIVIDUALS' ADOPTION OF SOCIAL NETWORKS IN SMES', *Journal of Computer Science*, 9(12), pp. 1686.
- Tan, K.S., Chong, S.C., Lin, B. and Eze, U.C. (2009) 'Internet-based ICT adoption: evidence from Malaysian SMEs', *Industrial Management & Data Systems*, 109(2), pp. 224-244.
- Tan, K.S. and Eze, U.C. (2008) 'An empirical study of internet-based ICT adoption among Malaysian SMEs', *Communications of the IBIMA*, 1(1), pp. 1-12.
- Tan, K.S., Eze, U.C. and Chong, S.C. (2012) 'Effects of industry type on ICT adoption among Malaysian SMEs', *Journal of Supply Chain and Customer Relationship Management*, 2012, pp. 1.
- Tarutè, A. and Gatautis, R. (2014) 'ICT Impact on SMEs Performance', *Procedia - Social and Behavioral Sciences*, 110, pp. 1218-1225.
- Tashakkori, A. and Teddlie, C. (2010) *Sage handbook of mixed methods in social & behavioral research*. Sage.
- Tavakol, M. and Dennick, R. (2011) 'Making sense of Cronbach's alpha', *International journal of medical education*, 2, pp. 53.
- Taylor, M. and Murphy, A. (2004) 'SMEs and the take-up of e-business', *Urban Geography*, 25(4), pp. 315-331.
- Teddlie, C. and Tashakkori, A. (2003) 'Major issues and controversies in the use of mixed methods in the social and behavioral sciences', *Handbook of mixed methods in social & behavioral research*, , pp. 3-50.
- Teddlie, C. and Yu, F. (2007) 'Mixed methods sampling a typology with examples', *Journal of mixed methods research*, 1(1), pp. 77-100.
- Tehrani, S.R. and Shirazi, F. (2014) 'Factors Influencing the Adoption of Cloud Computing by Small and Medium Size Enterprises (SMEs)', in *Human Interface and the Management of Information. Information and Knowledge in Applications and Services*. Springer, pp. 631-642.

References

- Teo, T.S. (2007) 'Organizational characteristics, modes of internet adoption and their impact: a Singapore perspective', *Journal of Global Information Management*, 15(2), pp. 91.
- Terrell, S.R. (2012) 'Mixed-methods research methodologies', *The Qualitative Report*, 17(1), pp. 254-280.
- Tharenou, P., Donohue, R. and Cooper, B. (2007) *Management research methods*. Cambridge University Press New York, NY.
- Thi, L.S. (2006) 'Electronic commerce adoption among manufacturing SMEs in Malaysia', .
- Thong, J.Y. (1999) 'An Integrated Model of Information Systems Adoption in Small Businesses', .
- Thong, J.Y. and Yap, C. (1995) 'CEO characteristics, organizational characteristics and information technology adoption in small businesses', *Omega*, 23(4), pp. 429-442.
- Thong, J.Y., Yap, C. and Raman, K. (1997) 'Environments for information systems implementation in small businesses', *Journal of organizational computing and electronic commerce*, 7(4), pp. 253-278.
- Thong, J.Y., Yap, C. and Raman, K. (1993) 'Top management support in small business information systems implementation: how important is it?', *Proceedings of the 1993 conference on Computer personnel research*. ACM, 416-425.
- Thorne, S. (2000) 'Data analysis in qualitative research', *Evidence based nursing*, 3(3), pp. 68-70.
- Thwaites Bee, D. and Murdoch-Eaton, D. (2016) 'Questionnaire design: the good, the bad and the pitfalls', *Archives of disease in childhood. Education and practice edition*, 101(4), pp. 210-212.
- Tiessen, J.H., Wright, R.W. and Turner, I. (2001) 'A model of e-commerce use by internationalizing SMEs', *Journal of International Management*, 7(3), pp. 211-233.
- Toepoel, V. and Lugtig, P. (2015) 'Online surveys are mixed-device surveys. Issues associated with the use of different (mobile) devices in web surveys', *Methods, Data, Analyses*, 9(2), pp. 155-162.
- Toker, A., Seraj, M., Kuscu, A., Yavuz, R., Koch, S. and Bisson, C. 'Social Media Maturity and Social Media Intention by SMEs in Turkey', .
- Tongco, M.D.C. (2007) 'Purposive sampling as a tool for informant selection', .
- Tornatzky, L.G., Fleischer, M. and Chakrabarti, A.K. (1990) *Processes of technological innovation*. Lexington Books.
- Treem, J.W. and Leonardi, P.M. (2012) 'Social media use in organizations: Exploring the affordances of visibility, editability, persistence, and association', *Communication yearbook*, 36, pp. 143-189.
- Triola, M.F. (2008) *Essentials of statistics*. Pearson Addison Wesley Boston, MA, USA:.
- Trochim, W.M. and Donnelly, J.P. (2001) 'Research methods knowledge base', .
- Tsao, H., Lin, K.H. and Lin, C. (2004) 'An investigation of critical success factors in the adoption of B2BEC by Taiwanese companies', *Journal of American Academy of Business*, 5(1), pp. 198-202.
- Vaismoradi, M., Turunen, H. and Bondas, T. (2013) 'Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study', *Nursing & health sciences*, 15(3), pp. 398-405.
- Van Selm, M. and Jankowski, N.W. (2006) 'Conducting online surveys', *Quality and Quantity*, 40(3), pp. 435-456.
- Van Teijlingen, E.R., Rennie, A., Hundley, V. and Graham, W. (2001) 'The importance of conducting and reporting pilot studies: the example of the Scottish Births Survey', *Journal of advanced nursing*, 34(3), pp. 289-295.

References

- Vatcheva, K.P., Lee, M., McCormick, J.B. and Rahbar, M.H. (2016) 'Multicollinearity in Regression Analyses Conducted in Epidemiologic Studies', *Epidemiology (Sunnyvale, Calif.)*, 6(2).
- Venkatesh, V., Brown, S.A. and Bala, H. (2013) 'Bridging the Qualitative-Quantitative Divide: Guidelines for Conducting Mixed Methods Research in Information Systems.', *MIS quarterly*, 37(1), pp. 21-54.
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003a) 'A Unified Theory of Acceptance and Use of Technology', *MIS Quarterly*, 27(3), pp. 425-478.
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003b) 'User acceptance of information technology: Toward a unified view', *MIS quarterly*, , pp. 425-478.
- Verheyden, M. and Goeman, K. (2013) 'Does (company) size matter? Differences in social media usage for business purposes', *Journal of Applied Quantitative Methods*, 8(4), pp. 3-16.
- Vlachvei, A. and Notta, O. (2014) 'Social media adoption and managers' perceptions', *International Journal of Strategic Innovative Marketing*, 1(2), pp. 61-73.
- Walczuch, R., Van Braven, G. and Lundgren, H. (2000) 'Internet adoption barriers for small firms in the Netherlands', *European Management Journal*, 18(5), pp. 561-572.
- Walford*, G. (2005) 'Research ethical guidelines and anonymity 1', *International Journal of Research & Method in Education*, 28(1), pp. 83-93.
- Wally, E. and Koshy, S. (2014) 'The use of Instagram as a marketing tool by Emirati female entrepreneurs: an exploratory study', .
- Walsham, G. (1995) 'Interpretive case studies in IS research: nature and method', *European Journal of information systems*, 4(2), pp. 74-81.
- Walsham, G. (1993) *Interpreting information systems in organizations*. John Wiley & Sons, Inc.
- Wamba, S.F. and Carter, L. (2014) 'Social Media Tools Adoption and Use by SMES: An Empirical Study', *Journal of Organizational and End User Computing (JOEUC)*, 26(2), pp. 1-17.
- Wamba, S.F. and Carter, L.D. (2013) 'Twitter adoption and use by SMEs: An empirical study', .
- Wang, R., Fu, Z. and Duan, Y. (2011) 'Understanding ICTs adoption from an evolutionary process perspective', *Management and Service Science (MASS), 2011 International Conference on. IEEE*, 1-4.
- Wang, Y., Susarla, A. and Sambamurthy, V. (2015) 'The Untold Story of Social Media on Offline Sales: The Impact of Facebook in the US Automobile Industry', .
- Wang, Y., Wang, Y. and Yang, Y. (2010) 'Understanding the determinants of RFID adoption in the manufacturing industry', *Technological forecasting and social change*, 77(5), pp. 803-815.
- Wen, K. and Chen, Y. (2010) 'E-business value creation in Small and Medium Enterprises: a US study using the TOE framework', *International Journal of Electronic Business*, 8(1), pp. 80-100.
- Weston, C., Gandell, T., Beauchamp, J., McAlpine, L., Wiseman, C. and Beauchamp, C. (2001) 'Analyzing interview data: The development and evolution of a coding system', *Qualitative sociology*, 24(3), pp. 381-400.
- Williams, A. (2014) 'How to... Write and analyse a questionnaire', *Journal of orthodontics*, .
- Williams, B., Onsmann, A. and Brown, T. (2010) 'Exploratory factor analysis: A five-step guide for novices', *Australasian Journal of Paramedicine*, 8(3).
- Williamson, T. and Long, A.F. (2005) 'Qualitative data analysis using data displays: The amount of data generated in qualitative research can be difficult to manage. In this paper Tracey W', *Nurse researcher*, 12(3), pp. 7-19.

References

- Wilmot, A. (2005) 'Designing sampling strategies for qualitative social research: with particular reference to the Office for National Statistics' Qualitative Respondent Register', *SURVEY METHODOLOGY BULLETIN-OFFICE FOR NATIONAL STATISTICS*-, 56, pp. 53.
- Wilson, B.M.R., Khazaei, B. and Hirsch, L. (2015) 'Enablers and barriers of cloud adoption among Small and Medium Enterprises in Tamil Nadu', *2015 IEEE International Conference on Cloud Computing in Emerging Markets (CCEM)*. IEEE, 140-145.
- Windrum, P. and Berranger, P.d. (2003) 'Factors affecting the adoption of intranets and extranets by SMEs: a UK study', .
- Wong, C. and Sloan, B. (2004) 'Use of ICT for e-procurement in the UK construction industry: a survey of SMES readiness', *ARCOM Proceedings Twentieth Annual Conference*. , 1-3.
- Wong, C.B. (2012) 'Facebook Usage by Small and Medium-sized Enterprise: The Role of Domain-Specific Innovativeness', *Global Journal of Computer Science and Technology*, 12(4).
- Wright, K.B. (2005) 'Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services', *Journal of Computer-Mediated Communication*, 10(3), pp. 00-00.
- Wymer, S.A. and Regan, E.A. (2005) 'Factors influencing e-commerce adoption and use by small and medium businesses', *Electronic Markets*, 15(4), pp. 438-453.
- Xiang, Z. and Gretzel, U. (2010) 'Role of social media in online travel information search', *Tourism Management*, 31(2), pp. 179-188.
- Yang, J., Wu, C. and Tsai, C. (2007) 'Selection of an ERP system for a construction firm in Taiwan: A case study', *Automation in Construction*, 16(6), pp. 787-796.
- Yang, K.H., Lee, S.M. and Lee, S. (2007) 'Adoption of information and communication technology: impact of technology types, organization resources and management style', *Industrial Management & Data Systems*, 107(9), pp. 1257-1275.
- Yap, C., Thong, J.Y. and Raman, K. (1994) 'Effect of government incentives on computerisation in small business', *European Journal of Information Systems*, 3(3), pp. 191-206.
- Yeboah-Boateng, E.O. and Essandoh, K.A. (2014) 'Factors Influencing the Adoption of Cloud Computing by Small and Medium Enterprises (SMEs) in Developing Economies', *International Journal of Emerging Science and Engineering (IJESE)*, 2(4), pp. 13-20.
- Yee-Loong Chong, A. and Ooi, K. (2008) 'Adoption of interorganizational system standards in supply chains: an empirical analysis of RosettaNet standards', *Industrial Management & Data Systems*, 108(4), pp. 529-547.
- Yong, A.G. and Pearce, S. (2013) 'A beginner's guide to factor analysis: Focusing on exploratory factor analysis', *Tutorials in Quantitative Methods for Psychology*, 9(2), pp. 79-94.
- Yu-Hui, L. (2008) 'An empirical investigation on the determinants of e-procurement adoption in Chinese manufacturing enterprises', *Management Science and Engineering, 2008. ICMSE 2008. 15th Annual Conference Proceedings*., *International Conference on*. IEEE, 32-37.
- Zachariadis, M., Scott, S.V. and Barrett, M.I. (2012) 'Designing mixed-method research inspired by a critical realism philosophy: a tale from the field of IS innovation', *Association for Information Systems*.
- Zeller, R.A. and Carmines, E.G. (1980) *Measurement in the social sciences: The link between theory and data*. CUP Archive.
- Zellner, D., Keller, F. and Zellner, G.E. (2004) 'Variable selection in logistic regression models', *Communications in Statistics-Simulation and Computation*, 33(3), pp. 787-805.
- Zhang, S., Zhang, L., Qiu, K., Lu, Y. and Cai, B. (2015) 'Variable Selection in Logistic Regression Model', *Chinese Journal of Electronics*, 24(4), pp. 813-817.

References

- Zhang, Y. (2000) 'Using the Internet for survey research: A case study', *Journal of the American society for information science*, 51(1), pp. 57-68.
- Zhu, K., Kraemer, K.L. and Xu, S. (2002) 'A cross-country study of electronic business adoption using the technology-organization-environment framework', *Center for Research on Information Technology and Organizations*, .
- Zhu, K., Kraemer, K. and Xu, S. (2003) 'Electronic business adoption by European firms: a cross-country assessment of the facilitators and inhibitors', *European Journal of Information Systems*, 12(4), pp. 251-268.
- Zhu, Y., Wittmann, X. and Peng, M.W. (2012) 'Institution-based barriers to innovation in SMEs in China', *Asia Pacific Journal of Management*, 29(4), pp. 1131-1142.
- Zohrabi, M. (2013) 'Mixed method research: Instruments, validity, reliability and reporting findings', *Theory and Practice in Language Studies*, 3(2), pp. 254.

Appendix A

محاوِر اسئلة المقابلة مع اصحاب المؤسسات الصغيرة والمتوسطة

I. المحور الاول: أسئلة عامة (عن المؤسسة والشخص المشارك في المقابلة):

- ارجو تقديم نبذة مختصرة عنك وعن تاريخ المؤسسة وأنتشطتها التجارية المختلفة.
- ما هي صفتك الوظيفية في المؤسسة؟

II. المحور الثاني: أسئلة عامة (التقنيات الموجودة و المستخدمة في المؤسسة – منها وسائل الاعلام الاجتماعية)

- ما هي التقنيات او التطبيقات الالكترونية المستخدمة حاليا في المؤسسة؟
- ما هي المعايير التي تم اخذها في الاعتبار عند اختيار تقنيات او تطبيقات الكترونية محددة؟
- ماهي التقنيات او التطبيقات التي تحتاج لها مؤسستك ؟ ولماذا ؟
- ما هو تقييمك لمدى فعالية مؤسستك في البحث عن التقنيات الالكترونية الحديثة؟
- لماذا قررت المؤسسة (تطبيق / عدم تطبيق) شبكات التواصل الاجتماعي
- ما هي الاهداف التي تسعى لتحقيقها من خلال استخدام وسائل الاعلام الاجتماعية ؟
- الى أي مدى مؤسستكم على دراية ب وسائل الاعلام الاجتماعية ؟
- هل تعتقد ان تواجد مؤسستكم في صفحات وسائل الاعلام الاجتماعية ساعد في تحقيق أهداف المؤسسة؟ كيف ذلك؟
- ما هي التحديات او الفوائد من اعتماد وسائل الاعلام الاجتماعية في المؤسسة؟

III. المحور الثالث: ويتعلق بمعرفة أهمية مميزات شبكات التواصل الاجتماعي في تسهيل قرار اعتماد وسائل الاعلام الاجتماعية وتأثير البعد التقني في اتخاذ مثل هذه القرارات.

- اذا كنت من مستخدمي شبكات التواصل الاجتماعي ، من وجهة نظرك ما يميز شبكات التواصل عن تطبيقات الانترنت السابقة مثل البريد الالكتروني والمواقع الالكترونية؟
- من وجهة نظرك ، ما تأثير الميزة التسيبية (القدرة على الوصول لعدد اكبر من الزبائن ، قلة التكلفة و القدرة على بناء ونشر اسم المؤسسة في فترة قصيرة) ل وسائل الاعلام الاجتماعية في قبول تطبيقها في المؤسسة؟
- من وجهة نظرك ، ما تأثير ميزة سهولة استخدام وسائل الاعلام الاجتماعية في اعتماد هذه التقنيات في مؤسستكم؟
- من وجهة نظرك ، ما تأثير توافق وانسجام وسائل الاعلام الاجتماعية (توافقها مع طبيعة العمل و مع التقنيات السابقة) في قبول اعتمادها في المؤسسة؟
- من وجهة نظرك ، ما تأثير تجربة اعتماد وسائل الاعلام الاجتماعية بصفة شخصية (او حتى تجاريك السابقة مع التقنيات السابقة) في قبول اعتمادها في المؤسسة؟
- من وجهة نظرك ، ما تأثير وضوح نتائج استخدام وسائل الاعلام الاجتماعية للمؤسسة في قرار اعتماد هذه التقنيات؟
- هل هناك عوامل تقنية أخرى لها تأثير في قرار مؤسستكم اعتماد وسائل الاعلام الاجتماعية؟

.IV المحور الرابع: و يتطرق هذا الجزء الى معرفة دور العوامل الداخلية في المؤسسة في تسهيل عملية استخدام وقبول تطبيقات وسائل الاعلام الاجتماعية ومن هذه العوامل: وجود القدرات والموارد البشرية والمالية لادارة تواجد المؤسسة في هذه الشبكات، ملاءمة استخدام تطبيقات الانترنت بشكل عام و وسائل الاعلام الاجتماعية على وجه الخصوص

- هل كان للعوامل الداخلية (متها - حجم المؤسسة , دعم ادارة واصحاب المؤسسة , المعرفة والخبرات داخل المؤسسة) للمؤسسة دور في قرار اعتماد وسائل الاعلام الاجتماعية ؟ كيف؟
- من وجهة نظرك ، هل لحجم المؤسسة تأثير في قرار اعتماد وسائل الاعلام الاجتماعية ؟
- هل سبق لك التعامل مع تقنيات الالكترونية قبل اعتماد وسائل الاعلام الاجتماعية ؟ ما أثر ذلك على قرار انشاء صفحة (أو صفحات) لمؤسستكم في شبكات التواصل الاجتماعي؟
- من وجهة نظرك ، هل للإدارة العليا للمؤسسة تأثير في قرار اعتماد وسائل الاعلام الاجتماعية ؟
- هل للتوجه الريادي والسلوك والنظرة لأهمية دور التقنية (المقصود نظرة وسلوك ادارة المؤسسة اذا كانت ايجابية) اثر في قرار اعتماد التقنيات الحديثة؟
- هل هناك عوامل داخلية للمؤسسة لها تأثير في قرار اعتماد وسائل الاعلام الاجتماعية؟

.V المحور الخامس: يتضمن هذا المحور أسئلة حول دور العوامل الخارجية في تحقيق المؤسسات الصغيرة والمتوسطة في اعتماد واستخدام وسائل الاعلام الاجتماعية. ومن العوامل المرتبطة بالبيئة الخارجية للمؤسسة دور المؤسسات الحكومية المناط اليها الاشراف وتنمية المؤسسات المتوسطة و الصغيرة. كذلك دور المنافسين والمزودين وعملاء المؤسسة.

- هل كان للعوامل الخارجية (المنافسين, الزبائن, الدعم الفني الخارجي) دور في قرار اعتماد وسائل الاعلام الاجتماعية في مؤسستك؟ كيف؟
- من وجهة نظرك ، هل للمنافس تأثير في قرار مؤسستكم اعتماد وسائل الاعلام الاجتماعية ؟
- هل لزيائن المؤسسة دور في قرار اعتماد وسائل الاعلام الاجتماعية ؟
- هل للدعم الفني من خارج المؤسسة اثر في قرار اعتماد وسائل الاعلام الاجتماعية ؟
- هل لك ان توضح دور الاسرة والاصدقاء في تحقيق قرار اعتماد هذه الادوات في نشاط المؤسسة؟
- هل هناك عوامل خارجية أخرى لها تأثير في قرار مؤسستكم اعتماد وسائل الاعلام الاجتماعية؟

General information (Enterprise background) theme:

- Can you please tell us about your enterprise's background? (Number of employees/ main services industry/ Years since establishment...)
- What is your role in the enterprise?

Social media adoption theme:

- What IS innovations has your business adopted? Or are currently in use?
- How do decisions get made with regards to new IS innovations in your enterprise?
- How effective do you think your business is in exploiting new IS innovations?
- Why has your firm decided to use / not to use social media?
- What are the uses of social media in your enterprise?
- What are the main reasons, if no social media platforms are currently used in your enterprise?
- What was required to adopt social media platform(s) in your enterprise?
- To what extent do you feel your firm is aware of social media? Please explain

Technological context theme:

- What technological factors do you think may impact the adoption of social media in your firm? Explain.
- In terms of technical features, in what ways do you see social media platforms are different from other technologies your enterprise use?
- How has social media use benefitted your company? Explain with examples.
- How would you describe the level of difficulty in the adoption of social media?
- How compatible have social media been with your business processes?
- What is the impact of (relative advantage, compatibility, complexity, observability and trailability) on the adoption of social media?
- Are there any other technological factors which you think may impact your decision regarding social media adoption in your enterprise?

Organizational context theme:

- What organisational factors do you think may impact the adoption of social media in your enterprise? Why?
- Do you think that the fact that the company is a SME has influenced the adoption decision? Why/why not?
- What is the impact of top management support on the adoption of social media?
- What is the impact of innovativeness on the adoption of social media?

The English version of the interview script

- What impact does prior experience with other similar technologies have on the adoption of social media in your enterprise? Explain?
- Are there any other organizational factors which have shaped your perception of social media?

Environmental context theme:

- What environmental factors do you think may impact the adoption of social media in your enterprise? Why?
- What impact does (competitive pressure, industry, market scope, external computing support) has in your adoption of social media? How?
- What role, if any, did your family members and friends play in your decision to adopt social media in your enterprise?
- Are there any other environmental factors which you think may impact your decision regarding social media adoption in your enterprise?

Appendix B

PASMED Letter



الهيئة العامة لتنمية المؤسسات الصغيرة والمتوسطة
Public Authority for SME Development

Brunel University West London

**Request for Permission to Conduct Research on Social Media in Social Media in the
SME Sector**

Dear Nayna Petal

Project Supervisor of Mr.Hafedh Said Al Rahbi

Brunel University

With reference to your request dated 31 March 2014 regarding the above mentioned subject, we are pleased to inform you that we have no objection to cooperate with Mr.Hafedh in his research, wishing that such research will be successfully accomplished and helpfully be of valuable benefit to our organization.

In addition we are willing to provide him with any information concerning the SME in Oman, noting that any provided information to be kept confidential.

Khalifa bin Said AL Abri
Acting / CEO



Appendix C

School of Information Systems, Computing and Mathematics
David Gilbert, Head of School, Professor of Computing
Martin Shepperd, Head of Information Systems and Computing
Steven Noble, Head of Mathematical Science, Professor of Mathematics

Brunel
UNIVERSITY
L O N D O N

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Zidong.Wang@brunel.ac.uk

Date: 10/04/2014

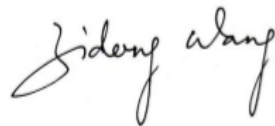
STATEMENT OF ETHICS APPROVAL

Proposer: Hafedh Said Abdullah AL Rahbi

Title: Uses and impacts of Social media adoption: insights from the SME sector in Oman

The school's research ethics committee has considered the proposal recently submitted by you. Acting under delegated authority, the committee is satisfied that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that you will adhere to the terms agreed with participants and to inform the committee of any change of plans in relations to the information provided in the application form.

Yours sincerely,



Professor Zidong Wang
Chair of the Research Ethics Committee
SISCM

Research Ethics Committee (REC) approval letter

متهجية البحث وطريقة جمع البيانات:

رقم	هدف الدراسة	اليه البحث	الفئة المستهدفة	الفترة الزمنية	اليه المقابلة
1	<ul style="list-style-type: none"> تقصي اسباب ودوافع استخدام شبكات التواصل الاجتماعي في المؤسسات المتوسطة والصغيرة بالسلطنة. معرفة تأثير استخدام هذه التقنيات على أنشطة المؤسسات المتوسطة والصغيرة بالسلطنة. 	<p>إجراء مقابلات غير مقتصة (بعض الاستئلة معدة مسبقا والبعض الاخر سيتم استقباطه من خلال الاجابات)</p>	<p>أصحاب المشاريع و المؤسسات المتوسطة والصغيرة</p> <p>✓ للحفاظ على خصوصية البيانات سوف لن يتم استخدام أسماء الأشخاص او المؤسسات والاستعاضة عنها برموز عشوائية</p>	<p>من منتصف شهر ابريل الى منتصف شهر مايو</p>	<ul style="list-style-type: none"> ستكون المقابلة باللغة العربية في حالة عدم ممانعة صاحب المؤسسة (المقابل) سيتم تسجيل المقابلة لترجمة الحوار يحقق أهداف الدراسة.
*	<p>شبكات التواصل الاجتماعي: تطبيقات الكترونية تتدرج ضمن تكنولوجيا الويب 2.0 تمكن المستخدم فردا كان او مؤسسة من تبادل المعلومات والتفاعل مع الآخرين في مجال العالم الافتراضي ومن أهم هذه التطبيقات الفيسبوك و التويتر و الأستجرام. تساعد هذه التطبيقات المؤسسات على عرض المنتجات والخدمات والتواصل مع العملاء إضافة الى الحصول على رأي المستهلك حول ما تقدمه المؤسسة. ومن ضمن فوائدها تعزيز التواصل الداخلي وإدارة المعرفة بالمؤسسة من خلال تبادل المعارف بين الموظفين.</p>				

سؤال وأهمية البحث:

- ما هي الدوافع والاسباب التي ساهمت في قرار مديرو المؤسسات المتوسطة والصغيرة في السلطنة استخدام شبكات التواصل الاجتماعي في مؤسساتهم؟

تكمن أهمية الدراسة في تحديد ومناقشة الدوافع التي عززت قرار رواد الاعمال في السلطنة الى استخدام شبكات التواصل الاجتماعي في مؤسساتهم نظرا للدور الذي تلعبه هذه التقنيات في تحقيق الميزة التنافسية للشركات الصغيرة والمتوسطة وديمومتها في ظل التحديات التي يواجهها هذا النوع من المؤسسات إضافة الى تحفيز رواد الاعمال العمانيين الى استغلال هذه التقنيات في المنافسة ودخول السوق العالمية.

محاور النقاش:

- I **المحور الأول:** يتناول هذا المحور نبذة عن الشركة ، تاريخ تأسيسها إضافة الى أنشطتها
- II **المحور الثاني:** يهدف هذا المحور الى التعرف على خصائص مدير (او مديرو) المؤسسة ورواد ورائدات الاعمال لمعرفة مدى تأثير هذه الخصائص على قرار استخدام شبكات التواصل الاجتماعي في مؤسساتهم وتتضمن: الفئة العمرية ، المرحلة التعليمية والخبرة العملية في استخدام الوسائل التقنية بالاحص تطبيقات الانترنت إضافة الى التطرق حول نظرتهم لكيفية التعامل مع هذه التقنيات.
- III **المحور الثالث:** و يتطرق هذا الجزء الى معرفة دور العوامل الداخلية في المؤسسة في تسهيل عملية استخدام وقبول تطبيقات شبكات التواصل الاجتماعي ومن هذه العوامل: وجود القدرات والموارد البشرية والمالية لإدارة تواجد المؤسسة في هذه الشبكات، ملائمة استخدام تطبيقات الانترنت بشكل عام وشبكات التواصل الاجتماعي على وجه الخصوص

Ethical procedures documents

IV. المحور الرابع: يتضمن هذا المحور أسئلة حول دور العوامل الخارجية في تحقيق المؤسسات الصغيرة والمتوسطة في تطبيق واستخدام شبكات التواصل الاجتماعي. ومن العوامل المرتبطة بالبيئة الخارجية للمؤسسة دور المؤسسات الحكومية المتأطرها إليها الاشراف وتنمية المؤسسات المتوسطة و الصغيرة. كذلك دور المتقنين والمزودين وعملاء المؤسسة.

V. المحور الخامس: ويتعلق بمعرفة أهمية مميزات شبكات التواصل الاجتماعي في تسهيل قرار استخدام شبكات التواصل الاجتماعي وتأثير البعد التقني في اتخاذ مثل هذه القرارات.

عينة من الاسئلة:

هذه عينة بسيطة للأسئلة التي سيتم بيان الله مناقشتها (مع ملاحظة أن عينة الاسئلة غير مرتبة حيث ان الترتيب مرتبط بطبيعة اجابات المشاركين)

- 1 ارجو تقديم نبذة مختصرة عنك وعن تاريخ المؤسسة وأنشطتها التجارية المختلفة.
- 2 فيما يتصل بالتكنولوجيا والتطبيقات الالكترونية ، كيف تقيم إلمامك بالتقنيات الحديثة بشكل عام وتطبيقات الانترنت (Websites, Electronic Commerce) على وجه الخصوص ؟
- 3 هل سبق لك التعامل مع تقنيات الكترونية قبل استخدام شبكات التواصل الاجتماعي؟ ما أثر ذلك على قرار انشاء صفحة (أو صفحات) لمؤسستكم في شبكات التواصل الاجتماعي؟
- 4 هل لك ان توضح دور الاسرة والاصدقاء في تحقيق قرار استخدام هذه الادوات في نشاط المؤسسة؟
- 5 ما هي الاهداف التي تسعى لتحقيقها من خلال استخدام شبكات التواصل الاجتماعي؟
- 6 كمؤسسة محدودة الموارد البشرية والمالية كيف تدير تواجدك في قضاء شبكات التواصل الاجتماعي؟ من يقوم على الاشراف على صفحة المؤسسة؟
- 7 هل تعتقد ان تواجد مؤسستكم في صفحات التواصل الاجتماعي ساعد في تحقيق أهداف المؤسسة؟ كيف ذلك؟

ارجو ارسال رسالة على البريد الالكتروني بتحديد الوقت المناسب لاجراء المقابلة:
خلال الفترة من 13 ابريل وحتى 30 نوفمبر 2014
ولكم جزيل الشكر والتقدير على قبول المشاركة

حافظه سعيد الربيعي
Alrahbi82@gmail.com
UK phone Number: 00447454313658

Appendix D

Bilingual Consent Form

أستمارة موافقة المشاركة في البحث العلمي

Consent form

	Yes نعم	No لا	
• Have you read the research participant information sheet?	<input type="checkbox"/>	<input type="checkbox"/>	• هل قرأت استمارة المشاركة في الدراسة وفهمت مضمونها؟
• Have you had an opportunity to ask questions regarding the topic under investigation?	<input type="checkbox"/>	<input type="checkbox"/>	• هل تم إعطائك الفرصة لطرح الاسئلة وفهم مضمونها؟
• Have you received satisfactory answers to all questions regarding your expected participation's and the purpose of the study?	<input type="checkbox"/>	<input type="checkbox"/>	• هل تم الاجابة على جميع استفساراتك حول طبيعة مشاركتك ومضمون الدراسة؟
• Do you know that neither you nor your enterprise will not be referred to by name in any report concerning the study?	<input type="checkbox"/>	<input type="checkbox"/>	• هل تعلم انه لن يتم الإفصاح عن اسمك ولا اسم المؤسسة وسيتم استخدام رموز او ارقام تسلسلية؟
• Do you know that you are free to withdraw from the study:	<input type="checkbox"/>	<input type="checkbox"/>	• هل تعلم انه لديك مطلق الحرية في سحب مشاركتك من هذا البحث؟
- At any time	<input type="checkbox"/>	<input type="checkbox"/>	- في أي وقت (متى شئت حتى بعد التوقيع على الموافقة)
- Without having to give a reason for withdrawing.	<input type="checkbox"/>	<input type="checkbox"/>	- دون الحاجة لايذاء أي سبب لعدم الرغبة في المشاركة
- With no effect	<input type="checkbox"/>	<input type="checkbox"/>	- دون أن يكون للقرار اي تأثير
• Do you agree to take part in this study?	<input type="checkbox"/>	<input type="checkbox"/>	• هل توافق على المشاركة في الدراسة؟

The name of the participant
Signature
Date

إسم المشترك
توقيع المشترك
التاريخ

Appendix E

Appendix E

Categories and themes		SMEs																	
		SME1	SME2	SME3	SME4	SME5	SME6	SME7	SME8	SME9	SME10	SME11	SME12	SME13	SME14	SME15	SME16	SME17	SME18
Technical context	RAV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	CMX	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	CMB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	TRB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	OBS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	TRT		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			
	INT				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
	IMG			<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Organizational context	SZE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	TMS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>							
	INV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	PIE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	PLT		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental context	IND	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	MKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	CMP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	CSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	FFI		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Checklist Matrix

Appendix F

Survey

بسم الله الرحمن الرحيم

الفاضل مالك (مدير – الرئيس التنفيذي) المؤسسة.... المحترم

السلام عليكم ورحمة الله وبركاته،،، و بعد

يجري الباحث دراسة استطلاعية بعنوان : (استخدام وسائل الاعلام الاجتماعية بالمؤسسات الصغيرة و المتوسطة بالسلطنة).

وتهدف هذه الدراسة للتعرف على وجهة نظركم حول استخدام وسائل الاعلام الاجتماعية في مؤسساتكم وتحديد العوامل المؤثرة على قراركم اعتماد هذه الوسائل في المؤسسة.

وتكمن اهمية هذه الدراسة في ندرة الدراسات التي تبحث حول استخدام التقنيات الحديثة في المؤسسات الصغيرة و المتوسطة في السلطنة وبالأخص وسائل الاعلام الاجتماعية. كما تبرز اهميتها في انها تهدف للتعرف على وجهة نظر اصحاب ومدراء المؤسسات الصغيرة و المتوسطة في السلطنة حول استخدام وسائل الاعلام الاجتماعية في مؤسساتهم وتحديد العوامل المؤثرة على قرار اعتماد هذه الوسائل التي قد تساهم في استخدامها لدى تلك المؤسسات. لذا فإن مشاركتكم في اجابة اسئلة هذا الاستبيان لها قيمة واهمية كبيرة اذ انها تساهم في اثراء البحوث القائمة على وسائل الاعلام الاجتماعية بشكل عام والدراسات العلمية حول السلطنة على وجه اخص. إضافة إلى انها تساعد الباحث في معرفة مدى استخدام واعتماد والاستفادة من هذه الوسائل التقنية الحديثة في المؤسسات الصغيرة والمتوسطة في السلطنة.

لذا ارجو تكرمكم في الاجابة على جميع اسئلة هذا الاستبيان بكل الصدق والموضوعية المعروفة عنكم لضمان نتائج ايجابية وأكد لكم ان ما تتلون به من معلومات سوف يتم التعامل معها بطريقة آمنة وسرية ولن تستخدم الا لغرض البحث العلمي فقط. وإني على ثقة كبيرة ان لارائكم ووجهة نظركم حول محاور واسئلة هذا الاستبيان الاثر الإيجابي في الوصول الى نتائج قيمة بإذن الله تعالى.

شاكرا لكم حسن تعاونكم واهتمامكم وتخصيص جزءا من وقتكم الثمين لإجابة اسئلة هذا الاستبيان.

والسلام عليكم ورحمة الله وبركاته،،،

الطالب: حافظ بن سعيد بن عبدالله الرحيبي

جامعة برونل لندن

المملكة المتحدة

البريد الإلكتروني: alrahbi82@gmail.com, cspghsa@brunel.ac.uk

هاتف : 00447454313658

Appendix F

Dear Business owner/manager,

I am currently pursuing PhD at Brunel University London, Major in Computer Science department focussing mainly on the adoption of social media by Omani small and medium sized enterprises (SMEs). The purpose of my study is to learn more about the factors that influence the SMEs' decision to adopt social media platforms. We believe the results will not only be value to individual firms but will also help the Public Authority for SMEs Development and the Ministry of Commerce and Industry to better identify and understand the factors that are essential to assist SMEs. The company and you are part of a representative sample of small and medium sized enterprises operating in the Capital, Muscat. Your kind participation to answer this questionnaire is critical to the success of our study. I recognize the value of your time, and sincerely appreciate your efforts to take part in this study. Individual responses are anonymous and All information provided will be strictly confidential (individuals will not be identified) and will be purely used for academic purposes.

I would like to thank you very much in advance for kindly agreeing to participate in this survey. Please take few minutes to complete this survey and submit it in online at your earliest convenience.

If you have any questions about this study or the questionnaire please contact me using the information below:

Hafedh Said AL Rahbi, PhD Researcher
Department of Computer Science
College of Engineering, Design and Physical Sciences
Brunel University London
Kingston Lane, Uxbridge
Middlesex UB8 3PH
United Kingdom
Email address: cspghsa@brunel.ac.uk; alrahbi82@gmail.com
Mobile: 07454313658

ملاحظات:

- يحتوي هذا الاستبيان على قسمين رئيسيين:
 - o القسم الأول: يتكون من ثلاثة أجزاء:
 - a. الجزء الأول: يضم مجموعة من الاسئلة العامة المتعلقة بالبيانات الديموغرافية لمالك (مدير – الرئيس التنفيذي) المؤسسة
 - b. الجزء الثاني: يتكون من مجموعة من الاسئلة العامة المتعلقة بالبيانات الديموغرافية للمؤسسة.
 - c. الجزء الثالث: يتكون من مجموعة من الاسئلة ذات الصلة باستخدام وسائل الاعلام الاجتماعية فيها.
 - o القسم الثاني: يتكون من ثلاث محاور وقد تم توزيع اجابة اسئلتها على تدرج ليكرت (Likert scale) من (1-5) درجات حيث يمثل 1 (موافق بشدة) و 5 (غير موافق بشدة).
 - a. المحور الأول: يتعلق برأي مالك / مدير المؤسسة حول اهم العوامل التقنية لوسائل الاعلام الاجتماعية ودورها في قرار اعتماد هذه الوسائل في مؤسسته.
 - b. المحور الثاني: يتعلق برأي مالك / مدير المؤسسة حول تأثير العوامل الداخلية للمؤسسة في اعتماد وسائل الاعلام الاجتماعية فيها.
 - c. المحور الثالث: يتعلق برأي مالك / مدير المؤسسة حول تأثير العوامل الخارجية (العملاء- المنافسين ...) للمؤسسة في اعتماد وسائل الاعلام الاجتماعية فيها.
- لتسهيل عملية الاجابة ، تم وضع الاستبيان في رابط الكتروني حيث تتم جمع الردود وتخزينها ضمن مساحة التخزين الي يوفرها مزود الاستبيان على الانترنت ولفترة زمنية محددة.
- سيتم التعامل مع جميع البيانات بطريقة آمنة وسرية والاستفادة منها لغرض هذا البحث فقط.
- المشاركة في الاجابة على اسئلة هذا الاستبيان اختيارية وللمشارك حق سحب مشاركته في اي وقت.
- الوقت المتوقع للاجابة على اسئلة الاستبيان يتراوح بين 10 دقائق – 15 دقيقة.
- اذا كنت ترغب في الحصول على نسخة من نتائج هذه الدراسة ، الرجاء كتابة عنوان بريدك الالكتروني في المكان المخصص في القسم الاخير من الاستبيان.
- للاستفسار حول الاستبيان ، يمكنكم التواصل مع الباحث عبر عنوان البريد الالكتروني المذكور اعلاه.

المصطلحات:

- **وسائل الاعلام (شبكات التواصل) الاجتماعية:** تطبيقات الكترونية حديثة من الجيل الثاني لتطبيقات الانترنت تتميز ب طبيعة تفاعلية عالية تمكن المشاركين (افرادا او مؤسسات) من التفاعل مع بعضهم عبر الصورة او الفيديو وتبادل الآراء بطريقة اكثر تفاعلية من الجيل السابق. من امثلة هذه التطبيقات وأشهرها: الفيسبوك ، تويتر ، انستجرام ، لينكد إن وغيرها...
- **العوامل التقنية:** يقصد بها الميزات التي يتميز بها التطبيق مقارنة بالتطبيقات السابقة مثل البريد الالكتروني والمنتديات والمواقع الالكترونية الخاصة بالمؤسسة.
- **العوامل الداخلية للمؤسسة:** ويقصد بها العوامل او المحددات ذات الصلة بمكونات المؤسسة وطبيعتها وبيئتها الداخلية التي قد تساهم أو تحد من اعتماد او استخدام وسائل الاعلام الاجتماعية في المؤسسة. وتتضمن حجم المؤسسة ونوع نشاطها وامكانيات الكادر البشري بها.
- **العوامل الخارجية للمؤسسة:** ويقصد بها العوامل او المحددات ذات الصلة بالبيئة الخارجية للمؤسسة التي قد تساهم أو تحد من اعتماد او استخدام وسائل الاعلام الاجتماعية في المؤسسة. وتتضمن طبيعة السوق والمنافسين والعملاء (الزبائن).

Appendix F

PART I: DEMOGRAPHIC INFORMATION:

PLEASE FILL IN THE FOLLOWING GENERAL INFORMATION ABOUT THE BUSINESS OWNER/MANAGER (1-5) AND THE ENTERPRISE (6-16):

الجزء الأول: البيانات الديموغرافية:
الرجاء تعبئة البيانات العامة الآتية عن مالك المؤسسة (1-5)
وعن المؤسسة (6-15)

Section A.1: General information about the business owner/manager:

The aim of this section is to gather general demographic information about the participants (CEOs/ Managers).

القسم أ، ١: بيانات عامة عن مالك المؤسسة:
يهدف هذا القسم من الاستبيان إلى جمع معلومات ديموغرافية عامة عن المشاركين (رؤساء تنفيذيين/ مديري المؤسسات)

1. What is the gender of the enterprise owner-manager?

الجنس:

- | | | |
|------------------------------|------|-----------------------|
| <input type="radio"/> Male | نكر | <input type="radio"/> |
| <input type="radio"/> Female | أنثى | <input type="radio"/> |

2. To which age group does the CEO/business owner belong?

الفئة العمرية التي ينتمي إليها مالك المؤسسة:

- | | | |
|------------------------------------|-------------------|-----------------------|
| <input type="radio"/> less than 25 | أقل من 25 سنة | <input type="radio"/> |
| <input type="radio"/> 25 to 34 | بين 25 إلى 34 سنة | <input type="radio"/> |
| <input type="radio"/> 35 to 44 | بين 35 إلى 44 سنة | <input type="radio"/> |
| <input type="radio"/> 45 to 54 | بين 45 إلى 54 سنة | <input type="radio"/> |
| <input type="radio"/> 55 to 64 | بين 55 إلى 64 سنة | <input type="radio"/> |
| <input type="radio"/> 65 and over | 65 فما فوق | <input type="radio"/> |

3. Please indicate your highest education qualification of the CEO/business owner.

المستوى التعليمي لمالك المؤسسة:

- | | | |
|---|--------------------------------|-----------------------|
| <input type="radio"/> No formal qualification | بدون مؤهلات علمية | <input type="radio"/> |
| <input type="radio"/> Primary qualification | الشهادة الابتدائية | <input type="radio"/> |
| <input type="radio"/> Secondary qualification | الشهادة الثانوية | <input type="radio"/> |
| <input type="radio"/> College qualification (diploma) | شهادة الدبلوم | <input type="radio"/> |
| <input type="radio"/> Degree | البكالوريوس | <input type="radio"/> |
| <input type="radio"/> Postgraduate (Master / PhD) | دراسات عليا (ماجستير/دكتوراة) | <input type="radio"/> |
| <input type="radio"/> Others please specify | غير ذلك ، الرجاء التحديد | <input type="radio"/> |

4. Which of the followings best describe the current occupation of the business owner?

الحالة الوظيفية الحالية لمالك المؤسسة:

- | | | |
|---|--------------------------|-----------------------|
| <input type="radio"/> Full time employee in the Government sector | موظف بالقطاع الحكومي | <input type="radio"/> |
| <input type="radio"/> Full time employee in the private sector | موظف بالقطاع الخاص | <input type="radio"/> |
| <input type="radio"/> Self employed | أعمال حرة | <input type="radio"/> |
| <input type="radio"/> Student | طالب | <input type="radio"/> |
| <input type="radio"/> Others, please specify | غير ذلك ، الرجاء التحديد | <input type="radio"/> |

Section A.2: General information about enterprise:

The aim of this section is to gather general demographic information about your enterprise, to explore the use of social media by your enterprise and to determine the popular platforms used for this purpose:

القسم أ، ٢: بيانات عامة عن المؤسسة:
يهدف هذا القسم من الاستبيان إلى جمع معلومات ديموغرافية عن مؤسستك و استطلاع مدى استخدامها لوسائل الاعلام الاجتماعية ولمعرفة أكثر هذه الوسائل استخداما بين المؤسسات الصغيرة والمتوسطة:

5. What is the age of your enterprise?

عمر المؤسسة؟

- | | | |
|---|-------------------|-----------------------|
| <input type="radio"/> Less than a year | أقل من سنة | <input type="radio"/> |
| <input type="radio"/> 1 to 3 years | من 1 إلى 3 سنوات | <input type="radio"/> |
| <input type="radio"/> 3 to 5 years | من 3 إلى 5 سنوات | <input type="radio"/> |
| <input type="radio"/> More than 5 years | أكثر من خمس سنوات | <input type="radio"/> |

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6. a) What is the total number of employees? إجمالي عدد الموظفين:
- | | | |
|--|-------------------|-----------------------|
| <input type="radio"/> Less than five | أقل من 5 | <input type="radio"/> |
| <input type="radio"/> 5 to 9 employees | من 5 إلى 9 موظفين | <input type="radio"/> |
| <input type="radio"/> 10 to 99 employees | من 10 إلى 99 موظف | <input type="radio"/> |
- b) What is the approximate annual sales figure of your enterprise? حجم المبيعات السنوي للمؤسسة
- | | | |
|--|-----------------------------|-----------------------|
| <input type="radio"/> Less than 25,000 R.O | أقل من 25000 ر.ع | <input type="radio"/> |
| <input type="radio"/> Between 25,000 to 250,000 R.O | بين 25000 و 250000 ر.ع | <input type="radio"/> |
| <input type="radio"/> Between 250,000 to 1.5 million R.O | بين 250000 و مليون ونصف ر.ع | <input type="radio"/> |
7. Which of the followings best describe your principle sector? أي من القطاعات التالية تنتمي مؤسستكم؟
- | | | |
|---|--------------------------|-----------------------|
| <input type="radio"/> Manufacturing | الصناعات التحويلية | <input type="radio"/> |
| <input type="radio"/> Wholesale and Retail | التجارة بالجملة والتجزئة | <input type="radio"/> |
| <input type="radio"/> Professional and Technical Services | الخدمات الفنية والتقنية | <input type="radio"/> |
| <input type="radio"/> Construction | التشييد | <input type="radio"/> |
| <input type="radio"/> Other sectors | قطاعات أخرى | <input type="radio"/> |
8. Which of the followings best describe your enterprise market area? نطاق عمل المؤسسة
- | | | |
|--|---|-----------------------|
| <input type="radio"/> Local market | تقتصر أنشطة المؤسسة على منطقة صغيرة بالخاصة | <input type="radio"/> |
| <input type="radio"/> National market | السوق المحلية (ليس العاصمة فقط) | <input type="radio"/> |
| <input type="radio"/> Regional market | السوق الإقليمية | <input type="radio"/> |
| <input type="radio"/> International market | السوق العالمية | <input type="radio"/> |

Section A.3: Social-media-related general questions:

The aim of this section is to explore the use of social media by your enterprise and to determine the popular platforms used for this purpose:

القسم أ.3: بيانات عامة حول وسائل الاعلام الاجتماعية: يهدف هذا القسم من الاستبيان الى استطلاع مدى استخدامها لوسائل الاعلام الاجتماعية ولتعرفه أكثر هذه الوسائل استخداماً بين المؤسسات الصغيرة والمتوسطة:

9. Does your enterprise have presence in social media (Facebook, Twitter, Instagram, etc...)? هل لمؤسستكم تواجد في وسائل الاعلام الاجتماعية (مثل الفيسبوك ، التويتر ، الانستجرام ، الخ ...)
- | | | |
|---------------------------|-----|-----------------------|
| <input type="radio"/> Yes | نعم | <input type="radio"/> |
| <input type="radio"/> No | لا | <input type="radio"/> |
- If your answer is "No", please go to questions 12& 13 إذا كانت الإجابة ب "لا"، يرجى التوجه الى السؤالين رقم 12 و 13
10. Please indicate which of the following platforms your enterprise have presence in?(you can choose more than one option) الرجاء تحديد في أي المنصات التالية لمؤسستكم تواجد فيها؟ (يمكنكم اختيار أكثر من منصة)
- | | | |
|---|------------------------------------|--------------------------|
| <input type="checkbox"/> Facebook | الفيسبوك | <input type="checkbox"/> |
| <input type="checkbox"/> Twitter | تويتر | <input type="checkbox"/> |
| <input type="checkbox"/> Instagram | انستجرام | <input type="checkbox"/> |
| <input type="checkbox"/> Linked In | لينكد إن | <input type="checkbox"/> |
| <input type="checkbox"/> Foursquare | فورسكوير | <input type="checkbox"/> |
| <input type="checkbox"/> MySpace | ماي سبيس | <input type="checkbox"/> |
| <input type="checkbox"/> Vine | فاين | <input type="checkbox"/> |
| <input type="checkbox"/> Google+ | جوجل + | <input type="checkbox"/> |
| <input type="checkbox"/> Pinterest | بينتريست | <input type="checkbox"/> |
| <input type="checkbox"/> Hi5 | هاي 5 | <input type="checkbox"/> |
| <input type="checkbox"/> Others, please specify | منصات أخرى ، الرجاء التحديد: | <input type="checkbox"/> |

Appendix F

11. Currently for what purpose does your organization use social media (you can choose more than one option)?
- لأى الاغراض التالية تستخدم مؤسستك وسائل الاعلام الاجتماعية؟ (يمكنك اختيار عدة اجابات):
- | | | | |
|--------------------------|--|---|--------------------------|
| <input type="checkbox"/> | Information sharing and search | لتبادل المعلومات والبحث | <input type="checkbox"/> |
| <input type="checkbox"/> | Branding | لبناء العلامة التجارية | <input type="checkbox"/> |
| <input type="checkbox"/> | Advertising and promotion | للإعلان والترويج | <input type="checkbox"/> |
| <input type="checkbox"/> | Conduct market research | لمعرفة سلوك السوق | <input type="checkbox"/> |
| <input type="checkbox"/> | Reach new customers | للوصول الى عملاء (زيلائن) جدد | <input type="checkbox"/> |
| <input type="checkbox"/> | Getting referrals (word-of-mouth via likes, shares and followers in Facebook, Twitter, etc.) | للحصول على الشكر والاطراء من عملاء (زيلائن) المؤسسة الحاليين بما يساعد في جذب عملاء جدد | <input type="checkbox"/> |
| <input type="checkbox"/> | Develop customer relations | بناء وتطوير العلاقات مع العملاء | <input type="checkbox"/> |
| <input type="checkbox"/> | Communicate with customers | للتواصل مع العملاء | <input type="checkbox"/> |
| <input type="checkbox"/> | Customer service activities | للقيام بالشطة لتلقي بخدمه العملاء | <input type="checkbox"/> |
| <input type="checkbox"/> | Receive customer feedback | للحصول على ملاحظات العملاء | <input type="checkbox"/> |
12. Which of the following phrases best describes your enterprise's intention with regards to social media?
- أى العبارات التالية تعطبق على وضع المؤسسة فيما يتعلق بوسائل الاعلام الاجتماعية:
- | | | | |
|-----------------------|--|--|-----------------------|
| <input type="radio"/> | intend to adopt social media platforms | لدينا الرغبة في استخدام وسائل الاعلام الاجتماعية في المؤسسة | <input type="radio"/> |
| <input type="radio"/> | do not intend to adopt social media platforms for the foreseeable future | ليس لدينا الرغبة في استخدام وسائل الاعلام الاجتماعية في المؤسسة في المستقبل القريب | <input type="radio"/> |
13. If your enterprise intends to adopt social media platforms, how soon do you think your enterprise will adopt social media platforms?
- إذا كان لديكم الرغبة في استخدام وسائل الاعلام الاجتماعية في المؤسسة ، ما هي خطتكم الزمنية لذلك:
- | | | | |
|-----------------------|---------------------|--------------------|-----------------------|
| <input type="radio"/> | Less than 6 months | أقل من 6 أشهر | <input type="radio"/> |
| <input type="radio"/> | 6 to 12 months | من 6 إلى 12 شهر | <input type="radio"/> |
| <input type="radio"/> | 13 to 18 months | من 13 إلى 18 شهر | <input type="radio"/> |
| <input type="radio"/> | 19 to 24 months | من 19 إلى 24 شهر | <input type="radio"/> |
| <input type="radio"/> | More than 24 months | أكثر من سنتين | <input type="radio"/> |
| <input type="radio"/> | No plans | لا توجد فترة محددة | <input type="radio"/> |
14. If you do not intend to adopt social media in your enterprise, please identify the reasons from the following?
- إذا كان ليس لدى مؤسستكم الرغبة في استخدام وسائل الاعلام الاجتماعية، يرجى اختيار تحديد الأسباب من الآتي:
- | | | | |
|--------------------------|--|---|--------------------------|
| <input type="checkbox"/> | The enterprise feels that it does not gain any benefit from using social media | بالنسبة لمؤسستنا ، لا توجد جدوى من استخدام وسائل الاعلام الاجتماعية | <input type="checkbox"/> |
| <input type="checkbox"/> | Social media is a risk for information security | وسائل الاعلام الاجتماعية تشكل خطراً لأمن المعلومات | <input type="checkbox"/> |
| <input type="checkbox"/> | Not enough skills to implement social media | لا نملك المهارات التقنية اللازمة لتطبيق وسائل الاعلام الاجتماعية | <input type="checkbox"/> |
| <input type="checkbox"/> | Not enough time to use social media | لا نملك الوقت الكافي لاستخدام وسائل الاعلام الاجتماعية | <input type="checkbox"/> |
| <input type="checkbox"/> | Not enough (monetary) resources | لا نملك الموارد المالية الكافية لاستخدام وسائل الاعلام الاجتماعية | <input type="checkbox"/> |
| <input type="checkbox"/> | The enterprise does not know how to best utilize social media in business | لا نملك المعرفة الكافية لاستغلال وسائل الاعلام الاجتماعية بشكل أفضل | <input type="checkbox"/> |
| <input type="checkbox"/> | Fear of critique or negative feedback | الخوف من النقد أو الردود فعل سلبية | <input type="checkbox"/> |
| <input type="checkbox"/> | Bad experience of social media | لدينا تجربة سيئة وسائل الاعلام الاجتماعية | <input type="checkbox"/> |
| <input type="checkbox"/> | The enterprise can do well without social media | نستطيع مؤسستنا العمل بشكل جيد بدون وسائل الاعلام الاجتماعية | <input type="checkbox"/> |

Appendix F

القسم (ب) :العوامل التقنية:

Section B: Technological factors :

The aim of this section is to explore your opinion as a business owner/manager about the extent of the technological factors in the adoption of social media in your enterprise:

يهدف هذا الجزء من الاستبيان الى دراسة اراء اصحاب او مديرو المؤسسات حول مدى تأثير الميزات التقنية لوسائل الاعلام الاجتماعية على قرار استخدام تلك الوسائل في مؤسساتهم:

المحور الأول: ما هي العوامل التقنية التي لها تأثير في اعتماد وسائل الاعلام الاجتماعية لدى مؤسساتكم ؟

من خلال خبرتك كمدير تنفيذي (مدير او مالك) للمؤسسة، الرجاء تحديد رأيك العبارات المدرجة في الجدول اذناه وذلك بوضع علامة (✓) في احد الخانات المدرجة امام كل عبارة:

Please answer the following questions using this 5-points scale

1	2	3	4	5
Strongly agree	Agree	Neutral	Disagree	Strongly disagree
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة

الرقم	العبارة	رأيك حول اهم العوامل التقنية المؤثرة في اعتماد وسائل الاعلام الاجتماعية لدى مؤسساتكم				
		(1) موافق بشدة	(2) موافق	(3) محايد	(4) غير موافق	(5) غير موافق بشدة
15. 1	استخدام تطبيقات وسائل الاعلام الاجتماعية يساعدنا على التواصل بشكل افضل مع الشركات والأفراد Social media allow us to better communicate with our business partners and customers					
16. 2	استخدام تطبيقات وسائل الاعلام الاجتماعية يساعدنا على خفض تكاليف العمل Social media allow us to cut cost on our operations.					
17. 3	اعتماد تطبيقات وسائل الاعلام الاجتماعية يزيد من عوائد مؤسستنا Implementing social media increases the profitability of our business.					
18. 4	تطبيق شبكات التواصل الاجتماعي يزودنا في الوقت المناسب بالمعلومات التي تساعدنا في اتخاذ القرارات Adoption of social media will provide timely information for decision making.					
19. 5	نعقد أنه من السهل الحصول على تطبيقات وسائل الاعلام الاجتماعية لتحقيق ما نهدف اليه من خلالها We believe that it is easy to get social media platforms to do what we want them to do					
20. 6	بشكل عام، نعتقد أن تطبيقات وسائل الاعلام الاجتماعية سهلة الاستخدام Overall, we believe that social media platforms are easy to use					
21. 7	تعلم استخدام تطبيقات وسائل الاعلام الاجتماعية من السهل بالنسبة لي Learning to use social media platforms is easy to us					
22. 8	استخدام وسائل الاعلام الاجتماعي متوافق مع البنية الحالية لتقنية المعلومات بالمؤسسة Using social media is compatible with existing IT infrastructure.					
23. 9	استخدام وسائل الاعلام الاجتماعي متوافق مع العمليات التجارية بالمؤسسة Using social media is compatible with our business processes and operations.					
24. 10	من السهل دمج وسائل الاعلام الاجتماعية مع الأنظمة الإلكترونية الموجودة لدى المؤسسة (على سبيل المثال الموقع الإلكتروني) It is easy to integrate social media with our existing systems (e.g. website)					
25. 11	قبل اعتماد تطبيقات وسائل الاعلام الاجتماعية بالمؤسسة، كنت قادرا على محاولة تجربتها بشكل صحيح (سواء ك حساب شخصي او حساب تجاري للمؤسسة) Before we use social media applications, we were able to properly try it out.					

Appendix F

				<p>المالك القمص لتجربة تطبيقات وسائل الإعلام الاجتماعية (سواء لك حساب شخصي أو حساب تجاري للمؤسسة)</p> <p>I have a great deal of opportunity to try various social media capabilities.</p>	26. 13
				<p>أعتقد أنه لن يكون لدى أي صعوبة في إخبار الآخرين نتائج استخدام تطبيقات وسائل الإعلام الاجتماعية</p> <p>We would have no difficulty telling others about the results of using social media applications.</p>	27. 14
				<p>أعتقد أنه يمكنني التواصل مع الآخر حول عواقب استخدام تطبيقات وسائل الإعلام الاجتماعية</p> <p>I believe I could communicate to others the consequences of using social media applications</p>	28. 15
				<p>نتائج استخدام تطبيقات وسائل الإعلام الاجتماعية واضحة بالنسبة لي</p> <p>The results of using social media applications are apparent to me.</p>	29. 16
				<p>توفر تطبيقات وسائل الإعلام الاجتماعية ميزات للتواصل ذو طبيعة تواصلية مع الزبائن</p> <p>Social media platforms provide features for interactive communication with customers</p>	30. 18
				<p>توفر تطبيقات وسائل الإعلام الاجتماعية عدة طرق للتفاعل مع الزبائن (عن طريق الصور و الصوت و الفيديو)</p> <p>Social media platforms provide appropriate amount of interactive features (examples pictures, voices and videos).</p>	31. 19
				<p>توفر تطبيقات وسائل الإعلام الاجتماعية العديد من الميزات لاجابات وافيه</p> <p>Social media platforms provide features for vivid responses</p>	32. 20
				<p>مزودو وسائل الإعلام الاجتماعية (على سبيل المثال، الفيسبوك، تويتر) التي استخدمها توفر ضمانات كافية لتجئتي شعر بالثقة عند استخدام الخدمة وإضافة المعلومات الخاصة بي</p> <p>The social media providers (e.g., Facebook, Twitter) that I use provide enough safeguards to make me feel comfortable using it to post my information.</p>	33. 21
				<p>لشركة المالكة لخدمة وسائل الإعلام الاجتماعية (على سبيل المثال، الفيسبوك، تويتر) التي استخدمها توفر بيئة قوية وامنة للتعامل.</p> <p>The social media service provider (e.g., Facebook, Twitter) that I use provides a robust and safe environment in which to transact my information.</p>	34. 22
				<p>أنا على يقين من أن الأطر القانونية والتكنولوجية لوسائل الإعلام الاجتماعية كافية للتغلب على مشاكل الاستخدام.</p> <p>I feel assured that legal and technological structures adequately protect me from problems on the social media.</p>	35. 23
				<p>المؤسسات التي تستخدم تطبيقات وسائل الإعلام الاجتماعية لديها أكثر مكانة من غيرها من المؤسسات التي لا تستخدم</p> <p>Businesses which use social media applications have more prestige than those who do not.</p>	36. 28
				<p>استخدام وسائل الإعلام الاجتماعية هو رمز للمكانة الاجتماعية</p> <p>Using social media is a status symbol</p>	37. 30

Appendix F

Section C: Organizational factors:

The aim of this section is to explore your opinion as a business owner/manager about the extent of the organizational factors in the adoption of social media in your enterprise:

القسم (ج) العوامل الداخلية للمؤسسة:
يهدف هذا الجزء من الاستبيان إلى دراسة آراء اصحاب او مديرو المؤسسة حول مدى تأثير العوامل الداخلية للمؤسسة على قرار استخدام وسائل الاعلام الاجتماعية لدى مؤسساتهم.

المحور الثاني: ما هي العوامل الداخلية للمؤسسة التي لها تأثير في اعتماد وسائل الاعلام الاجتماعية لدى مؤسساتكم ؟

من خلال خبرتك كمدير تنفيذي (مدير او مالك) للمؤسسة، الرجاء تحديد رايك العبارات المدرجة في الجدول ادناه وذلك بوضع علامة (✓) في احد الخانات المدرجة امام كل عبارة:

Please answer the following questions using this 5-points scale

1	2	3	4	5
Strongly agree	Agree	Neutral	Disagree	Strongly disagree
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة

رأيك حول مدى تأثير العوامل الداخلية للمؤسسة على قرار استخدام وسائل الاعلام الاجتماعية لدى مؤسساتكم					الرقم	العبارة
(5)	(4)	(3)	(2)	(1)		
غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة		
					38. 1	مالك او مدير المؤسسة دائما متحمس لاعتماد التقنيات الجديدة (منها وسائل الاعلام الاجتماعية) في المؤسسة The owner or manager enthusiastically supports the adoption of these new technologies.
					39. 2	مالك او مدير المؤسسة يخصص المصادر (الوقت والمبالغ) لاعتماد التقنيات الجديدة (منها وسائل الاعلام الاجتماعية) في المؤسسة The owner or manager has allocated adequate resources to adoption of these new technologies.
					40. 5	في حالة سماعي عن تقنية جديدة، اود في البحث عن طريقة لتجربتها If I heard about a new information technology, I would look for ways to experiment with it.
					41. 6	من بين اقربائي، اسعي جاهدا ان اكون اول من يجرب التقنيات الحديثة Among my peers, I am usually the first to try out new information technologies.
					42. 8	اود دائما تجربة التقنيات الحديثة I like to experiment with new information technologies.
					43. 9	بشكل عام ، لدى مؤسساتنا معرفة تقنية واسعة التطاق حول تقنيات مماثلة وسائل الاعلام الاجتماعية Overall, our enterprise has extensive technical knowledge about technologies similar social media
					44. 11	وسائل الاعلام الاجتماعية نوع مألوف من التقنيات الحديثة لدينا Social media are a familiar type of technology to use.
					45. 12	الالتزامات الشخصية (الاسرة، الدراسة، والالتزامات الشخصية الأخرى) تأخذ الكثير من الوقت لذلك تحول دون استخدام وسائل الاعلام الاجتماعية في المؤسسة Personal activities (family, studying, other personal commitments) take too much time to allow using social media in my business.
					46. 13	التزامات العمل (اعداء العمل، التزامات الوظيفة، والتزامات العمل الأخرى) تأخذ الكثير من الوقت لذلك تحول دون استخدام وسائل الاعلام الاجتماعية في المؤسسة Work activities (workloads, job commitments and other work-related commitments) take too much time to allow using social media in my business.

Appendix F

Section D: Environmental factors:

يهدف هذا الجزء من الاستبيان الى دراسة اراء اصحاب او مديرو المؤسسة حول مدى تأثير العوامل الخارجية للمؤسسة على قرار استخدام وسائل الاعلام الاجتماعية لدى مؤسساتهم: **الجزء (د): العوامل الخارجية للمؤسسة:**
The aim of this section is to explore your opinion as a business owner/manager about the extent of the external (environmental) factors in the adoption of social media in your enterprise:

المحور الثالث: ما هي العوامل الخارجية للمؤسسة التي لها تأثير في اعتماد وسائل الاعلام الاجتماعية لدى مؤسساتكم ؟

من خلال خبرتك كمدير تنفيذي (مدير او مالك) للمؤسسة، الرجاء تحديد رايك العبارات المدرجة في الجدول اثناء وذلك بوضع علامة (✓) في احد الخانات المدرجة امام كل عبارة:

Please answer the following questions using this 5-points scale

	1 Strongly agree موافق بشدة	2 Agree موافق	3 Neutral محايد	4 Disagree غير موافق	5 Strongly disagree غير موافق بشدة		
الرقم	(5) غير موافق بشدة	(4) غير موافق	(3) محايد	(2) موافق	(1) موافق بشدة	العبارة	رأيك حول مدى تأثير العوامل الخارجية للمؤسسة التي لها تأثير في اعتماد وسائل الاعلام الاجتماعية لدى مؤسساتكم؟
47. 1						We believe we will lose our customers to our competitors if we do not adopt these new technologies	نعتقد اننا سوف نفقد زبائننا لصالح منافسينا اذا لم نبتلي اعتماد وسائل الاعلام الاجتماعية في مؤسساتنا
48. 2						We feel it is a strategic necessity to use these technologies to compete in the marketplace	نشعر بوجود ضرورة استراتيجية لاستخدام وسائل الاعلام الاجتماعية في مؤسساتنا للمنافسة في السوق
49. 3						We know our customers are ready to do business over the social media applications.	نحن على علم بأن زبائننا مستعدون للتواصل معنا عبر وسائل الاعلام الاجتماعية
50. 4						Our customers are demanding the use of social media in doing business with them.	زبائننا يطالبوننا باستخدام وسائل الاعلام الاجتماعية في التواصل والتعامل معهم
51. 5						My friends and family members think we should adopt social media in my enterprise	اصدقائي و الاقارب يعتقدون انه ينبغي أن يكون لدى مؤسساتنا تواجد في وسائل الاعلام الاجتماعية
52. 6						Those in my social circle think we should adopt social media in my enterprise	الاشخاص في مجتمعنا يعتقدون انه ينبغي أن يكون لدى مؤسساتنا تواجد في وسائل الاعلام الاجتماعية

هل تود الحصول على نسخة من التقرير الموجز لنتائج هذه الدراسة؟

Yes نعم No لا

if your answer is "Yes", please provide your email address: إذا كانت الاجابة ب "نعم"، يرجى كتابة عنوان بريدك الإلكتروني

54. For any further comments, please use the space below?

أنا كلفت لديك ملاحظات ، يرجى كتابتها في المساحة الخالية بالاسفل؟

.....

.....

Thank you شكراً لحسن تعاونكم معنا،،،

Appendix G



Survey Roadmap

Appendix H

Survey assessment form

Questionnaire Evaluation

Participant Information

Please tick on of the following categories that best describe your status:

- Student Member of Staff (e.g. Professors or Lecturers) Employee

Questionnaire Objective

The objectives of the questionnaire are stated clearly:

1 2 3 4 5

Disagree Agree

The objectives of the questionnaire is relevant to social media adoption:

1 2 3 4 5

Disagree Agree

The questionnaire is sufficient to measure the social media adoption.

1 2 3 4 5

Disagree Agree

Questionnaire Content

The questionnaire content is clear:

1 2 3 4 5

Disagree Agree

The content of the questionnaire is easy and understandable:

1 2 3 4 5

Disagree Agree

The questionnaire content covers important areas of social media adoption:

1 2 3 4 5

Disagree Agree

Questionnaire Design

The questionnaire's design is flexible enough for you to go back to where you left:

1 2 3 4 5

Disagree Agree

The sequence of questionnaire is well-structured:

1 2 3 4 5

Disagree Agree

The instructions in the questionnaire are easy to follow:

1 2 3 4 5

Disagree Agree

The questionnaire is visually appealing :

1 2 3 4 5

Disagree Agree

The questionnaire is too lengthy:

1 2 3 4 5

Disagree Agree

Overall

What additional content would you like to see developed in this questionnaire?

.....
.....
.....

Do you have any comments or suggestions you would like to raise regarding this questionnaire?

.....
.....
.....

Appendix I

Goodness-fit-statistics

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp.(B)
Step 0 Constant	.657	.147	19.885	1	.000	1.929

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step 1 Step	158.040	15	.000
Block	158.040	15	.000
Model	158.040	15	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	105.181 ^a	.537	.743

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.496	8	.810

Classification Table^a

	Observed	Predicted		
		Does your enterprise have social media presence (Facebook, Twitter, Instagram, etc...)?		Percentage Correct
		No	Yes	
Step 1	Does your enterprise have social media presence (Facebook, Twitter, Instagram, etc...)?	No	Yes	
		56	14	80.0
		9	126	93.3
	Overall Percentage			88.8

a. The cut value is .500

Appendix J

Appendix J

	IND	SZE1	SCP	RAV	CMX	CMB	TRB	OBV	INT	TRT	IMG	TMS	INV	PIE	PLT	CMP	CPS	FFI
CONSTANT																		
IND	1																	
SZE1	-.279	1																
SCP	-.050	.056	1															
RAV	.083	-.062	-.015	1														
CMX	.036	-.028	.080	.493	1													
CMB	-.016	-.080	.099	.452	.569	1												
TRB	.015	.007	.087	.498	.559	.606	1											
OBV	-.021	.077	.042	.507	.555	.616	.686	1										
INT	.002	-.050	.116	.468	.414	.534	.470	.451	1									
TRT	-.012	.058	.056	.355	.413	.507	.592	.516	.378	1								
IMG	-.052	.058	-.026	.528	.246	.362	.398	.386	.480	.412	1							
TMS	.008	-.131	.070	.476	.390	.439	.415	.416	.325	.293	.360	1						
INV	.022	-.077	.118	.408	.299	.405	.474	.438	.336	.405	.307	.629	1					
PIE	.028	-.027	.151	.398	.496	.471	.551	.563	.350	.395	.344	.574	.650	1				
PLT	-.093	.030	.022	.114	.032	.009	.046	.034	.067	.105	.141	.083	.101	.132	1			
CMP	.061	-.153	.038	.424	.229	.374	.336	.230	.402	.228	.449	.492	.450	.472	.151	1		
CSP	.015	-.098	.066	.462	.334	.475	.432	.376	.477	.363	.503	.528	.450	.477	.144	.689	1	
FFI	-.007	-.051	.046	.412	.255	.354	.348	.327	.411	.286	.482	.550	.440	.457	.202	.635	.736	1

Pearson R Coefficient

Appendix K

A summary of SMEs profiles

SME01: is an Omani-style café specialized in fast food with Omani flavours and taste. The enterprise is classified as a small enterprise because it consists of 8 members of staff. It was founded by three owners in the year 2013 and located in an area surrounded by the several educational institutions and students' accommodation in the capital. The enterprise started to use social media during the start-up stage and before the actual launch by targeting a VIP and officials to taste their meals and attract potential customers; they started with Facebook, Twitter, Instagram, YouTube and Foursquare. In the first five weeks, the enterprise attracted about 16,000 followers in Instagram. In addition to social media platforms, the enterprise use email and WhatsApp to communicate with suppliers and for internal communication with staff. The participant for the study was the marketing and operation manager who is in charge of managing the enterprise presence in social media. The participant has solid experience with electronic forums and graphic design.

SME02: is a modern chocolatier enterprise specialized in manufacturing handmade chocolates that encompasses classic flavours of Oman. The enterprise is co-founded by two female relatives in 2009 and located in the capital, Muscat. It is classified as a small company as it has six members of staff including the owners. The enterprise started as a home business before opening the first store in 2012. It started to use social media channels from the first day in business. The adopted channels include Facebook, Twitter, Instagram and Foursquare. In addition, the company has its official website enabled with online order and acceptance of cards payments. Also, the company use email address, WhatsApp mobile application for internal and external communication. The company has adopted a blackberry mobile application to communicate with people. The interviewee participated in this study was the marketing and operation manager, co-owner.

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SME03: is a cake decorating enterprise that started as a home start-up business in 2012. It is based in the capital and has two branches. The enterprise is categorised as a small enterprise with a total employees of 6 including the owner. The company started to use Facebook and then moved to Instagram and twitter. In addition, it has a website and use email and WhatsApp for internal and external communication. The interview was done with the owner who is currently managing enterprise's accounts in social media.

SME04: is a local shoe retailing company that specialized in men's shoes. The company has been in business for six years and was founded in 2014 by two brothers. It has a total of six staff and thus classified as a small business. With the idea from two their brother, who has personal experience in using social media, the company started to use social media platforms after the first three months of its official launch. The currently used platforms are Facebook and Instagram. In addition, email and WhatsApp are used to communicate with suppliers. The participant for the study was the operation manager, co-owner.

SME05: is a drive-thru café specialized to serve different types of international coffee such as cappuccino and latte. It is the first in nature in the country. The enterprise was founded in 2013 and based in the capital. It is classified as a small enterprise as it comprised of nine staff including the owner. The idea of creating presence for the Café in social media was initiated by a relative. The adopted platforms include Facebook Instagram and Twitter. In addition, the enterprise use WhatsApp to communicate with staff and has adopted a simple accounting system. However, SME 5 does not have official email address or a website. The participant for this study was the owner.

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SME06: is a fashion incubator and an event management small enterprise. The enterprise was founded in 2006 and aim to maintain the traditional uniform and Omani fashion and preserve the identity of the local uniform. It provides a multi fashion related functions including: concerts, event management, fashion show, education and training for Omani women, encourage Omani designers to follow their dream by becoming successful entrepreneurs, organizing workshops and organizing various different Exhibitions. It is classified as a small enterprise as it has five full-time employees including the owner and occasionally it hires subcontractors to do some seasonal tasks. The enterprises started to use social to use Facebook in 2006. Currently, besides Facebook the enterprise uses another four platforms; Twitter, Instagram, YouTube and Foursquare. In addition, the enterprise official website and email address. Also, the company use WhatsApp to communicate with members of staff. It has a prior experience in using a chatting messenger known as ICQ to communicate with customers. The participant for this study was the owner who currently manages enterprise's presence in all the platforms.

SME07: is a small perfume enterprise specialized at producing oriental perfume and unique national fragmented. It was founded as a home business in 2007 and registered officially in 2012. The enterprise has four staff including the owner and has created presence in social media in 2013. Owner's son initiated the idea of establishing presence in social media platforms, so the enterprise first presence was on Facebook and Instagram. Recently, the owner created a presence in twitter. In addition to social media platforms, the enterprise use email and WhatsApp to communicate with external suppliers and some customers who have no accounts on social media. The owner is a full-time government employee who has been granted a two-year off job permission to take care of her business. The participant for this study is the owner.

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SME08: a small company specialized at producing Arabian Spices for Omani households. The enterprise was founded in 2012 and consists of six staff including the owner. The idea of establishing presence in social media came from the owner's sister who has a good experience to use social media platforms. Thus, the enterprise has presence in Facebook and Instagram. In addition, the enterprise created email account to communicate with suppliers which did not continue as suppliers did not show willingness to use technology. The enterprise is owned by a full-time private sector employee.

SME09: is a micro-size enterprise specialized at producing and retailing perfume. It was founded in 2012 and located in the capital. The enterprise has two staff including the owner. Creating a presence for the enterprise in Facebook, Instagram and Twitter was initiated by a group of friends. Also, the enterprise's accounts in social media platforms are managed by the owner. Beside social media platforms, the enterprise has email account, a static website and use WhatsApp for external communication with customers. The owner has a positive perception about social media and other IT applications; however, he lacks the time as he is a full-time government staff. The participant for the study was the owner.

SME10: is a medium fast food enterprise specialized in different types of pizzas. It was established in 2011 and has five branches in the capital. The organizational structure of the enterprise consists of the CEO, marketing and sales manager, the operation and quality control manager and 33 members of staff in the five branches. The enterprise has started recently to give franchising licence in Oman. With respect to the presence in social media, in 2013 the enterprise has started to use three platforms which are: Facebook, Instagram and Twitter. Apart from social media applications, the enterprise has also adopted an online delivery system to accept online orders. Also, it uses email and WhatsApp for both internal and external communication. The participant for the study was the marketing and sales manager.

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SME11: is a small enterprise with recycling services as a core business activity. It provides recycling services, waste management and eco-friendly solutions. The services include recycling cardboard, disposal of documents using safe methods, collect cartons, buy waste paper, newspapers and magazines, remains of printing presses, old textbooks and old documents and provide environmental management training and consultancy. The enterprise was founded in 2011 and has been awarded national and international certificates including the ISO 1401 EMS. The enterprise has a total of ten employees including the owner. In addition, occasionally the enterprise hires contracts-based staffs. In 2013, the enterprise adopted Facebook, Instagram, Twitter and LinkedIn. It has a contract with an international social media agency to provide additional support and consultancy for effective use of social media tools. The enterprise also has a Skype account to get external technical support vharaira video-based calls. It has also, a website placed in two servers and official email account. The enterprise presence in social media is managed by the CEO and recently shared access with a dedicated staff. The CEO was interviewed for this study.

SME12: is a small partnership enterprise that provides advertising and media services ranging from designing to implementing and printing business activities. In addition, the enterprise organizes events and manages social media contents for officials and organizations in public and private sectors. It has completed its 15th anniversary in business. It has a team consists of eight full-time employees and some part time staff during busy occasions. Two years ago the enterprise initiated its presence in five social media platforms: Facebook, Instagram, Twitter, YouTube and LinkedIn. Social media accounts are accessed and managed internally by the CEO and the operation manager. Apart from social media, the enterprise has an official website, email account and uses different design software. Also, it has implemented an annual plan to update software and hardware. The enterprise has started recently social media related activities by managing social media accounts for some officials and organizations. The CEO, the general manager, was interviewed for this study.

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SME13: is a small private general clinic operating in Muscat since 2013. It has a very limited scope as it focus to serve a limited area in the capital. It is classified as a micro-business with a total of six employees including the owner. The enterprise has not yet created presence in social media. However, it has a static website as well as simple software for appointment scheduling and staff HR related issues such as leave management. In addition, the enterprise uses email to communicate with the medical instruments suppliers and in very rare cases to exchange medical reports with patients. A telephonic interview was conducted with owner for the study.

SME14: is a small retail enterprise that sells computer accessories. The enterprise was founded in 2004. It targets mainly schools as well as individual customers in a limited area in Muscat. It is classified as a micro business as it has only four employees including the owner, a full-time government employee. It has developed a simple e-billing and inventory system. In addition, it also uses email to send the required accessories from the main suppliers in Dubai. The enterprise has a plan to adopt Facebook in the near future to market its business. The interviewed candidate for the study was the owner.

SME15: is a construction based small enterprise which has been in business since April 2007. It is classified as a small enterprise and has a staff of 30 including the owner. The enterprise uses email for external communication with labour agencies outside Oman. Despite being in business for more than five years, the enterprise has not yet adopted social media. However, it intends to adopt an ERP system to manage financial and HR issues. The enterprise is owned by a full-time government employee. The owner was interviewed for this study.

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SME16: is a small service enterprise with a team of six employees including the owner. It was founded in 2013 and operates in a small area in the capital. The enterprise is specialized in lefts installations for residential buildings. Owing to the need to supply accurate information and measures of customers' specifications, the enterprise has decided to use email to communicate the required product's details to the main supplier in South Korea. In addition, WhatsApp mobile application is used internally to exchange information within the enterprise. The enterprise may intend to use Facebook as a marketing tool in the near future. The owner is a full-time government employee. He was interviewed for the study.

SME17: is a small construction based company that focuses in a limited area in the capital. The enterprise mainly specialized in re-innovating old houses and buildings. This includes finishing and decoration works. It was established in 2009 and has 10 labours. With regards to technology, the enterprise does not have access to any sort of IT applications. In addition, it has no intention to adopt social media in the near future. The participant for the study was the owner.

SME18: is a small enterprise providing technical services related to automobiles key remote programming. It has been in business for about 8 years since 2006. The services provided by the enterprise involve; copying car keys, dealing with locked out keys and fixing car remote faults. It has a team of six staff including the owner. Due to the need to update software used to program remote keys, the enterprise uses email to exchange requires software to members of staff. In addition, email is currently used to communicate with technical support companies in the UK and Canada for defaults in the copying and programming machines. Beside email, WhatsApp is used for sharing information between staff. Additionally, the enterprise intends to adopt social media in the near future to market its services. The owner was interviewed for the study.