FACTORS THAT INFLUENCE EMPLOYEES' KNOWLEDGE-SHARING BEHAVIOUR IN AN INVESTMENT FIRM IN KUWAIT

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ABSTRACT

Information dissemination is gradually gaining suitability in all organisations in the modern dispensation information era. At a distinct level, knowledge dissemination is the procedure through which a person willingly guarantees admittance to the exchange of information, and experiences as well as knowledge with others in the organisation. Sharing of knowledge is essential organisations as they are not treated as independent organizations (Orlikowski, 2002; Tsoukas, 1996). Dissemination of knowledge entails many-sided and complex actions that depend on factors such as cultural, technological and organisational aspects as well as attitudes and an individual's values (Oliver, 2008).

The research problem highlights the lack of the incorporation of knowledge-sharing practices in investment companies and defines the reasons why knowledge sharing is not a significant component of a business strategy. However, studies about the practices in the sharing of knowledge in the investment sector in Kuwait are lacking. Consequently, this leaves a gap in the academic and the business environments concerning the significance of knowledge sharing and its practices in Kuwait.

The gap in the field of knowledge sharing has formed the basis for this research and the aim is to ensure an understanding of the knowledge-sharing practices. Moreover, the research aims to fill this gap by determining the reasons why employees and management in the investment sector have not taken a step towards formally practising knowledge sharing in these companies. The investment sector has a substantial function in the country's development and economic well-being. These companies compete in retaining their customers and recruiting new ones but, with similar products and service offerings, maintaining the competitive advantage is relatively difficult. Investment companies need to focus on the knowledge that they possess and use it to create a unique knowledge, which can then be a competitive advantage, leading to business growth.

This research collects information from employees through surveys, followed by in-depth data collection from the management of the investment companies through interviews. The findings will contribute immensely to the existing gap in the concerned research field and add value to management by formally introducing knowledge-sharing practices in the Kuwait investment companies.

The literature review defined the conceptual framework for this study. The independent variables included individual cognition (organisational commitment and perceived benefits), interpersonal interaction (trust and social interaction) and the corporate context (reward systems and organisational support). The dependent factor is the individuals' knowledge sharing behaviour. Additionally, information technology is considered a mediating variable.

The model was tested by collecting data from the managers and the employees of the selected organisations. The research uses both quantitative and qualitative research methodologies. First, the data from employees were gathered through surveys (quantitative), and this was followed by interviews with managers (qualitative). Based on the survey, there were 424 responses, and these were analysed using SPSS. Interviews with seven managers were conducted on the quantitative data results.

The quantitative findings indicated that perceived benefits, social interaction, organisational support and reward systems are vital components in individuals' knowledge-sharing behaviour. Based on the managerial interviews, top management (support and knowledge sharing practices), managerial relationship, informal communication and knowledge-sharing platform (IT, social events) are perceived important.

The qualitative findings from the management of the investment companies indicated that knowledge-sharing practices are not practised. Some managers take self-interest into such practices. However, from an overall perspective, the investment sector in Kuwait has not yet started such practices. The qualitative findings also showed that the management is aware that knowledge-sharing practices are an organization-wide concept and there is a need for such practices to be part of the overall business strategy, mission and vision.

The literature review has depicted the absence of research paradigms into knowledge-sharing practices in investment companies. Based on the in-depth findings and employee survey, the findings of the thesis contribute to scholarly practitioners' knowledge and to the literature by recommending a framework that investment companies in Kuwait can use to assess the knowledge-sharing practices. The framework focuses on individual factors and organisational factors. Organisations have to provide the appropriate knowledge-sharing platforms for

employees to take part in knowledge sharing. The findings of the study consequently add value to academic and business fields.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1: INTRODUCTION

1.1 OVERVIEW

The concept of knowledge sharing has drawn much influence from society thereby attracting significant scholarly attention over time. As pointed out by Bartol and Srivastava (2002), knowledge sharing within an organisation is relevant among individuals, who can share suggestions, ideas and expertise with each other. Ideally, knowledge sharing enables the swapping of relevant experiences alongside information among workmates, and, therefore, such practices are essential for workgroups to improve knowledge sharing as a measure of meeting the goals and objectives of the organisation (Tsai et al., 2013). Knowledge sharing is regarded an essential element of self-delivery that is considered as knowledgeable. Moreover, knowledge is an expressive model, such as an attitude or private custom (Cyr and Choo, 2010). However, knowledge-sharing practice can be poor in the sense that people consider their knowledge as valuable or necessary, and thus are not be willing to share it with their colleagues (Davenport and Prusak, 1998; De Long and Fahey, 2000). The significance of knowledge sharing is that the results are intended to benefit those perceived to be deficient in some form of knowledge.

The concept of knowledge sharing cannot take place where there is no connection. Therefore, knowledge sharing operates in a specified context. According to Oliver (2008), information sharing is not just about influential related factors like personal values or attitudes; it embraces all concepts of the organisation and is not limited to cultural values, technological infrastructure and access of information among other factors. Therefore, techniques used in information sharing must show some sense of association to cultural aspects, technology and policies governing an institution (Davenport and Prusak, 1998). Interrelated factors that support the sharing and dissemination of information must stick in the mindset of the participants, which in turn corresponds to their relationships (Davenport and Prusak, 1998). During the process of social interactions for instance, it is of benefit for members of an organisation to share knowledge because it supports innovation thereby contributing to organisational performance.

There are 100 investment companies conducting their operations in Kuwait, and 54 of them operate within the Islamic Sharia provisions. However, the remaining companies operate as

well-known investment companies. Additionally, 51 of these companies are listed on the Kuwait Stock Exchange (KSE) (Capital Standards, 2010). Investment companies can be categorised into three; these are Asset Management/Investment Banking, Consumer Finance Companies, and Merchant Banks (MARKAZ, 2012). The MARKAZ (2012) reports that because of the inherent money, some of the Category 1 and 2 companies went into Category 3 business because of inadequate regulatory oversight. The 2008/09 global financial crisis created a massive shakeup in this sector. The sector lost KD 235 million in 2010 due to a decline in investment income, but it saw a good start 2017. The KAMCO report for January 2017 stated that Kuwaiti equity markets had the best monthly performance in the world in January 2017 on the back of some positive factors. They further intimate that the sector performance also indicated the positive sentiments from the investors in the market because all the indices closed the month with positive monthly returns. It took this sector several years to get back to stability due to market variations. Due to heavy competition, the investment sector needs to rely on substantial information to ensure business sustenance and growth.

1.1.1 Identification of the Gap

While much research has been conducted about information sharing, studies on the intention and willingness to share information remains limited (Cyr and Choo, 2010). First, the extent of the personal norm with regard to information sharing is attrtaced by both internal and external contexts of the organisation (Jarvenpaa and Staples, 2000). According to most researchers, there is a wide deficiency of knowledge sharing as most of the studies focus on knowledge management. Fundamentally, sufficient evidence of knowledge sharing as part of a global investment is lacking, particularly in Kuwait.

Although some scholarly articles have presented the need for knowledge sharing as a crucial element, its relevance to Kuwait remains very scant, particularly in the public sector. From a report published by the Capital Standards (2010), Kuwait enjoys a dynamic financial sector with over 11 local banks and close to 10 international banks. Of crucial concern to note is that, of all the 11 banks, 60% are Islamic banks, indicating that the country experiences demand for Islamic banking. The report further indicates that the country has over 100 investment companies which are the largest in the GCC countries. The figure comes second after Islamic finance banking that takes 51% e of the publicly listed companies. Kuwait's economy experienced an economic crisis in 2009 and, following the government's stabilising

intervention, investment firms were advised to reassess their business models by focusing on innovations and customer needs. The concept has contributed to the significance of knowledge sharing thereby producing new products and services at first hand.

The level at which organisations in Kuwait enjoy the benefits of knowledge shairing demands an in-depth theory test of the factors that enhance information sharing. From the above premise, knowledge sharing is of significance to the prospective success of an investment. The research took place in Kuwait and therefore, the next section presents some of the studies in knowledge management in Kuwait. It has to be highlighted here that research in this field is limited, and particularly in the area of knowledge sharing. The discussion in the next section focuses more on knowledge management than on knowledge sharing.

1.1.2 Theories

One of the theories that are used in the compilation of this thesis is *social exchange theory*. According to Ma (2007), interaction and exchange of information between different persons determine by the wellness of an environment. A similar sentiment has been supported by Kankanhalli et al. (2005) who clarify that the expected benefits of information sharing is what encourages an individual to disseminate information from his or her part. As pointed out by Davenport and Prusak (1998), the perceived significance of information sharing is the excepted future outcome that is not limited to job protection, position appraisal and status recognition, among others. Ma (2007) further highlighted the high level of satisfaction that one can get from the inclusivity of a social community. However, Chiu et al. (2006) looked at the interpersonal factors of social interaction including trust, reciprocity, and the sharing of knowledge as a team. Meanwhile, Kim and Lee (2006) referred to the need to evaluate the benefits of knowledge sharing. They conclude that reward systems significantly affect knowledge-sharing capabilities. On the other hand, Lin (2007) reported that a poor relationship between the organisational rewards and employees' willingness to share knowledge do affect the strategic planning of an institution.

Among the prominent studies on the use of social exchange, many scholars have since addressed model and information sharing. According to Liang et al. (2008), most studies supported by the social exchange model have acknowledged that IT supports organisations that believe in knowledge and information sharing. Based on a range of moderators, social exchange theory supports the notion of information sharing as an underlying role that is

determined by the behaviours of the participants in a communication system. The result has confirmed that the reliance and social interface that one might derive from the social exchange theory and moderate through information technology contextual factors can be predictors for an individual's knowledge-sharing behaviour. Chiu et al. (2006) undertook a study to understand the relationship between capital, resources, communal interface ties, reliance, recognition, the custom of reciprocity, and collective language among communities. The findings of their assessment indicate that social interaction significantly contributes to individuals' knowledge sharing regarding quantity. The managers that have an interest in sustaining knowledge exchange through virtual communities should introduce mechanisms that facilitate the interaction and the strength of the relationships among members. Similarly, Cyr and Choo (2010) examined how several factors influence knowledge-sharing behaviour. Some of the factors include a logical calculus that seeks to assess whether the benefits and values of cost sharing are characterised by disproportional preference that favours specific outcomes. Based on Cyr and Choo's (2010) predictions, it has emerged that information sharing contributes to a wholesome working relationship thereby instigating positive relationships among the recipients. From their observations, the cost benefit of social exchange deters chances of self-interest but is apparent gain for the recepient. Finally, the form of relationship with the sharing target (the Executives) is also classified as change sharing.

The social exchange is considered as a specific offer characterised by three dimensions that are not limited to personal recognition, individual interaction and organisational framework. While personal cognition entails the benefits of company obligation, individual integration calls for interpersonal values such as trust. On the other hand, organisational framework is all about the reward scheme exhibited by the management such as technological infrastructure that enhances the sharing of knowledge among members of an organisation.

1.2   PROBLEM STATEMENT

Many documents report that the idea of knowledge sharing is crucial in attaining a prospective outcome because many people believe that it is part of an organisational requirement to share knowledge. Nevertheless, various institutions understand that the sharing of knowledge may not take place naturally, unless a specific strategy and documentation is followed (Hansen et al., 1999).

One of the major problems that needs evaluation is the lack of knowledge sharing in the investment sector in Kuwait. Employees stay for several years with the same organisation and particularly within the same industry. The knowledge that they gain by working in the sector is valuable. However, they do not share this knowledge with each other. Working in the industry and gaining considerable knowledge of the industry and the employees, one can observe that the lack of sharing is due to the fear of losing their opportunities to grow or their job. They fear that if others gain their knowledge, then they can leave the present institution for another; or it may influence their career growth. There is deficiency of incentives offered by the management in encouraging knowledge-sharing practices among the employees.

The lack of knowledge sharing can lead to several problems. Some of the problems include lack of coordination, inefficiency in solving problems on a timely basis, and negatively impacting the growth of the organisation. Additionally, during employees' turnover from an organisation, they seize this knowledge and take it with them. However, a new employee who is hired will have minimal knowledge of the firm and, therefore, the enterprise faces an expensive and time-consuming task of training and developing the employee. The essence of such initiatives is to bring the employee up to the organisation's standards. The lack of adequate studies on KS poses a hurdle to management in implementing and practicing KS. Moreover, even with the right information, it is relatively difficult to adopt KS practices. Employees have to be encouraged to share knowledge by removing the hurdles that they face in sharing knowledge; however, this is not an easy task for the management. The first step is to identify the obstacles and then find the solutions, and this is one of the aims of this research.

Knowledge sharing is considered by several researchers as a robust method of solving problems. The investment sector in Kuwait is dependent on the market information. With stiff competition in this area, the companies need to address their issues by sharing of information and finding better ways to generate stable results. However, investment firms do not currently have a formal practice of sharing knowledge. First, the management has not yet taken the upper hand in establishing a formal knowledge-sharing environment and practices.

- The employees do not take an interest in sharing knowledge, as they fear that this will affect their job security. Most employees do not get incentives in sharing knowledge.

- Kuwait relies heavily on its expatriate population. The majority of investment companies' employees are from various countries. Some of the employees have been in this sector for several years. The issue relates to the employees leaving the companies or even the country. The wealth of knowledge that these employees possess is taken with them. Employees who are hired (from within the company or outside) do not have the same extensive knowledge and experience as the ones who have left, and this leaves a gap in the workplace.

- Although most of the companies in Kuwait work with similar products and services, they have niche clients and some unique offerings. Without knowledge sharing, these offerings cannot be improved, and soon the companies fall into competition with others offering similar environments to their customers.

- Lack of knowledge sharing has slowed the pace of the growth of the investment sector. The companies are slow to handle competition or the lucrative financial market, which is dependent on several factors. The failure to use this information to develop internal strength through knowledge sharing puts the investment companies at risk of losing their competitive advantage and market power.

- As discussed here, the issue is with the employees and the management. There is the lack of empirical evidence from the investment sector in Kuwait regarding knowledge-sharing practices. There is a need for this research to go in-depth into finding the reasons cited by the investment companies in Kuwait regarding the lack of knowledge-sharing practices.

The tension's dynamics are played out at the individual level, but while much research has evaluated techniques and systems that can enhance knowledge sharing, there is a deficiency of studies to substantiate the willingness of a person to share knowledge with others within an institution.

1.3   RESEARCH OBJECTIVES

Although the author argues that the reasons for the lack of knowledge sharing could be due to fear of job security, fear of promotions and career development opportunities, these are from

a personal perspective. The fact is that the management does not have clear evidence for the reasons why employees do not share knowledge. One of the causes of this is due to the lack of adequate studies in Kuwait on knowledge input. It can also be stated that there is very little or no research in the investment sector that can be used by the management to understand and implement knowledge sharing. Ideally, the findings of this study will add to the literature gap due to a lack of studies in Kuwait and particularly the investment sector. The results will also provide recommendations to the management regarding the factors that hinder knowledge sharing, and recommendations for implementing knowledge exchange in the investment industry. This study uses the social exchange theory (SET) to evaluate knowledge sharing (KS). There are no studies currently in the investment sector relating to SET and KS. Therefore, the findings will be unique and specific to the SET. The research objectives are as follows:

- To study the significance of individual cognition (perceived benefits and organisational commitment) on knowledge sharing.
- To identify the interpersonal interaction (social interaction and trust) enable employees to share their knowledge.
- To determine the organisational context factors such as organisational support and reward systems impact the knowledge sharing.
- To investigate the significance of information technology on knowledge sharing.
- To identity the measures can the management of the investment companies in Kuwait take to create learning communities to promote knowledge-sharing practices.

1.4   RESEARCH QUESTIONS

How is knowledge sharing influenced by individual, group and organisational factors as outlined by the social exchange theory, and what are the implications to foster greater knowledge sharing in the context of an investment company in Kuwait?

The research questions is are answered in section 6.2.

1.5   RESEARCH METHODOLOGY

Both empirical and non-empirical designs formed part of this study. Therefore, secondary and primary data were collected for further analysis and interpretation. Sources of data included articles, books, journals and electronic libraries that formed a greater part of the

literature review of topics that discussed knowledge sharing. Therefore, the literature review constituted the basis method for conducting this study from which a conceptual framework was developed. This study followed a deductive approach.

The primary data came from staff of the organisation with which surveys were conducted. Following this, the managers were interviewed for the same. Quantitative and qualitative methodologies were used in this research. The emphasis on the methodology chapter constituted the primary data collected for this research. Two methodologies were deployed in two phases deemed reliable for this study. First, the quantitative study methodology and self-administered questionnaires were prepared and distributed in hardcopy to the employees. Responses were received in eight weeks. A population of 424 responses were used for data analysis. Details of the questionnaire design were inserted as part of the methodology chapter, as was the case with surveys (see Appendix I).

The quantitative data were analysed using SPSS version 21. The data were first tested for consistency with the help of Cronbach's Alpha. The step that followed was the descriptive analysis of the demographics and the studied variables. The test for the relationship between the variables, also known as the correlation analysis, was used, and the hypotheses were tested based on regression analysis. Although the demographics are not part of the research framework, their impact on the studied variables by T-test and the one-way ANOVA. The data analysis chapter provides the details of this evaluation.

Phase II constituted the interviews with the managers. The interviews followed the quantitative findings. The interviews were semi-structured and, therefore, the questions were prepared based on the quantitative results. Twelve managers were contacted for interviews, but only eight agreed to participate. The results are presented in the data analysis chapter. Details of the interviews and the time that was taken are in the methodology section.

1.6   LITERATURE CONTRIBUTION

Knowledge is necessary for managers and decision-makers in making proper judgements required for better functionality along the line of duties. Knowledge sharing has contributed to the creation of a positive learning environment at which staff productively contribute towards the benefit of an organisation. Besides, it enables the management to realise efficient administration of employees while making positive judgements on issues affecting a

company. However, sharing of knowledge requires control to benefit employees' usage in different departments of a company.

With the aid of this study, researcher is able to substantiate the environment of knowledge sharing while pinpointing factors that motivate knowledge sharing within an organisation. Through the supply of diverse information concerning knowledge sharing, the management will benefit in making judgements with regard to the implementation of factors aimed at gaining a competitive advantage.

The literature review provided detailed information on the factors and underpinning theories related to knowledge sharing. These discussions have led to the development of the conceptual structure for this study. The conceptual structure has several factors that influence an individual's knowledge-sharing behaviour. The factors studied include (i) *individual cognition*, which focuses on potential payback and organisational obligation; (ii) *interpersonal relations*, which focuses on social dealings and trust, and (iii) *organisational context*, which focuses on support and reward systems. The literature has also provided evidence that information technology (IT) plays a significant role as an enabler to knowledge sharing. Therefore, IT remains a mediator between the three factors discussed above and individuals' knowledge-sharing behaviour.

1.7   ACTIONABLE KNOWLEDGE

The information from this research will enhance existing knowledge-sharing practices. This study's findings will also be shared with the top management. The results require the CEO's and Board of Directors' approval to hold focus groups to discuss the findings. The process of the research, data collection and the results needs to be shared and disseminated. The importance of knowledge sharing and its impact on employee performance will be emphasised to the management. The process of implementing KS, existing infrastructure and required support for implementing and using KS also demands presentation.

All required information for the management to take the decision to apply KS would require submission. A meeting was held with the supervisors and other managers, so that the perspectives of all those who are responsible for implementing and practicing KS are supported and clearly understood. There is a need for cooperation in the KS implementation and such would require scrutiny. Multiple rounds of discussions with the supervisors,

managers, and top management were carried out to achieve successful implementation of KS. Further details on the actionable knowledge are in section 6.3.

Section 3.13.1 provides the initial steps that were taken in discussing the findings with the management. These were done using focus groups. Section 3.13.2 provides the next step that was taken as part of actionable knowledge. This is where managerial meetings were carried out. The researcher has also been able to develop the KS topic through brainstorming sessions with different departments. The steps taken are provided in sections 3.13.3. And the outcomes are discussed in section 6.4. Successful meeting with top management was also held and produced results related to strengthening and increasing the practice of KS between departments. There has been significant increase on KS practices over the past several months. This has led to the creation of knowledge centre (section 6.4).

1.8   THESIS STRUCTURE

The thesis has six chapters in total, and it begins with this chapter. The overview of knowledge sharing, and studies that one can find in Kuwait are presented in this section. The section contains the problem definition, the research objectives, and the questions. The overview of the methodology and data analysis is also in this section.

The second chapter is the literature section and contains detailed information on the area of knowledge sharing taken from various studies. The chapter begins by discussing knowledge in general, followed by the tacit and explicit knowledge with an emphasis on the tacit knowledge, as this is difficult to share. The next section focuses on knowledge sharing, right from the definition and importance of information sharing. The ensuing section discusses the knowledge-sharing process, followed by the theories used in this research. The theories discussed are social exchange assumption, personality traits, and the presumption of reasoned action. The main emphasis, though, is on the social exchange theory (SET). Detailed information is provided on the factors influencing knowledge sharing in organisations, such as individual interpersonal interaction, cognition, organisational context, and information systems. In addition to the individual knowledge-sharing behaviour, communication, new product development, knowledge transfer and social norms are also discussed. These are variables utilised in the research framework. The final section highlights knowledge management, which is part of the knowledge sharing, sources of knowledge, and employees' perspective on knowledge.

The third chapter, the methodology section, discusses the techniques employed in the gathering of the primary data. The problem definition and research questions are addressed briefly again in this chapter. This chapter presents the conceptual framework with an overview of each of the factors and the hypotheses. The subsequent sections discuss the research approach, the study types, and the research methods. Within the research strategy section, experimental, survey, archival analysis, case study, ethnography, and time horizon are discussed. The chapter also discusses the questionnaire design, validity, and reliability, and the sample population details for both quantitative and qualitative techniques are also reviewed. The section also provides the actionable knowledge to indicate application of the research outcome. The final part of this chapter contains information on the different types of data analysis carried out in this research.

The fourth and fifth chapters are the data analysis sections, and the fourth chapter is the quantitative data analysis section. The data were analysed using SPSS. Various tests and analyses, such as the Cronbach's Alpha reliability test, the descriptive analysis, the correlation analysis, the regression analysis, and the demographics test using T-test and One-way ANOVA were carried out. The fifth chapter presents the qualitative data analysis. In this section, the interview data gathered from the managers are analysed.

The sixth chapter provides the conclusion and recommendations of the study. In the conclusion, the research questions are also answered. The recommendations are for the managers in the investment company to enhance and improve the practices of knowledge sharing. The chapter also states the thesis' contribution to literature and finally, makes recommendations for upcoming studies.

CHAPTER 2: LITERATURE REVIEW

2.1   INTRODUCTION

According to Wang and Noe (2010), knowledge is crucial for most organisations because it provides a vital resource for competition in a dynamic economy. However, to add this benefit, the attention should not only be on the knowledge sharing between the novices and experts within the organisation but also on recruitment of staff with specific abilities, knowledge, or skills (Wang and Noe, 2010). Historically, organisations and the ancient economies depended on the resources like land as well as capital since they have physical values. This trend has changed in the modern economy, and knowledge is the major aspect of the competitive benefit over others (Beijerse, 1999). In the modern world of business, sharing of knowledge primarily means that employees contribute the knowledge of everyone in the organization, the viability as well as the innovation of the organisation benefits (Wang and Noe, 2010). Acquisition of knowledge has distinctive benefits. For instance, positively, sharing knowledge could lead to faster completion of projects, reduced production costs, better team performance, and increased innovation of capabilities of a firm and overall organisational performance (Wang and Noe, 2010).

This chapter discusses the social exchange theory (SET) and various aspects related to KS. The chapter begins by defining knowledge contained by the construct of knowledge management and is concerned about making the differentiation between *explicit* knowledge and *tacit* knowledge. The next section discusses sharing of knowledge practices, and the theories used in this research (SET, personality theories, and the theory of reasoned action). Then the various elements linked to knowledge sharing and used for growth of the conceptual framework are reviewed. The discussion then moves to the limited information related to studies in Kuwait on information administration and knowledge sharing. The final section of the literature review identifies the research gap.

2.2   KNOWLEDGE

Knowledge is simply the understanding of people about ideas, concepts, practices and procedures, among others, on how on how to do things (Armstrong, 2009, p. 220). Nonaka (1994) referred to knowledge as a true belief that is justifiable. Ruggles (1998) referred to knowledge as a mixed information experience, norm, and the standard value. Liebowitz and

Beckman (1998) define knowledge as a model or fact, the situation with an ability to foster understanding an influence of a simple field or subject and O'Dell (1999) defines knowledge as information for an action.

People utilise knowledge to interpret and enhance their understanding of a message conveyed in a particular environment (Melkas and Harmaakorpi (2008). Information can come from diverse sources, and is utilised for events of business processes within the unique context in which people generated it. 'Knowledge' depends on what is familiar: it entails the intellectual procedures of understanding, learning and comprehension going on within the mind of an individual. However, these intellectual procedures necessitate much collaboration with the world outside, with others external to one's mind. According to Davenport and Prusak (2000, p. 5) knowledge is '*a contitious of enclosed values, except insight, experiences, as well as contextual information providing an outline for assessing and incorporating information with new experiences*". Jennex (2008, p. 59) outlined knowledge as contextualised information and defined knowledge as an ability of human with an ability to be developed and extended through learning.

There is often confusion between *knowledge* and *information*, but there is some evidence that individuals cannot utilise knowledge and information interchangeably. The following section reports on the differentiation between the two constructs.

2.2.1 Knowledge and Information

In most instances, knowledge is differentiated from information; however, to date, researchers have not reached an agreement on the distinction between knowledge and information. For instance, Nonaka (1994) has the opinion that knowledge is built on information and can be justified through belief while information is the passage of messages. From the view of other researchers, knowledge goes beyond knowledge while information is the same as knowledge. Other scholars posit that knowledge goes beyond information; that is, knowledge is more competent than information but information is the same as knowledge (e.g., Kogut and Zander, 1992; Zander and Kogut, 1995). A number of sholars interchangeably applied the two terminologies – information and knowledge – stressing that differentiating between information and knowledge in knowledge-sharing research does not have much practical utility (Bartol and Srivastava, 2002). These authors take this perspective through the consideration that knowledge is information administered via persons with facts,

ideas, judgements, and proficiency suitable for a person, a group, and the performance of the organisation (Alavi and Leidner, 2001; Bartol and Srivastava, 2002). These researchers further argued that knowledge is not data or information. A brief discussion on the difference between knowledge, data and information follows.

2.2.2 Knowledge, Information, and Data

Table 2.1 gives brief information on the differences between knowledge, data, and information. Business processes are conducted on the basis of information that is accessible in a variety of formats; for instance, discussions conducted orally. Therefore, it becomes difficult to distinguish between information and data. However, there is a debate on whether to differentiate between the two words. Nevertheless, the information which is inside the company is too large when compared to data(records) (Hicks et al., 2006). Davenport and Prusak (2005) delineated data to be a collection of objective and discrete truth about occasions usually appearing in enterprises as organised accounts of transactions. The scholars explained their knowledge concerning the notion in the same way; that is, written, oral, gesture, graphic, or even through 'body language.' These are the kinds of messages consisting of information but do not explain much more on knowledge is easily incorporated, understood and assimilated in the student knowledge structures. The knowledge structures are not the same for both the student and the educator. This is because each individual's knowledge edifices are determined biographically (Schutz, 1967). Therefore, the knowledge spoken by others cannot be similar knowledge built from the messages. A good portion of KM practice and theory lines up two models' meaning of knowledge: the first one is the Data, Information, Knowledge and Wisdom (DIKW) model, which puts knowledge, information, data, and wisdom into an increasingly valuable pyramid. The second one is Nonaka's (1994) Polanyi's reformation (1966, Prusak, 1997) which provides the differences between explicit and tacit knowledge.

Table 2.1: Examples of Data, Information, and Knowledge

	Data (what a machine can assess)	Information (what an individual with no domain knowledge can assess)	Knowledge (what an expert can assess)
Content What is it?	File type, data type	Content type (e.g. whitepapers), language, title	Subject area, topic, ontology concept, theme, summary, keyword
Quantity/value How much is in it?	Byte size, # of records, # of files	Completeness (w.r.t. templates), number of diagrams and examples, domain and range of information	Current value to company, potential value, contribution to prior projects, authority and ownership of subject area
Quality How good is it?	Checksum, format, font, resolution	Matches template, grammatical correctness, clarity, contrast	Quality rating, reviews, comments, popularity, frequency of use
Goal/purpose What is it meant for? Why is it there?	For viewing on handheld, for printing	To calculate taxes, for ID card, for a graduate course	Intended purpose, target audience, people and team goals
Applicability How do we use it?	Mapping to application, to zip, to encrypt, to protect via password	For review, not for critical applications, not for export, need-to-know basis, reference only	Constraints on application, assumptions made, ease of generalization or specialization, self-contentedness, extra-functional requirements

Source: Srikantaiah and Koenig (2008)

The knowledge hierarchy is an example of a model that has been accepted and used all over the world. The model was established by Skyrme in 1999. The pyramid was adapted and improved by very many scientists over the years. The structure differentiates between 'information,' 'data,' 'wisdom,' and 'knowledge' (DIKW model; in some models, 'wisdom' is called 'intelligence') (Cheong and Tsui, 2010). Vandergriff (2008), for example, extended the the model by the constituent 'measurement' after distinguishing between intelligence and wisdom. It is through the approach that the Intelligence, Wisdom, Knowledge, Information, Data; Measurement (IWKIDM) model came into being. Nevertheless, when it comes to using it, it becomes difficult to pick the correct constituent that belongs to each level (Figure 2.1).

Figure 2.1: Hierarchy of knowledge
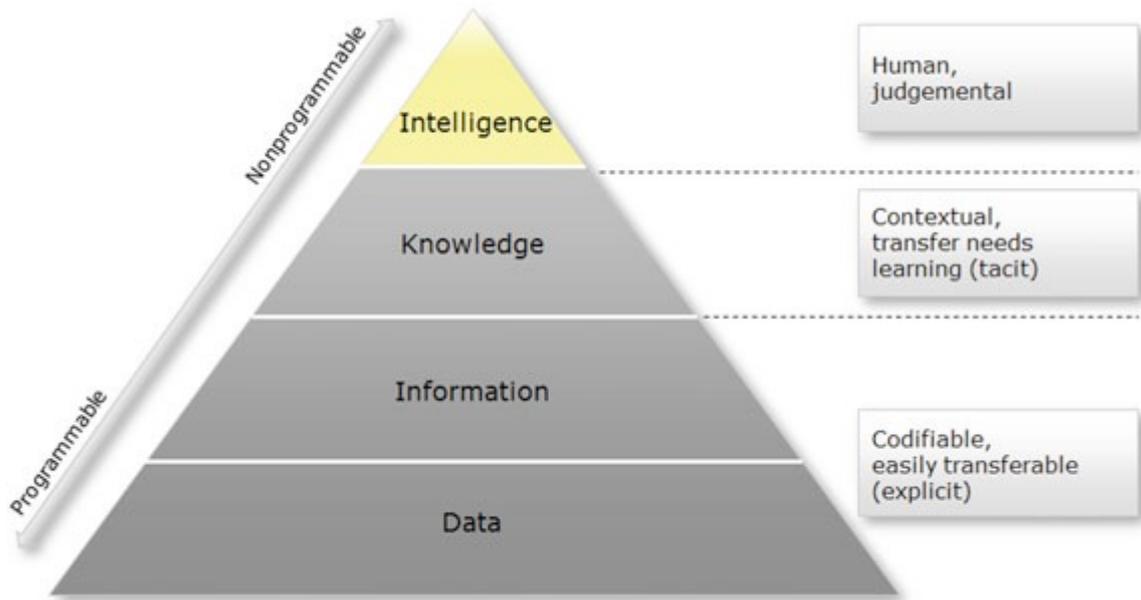
Sources: Taylor (2007); Montano (2005)

It is important to examine the 'data,' 'information' and 'knowledge' (DIK) components simply because they carry out different functions. Also, each constituent is used interchangeably in numerous business processes. The precise distribution of data, information or knowledge facilitates the development and management of these constituents pro-actively. It is, therefore, significant to discuss which of the three components one is trading with.

2.2.3 Knowledge Dimensions

Knowledge, however, remains a complex concept. Zander and Kogut (1995) suggested five dimensions of knowledge. The dimensions affect the ability to share knowledge outside organisational bounds in an efficient way KMS. They are modifiability, procedural complexity, teachability, observability, and system dependence.

- *Codifiability* is the process by which knowledge can be coded and stockpiled.
- *Technical intricacy* refers to the numerous steps of possessions that must be pooled to generate knowledge.
- *Teachability* entails the extent at which knowledge can be joined through teaching, either at work place or in school.

- *Observability* is the process by which a conterfeit of knowldege is made through observation of how to perform tasks.

- *System dependence* is the extent to which knowledge is reliant on and imitated by various people. The knowledge that is not sophisticated, extra codifiable, extra teachable and extra visible should be easily shared (Zander and Kogut, 1995).

Similarly, knowledge will be shared depending on different parts needed to complete it (Zander and Kogut, 1995). Zander and Kogut (1995) evalutaed the effects of the five dimensions of knowledge on the speed at which organisations adopt innovations. They established that teachability and modifiability had vital effects on inter-directorial transfer of knowledge.

In summary, data are viewed as realities planned to develop into information (Lundvall and Nielsen, 2007). Information is data that are unique because they has meaning and purpose (Kumar and Thondikulam, 2006; Williams, 2006). Knowledge happens when information is deduced or put into context and joined in associations (Gordon and Grant, 2005; 2011).

2.3   TYPES OF KNOWLEDGE

Knowledge is the revenue of economic advantage within an organisation, and employees are referred to as the expert knowledge. Expert knowledge refeces to tacit and not easy to communicate but assumed to be an essential modest benefit (Spender, 1998; Thompson et al., 2001). Social collaboration between group's members depends on the revenue through which one can either attain or join an inferred knowledge (Busch et al., 2003; Edmondson et al., 2003; Nonaka and Takeuchi, 1995). Knowledge is distinguished between its tacit and explicit components, and the following discussion evaluates them.

2.3.1   Explicit and implicit Knowledge

Two vital notions on knowledge in literature exist – i.e. explicit and tacit information. Polanyi suggested two classes of knowledge: focal knowledge and tacit knowledge. Polanyi's discussion of the double nature of knowledge was grounded on his reflection that we can understand more than we can express (Puusa and Eerikäinen, 2010); that is, it is very difficult to articulate correctly what explicit knowledge means. Nonaka and Konno (1998) argued that knowledge depends on distinct dimensions: explicit and implicit. *Implicit*

information refers to 'the proficiency and expectations that persons develop' (McInerney (2002). On the contrary, *explicit* knowledge is an explained documented or recorded knowledge. Presumption that implicit information is subconscious are a common event, challenging to articulate and it depends on familiarity. Ever since tacit knowledge became frequently entrenched in stories, it is efficient when defined by descriptions of stories (Snowden, 2008).

On the contrary, obvious knowledge remains fixed or well documented. Tacit knowledge is delineated as knowledge possessed by people and is, hence, difficult to acquire and share. Consequently, it is difficult to articulate unspoken information. It is assumed in most cases that individuals possess less information on knowledge they possess, or they do not know how important it is to others. In the arena of association studies, tacit knowledge gained emphasis in the late 1990s in the works of information administration. Grant (2007) suggested that that explicit-tacit dimension of knowledge is one of the most broadly discussed matters in information management.

2.3.2 Tacit Knowledge

Tacit knowledge is essential, but hard to share. These are the concerns of prominent scholars in the arena of distribution information. The concept of tacit understanding came from Polanyi (1996; cited in Ryan and O'Connor, 2013) who delineated it as inexpressible knowledge or the truth that "we tell less than we know. Ryan and O'Connor (2013) further stated that the literature contains much debate as to how tacit information is operationally and conceptualised defined. Some scholars (Nelson and Winter, 1982) claimed that 'tacitness is a substance of degree' and that similar knowledge can be more difficult depending on the individual. This point is where tacit knowledge is produced through social collaboration (Nonaka and Takeuchi, 1995). However, others argue that tacit knowledge is inherent knowledge (Wilson, 2002).

Nonaka (1991) and Nonaka and Takeuchi (1995) stated that the word 'tacit' is used to refer to a kind of information that is hard to express and articulate. It is not easy to codify tacit knowledge, despite the fact that it contains relationships, competencies and skills, familiarities, value and beliefs, and ideas. It is highly personal and implanted in the individual's mind. According to Kidwell et al. (2000), tacit knowledge reflects learning and competence implanted in people's minds within the organisation. It has to do with insights,

perceptions, craftsmanship, and experiences. Tacit knowledge is difficult to transfer, personal, hard to communicate, context-specific, and hard to formalise. Hence, tacit knowledge is a restricted domain to students because it is difficult to elucidate and organise in documents. In addition, it is very hard to teach them tacit knowledge. In response, teachers try their best to make use of animation, narration and commentary when teaching the learners.

Tacit knowledge comes from organisational learning that happens at numerous levels. Edmondson (2002) delineated three levels of speculating about organisational learning. The impact of adaptations and routines takes place at the organizational level or micro level over a period of time. The behaviour of people including the effect of changes within the organisation deepens at the micro or individual levels. According to Edmondson (2002), group work is vital particularly for personal behaviour and understanding. Teams thereby give a societal influence that is, by the action outcomes of others with whom they labor in close cooperation.

Tacit knowledge transfers and sharing are the most vital study areas in the knowledge management field (Huang and Newell, 2003). Tacit knowledge transferral and involvement might result in synergy, and workers and initiatives can profit from it. However, due to the non-structured characteristics of tacit knowledge and the unbalanced information between the initiative and staff, the tacit knowledge involvement and transfer is hard. It has the problem of whether the inducement machinery is beneficial or not in the transaction of tacit knowledge involvement and transfer (Sanidas, 2004; Xunlian et al., 2005). Even though trading can be simplified by information technology, it cannot generate motivation within the people (Sun and Scott, 2005). The emphasis here is about how employees can be motivated to transmit and segment their tacit knowledge. Yuqin et al. (2012) stated that the enterprise plays a major position in the acquisition of tacit information and in the transfer of knowledge. Allocation depends on the organised and premeditated human resource management and development (Yuqin et al., 2012). They add that how to apply organisational methods, incentive machinery and culture to enhance the sharing and transfer of tacit knowledge is the major issue and main problem in enterprise management of knowledge and it is a significant component in the management of human resources.

The arguments, as well as discussion presented here by several authors, describe the difficulties of transferring and sharing tacit knowledge, but they also recommend some of the ways that tacit knowledge can be transferred and shared. Recommendations of tacit knowledge sharing refer to social interaction in teams, mentoring and apprenticeships, use of information technology, employee motivation, the use of incentives, employee development, and including KS as part of the organisational culture.

2.3.3   Articulating Explicit Knowledge

This section discusses the sharing and articulation of explicit knowledge. Nonaka and Takeuchi (1995) show codified information or explicit information as understanding expressed through official language such as linguistic statements, specifications, scientific expressions, and in the manuals. Such clear knowledge, they summarised, is transmitted officially and easily across persons. Choo (1998) recommends that symbols, objects, language and artifacts define explicit knowledge. Explicit knowledge can also be based on the object – that is, in blueprints and technical drawings, business plans, patents, mathematics and chemical formulae, software code, databases and statistical reports, or rule-based – that is, expressed as routines, procedures and rules. In addition, Marwick (2001), Stenmark (2002), Petrides and Nodine (2003) and Wilson (2002) claimed that clear knowledge is not awareness but information.

Explicit knowledge is the official knowledge that transfers from educators to learners. In most cases, knowledge comes in a form of course materials, study guides and syllabi. It is easy to transfer, codify, package and communicate explicit knowledge (Kidwell et al., 2000). Therefore, it is relatively easy to process, transmit and store explicit knowledge in the database. Associations tend to rely primarily on this method of explicit and uttered knowledge, which is written in memorandums and described through graphs and applied in the processes of making decisions or operating institutionalised procedures.

2.3.4   Implicit Knowledge

The findings of Nonaka (1991) and Nonaka and Takeuchi (1995) have contributed significantly toward the field of sharing tacit and explicit knowledge. However, their views have also received criticism. For example, Wilson (2002) critiqued these scholars, that they have either misled the truth that tacit knowledge can be captured or did not understand the works of Polanyi. Further, Wilson claimed that Takeuchi and Nonaka came up with implicit

definition of knowledge. Normally implicit knowledge is perceived as something that we do not take seriously in our behaviours. Through collective culture or experience, we share with others (Wilson, 2002). Wilson also argued that tacit knowledge cannot be captured but implicit knowledge can. It is difficult to make implicit or tacit knowledge 100-per-cent explicit. Thus, the difficulty brings many problems during the process of transfer and creation of knowledge. Subsequently, most of the theories of knowledge management prefer implicit knowledge as opposed to explicit knowledge; the thesis utilises the concept 'implicit' knowledge to have the same meaning as that of tacit knowledge.

2.3.5 Knowledge Creation

Nonaka's project it is rooted in action, tied to a particular context, acquired through experience, comprising skills and cognitive elements and intrinsic to developing shared understanding. It is quite distinctive from explicit knowledge. Knowledge creation, Nonaka, and Toyama (2007) argued, is grounded on the interaction of subjectivities (tacit) and objectivities (explicit). Elsewhere, tacit knowledge is a tool which aids action, yet is not part of it (Cook and Brown, 1999); it is intangible, cannot be easily articulated, is held unconsciously, and cannot be divorced from context or explicit knowledge (Thompson and Walsham, 2004). Tsoukas (2011) viewed the tacit condition as a requisite for explicit knowledge, comprising a functional, phenomenal and semantic structure.

Nonaka and Konno (1998) recommended the Socialisation, Externalisation, Blend, and Internalisation (SECI) model to clarify the roles of these two types of information in the knowledge creation process. Hence, they put forward the hypothesis that knowledge can be freely altered between explicit and tacit conditions through four stages: socialisation, externalisation, combination, and internalisation (SECI). However, scholars have not agreed that all tacit knowledge forms can be changed into the forms of explicit knowledge. It is cautioned that, during the process of transformation, there is a likelihood of losing the potential value and richness of the content. The process of losing the richness is referred to as 'tacit-explicit paradox' (Jasimuddin et al., 2005). Indeed, it has also been recommended (Kogut and Zander, 1992) that knowledge should be viewed as inhabiting a continuum with tacit knowledge on one end and explicit acquaintance on the other.

Past studies on explicit and tacit knowledge in the organizational context considers two perspectives. One, focused on individuals who primarily work on tacit knowledge being

transformed to plain knowledge that is easily understood and usable by others. This kind of information is crucial to the organization in achieving better results and brining out innovative products and services. The second focus is on how this knowledge can be shared and in motivating others in sharing this knowledge. Such studies have also found various barriers on sharing knowledge. For example, Herrgard (2000) found factors such as the organizational culture, time, and physical distance as barriers to knowledge sharing. Another study by Koskinen et al. (2003) indicates that environment that promotes interaction and trust will foster KS environment.

2.3.6 Tacit Knowledge and Innovation

The emphasis thus far has been on the importance of sharing knowledge. However, explicit knowledge is much easier to share. This section discusses the importance of tacit knowledge on firms' innovation capability. Cavusgil et al. (2003) argued that tacit knowledge is critical for a company's innovation capacity. A high degree of tacit knowledge obtained through close interactions with partner companies. Firms could benefit from the experience that comes from the collaborative process of tacit knowledge transfer. They further argue that a strong relationship between enterprises is necessary for knowledge transfer. It paves the way for the continued sharing among technical and managerial personnel and simplifies the duplication of organisational routines. A direct interface that is at the partner firms allows the unswerving reflection of processes and facilitates the steady and experimental learning that is important for the effective handover of tacit knowledge.

2.3.7 Knowledge Management

Knowledge sharing is also part of the knowledge management (KM). This research focuses on knowledge sharing. This section provides a brief discussion about knowledge management.

As pointed out by Prusak (1997), KM is a process of using, capturing, acquiring and creating knowledge to promote performance and learning within the organisation. The phrase can also be defined as clear management and control of knowledge in an organisation with the aim to achieve the objectives of the organisation (Van der Spek and Spijkervet, 1997, p. 43); it is the official knowledge management to enhance reuse, access to and creation of knowledge by the use of advanced technologies. (O'Leary, 1998, p. 34); the process of using, creating and capturing knowledge to promote the performance of the organization (Bassi and Ingram,

1999, p. 424); and the capability of the organisation to distribute, manage, value and store knowledge (Liebowitz and Wilcox, 1997, p. i). The Organization for Economic Co-Operation and Development (OECD) defines the KM procedure as comprising of use, production, and mediation of knowledge (OECD, 2000, p. 70).

The processes of knowledge management are the storage and the retrieval of knowledge. Various practices are contained within the KM that are used within the organisation to apply, create, transfer, capture and collect what people within the organisation are aware of and the ways of knowing what people in the organisation are aware of. The discipline emerged as early as 1995 with academic journals and professionals as well as university courses dedicated to it (Stankosky, 2005).

2.4   KNOWLEDGE SHARING

Scholars use versatile expressions to define the term 'knowledge'. For instance, according to Starbuck (1992) knowledge is a stock of expertise, while Purser and Pasmore (1992) suggested that knowledge is a union of intuition, facts, opinions, models, themes and ideas applied in the process of decision making.

2.4.1   Definitions

Sharing of knowledge entails the endowment of core information and ideas to benefit other individuals, as well as to cooperate with other persons in solving challnges while creating ideas, or setting up procedures (Cummings, 2004; Pulakos et al., 2003). A range of scholars have addressed the benefits of creating a unique knowledge base at different companies as well as distributing new products and services towards the creation of a unique competitive advantage. According to   Menguc et al. (2007), coming up with a unique commodity or service contributes to helping consumers at influencing dynamicity of performances within an organisation (Bogner and Bansal, 2007; Tanriverdi, 2005). Taking into consideration that knowledge is derived from employees' knowledge, companies have thus come up witth mecahnisms for creating organisational knowledge by making it easier for institutional members to get access to knowledge. Similarily, human resource managers are current getting involved in the knowledge management issues such as leadership styles that are utilised in suport of knowledge management programmes (Birasnav, 2014).

Another concept is knowledge alignment because congruence of knowledge cannot readily be achieved without sharing. Thus, it is not surprising that Reich et al. (2012) found no relationship between knowledge stock (i.e. levels of expertise) and knowledge alignment because the degree of competence does not imply a propensity to share. This aspect is consistent with earlier studies which have found little or no direct impact of expertise on project performance (Faraj and Sproull, 2000). There are many possible reasons why subject matter experts may not share their knowledge with non-domain specialists including the grounds of power, differences of language, and pressure of time (Koskinen and Pihlanto, 2008).

Four ways of assessing the suitability of sharing knowledge were identified in prior research: quality, efficiency, learning, and understanding (Brown et al., 2013). Zander and Kogut (1995) examined efficiency as the sole metric. The process of sharing knowledge should boost the effectiveness of the workers in their performance of the job. Some jobs have key relative standards, and it can help boost the worker's performance if the organisation has enough knowledge about them (Zander and Kogut, 1995). Exploitation of the available knowledge within the organisation saves time in the organisation; hence, the efficiency of the individual workers is improved besides that of the whole organisation (Hansen et al., 1999).

Besides the importance of enhancing sharing of knowledge should also boost the quality of performing a task; otherwise it defeats the purpose of sharing knowledge. The quality of work within the organisation should improve because enough knowledge is available to people within the organisation (Hansen et al., 1999). Therefore, when evaluating the importance of sharing knowledge, it is vital to assess the extent to which the quality of work improves.

The sharing of knowledge can be vital, and for this to occur, it should promote comprehension and learning (Argote et al., 2003; Ko et al., 2005). Education as well as the capability to apply it (i.e. understanding) are different and discrete aspects of sharing knowledge (Ko et al., 2005). People are required to share knowledge and the structures that are needed to use it. Thus, evaluating the extent to which a person has cultured the new knowledge and can use it to perform work due to knowledge sharing are the most important facets of assessing the significance of sharing knowledge.

Knowledge sharing requires several components to be in place, and some of these are discussed. Information networks are made up of networks of people that pursue knowledge from others (i.e. a seeking link). Knowledge pursuing is dogged to a great extent by whether a person is aware of another individual's knowledge, can reach that person, and share this knowledge (Borgatti and Cross, 2003). Persons that know others' knowledge and struggle to contact them are anticipated to highly value person-to-person sharing of knowledge.

2.5   KNOWLEDGE-SHARING PROCESS

The process of sharing knowledge entails the transfer of knowledge from the owner to the demander. It is a process that requires a variety of steps. The *owners* of knowledge apply some means to externalise and propel the externalisation of knowledge which hides in the brain; the *demanders* of knowledge also apply ways to acquire and internalise knowledge, so the demanders of knowledge expand the knowledge, as described by Qun and Xiaocheng (2012). The authors express the process, and it is shown in Figure 2.2.

Figure 2.2: The process of knowledge sharing
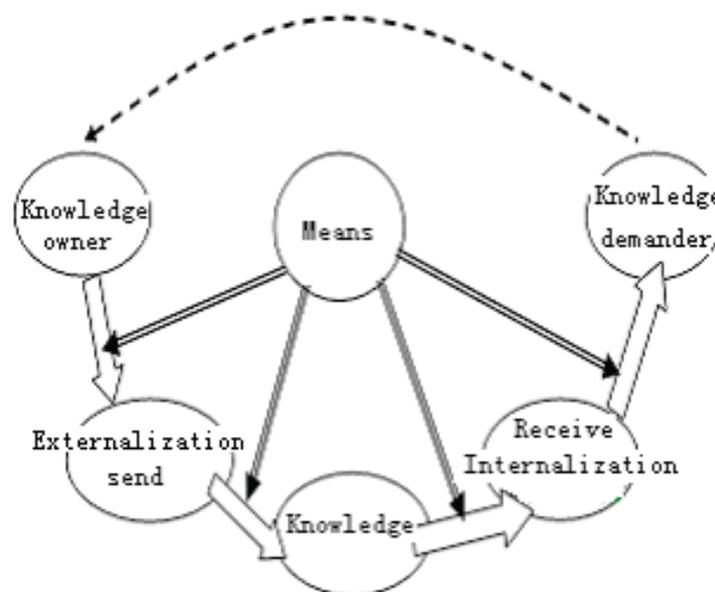
Source: Qun and Xiaocheng (2012)

From Figure 2.2, we grasp that in the activities of knowledge sharing, other means must be present to achieve its operation. Therefore, it is of benefit to choose the rightful means that can enhance the sharing of knowledge for maximum realisation.

The knowledge that a firm possesses constitutes a deliberate resource that can generate modest advantage (King and Marks, 2008). The knowledge of a company is due to years of organisational activity determined by the extent of knowledge sharing involved. The highlighting on sharing of knowledge that takes place through a restricted process emphasises the question of how firms should both support and motivate workers who may have advantageous knowledge that might be combined through a KMS (Osterloh and Frey, 2000).

The approach of utilising a KMS to detain knowledge and dispense it often requires that people subsidise their knowledge to a scheme rather than making it a secret or directly sharing it with others through individual personal exchanges or a conversation. Presumably, some persons in some cultures of the organisation follow the dictum that "knowledge is power" through signposting knowledge and they share it only when they are motivated externally to do so (King and Marks, 2008). Even contributors that are willing may be unwilling to share sometimes particularly if they are not sure of who may benefit from the shared knowledge.

Official systems of sharing knowledge provide clear instructions on how the employees can share knowledge (Okhuysen, 2001). They are management structures and systems that have been well defined, prescribed and generated forcefully by the management to be congruent with the shared mission and strategy. Yates and Orlikowski (1992) defined them as genres of socially recognised styles of communicative activities determined by members of the organisation to realise a specific social purpose. Consequently, the *genre* repertoire reveals expectations, common knowledge and norms resulting from the organisational context (Yates et al., 1999). Organisations structure their formal tools with the intention to organise the process of exchanging knowledge so that more knowledge is discovered and confined efficiently (Okhuysen and Eisenhardt, 2002). Examples of systems of formal knowledge sharing include modest structured interventions such as, for instance, simple instructions on how to segment information by giving information on meetings, team reports, official announcements and training seminars (Okhuysen, 2001). It also involves more sophisticated devices like electronic knowledge catalogues and various team work approaches (Schwaer et al., 2012).

The tools of knowledge sharing boost the exchange of knowledge by giving exact behavioural directions (Pavitt, 1994) and enhancing easy and quick identification of

organisational experts. Such devices are important for the extensive transfer of knowledge in the major companies worldwide (Davenport and Prusak, 1998), even if they can prove harmful if environmental features are yet to be met. Formal devices have been applied in different settings in which the integration of knowledge is very important, including the generation of ideas, as well as strategic decision-making and problem-solving (Schwaer et al., 2012).

Knowledge is required for sharing with individuals, at organization level, sometimes with 'strangers'. This means that the knowledge sharing tools that are used should be suitable in different environments. An example of sharing knowledge with strangers is through seminars, conferences, workshops, etc. One of the points that Schwaer et al. (2012) points the self-efficacy of the individual plays a significant role in KS behaviour.

KS is not limited to formal environment. On the contrary KS can be achieved in informal settings such as impromptu conversations, discussions at social events, outside work environment. The emphasis is on building the social environment that incorporates socialization and networking of the individual. Formal settings require some kind of motivation or incentive for the individual to share knowledge, where KS in informal settings in voluntary and therefore expected to yield better KS outcomes. Informal settings also encourage the reliance on each other which is highly essential for KS (Dirks and Ferrin, 2001). These authors also state that trust is another strong factor that enables KS. Trust will increase the desire to establish interpersonal relationships and share knowledge with each other and this will also provide a better understanding on the KS tools that are essential.

There are various common types of knowledge-sharing tools and knowledge management systems, and they include the following.

2.5.1 Online Forums

An online forum is a form of Web solicitation where debates are held and user-generated content is posted in a particular domain, such as travel, techniques, sports, and recreation. Individuals that take part in the online forum encourage societal bonds and, through the discussions, there is the emergence of interest groups from social bonds. A massive amount of vital user-generated content is found in the form of different topics. It is greatly desired that the human knowledge confined in user-generated content in forums can be mined and

reprocessed (Chen et al., 2006). Knowledge management involves the utilisation of forums in organisations, and this includes course forums in schools, discussion boards in enterprises, employees' work diaries and online newscast copyreader forums, among others (Lichtner et al., 2009; Pendergast, 2006).

2.5.2 Question-Answering System

An increasing amount of search devices are utilised to satisfy the information needs of the users of the internet for clearing the issue of information overload. However, they do not have the ability to describe the queries offered as natural language questions. In response to the natural language questions, a system of Question-Answer (QA) was developed to bring back brief answers. The system of QA was intended to provide the internet user with brief answers on information, forestalling the need for perusing through a stack of pamphlets (Blooma et al., 2008; Liu et al., 2007).

2.5.3 Expert ranking mechanism

In the process of looking for the experts, a system will always come up with a list of experts ranked in the sector of expertise, something that is carried out in the Text Retrieval Conference (TREC). Organisations trail a mass of initiative documents, and a list of the workers of the company as immediate candidates (Rode et al., 2007). Earlier studies employed methods that considered how to figure query-independent individual profiles, termed as stint vectors, through the integration of all documents of each candidate expert into a single model of an expert. After assessing the content resemblance of experts' profiles to the search request, they would would then be ranked. Reliance on the document and word frequencies has been established to be of limited use because of the difficulties experienced in differentiating the level of a person's expertise (Liu et al., 2007; Yang and Chen, 2008).

2.5.4 Blogs

One of the prominent sharing platforms using information technology is a blog. This is a podium in which individual information mailed on the network; the log arranges the content. It benefits from the Blogger's network (Blog written by the people) of the life and works of the course of events. The resulting concepts and liability are quickly noted and unconfined for the leitmotif of common concern for others to read, to interconnect with each other, thus entering the knowledge (Qun and Xiaocheng, 2012). The blog-based platform for the sharing of knowledge between people receives support from a network of open sharing platforms; its

major function is to offer a service for knowledge sharing for those who demand it by esposing access patterns. The blog platform contains three layers: the application, user, and knowledge (Qun and Xiaocheng, 2012).

The context of this research is in Kuwait and within a particular investment firm in Kuwait. The investment firm that formed the basis of the research has been in Kuwait for several years with thousands of customers. There are several investment firms in Kuwait offering similar services. Therefore, the competition among the companies to retain existing customers and acquire new customers is high. The lack of studies in KS in Kuwait within the investment sector creates a gap. Most of the studies discussed in this chapter are carried out outside Kuwait. A large number of these studies are in the Western and European environment and a few are even in the Asian countries. However, there are very few studies about KS and SET in the Arab region. Due to this, the factors that are adopted and discussed later on in this chapter are tested within the Kuwait investment sector. The literature gaps are also discussed later on in this chapter.

There are several definitions of KS that have been dealt with in this chapter. Each of these definitions provides similar and different views on KS. For example, according to Cummings (2004) and Pulakos et al. (2003), KS is useful for problem-solving, innovativeness and to establish policies and procedures. According to Menguc et al. (2007) KS is important towards developing new products. While researchers such as Bogner and Bansal (2007) and Tanriverdi (2005) emphasised the KS contribution to employee performance, others such as Birasnav (2014) emphasised the impact of KS on organisational performance. One of the most interesting definitions is from Prusak (1997) and from Davenport and Prusak (2000), discussed earlier. According to Prusak (1997), knowledge management is about creating, acquiring, capturing, sharing and using knowledge. Davenport and Prusak (2000) further added that knowledge is the contextual information, experience, insights of the expert and values applied in the development of new ideas. From the various definitions that have been discussed in both the knowledge and knowledge-sharing sections, this research adopts adopt the one from Davenport and Prusak (2000) as this is closest to the SET. The next section discusses the SET theory and two other relevant theories which are personality theory and the theory of reasoned action.

2.6   THEORIES

In this section, different theories related to knowledge sharing are discussed.

2.6.1   Social Exchange Theory (SET)

SET strives to show relationships among people. It focuses mainly on exchanges between firms and customers making it suitable to demonstrate loyalty (Singh and Sirdeshmukh, 2009). Borrowed from sociology and social psychology, the SET roots go deep into business and theories of economies and philosophies such as expected-utility, rational choice, diminishing marginal utility, maximum utility and (Lee et al., 2014).

Homans (1958) offered this idea first that a conversation could comprise added quantifiable goods. Prestige anger and happiness among other imperceptible rudiments also improved influences. He shows these interactions to be of great importance as compared to physical transactions as they have a higher and more direct impact on relationship influence structure. However, dependent on what each party perceives to be fairness, different levels of satisfaction could exist at various levels of equity or satisfaction. The resulting independence, interdependence or dependence determines balance or strength in a relationship (Lee et al., 2014).

Although there are criticisms of this view, the theory has prospered in organisational and behavioural sciences, particularly in marketing. Since Alderson (1965) proposed his theory of perfect cooperation, researchers have utilised it for examination of both business-to-consumer relationships (Johnson and Selnes, 2004; Luo, 2002) and business-to-business relationships (Anderson and Narus, 1990; Frazier, 1983). SET foresees that, over time, establishing trust through shared values, cooperation and satisfaction, the relationships gain strength. The trust element forms a foundation for commitment established through the exchange of resources-led normative rules (Cropanzano and Mitchell, 2005). Striking a proper balance releases the potential for high-quality relationships based on firm's competition (Morgan and Hunt, 1994).

2.6.2   Personality Theories

Personality theories identify connections between behaviour and cognitive patterns (Matthews et al., 2003). Character theories have been extended and utilised to recognise and classify people's physiognomies into universal groups (Drapela, 1987). Such interests go

back to the time of the ancient Greeks based on the four senses of humour concept that strived to show the reason for the behaviour. Achakul and Yolles (2013) provided instances of modern approaches developed by researchers like the Myers-Briggs Type Indicator (Briggs-Myers and Myers, 1995), the 'Big Five' personality factors (Malone and Lepper, 1987), and Jung's (1971) psychological types. Explorations on the existence of individuals in groups also exist with examples of Belbin's (1993) Team Parts Inventory. However, each model has its own weaknesses and strengths.

Although each is unique, they all strive to assess personality with higher preciseness. On Human Resource Management (HRM), gaining a comprehension of behaviour utilised to characterize people enables employers and employee to better work programmes and policies enhancing job satisfaction as well as eliminating ways to dissatisfaction. HRM interpersonal relations and communications are effective with the existence of comprehension of motivational factors and cognitive factors (Lamb and Bornstein, 2011).

2.6.3   Theory of Reasoned Action (TRA)

This theory articulates that a person's behaviour is a determination of the intention determined via the subjective norms and personal attitude for the behaviour expected (Fishbein and Ajzen, 1975).

Figure 2.3: Theory of Reasoned Action
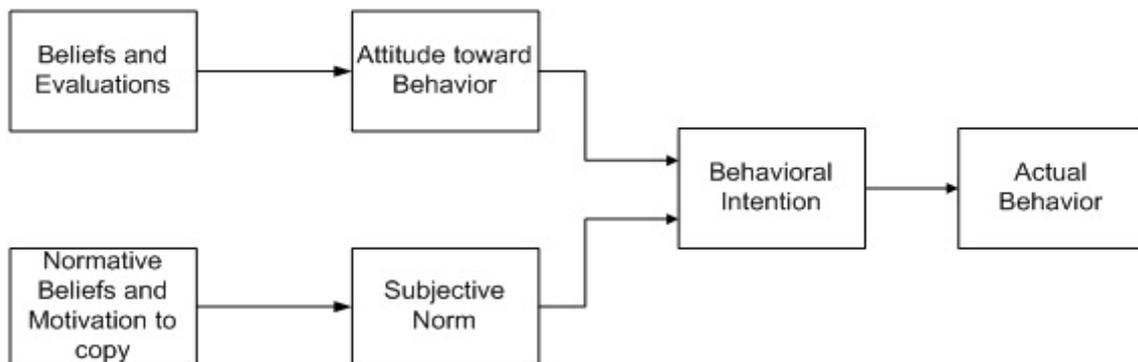
Source: Shu and Chuang (2011)

This theory comprises two different assumptions. One, the behaviour is rational and is under volitional control. Two, the behaviour is determined through intention as shown in Figure 2.3. Besides, subjective norms affect behavioural intentions, which is simply the normative

behaviour burgeoned by the drive to comply, which reflects the degree to which an individual character conforms to others' opinions.

The two proponents of TRA suggest that behaviour intention – the amount of effort one considers in assuming a particular action – is the immediate determinant of that particular action. This means that subjective norms and attitudes mediate intention or behaviour.

2.7 KS IN GCC COUNTRIES

The literature search on KS was not limited to Kuwait, but to other regions such as the Gulf Cooperation Council (GCC) countries. The GCC is formed by six countries which are Kuwait, Bahrain, Saudi Arabia, Qatar and the United Arab Emirates (UAE). This section discusses the search results of KS studies from the GCC countries. The search was carried out first using SCOPUS as it is one of the global journal citations. The searches began with 'Knowledge Sharing' as the 'Article Title', followed by the respective country names within the search. Each section indicates how many results were found and how many of these pertained to the respective country.

One set of studies focuses narrowly on technology in KS and barriers thereof. Some studies in this regard mainly emphasise the importance in KS of using technologies, such as web-based KS applications in universities in general (Almujally and Joy, 2017), social networking (Eid and Al-Jabri, 2016) and e-learning platforms by students in Saudi universities in particular (Alammari and Chandran, 2016). However, these studies rarely extended beyond highlighting the importance of technology and the need for IT infrastructure (and leadership). Moreover, in the context of Oman, Al-Busaidi et al. (2011) identify barriers to KS including individual, technical, organisational and social barriers. A small number of technology-focused studies attempt to identify relationships. For example, in the UAE context, AlShamsi and Ajmal (2017) found that KS is positively related to corporate strategy, performance, process, and structure, and particularly to leadership and employee engagement. In the context of Oman, Al-Busaidi et al. (2011) identified that the use of social networking sites (SNS in professional societies provide individual and organisational benefits. In the context of Kuwait, Ali and Hasan (2006) found that in using information systems (IS) KS had a positive impact on group cohesion, group efficacy and group members' behavioural intentions, but was negatively impacted by perceived loafing. Yet, the researcher struggled to

find a study which examined how KS is influenced by individual, group and organisational factors, technology being just one of the important factors.

Other studies are too broad and focus on the industry, national or inter-organisational contexts. Some studies here focus on the industry as a whole. For example, in the context of Bahrain's public sector, Al-Alawi et al. (2007) found that people hoard knowledge, a practice which needs to be eliminated, and a culture which motivates KS need to be promoted. In the context of Kuwait companies, Marouf (2015) showed that in employees' perceptions the demographic factors, such as age, experience, job position and public versus private companies significantly influenced KS. Other studies focus on the national context. For example, in the context of Bahrain's national culture in relation to in-group/out-group relationships, Ribiere and Zhang (2010) showed cultural differences in the KS intensity and preferences and emphasised the need to combine cultural values with KM technologies for online communities in multinational corporations. Similarly, in international construction projects in multiple-country contexts (Qatar, Libya and Bulgaria) Kivrak et al. (2014) found that barriers to KS include issues in language and communication, in addition to trust, motivation and personal relationships. Still other studies focus on the inter-organisational context. For example, in the context of the UAE, Ahmad and Daghfous (2010) highlighted the importance of KS in developing a competitive advantage and identify challenges and opportunities in KS through inter-organisational knowledge networks. In the context of Saudi Arabia, Idrees et al. (2018) found cooperative-competitive tension and tacit KS strategy were significantly related to KS. In the context of the UAE, Al Ali et al. (2016) found a positive found positive relationship of organizational justice with organizational performance and KS, with KS as a positive mediator. In the context of Oman, Al-Busaidi (2014) and Al-Busaidi and Olfman (2017), studying inter-organisational knowledge-sharing systems, indicated the role of human factors, in addition to organisation and sector factors that impact the intention to share knowledge by knowledge workers and their peers. Overall, there are numerous studies which focus on the industry, national or inter-organisational contexts.

Fewer studies appear which focus intra-organisationally. One set of studies in this regard focuses predominantly on the organisational culture. Within this set, some studies emphasise the importance of culture intra-organisationally. For example, in the context of Saudi Arabia, studies have identified the importance of learning culture because it integrates human resources with (digital) technologies (Dulayami and Robinson, 2015; Eid and Nuhu, 2011).

Similarly, Yeo and Gold (2014) found the importance of trust to enable KS attitude and behaviours. Other studies focus on identifying relationships. For example, in the context of multinationals in Saudi Arabia, Al-Qadhi et al. (2015) found the importance of trust and management support to be significantly related with KS. Marouf (2016) showed the importance of KS culture in business performance, KM strategies and HR strategies. The study that comes closest to the focus of this current research is that of Al-Busaidi et al. (2008) who, in the context of Oman, found a positive role of organisation culture's dimensions, such as management support and rewards policy, in KS. However, the researcher was unable to find a study that provides a more comprehensive investigation which focuses on how KS is influenced by a range of factors - i.e. not just organisation-related, but also group- and individual-related.

That is not to suggest that individual-related studies on KS are not present in the GCC context. For example, in Saudi Arabia, Yeo and Marquardt (2015) studied the self-perception of individuals and identified factors they found that contrasted between self-centredness and self-doubt and their impact on trust and openness. Another study in Saudi Arabia by Abdullah (2017) found that KS positively influences individual performances through meetings, workshops, and favourable KS environment. In the UAE context, Abukhait et al. (2018) identified the relationship between empowerment and KS on innovative behaviours, with stronger impact from females. In Oman, Shamsudin et al. (2016) identified factors such as perceived security, employability and promotion opportunities towards predicting the knowledge collecting behaviour, but not on knowledge-donating behaviour. Jabr (2007) also carried out a study in Oman which identified physicians' attitude towards knowledge transfer and KS identifying barriers such as workload among junior physicians and negative attitude of senior physicians towards KS as obstacles to KS. Studies were also undertaken in Kuwait where Zia-ur-Rehman et al. (2011) identified how trust, perception, willingness and motivation impact the learning of students through KS behaviours among two sets of students.

Information technology (IT) has an important role in KS which is also the mediating variable in the conceptual framework in this research. Studies in the GCC countries in the context of IT platforms were also found in the literature search. In Qatar, Muzaffar and Alshare (2013) studied the application of KS in virtual network communities (VNCs) and found indirect positive organisational support for KS intention through attitude. In Kuwait, Marouf (2007)

identified the role of social networks and KS within an organisation. The study showed the use of both public and private KS based on business relationships. In Qatar, Kumaresan and Swrooprani (2013) identified that large amounts of data were being shared between the librarians in their team and librarians in other libraries. However, there were barriers such as language, culture and library policies that hindered KS.

KS is also considered as the one of the key factors in building innovations and gaining competitive advantage. In the UAE, Hussein et al. (2016) found a positive impact of the factors on KS enablers such as donating and collecting towards innovative capability based on KS enablers and firms' innovative capability.

KS is part of the knowledge management (KM) umbrella which has other dimensions such as knowledge sharing. Arif et al. (2009) in the GCC countries have contributed to the KM framework through their studies in different factors. Their focus in the UAE was within the construction sector, where they recommend four stages towards effective knowledge retention – (1) personalisation/socialisation (sharing of tacit knowledge); (2) codification/externalisation (converting tacit knowledge to explicit knowledge); (3) combination/renewation (renewing of knowledge); and, (4) internalisation (retrieval process of the stored knowledge). They extended their study in the same context (UAE construction sector) and found the importance of information technology in the knowledge retention process.

The literature review for GCC countries showed that there are several studies related to the field of KS and KM, but academic studies in GCC countries is limited. Studies covered various organisation types: for example, the education sector (Alammari and Chandran, 2016; Al-Kurdi et al., 2018; Almujally and Joy 2017; Chandran and Alammari, 2016; Eid and Al-Jabri, 2016; Eid and Nuhu, 2011), the construction sector (Arif et al., 2009; 2012; 2015; 2017), the health sector (Al-Busaidi, 2014; Jabr, 2007), the hospitality sector (Idrees et al., 2018), libraries (Burnetteu, 2017; Kumaresan and Swrooprani, 2013), and petroleum (Al-Busaidi et al., 2008). Studies also focused on various topics related to KS, such as culture (organisational culture; national culture) (Al-Alawi et al., 2007; Ribiere and Zhang, 2010), gender differences (Abukhait et al., 2018), use of technology (Ali and Hasan, 2006; AlShamsi and Ajmal, 2017), use of social networking sites (Al-Busaidi et al., 2011; Marouf, 2007; 2015; 2016), virtual networks (Muzaffar and Alshare, 2013), knowledge networks

(Ahmad and Daghfous, 2010), innovation (Hussein et al., 2016), multi-national environment (Al-Qadhi et al., 2015), country comparative studies (Kivrak et al., 2014), economy (Youssef et al., 2017) and various organisational contexts (Al Ali et al., 2016; Al-Busaidi and Olfman, 2017; AlShamsi et al., 2017). Unique studies on *Wasta* (Al-Enzi et al., 2017) and employee career (Shamsudin et al., 2016) were also found.

There is uniqueness in KS studies in *Wasta* (nepotism). Al-Enzi et al. (2017) studied the influence of *Wasta* on KS in Kuwait. *Wasta* is the Arabic term that is used to explain personal networks that are accessed to get work done. It can also be termed as nepotism or favouritism that a person uses to get what they want. Using mixed methodology, these authors found that *Wasta* has a negative impact on KS, which therefore can also have a negative impact on employees' performance. The authors recommend that KS is limited to those who are in the *Wasta* circle, which can be limited. The others who are outside this circle will therefore not share their knowledge as this will not be beneficial to organisational growth.

There are limited studies in the financial sector (for example, Al-Alawi et al., 2007). The focus of this study is on the culture. There are no studies in the investment sector in GCC countries. This limits a model that can used to study KS in investment sectors. Therefore, this research has designed a framework that is tested and will provide a new framework that other studies in this sector can adopt.

2.8   FACTORS IMPACTING KS IN ORGANISATIONS

Individuals widely consider knowledge sharing to be an important component in the accomplishment of sharing knowledge, and a key fundamental feature of a strong information culture comprises of sharing of knowledge as rooted in the way in which firms work. Sharing of knowledge plays a significant role in the generation of new ideas as well as developing new opportunities through learning and socialisation (Lin, 2007). Despite this, the only moment when employees pass or receive knowledge is when doing so is in their sself-interest and motivation. Employees' willingness to pass on and receive knowledge can be altered by numerous factors in organisational levels, particularly those environmental factors affecting knowledge-sharing culture. Increasing the capacity of the organisation to the management of knowledge could be the biggest challenge that contemporary organisations face (Davenport and Prusak, 1998). Accordingly, people are interested in the proponents with influence on the

sharing of knowledge in organisations with some of these factors differing on the impact on different organisations (Seba et al., 2012). Accordingly, practitioners and researchers need to evaluate the majority of these proponents in regard to particular organisations.

Models have been proposed to study proponents attributed to receiving and passing information with some of them texted on national and organizational context. The majority of these models have shown a variety of independent and dependent variables included with lots of similarities. On, dependent variables, the main attempt by the models has been to quantify single or more perceptions in sharing knowledge, behaviour, and intention at individual's capacity. For instance, Lin's (2007) theory of the properties of extrinsic and intrinsic motivation on workers sharing knowledge in a huge private sector organisation in Taiwan selected the relevant variables, sharing knowledge intentions and attitude towards sharing knowledge. In an earlier study, Lin and Lee (2004) investigated the perceptions of top management on their behaviour of sharing knowledge, and Kim and Lee (2005) studied the influence of information and technology at an organisational level and their impact on information sharing in 10 organisations in South Korea.

Other studies are vague in explaining the impact on the dependent variable. For instance, Lin's (2008) study of factors impacting the sharing of knowledge in Taiwan's high-tech industry primarily refers to sharing of knowledge. Similarly, Ardichvili (2008) reviewed barriers, enablers and factors relating to the sharing of knowledge in cybernetic communities of practice, and referred to sharing of information. Lin (2007) proposed Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA) showing a closer association between intentions and attributes. In the current work, the researcher considers individual knowledge-sharing behaviour as the dependent variable.

Independent factors seen to adversely influence sharing of knowledge differ greatly among proposed theories (He and Wei, 2009). For instance, Ardichvili (2008) offered a review that shows factors of motivation (normative considerations, consideration related to community, and personal benefits); obstacles (cultural, technological, procedural and interpersonal) and enablers (tools, trust, positive organisational culture). Riege (2005) demonstrated many barriers to knowledge sharing. Empirical studies have strived to be more selective in measuring every variable considered; an example is Lin (2007) who examined intrinsic motivation (enjoyment in helping others, knowledge self-efficacy) and extrinsic factor

(expected reciprocal benefits, organisational rewards). Al-Alawi, Al-Marzooqi and Mohammed (2007) evaluated the influence of rewards and organisational structure, information systems, interpersonal trust and communication between staff. Bock et al. (2005) included anticipated expected intrinsic rewards, extrinsic rewards, subjective norm sense of self-worth and organisational climate (innovativeness, affiliation, fairness) as dependent variables. In their study of knowledge sharing amongst IT professionals in India, Joseph and Jacob (2011) included anticipated extrinsic rewards, subjective norms, expected reciprocal relationships, and organisational climate. Independent variables that impact the individual's knowledge-sharing behaviour are individual cognition factors (perceived benefit and organisational commitment), organisational context (organisational support and reward system).and interpersonal interaction (trust and social interaction)

In this section, the different independent and dependent factors that impact KS are discussed together with how these factors impact individual knowledge-sharing behaviours. An information system is taken as the mediator between the independent and dependent variables.

2.8.1 Individual Cognition

In individual cognition, the researcher discusses two factors related to knowledge sharing – (1) perceived benefit and (2) organisational commitment.

The key element in the social exchange theory is personal cognition including organisational commitment and perceived benefits. Forsythe et al. (2006) indicated that "perceived benefits" are personal behaviours gained as subjective perception. According to social exchange theory, people expect to contribute to communal rewards such as respect status and approval to take part in social interaction (Blau, 1964). Given this aspect, it is suggested that a person can benefit from active participation in any particular social group. The behaviour of sharing knowledge attracts motivation from benefits perceived from the event (Davenport and Prusak 1995) According to O'Reilly and Chatman (1986) organisational commitment refers to the type and level of the employee's psychological attachment to the organisation. Meyer and Allen (1997) and Mowday et al. (1982) defined this as the positive attitude that employees show towards their organisation and the worth of organisation-employee relations. Organisational commitment forms the core of the majority of organisational behaviours that indulge in a sense of obligation, helpfulness, job satisfaction, and turnover (Meyer et al.,

1993; O'Reilly and Chatman, 1986). Further discussions on both these individual cognition factors are provided below.

2.8.1.1 Perceived Benefits

Perceived benefits are one of the antecedents that are most studied for sharing knowledge. Social exchange theory proposes that people examine proportions of benefits they will accrue and base the action decisions expected in terms of reputation, respect and tangible incentives (Wang and Noe, 2010). To support this theory, studies indicate that apparent benefits have a positive association with sharing knowledge while the apparent costs are associated with an adverse effect on sharing knowledge. The majority of the studies that attempt to show expected benefits/cost are conducted by professional communities.

2.8.1.2 Organisational Commitment

This forms one of the factors acknowledged to influence interpersonal and interdepartmental communications. Therefore, it comes as no surprise that many authors provide both theoretical and empirical evidence for relations between employees and organisational structure (Al-Alawi et al., 2007; Gorry, 2008; Grevesen and Damanpour, 2007; Jennex, 2005; Rowley et al., 2012). In other words, organisations need to be committed and provide an environment that is suitable for employees to share knowledge.

Recently, it was agreed that philosophies and organisational structures should not hinder the sharing of knowledge. However, application and practices of sharing awareness should be crafted to suit circumstances in an organisation (Jennex, 2005; Willem and Buelens, 2009). Gorry (2008) recognised three key types of firm structure important in the determination of particular features of sharing knowledge – i.e. *object-oriented* structure, *networking* structure, and dynamic *structure*.

2.8.2 Interpersonal Interaction

Interpersonal interaction, in this research, is composed of social interaction and trust. Based on the social exchange theory, individual activities are driven by hydraulic associations. Therefore, social activity becomes a resource for information flow (Liang et al., 2008). On the other hand, trust is a set of human principles that determine integrity and behaviour including the ability of partisanship (Chiu et al., 2006). Further discussions on both these interpersonal factors are provided below.

2.8.2.1 Social Interaction

With reference to social capital theory, human relations is presented through social human ties or configuration supported with the help of social interconnection and collective group conduct like human sharing (Tsai et al., 2014). From a different perspective, Tsai et al. (2014) predicted that the social capital of individuals encourages knowledge sharing among communities thereby resulting in a positive relationship between social interaction and social relationship. According to Tsai et al. (2014) and the research by Chiu et al. (2006), their work neither considers the unit of an effect of common interaction and positive outcome nor examines the potential moderating effects of positive emotional tone.

2.8.2.2 Trust

According to Rousseau et al. (1998), trust entails a psychological state of the mind where one acknowledges vulnerability due to positive expectations inflicted by the conduct of another person. The concept is not limited to a given line of nature. While an individual may trust one of their colleagues under certain circumstances, a similar level of trust may not be granted to another that is creative because it requires varied potentials.

Under different circumstances, trust has been identified as part of knowledge sharing (Al-Alawi et al., 200). Butler (1999) argued that that are two types of trust – *personal* and *institutional*. While social relations occur among individuals, individuals, its relevance to how knowledge influences personal trust sharing which is widely addressed through the social exchange (Chow and Chan, 2008). Under all circumstances, cognitive principles of trust do not only cover the willingness to listen to others, but also act as a prerequisite for knowledge absorption (Bakker et al., 2006). Other research has shown that trust in colleagues and managers is important and an influencing factor towards an individual's knowledge sharing.

A trust that is exhibited at an organisational level has demonstrated the potentiality to influence persons depending on circumstances, attitude, workplace satisfaction, productivity and commitment among other factors (Levin and Cross, 2004). Abrams et al. (2003, p. 65) suggested that trust contributes to overall knowledge change within an organisation. Accordingly, knowledge exchange becomes less valuable while increasing the chances of acquiring knowledge from a friend or any close ally (Kramer, 1999). The precursor of trust is

ignited by both environmental and contextual factors including "malleable relational features" that are not limited to language or vision. As pointed out by Levin et al. (2006), many scholars have explored the relational effect of trust and its promotional factors such as strength and weak ties. However, a good percentage of the findings have indicated that the length of tenure of an employee determines the extent of truth worthiness (Hansen, 1999; Levin and Cross, 2004). As a consequence, trust becomes an important element of knowledge sharing. The sociological literature explains that not only would a person d try to trust a colleague, but the behaviours and moral conduct of the other would draw his attention and willingness to share knowledge, thereby influencing the future action (Renzl, 2008).

2.8.3   Organisational Context

The social exchange theory states that the transition of knowledge and the action of an individual is determined by the extent of dyadic association. From a different direction, knowledge sharing is affected by the extent of synergy within a group also termed as a 'group effort' that in turn influences the activities of the members. Within KM and KS research, there are two common factors influencing knowledge sharing; these t are *organisation support* and *reward systems*.

Organizational support entails the opinion of the stakeholders that their values are factored in by an organisation. Employees tend to recognise institutions that value their well-being and contributions to the company (Eisenberger et al., 1997). Apart from the organisational support, reward management has also played a critical role towards the realisation of better behaviours (Cabrera and Bonache, 1999). Both factors are discussed in the following sections.

2.8.3.1 Organisational Support

Blau (1964, p. 91) suggested that "*the voluntary action undertaken by a person is influenced if one expects that a specific form of return would enable them to perform an act that would make them sell similar ideas on to others*". Furthermore, social exchange interaction forms a principal component for employees' in the organizational (Fu and Lihua, 2012).

Supervisory Management

Supervisory management is an act that has contributed significantly in encouraging others towards the sharing of knowledge (Loebecke et al., 1999). According to Stajkovic and Luthans, 2001), supervisory management or control involves the amount of effort contributed by the management to increase the well-being of employees to act in a way that enables a firm to achieve its objectives. Supervisory control has played a significant role in many organisations by demonstrating a positive behaviour in stemming the principal asset of relationship. As pointed out by Flamholt (1996), supervisory control is supported by agency theory which dictates that both employer and employee goal is the convergent of knowledge towards helping each other. While the main objective of supervisory control is to produce a congruent goal, it has often led to achieving a wide range of goals including mechanisms of attaining future organisational objectives.

Perceived Organisational Support (POS)

Perceived organisational support (POS) combines both the employee's opinion of justice and a sense of self-esteem (Sluss et al., 2008). POS entails employees in an organisation having a universal belief with regard to the extent to which organisational values and their impacts contribute to the well-being of individuals (Eisenberger et al., 1986). That is to say; POS is an idea that symbolises employees' beliefs and organisational willingness to remunerate them for the effort applied in the line of duty (Panaccio and Vandenberghe, 2009).

With reference to organisational support theory (OST), perceived managerial support (POS) is the extent to which workers trust that the organisation values their wellness (Eisenberger et al., 1986). As pointed out by Rhoades and Eisenberger (2002), literature that discusses POS has been in existence, with over 70 articles published by Rhoades and Eisenberger between 1986 and 2000. A surge of literature explaining a POS has since been published; for instance, the link with (a) organisational outcomes like behaviour and turnover, and (b) the benefits of work relationships. Other factors are drawn from the POS and include reliability of the measurements, and organisational investigation of the grounding of OST which is a crucial part of article progression (Eisenberger et al.s., 1986).

2.8.3.2 Reward System

Reward system is the way in which organisations provide motivation and encouragement to their employees. Rewards, monetary appreciation and other financial benefits that are achieved from sharing of knowledge have been widely addressed. While most authors have

focused on motivation theory as a sole base of knowledge of knowledge sharing, the entire idea of reward is driven by the notion of behavioural change and the theory of motivation. Many researchers have recognised the deficiencies of and barriers associated with knowledge sharing (e.g., Sandhu et al., 2011). In essence, Fathi et al. (2011) and Liebowitz (2003) acknowledged that companies must learn to establish policies that favour reward schemes. Nevertheless, research obtained from other studies substantiates that a clear variation exists between intrinsic and extrinsic reward types, although these studies have not provided enough evidence on how extrinsic reward can influence knowledge sharing. While Bock et al. (2005) asserted that intrinsic reward has signficant impacts on knowledge sharing, there are reciprocal benefits of knowledge sharing like self-efficacy and cross benefits attained by sharing the knowledge with others. Unquestionably, the greatest challenge with reward systems is that it is quite difficult to determine the level at which knowledge is shared among employees (Holman, 2005). Therefore, the issue of reward system has become quite complicated particularly in the public sector (Bock and Kim, 2002). The extent of its impact varies depending on the incentives available and the circumstances.

Lack of incentives is suggested as a great challenge affecting the concept of knowledge sharing across ethnic boundaries (Yao et al., 2007). For instance, incentives like reward and recognitions represent possible factors in support of knowledge sharing intended at enhancing a culture of inclusivity (Nelson et al., 2006). While there is a positive influence of incentives of knowledge sharing among employees, the present results posit that the effects of intrinsic rewards are mixed. A typical scenario can be evidenced from social exchange theory which posits that salaries and higher bonuses have the capacity to raise the frequency of knowledge sharing to KMS within an organisation (Kankanhalli et al., 2005; Cabrera et al., 2006). From a different perspective, Kulkarni et al. (2006) clarify that an organisation that emphasises performance-based systems tends to increase its level of knowledge sharing.

2.8.4 Information Systems

Information technology (IT) plays a significant role in the KM and KS environment (Alavi and Leidner, 2001). IT creates a better environment for access and retrieval of information, and quick accesses to information is essential for businesses to maintain good customer relationship (Wong, 2005). There are several examples of how IT contributes to the KS development of the organization. For example, IT and information systems (IS) can create effective knowledge base, based on which data mining, business intelligence, and e-learning

can be promoted. In addition to this, IT/IS can provide enhanced workflow environments for sharing of information, removing mundane tasks, and bringing in better efficiency. The incorporation of KS into these organizational processes and requirements can therefore strengthen the KS adoption and usage (Luan and Serban, 2002). Tiwana (2000) suggested that companies need to fully utilise and integrate their current technologies with those of KM and KS activities so as to create a one-of-a-kind KM and KS experience. When a firm is well equipped with the right IT infrastructure, it provides the company with an advantage in harvesting the relevant knowledge (Ooi, 2014).

Information systems are tools designed to enhance the sharing of knowledge. Similarly, technological aspects such as the internet and DSS and social networking sites have also provided a platform for knowledge sharing. Therefore, the use of information systems plays a role in the realisation of functional and quality roles needed to enhance information sharing. Accordingly, information systems consistently appear as part of knowledge sharing among the state companies (Choi et al., 2010). From a different perspective, Robinson et al. (2010) argued that information knowledge plays a significant role in knowledge input, but technological skills can neither contribute to nor deter knowledge sharing.

Traditionally, the expertise adoption studies have asserted that efficiency and perceived expediency are the primary factors that drive users to accept a new technology (Davis, 1989). Also, a user-friendly system not only helps in reducing the psychological costs of sharing, but it also enhances the exchange of information, as reported by Jarvenpaa and Staples (2000). Lee et al. (2006) carried out an exploratory study in search of factors that drive customers to knowledge sharing on the web-based discussion boards. The researcher has identified the main factors from their study; namely social context, personal interest, and technological attributes. Findings reported that the main factor that prompted customers to engage in knowledge sharing in the web-based discussion boards is the sense of enjoyment in helping others. In conclusion, information analysis contributes positively on the three dimensions of KM; these are information acquisition, knowledge input and knowledge application.

2.8.5 Individual Knowledge-sharing Behaviour

It is clear that precision constitutes one of the greatest capacities in determining the level of performance among a variety of settings (Salgado, 2003). The willingness to embrace knowledge exchange has wielded a positive effect on the behaviours of those engaged in

information sharing. Research conducted by Cabrera et al. (2006) showed that the willingness does not have any link to the sharing behaviour. Therefore, to assess the willingness of knowledge sharing, one has to factor in knowledge as a critical part of the observation. According to Cabrera et al. (2006), transparency of knowledge sharing is the perception of an individual that they are taking part in knowledge sharing. Persons who are free to take part in knowledge sharing are often linked to requests and are most likely to react to knowledge requests.

Scholars have identified the previous history of willingness to share information such as organisational commitment, experience, and independence of tasks among others (Cabrera et al., 2006; Matzler et al., 2006). A series of studies have also addressed the concept of knowledge sharing by employing the theory of Reasoned Action (TRA). It is important to note that absorptive capacity as evinced in most of these studies is applied through a specific line of channel richness (Kwok and Gao 2005). Bock et al (2005) supported a similar sentiment by confirming that an organisational climate is an unprecedented relationship sentimental value that contributes a willingness to share information as a single subject supported by an independent phrase. From Hansen, Mors and Lovas' (2005) investigation to ascertain stages involved in the sharing of knowledge and providence, the results confirmed that positive and negative effects of information outcome depend on different stages of communication.

Based on TRA principles, an action of a person to demonstrate their behaviour or intentions is evinced when they takes part in an activity (Schwaer et al., 2012). It is from this premise that human beings expect to exhibit positive behaviours supported by volitional control. Moreover, different studies have positively tested the TRA to draw associations between customs, intentions and deeds between customs, intentions, and deeds (Kim and Hunter 1993). In support of behaviour intentions theories, staff seeking for knowledge transfers must involve technological tools that alter behaviour. Otherwise, they must be willing to share knowledge, a situation that would create a platform for request of knowledge.

2.9   KM AND KS IN KUWAIT

There are limited studies in the field of KM and KS in Kuwait, but there are a few worth mentioning, and they are discussed here.

With reference to Kuwait, limited publications have addressed the concept of KM. From a study conducted by Al-Athari and Zairi (2001) to explore available alternatives to KM systems designed to benefit the public sector of Kuwait, the findings exposed that knowledge management is crucial for organisations in both public and private sectors. Therefore, the workforce and organisation itself become rich sources of ideas. Besides, many internal journals address the conventional method of knowledge sharing between organisations and the staff. Based on Alazmi's (2003) assumptions, the actual functioning of IT-based systems in both Kuwait and the UK have similar models of practices utilised in conjunction with technology.

Another objective is intended at exploring web-based information systems as part of special project administration (SPA) of knowledge sharing in the Ministry of Public Works of Kuwait. From research conducted by Al-Reshaid and Kartam (2000), the findings confirmed that communication has failed to present an efficient means of information delivery and exchange. As a consequence, the application of web-based infrastructure as a tool of information exchange and delivery has had a significant impact among partisans to knowledge sharing. In their sentiments, Al-Reshaid and Kartam (2003) posited that the use of web pages influences the rate at which information disseminates directly among the stakeholders of an institution. Besides, they acknowledged that the use of web pages has encouraged electronic project discussion. Nevertheless, the SPA department implemented revolutionary attempt and the stakeholders that were involved in the construction projects. One of the prominent studies is by Al-Athari and Zairi (2001), who focused on both government and private sectors in Kuwait. In the following section, some of the noticeable results of their research are discussed.

2.9.1 Source of Knowledge

The study by Al-Athari and Zairi (2001) within the government and the private sector provides insight into the source of knowledge within these areas (Table 2.2).

The results in Table 2.3 show that a significant percentage of the knowledge is from internal sources (employee and organisation) and outside sources. A higher percentage is from suppliers within the private sector whereas in the government sector the greater proportion is from their customers. The study also showed that many people both in the state-owned and the public sectors mainly use journals and video conferences as a source of knowledge. Close

to 75% of state agencies alongside 51% drawn from the public sector depend on knowledge drawn from employees. On the other hand, 64% of private institutions turn to employees' performances as a rich source of the knowledge system. Finally, 37% of government institutions and 46% of private institutions depends on customers' knowledge as a rich source of the knowledge system.

Table 2.2: Importance of knowledge management sources

Knowledge Source	Sector	Disagree (%)	Not Sure (%)	Agree (%)
Employee knowledge	Government			100%
	Private			100%
Customer knowledge	Government	8%	48%	44%
	Private	3%	38%	9%
Supplier knowledge	Government	33%	35%	32%
	Private	3%	5%	92%
Organization knowledge	Government			100%
	Private			100%

Source: Al-Athari and Zairi (2001)

From the results observed in Table 2.2, it is clear that a wide range of knowledge obtained from Kuwait organisations comes from external sources, but KM sources are extracted both internally and externally. The above results coincide with Coates' (1999) sentiments, which stated that KM should not be limited simply to external sources. Finally, the entire concept must include suppliers, distributors, clients and interested parties. Therefore, any source of knowledge must link the business and the KM network. From a different perspective, Garner (1999) argued that KM is characterised by many flaws something that is of limited interest when it comes to management in Kuwait. The findings also indicate that private institutions have greater potentiality in establishing a system that links KM systems to knowledge-based sources.

2.9.2 Employee Perspective on Knowledge

KM is all about seeking for the right way to capture wisdom from the workers of an organisation. Sharing of knowledge is a vital concept in creating a KM system. From research conducted by Al-Athari and Zairi (2001), it is evinced that the focus on the management and sharing of knowledge in private and public sectors in Kuwait. With regards to employee perspective on knowledge, they found the following. The results revealed that 65% of government employees and 75% drawn from the private sector believe that

knowledge is power. From the same study, 87% respondents drawn from the government agencies and 75% from the private sector acknowledged that knowledge is a private concept.

A report published by Schwarzwalder (1999) indicated that many challenges are experienced from the listed attitude of KM systems in Kuwait. In his sentiments, Schwarzwalder (1999) argued that information that is shared openly is acceptable by many people. However, the greatest challenge is the environment that is not limited to organisational culture. In essence, recording of important information is critical in ensuring that employees achieve an indispensable state-of-the-art free from termination. Such an environment is free from reward schemes as a factor that influences the sharing of information.

The most important aspect of ensuring a seamless platform of knowledge sharing becomes visible as management seeks for power to support KM (Al-Athari and Zairi, 2001). Besides, many studies have recommended that management in Kuwait should consider employing people with knowledge management and sharing skills to benefit the company in the realisation of the knowledge sharing. Such employees can also play a role in the reorganisation of different departments thereby making them useful staff at different levels. As a consequence, it would be easier to stage an investigation in the case of an exchange of information among departments sharing similar goals. For instance, group members that take part in sharing of knowledge would be granted many opportunities including organisation skills. From the above sentiments, it is advisable that the management should consider the sharing of knowledge when an employee decides to leave a company. When there is high turnover rate, for instance, new recruits must train on knowledge-sharing skills to reconstruct the previous rapport. This is important because a system that does not recognise knowledge transfer to new recruits allows those who may have departed to enrich themselves at the benefit of the company.

Another study in the Kuwait context was carried out by Almarshad et al. (2010) in the public development and maintenance projects. In Kuwait, public development and maintenance projects have been witnessing substantial government spending, which comprised 11% of the total state budget. If the current rate of oil surpluses is anything to go by, then the public expenses were adequate to maintain the organisational support of production and restoration projects. Public construction departments also provide their services to maintain buildings owned by the State of Kuwait. Such services include small repairs to full revamp and

rebuilding projects. There is a great deal of information acquired, stored and shared in these sectors. With several parties that are involved in the construction sectors, the need for KS is of high importance for project success.

Almarshad et al. (2010) found that several issues were witnessed in the public BM sector in Kuwait that reduces efficiency in performance. With the help of framework and application of KM and developing a KM system, cost benefit among public department can be attained. The lack of literature in this area has created a novel and unique research opportunity for investigation. Therefore, the research objectives were set to investigate awareness and attitudes towards KM, map the main BM processes, and develop the KM system.

2.10   LITERATURE GAP

Conceptualising the idea of information sharing may be a challenging task. For instance, no specific theories or concepts of knowledge sharing can be located within one discipline. However, many scholars have confirmed that knowledge can be disseminated over social science and sub-disciplines. Besides, a wider section of the literature addresses epistemological discourse of knowledge without a clear consensus. In addition to these, there are very few studies in Kuwait on knowledge sharing, and no studies talk about knowledge sharing with social exchange theory.

Table 2.3 gives an impression of the prominent studies that have been carried out in Kuwait in the area of Knowledge Management (KM) alongside Information Sharing (KS). First of all, the studies in Kuwait on both KM and KS have been limited. Secondly, these studies are focusing on the usage of KM and KS in private and public sectors or the use of technological infrastructure (IT) to add to the use of KM and KS. Additionally, none of these studies focuses on the use of KS particularly, rather than combining KS with KM. Third, there are no studies on the use of KS in the financial sector (this study focuses on KS in the financial sector). Fourth and most importantly, none of these studies focuses on KS with Social Exchange Theory (SET).

The studies by Al-Athari and Zairi (2001) and Al-Reshaid and Kartam (2000; 2003) focused on the tools that are required for successful KM and KS in an organization, whereas the study by Alazmi (2003) focused on critical success factors of KM. In all of these works, there is an emphasis on using the right tools and particularly the role of IT being imperative. The

obligation of the executive remains a determinant towards the realisation of the success of KM and KS. However, this is achieved with the help of the right tools for KS, and the involvement of senior management as a principal success factor of KS is highlighted in this study. However, the literature gap observed in all of these studies is that none of these studies has examined the relationship between SET and KS. In this study, the researcher focuses on the relationship between SET and KS and thereby closes this literature gap.

Table 2.3: Literature on Knowledge Sharing in Kuwait

Focus	Studies Author Name	Framework	Key Findings
Availability of KMS in Private and Public Sector	Al-Athari and Zairi (2001)	Examines the actual situation; provides recommendations to improve to achieve organisation and national objectives; enhances employee participation in knowledge sharing (KS).	KS and KM practices were limited; Internal Journal used as KS tool; Management to encourage employees on the importance of KS and its benefits; The concept of shared knowledge increases total power needs to be practiced.
Best practice for KM IT Implementation of IT-based KM systems	Alazmi (2003)	points out four major success factors of KM sphere employed by Kuwait companies to exercise change management process from the executives to staff.	KM is not fully utilised in Kuwaiti organisations; The apprehension of KM reimbursement is needed for amplification; More emphasis on IT use in KS and KM processes; Lack of structured programme for employees concerning KM; Top Management commitment and focus required in the change management process and to prioritise the need for KM.
Establishment of web technology as part of building technique	Al-Reshaid and Kartam (2000)	Use of web-based software in the management of important projects by the ministry of public works in Kuwait.	The present communication system failed to deliver the reliable means of information exchange. the web-based technology was recommended to enhance the efficiency of information exchange.
Efficient project management using web-based technology	Al-Reshaid and Kartam (2003)	Investigates the application of web page by all personnel involved in the SPA projects.	Usage of professional web-based technology in projects was limited; Emphasises that web-based technology enhances stakeholders to communicate with each other directly; Recommends quick retrieval of all project-related information via web-based systems.

As pointed out earlier, there are no studies in Kuwait examining the use of KS and the critical success factors of KS in a financial sector in Kuwait. Most of the studies were conducted in general private and public sectors. The studies by Al-Reshaid (2000) and Kartam (2003) were particularly in the construction industry. Nevertheless, the literature search shows that there is no KS research in the financial sectors in Kuwait, and therefore, this is another gap that was explored in this research. Herein, the researcher analyses factors such as individual cognition, interpersonal interaction, organizational context, information systems, individual knowledge sharing behaviour, communication, knowledge transfer and social norms.

2.11   CONCLUSION

The discussion in this chapter provides information on knowledge sharing. Views of various authors based on their studies have been presented here. The factors that affect knowledge sharing will be used to generate a framework. Knowledge sharing is a significant factor that contributes to the development of both and the entire institution. Therefore, it is the role for every organisation to encourage and practice knowledge sharing. Knowledge sharing will lead to bringing better ideas and innovation among the employees, and this new knowledge can be the key to achieving competitive advantage. It is therefore important to approach knowledge sharing from a social exchange theory perspective, to enhance our understanding of the relationships of the factors discussed here.

CHAPTER 3: RESEARCH METHODOLOGY

3.1   INTRODUCTION

The earlier section of the paper sets up a structure of theories on how enablers affect the way employees share knowledge. To explore whether these effects take place in instrument consortia, an empirical study was conducted. The empirical study consisted of two phases. First, the data were collected from employees through surveys. The findings of this research led to the second phase of the empirical data collection. These data were generated from the managers in the investment firms. These were based on the qualitative method and the data gathered by means of interviews. Therefore, this research uses a mixed methodology in collecting the empirical data.

The research begins by studying existing literature and therefore following a deductive approach. Based on a conceptual framework, factors that affect individuals' knowledge-sharing behaviour in an organisation were examined in this context. The quantitative data were analysed using SPSS. In addition to this, the managerial interviews show further elements that influence activities rated to knowledge sharing within an organisation.

3.2   PROBLEM STATEMENT

Many scholars have developed an opinion that knowledge sharing is of importance when worked on as a unit. In that case, a team that is able to share knowledge forms part of a requirement. Besides, different varied institutions have acknowledged that knowledge sharing may not take place by default; rather, meaningful steps and a set of documentation must be followed (Hansen et al., 1999).

One of the biggest problems that needs to be emphasised is the lack of knowledge sharing in the investment sector in Kuwait. Employees remain committed for years with the same organisation and particularly within the same industry. The knowledge that they gain by working in the sector is valuable. However, they do not share this knowledge with each other. Working in the sector and gaining considerable knowledge of the industry, an employee can be recogonasied for lack of sharing due to the fear of losing their job or opportunities to grow. They fear that if others gain the knowledge then they can easily be replaced or it can

influence their career growth. There is also a lack of incentive from the management in encouraging knowledge-sharing practices among the employees.

The lack of knowledge sharing can lead to several problems, such as lack of coordination, inefficiency in solving problems on a timely basis and negatively influencing the growth of the organisation. In addition to this, when employees leave from the organisation, they carry the innovative knowledge with them. The new employee who is hired will have a negligible awareness of the organisation and therefore, the firm faces an expensive and time-consuming task of training and developing this employee to bring the employee up to the organisation's standards. The lack of adequate studies on KS leads to the hurdle that management faces in implementing and practicing KS. Further, even with the right information, it is not easy to adopt KS practices quickly. Employees have to be encouraged to share knowledge by removing the hurdles that they face in sharing knowledge, and this is not an easy task for the management. But the first step is to identify the obstacles and then find the solution, and this is one of the aims of this research.

Several researchers argued for knowledge sharing as a robust method of solving problems. The investment sector in Kuwait particularly is heavily reliant on the market information. With stiff competition in this area, the companies need to address their issues by sharing of information and finding better ways to provide stable results. Currently, investment firms, in general, do not have a formal practice of sharing knowledge. The problems are listed here:

- One of the reasons is that the management has not yet taken the upper hand in establishing formal knowledge-sharing environment and practices.

- Another problem includes employees, who do not take the interest of sharing knowledge, as they fear that this will influence their job security. The employees do not get any incentives in sharing knowledge.

- Kuwait relies heavily on its expatriate population. The investment companies recruit the majority of their employees from various countries. Some of the employees have been in this sector for several years. The issue relates to the employees leaving the companies or even the country. The wealth of knowledge that these employees

possess is taken with them. Employees who are hired (from within the company or outside) do not have the level of extensive knowledge and experience as the ones who have left, and this leaves a gap in the workplace.

- Although most of the companies work with similar products and services, they have niche clients and some unique offerings. Without knowledge sharing, these offerings cannot be improved, and soon the companies fall into competition with others offering similar environments to their customers.

- Lack of knowledge sharing has put the growth of the investment sector at a slow pace. The companies are not committed to handle competition or the lucrative financial market, which is dependent on several factors requiring studies. Lack of using this information to develop internal strength through knowledge sharing puts the investment companies at risk of losing their competitive advantage and market power.

- As discussed here, the issue is with the employees and the management. Therefore, there is a deficiency of pragmatic proof from the investment sector in Kuwait regarding knowledge-sharing practices. Hence, there is a need for this research to go in-depth into finding the reasons from the investment companies in Kuwait regarding the lack of knowledge-sharing practices.

The dynamics associated with this challenge must co-exist on different levels throughout, but the research has explored varied techniques and systems that can be employed to enhance the sharing of knowledge. Nevertheless, there is evidence of limited research on elements that encourage the willingness to share information among employees within an organisation.

3.3 RESEARCH QUESTIONS

How is knowledge sharing influenced by individual, group and organisational factors as outlined by the social exchange theory, and what are the implications to foster greater knowledge sharing in the context of an investment company in Kuwait?

3.4 CONCEPTUAL FRAMEWORK

The framework discussed in this section is the result of information collected from previous studies by various authors in the area of knowledge sharing. The conceptual model is provided here in Figure 3.1.

Figure 3.1: Conceptual Framework
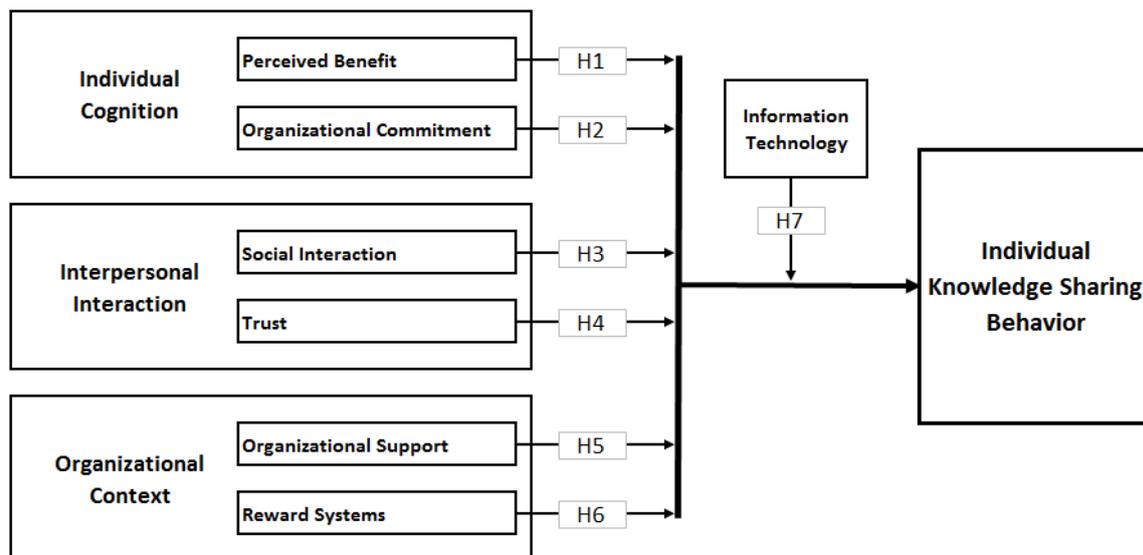
As shown in the theoretical outline, an individual's knowledge sharing behaviour depends on three factors – individual cognition, interpersonal interaction and organisational context.

The following section discusses the relationships as shown in the model, and the hypotheses.

3.4.1 Individual Cognition

Individual cognition is the first aspect being studied here, within which perceived benefits and organisational commitment are the factors examined.

Some authors have focused on the value of a shared cognitive ground including a mutually held cognitive structure and a common knowledge as evinced among the stakeholders. Scholars assert that people should coexist alongside each other as one way of developing utmost understanding and interpretation (Kang et al., 2007). Besides, it is observable from most institutions that the role of socio-cognitive factors associated with knowledge sharing is mostly inclined towards influencing the need for knowledge sharing. According to Chowdhury (2005), this is important as most studies talk about trust and knowledge sharing.

3.4.1.2 Perceived benefits

Perceived benefits are defined as the individuals gaining benefits from their behaviours. Based on social theory, Forsythe et al. (2006) asserted that there are recommendable benefits of engaging in teamwork. In essence, one gets sufficient opportunity to share contributions that in turn go a long way to improve their reputation and their status within a team. These individual cognitive factors are addressed alongside individual knowledge-sharing behaviour. The hypothesis for perceived benefits is:

- *H1: Perceived benefits influences employees towards knowledge sharing through the use of information system.*

3.4.1.1 Organisational commitment

This form of engagement constitutes psychological attachment of an employee with an organisation (O'Reilly and Chatman, 1986). The greatest employee commitment is the sharing of knowledge as part of the responsibility of associating with others in a collaborative way. Previous studies have also provided evidence of organisational commitment as a mutual determinant for the act of knowledge sharing (Cabrera et al., 2006). The hypothesis for organisational commitment is:

- *H2: Organisational commitment influences employees towards knowledge sharing through the use of information system.*

3.4.2 Interpersonal Interaction

The second factor studied in the model is interpersonal interaction, which comprises social interaction and trust. Therefore, KS becomes an import social process emanating from interpersonal interaction influenced by knowledge exchange. It is critical for organisations to consider the social factors for an efficient KS.

3.4.2.1 Social Interaction

As social exchange theory asserts, collective exchange of information among different persons creates a bond – that of relationship and a sense of belonging to a group. While it may not be a common belief financial benefit, it has contributed in establishing a mutual benefit between workers (Yiu and Law (2012). In most organisations, for instance, people are being treated as loyal team members. Therefore, it is a social capital and a valuable asset of

substantial benefit for all. From research conducted by Bolino et al (2002), the finding revealed that a greater degree of social capital is of significance in the realisation of inter-unit resource exchange, a situation that has led to the gaining of quality access to information alongside other skills needed for quality collective sharing responsibilities. Other scholars, Adler and Kwon (2002) argued that relational characteristics are important incentive resources that encourage persons to help others. In a friendly relationship, most people are willing to assist each other, for instance, in a KS activity characterised by the need to share well at the expense of self-interest.

The hypothesis for social interaction is:

- *H3: Social interaction is related to individuals' knowledge sharing with information systems.*

3.4.2.2 Trust

Trust constitutes asset of beliefs on honesty and kindness ability to other persons (Chiu et al., 2006). Based on the SCT principles, trust is an important concept of relational capital because it determines the extent of individual relationship including the relationship between peers or employees and an organisation. As a consequence, it creates an atmosphere for sharing information (Hedlund and Nonaka 1993; Nonaka 1994). Where trust exists, people would be more willing to take part in a corporate interaction. Therefore, trust creates room for exchange of information and relationships thereby leading to quality knowledge.

The hypothesis for trust is:

- *H4: Trust influences employees towards knowledge sharing through the use of information systems.*

3.4.3 Organisational Context

The third factor is organisation context, made up of organisation support and reward systems.

3.4.3.1 Organisational Support

Organisational support constitutes the notion that an organisation values the well-being of its workforce, including their contribution (Eisenberger et al., 1997). The executive should be at the forefront in influencing KS. As pointed out by Connelly and Kelloway (2003), the top management is the epicentre of resources intended to ensure the provision of KS. Besides,

Lin and Lee (2004) acknowledged that the idea behind the executive to promote KS has played an important role in establishing a KS culture within an organisation.

The hypothesis for organisational support is:

- *H5: Organisational support influences employees towards knowledge sharing through the use of information systems.*

3.4.3.2 Reward Systems

The reward system constitutes a crucial concept meant to streamline the effectiveness of KS due to employee willingness to share knowledge. Institutions' rewards entail the shape of organisational values and behaviours (Cabrera and Bonache, 1999). The right incentive and reward technique influence employees to share knowledge (Hall, 2001).

Rewards for KS are valued in terms of monetary rewards like salaries, bonuses or employee promotions that are all designed for personal satisfaction and job security (Davenport and Prusak, 1998; Hall, 2001). Different companies have since established reward systems intended specifically for sharing of knowledge. In essence, Buckman Laboratories tested 100 greatest contributors of KS within an organisation. The findings confirmed that close to 25% of employees within an organisation divot their KS support to an institution depending on the reward scheme offered to them (Bartol and Srivastava 2002; Davenport 2002). The hypothesis for reward system is:

- *H6: The reward system of the organisation will influence individuals towards knowledge sharing with information systems.*

3.5   RESEARCH APPROACH

In social science research, there are two types of research methods – Deductive and Inductive. The following section sheds light on both these approaches.

The *deductive* approach employs present theories of social context to establish a basis through which the objectives were achieved. The tools for gathering empirical data like questionnaires were used here to collect and analyse data towards establishing conclusions and recommendations. The deductive approach uses scientific principles and moves from theory to experimental data. It illustrates a causal relationship between the variables.

Information is commonly collected through the quantitative method. Saunders et al. (2007) pointed out that the deductive approach is a highly structured approach.

The *inductive* approach is the opposite of the deductive technique. The deductive technique commences from the empirical; from data collection all the way to the literature review, before illustrating the theory and area of research. The inductive approach aims at understanding human emotions. It avoids generalisation and requires the researcher to be part of the data collection process. The sample size is limited as compared to a deductive approach (Saunders et al., 2007).

In this study, a combination of both deductive and inductive techniques is used. As stated by Saunders et al. (2003), this study began by investigating various articles on knowledge sharing (KS). From the diverse literature based on past research, the researcher gathered the theories on KS. A research framework was also designed. This was followed by first collecting data from employees. To gather more information on the use of KS practices, in-depth interviews with the management of the investment companies in Kuwait was carried out.

As per Saunders et al. (2003), interviews (qualitative methods) fall under the inductive approach. The aim of this study was to clarify knowledge sharing by employees. This step was achieved through the deductive approach (details of quantitative method discussed in the subsequent sections). To gather the managerial perspective of knowledge sharing, the inductive approach (detailed information of the qualitative method is reviewed in the following sections) was used. This research uses both deductive and inductive approaches.

3.6   RESEARCH TYPES

There are many ways to undertake research. In most cases, researchers define research types depending on the knowledge of the researcher with regard to a problem before commencing an investigation. As described by Yin (1994), there are varied classifications of the research based on the problem; these are exploratory, descriptive, or explanatory.

3.6.1   Exploratory research

Exploratory research is applicable in areas where the problem knowledge is not clear or not available at all. In this case, the researcher has a definite study environment by focusing on

the existing environment to a ascertain anything of significance that helps to develop ideas (Yin, 1994). When a researcher encounters challenges in the formulation of problems statements, exploratory research is employed to substantiate a clear understanding. Therefore, the right technique is deemed suitable for gathering information while conducting research interviews (Yin, 1994).

3.6.2   Explanatory studies

Explanatory studies entail research that substantiates causal relationships among the variables. The greatest challenge associated with this study is that the relationships between the variables are not clearly explained. The relationships are best illustrated statistically with the aid of correlations. To be specific, data associated with kind of data include quantitative data, but qualitative data can also be used. Explanatory studies are characterised by research hypotheses that specify the nature and direction of the relationships between or among the variables being considered (Saunders et al., 2007).

3.6.3   Descriptive research

Descriptive research is applicable in designing general empirical applications. Of importance to note is that it begins with the net worth of a study thereby leading to theoretical development of the study. The main aim of this kind of analysis is to identify a clear phenomenon for study, while providing a clear description of the phenomenon associated with the study (Saunders et al., 2007).

This study has used exploratory and explanatory research types. The explanatory research type is used for the quantitative data, and the exploratory research type is used for the qualitative data. Explanatory research is used here as the researcher aims to establish the causal relationship between the variables in the research framework. For example, the relationship between factors of individual cognition (perceived benefits and organisational commitment) to sharing behaviour of the person becomes an explanatory approach. As discussed, the hypotheses were driven by the notion that relationships shall be drawn up through the explanatory research. The exploratory research applies to the interviews carried out with the management. The interviews were to explore the KS practices based on the information that is collected from the employees.

3.7   RESEARCH METHODS

In social science research, there are two main two methods used. These are qualitative and quantitative research methods. Some researchers use a combination of both these methods. The following sections discuss these in detail.

3.7.1   Qualitative Research

At this stage, data obtained from fieldwork survey and other sources are believed to be from credible sources and are thus analysed for clearer understanding by ordinary persons. Nonetheless, qualitative research focuses on interpreting numerical results obtained from credible sources. Therefore, qualitative study forms the basis of description where a researcher is furnished with only an idea of the subject. In this regard, much of the researcher's time is consumed by the data collection process. However, qualitative data play a significant role in deriving the opinions, experiences and ideas of people in an attempt to describe a phenomenon as it occurs. It is also important to note that qualitative research follows a descriptive approach targeted at assessing the theories. Therefore, data collection is done by meeting the respondents physically (Saunders et al., 2007).

3.7.2   Quantitative Research

In contrast, quantitative research deals with the analysis of numeric data that are in turn converted into machine codes for better testing and analysis using statistical software. ~Through the qualitative technique, data are gathered by constructing a similar set of questions with results recorded through numerical codes or physical numbers (Saunders et al., 2007). Quantitative methods can also be applied at interpreting statistical inferences and experiential conclusions with regard to the investigated population. A sample questionnaire is the most common tool utilised in formulating an initial hypothesis. Therefore, questionnaires provide a background against which the findings of the study are interpreted. The questionnaires constitute a meaningful set of questions that are pre-set for respondents to answer.

3.7.3   Mixed Methodology

This research used a mixed methodology. The first step was to collect data from employees through quantitative methods, and the next step was to gather data from managers through personal in-depth interviews.

Quantitative research is the prime method of data collection in this investigation. The main objective is to explore elements that influence individuals' KS activities. By understanding the factors, investment companies in Kuwait will be able to determine how to implement KS in the organisation and how to encourage the employees to share their knowledge. These quantitative data were collected from employees, and this information provides a good understanding of the employees' intention to acknowledge informatics during the sharing of information. The information from the quantitative findings was then used to inform the interviews with the management in implementing KS in the organisation.

The use of the qualitative method pertains to the interviews and discussions that were carried out with the management. This was done based on personal interview and focus groups. The interviews were unstructured and based on the quantitative findings. The aim is to provide scientific evidence to the management on the need for knowledge sharing (KS) in the organisation. The evidence from this research will guide the management to take the decision in implementing the practice of KS and investment in the necessary structure for KS. Therefore, the qualitative research method is applicable in this research.

The next section discusses the research strategies that are used in social science research.

3.8   RESEARCH STRATEGY

According to Yin (1994), the choice of a research strategy is determined by the type of research and questions involved in a study and the extent of management guiding the overall behavioural events. Most of all, research strategy guides the researcher on the extent of control of the contemporary events captured in the study. With reference to the three conditions, and the research techniques, it is possible to conduct the following. There are several research strategies such as experimental, survey, archival analysis, case study, ethnography, and time horizon. This section only discusses 'survey' and 'time horizon' as these relate to this research.

3.8.1   Survey

This strategy is employed once the research questions are identified with phrases like 'whom', 'what' and 'where'. Therefore, the researcher does not need to seek for control behavioural events; however, the study will rely on contemporary events. The concept of survey is widely used in business research because of its potentiality to collect a manageable

volume of data in a cost-friendly way. Less often, people learn about the attitudes, opinions, expectations and the agenda behind surveys. Moreover, the concept of survey is crucial for a survey because it helps capture subjects perceived exclusive to the participants. Finally, the survey helps in the capturing of information of historic events thereby creating the familiarity of people to previous events (Cooper and Schindler, 2003). In most cases, the survey method is applicable in collecting information on a bigger population size (Hair et al., 2003).

As discussed by writers like Hair et al. (2003), the use of surveys is part of the quantitative research method. It is a popular strategy when researchers need data from a large number of samples. The researcher in this study used the survey method to gather data from the employees in a particular investment company. The tools employed in the gathering of data from the respondents were self-administered questionnaires. The use of survey method ensured that data were gathered from a large number of people over a shorter period. This approach helped in collecting the data quickly, and, also in gathering the data from several employees.

3.8.2 Time Horizon

Time horizon constitutes arrangement of the project schedule. In project management, there are two main types of time horizon – cross-sectional, and a diary often referred to as longitudinal, as discussed below (Saunders et al., 2007). This research has used a combination of cross-sectional studies; discussed below.

Cross-sectional studies concern a special type of event within a given period. As pointed out by Easterby-Smith et al. (2002), cross-sectional studies utilise survey strategies. Of significance is that qualitative cross-sectional investigation employs the concept of qualitative technique to conduct interviews within the shortest time possible. Below is a snapshot of the approaches adopted herein.

3.9   DATA COLLECTION METHODS

Two main types of data collection techniques used in this research are primary and secondary methods. Secondary data is information that has been published by others and used in this research. These mainly refer to the theoretical information that has been used to write the literature. Theoretical aspects of data collection were employed by reviewing electronic journals, online books and physical books.

Primary data refer to information that has been collected directly by the researcher. This refers to the data collected from employees working in the financial investment sectors, and done through the use of a self-administered questionnaire. Subsequent sections provide details on the survey.

3.9.1 Data Collection Tool

A self-administered questionnaire was employed in the gathering of data from the employees working in the financial sectors.

Questionnaires are the most common data collection tool where a survey is applied. By definition, a survey comprises any method of data collection where respondents are requested to answer a set of questions designed in a predetermined manner (de Vaus, 2002; cited by Saunders et al., 2003). The design of a questionnaire depends on response rate, reliability and validity. The following factors are employed during the process of designing a questionnaire:

- Open-ended questions should be designed for individuals.
- The researcher must adopt a clear outline.
- Purpose of the poll should be explained.
- Pilot testing is required prior to the actual day of the research.
- All administrative protocols must be followed.

Therefore, questionnaires are also applicable in both descriptive and exploratory research. Since descriptive research involves the incorporation of attitudes and opinions as part of the survey, it creates a centre stage for identity and variability of different events. On the other hand, exploratory research requires examining and explanation of relationships that exist between the variables including their causes and the effects.

There are two types of questionnaire, self-administered or interviewer administered, as follows.

Self-administered questionnaires are designed to be answered by the respondents. This type of questinnaire is allocated to the respodents either through email or posted to the

respondents through an online platform such as survey monkey. After receipt, a respondent is required to fill in or post back the answers after completion.

Based on Saunders et al.'s (2003) research, the layout of the questionnaire is quite important both for the self-administered and interview questions. Much emphasis is set on the layout because attractive questionnaires are known to attract attention of the respondents towards delivering positive results. Besides, a good layout captures attention making it easier to answer the questions correctly. Among other important factors that should also be considered while designing the questionnaire is its length (de Vaus, 2002; cited by Saunders et al., 2003). A long questionnaire negatively affects the attention of the respondents. Therefore, it should be precise, concise and easy to understand.

There are closed and open questionnaires. According to Dillman (2000), an open-ended question gives respondents an opportunity to answer it in their own way. However, closed questions allow the respondents to choose from a list of multiple options. Both types of question are designed in a way that is simple and easy to answer. For instance, the questions are listed in a way that respondents can choose. Of critical concern to note is that the questions are designed for answering by the respondents. However, the questions are ranked and accorded a rating scale by the researcher to enhance collection of opinion data.

3.9.2   Questionnaire Design

The questionnaire in this research was divided into two parts. The first part constitutes demographic information like gender, age, education level and work experience. Each of these demographics is provided with options for the respondent to choose. The last option in each of these demographics is provided with "no response" as an option, in case the respondent does not wish to answer. Gender had two groups that include male and female. Age, education level, and work experience had multiple groups.

The second section is made up of the different variables in the model. Each of these variables had multiple statements that were designed using a 5-point scale. The scales are numbered as (1) Strongly Disagree, (2) Disagree, (3) Neither Disagree or Agree, (4) Agree, and (5) Strongly Agree. This element explains the questionnaire design for employees that were distributed using surveys. The questionnaire is attached in Appendix I.

The qualitative interviews were guided by pre-designed questions. These questions were designed using the findings of the quantitative data analysis. The questions helped in getting a semi-structured approach and following a pattern with all the interviewees, and the questionnaire is provided in Appendix II.

3.10 VALIDITY AND RELIABILITY

To achiev the highest level of credibility, the reseach must attain the requirements of validity and reliablity. Basicallly, reliability and validity must be given priority in conducting a quantitative reseach study (Densombe, 2010). To achieve a high level of credibility, a study must be either independent or whoever is performing the research must be within the framework of validity. Otherwise, the study was measured and described to determine if it is within the required phenomenon.

Validity is associated with the right knowledge of the research and must work on two levels – theoretical and empirical – as described by (Saunders et al., 2009). The researcher draws the questions and the problems on the theoretical level before exploring the empirical level. A research problem is observed at this stage. The question is meant to determine if the empirical finding coincides with the topic of investigation. Therefore, it highlights the level of validity at hand.

In the course of an investigation, it is important to address the concept of validity as long as theoretical definitions and operational tools have been defined. The tools are specifically designed to prove the theories. However, it is not possible to assess until the investigations on the structural levels have been completed.

On the other hand, the reliability of a study is defined by the measurement that is performed, the level of accuracy, and the arrangement of information. In a case of higher reliability, measuring instruments like a questionnaire must be employed to assess the result. In essence, interview control questions provide the best guarantee for better reliability. Moreover, higher reliability indicates that an independent variables are studied based on the generalisation (Densombe, 2010).

3.11 SAMPLE POPULATION

The sample population is employees and managers working in the investment firm in Kuwait.

Despite having sizeable sources of income, the government of Kuwait largely depends on oil as its source of income. The same is exhibited as other sources of revenue only amounted to 15% and oil covered the rest. Oil is known to experience substantial changes in prices hence its consistency is rather questionable. An extensive steady recording was realized in the total spending from 1985 and in the next 27 years that followed. Nonetheless, a substantial rate in the changes of prices was realized. In the mid 1980s and 1990s, the negative impacts of depending and focusing on a single source of unpredictable income was felt. The latter happened when the prices of oil went down due to massive decrease in the real spending. The real spending, however, rose back to normal in the 2000s when the prices of oil began rising (IMF, 2013).

In order to be able to sustain an economy with high dependency on oil as a source of income, an ultimate fiscal policy must address a clear feasible spending, making substantial investments in trade involved investments in sectors, and creating emergency savings. The presence of such an economy requires reduced expenditure as the state of the economy may change at any time. The emergency savings set-up may include both liquidated assets and safe assets. Additionally, there is need for the government to perfectly estimate the level of public investment needed to expedite the positive tradable sector development and improve their productivity level (IMF, 2013).

From 2009, Kuwait has actively embarked on the routine of decreasing its expenditure with an aim of adjusting to its economic situation. Investment companies (ICs) have sold their assets in order to reduce their debts and establish the concept of ease of spending and to adjust to the dire state of the economy. The ICs sector, which includes assets under management, accrues to over 50% of the projected 2011 nominal GDP. ICs' assets have gone down by 30% while the assets under management have likewise fell by 21%; compared to 2008 when companies topped with over 50%. The process was all round and it involved the conventional and Islamic establishments. Exclusively in 2011, the ICs' assets fell by 11% from KD 1.5 billion to KD 12.2 billion. On the other hand, the assets under management dropped by 15% and this demonstrated losses majorly from regional asset and domestic investments as well as from the reclamations made by stakeholders.

Furthermore, the ICs' resolved to restructuring in the years 2009 and 2010 with an aim of adjusting to the ultimate fiscal policy mentioned above, which marked a significant progress.

However, the recurrence of global liquidity pressures and constant flaws in asset markets has exposed the sector to new impediments. For example, GIH, one of the most influential ICs, had to experience a second financial reorganization in a period of two years. Furthermore, the situation got worse when in the first quarter in 2012, these companies together with seven others were deleted from the country's list of stock exchange market. At this time, 12 other companies had been suspended from the market and were instructed to address their financial issues by the end of June 2011 or else they would as well be delisted.

Majority of investment organizations are working tirelessly to achieve stability. All ICs in Kuwait are capitalised at around 39% of the entire resources. Despite the same, numerous investment businesses steadily recorded losses in the close of the third quarter in 2011. There was a total of 50 companies listed by close of January 2012. Of those, 14 failed to publish their Quarter 3 monetary outcomes. From the statistics, 35 companies indicated that, as they aimed at gaining fiscal stability, they had embraced the ease of spending ideology by subsidizing their size of operations. Nonetheless, regardless of the same, they kept making losses in the third quarter of 2011. Of the successfully listed businesses, 68% recorded crucial losses in 2011 in the third quarter, and 31% of the corporations surpassed 50% of their prevailing investment. Recent data shows that 21 of all the listed enterprises have registered enormous losses. Subsequently, they have used up more than 50% of their paid-up capital.

The data were drawn from workers in the investment firms in Kuwait. The figures collection was done by distributing self-administered questionnaires to seven prominent investment firms. A total of 750 questionnaires were distributed, from which 437 responses were received. The distribution of all the questionnaires was done in hardcopy. Each of these hardcopy forms was studied and, based on this, 13 forms were found to be unusable. This was because several variables were left unanswered. The total number of records that were used for analyses is 424. The period for collecting the empirical data was around 14 weeks.

The data were analysed using SPSS, and the findings were used to carry out the next phase of data collection, which is interviews with the managers. Interviews took part among managers drawn from seven different positions. The aim was to collect information from different managers. Details of the interviews are provided in the next section.

3.12   QUALITATIVE METHOD: GROUNDED THEORY

Managers of the investment company were contacted for interviews. The interviews were based on the findings of the quantitative survey data that were collected from the employees. This means that the data gathered from employees were analysed and the results were used to design the interview questions. Semi-structured interviews were employed for this study. The research questions guided the interviews to follow a similar pattern. At the same time, they provided an opportunity for the researcher and the interviewee to discuss more details.

The grounded theory (GT) founded by Glasser and Strauss (1967) based on their study *'Awareness of Dying*', is a stream of research methodology that is concerned with the generation of theory which is 'grounded' on systematic data collection and analyses. Authors such as Strauss and Corbin (1994) added that GT is useful in uncovering phenomenon related to social relationships and behaviours of groups, referred to as the social process. (Noble and Mitchell, 2016).

Grounded theory provided an outlook that questioned the views of the time that quantitative methodology was the only valid, unbiased way to determine phenomena and facts about the world (Tie et al., 2019). These authors added that the grounded theory method rests on collecting, examining, and checking data. This method has focused mainly on the data analysis; however, Charmaz and Belgrave (2019) indicated that its implications for data collection are beginning to be articulated (Charmaz and Belgrave, 2019). Grounded theory is a systematic method aimed for theory construction, which relies on rigorous analysis and conceptualisation of data. Grounded theory is an iterative, comparative and interactive method that begins with inductive data (Tie et al., 2019). From these discussions, it is understood that the grounded theory is a general methodology for developing theory that is grounded in data which is systematically gathered and analysed.

Charmaz and Belgrave (2019) shed more light on the discourse by indicating that grounded theorists analyse data using comparative methods from the beginning to the end of the research process. Although most of the literature focuses on the use of grounded theory in relation to data analysis, Charmaz and Belgrave (2019) pointed out that one of the features of grounded theory is that the collection and analysis of data occur simultaneously. The data analysis phases include the development of categories and codes developed from data.

Theoretical sampling is also used in refining categories and involves social processes in discovering the data.

As stated above, GT follows the inductive reasoning, that can be used by researchers can use to conceptualise their data and construct creative theoretical interpretations, which can lead to conflicts with some assumptions and practices (Charmaz and Belgrave, 2019). GT has traditionally aligned with objectivism, which reflects "the epistemological view that things exist as meaningful entities independently of consciousness and experience, that they have truth and meaning residing in them as objects" (Seaman, 2008; p. 2).

Table 3.1: Key differences in Grounded Theory approaches

'Glaserian'	'Straussian'
Beginning with general wonderment (an empty mind)	Having a general idea of where to begin
Emerging theory, with neutral questions	Forcing the theory, with structured questions
Development of a conceptual theory	Conceptual description (description of situations)
Theoretical sensitivity (the ability to perceive variables and relationships) comes from immersion in the data	Theoretical sensitivity comes from methods and tools
The theory is grounded in the data	The theory is interpreted by an observer
The credibility of the theory, or verification, is derived from its grounding in the data	The credibility of the theory comes from the rigour of the method.
A basic social process should be identified	Basic social processes need not be identified
The researcher is passive, exhibiting disciplined restraint	The researcher is active
Data reveals the theory	Data is structured to reveal the theory
Coding is less rigorous, a constant comparison of incident to incident, with neutral questions and categories and properties evolving. Take care not to 'over-conceptualise', identify key points	Coding is more rigorous and defined by technique. The nature of making comparisons varies with the coding technique. Labels are carefully crafted at the time. Codes are derived from 'micro-analysis which consists of analysis data word-by-word'
Two coding phases or types, simple (fracture the data then conceptually group it) and substantive (open or selective, to produce categories and properties)	Three types of coding, open (identifying, naming, categorising and describing phenomena), axial (the process of relating codes to each other) and selective (choosing a core category and relating other categories to that)
Regarded by some as the only 'true' GTM	Regarded by some as a form of qualitative data analysis (QDA)

Source: Onions (2006)

Grounded theory method has persisted and variations prove to be comparatively similar. Some conceptual and methodology variances have risen between the creators of this model and the interpretation elucidated in literature which has made reference to it. There exists three separate types of grounded theory including, the original description, the 'Glaserian' and 'Straussian' methodologies. Researchers who are interested in utilizing the grounded theory method justifiably select the form of the theory they would use rather than solely limit themselves to the method herein (Onions, 2006).

Based on the two grounded approaches in table 3.1, this study follows the Glaserian approach. This research is based on existing theories such as the social exchange theory, personalities theory, and the theory of reasoned action. This has led to the development of the conceptual framework where the relationship of independent variables such as individuals' cognition (perceived benefits and organisational commitment), interpersonal interaction (social interaction and trust) and organisational context (organisational support and reward system) on KS behaviour with information technology (IT) as mediator is studied.

The study then proceeds to collect empirical data through survey and personal in-depth interviews. The grounded theory is applied to the interview analysis for data that are collected from managers. As stated in the Glaserian discourse, the data reveal the theory. The interviews are carried out to gather managerial perceptions on KS based on the survey data findings. However, the data analysis has been vigorous as stated in the Straussian approach. Three stages of coding are carried out. These are discussed in the coding section below. To conclude, this research follows a grounded theory methodology and follows a combination of Glaserian and Straussian approaches.

3.12.1 Coding

The grounded theory method consists of three types of codding – open, axial, and selective coding.

3.12.1.1 Open coding

Open coding is considered as the initial level of coding that the researchers starts with, wherein the objective is to identify and categorize distinct concepts and themes. It begins with creating broad themes based on grouping of data. The aim is to express the data and the phenomena in the form of concepts (Williams and Moser, 2019).

The first level of coding began with extracting groups of words that were taken from the interview transcripts. The interview questions were categorised into five groups – (1) KS practices, (2) top management, (3) training and development, (4) reward systems, and (5) information technology. Word frequency was identified within these five categories. In the first level of coding the following were the codes and word frequencies.

Table 3.2: Factors, codes, and frequencies

Factors		Word Frequencies
1	KS practices	204
2	Top Management	92
3	Training and Development	187
4	Reward Systems	36
5	IT	47
Total		**566**

As shown in Table 3.2, a total of 566-word frequencies are identified between the five categories. This led to the second level of coding – axial coding.

3.12.1.2 Axial coding

The researcher moves from open coding to axial coding. In this stage, the researcher identifies categories and aligns them with the themes. This is achieved by sifting the data, refining it, and categorizing it with the goal of creating distinct thematic categories that leds to the next stage which is selective coding (Williams and Moser, 2019). In the second level of coding, the word frequencies were reduced to 131 codes based on the similarities and distinct thematic categories. Table 3.3 provides the details of axial coding.

Table 3.3: Axial and Selective coding

Axial coding	Selective Coding		Axial coding	Selective Coding
Strong emphasis in the initial stages KS stress began after 2008 financial crisis KS evolved from situation	KS Inception		KS limited to queries KS practices in the organisation are limited Discuss with team and provide response KS is limited to within team KS limited to current problems	KS Current Practices
Tools for KS Online KS platform Intranet portal for KS Group discussions Based on problems Linked to employee email Information search Preventive solutions Blogs Learn from customers Repository Archiving Expert answers	KS Platform (current and requirements)		Top management authorisation Manager meetings to provide best solutions Brainstorming Managerial training Leadership capabilities Take advice from managers Building leadership skills Managerial feedback Monitor employee performance regularly Effective follow-up from top	Leadership

		management Organisational culture Formal and informal communication Leadership development programs Top management encouragement in KS HR department participation Building leadership tools	
For employees to know each other Encourage social interaction Bring people of different cultures closer Essential for different nationalities to come together Establish personal relationship Non-work-related matters Social events Lunch/Dinner events Maintain stronger relationship 4-5 times a year	Importance of Social Interaction	Job security concerns Employees' fear of KS Lack of employee motivation Not included in performance appraisals No reward systems Lack of understanding on the benefits of KS Not part of performance evaluation	KS Barriers
Training needs Type of training Frequency of training	Training	Build trust Encourage employees Create positive employee willingness Talk openly Work-life balance Personal issues Achieve best ideas from employees	KS Motivation
Acquiring new knowledge and increase knowledge Positive impact on work performance Improve organisation practices Improve organisation performance Gain competitive advantage Achieve stronger customer confidence Provide best solutions Succession planning Retain talented employees Positive for KS by employees	KS Outcomes	Improve KS utilisation Top management participation required Strengthen relationships between employees and managers Employee motivation to be enhanced Promote KS Stronger team involvement needed Need to change KS practices Provide comfortable work environment Incorporate KS as part of organisation vision, mission and goals Participation from everyone required Department head initiatives Top management discussion on best KS practices	Recommendations

3.12.1.3 Selective coding

The final level of coding within the GT is selective coding. The steps and processes that are carried out in open coding and axial coding are categorized in an organized manner and filled with meaning and expressions. A higher process of axial coding is carried out in selecting coding based on actions that lead to creating the story related to the (Williams and Moser, 2019). The coding is based on word frequency queries, which refer to checking the words that occur most frequently. This then provides identification of key themes. After the coding was done for each of the seven categories, coding queries were carried out to study certain concepts. This aim here is to understand if there are connects between various levels of the codes. In the third level of coding, 10 themes were generated. The 131 codes in the second level of coding were further refined to 109 codes to generate the 10 themes (see Table 3.4).

Table 3.4: Themes

Number	Themes	Codes
1	KS Inception	3
2	KS Current Practices	5
3	KS Platform	13
4	Leadership Needs	16
5	Importance of Social Interaction	9
6	KS Barriers	7
7	KS Training Needs	27
8	KS Motivation	7
9	KS Outcomes	10
10	Recommendations	12

3.12.2 Qualitative Sample

Managers of all the departments in the investment company were contacted for interviews. The organisation has 11 managers handling various responsibilities.

Four of the managers agreed to the interview and gave appointment dates and times at the first time they were contacted. Another two stated that they would advise on availability later. Seven of these managers were contacted again after a few days. Three of them agreed to take part, and four of them declined. Three of these managers were travelling for business and trainings. One was on leave. Therefore, interviews were carried out with seven of the managers.

Table 3.5: Interviewee details

Department	Gender	Nationality	Highest Education Level
Information Technology (IT)	Male	Non-Kuwaiti	Post Graduate Degree
Human Resources (HR) & Administration	Female	Kuwaiti	Post Graduate Degree
Training & Development	Female	Non-Kuwaiti	Undergraduate Degree
Risk Management & Compliance Division	Male	Kuwaiti	Bachelor Degree
Financial Services	Male	Kuwaiti	Post Graduate Degree
Real Estate and Investment	Male	Kuwaiti	Diploma
Corporate Finance and Investment	Male	Kuwaiti	Post Graduate Degree

The details in Table 3.5 provide an overview of the interview participants. Focus group interviews were not possible as each of them provided different timing and the participants did not show much interest in discussing with others at this stage. The interviews were all carried out in their respective offices, based on the date and time they had provided. Further details related to the duration the interviewees have been in their current job position and the number of employees that each of them has in their department, are provided in Chapter 5.

Specific questions related to the department and their gender was not required, as these were understood, as all of the interviews were done in person in the interviewee's respective offices. Details regarding the highest educational level, duration in the present ranking, time with the organisation, and varried workforce that report to them were asked from the interviewee at the beginning of the interview.

As shown in Table 3.4, two of the interviewees were female managers who have been in the organisation for six and 11 years, respectively. Others are male managers who have been in the organisation for several years. The real estate and investment manager is the one who has the lowest exposure and experience with the organisation (four years). The highest exposure and expertise are with three of the participants who have each been in the organisation for 12 years. Each of them had different educational levels. The nationality question showed that five are Kuwaiti nationals and two are non-Kuwaiti nationals. As part of the "*Kuwaitization*" (hiring of Kuwaiti nationals in managerial positions as per Kuwait law), most of the leadership positions are occupied by Kuwaiti citizens.

Each interview took from one and a half to two hours. These were guided by the number of questions that were asked in addition to the semi-structured questions, and, also based on the discussion by the interviewee. Each of the respondents was asked if the interview session could be voice recorded. The participants were assured that the sound recording would only be used for transcribing the data and would not be shared with anyone. Only four provided permission for the interviews to be voice recorded. With the others, the discussions were jotted down.

The interviews were transcribed with the help of voice recording and note-taking during the interviews. The transcribing was done on the same day after each interview on MS-Word. Each interview took several hours to transcribe. Each of the interviews was carried out in English, except for the initial greetings that were in Arabic. The transcribed information was used to code and understand the information in more detail and identify the similarities and differences in the information. Computer software was not used in the coding of the data considering that the purpose of the interviews was to gather more information based on the employee data findings. Based on the interview data analysis, the interview information is discussed in Chapter 5.

3.13   STEPS TAKEN IN APPLYING THEORY TO PRACTICE

This section provides the details that are taken in putting theory to practice. These refer to meetings and brainstorming with department managers and senior management.

3.13.1 Initial Steps

This research uses both quantitative and qualitative research methods to collect the data from employees in the investment firm. These data were analysed, and the findings discussed in the data analysis chapter and the conclusion and recommendations section. The results and recommendations was reviewed with the management of the investment firm. The objective of the research has been to identify the reasons why employees do not share knowledge and how this can be overcome. It is important to turn the theoretical knowledge into actionable knowledge that can be implemented and practiced.

The empirical data collected through a survey using self-administered questionnaire were statistically analysed to identify the reasons for employees' lack of sharing knowledge and how the investment firm can implement KS. These findings and recommendations were

shared with the management. The discussions were held through focus groups. To achieve this, the results were first shared with the CEO and Board of Directors, to make them understand the need for KS and how several of the problems that the firm is currently facing can be overcome by sharing employees' tacit knowledge. The need to share this information with the managers of the enterprise were emphasised, and the permission to share this knowledge with the management were taken. Based on this approval, managers of all the departments were called together and the findings were discussed. Their opinions were collected and used for future in-depth meetings.

3.13.2 Managerial Meeting

Meetings were successfully held with head of departments and supervisors. Three meetings have been completed thus far and these were brainstorming sessions where information gathered from the all attendees was shared and discussed. The objective was to identify obstacles related to KS and to understand how KS practices could be strengthened. In addition to the empirical findings, the literature discussions (the recommendations from previous studies for sharing tacit knowledge) were also shared with the attendees (managers and supervisors). The recommendations included employee development, ways to motivate them and the use of incentives in knowledge segments, as well as application of existing information technology to partition knowledge. However, an agreement toward reward system practice is still pending.

3.13.3 Implementing KS Systems

After two brainstorming sessions, separate meetings were held with all the departments. Ideas from all the departments were gathered to form a cumulative and actionable approach towards implementing KS in the investment firm. This information collected from the managers, supervisor and departments was shared with the top management.

Further developments and details on actionable knowledge can be found in section 6.4.

3.14   DATA ANALYSIS

According to Dey (1993), qualitative analysis is a way of transforming data into something that does not exist – to obtain a fresh view of the data. The data are broken down so as to classify them, and the concepts created or employed in classifying the data, and the connections made between these concepts provide the basis of a new description. The core of

qualitative analysis lies in these related processes of describing phenomena, classifying them, and seeing how the concepts interrelate. Dey (1993) underscored that the steps should be followed when a researcher wants to make use of the qualitative data analysis process.

The researcher used SPSS data to generate various tests and statistical analyses to study the quantitative data that were collected from the employees. As stated earlier, the data were gathered through surveys and the use of self-administered questionnaires. Following are the different types of analyses that were run through SPSS.

Cronbach's Alpha: The reliability of a statistic is determined by consistency test variables using Cronbach's Alpha analysis.

Descriptive analysis: This type of analysis delivers feedback based on the results of each of the variables as reported in the questionnaire. Data are collected with the help of survey questionnaires in accordance to the frequency and percentages. The data are thus presented in the form of tables and discussed individually and cumulatively.

Correlation examination: This type of analysis is used to test the one-to-one relationship between the studied variables. The relationship is studied based on the significance figures followed by the Pearson Correlation. The Pearson correlation values also tell us the type of relationship (positive or negative) and power of the association connecting the two variables.

Regression analysis: This analysis is used to test the independent variables against the dependent variable. The relationship is based on the significance and the beta values. The results of the regression are also used to answer the hypotheses.

T-Test and one-way ANOVA: These are two different analytical tools that are used to analyses that are used to test the significance of demographics on the studied variables. The t-test is used to test demographic variables that have two groups (for example, gender which has male and female) and the one-way ANOVA is used to test demographics that have more than two groups, such as age, education, and others.

CHAPTER 4: SURVEY FINDINGS

4.1   INTRODUCTION

In this section, the data gathered by surveying workforce, using self-administered questionnaires were analysed and discussed. The data analysis took place with the assistance of SPSS software after which data were gathered by distributing the questionnaire to the employees in the organisation. The covering letter had instructions and the objectives towards collecting the data. It also assured the anonymity and confidentiality in the handling of the data that the respondents provided.

The data were generated within a period of several weeks. The completed responses were received from the respondents on a timely basis. After a period of eight weeks, the researcher had received 424 completed questionnaires and entered the information into SPSS for data analysis. The data were first tested for consistency using the Cronbach's Alpha for variables designed using the 5-point Likert scale. This step was followed by the descriptive statistics in studying the demographics and the responses received in the studied variable. The discussion of the demographics is done based on the percentages. Next crosstab analysis of the population variables was carried out to understand the responses based their relationship with each other. The discussion of the variables studied is done using percentages, mean and standard deviation (SD).

Data were further subjected to analysis where the understanding of the variables was based on important relationships between variables and the correlation values. The other part of the analysis was the regression analysis where the testing of the significance of the independent and dependent variables was conducted including the mediating role of information technology (IT) on individuals' knowledge-sharing behaviour. The independent variables are categorised into three factors. The first was the Individual cognition, which consists of apparent significance of the organisational commitment. Second, interpersonal interaction was analysed. This entails social interaction and trust. Third, there was the organisational framework that consists of organisational support and reward systems. The dependent variable is individuals' knowledge-sharing behaviour.

The final section of this chapter uses the t-test and one-way ANOVA to test the significance of the demographic variables (gender, age, education level and work experience) to the studied variables. The chapter begins with a discussion of the demographics.

4.2   DEMOGRAPHICS

The information that is analysed and reviewed here is through the usage of descriptive statistics. The report provides understanding of who took part in this survey based on the gender, age, education and work experience.

Table 4.1: Respondent Demographics

Gender	%	Age	%
Male	83%	18-25 Years	13%
Female	17%	26-35 Years	38%
		36-45 Years	41%
		46-55 Years	5%
		56 Years and above	4%
Education	**%**	**Work Experience**	**%**
Less than high school	0%	5-10 years	23%
High School	2%	11-15 years	38%
College	1%	16-20 years	37%
Undergraduate Degree	66%		
Post Graduate Degree	29%		
Doctorate	0%		

Table 4.1 presents the results for the four demographic variables. Based on the responses, more men took part in the survey compared to women, and this is because the investment sector in Kuwait is largely dominated by men in the workforce. The age group shows that there was higher participation from the middle age group (36-45 years) and younger age group (26-35 years). The results for the education level of the respondents indicate that higher participation was from workers with an Undergraduate Degree, followed by those with a Post Graduate Degree. Finally, based on the work experience, the majority of the participants have been in the organisation for several years (11 years and above).

4.3   CONFIRMATORY FACTOR ANALYSIS

One of the first analyses that was carried out is the confirmatory factor analysis (CFA) to study the factor loading of items per variable. The factor loading cut-off differs. The

confirmatory factor analysis is used to test how well the measured variables represent the number of constructs. CFA is a tool that can be used to confirm or reject the measurement theory.

For example, Brachos et al. (2007) studied knowledge effectiveness, social context and innovation and they maintained the factor loading at 0.7 in their analyses. A study by Abukhait et al. (2018) on KS, empowerment and innovative behaviours maintained the factor loading at 0.5. Similarly, Bilgihan et al. (2016) maintained factor loading at 0.5 in their study to understand consumer perceptions of KS in the use of social networks within the online travel context. Further evidence from Masa'deh et al (2016) KS was on the impact leadership types (transformational and transactional) on job and firm performance. These authors also maintained the factor loading at 0.5.

The factor loading represents the average variance extracted (AVE) which according to Hair et al. (2014) should be 0.50 or higher. This research also maintains the factor loading at 0.5. This means that items that have less than 0.5 as the factor loading are excluded from the variable.

In addition to the AVE, the Kaiser-Meyer-Olkin (KMO) is also extracted for each variable. Gupta (2011) studied the role of organisational politics using KS among employees and work engagement. They maintained KMO cut-off value at 0.6. Alshamsi et al. (2017) studied the impact of organizational practices on KS and used KMO with a cut off value of 0.5. Akroush and Awwad (2018) studied the role of KS in new product development and indicate the KMO cut-off value at 0.5. This research maintains the KMO cut-off value at 0.5.

The CFA tables for factor loading and KMO are discussed based on these values.

Table 4.2 shows the factor loading results for perceived benefits (PB). The findings indicate that three items have factor loadings of less than 0.5 and need to be excluded from further analyses. The KMO indicates value of 0.773 which is higher than the cutoff value of 0.5.

Table 4.3 provides factor loading results for organisational commitment (OC) and all items have factor loadings above 0.5; therefore, none of the items needs to be excluded. The KMO value of 0.796 for OC indicates good sampling adequacy with value above 0.5.

Table 4.4 provides the CFA results for SI and indicates that all items have factor loadings above 0.5. The KMO also indicates good sampling adequacy with value of 0.760.

Table 4.2: CFA for PB

KMO = 0.773	
Items	Factor Loading
PB1	0.032
PB2	0.014
PB3	0.716
PB4	0.885
PB5	0.871
PB6	0.833
PB7	0.914
PB8	0.879
PB9	-0.095

Table 4.3: CFA for OC

KMO = 0.796	
Items	Factor Loading
OC1	0.627
OC2	0.833
OC3	0.824
OC4	0.808
OC5	0.764

Table 4.4: CFA for SI

KMO = 0.760	
Items	Factor Loading
SI1	0.557
SI2	0.712
SI3	0.534
SI4	0.799
SI5	0.881
SI6	0.883

Table 4.5: CFA for TR

KMO = 0.822	
Items	Factor Loading
TR1	0.757
TR2	0.722
TR3	0.878
TR4	0.890
TR5	0.846
TR6	0.254

Table 4.6: CFA for OS

KMO = 0.716	
Items	Factor Loading
OS1	0.814
OS2	0.744
OS3	0.783
OS4	0.620
OS5	0.703
OS6	0.538
OS7	0.271

Table 4.7: CFA for RS

KMO = 0.899	
Items	Factor Loading
RS1	0.865
RS2	0.931
RS3	0.917
RS4	0.941
RS5	0.967
RS6	0.940
RS7	0.941
RS8	0.897

Table 4.5 provides the factor loading for trust (TR) and indicates that only one item has low factor loading. The KMO of 0.822 indicates good sampling adequacy. Table 4.6 provides the factor loading results for organisational support (OS) and one item has a factor loading below 0.5. The KMO of 0.716 indicates good sampling adequacy. Table 4.7 also indicates that one

item for rewards systems (RS) and all items have factor loadings above 0.5. The KMO of 0.899 for RS indicates good sampling adequacy.

Table 4.8: CFA for IT

KMO = 0.910	
Items	Factor Loading
IT1	0.866
IT2	0.928
IT3	0.897
IT4	0.861
IT5	0.909
IT6	0.944
IT7	0.877

Table 4.9: CFA for KSB

KMO = 0.805	
Items	Factor Loading
KSB1	0.746
KSB2	0.901
KSB3	0.755
KSB4	0.242
KSB5	0.730
KSB6	0.768
KSB7	0.772
KSB8	0.670

Table 4.8 for information technology (IT) also has all the items with factor loading values above 0.5; therefore, all items are retained. KMO has strong value of 0.910 and therefore indicates good sampling adequacy.

Table 4.9 provides the factor loadings for knowledge sharing behaviour (KSB) and one item has low factor loading therefore it will be excluded. The KMO value of 0.805 indicates good sampling adequacy.

The results of the factor loading are used in the other analyses that are carried out in this chapter. However, the descriptive analysis discusses all the items.

4.4   RELIABILITY TEST

The first test that is carried out is the Cronbach's Alpha reliability test. The test has been conducted on all the variables individually. The Cronbach's Alpha scales ranges from zero to one and for the data to achieve reliability test, it required to have a value of 0.7 and above. A high Cronbach's Alpha value indicates strong reliability.

Table 4.9 provides the reliability test for all the study variables. Based on the results all the variables have the required Alpha value of 0.7 and above indicating that all the variables can

be used for further analysis (ats.ucla.edu, 2016). The strongest reliability has been observed with the reward system (.975). The number of objects indicates the total number of statements that are contained by each of the variables.

Table 4.10: Reliability Test

Variables	Alpha	Number of Items
[PS] Perceived Benefits	.921	6
[OC] Organisational Commitment	.820	5
[SI] Social Interaction	.834	6
[TR] Trust	.875	5
[OS] Organisational Support	.784	6
[RS] Reward System	.975	8
[IT] Information Technology	.959	7
[KSB] Knowledge-sharing Behaviour	.879	7

4.5   DESCRIPTIVE ANALYSIS

The descriptive analysis clarifies the responses received per variable and is understood based on the responses received in each of the 5-point scales.

4.5.1   Individual Cognition

Individual cognitions consist of perceived benefits and organisational commitment. Figure 4.1 provides the average of perceived benefits and organisational commitment which form the individual cognition. For both perceived benefits and organisational commitment, higher responses are in the agree scale.

The findings for perceived benefits show higher responses in agree (the detailed descriptive table is provided in Appendix III-Table III-1). This variable has nine items focusing on the employee perception of knowledge sharing and its benefits. The strongest responses were received for employees' agreeableness on the importance of sharing knowledge: 44.8% agreed and 54.0% strongly agreed, indicating that employees are agreeable in sharing knowledge. This is further strengthened by 45.5% agreeing and 50.9% strongly agreeing. Further, according to 46.0% agreeing and 35.4% strongly agreeing, it was also understood that their intention of sharing knowledge would lead to improved performance and reputation

of the organisation. From a personal perspective the responses were low. For example, not all the employees felt proud to share knowledge with the intention of getting a reward or being promoted. It was also understood that the employees did not share knowledge because they felt they would gain the respect of the co-workers or with the intention to impress the supervisor and make them feel that they are competent.

Figure 4.1: Averages for Individual Cognition
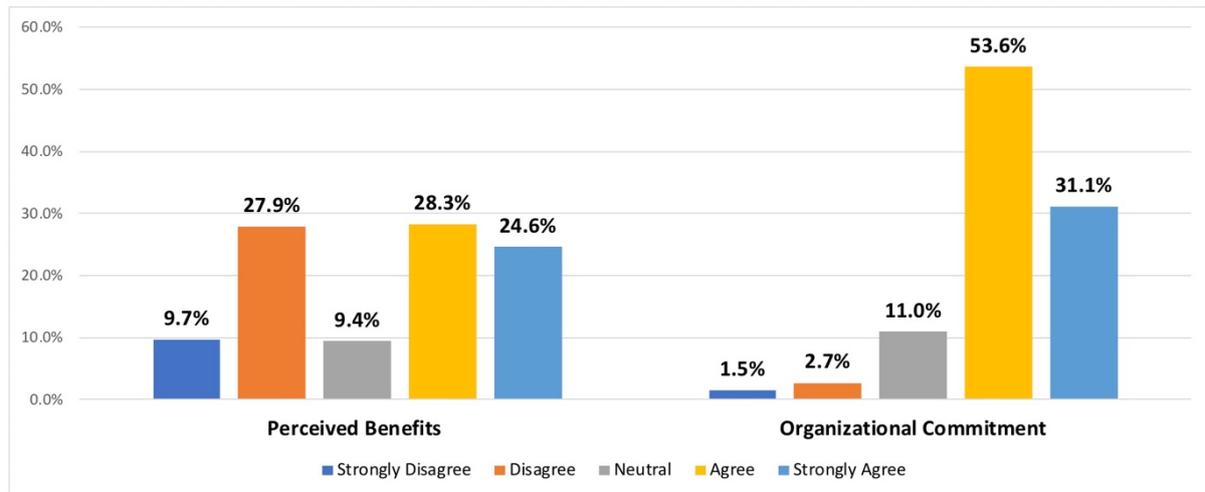
The descriptive findings for organisational commitment show higher responses in the agree scale (the detailed descriptive table is provided in Appendix III-Table III-2). The strongest responses indicate that the work environment provides knowledge-sharing capabilities and that the employees have access to necessary communication tools. The availability of different communication tools is essential for knowledge-sharing practices. It is also understood that KS is considered as a key resource in the organisation. As per the majority of the responses, it was also understood that there is internal competition in the organisation with regards to KS. Based on these responses it is understood that there is a certain level of organisational commitment with regard to KS.

4.5.2 Interpersonal Interaction

Interpersonal interaction is made up of social interaction and trust. The results for these variables are discussed here. Figure 4.2 provides the averages for social interaction and trust which form the interpersonal interaction.

Figure 4.2: Averages for Interpersonal Interaction
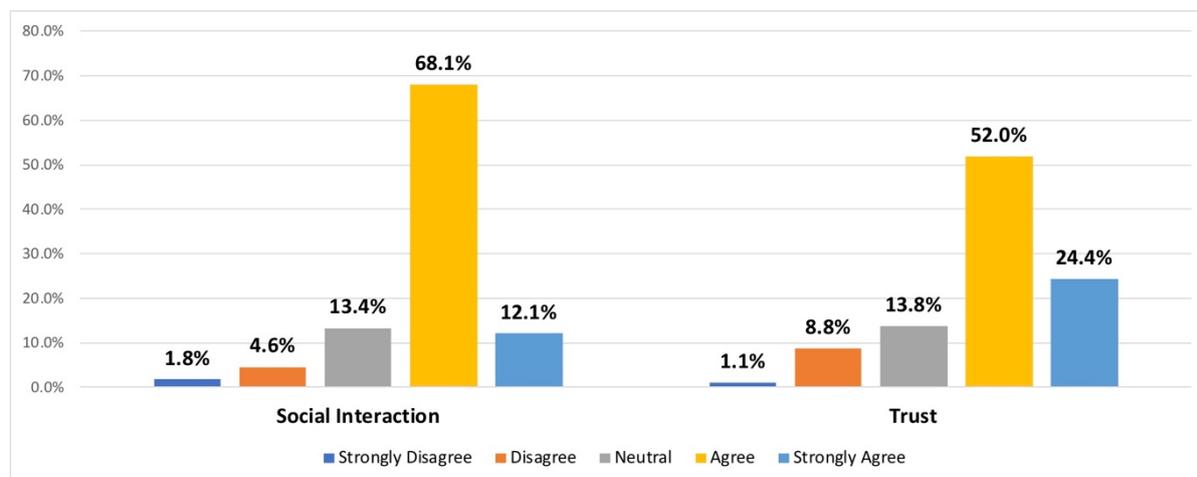
The descriptive findings for social interaction show higher responses in the agree scale (the detailed descriptive table is provided in Appendix III-Table III-3). Observing the stronger responses, it is understood that there is cooperation within the team and its members in KS. This can be considered as one of the advantages of KS. One of the ways in which KS is practiced is based on spontaneous informal communication.

KS is two-way and therefore it was confirmed by a good majority that their colleagues also reciprocate by sharing their knowledge with them. This shows that the knowledge-sharing practices are not limited to problem solving or a particular situation but are being carried out at any time. This can also be viewed as positive feedback for knowledge sharing within the organisation. A considerable majority agreed that the organisation encourages the use of various social events for employees to get together and discuss with each other about various organisational activities, leading to knowledge sharing. Finally, it was understood that the workplace environment is also conducive for knowledge sharing.

The descriptive findings for trust show higher responses in the agree scale (the detailed descriptive table is provided in Appendix III-Table III-4). The responses show that employees trusted the knowledge that was shared by the members. From the earlier responses it is understood that there is a certain level of KS with the organisation and the response here indicate that the knowledge shared is trustworthy. Therefore, we can state that there the KS practices in the organization are good. The trustworthiness of the team members was also

indicated from a general perspective. With regards to knowledge being shared on a timely basis, although there were considerable responses in the positive scales (agree and strongly agree), there were also a noticeable number in the neutral scale. From these responses, we can understand that knowledge shared between the employees is good, but it is also important for the employees to share their knowledge or rather respond to colleagues' need for information on a timely basis.

4.5.3 Organisational Context

Within organisational context, the focus is on organisational support and reward system. The descriptive statistics results for these are discussed here. Figure 4.3 provides the averages for organisational support and reward system, which form the organisational context.

Figure 4.3: Averages for Organisational Context
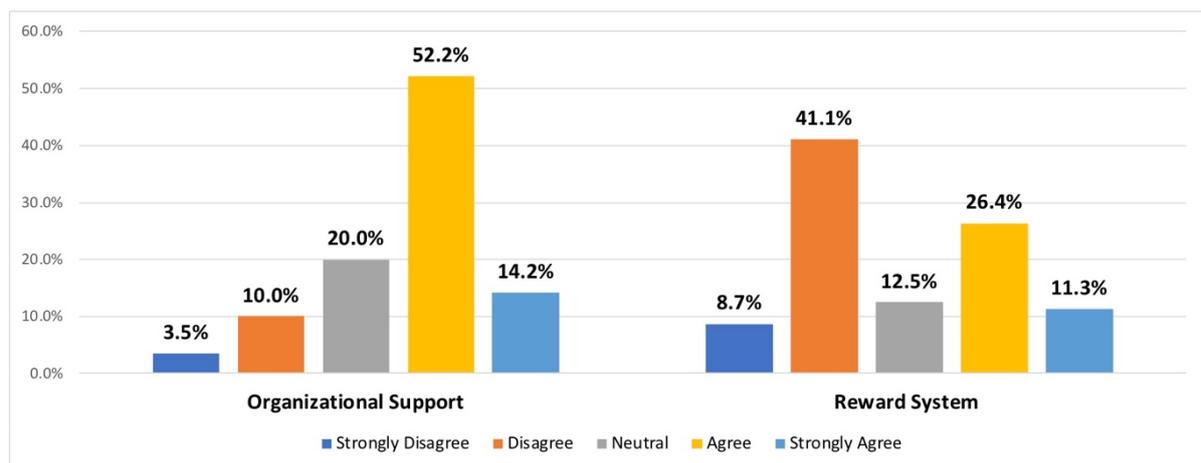
The descriptive findings for organisational support show higher responses in the agree scale (the detailed descriptive table is provided in Appendix III-Table III-5). The findings show that most of the responses are spread between neutral, agree and strongly agree scales. However, for four of the items, the percentage value indicates that there are also a few in the disagree scales. The stronger responses were received for supervisor expectation from employees in sharing knowledge and the supervisor's view that knowledge sharing is essential for the organisation. It was also understood that the supervisor provides positive feedback when employees share their knowledge. With regards to closest colleagues thinking that it is important for everyone to share knowledge within the organisation, the responses were more in the agree scale, but there were noticeable responses in the neutral and the disagree scales, indicating disagreements.

Similarly, with regards to the employee being provided adequate time in sharing knowledge, the responses were spread across disagree, neutral and agree scales. Further, it is understood that the hierarchy in the organisation is not a barrier for information flow. KS requires the participation of everyone irrespective of the position they hold. Everyone has knowledge that they can share. Although the responses for this were more in the agree scale, there are also responses in the disagree and neutral scales. Therefore, similar responses were received for the ease of information flow throughout the organisation regardless of employee roles and other boundaries.

The descriptive findings for reward system show higher responses in the disagree scale. The responses for the reward systems are more in the negative and neutral scales, as can be seen from Figure 4.3 and Table III-6 in Appendix III. The strongest positive response that was received has been for employees being rewarded for teamwork and collaboration compared to individual performance. The percentage values for this statement are higher in the disagree agree scale. Further results indicate that KS rewards that are currently available are not motivating the employee to spread their knowledge. Similarly, the appraisal and the reward system are not a motivational factor for employees to interact or share their knowledge. Based on these responses, it is understood that employees are not rewarded for sharing their knowledge, as indicated by several of the participants. The KS of the employee did not lead to positive performance evaluations as indicated by a large majority. The KS did not lead to an increased salary for the employee either. Based on the responses received here, it can be concluded that there is lack of reward system for KS.

4.5.4   Information Technology

Information technology is the mediating variable between individual cognition (perceived benefits and organisational commitment), interpersonal interaction (social interaction and trust), organisational context (organisational support and reward system), and individuals' knowledge-sharing behaviour.

The results for IT are discussed here. IT is a mediating variable in our study as it is the platform that facilitates KS in the organisation. The findings shown in Figure 4.4 and Table III-7 in Appendix III indicate that there are considerable positive responses. Based on the

responses it is understood that there are effective cataloguing and archiving procedures in place for document management in the organisation.

Figure 4.4: Average for Information Technology
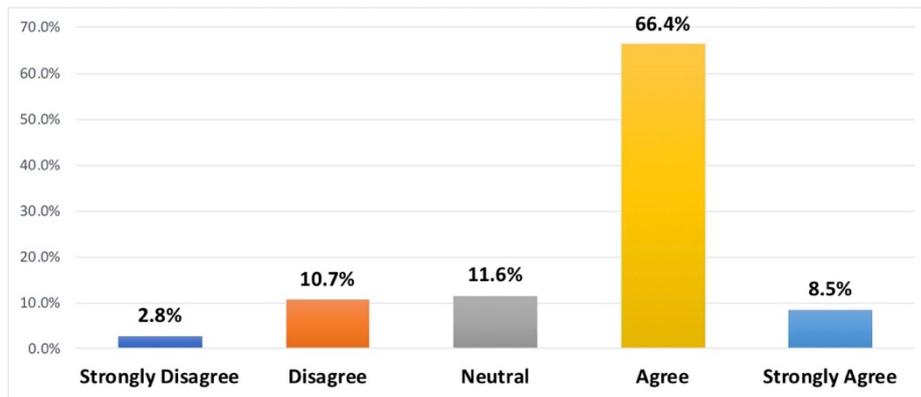
Information is stored in the IT systems, so that this can be retrieved by employees and used as part of the KS process. The responses indicated that the employees feel comfortable using KS technology that is available in the organisation and that the IT platform is used as a tool to share the knowledge. Based on this, strong positive responses were received for IT as the facilitator for collaboration and knowledge sharing. It is also understood that the organisation uses various IT-based tools to enable collaboration and KS and a good majority agreed that these tools were effective. Thus, it was understood that the employees feel comfortable using KS technologies that are currently available in the organisation.

4.5.5   Individual KS Behaviour

The dependent variable in the model is individuals' knowledge-sharing behaviour. The results for these are discussed here. Figure 4.5 provides the average for KS behaviour.

There are eight items, and the average provided in Figure 4.5 and the details provided in Table III-8 in Appendix III indicates that majority of responses are in the agree scale. One of the higher responses has been for employees telling others about their knowledge-sharing community. One of the ways that communication between colleagues can be increased is through teamwork discussion and collaboration. Further it was also understood that KS behaviour is actively promoted on a day-to-day basis in the organisation. From an individual perspective, it was understood that the employee actively shares knowledge and responds

with other members in the community. Low response was received for employees involving themselves in discussion of various topics rather than specific topics.

Figure 4.5: Average for KS Behaviour
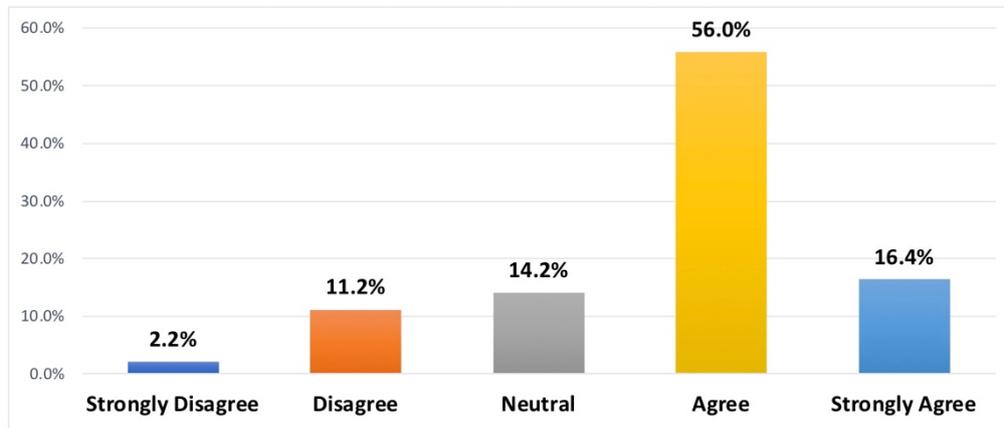
Therefore, from an overall perspective it can be understood that there are some knowledge-sharing activities that are practiced in the organisation.

4.6   CORRELATION ANALYSIS

The correlation analysis was employed to address the association between the two variables. For this study, correlation provided a platform for two principles that were needed to adress their relationship. First, we evaluate the significance value (Sig. 2-tailed) to figure out whether there is significance between the two variables. The significance is established at 95% confidence level or higher, where the p-value is 0.05 or below and this is indicated by single asterisks (*). Values that are below 0.01 have substantial significance, and these values have double asterisks (**). Based on the significance value, the correlation between the variables is studied.

The correlation scale ranges from -1 to +1. This means that there are negative and positive correlation values. The correlation values can be categorised into weak correlation and high correlation. For example, if the values range between +0.0 and +0.5 then there is a low positive correlation and values that range between +0.5 and +1.0 have a strong positive correlation (statistics.laerd.com, 2013). The same applies for the negative correlation.

According to the research model, individual cognition (expected benefits and organisational pledge), interpersonal interaction (social interface and belief), and organisational circumstance are significant to individuals' knowledge-sharing behaviour. Next, the relationship of information technology to individuals' knowledge-sharing behaviour is studied.

Table 4.11: Correlation Analysis

		PB	OC	SI	TR	OS	RS	IT	KSB
PB	P. Correlation	1							
	Sig. (2-tailed)								
OC	P. Correlation	.036	1						
	Sig. (2-tailed)	.465							
SI	P. Correlation	.045	.175**	1					
	Sig. (2-tailed)	.361	.000						
TR	P. Correlation	-.266**	.026	.349**	1				
	Sig. (2-tailed)	.000	.596	.000					
OS	P. Correlation	.158**	-.015	.012	-.080	1			
	Sig. (2-tailed)	.001	.761	.799	.099				
RS	P. Correlation	.305**	-.029	.408**	.221**	-.042	1		
	Sig. (2-tailed)	.000	.552	.000	.000	.385			
IT	P. Correlation	-.084	.163**	.706**	.408**	-.168**	.487**	1	
	Sig. (2-tailed)	.085	.001	.000	.000	.001	.000		
KSB	P. Correlation	.080	**.125***	**.622***	**.231***	**.251***	**.179***	**.321***	1
	Sig. (2-tailed)	.100	.010	.000	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
P. Correlation = Pearson Correlation

PS = Perceived Benefits	OC = Organisational Commitment
SI = Social Interaction	TR = Trust
OS = Organisational Support	RS = Reward System
IT = Information Technology	KSB = Knowledge-sharing Behaviour

Based on the results for *individual cognition*, the significance was recorded between the benefits of knowledge sharing and behaviour while there was no significance between the OC and KSB. The correlation shows that no correlation is found between perceived benefits and individuals' knowledge-sharing behaviour (KSB). This is because the significance between PB and KSB is 0.080, which is higher than the p-value of 0.050 (95% confidence level). OC has significance with KSB with a correlation of 0.125. This indicates weak positive correlation.

For *interpersonal interaction*, there is a strong significance with both social interaction (.000) and trust (.000). The correlation between social interaction (SI) and KSB is strong (0.622), indicating that the close relationship with co-workers and managers will increase KSB. The correlation for trust is 0.231 which indicates weak positive correlation.

Organisational context has organisational support (OS) and reward systems (RS). Both OS (.000) and RS (.000) have strong significance, but the correlation is weak positive. Between both of these variables, OS has a more significant impact on KSB with a correlation value of 0.251 compared to the correlation value of 0.179 for RS.

Finally, for *information technology* (IT), there is substantial significance (.000) but weak positive correlation (.321). This aspect indicates that IT plays a positive role in KS, but it is not the primary factor in promoting the usage and practice of KS within the investment firm in Kuwait.

4.7   REGRESSION ANALYSIS

In this section, the significance of the independent variables to the dependent variable is investigated. The results are used to answer the hypotheses. Prior to answering the hypotheses, the Cook's Distance and Durbin-Watson regression tests are used to study any outliers and collinearity.

4.7.1   Regression: Cook's Distance

The Cook's Distance is a regression analysis that is used to identify influential outliners within a set of predictor variables. Higher leverage and residual values indicate higher Cook's Distance. One of the interpretations for Cook's Distance is to study the observations based on the formula 4/n, where 'n' is the number of observations (statisticshowto.com, 2018). In this record, the total number of records is 424. The formula and results would be as follows; 4/424 = 0.00943396. As per the regression using Cook's, the minimum is 0.00 and the maximum is 0.039. There are 24 records that have values above 0.009. Since the focus here is on the Cook's Distance, only the residual statistics results for Cook's Distance are provided in Table 4.12.

Table 4.12: Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation
Cook's Distance	**.000**	**.039**	.003	.006

a. Dependent Variable: KSB

Figure 4.6: Scatter Plot for Cook's Distance
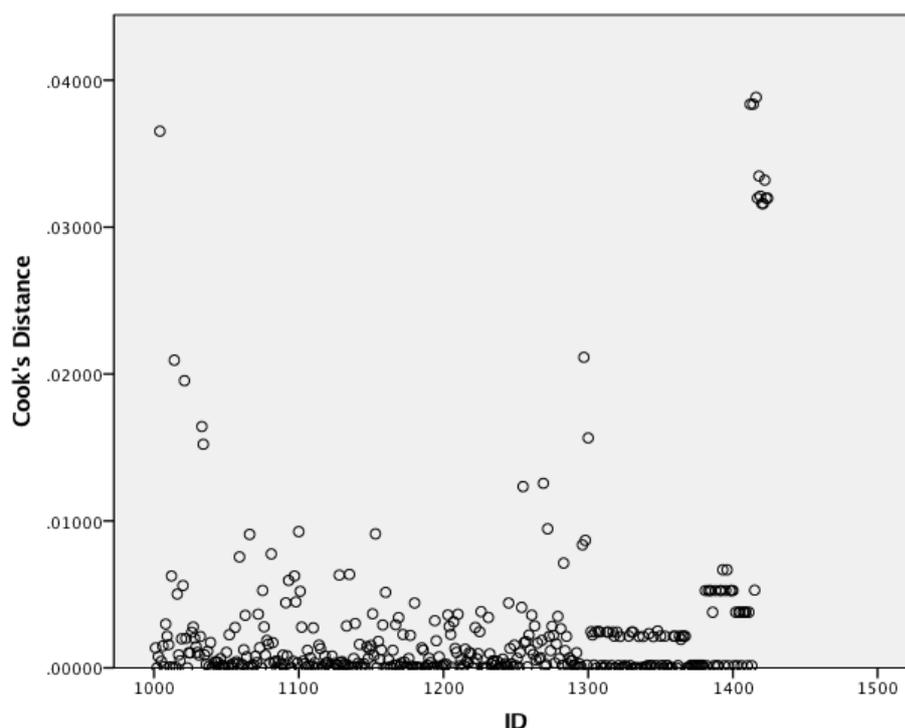
To further verify the regression findings, a scatter plot was also generated (Figure 4.6). The findings of the scatter plot were similar to the regression analysis (ibm.com, 2018).

4.7.2   Regression: Durbin-Watson Test

The Durbin Watson is a test that measures collinearity based on residuals from regression analysis. Autocorrelation studies the correlation between variables based on related objects. Autocorrelation can occur mainly due to dependencies within the data. There are positive and negative autocorrelation.

The Durbin Watson test is a commonly used test for studying the autocorrelation. If there is pure autocorrelation, then the researcher needs to transform it to an original model that is free from pure autocorrelation (statisticssolutions.com, 2018). The Durbin Watson values are

between 0 and 4, where the value of 2 indicates that there is no autocorrelation. Values between 0 and 2 indicate positive autocorrelation which is common in time series data. Values that are between 2 and 4 have negative autocorrelation, which is less common in time series data. Based on a rule of thumb, values that range between 1.5 and 2.5 are relatively normal. Values that are under 1 or more than 3 are definite cause for concern (statisticssolutions.com, 2018). The results are provided in Table 4.13.

Table 4.13: Model Summary: Durbin-Watson

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	**Durbin-Watson**
1	.667[a]	.445	.437	.45682	**1.374**

a. Predictors: (Constant), RS, OC, OS, TR, PB, SI
b. Dependent Variable: KSB

The Durbin-Watson value of 1.374 indicates positive autocorrelation (which is within the acceptable range), and therefore indicates that there is no need for the concern of collinearity for the model. But as stated above, the Durbin-Watson test is more suited for time series data with successive intervals and indicator for collinearity. However, it is not particularly suited for this research.

4.7.3   Regression 1: Individual Cognition (PB & OC) to KSB

The first regression studies the significance of individual cognition (PB & OC) on KSB.

Table 4.14: Model Summary for Individual Cognition (PB & OC) to KSB

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.146[a]	.021	.017	4.47381

a. Predictors: (Constant), Perceived Benefits (PB); Organisational Commitment (OC)

Table 4.15: ANOVA for Individual Cognition (PB & OC) to KSB

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	183.327	2	91.664	4.580	.011[b]
	Residual	8406.280	420	20.015		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Perceived Benefits (PB); Organisational Commitment (OC)

Table 4.16: Coefficients for Individual Cognition (PB & OC) to KSB

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.126	1.544		14.335	.000
	PB	.053	.034	.076	1.568	.118
	OC	.178	.070	.122	2.531	.012

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.14 provides the model summary for individual cognition which has perceived benefits and organisational commitment as the two variables. The R^2 value is low (Table 4.15); however, the ANOVA significance (Table 4.16) indicates good model fit. The coefficient table shows that OC is significant (0.12) with a beta value of 0.122 indicating positive impact.

4.7.4 Regression 2: Interpersonal Interaction (SI & TR) to KSB

The second regression studies the significance of interpersonal interaction (social interaction and trust) on KSB.

Table 4.17: Model Summary Interpersonal Interaction (SI & TR) to KSB

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.622[a]	.387	.384	3.54010

a. Predictors: (Constant), Social Interaction (SI); Trust (TR)

Table 4.18: ANOVA Interpersonal Interaction (SI & TR) to KSB

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3326.046	2	1663.023	132.699	.000[b]
	Residual	5263.562	420	12.532		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Social Interaction (SI); Trust (TR)

Table 4.19: Coefficients Interpersonal Interaction (SI & TR) to KS

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.777	1.460		4.641	.000
	SI	.841	.056	.617	15.129	.000
	TR	.024	.062	.016	.386	.700

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

The R^2 value in the model summary (Table 4.17) indicates variance of 38.7% and ANOVA significance (Table 4.18) indicates good model fit. Table 4.19 provides the coefficient results and indicates that only social interaction (SI) is significant and has a strong positive beta on KSB. The results therefore indicate the role of social interaction as essential towards the success of KSB.

4.7.5 Regression 3: Organisational Context (OS & RS) to KSB

The third regression studies the significance of organisational context (organisational support and reward systems) on KSB.

Table 4.20: Model Summary for Organisational Context (OS & RS) to KSB

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.314ᵃ	.099	.094	4.29343

a. Predictors: (Constant), Organisational Support (OS); Reward Systems (RS)

Table 4.21: ANOVA for Organisational Context (OS & RS) to KSB

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	847.515	2	423.757	22.988	.000ᵇ
	Residual	7742.093	420	18.434		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Organisational Support (OS); Reward Systems (RS)

The R^2 (table 4.20) is low (9.9%); however, the ANOVA significance of 0.000 (Table 4.21) indicate good model fit. The coefficient results in Table 4.22 indicate that both organisational support (OS) and reward systems (RS) are significant to KSB. Between OS and RS, OS (beta=0.258) has a stronger impact on KSB compared to RS (beta-0.190).

Table 4.22: Coefficients for Organisational Context (OS & RS) to KSB

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.280	1.430		12.087	.000
	OS	.325	.058	.258	5.573	.000
	RS	.096	.023	.190	4.088	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

The results therefore indicate that the support that is provided in the organisation with regards to KSB will motivate employees in sharing their knowledge. However, the significance of RS indicates that the organisation needs to encourage practice of rewards.

4.7.6 Regression 4: All Independent Variables to KSB

In addition to studying the role of individual cognition (PB and OC), interpersonal interaction (SI and TR), and organisational context (OS and RS) on KSB, the fourth regression studies all of the six variables (PB, OC, SI, TR, OS, and RS) together to KSB.

Table 4.23: Model Summary for all Independent Variables to KSB

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.675[a]	.456	.448	3.35149

a. Predictors: (Constant), Perceived Benefits (PB); Organisational Commitment (OC); Social Interaction (SI); Trust (TR); Organisational Support (OS); Reward Systems (RS)

Table 4.24: ANOVA for all Independent Variables to KSB

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3916.884	6	652.814	58.118	.000[b]
	Residual	4672.723	416	11.233		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Perceived Benefits (PB); Organisational Commitment (OC); Social Interaction (SI); Trust (TR); Organisational Support (OS); Reward Systems (RS)

Table 4.23 provides the model summary and the R^2 indicates variance of 45.6% between the studied variables. The ANOVA significance in Table 4.24 provides a value of 0.000, indicating good model fit. Table 4.25 provides the coefficient results and indicates

significance of SI, OS and RS. Of these, the strongest impact is from SI with a beta value of 0.633, followed by OS with a beta value of 0.234.

Table 4.25: Coefficients for all Independent Variables to KSB

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.693	2.044		-.828	.408
	PB	.045	.029	.065	1.567	.118
	OC	.015	.054	.011	.286	.775
	SI	.864	.058	.633	14.941	.000
	TR	.105	.063	.069	1.666	.097
	OS	.294	.046	.234	6.340	.000
	RS	-.053	.022	-.104	-2.412	.016

a. Dependent Variable: Individual Knowledge -sharing Behaviour (KSB)

The results also show that when studied with all the independent variables, RS is significant but has a negative impact with a beta value of -0.104. The reward system has a negative beta, and this is because most of the responses on the 5-point scale were towards negative ranges. The results had indicated that the rewards were not practiced as a motivational factor to enhance knowledge-sharing behaviour. The hypotheses results are similar to the regression tests carried out above, except for reward system. When reward system was studied with organisational support, it had a positive significance, but with the beta, it was low. When studied with all the other independent variables, rewards system has a negative impact on knowledge sharing behaviour.

4.8   MEDIATION ANALYSIS

The conceptual framework observes information technology as the mediator between the independent and dependent variables. The mediation methods recommended by Baron and Kenny (1986) are the hierarchical regression analysis, which is used here.

The hierarchical regression analysis is the recommended method by Baron and Kenny (1986) to study the mediating effects. The hierarchical regression analysis has been used in several studies related to knowledge management and knowledge sharing. For example, Xang (2017) used the hierarchical regression analysis to study the moderating role of technology experience factors, knowledge-sharing factors and electronic word-of-mouth. Ali et al. (2016)

used the hierarchical regression analysis to study the mediating role of knowledge sharing behaviour and organisational justice and internal process perspective and learning and growth perspective. Another example on the use of hierarchical regression analysis is by Ouerdian et al. (2017) who studied the mediating role of human capital and learning climate and the independent variables and knowledge sharing.

All these authors have stated that the hierarchical regression analysis by Baron and Kenny (1986) is a commonly used statistical method to study the mediating effects. The mediating effect is studied through simple regression in three steps. The first step is to test the effect between the independent variable and the mediating variable. The second step is to test the effect between the independent variable and the dependent variable. The third step tests the effects of independent variable + mediating variable on the dependent variable. In addition to this, the effect of mediating variable on the dependent variable is also studied. When the effect of the independent variable on the dependent variable is less than step 4, partial mediation is observed. The argument by Baron and Kenny (1986) is that a "successful mediator is caused by the independent variable and causes the dependent variable" (Moon and Lee, 2014; p. 38).

4.8.1 IT mediation between PB and KSB

The first mediation regression studies the mediating role of IT between PB and KSB, through three regression analyses.

4.8.1.1 Regression: PB to IT

This regression studies the significance of PB to IT.

Table 4.26: Model Summary for PB to KSB with IT as mediator (Step 1: PB to IT)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.084[a]	.007	.005	5.51031

a. Predictors: (Constant), Perceived Benefits (PB)

Table 4.27: ANOVA for PB to KSB with IT as mediator (Step 1: PB to IT)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	90.368	1	90.368	2.976	.085[b]
	Residual	12813.385	422	30.363		
	Total	12903.752	423			

a. Dependent Variable: Information Technology (IT)
b. Predictors: (Constant), Perceived Benefits (PB)

Table 4.28: Coefficients for PB to KSB with IT as mediator (Step 1: PB to IT)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.887	.741		36.297	.000
	PB	-.071	.041	-.084	-1.725	.085

a. Dependent Variable: Information Technology (IT)

Table 4.26 is the model summary that indicates very low variance. Table 4.27 indicates p-value (significance) higher than 0.05 (95% confidence level); therefore, the model is not significant.

4.8.1.2 Regression: IT to KSB

This regression studies the significance of IT to KSB.

Table 4.29: Model Summary for PB to KSB with IT as mediator (Step 2: IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321[a]	.103	.101	4.27791

a. Predictors: (Constant), Information Technology (IT)

Table 4.30: ANOVA for PB to KSB with IT as mediator (Step 2: IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	885.083	1	885.083	48.364	.000[b]
	Residual	7704.524	421	18.301		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Information Technology (IT)

Table 4.31: Coefficients for PB to KSB with IT as mediator (Step 2: IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.925	.990		20.131	.000
	IT	.262	.038	.321	6.954	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.29 is the model summary that indicates R^2 variance of 10.3% and Table 4.30 indicates that the model is significant. Table 4.31 provides the coefficient and indicates that IT is significant to KSB with a beta value of 0.321.

4.8.1.3 Regression: PB + IT to KSB

This regression studies the significance of PB and IT to KSB.

Table 4.32: Model Summary for PB to KSB with IT as mediator (Step 3: PB + IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.338ª	.115	.110	4.25548

a. Predictors: (Constant), Perceived Benefits (PB); Information Technology (IT)

Table 4.33: ANOVA for PB to KSB with IT as mediator (Step 3: PB + IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	983.777	2	491.889	27.162	.000ᵇ
	Residual	7605.830	420	18.109		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Perceived Benefits (PB); Information Technology (IT)

Table 4.34: Coefficients for PB to KSB with IT as mediator (Step 3: PB + IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.487	1.161		15.917	.000
	PB	.075	.032	.108	2.335	.020
	IT	.269	.038	.330	7.161	.000

a. Dependent Variable: Individual Knowledges-sharing Behaviour (KSB)

Table 4.32 is the model summary that indicates 11.5% R^2 variance between the studied variables. Table 4.33 provides strong significance, therefore indicating good model fit. Table 4.34 provides the coefficient where both PB and IT are significant to KSB. Higher impact is from IT with a beta value of 0.330, followed by a beta of 0.108 for PB.

Figure 4.7: IT mediation between PB and KSB
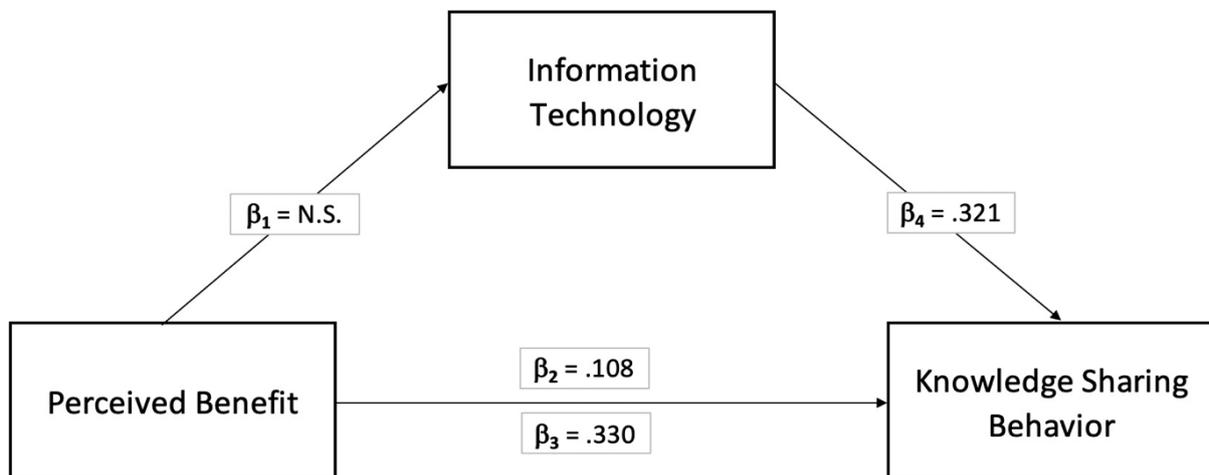
Table 4.35: Mediation result for PB to KSB with IT as mediator

Steps	Regression Equation	β_1	β_2	β_3	β_4
Step 1	PB → IT	N.S.			
Step 2	PB → KSB		.108		
Step 3	PB + IT → KSB			.330	.321

Three regression analyses were performed.

- Step 1 studies the significance of PB to IT but indicates no significance.
- Step 2 studies the significance of PB to KSB and indicates beta of 0.244.
- Step 3 studies the significance of PB + IT to KSB and indicates beta of 0.230.
- Step 4 is the significance between IT and KSB and indicates beta of 0.218.

From step 3 of the mediation test, β_3 was increased to 0.330, which indicates partial mediation. To demonstrate the complete mediation of IT, the effect of collaboration on β_3 should be 0.

4.8.2 IT mediation between OC and KSB

The second mediation regression studies the mediating role of IT between OC and KSB.

4.8.2.1 Regression: OC to IT

This regression studies the significance of OC to IT.

Table 4.36: Model Summary for OC to KSB with IT as mediator (Step 1: OC to IT)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.163ᵃ	.027	.024	5.45593

a. Predictors: (Constant), Organisational Commitment (OC)

Table 4.37: ANOVA for OC to KSB with IT as mediator (Step 1: OC to IT)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	342.018	1	342.018	11.490	.001ᵇ
	Residual	12561.735	422	29.767		
	Total	12903.752	423			

a. Dependent Variable: Information Technology (IT)
b. Predictors: (Constant), Organisational Commitment (OC)

Table 4.38: Coefficients for OC to KSB with IT as mediator (Step 1: OC to IT)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.742	1.776		11.114	.000
	OC	.290	.086	.163	3.390	.001

a. Dependent Variable: Information Technology (IT)

Table 4.36 provides the model summary but indicates weak R^2 variance between the studied variables. Table 4.37 provides the ANOVA significance of 0.001 indicating good model fit. Table 4.38 provides the coefficient results where OC is significant to IT with a beta value of 0.163.

4.8.2.2 Regression: IT to KSB

This regression studies the significance of IT to KSB.

Table 4.39: Model Summary for OC to KSB with IT as mediator (Step 2: IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321ᵃ	.103	.101	4.27791

a. Predictors: (Constant), Information Technology (IT)

Table 4.40: ANOVA for OC to KSB with IT as mediator (Step 2: IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	885.083	1	885.083	48.364	.000ᵇ
	Residual	7704.524	421	18.301		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Information Technology (IT)

Table 4.41: Coefficients for OC to KSB with IT as mediator (Step 2: IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.925	.990		20.131	.000
	IT	.262	.038	.321	6.954	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.39 provides the R^2 of 10.3% indicating the variance between the studied variables. Table 4.40 is the ANOVA significance indicating strong significance and good model fit. Table 4.41 is the coefficient results indicating that IT has significance to KSB with a beta value of 0.321.

4.8.2.3 Regression: OC + IT to KSB

This regression studies the significance of OC and IT to KSB.

Table 4.42: Model Summary for OC to KSB with IT as mediator (Step 3: OC + IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.329ᵃ	.108	.104	4.27004

a. Predictors: (Constant), Organisational Commitment (OC); Information Technology (IT)

Table 4.43: ANOVA for OC to KSB with IT as mediator (Step 3: OC + IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	931.631	2	465.816	25.548	.000[b]
	Residual	7657.976	420	18.233		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Organisational Commitment (OC); Information Technology (IT)

Table 4.44: Coefficients for OC to KSB with IT as mediator (Step 3: OC + IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	β		
1	(Constant)	17.954	1.581		11.359	.000
	OC	.109	.068	.075	1.598	.111
	IT	.252	.038	.309	6.614	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.42 provides the model summary indicating 10.8% R^2 variance between the studied variables. Table 4.43 is the ANOVA indicating strong significance and good model fit. Table 4.44 is the coefficient which indicates that only IT is significant with KSB with a beta value of 0.309.

Figure 4.8: IT mediation between OC and KSB

Figure 4.8: IT mediation between OC and KSB
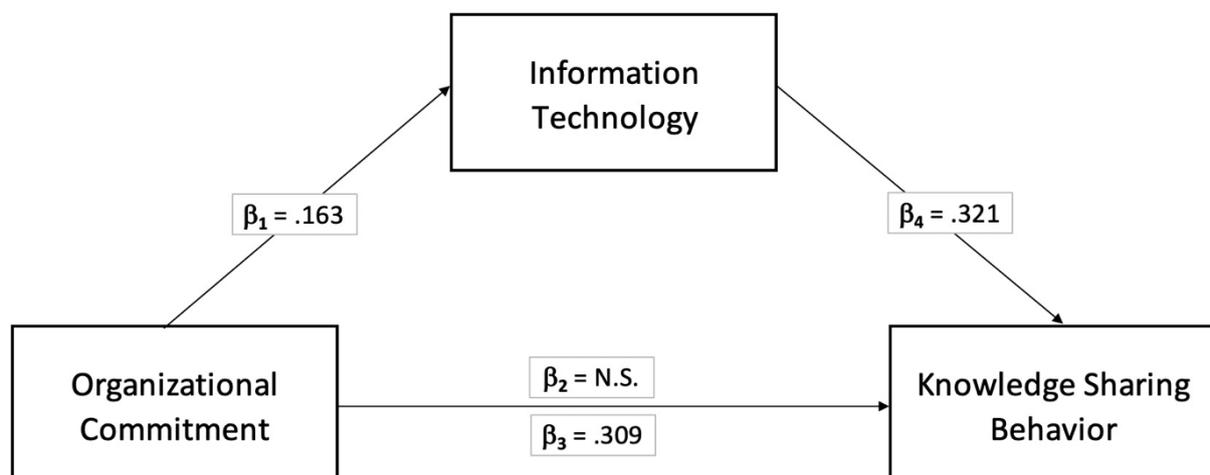
Table 4.45: Mediation result for OC to KSB with IT as mediator

Steps	Regression Equation	β_1	β_2	β_3	β_4
Step 1	OC → IT	.163			
Step 2	OC → KSB		N.S.		
Step 3	OC + IT → KSB			.309	.321

Three regression analyses were performed.

- Step 1 studies the significance of OC to IT but indicates beta of 0.163.

- Step 2 studies the significance of OC to KSB and indicates no significance.

- Step 3 studies the significance of OC + IT to KSB and indicates beta of 0.309.

- Step 4 is the significance between IT and KSB and indicates beta of 0.321.

From step 3 of the mediation test, β_3 was reduced to 0.309, but indicates no mediation as OC is not significant. To demonstrate the complete mediation of IT, the effect of collaboration on β_3 should be 0.

4.8.3   IT mediation between SI and KSB

The third mediation regression studies the mediating role of IT between SI and KSB.

4.8.3.1 Regression: SI to IT

This regression studies the significance of SI to IT.

Table 4.46: Model Summary for SI to KSB with IT as mediator (Step 1: SI to IT)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.706[a]	.498	.497	3.91685

a. Predictors: (Constant), Social Interaction (SI)

Table 4.47: ANOVA for SI to KSB with IT as mediator (Step 1: SI to IT)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6429.542	1	6429.542	419.088	.000[b]
	Residual	6474.210	422	15.342		
	Total	12903.752	423			

a. Dependent Variable: Information Technology (IT)
b. Predictors: (Constant), Social Interaction (SI)

Table 4.48: Coefficients for SI to KSB with IT as mediator (Step 1: SI to IT)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.513	1.343		-1.127	.260
	SI	1.181	.058	.706	20.472	.000

a. Dependent Variable: Information Technology (IT)

Table 4.46 provides the model summary with R^2 variance of 49.8% indicating good variance between the studied variables. Table 4.47 is the ANOVA results indicating strong significance and good model fit. Table 4.48 is the coefficient results indicating that SI is significant with IT with a beta value of 0.706.

4.8.3.2 Regression: IT to KSB

This regression studies the significance between IT to KSB.

Table 4.49: Model Summary for SI to KSB with IT as mediator (Step 2: IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321ᵃ	.103	.101	4.27791

a. Predictors: (Constant), Information Technology (IT)

Table 4.50: ANOVA for SI to KSB with IT as mediator (Step 2: IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	885.083	1	885.083	48.364	.000ᵇ
	Residual	7704.524	421	18.301		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Information Technology (IT)

Table 4.51: Coefficients for SI to KSB with IT as mediator (Step 2: IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.925	.990		20.131	.000
	IT	.262	.038	.321	6.954	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.49 provides the model summary with R^2 variance of 10.3% between the studied variables. Table 4.50 provides the ANOVA results with significance of 0.000 indicating good model fit. Table 4.51 provides the coefficient results that indicate IT is significant with KSB with a beta value of 0.321.

4.8.3.3 Regression: SI + IT to KSB

This regression studies the significance of SI and IT to KSB.

Table 4.52: Model Summary for SI to KSB with IT as mediator (Step 3: SI +IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.644ᵃ	.415	.412	3.45955

a. Predictors: (Constant), Social Interaction (SI); Information Technology (IT)

Table 4.53: ANOVA for SI to KSB with IT as mediator (Step 3: SI +IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3562.834	2	1781.417	148.842	.000ᵇ
	Residual	5026.774	420	11.969		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Social Interaction (SI); Information Technology (IT)

Table 4.54: Coefficients for SI to KSB with IT as mediator (Step 3: SI +IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.800	1.188		5.726	.000
	SI	1.076	.072	.788	14.958	.000
	IT	-.192	.043	-.235	-4.465	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.52 provides the model summary and the R^2 of 41.5% indicates good variance between the studied variables. Table 4.53 provides strong ANOVA significance indicating good model fit. Table 4.54 provides the coefficient results where both SI and IT are significant with KSB. SI has a positive impact on KSB whereas IT has negative impact on KSB, when studied with SI.

Figure 4.9: IT mediation between SI and KSB
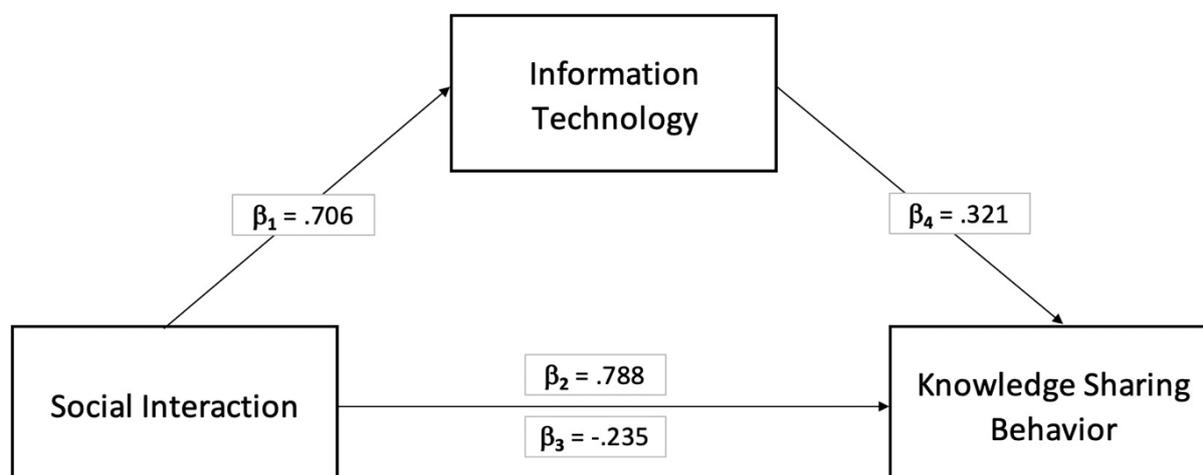
Table 4.55: Mediation results for SI to KSB with IT as mediator

Steps	Regression Equation	β_1	β_2	β_3	β_4
Step 1	SI → IT	.706			
Step 2	SI → KSB		.788		
Step 3	SI + IT → KSB			-.235	.321

Three regression analyses were performed.

- Step 1 studies the significance of SI to IT but indicates beta of 0.706.
- Step 2 studies the significance of SI to KSB and indicates beta of 0.788.
- Step 3 studies the significance of SI + It to KSB and indicates beta of -0.235.
- Step 4 is the significance between IT and KSB and indicates beta of 0.321.

From step 3 of the mediation test, β_3 was increased to -0.235, which indicates partial mediation. To demonstrate the complete mediation of IT, the effect of collaboration on β_3 should be 0.

4.8.4 IT mediation between TR and KSB

The fourth mediation regression studies the mediating role of IT between TR and KSB.

4.8.4.1 Regression: TR to IT

This regression studies the significance of TR to IT.

Table 4.56: Model Summary for TR to KSB with IT as mediator (Step 1: TR to IT)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.408ᵃ	.166	.164	5.04928

a. Predictors: (Constant), Trust (TR)

Table 4.57: ANOVA for TR to KSB with IT as mediator (Step 1: TR to IT)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2144.767	1	2144.767	84.124	.000ᵇ
	Residual	10758.986	422	25.495		
	Total	12903.752	423			

a. Dependent Variable: Information Technology (IT)
b. Predictors: (Constant), Trust (TR)

Table 4.58: Coefficients for TR to KSB with IT as mediator (Step 1: TR to IT)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.258	1.701		6.031	.000
	TR	.763	.083	.408	9.172	.000

a. Dependent Variable: Information Technology (IT)

Table 4.56 provides the model summary results with R^2 variance of 16.6% between the studied variables. Table 4.57 provides strong ANOVA significance indicating good model fit. Table 4.58 provides the coefficient results where TR is significant to IT with a beta value of 0.408.

4.8.4.2 Regression: IT to KSB

This regression studies the significance of IT to KSB.

Table 4.59: Model Summary for TR to KSB with IT as mediator (Step 2: IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321ᵃ	.103	.101	4.27791

a. Predictors: (Constant), Information Technology (IT)

Table 4.60: ANOVA for TR to KSB with IT as mediator (Step 2: IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	885.083	1	885.083	48.364	.000[b]
	Residual	7704.524	421	18.301		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Information Technology (IT)

Table 4.61: Coefficients for TR to KSB with IT as mediator (Step 2: IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.925	.990		20.131	.000
	IT	.262	.038	.321	6.954	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.59 provides the model summary which indicates R^2 variance of 10.3% between the studied variables. Table 4.60 provides the ANOVA significance, indicating good model fit. Table 4.61 indicates that IT is significant with KSB with a beta value of 0.321.

4.8.4.3 Regression: TR + IT to KSB

This regression studies the significance of both TR and IT to KSB.

Table 4.62: Model Summary for TR to KSB with IT as mediator (Step 3: TR + IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.339[a]	.115	.111	4.25436

a. Predictors: (Constant), Trust (TR); Information Technology (IT)

Table 4.63: ANOVA for TR to KSB with IT as mediator (Step 3: TR + IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	987.790	2	493.895	27.288	.000[b]
	Residual	7601.818	420	18.100		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Trust (TR); Information Technology (IT)

Table 4.64: Coefficients for TR to KSB with IT as mediator (Step 3: TR + IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.249	1.494		11.548	.000
	TR	.183	.077	.120	2.382	.018
	IT	.222	.041	.272	5.413	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.62 provides the model summary where the R^2 of 11.5% indicates the variance between the studied variables. Table 4.63 provides the ANOVA significance of 0.000, indicating good model fit. Table 4.64 provides the coefficient results where both TR and IT are significant with KSB. Stronger impact between these two are observed with IT with a beta value of 0.272, followed by TR with a beta value of 0.120.

Figure 4.10: IT mediation between TR and KSB
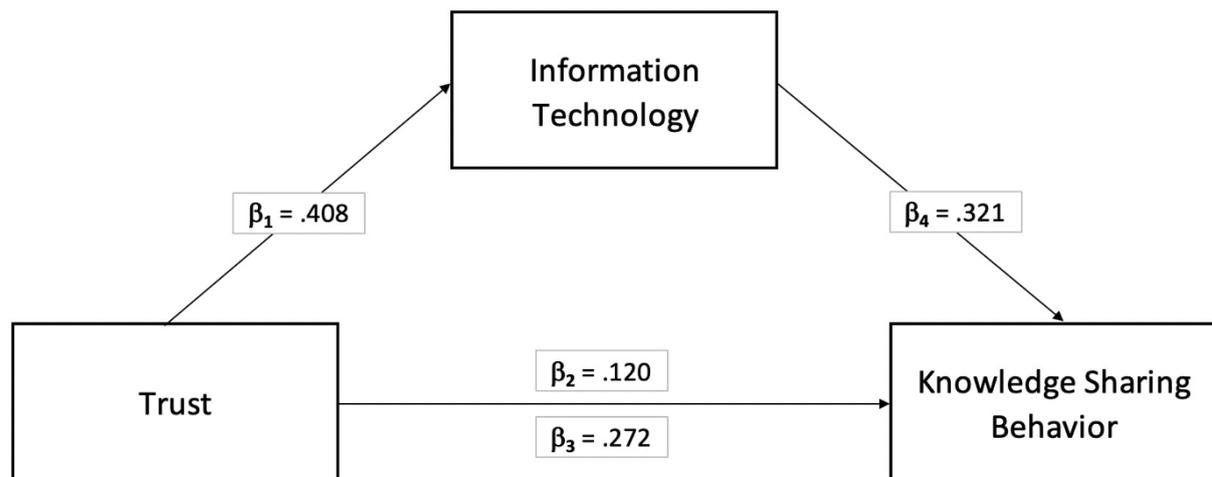
Table 4.65: Mediation results for TR to KSB with IT as mediator

Steps	Regression Equation	β_1	β_2	β_3	β_4
Step 1	TR → IT	.408			
Step 2	TR → KSB		.120		
Step 3	TR + IT → KSB			.272	.321

Three regression analyses was performed.

- Step 1 studies the significance of TR to IT but indicates beta of 0.408.

- Step 2 studies the significance of TR to KSB and indicates beta of 0.120.
- Step 3 studies the significance of TR + IT to KSB and indicates beta of 0.272.
- Step 4 is the significance between IT and KSB and indicates beta of 0.321.

From step 3 of the mediation test, β_3 was increased to 0.272, which indicates partial mediation. To demonstrate the complete mediation of IT, the effect of collaboration on β_3 should be 0.

4.8.5 IT mediation between OS and KSB

The fifth regression studies the mediating role of IT between OS and KSB.

4.8.5.1 Regression: OS to IT

This regression studies the significance of OS to IT.

Table 4.66: Model Summary for OS to KSB with IT as mediator (Step 1: OS to IT)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.168[a]	.028	.026	5.45136

a. Predictors: (Constant), Organizational Support (OS)

Table 4.67: ANOVA for OS to KSB with IT as mediator (Step 1: OS to IT)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	363.049	1	363.049	12.217	.001[b]
	Residual	12540.703	422	29.717		
	Total	12903.752	423			

a. Dependent Variable: Information Technology (IT)
b. Predictors: (Constant), Organizational Support (OS)

Table 4.68: Coefficients for OS to KSB with IT as mediator (Step 1: OS to IT)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	31.384	1.649		19.035	.000
	OS	-.258	.074	-.168	-3.495	.001

a. Dependent Variable: Information Technology (IT)

Table 4.66 provides the model summary where the R^2 variance is low (2.8%). However, the ANOVA significance in table 4.67, indicates good model fit. Table 4.68 provides the coefficient results indicating that OS has negative impact on IT with a beta value of -0.168.

4.8.5.2 Regression: IT to KSB

This regression studies the significance of IT to KSB.

Table 4.69: Model Summary for OS to KSB with IT as mediator (Step 2: IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321ᵃ	.103	.101	4.27791

a. Predictors: (Constant), Information Technology (IT)

Table 4.70: ANOVA for OS to KSB with IT as mediator (Step 2: IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	885.083	1	885.083	48.364	.000ᵇ
	Residual	7704.524	421	18.301		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Information Technology (IT)

Table 4.71: Coefficients for OS to KSB with IT as mediator (Step 2: IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.925	.990		20.131	.000
	IT	.262	.038	.321	6.954	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.69 provides the R^2 variance of 10.3% between the studied variables. Table 4.70 shows strong ANOVA significance, indicating good model fit. Table 4.71 shows that IT is significant with KSB with a beta value of 0.321.

4.8.5.3 Regression: OS + IT to KSB

This regression studies the significance of OS and IT to KSB.

Table 4.72: Model Summary for OS to KSB with IT as mediator (Step 3: OS + IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.445ᵃ	.198	.194	4.04915

a. Predictors: (Constant), Organisational Support (OS); Information Technology (IT)

Table 4.73: ANOVA for OS to KSB with IT as mediator (Step 3: OS + IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1703.453	2	851.726	51.948	.000ᵇ
	Residual	6886.155	420	16.396		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Organizational Support (OS); Information Technology (IT)

Table 4.74: Coefficients for OS to KSB with IT as mediator (Step 3: OS + IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.160	1.670		6.085	.000
	OS	.393	.056	.313	7.065	.000
	IT	.305	.036	.373	8.426	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.72 provides the model summary that indicates R^2 variance of 19.8% between the studied variables. Table 4.73 provides the ANOVA significance of 0.000 indicating good model fit. Table 4.74 provides the coefficient results indicating that both OS and IT are significant with KSB. Stronger impact is from IT with a beta value of 0.373, compared to OS with a beta value of 0.313.

Figure 4.11: IT mediation between OS and KSB
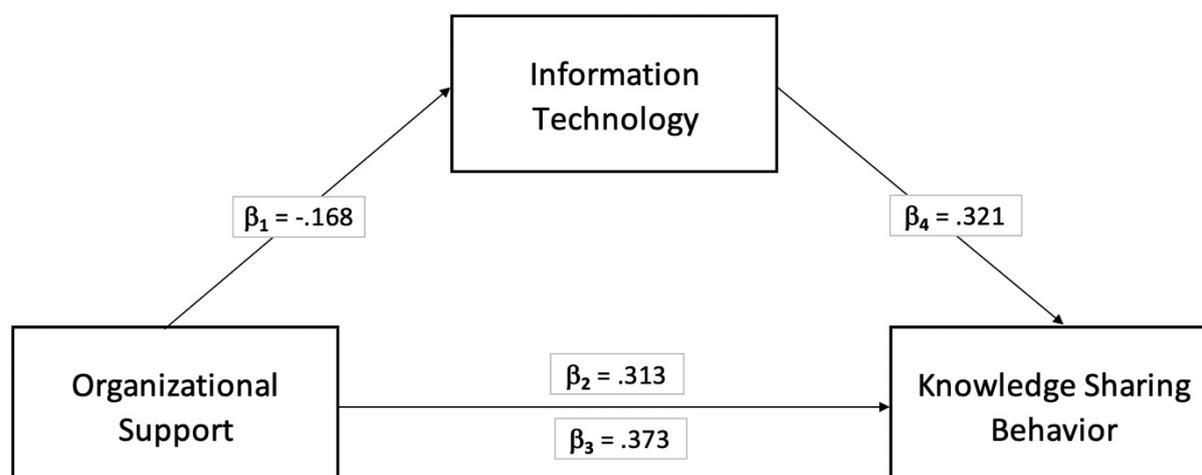
Table 4.75: Mediation results for OS to KSB with IT as mediator

Steps	Regression Equation	β_1	β_2	β_3	β_4
Step 1	OS → IT	-.168			
Step 2	OS → KSB		.313		
Step 3	OS + IT → KSB			.373	.321

Three regression analyses were performed.

- Step 1 studies the significance of OS to IT but indicates beta of -0.168.
- Step 2 studies the significance of OS to KSB and indicates beta of 0.313.
- Step 3 studies the significance of OS + IT to KSB and indicates beta of 0.373.
- Step 4 is the significance between IT and KSB and indicates beta of 0.321.

From step 3 of the mediation test, β_3 was increased to 0.373, which indicates partial mediation. To demonstrate the complete mediation of IT, the effect of collaboration on β_3 should be 0.

4.8.6 IT mediation between RS and KSB

The sixth mediation regression studies the mediating role of IT between RS and KSB.

4.8.6.1 Regression: RS to IT

This regression studies the significance of RS to IT.

Table 4.76: Model Summary for RS to KSB with IT as mediator (Step 1: RS to IT)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.487ª	.237	.235	4.83046

a. Predictors: (Constant), Reward Systems (RS)

Table 4.77: ANOVA for RS to KSB with IT as mediator (Step 1: RS to IT)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3057.078	1	3057.078	131.018	.000ᵇ
	Residual	9846.674	422	23.333		
	Total	12903.752	423			

a. Dependent Variable: Information Technology (IT)
b. Predictors: (Constant), Reward Systems (RS)

Table 4.78: Coefficients for RS to KSB with IT as mediator (Step 1: RS to IT)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.704	.654		28.585	.000
	RS	.301	.026	.487	11.446	.000

a. Dependent Variable: Information Technology (IT)

Table 4.76 provides the R^2 variance of 23.7% between the studied variables. Table 4.77 provides strong ANOVA significance, indicating good model fit. Table 4.78 provides the coefficient results, indicating that RS is significant with IT with a beta value of 0.487.

4.8.6.2 Regression: IT to KSB

This regression studies the significance of IT to KSB.

Table 4.79: Model Summary for RS to KSB with IT as mediator (Step 2: IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321ª	.103	.101	4.27791

a. Predictors: (Constant), Information Technology (IT)

Table 4.80: ANOVA for RS to KSB with IT as mediator (Step 2: IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	885.083	1	885.083	48.364	.000b
	Residual	7704.524	421	18.301		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Information Technology (IT)

Table 4.81: Coefficients for RS to KSB with IT as mediator (Step 2: IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.925	.990		20.131	.000
	IT	.262	.038	.321	6.954	.000

a. Dependent Variable: Individual Knowledge-haring Behaviour (KSB)

Table 4.79 is the model summary that indicates R^2 variance of 10.3% between the studied variables. Table 4.80 provides the ANOVA significance of 0.000 indicating good model fit. Table 4.81 provides the coefficient results indicating IT is significant with KSB with a beta value of 0.321.

4.8.6.3 Regression: RS + IT to KSB

This regression studies the significance of RS and IT to KSB.

Table 4.82: Model Summary for RS to KSB with IT as mediator (Step 3: RS + IT to KSB)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.322a	.104	.099	4.28138

a. Predictors: (Constant), Reward Systems (RS); Information Technology (IT)

Table 4.83: ANOVA for RS to KSB with IT as mediator (Step 3: RS + IT to KSB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	890.919	2	445.459	24.302	.000b
	Residual	7698.689	420	18.330		
	Total	8589.608	422			

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)
b. Predictors: (Constant), Reward Systems (RS); Information Technology (IT)

Table 4.84: Coefficients for RS to KSB with IT as mediator (Step 3: RS + IT to KSB)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.880	.994		20.002	.000
	RS	.015	.027	.030	.564	.573
	IT	.250	.043	.306	5.797	.000

a. Dependent Variable: Individual Knowledge-sharing Behaviour (KSB)

Table 4.82 is the model summary that indicates R^2 variance of 10.4% between the studied variables. Table 4.83 provides strong ANOVA significance indicating good model fit. Table 4.84 provides the coefficient results indicating that only IT is significant with KSB with a beta value of 0.306.

Figure 4.12: IT mediation between RS and KSB
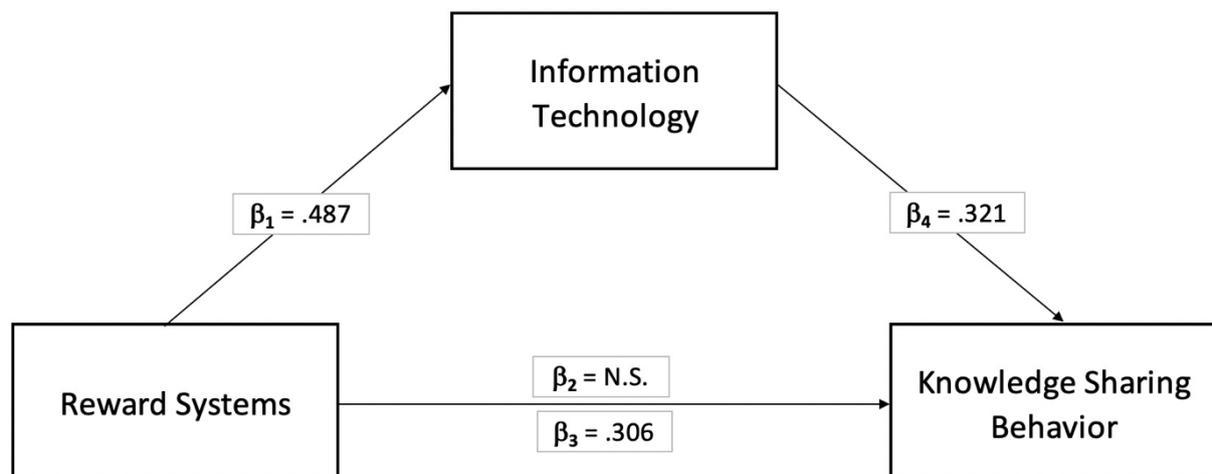
Table 4.85: Mediation results for RS to KSB with IT as mediator

Steps	Regression Equation	β_1	β_2	β_3	β_4
Step 1	RS → IT	.487			
Step 2	RS → KSB		N.S.		
Step 3	RS + IT → KSB			.306	.321

The sixth mediation regression studies the mediating role of IT between RS and KSB. Three regression analyses were performed.

- Step 1 studies the significance of RS to IT but indicates beta of 0.487.

- Step 2 studies the significance of RS to KSB and indicates no significance.
- Step 3 studies the significance of RS + It to KSB and indicates beta of 0.306.
- Step 4 is the significance between IT and KSB and indicates beta of 0.321.

From step 3 of the mediation test, β_3 was reduced to 0.306, which indicates partial mediation. To demonstrate the complete mediation of IT, the effect of collaboration on β_3 should be 0.

4.9   DEMOGRAPHICS TEST

The tests here are carried out between the four demographic variables and the studied variables. The first test is the t-test, and this is limited to demographic variables with two groups, such as gender. The second criterion is the one-way ANOVA, and it is used to test demographics with more than two groups such as age, education and work experience.

4.9.1   T-Test

As stated above, the t-test is carried to understand the significance of gender on the studied variables.

The t-test for gender (Table IV-1; Appendix IV) indicates significance with perceived behaviour, organisational commitment, social interaction, reward system and knowledge sharing behaviour. However, the results in this table do not indicate if male or female plays a stronger impact. To understand this, we look at the group statistic results shown in Table IV-2 (Appendix IV).

Table IV-2 (Appendix IV) provides the group statistics for gender. Based on the results, for perceived behaviour and organisational commitment, a higher mean is observed with females. The earlier demographic information indicated that there were only 17% females compared to 83% males, but their impact on perceived behaviour and organisational commitment is stronger than that of their male counterparts. For social interaction, reward system and knowledge-sharing behaviour, the higher mean is from men.

4.9.2   One-way ANOVA

The one-way ANOVA is carried out for demographic variables with more than two groups such as age, the level of education and work understanding. The results are discussed here.

Based on the results in Table IV-3 (Appendix IV) for age, the significance is observed with all the studied variables. To understand which of the age groups is significant for each of the studied variables, we generate the posthoc Bonferroni test, and since it is a large table, it is provided in Table IV-4 (Appendix IV). Based on the Bonferroni results, significance was observed in all age groups for social interaction, trust, organisational support, reward system, IT, and knowledge-sharing behaviour. For perceived benefits, significance was observed with several age groups such as 18-25 years, 36-45 years, 46-55 years, and 56 years and above. Only the age group of 26-35 years did not show significance. Therefore, we can state that people of nearly all the ages contributed an important position in perceived benefits from the knowledge-sharing actions. For organisational commitment, significance was observed with age groups 26-35 years, 46-55 years and 56 years and above, indicating that people make significant contribution on organisational commitment through knowledge-sharing behaviour.

Table IV-5 (Appendix IV) provides the ANOVA results for education. Based on the results, significance is observed with perceived benefits, social interaction, trust, organisation support, reward systems, and information technology. To understand which of the education groups is important, we look at the posthoc Bonferroni test. Since the table is too large to be displayed here, it is provided in Table IV-6 (Appendix IV). Based on the posthoc Bonferroni test, for perceived benefits and trust, significance was observed with less of high school, those who had high school degree, Undergraduate Degree and Post Graduate Degree. No significance was found with the group "College." For reward system and IT, significance was determined with high school, Undergraduate Degree, and Post Graduate Degree. For social interaction, significance was found with high school, Undergraduate Degree, and Post Graduate Degree. There was no significance with Education and organisational commitment. Knowledge-sharing behaviour between groups is not statistically significant.

Table IV-7 (Appendix IV) provides the ANOVA results for Work Experience. Based on the results, the significance is observed with perceived behaviour, social interaction, trust, organisational support, reward systems, IT, and knowledge sharing behaviour. To understand which of the work experience groups are significant, we extract the posthoc Bonferroni test. The result (Table IV-8) is provided in Appendix IV. Based on the posthoc Bonferroni test, perceived behaviour, social interaction, reward system, and IT has significance with all work

experience groups. For trust, the significance is observed with 5-10 years, and 16-20 years. For organisational support, the significance is found with 5-10 years, and 11-15 years.

4.10   SUMMARY

In this chapter, the data were analysed using SPSS and this has been discussed with various types of statistical analyses. The findings showed that several factors affect the efficient use of knowledge-sharing practices within the investment firm in Kuwait. The response has been received from workforces who have stayed with the company for a longer period. Therefore, we were able to gather information based on their experience and exposure in the enterprise. Based on t-test and one-way ANOVA, we were able to establish the significance of the demographic variables on the studied variables.

In this chapter, the focus has been on explaining the findings. The next section discusses the results based on providing the conclusion and recommendations for this study. The research questions as indicated in the methodology section are answered in the next chapter. The recommendations will be for the managers of the investment firms to improve the usage of KS. However, provisions for future studies have been made in the next chapter.

CHAPTER 5: INTERVIEW FINDINGS

5.1   INTRODUCTION

In this chapter, the interviews that were carried out with the managers in the investment company is discussed. A total of 11 managers were contacted and only seven of provided time to meet and discuss on the topic of knowledge sharing. The initial section provides an overview of the participants based on a few demographics that were collected. The interviewees were assured confidentiality and anonymity; therefore, no sensitive data that would disclose their identity was collected.

The discussion begins with demographics and then moves to the specific questions that were asked. The interviews were semi-structured and therefore used questions to guide the interviews. The questions were based on the quantitative data findings. The purpose of the interview was to gather views from the managers about knowledge-sharing practices in the organisation and verify the answers that were provided by the employees. In doing so, a cumulative perspective of employees and managers regarding knowledge sharing is understood.

Based on the quantitative findings, the interview questions were classified into seven categories. The data collected were then analysed to develop codes and themes. These are discussed in the data analysis section (see section 5.3). The discussion in this chapter begins with an overview of the interview participant demographic such as the department that they were heading; duration in the current job position; duration with the organisation; and the number of employees that they have reporting to them. This is followed by the data analysis section which is classified based on the themes. The coding led to developing 10 themes and the cumulative responses are discussed along with a few individual quotes.

5.2   PARTICIPANTS

There were four basic demographic details that were collected. The initial demographics question focused on the current job position of the participant. Since the job positions would reveal the participant's identity, this has been changed to the current department that they are working in. All the interviewees were managers with responsibilities and decision-making

authorities in their respective departments. The managers who were interviewed were from the following departments:

1. Information Technology (IT)
2. Human Resources (HR) & Administration
3. Training & Development
4. Risk Management & Compliance Division
5. Financial Services
6. Real Estate and Investment
7. Corporate Finance and Investment

In this section, three of the demographics questions that pertain to the respondents are answered. Table 5.1 provides the results.

Table 5.1: Duration in Current Job Position

Department	Duration in Current Job Position	Duration with the Organisation	Number of Employees
Information Technology (IT)	9	12	11
Human Resources (HR) & Administration	10	11	7
Training & Development	6	6	3
Risk Management & Compliance Division	8	12	23
Financial Services	7	12	14
Real Estate and Investment	4	4	36
Corporate Finance and Investment	7	11	23

Most of the participants have been with the organisation for several years and they have been promoted to the current positions. A few of them had joined as managers in the past few years. As shown in Table 5.1 most of them have been in the same job position for several years. The managers in the real estate and investment and training and departments are relatively new to the team. Nevertheless, all of them have good knowledge of their team and the organisation. The last column provides the total number of employees in the team under each of the managers.

The company has been in operation in Kuwait for the last 16 years and is also listed in the Kuwait stock exchange. The total current assets of the company are over US$ 155 million. Most of the senior managers have been with the company for several years. This can be understood from the following information. Based on the limited demographic information and company overview, a general idea of the participants and the organisation is gained.

5.3   DATA ANALYSIS

The coding was first done based on each of the categories in which the semi-structured interview questions were designed. The questionnaire categories were (1) KS practices; (2) top management; (3) organisation-wide KS practice; (4) managerial support in KS; (5) training and development practices used to promote KS; (6) reward system; and (7) information technology.

Once the coding was done, the themes for each of these seven categories were generated. The frequency for each of the themes and the number of times (frequency) that the word was indicated by the various participants are also recorded. These are provided in separate tables under each of the different categories.

The coding is based on word frequency queries, which refers to checking the most frequent times that the words occur. This then provides identification of key themes. After the coding was done for each of the seven categories, coding queries were carried out to study certain concepts. This aim here is to understand if there are links between various codes. For example, codes such as "improve KS practices" and "need to change KS practices" can be combined as they have the same meaning. Based on the coding queries, 131 codes were identified. These were all studied to understand each of the codes that had the frequency and to generate themes. This led to finding out various codes that conveyed similar meanings and, therefore, they were merged. Once this was done, they were classified into themes. A total of 10 themes were generated based on the coding. These are:

(1)   KS Inception
(2)   KS Current Practices
(3)   KS Platform (current and requirements)
(4)   Leadership Needs
(5)   Importance of Social Interaction
(6)   KS Barriers

(7)   KS Training Needs

(8)   KS Motivation

(9)   KS Outcomes

(10)   Recommendations

The discussion in this chapter is based on these themes. The discussion in the following section begins with these themes. Each of the ensuing sections first provides a table that indicates the codes and the number of times (frequency) that the theme was stated by the participants.

5.3.1   KS Inception

This section discusses the KS inception factors, which first begins with the codes, followed by the discussions.

Table 5.2: KS Inception

Coding	Frequency
Strong emphasis in the initial stages	7
KS stress began after 2008 financial crisis	5
KS evolved from situation	3

From the responses received from these participants, the organisation currently has a process in place for KS. Although the process differs based on the manager's choice of operation, employees in their department share knowledge with each other. Based on the responses received, the KS seems to be limited to within each department or the team that the manager is responsible for. The quantitative findings showed that in addition to the respondents, their colleagues and team members also shared knowledge with each other.

KS started with certain initiatives and incidents in the organisation. The information shared by the participants indicated that the KS initiative began with top management interest. Their objective was to gain a competitive advantage in the financial investment market. The competition is strong, and the investment firms provide nearly the same products and services. Within the financial market the primary classification is between financial firms that provide Islamic-based banking (based on Islamic *Sharia'a* rules and regulations) and

conventional financial services. The customer's choice of financial firm is therefore primarily between these two financial types, followed by the financial service that they require. Although Islamic financial firms are comparatively fewer than conventional financial firms, according to the Central Bank of Kuwait (CBK), the gap between conventional and Islamic banks is reducing (CBK, 2016). Their comparison is limited to the banks and not particularly to the investment sector, but this provides an indication on the trend that is developing in Kuwait with regards to customer selection of financial firms. In brief, the competition is strong in the financial markets in Kuwait, which strengthens the information provided by the participant regarding the inception of KS in the organisation.

In addition to this, the 2008 financial crisis had a strong jolt on the financial sector. Investment firms that had a stake in several local and international markets faced challenges. This was also the case with investment firms in Kuwait. This was also an opportunity for top management and managers in the organisation to ensure their presence in the market. The objective was to ensure that the customer investments are secured, and they are assured of their relationship with the firm. This led to taking more interest in establishing a relationship with the customer by understanding their needs and providing services that meet their expectations. To achieve this, the organisation required a strong team environment that shared information across all department and services to provide seamless and transparent services to the customer. The need to share information was therefore stressed. According to the participants, after the initial stages of creating the KS initiative by top management, it was practiced for a few months and then it slowed down. Information sharing soon became limited to the department or – to be more specific – between the manager and his/her team. For a short period during and after the financial crisis, the KS practices had increased. Market studies were being conducted to understand the impact of financial crisis on the firm and how to overcome it. According to the financial services manager (participant) this was a good example of strengthening KS practices in the organisation. This situation was also indicated by four other participants. The issue is with lack of motivation in the organisation. The current scenario is that KS is considered important when there is a situation as indicated by three of the participants.

5.3.2 KS Current Practices

The previous section provides information on how KS concept was initiated in the firm. These findings indicate that strong emphasis was there in the beginning by the top

management and other managers, but this interest slowed down. KS began more active in the firm during the 2008 financial crisis, indicating situational needs for KS practices. The focus of this section is to understand the current situation of KS in the firm. Table 5.3 provides an overview.

It was understood from the participants that the KS practices have been encouraged by the top management. The practice of knowledge sharing in each of the departments has been based on direct instructions from the top management to each of the department heads. Three of the managers also added that, during the initial stages, there was strong emphasis and follow-up by the top management on the practices of knowledge sharing in the organisation. One of the managers added:

> *"The need for knowledge sharing was felt important by the top management when the company started facing problems during the financial crisis in 2008. They wanted to find out the best ways to stay strong in the market and each of us (the department heads) were asked the best ways to find to stay strong in the Kuwait market and assure their customers' confidence in their investments. We suggested that we are strong and one of the oldest investment firms in Kuwait and we need to work as a strong team to get out of this financial crisis. The practice of knowledge sharing came into effect after a couple of years, but the need and importance of sharing information with everyone and pooling our knowledge was felt important during this time."*

The findings showed the employees in the organisation know that knowledge is important and that they like to share knowledge. From the quantitative findings, it was also understood that employees do not aim to prove their competence to their supervisor or to be respected by the co-workers or for promotions, through KS practices. Employees shared knowledge with the intention of improving performance of the organisation.

The participants were also asked to explain more about the knowledge-sharing practices in their organisation. The participants explained that there is a knowledge-sharing platform, based on which everyone can share knowledge with each other. The person, who posts the query or issue, can select which departments need to respond. Based on this email alerts are sent by the system to everyone concerned in that department. The receiver then has the option to respond to the query by providing the expert advice. If this query has been answered

before, then they can search from the knowledge archive and send the link, or they can provide new information as the answer to the query.

It was understood from this response that the need for knowledge sharing came from the situation that was faced by the organisation and gradually has been understood as a necessity and therefore being practiced. But the focus on KS practices across the entire organisation is limited and is currently seems to be limited to each department and the emphasis of the department heads – the managers that are being interviewed.

Table 5.3: KS Current Practices

Coding	Frequency
KS limited to queries	8
KS practices in the organisation is limited	8
Discuss with team and provide response	5
KS is limited to within team	5
KS limited to current problems	5

The information provided in Table 5.3 confirms the earlier discussion regarding the use of KS being limited to situations and needs. The highest frequency on the use of KS is limited to queries. This also confirms the information that the current KS practices in the organization is limited. These were discussed by nearly all the participants and in some cases repeated several times by one or more individual. The participants also stated that as department heads, they currently practice KS, but it is limited to their team: and this is one of the stumbling blocks. As stated by the risk management and compliance division manager, there is awareness by the top management and the managers on the importance of KS, but no one wants to take the upper hand in promoting and emphasising the practice of KS. Therefore, there is limited use on KS practices in the organisation.

According to some of the managers, they stated that emphasis on knowledge-sharing practices needs to be strengthened by the top management. The management practice on knowledge sharing from the above discussion has been understood to be limited to the departments. The knowledge sharing between departments must be strengthened. Information regarding the daily processes is shared, but the knowledge sharing as a process is limited. The

organisation intranet portal needs to be utilised more strongly. One of the managers emphasised that:

> "*Knowledge sharing is an organisation-wide concept. It must be part of the organisation vision and mission and business practices. This can happen only with stronger emphasis and involvement of the top management. We are ready to practice knowledge sharing, but everyone must participate. It cannot happen with the interest of one or two managers.*"

As per the respondents, the top management took the initiative with knowledge sharing a few years previously. This led to the development of an intranet portal for knowledge sharing. The responsibility of the department heads is to ensure that knowledge sharing is being practiced in their department. These are some of the steps that are in place for knowledge sharing. But as per the participants, more initiatives and encouragement are needed to ensure that knowledge sharing is practiced strongly in the organisation. It was also pointed out that there are no written policies and procedures for knowledge sharing in the organisation.

The management practice of knowledge sharing is limited to within their department and among their employees, but it was also understood from some of the participants that they meet multiple times a month to discuss various issues. The top management also requests solutions to various issues, and it is based on the outcome of the managerial meetings that the best solutions are suggested. This is one of the platforms where the managers share their knowledge to come up with the best solutions and provide the top management with their suggestions and recommendations. A great deal of sensitive information is shared during these meetings, but these are limited to the problems that currently persist. These are official meetings, which are recorded, and meeting minutes are taken. Everyone is prepared with their notes regarding their departments and performance and suggestions. According to one of the managers:

> "*We need a more relaxed environment where we can talk comfortably about work-related matters and find ways to improve organisation practices and performance. During such meetings even issues related to one of the employees should be discussed. For example, we have some very talented employees. These employees possess a great deal of knowledge of the industry and also the organisation. If such an employee leaves, then it would be very difficult to find a replacement. During such meetings we should be able to discuss matters and find ways of retaining such*

employees before even they decide to leave the organisation. As of now, such matters are considered only when the employee decides to leave, and the matter is urgent."

As indicated by four of the participants, the use of KS is situational as it is limited to addressing current problems. This needs to change. KS usage and practices needs to be improved. This leads to the next topic on the platform and environment that is required for KS practices to improve.

5.3.3   KS Platform (current and requirements)

This section discusses the environment required for KS to function effectively. This is based on the interview feedback, therefore, as the KS needs are based on the perception of the participants. Table 5.4 provides the coding results.

Table 5.4: KS Platform (current and requirements)

Coding	Frequency
Tools for KS	17
Online KS platform	7
Intranet portal for KS	7
Group discussions	6
Based on problems	6
Linked to employee email	6
Information search	6
Preventive solutions	5
Blogs	5
Learn from customers	4
Repository	3
Archiving	3
Expert answers	3

The need for KS tools was emphasised by several participants. As shown in Table 5.4, the need for tools to share knowledge has been voiced 17 times. This research studied the role of information technology (IT) on KS. The firm also currently utilises blogs as the platform to share knowledge. Rather than just specifically for the KS platform, the need for an online platform, such as the use of Intranet, was indicated to be important. It is based on such platforms that employees in the firm are able carry out discussions. But as stated earlier, it is

based on needs and situations. Therefore, the need for KS usage is based on the problems that drive group discussions.

The responses from the interviewees indicated that the organisation has an intranet portal for sharing of knowledge. The portal is adequate for employees to share their thoughts, ideas, and also post answers to questions that are put forward to all employees. The information shared on this portal is also linked to employees' official email addresses. Thus, the employees do not need to check the portal all the time for new information. While one of the employees posts a question, he/she is requested to select the department to which these questions are related and, based on this, the employees in those departments receive email notifications. Once they receive the notification, they can click on the link that is automatically generated and thereby post their comments and answers. According to one of the managers:

> *"Our knowledge-sharing platform is like a customised blogging site tailored to our requirements and connected to our internal emailing system. The system is efficient for our current needs, but the problem is encouraging employees to participate and share their knowledge. The system keeps track of the answers that are posted and, therefore, there is a repository of information shared. Employees can search this repository to find solutions to their query, before they post their questions online for others to answer. We find the knowledge-sharing portal to be effective to our current needs."*

The current setup of the blogs is to search for information or post pieces of information based on based on different criteria. For example, employees can address the query to a department; in which case, an email notification will be sent to the respective recipients. This avoids the need to check the blog for posts. Again, this is based on situation or need basis. Therefore, the blog KS platform is more of a platform to post and answer queries and search for information. The system maintains a database (repository) of queries and answers that enables employees to search the database before posting their queries. According to an IT manager, the archiving of information is very helpful as people do not have to waste time in waiting to get responses. He also added that, in several cases,

> *"People do not tend to search the archives before posting their responses. But others who know that that the query has been addressed before point to the hyperlink that*

contains the discussions and answers. This avoids repetition and also acts as a reference on the discussions and developments".

These are the advantages of using blogs as a platform for KS. The IT managers also indicated that when KS practices improve, the current platform will not be adequate. It serves the current need as the usage is low.

The need to share information with each other based on what has been learned from work and especially from the customers has been shared by several of the participants. There are actions that need to be taken by senior managers and this requires various managerial actions. These form the discussion in the next section.

5.3.4   Leadership Needs

This section discusses the various needs of the leaders in the firm with regards to KS and developing the employees in practicing KS.

Table 5.5: Leadership Needs

Coding	Frequency
Top management authorisation	8
Manager meetings to provide best solutions	7
Brainstorming	7
Managerial Training	6
Leadership capabilities	6
Take advise from managers	5
Building leadership skills	5
Managerial feedback	4
Monitor employee performance regularly	3
Effective follow-up from top management	3
Organisational culture	3
Formal and informal communication	3
Leadership development programmes	2
Top management encouragement in KS	2
HR department participation	2
Building leadership tools	1

Table 5.5 shows the various coding factors that relate to leadership needs. First, is top management authorisation. This refers to various activities in the firm. The focus during this discussion was mainly on two factors – KS and training. As stated in the beginning, KS initiative has been based on top management interest and initiatives. This refers to several aspects that require top management authorisation. Top management had played their role in initiating KS in the firm. The next step is for managers to strengthen KS practices. This is where there has been a barrier. Managers have indicated that their practice in KS is limited to need, and within their department. The effectiveness of KS is measured based on is adoption and usage by everyone in the organisation. This includes from the top management down to every employee. Everyone has knowledge and information that needs to be shared with others so that it can benefit the firm. This is how the firm can provide better customer services, bring out innovative products, and gain competitive advantage. In addition to this, the participants stated that they have to wait for top management authorisation and approval in various other needs. For example, training is important for every task that the employee is vested with. In all of this, the issue seems to be the delays and processes involved in getting top management authorisation.

The need to provide training and KS practices need to be moved from top management and to the departmental managers. Top management need to have frequent a periodical monitoring on the KS practices and what the managers have been able to achieve. It should be the responsibility of the managers to encourage their team to participate in KS along with other departments and employees. This would provide an environment for the firm to function as a single unit. According to the Training & Development head, the issue that the firm has is lack of coordination. According to the Corporate Finance and Investment manager, information sharing is delayed, and this delays the final outcome that impacts the customer. This has had an impact on the firm's performance. The need for managers to share their ideas and provide feedback to employee queries and tasks has been highlighted as an essential part of KS.

There were different opinions regarding the knowledge sharing in the organisation. One of the managers stated that knowledge sharing in his department is based on meetings that are helpful. These are similar to brainstorming meetings where everyone is asked to provide their opinion on a particular situation or problem that they are facing. But it was also stressed that these meetings are not limited to problems; they are conducted on a regular basis. The manager stated that:

"I like to be prepared and therefore, I take an interest that my employees are also prepared to handle any situations. The brainstorming/knowledge-sharing meetings that we have are to ensure that we have the best solution to existing situations or problems and also for us to be prepared… to have preventive solutions in place, before the problem occurs. I find these meetings to be highly productive and, therefore, we are able to stay ahead of our competitors and provide the best solutions to our customers."

Informal communication is an essential practice in addition to formal communication. It was explained that the way that managers interact with the employees and the way that they treat them has a positive impact on their work performance and practices. The managers stated that employees become more willing to listen to them and take care of responsibilities regarding their work, and also perform matters willingly. An issue raised by the participant is the lack of strong communication with the manager. Employees have limited interaction with the managers only for work-related matters, but they want to talk about other matters and take advice from them. This is not just on a personal basis, but also happens when the entire team is present. According to one of the managers who practices informal communication and open-door policy:

"It is important to understand you employees. You cannot relate to everyone in the same manner. We have different nationalities working with us and they come from different culture and background. We have Egyptians, Indians, Pakistanis, Filipinos, and others, in addition to Kuwaiti nationals. Each of them has different ways of working. If you need to get work done equally from all of them, it can happen only when you establish a personal relationship with them, with the aim of understanding them better. Once you have understood them and they have understood you and then they start to open up and are also willing to listen. Based on this we are able to build a strong relationship and understanding that leads to a better work environment."

Based on this response and responses received from others, it was understood that managers put in efforts to build better relationships with their employees and were thereby able to get better performances from them. They are also able to create an environment where employees share their knowledge and information with each other. They stated that such informal communication leads to stronger relationships and thereby a better knowledge-sharing environment.

The managers feel that lack of communication is one of the main stumbling blocks that they need to overcome, and it is due to this that they hold some of the special brainstorming sessions to share knowledge. A level of confidence is created in the brainstorming sessions when the employees start to gradually open up and share their knowledge and suggest solutions. This is one of the steps that have been seen as effective in KS.

The manager stated that KS through informal communication practices is based on the individual interest of each manager. Some practice informal communication and take interest in talking to employees about their work, discussing issues with them, and several other approaches with the aim of building better relationships. Therefore, this is not an organisation-wide practice, but based on the managers and how they interact with the employees.

The need for frequent and regular follow-up on KS practices by top management has been indicated earlier. In addition to this, top management participation in KS is also required. Similarly, the need for monitoring employee performance on a regular basis with regards to KS is also indicated by three participants. The need for regular follow-up on KS practices has to be at all levels.

The other needs that the leaders of the firm should establish are the role and practices of KS within the organisational culture and the need for KS as part of the leadership development programmes. This was indicated by the training and development head and the IT manager regarding stronger participation of the HR department and their participation in KS.

There have been suggestions that the managers require more training with regards to information sharing. The firm needs to build leadership tools that promote KS practices. The next section discusses the importance of social environment with regards to promoting KS.

5.3.5 Social Environment

In this section, the social environment as an important factor in promotion KS and social interaction is discussed. The findings also indicate that the organisation encourages the use of social events such as lunches, drinks and dinners to provide informal settings to allow people to socialise, talk together and share knowledge.

When asked about knowledge sharing through social events, the participants indicated that such events are hosted by the organisation a few times in a year; but these events are not particularly for knowledge sharing. They allow people to socialise and get to know each other. Employees of every department get to meet each other outside the office space. The environment allows the employees and managers to meet and talk about everything. Office-related topics are discussed but these are limited. As stated by one of the managers:

> *"Some of these gatherings are over lunch or dinner. The organisation presents its agenda and goals and top management, and some managers get to speak at these events. But later on, over lunch, employees of each department gather with each other and discuss their own topics. Interaction with others is limited. They form their own groups. The discussions are therefore limited to their own department or other matters. Interaction with others needs to be improved."*

Table 5.6: Importance of Social Interaction

Coding	Frequency
For employees to know each other	10
Encourage social interaction	5
Bring people of different cultures closer	5
Essential for different nationalities to come together	5
Establish personal relationship	5
Non-work-related matters	3
Social events	3
Lunch/Dinner events	3
Maintain stronger relationship	2
4-5 times a year	1

The participants informed of the need to have a social environment for employees to know each other. According to the HR and administration manager, employees' interactions with each other are limited to the work-related matters. There is a gap in establishing relationships.

> *"We have observed that relationships are maintained based on nationality or even the state that the employee is from. For example, people who are from Egypt tend to keep in contact with those from Egypt. With countries like India, the relationships seem to*

be stronger based on the state that they are from. Different cultures seem to be the bonding factor here. And this needs to be changed if a healthy relationship is to be maintained in the firm".

This is one of the concerns raised by the HR department manager. The manager also indicated that there is the need for an environment that is outside the work timings for employees to get together and get to know each other. This was voiced by several of the participants and some have voiced it multiple times. Social interactions create the environment and opportunity for employees to share ideas, create a bond, and to bring people of different cultures together. There are multiple cultures in the firm. More than half of the population in Kuwait is made up of an expatriate workforce from different parts of the world.

Based on the information provided by the participants, the lunch and dinner events are held in banquet halls. There are also events that are held within the organisation. As per information gathered from these department heads, these events also do not encourage or stress on knowledge sharing. There are various topics being discussed, but these do not necessarily constitute knowledge sharing. Moreover, the information gathered should be stored somewhere. This is also not happening. Therefore, the social events that are organised by the organisation do not necessarily focus the need for knowledge-sharing practices.

Therefore, the top management needs to take steps in promoting social gatherings. The type of social events and gatherings can be determined by the managers. This will also strengthen stronger relationships between the managers, between managers and employees, and between employees as well. These are also the areas where top management participation that top management participation is essential. The study has also identified various barriers to promoting/strengthening KS in the firm. The next section discusses these.

The responses from the interviewees also indicated the frequency of annual social events. According to them, such events happen around 4-5 times a year. These events are to highlight organisation success and for top management to address everyone in the organisation. In addition to these everyone gets to interact with each other on an informal basis. These events are good to get to know each other and also to meet top management in person. Although several office matters are discussed, these events do not particularly focus on knowledge-sharing practices.

5.3.6   KS Barriers

A research study is conducted with the prime intention of understanding the factors that negatively impact KS so that necessary measures can be taken to overcome these. The barriers that have been identified in this research are factors that need to be eliminated or measures taken to strengthen and improve the KS environment in the firm.

Table 5.7: KS Barriers

Coding	Frequency
Job security concerns	13
Employees fear of KS	7
Lack of employee motivation	7
Not included in performance appraisals	7
No reward systems	5
Lack of understanding on the benefits of KS	4
Not part of performance evaluation	4

The top barrier that has been identified in Table 5.7 is job security concerns. This has been mentioned by nearly all the participants. Managers have a huge responsibility in eliminating this fear of employees. As stated by one of the managers:

> "*Employees are hesitant in sharing their knowledge as they fear that it would jeopardise their job security. They are also unsure about the benefits of knowledge sharing. Further, knowledge sharing has to be done willingly and cannot be forced. Thus, employees have to be motivated to share knowledge without which it cannot happen. In such situations, it is not easy to create a knowledge-sharing environment without practicing rewarding.*"

Knowledge grows through sharing and employees need to understand that, for the growth of the organisation, their participation through KS is essential. Therefore, KS would benefit them to grow with the organisation and not harm them. In a country like Kuwait, where the expatriate workforce is abundant, employees fear that they could be easily replaced and the only way to secure their job is to hold on to their job. Another argument relating to a lack of KS is that organisations tend to lose much when the employee leaves the organisation with all

the knowledge. Even a well experienced new employee will require much time to gain a good understanding of the organisation culture and work environment.

Another important barrier that needs to be improved and strengthened is employee motivation towards KS. This can only be done with managers maintaining personal interaction with the employees. Managers need to mentor and put trust in the employee to create a motivation and also remove the fear that the employee has towards sharing knowledge. Managers have stated that they tend to maintain a good relationship with the employees, but this seems to be limited to work-related task and issues. KS does not seem to be on their agenda.

According to one manager, the best way to carry out knowledge sharing was through personal interaction. He stated that for knowledge sharing to be successful, there should be good interaction between the employees and a willingness to share information. This situation was also understood from other managers as well. There is a hesitance to share knowledge by the employees. Employees do not see the clear picture of knowledge sharing; therefore, they do not see the importance. But most of all the managers feel that the employees are scared of sharing knowledge, as they feel that it would compromise their job security.

> *"The employees feel that they will lose their job if they share what they know with others. They do not understand that when they share their knowledge, they are also acquiring new knowledge. And this would make them stronger in their job and make them more valuable."*

In addition to maintaining relationship, the employee also needs to be rewarded. This is not limited to monitory rewards. There are various ways that managers can take interest in rewarding employees who contribute to KS. In doing so, it is expected that the employee will be motivated and that other employees will also be motivated. Reward is an attractive instrument towards motivating people in various tasks, such as sharing knowledge.

From the discussions thus far, it was understood that there is good knowledge sharing within the department. But the knowledge sharing with other departments is based on queries that they receive, and this is more of answering the query rather than everyone putting forward his or her opinions and information. It has been understood earlier, from two of the department

heads that they prefer to discuss these issues and then provide the best solution. The discussion is within their department and the best outcome is taken by the department head and shared with others in the organisation. For knowledge sharing to happen, everyone needs to participate, but as per the responses thus far, this is not happening effectively. Another aspect is training the employee with focus on KS. This is discussed in detail in the next section.

5.3.7 Training

This section discusses the training needs of the employee with regards to work related issues and KS. A range of information was collected regarding training. Training is provided to enhance the skills, knowledge and ability of the individual. This can be done through various methods and the participants have indicated the various methods that are used now and the also the requirements to strengthen training. The coding is split into three sections – (1) Needs; (2) Type of training; and (3) Frequency of training.

Table 5.8: Training

Needs		Type of Training		Frequency of Training	
Coding	Freq	Coding	Freq	Coding	Freq
Based on work requirements	29	Employee-Manager interaction	14	Periodical training	8
As per management	9	Outside professionals	10	Once a year	7
Development programmes	5	In-house professionals	10	Twice a year	4
Department functions	5	Outside countries	7	3-4 times a year	2
New Job position	4	In-house training	7		
Job Criteria	2	On-the-job training	5		
		Mentoring	5		
		Coaching	4		
		Train-the-trainer	4		
		Training centres	3		
		Employee rotation	3		
		Career development	2		
		Conferences	2		
		Seminars	2		
		Workshops	2		

The responses from participants indicated that the organisation takes an interest in providing training to its employees and also managers on a periodic basis. The training for employees and for managers differs. For example, the managers receive training that is focused on building leadership skills and tools necessary for their work as a leader. The employees receive training that is based on the type of the work that they are required to perform. For example, the training provided to employees in the risk management department will vary from those in the HR department. But there is also similar training, such as the use of computers and the use of Enterprise Resource software, which connects each department and every function of the organisation.

Several codes were found regarding training. Based on these they were classified, and the findings are provided in Table 5.8. The first step in training is to identify the training needs. Training becomes effective when it matches the needs of the trainee. Training has to be specific. For example, there could be employees who have joined the firm with prior experience of KS. But their experience and exposure to KS may be different from that which is expected in their current firm. The training for such employees cannot be the same as that for a novice employee who is new to the KS environment. Also, as stated earlier, the employees fear has to be eliminated and motivation has to be strengthened to practice KS; without this even the training may not be beneficial. Therefore, it is important for managers and everyone who is in charge of being responsible for selecting employees for training to understand the needs of the individual before they are assigned to a training and development programme.

According to the participants, training is provided based on work requirements. There are some cases where top management decides specific training for the employee and/or the managers. These could be such as conferences, seminars and/or workshops that are happening and which are important for specific departments. Other evidence to training needs indicates that it is based on development programmes. This could be career development programmes, or leadership development programmes, succession planning, etc. Training is also provided based on department function needs or when a new employee joins (for example as part of orientation), or when an employee is promoted or moves to a different department. In brief, it may be based on the job criteria. Therefore, the firm has various ways in which training is provided to its employee.

Another way of determining training is based on managerial feedback. Managers are required to monitor their employees on a regular basis. This was explained well by one of the managers:

> *"Based on the formal and informal communication that we have with our employees, we are able to understand employee needs for training and development. Trainings are provided based on their job criteria and requirements. But this may not be adequate for some of the employees. More specific and focused training is required. When I understand such needs, I notify the training and development department to provide training that meets the employee specific needs. Once top management approval is received, the employee is sent for training."*

The type of training provided depends on the need and the participants. For example, in-house professionals can hold some managerial training. But most of the time, it is required to bring in professionals from outside to carry out the managerial trainings. Such training may be in-house or at specific training centres. The firm has a training and development department, which comes under the HR department. This department is responsible for all training related activities in the organisation. Training requests are sent to this department, which studies the requirements, the costs, the time, and other factors that are involved in the training, and then these are forwarded to the top management for approval. This department also has training and development professionals who are qualified to conduct training and development activities. These professionals handle most of the training requirements. This helps the organisation with flexibility of providing training at its convenience to its employees.

In addition to this, training requirements that cannot be fulfilled by in-house professionals are handled by external training companies. These companies are selected based on the types of training that they provide. The training and development department is responsible for selecting these companies and the required professionals. Once the company and the professionals are shortlisted, this information is forwarded to the top management for approval. The venue for the training would depend on the complexity and specifics of the training programme. In some cases, these professionals can work in-house. In other cases, the staff that need to be trained have to go to the training and development company. The location of the company can be in Kuwait or outside. If it is outside, then the accommodation

of the staff, the duration that they need to be away from their work, the travel details and various other details pertaining to the training requirements are considered.

On some occasions, the managers have to travel outside the country to attend such training. This also includes attending conferences, seminars and workshops. Attending of conferences, seminars and workshops is not limited to managerial staff but also offered to the employees. The responses from the managers indicated that different types of training are provided to the employees and managers on a regular basis. In other words, there are various steps taken to increase the knowledge of the employees and managers.

The next information on training is related to the type of training. As indicated, there are various types of training and development programmes that are practiced in the firm. The information shared by the participants also indicated that not all of these are applicable to everyone or even to employees. For example, attending conferences and seminars is limited to the managers or specific employees. Such attendances can also be limited to certain departments. Even the use of outside professionals or being sent to other countries as part of training is limited practice in the firm. The majority of the employees largely receive training from in-house professionals, through on-the-job training, through mentoring, and through coaching. In some cases, employees are rotated in departments to understand the function of other departments. This can also provide an opportunity for employees to understand their ability in other aspects of the firm. For example, an employee working in the risk management and compliance division may want to move to corporate finance and investment department.

The manager of risk management and corporate finance stated that
"*the employee can put a request for such transfers. This request is studied with the employee performance in the organisation over the years to understand their capabilities. But still we prefer to expose the employee to the department for a month to get a first-hand information on the functioning of the department and then make the concrete decision in moving to the department. This provides confidence in the employee and also the manager of the department in accepting the employee requests*." The employee also gathers information and learns the operations of the department as part of this activity. Employee rotation is therefore a learning process.

Employees need to grow, and it is the responsibility of the organisation to provide opportunities for them to grow. Growth requires employees to be developed to handle higher responsibilities and new job positions. As stated by one of the managers:

> *"In some cases, the employee wants to change department and find career growth in another department. The employee puts in a formal request for such change of department and for specific job positions. If we see that the employee is fit to handle the new position and job, then we grant the requests. But the employee needs to be developed prior to being transferred. He/she has to be prepared before taking over the new job position. The development programme ensures that the employees are well prepared, suited and developed for the new job position."*

The final section in training is related to the frequency. The findings show that training is provided on a periodic basis, but the frequency seems to differ among the managers. It can therefore be assumed that training is provided once or maybe twice a year. The other frequencies of training indicate that it could be based on specific circumstances. As indicated by one of the managers: "*Employees are provided mainly in-house training. These are done by in-house professionals on a regular basis and companies that provide training are also invited to provide training to the employees at least 2-3 times a year.*"

Based on the responses, there are some discrepancies regarding the frequency of the training. This is because the types of training provided are rather specific to each department. The training is determined based on the performance appraisals and needs of the team. The managers also select the training frequency based on the employee needs. Therefore, the frequency of training is determined by the need although, on average, 2-3 training sessions a year are provided. The next section discusses how the needs are determined for the training.

The overall findings for training show that training is being provided to employees and managers, but all of these are related to job and tasks and there is very little emphasis on KS. This needs to be changed. Specific training for KS has to be conducted in the firm. Outside professionals can be used to provide such training and they can also conduct train-the-trainer programmes as well. Train-the-trainer is one such development programme. The department heads and qualified people in the department are selected for such a development programme. Here the person is developed on how to train others. This mainly pertains to managers. Managers are leaders who possess knowledge and skills and also have the ability

to coach and mentor their followers. But these competencies are gained through continuous development and experience. The manager needs to share these with their employees and mentor their employees to perform better. Therefore, such training is usually provided to those that have leadership capabilities.

Talented employees and managers can be selected in providing such training to employees on a frequent basis to keep up the KS practices. However, as stated earlier, prior to providing training, employees need to be motivated so that their fear about KS will be eliminated and they would be encouraged to share their knowledge with others. Employee motivation also needs to be practiced on a regular basis and this is discussed in the next section.

5.3.8 Employee Motivation

Employees need to be motivated on a regular basis with respect to all aspects of work. In the case of KS, motivation plays a stronger role, but this cannot be achieved easily. This section discusses the employee motivation factors.

Table 5.9: Motivation factors

Coding	Frequency
Build trust	9
Encourage employees	7
Create positive employee willingness	6
Talk openly	4
Work-life balance	3
Personal issues	3
Achieve best ideas from employees	2

The focus here is on providing motivation through various ways. The first on the list is building trust. The managers agree that they have to gain the trust of the employees to achieve transparency and the desired results. For this the managers need to have regular interaction with the employee and be part of their work. This will create a bond of understanding and maintain a strong relationship. Employees in the team need to trust the manager and each other and work on achieving the goals through effective teamwork built on trust. Another thing that the managers need to do is to encourage employees. This is required regarding sharing idea, sharing knowledge, and contributing to the team. Employees should

be vested with responsibilities in carrying out the tasks assigned to them. Training, motivation and the trust that is built with the employee can achieve good results. Such employees will also have no fear and be willing to share their knowledge and experience with others. They will also, in turn, encourage others in the team to also practice KS.

In addition to the top management support in KS, the immediate manager also plays a significant role in employees' KS behaviours and practices. It was also understood that the managers use personal relationships to build trust and strengthen employees' relationships to enhance the sharing of knowledge informally. When asked how they (as a manager) used their personal relationships to 'strengthen trust in your team and encourage your team to share knowledge,' they found this to be an interesting question and thus provided detailed information regarding their relationship with their subordinates. According to them, relationships with subordinates or team are very important in every work-related aspect. As a leader, they stated that they needed to have good relationships with the team in general and also on an individual basis. The need for maintaining individual relationships was only confirmed by four of them, but everyone holds the opinion that it is important to maintain strong relationships with their employees.

Managers also need to consider other aspects such as work-life balance practices, listening to employees' personal issues, and making the employee understand that they have a lot to contribute to the firm in sharing their ideas, as per four of them who mentioned the importance of maintaining individual relationships, stating that they have an open-door policy. That anyone in their department can walk in any time with their issues and grievances. They have maintained a relationship wherein the employee can trust them and talk openly about anything that disturbs them in their work. Three of four also confirmed that the issues are not limited to work, but also to personal problems that they may be facing. As per one of them, this is what he commented about personal issues with the employees:

> *"Most of them are expatriates (non-Kuwaiti), and they have families here. There are several issues that they face, and they need to take a day's leave or even a few days of leave. They have issues such as renewing their passports, issues with children in the school, issues with their parents who are in their native place, and such issues that disturb them. If these issues are not handled appropriately, it can have negative effect on their jobs and their performance can decrease. This will then become a problem for the employees and the department. By listening to the employee and handling such*

issues professionally, I am able to gain the trust of the employee and find them providing their best at their work."

The response received here shows that, by focusing on work-life balance and personal issues, the manager is able to gain the trust of their employee and the employee in turn is willing to provide their best. Based on the response of the four department heads, who maintained good relationships with their team and each individual, they are able to gain their trust and the employees are willing to do anything that is required of them from their job. Therefore, these department heads also confirmed that they are able to get the best ideas from their employees. This is because the employees are willing to share their knowledge and information. They share their knowledge based on past work experiences, training received, and information gathered from various sources. This shows that the personal relationship the manager maintains with their subordinates can lead to building of trust with their employees and the employees therefore are willing to provide what is requested from them, such as sharing of knowledge and providing innovative ideas that help build a good team and good work environment.

Employees who contribute good ideas and contribute to problem solving need to be recognised, appreciated and also rewarded for their interest and contribution. The next section discusses the expected outcomes of KS that can be achieved through the various practices that are discussed above.

5.3.9   KS Outcomes

KS outcomes can vary according to the individual, the management, and the firm. But it is important to have a clear idea on the outcomes so that everyone will understand and work towards those goals. Table 5.10 lists the KS outcomes.

As indicated in Table 5.10, at the top of the list of KS outcomes is acquiring new knowledge and increasing knowledge. This has been discussed several times by the participants. This receives the highest frequency in all the codes that were identified. Therefore, it is clear from the participants that the contribution of KS is to acquire and enhance one's knowledge. Other outcomes refer to it having a positive impact of employee work performance and improving practices and performance of the firm. KS also contributes to gaining competitive advantage

as indicated by four of the participants. Participants also linked it to gaining customer confidence, by providing best solutions.

Table 5.10: KS Outcomes

Coding	Frequency
Acquiring new knowledge and increase knowledge	31
Positive impact on work performance	6
Improve organisation practices	5
Improve organisation performance	5
Gain competitive advantage	4
Achieve stronger customer confidence	3
Provide best solutions	3
Succession planning	2
Retain talented employees	2
Positive for KS by employees	1

The other aspects are related to succession planning and retaining talented employees as indicated by the HR manager and the head of training and development. The organisation also develops people to be future leaders. This is done mainly with the aim of succession planning. Employees with leadership capabilities, experience and knowledge are considered for leadership development programmes. This is a lengthy development programme, as the employees need to be aware of the organisation's vision, mission and goals. They also need to be aware of the organisation culture. Further, they have to have a good knowledge of each of the department working and needs. For this, they need to sit with the different department heads and understand how they work. There are several aspects that go into the leadership development, and it also involves hiring of external professionals and in-house professionals, as part of the development process.

The HR manager also stated that KS is positive for the employees in improving their work and also their learning process. The findings here indicate that participants agree on the positive impact that KS can have on the individual, the customer, and the firm. Therefore, the managers have positive feelings regarding KS and therefore need to take the necessary steps to improve KS practices in the firm. This is discussed in the next section.

5.3.10 Recommendations

This refers to the recommendations that have been identified through the interviews. Table 5.11 provides the codes and their frequencies.

As shown in Table 5.11 the highest count is received for improving KS utilisation. The responses received from the participants also indicate the measures that need to be taken in improving KS in the firm. This occurs with the top management participation. It has also been identified in the discussion regarding top management that the KS initiative was taken by the top management and that their participation is also required in the KS to promote KS usage by everyone. When employees understand that top management is also contributing their knowledge, this could bring encouragement to the employees in contributing to the KS initiatives and practices. It has also been recommended to improve the relationship between the manager and the employee. The same is highlighted here as the recommendations as well. The objective is to gain employee trust, and to motivate them in sharing their knowledge for their own development, for the team, and to achieve organisational goals and objectives.

Table 5.11: Recommendations

Coding	Frequency
Improve KS utilisation	25
Top management participation required	18
Strengthen relationships between employees and managers	13
Employee motivation to be enhanced	10
Promote KS	9
Stronger team involvement needed	7
Need to change KS Practices	7
Provide comfortable work environment	6
Incorporate KS as part of organisation vision, mission and goals.	6
Participation from everyone required	5
Department head initiatives	5
Top management discussion on best KS practices	1

Promoting KS has to be the key agenda item of the top management and the managers. This is through their own participation, maintaining good relationships with the employees,

removing the fear of job security, through motivation, and by providing a comfortable work environment. In order to achieve this, KS has to be part of the organisational culture, vision, mission and goals.

5.4   SUMMARY

The interviews carried out with the managers were with the purpose of verifying the employee feedback that was received through surveys. However, the findings have provided additional information that is valuable to the research in terms of understanding the importance of knowledge-sharing practices and knowledge-sharing platforms. In addition to these, the importance of top management and managers are also indicated to be of strong importance in encouraging employees to share knowledge. Furthermore, the discussion about encouraging employees in knowledge sharing highlights the importance of employee motivation. Efficient knowledge sharing can happen when employees are motivated. Creating such an environment that motivates employees is not easy and, therefore, the management will need to introduce factors such as reward and recognition.

The responses from the managers also made clear the importance of information technology as one of the platforms for sharing knowledge. The managers have also made clear the importance of creating informal environments for knowledge sharing. The managers were able to provide their own recommendations for creating better knowledge sharing practices in the organisation and removing of hurdles that promote knowledge sharing. These are discussed under managerial recommendations in the next chapter.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

In this chapter, the conclusion, administrative recommendations, literature contribution, limitations, and future research are discussed. The chapter begins with the conclusion, which provides an overview of the empirical findings. The major part of the conclusion is answering the research questions, and this is followed by the managerial recommendations, literature contribution, limitations, and recommendations for future studies.

This research follows a deductive approach where research about knowledge sharing was studied and discussed. Based on the literature discussion, the conceptual framework for this research was developed. The conceptual framework helped in understanding the various factors that impact knowledge-sharing practices in an organisation. Most of these studies were from outside Kuwait. The literature review found six published articles in Kuwait that are related to KS. The results are discussed in section 2.7.6. A more recent search was again carried out to identify any recent publications such as within 2018 or 2019. Global citation databases such as Web of Science and Scopus were used to search for publications. These studies were again not within the finance or investment business context. Therefore, most of the secondary information collected in this research pertains to information from outside Kuwait, and this was one of the drawbacks, but it also showed that there is a need to contribute to this literature gap. The contribution to literature is discussed later in this chapter.

The discussion in the following section is mainly based on the empirical information collection from employees and managers. Although the research is deductive in approach, it uses a mixed methodology. Both quantitative and qualitative research methods were adopted in this research to collect the empirical data. These were done in two phases, where the first step was to gather data from the employees. Since this required gathering data from a large number of the sample population, the quantitative research method was used. The information was collected through surveys, using self-administered questionnaires. The questionnaires were designed on MS-Word, using information from other studies in the field of knowledge sharing and researchers who have carried out studies using similar variables. The questionnaire was then distributed to the employees in the organisation, by distributing hard copies of the questionnaire. The collected responses (424 total responses) were analysed

using SPSS. The findings of the employee responses were presented in Chapter 4. The statistical analyses for the studied variables that were carried out were confirmatory factor analysis, Cronbach's Alpha, descriptive, correlation, regression, t-test, and one-way ANOVA. The findings of the descriptive analyses showed the responses that were received for each of the variables, based on the 5-point Likert scale and the correlation indicated the relationship between the variables. The regression analysis tested the significance between the independent and dependent variables and to answer the hypotheses. The mediation is tested using the Baron and Kenny (1986) hierarchical regression analysis. The conceptual framework was tested using this review. Cronbach's Alpha was used to verify consistency and rationality in the data, and all the variables indicated adequate internal consistency.

The findings of the quantitative analyses paved the way for the second phase of data collection, and these were from the managers. The managerial data collection was based on a qualitative research method, involving interviews as the data collection method. The managers of the investment organisation were requested to provide appointments for the interviews. The time taken to receive the appointments was longer than expected. Eleven managers were contacted, and after much delay, only seven interviews could be carried out. The interviews were semi-structured and the questions that were used to direct the interviews were the result of the quantitative (employee survey) analyses. The objective of the meetings was multi-fold. One of the objectives was to verify the responses provided by the employees. Another objective was to gather managerial opinion on knowledge-sharing practices. Finally, it was important to understand the contributions of the managers towards the practice of knowledge sharing in their organisation.

The following section provides the conclusion based on the cumulative findings from both employees and managers.

6.1   CONCLUSION

This research takes place in one of the prominent investment firms in Kuwait. This firm has been in operation for the last 16 years (formed in the year 2000), and in this short period, it has been able to make a considerable positive impact on the market. Even during the financial crisis that hit the world, the firm has managed to withstand the problems and assure its customers' of the safety of their investments.

Before discussing the studied variables and the findings of the interviews, the overview of the respondents and participants is provided. The employee demographic details showed that higher participation was of men (83%), ages ranging between 26-35 years (38%) and 36-45 years (41%). The education showed that most of the people held a Bachelor's degree. The work experience ranged from five to 20 years. The results here indicate that most of the working population in the investment sector are men and these are middle-aged. Most of them were graduates with adequate working experience. The participants for the interview were managers of various departments (see demographics in Chapter 5). Most of these managers have been with the organisation for several years, with many of them being promoted to the current managerial positions. Each of them had several employees under them. The demographics for both employees and managers show that these people could provide a good response to knowledge-sharing practices in the organisation based on their experience. In the next section, the research questions that were provided in Chapter 3 (methodology) are answered in the next sections.

6.2   ANSWERING THE RESEARCH QUESTION

How is knowledge sharing influenced by individual, group and organisational factors as outlined by the social exchange theory, and what are the implications to foster greater knowledge sharing in the context of an investment company in Kuwait?

The social exchange theory (SET) explains the relationships between the individual and others. According to researchers such as Singh and Sirdeshmukh (2009), since SET is about relationships of the individual with others in the organisation and outside, the theory can be well suited to study factors such as loyalty. Lee et al. (2014) pointed out that the roots of this theory lie in the psychology and sociology environments. According to researchers such as Cropanzano and Mitchell (2005) and several others (for example, Johnson and Selnes, 2004; Luo, 2002), SET is based on the relationship that is strengthened over a period of time. This happens through trust, satisfaction, interaction, and shared values. In this study, the focus is on the interaction and exchange of information that is required for the growth of the individual and the organisation.

Employees will be willing to share knowledge when they are provided with the right environment, but they also require motivation. Employees need to see what they tend to gain from the knowledge-sharing process and practices. In addition to SET, this study presented other related theories such as the personality theory (see Chapter 2, section 2.6.2) and the

theory of reasoned action (see Chapter 2, section 2.6.3). However, the foundation of this study has been the SET (see Chapter 2, section 2.6.1).

The research was based on a conceptual framework that had three independent factors with two variables each. The first factor that was studied to impact individuals' knowledge-sharing behaviour is individual cognition which consists of perceived benefits and organisational commitment. The findings showed that perceived benefits was significant with knowledge-sharing behaviour, but there was no significance between organisational commitment and individuals' knowledge-sharing behaviour (see Chapter 4, section 4.7 and section 4.7.6), when studied with all five independent variables. According to SET, information exchange is related to the individual, and the environment adds to the need and desire for the individual to share knowledge. In addition to this the individual looks towards gaining benefits from the knowledge that is being shared. Therefore, based on the results of this study and SET, the perception of gaining something through the knowledge-sharing process can create positive impact in the individual towards sharing their knowledge.

The second independent factor that was studied was interpersonal interactions, which has social interaction and trust as the two factors. Based on the individual relationship, both social interaction and trust had a relationship with knowledge-sharing behaviour (see Chapter 4, section 4.6). The regression analysis showed that, when studied together, only social interaction was significant, and trust was not. From the literature discussions, it was clear that as per the SET, trust has a role in individuals' knowledge-sharing behaviour. It was also evident that trust builds up over a period of time based on which individuals' knowledge-sharing behaviour is expected to increase. The most important factor, however, is interaction and the findings therefore agree with SET on the importance of social interaction as one of the key factors towards knowledge sharing.

The third independent factor is organisational context, which contained organisation support and reward systems as the variables. The finding showed that both organisational support and reward systems had positive relationships with individuals' knowledge-sharing behaviour (see Chapter 4, section 4.6). The results were also the same when both these variables were studied together (see Chapter 4, section 4.7.5). As per SET, gaining something in return or benefitting from information sharing is something that the individual expects. In the case of knowledge sharing the support that the individual receives, accompanied with the practice of

a reward system, can lead to stronger knowledge-sharing practices. The interactions between the employees are expected to increase based on these factors. Therefore, the findings of this research agree with SET with regards to the support that the individual requires from the group and reaping benefits from the knowledge-sharing practices.

It has also to be noted that in addition to studying each of these three independent factors (individual cognition, interpersonal interaction, and organisational context) with the respective variables, separately with knowledge-sharing behaviours, regression was carried out for all eight variables (perceive benefits, organisational commitment, social interaction, trust, organisation support, and reward system) combined on individuals' knowledge-sharing behaviour. The results were consistent with other regression analyses, except for reward system having a negative beta, indicating negative impact of reward system on knowledge-sharing behaviour (see Chapter 4, section 4.7.6). This indicates that the current practices of reward systems do not positively support individuals' knowledge-sharing behaviours. Therefore, management needs to address this issue as SET indicates the importance of individuals expecting benefits based on the knowledge shared. This is discussed as part of the recommendations in addition to other factors that need to be focused on with the aim of improving the knowledge-sharing practices in the investment firm.

6.3   ACTIONABLE KNOWLEDGE

Several authors (for example, Bate, 2007; Jelinek et al. 2008; Hodgkinson and Rousseau, 2009; Rousseau, 2012) argued on the importance and interest of management scholars on the divide between practice and academic and the need to develop actionable knowledge that is grounded on evidence. Holloway et al. (2016) stated that it was Simon (1996) who pioneered and coined the word "design science" with respect to organisation and management research. Van Aken (2004) indicated that design and science are combined to produce artefacts that scholars test in practice as well as grounded in scientific evidence.

Actionable knowledge "*is not only relevant to the world of practice, it is the knowledge that people use to create that world*" (Cao, 2012; p. 149). Actionable knowledge is not new in social science contexts and it has been studied extensively in social sciences. For example, it has an impact in the business management context (Argyris, 1996), organisation science (Cross and Sproull, 2004) and management science (Morgan et al., 2004). Pentzaropoulos (2016) argued that actionable knowledge is important but that it is often neglected in

mainstream epistemology. Davies et al. (2017) provided the following definition: "*knowledge is a format that can easily be implemented to support decision making in day-to-day practice*" (p. 80). Nonaka and Takeuchi (1995) defined actionable knowledge thus: "*Knowledge is always about action – the knowledge must be used to some end*" (p. 57-58). Authors such as Cross and Sproull (2004) also highlighted the importance of actionable knowledge leading to immediate progress. Another definition by Yoo (2014) considers actionable knowledge as "*the extent to which knowledge is expandable, adaptable or easily applied to tasks*" (p. 526).

Actionable knowledge illustrates the relationship between theory and practice and refers to the learning capability of individuals and organisations with regards to social, political, economic and technological elements, and taking future actions based on findings (Antonacopoulou, 2006). Authors such as Clancy et al. (2013) stated that actionable knowledge is important for organisations to develop more sustainable products. In the context of financial organisations such as the investment companies, the importance of actionable knowledge is on developing innovative financial products and services. They emphasise that for organisations to maintain long-term relationships and competitive environments, they need to develop and offer sustainable and innovative products.

Zaglago et al. (2016) stated that effective and successful KS empowers individuals and, to ensure that this is successfully implemented, the responsibility rests on knowledge leaders to ensure that those with power spread its importance and usage. In the context of this research, the leaders are the top management, and those with power to ensure the practice of KS are the managers of different departments. Top management needs to foster coherent paradigms of the organisation such as its values, strategies, mission and vision. This should be combined with their opinions and fit within the paradigm of the organisation. This would require eliminating some conservative habits to build the new KS platform based on the findings and introducing innovative ideas. The management also needs to be open to different views, opinions, and perspectives.

Authors such as Fahey and Prusak (1998), and Cabrera and Cabrera (2005) stated that in the context of KS, the environment plays a key role in facilitating and strengthening KS practices among organisation members. The focus is on eliminating the barriers and initiating the factors that promote KS. In another study by Geiger and Schreyögg (2012) on narratives in

KS argued that narrative descriptives represent actionable knowledge that evolves from experiences and thus closer to action.

6.4   CONTRIBUTION TO PRACTICE

The results of this research produces actionable knowledge which enables actors to put their vision into practice for others based on theory of their own practices. Knowledge needs to be put into action to achieve the intended outcomes. Davies et al. (2017) stated that putting knowledge into action is a multi-faceted approach and they provide the tools and methodology required to put knowledge into action.

There is a need to create communities of practice in the organisation under study. This involved creating a set of people who come together as a group for sharing their problems and concerns about a topic based on their passion and knowledge. The objective of members within the communities of practice is to find the best solution to their problems and improve their knowledge. This is achieved by sharing of information and expertise, and through interaction. The literature and empirical findings identify several of the factors that are required in implementing the communities of practice. These are having strong leadership, incentives and other motivational factors to provide active participation, the role of technology, and trust. In addition to this, in the context of this research, the employees are from various cultural backgrounds; therefore, the leaders need to ensure that the cultural factor is considered to ensure KS. Technology needs to be used effectively and efficiently to support its invaluable role in facilitating communication and the sharing of ideas. This is important within communities of practice to ensure success.

Communities of practice will play an important role in facilitating KS across the organisation. They can achieve this by fostering evidence-based practices through KS experience and resources. Wenger et al. (2002) stated that communities of practice will be able to create both long-term and short-term value and both tangible and intangible results. The contribution can be to the professional development of all concerned and also produce concrete outcomes such as improving the skills and attitudes of other members. They can also build trust and remove the fear of the employees in practicing KS. Communities of practice can be set up through face-to-face interactions and meeting, and also through social media platforms and also existing blogs.

Interest in the top management led to the development of a KS infrastructure. As discussed previously in the literature, implementing platforms to share knowledge can be easy. However, getting the workers to segment their knowledge is more likely to be a problem. Further, convincing the management to change the existing culture to and adapt a culture that encompasses KS would be another challenge. This is because the changes and the need for sharing knowledge are not limited to certain employees or a particular department; rather, this is an organisation-wide approach. As a result, everyone's cooperation and participation is required in addition to several changes in the existing working scenario. These were the predicted challenges; these challenges still exist, and measures are being taken by managers to overcome them. The objective is to win the trust and confidence of the employees who are from different cultural backgrounds.

This is a follow-up of steps that are discussed in sections 3.13.1 (initial steps), 3.13.2 (managerial meeting), and 3.13.3 (implementing KS systems). The top management has also taken initiatives in developing a mobile platform for KS that is tailor-made and integrated with the organisation IT infrastructure. This is being done in coordination with third-party mobile app developers and the in-house IT team.

The discussions and meeting towards pushing KS in the organization has yielded to various results, such as increased usage in KS between departments. Employees within departments share information with each other, however this practice was limited from organization level. The research findings and discussion persuaded the management to strengthen the motivation of employees in sharing the knowledge with everyone in the organization. The development of a blog platform and mobile platform was initiatives by the top management in creating the environment of KS in the organization. The employees and managerial actions of KS has also led to the development of a knowledge centre.

Through the KS practices the management has been able to identify major contributors of KS practices. A team that includes three department managers and 10 employees were identified to form the knowledge centre team. The employees are selected not only based on the KS participation and contribution, but some of these employees are also part of the talent management program in our organization. These employees have been with the organization for over eight years. They are part of the talent management program based on the knowledge of the industry, their experience, and contribution to the organization.

The objective of the knowledge centre team is to find ways of promoting the KS practices. They are also provided the responsibility of identifying the employees who contribute largely to KS in the organization. These are documented based on information collected through the IT department who can produce reports from the blog and mobile App information and interaction with the employees and managers. The team has also contributed to better methods of storing and retrieving the information shared.

The conversation of theoretical findings to actionable stages is based on the framework provided above. Every of these steps may require multiple sessions or to revisit the steps several times. Each of the stages will be documented, and the next step will be planned accordingly.

6.5   MANAGERIAL RECOMMENDATIONS

The recommendations provided here are based on the quantitative (employee survey) and qualitative (manager interviews) findings. At the start this research, the research questions were based on the SET and conceptual framework. However, the interviews showed that other factors need to be considered while studying the implementation and practicing of individuals' knowledge-sharing practices. Also addressed here are the hurdles or issues that could be faced when encouraging knowledge sharing. It is in overcoming the problems that the knowledge sharing can be enhanced. Discussed here are recommendations to improve knowledge-sharing practices in the investment firm.

The findings showed that informal communication would be a powerful method to encourage communication between the employees and between the employees and the managers. Through informal communications, employees will be encouraged to speak and listen freely, and this is because there are individuals who are not sure about how to share their knowledge. They think from an official perspective. By introducing informal communication, these people will be able to share more knowledge in their own way. They can contribute much more through such practices compared to just having a suitable environment. The managers also pointed out that there should be a good relationship between the employee and others (colleagues and administrators) so that they can have a transparent knowledge-sharing environment. People also need to trust each other to ensure that everyone contributes to the knowledge shared.

The findings also showed that top management did not practice KS. The researcher therefore recommends that top management support and their involvement in the knowledge-sharing practices will encourage the employees also to partake in and practice KS. As per the managers, when top management supports and participates in the knowledge sharing, then the employees will be positively encouraged to also participate and share their ideas.

Managers need to maintain a good relationship with the employees. Based on the strength of the relationship, the employees will interact with the managers on a regular basis. This frequency of interaction needs to increase. This is possible when managers can create an environment of trust and transparency with the employees. Higher interaction between the manager and the employee will make the employee feel more comfortable and increase his or her interaction with everyone in the team and the organisation.

Past literature has proposed that reward systems are a motivator to knowledge-sharing practices. The management needs to encourage their employees in knowledge-sharing practices, and a reward system is one way that employees can be motivated. Based on the quantitative findings, the reward system was not significant when studied with all the variables. When only organisation support and reward system (organisational context factors) were investigated together, reward system indicated significance. From the employees' responses, it was understood that a reward system was not practiced by the organisation relating to knowledge-sharing practices. Through their interviews the managers showed that reward systems could motivate the employees, so these should be considered as part of knowledge-sharing practices.

Information technology (IT) was studied as a mediator as it is considered as the platform that enhances the practice of knowledge sharing. People can create stronger environments in which they can share knowledge. Groups can be created based on topics so that everyone can participate based on the particular topic. The information can be transmitted with relative ease using IT, irrespective of how the people are geographically located. IT adds value to the knowledge-sharing practices. Based on the quantitative analysis, IT did not play a moderating role but, as per the managers it is important to have a reliable dedicated IT platform for knowledge-sharing practices. The final recommendation to the management will be towards having a dedicated knowledge-sharing platform.

6.6   LITERATURE CONTRIBUTION

The research was based on reviewing existing literature on knowledge segments. Grounded on the analysis of the literature a conceptual context was developed and used. By collecting data from the employees in the investment firm, the model was tested. The results indicated that perceived benefits, social interaction, and organisational support were the factors that best supported individuals' knowledge-sharing practices.

In addition to the data from the employees, the managerial interviews also indicated the importance of the right knowledge-sharing platform, informal communication with top management, managerial relationship, support and participation, and training and development. In addition, having a reward system practice in place to motivate and encourage the employees in knowledge-sharing practices was also indicated as important. Consequently, having a dedicated IT platform for knowledge sharing is also required.

Figure 6.1: Recommended Framework
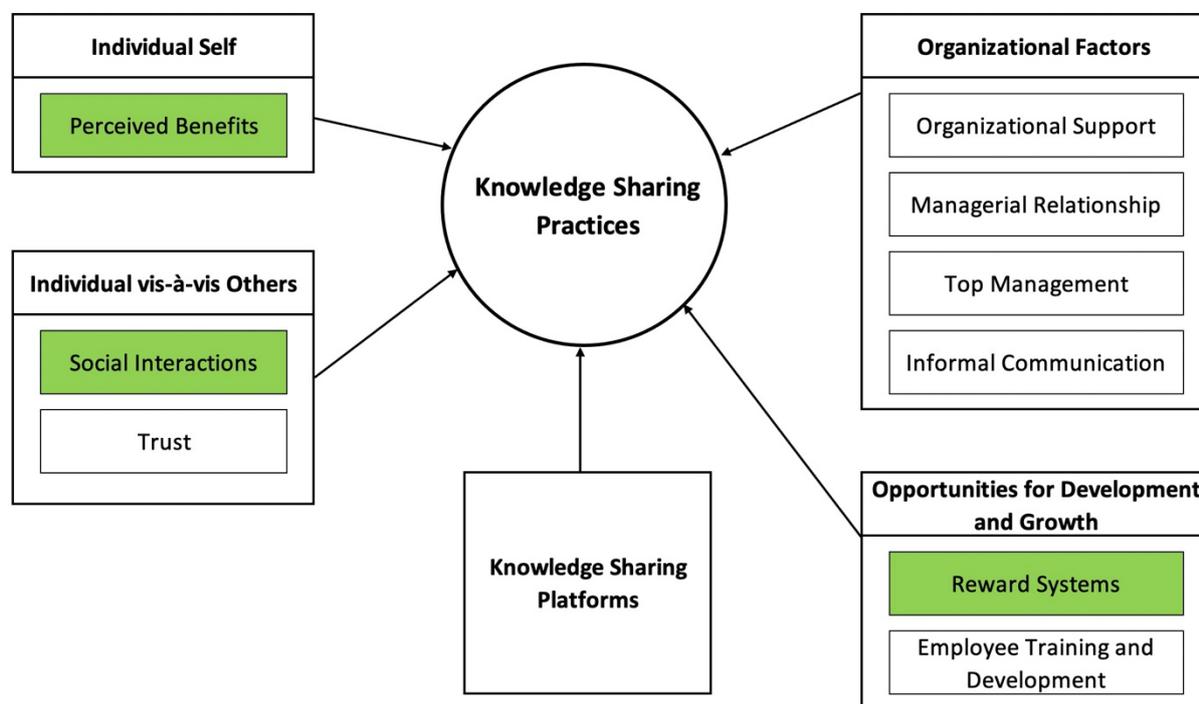
A collective majority of the secondary information in this research is based on research done outside Kuwait, and this is due toa lack of research within the country on knowledge-sharing practices. Moreover, there are no studies in Kuwait using SET to examine knowledge-sharing

practices. Ideally, the findings of this study contribute to the lack of studies in Kuwait and even in the wider the Middle East region. Grounded on the feedback, the framework within Figure 6.1 is recommended when considering implementation and adoption of knowledge-sharing practices in Kuwait. The framework is the outcome of the empirical findings. This research has collected data from employees through survey and through interviews from managers. The research is based on the social exchange theory (SET). The framework is also developed based on the literature review. This research produces practical and theoretical outcomes. Emphasis is on individual self which focuses on perceived benefits; individual vis-à-vis others which requires strengthening social interactions; and, opportunities for development and growth through effective reward systems.

For practice, the actionable knowledge is then producing a set of factors that the organization can emphasize, such as perceived benefits, social interactions, and reward systems (because these were strongly related to KS compared to other factors). That does not mean that other factors are not important. Indeed, they must be provided, but the perceived benefits, social interactions, and reward systems would require a higher degree of emphasis by the organization.

For theory, the knowledge that this thesis is producing can be contributory. The thesis is showing which factors within SET are more important than others to foster KS, in the context of the organization that the thesis examined. Thus, the thesis (within the study's context) is highlighting the differences in the degree of importance of SET factors.

The findings of this research contribute to the literature by filling the identified gap and in providing a suggested framework that both academic researchers and business practitioners can use to study and implement the best knowledge-sharing practice.

Kuwait lacks studies on KS, particularly in the investment sector. The conceptual framework that was designed using the literature review focused on studying individuals' KS behaviour. The findings indicated that there is the need to study KS practices. The recommended framework focuses on KS practices within the organisations in Kuwait. The survey and in-depth interviews have indicated the factors that need to be studied in greater depth. Due to the lack of research in Kuwait, this research had to depend on studies from outside Kuwait. This

meant that the findings of those studies could not be related to Kuwait, as is also evident from the findings.

Academic researchers and business practitioners can adopt the recommended framework here to explore the knowledge-sharing practices from two perspectives – individual and organisational. In addition to these, it is also recommended that those concerned can evaluate the best platform that would make employees comfortable in KS. It is not necessary that IT is seen as the prime platform for KS. Social gatherings, office meetings, informal communications and other such venues can be created for employees to share their knowledge. This can be followed by the use of IT. However, the important point is to study the factors that can promote KS practices. The use of the recommended framework will help businesses to identify these factors and thereby have effective KS practices in the organisation.

6.7   LIMITATIONS

The biggest limitation of this research was the lack of KS studies in Kuwait. The research had to depend on studies outside Kuwait to develop the framework, and this posed a limitation as the factors that are examined can vary depending on the country, culture, and other factors. To ensure that an in-depth understanding of KS practices in the investment companies is achieved interviews with managers also needed to be carried out. This aspect helped to understand other factors that were not focused on the initial framework. The limitation of the lack of studies in Kuwait was overcome by applying quantitative and qualitative methods.

The mixed methodology ensured a better understanding of KS practices in Kuwait investment companies, but there was a time constraint in gathering information from employees. Within a period of 14 weeks, only 424 usable responses were received and analysed. A longer period could have provided an opportunity to gather information from more employees. Nevertheless, the effort was made to collect as many responses as possible.

6.8   FUTURE RESEARCH

This research has been carried out in an investment firm in Kuwait. Recommendations for future research would be to conduct this research using the new framework in the financial institutions in Kuwait. The results should indicate the practices of knowledge sharing in the financial institutions. Future research can be first based on the qualitative method where HR

managers can be interviewed to understand the KS practices. Information on the process and platforms used to share knowledge can be gathered. Based on this, a self-administered questionnaire can be designed to collect information from the employees to gather their perspective of KS practices. The study would be exploratory in nature, but this research can utilise the recommended framework. This approach would enable the researcher to follow a framework that has been designed based on information collected from Kuwait.

Another recommendation would be to study investment firms in the countries of the Gulf Cooperation Council (GCC). These six countries in the Middle East comprise of the United Arab Emirates, Kuwait, Saudi Arabia, Oman, Qatar and Bahrain. Based on the culture of these countries there should be similar business operations. Several of the investment companies have operations/branches in these GCC countries. Understanding how these firms share knowledge based on their local and regional operations will provide more understanding into effective knowledge-sharing practices. The information gathered from GCC countries can provide a wealth of information that can be compared with the findings of this research to understand how to improve KS practices in Kuwait investment companies. The results should not provide varied differences, but at the same time should produce new knowledge that can enhance the Kuwait framework because they are similar cultures.

In both of the recommended future research studies, the underpinning theory should be SET.

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APPENDIX I: SURVEY QUESTIONNAIRE

DEMOGRAPHICS

[GEN] Gender	1.☐ Male	2.☐ Female	3.☐ No Response

[AGE] Age	1.☐ 18-25 years	2.☐ 26-35 years
	3.☐ 36-45 years	4.☐ 46-55 years
	5.☐ 56 years and above	6.☐ No response

[EDU] Level of Education	1.☐ Less than high school	2.☐ High School
	3.☐ College	4.☐ <u>Undergraduate Degree</u>
	5.☐ Post Graduate Degree	6.☐ Doctorate
	7.☐ No Response	

[WEXP] Work Experience	1.☐ Less than five years	2.☐ 5-10 years
	3.☐ 11-15 years	4.☐ 16-20 years
	5.☐ Over 20 years	6.☐ No Response

VARIABLES

The following section is designed using a 5-point Likert scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Perceived Benefits	1	2	3	4	5
PB1: I think it is of significance to share knowledge	☐	☐	☐	☐	☐
PB2: I like to share knowledge	☐	☐	☐	☐	☐
PB3: I find sharing knowledge as personally satisfying	☐	☐	☐	☐	☐
PB: I share knowledge because I feel proud of myself	☐	☐	☐	☐	☐
PB5: I share knowledge because I would appreciate if my seniors think I am competent	☐	☐	☐	☐	☐
PB6: I share knowledge because I want to be respected by my co-workers	☐	☐	☐	☐	☐
PB7: I share knowledge because I might get a reward	☐	☐	☐	☐	☐
PB8: I share knowledge because it may help me get promoted	☐	☐	☐	☐	☐
PB9: I share knowledge because I want to improve the performance and reputation of the organisation	☐	☐	☐	☐	☐

Organization Commitment	1	2	3	4	5
OC1: When it comes to knowledge sharing, there is internal competition in my organisation	☐	☐	☐	☐	☐
OC2: Individual performance is important in my organisation	☐	☐	☐	☐	☐
OC3: Knowledge is recognised as a vital resource in my organisation	☐	☐	☐	☐	☐
OC4: My job role allows me to share knowledge	☐	☐	☐	☐	☐
OC5: I have access to necessary communication tools	☐	☐	☐	☐	☐

Social Interaction	1	2	3	4	5
SI1: My colleagues reciprocate by sharing knowledge with me	☐	☐	☐	☐	☐
SI2: My team members are cooperative in sharing knowledge	☐	☐	☐	☐	☐
SI3: My manager uses individual interaction to establish trust and promotes employees' associations to improve the involvement of knowledge informally.	☐	☐	☐	☐	☐
SI4: My organisation advocates for social events such as dinner and nibbles to provide informal settings to permit persons to entertain, talk together and share knowledge	☐	☐	☐	☐	☐
SI5: We have a favourable place of work settings of office arrangement for speaking, and sharing knowledge casually with social group	☐	☐	☐	☐	☐
SI6: We practice unprompted, casual connections to supported social interaction for smooth knowledge sharing	☐	☐	☐	☐	☐

Trust	1	2	3	4	5

TR1: The facts shared by team members is consistent	☐	☐	☐	☐	☐
TR2: The facts shared by team members is appropriate	☐	☐	☐	☐	☐
TR3: Overall, the people in my team are very trustworthy	☐	☐	☐	☐	☐
TR4: We are usually considerate of one another's feelings on this team	☐	☐	☐	☐	☐
TR5: I can rely on other members of my team to share and received reliable information's	☐	☐	☐	☐	☐
TR6: My team members are responsible for any mistake relating to the task	☐	☐	☐	☐	☐

Organization Support	1	2	3	4	5
OS1: My supervisors expect me to share knowledge	☐	☐	☐	☐	☐
OS2: My supervisors give me positive feedback if I share knowledge	☐	☐	☐	☐	☐
OS3: My supervisors view knowledge sharing as essential for our organisation	☐	☐	☐	☐	☐
OS4: My closest colleagues think that it is crucial that everyone feels responsible for sharing knowledge internally in our organisation	☐	☐	☐	☐	☐
OS5: My organisation provides me adequate time to share knowledge	☐	☐	☐	☐	☐
OS6: The hierarchy in our organisation is not a barrier to the flow of ideas and information	☐	☐	☐	☐	☐
OS7: Information flows smoothly throughout the enterprise regardless of employee roles or other boundaries	☐	☐	☐	☐	☐

Reward System	1	2	3	4	5
RS1: The reward systems applied to me are directly tied to my efforts in sharing knowledge	☐	☐	☐	☐	☐
RS2: Frequent high-quality knowledge sharing increases my salary	☐	☐	☐	☐	☐
RS3: Frequent knowledge sharing leads to positive performance evaluation	☐	☐	☐	☐	☐
RS4: Employees in our organisation are visibly rewarded for knowledge sharing and reuse	☐	☐	☐	☐	☐
RS5: Employees are rewarded for sharing their knowledge and experience with their colleagues	☐	☐	☐	☐	☐
RS6: The knowledge sharing rewards available are useful in motivating me to spread my knowledge	☐	☐	☐	☐	☐
RS7: The appraisal and/or reward system encourage employees to interact, work together in different sections and share the knowledge passed by various section	☐	☐	☐	☐	☐
RS8: Employees are rewarded on teamwork and collaboration rather than merely on individual performance	☐	☐	☐	☐	☐

Information Technology	1	2	3	4	5
IT1: Technological infrastructure facilitates collaborative knowledge sharing through various tools in our organisation	☐	☐	☐	☐	☐
IT2: Effective cataloging and archiving procedures are in place for document management in our organisation	☐	☐	☐	☐	☐
IT3: IT supports effective communication among leaders and the employees in our organisation	☐	☐	☐	☐	☐
IT4: The organisation provides various tools and technologies to facilitate knowledge sharing and exchange	☐	☐	☐	☐	☐
IT5: The technological tools available to the organisation for sharing knowledge are effective	☐	☐	☐	☐	☐
IT6: I feel comfortable using the knowledge sharing technologies available	☐	☐	☐	☐	☐
IT7: Employees use IT technology to share their knowledge inside the company	☐	☐	☐	☐	☐

Knowledge Sharing Behaviour	1	2	3	4	5
KSB1: I usually use too much time sharing knowledge with members of the neighbourhood	☐	☐	☐	☐	☐
KSB2: I usually actively share my knowledge with other members of the community	☐	☐	☐	☐	☐
KSB3: I often respond to others' comments on my messages	☐	☐	☐	☐	☐
KSB4: I usually engage myself is negotiations of various topics rather than specific topics	☐	☐	☐	☐	☐
KSB5: I tell the other members of this community what I know when they ask me about it	☐	☐	☐	☐	☐
KSB6: Knowledge-sharing behaviours are actively promoted on a day-to-day basis in the organisation	☐	☐	☐	☐	☐
KSB7: There is a high level of face-to-face interaction among colleagues in the workplace	☐	☐	☐	☐	☐
KSB8: Teamwork discussion and collaboration enhance communication between colleagues	☐	☐	☐	☐	☐

APPENDIX II: MANAGERIAL INTERVIEW QUESTIONS

Demographics:
- What is your current department?
- How long have you been in the current job position?
- How long have you been with this organisation?
- How many employees are on your team?
- What is your nationality?
- What is your highest education level?

Knowledge Sharing Practices
- What are the steps that are in place for knowledge sharing?
- Could you please explain how knowledge sharing is done in your organisation?

Social Events and Knowledge Sharing
- Could you please shed light and provide more information on these social events?
- How frequently do these social activities occur in a year?
- What are the activities that happen during such socialising events to encourage sharing of knowledge?

Knowledge Sharing Practices: Informal Communication
- How does informal communication happen?
- Is this limited to a specific department or does this happen with everyone in the organisation?

Top Management
- What is the management outlook on knowledge sharing?
- How does the management practice knowledge sharing?
- What steps are currently in place to ensure that everyone in your organisation practices knowledge sharing?

Manager Support

- How do you (as a manager) use personal relationships to strengthen trust in your team and encourage your team to share knowledge?

- Do your employees share knowledge with employees in other departments?

Training and Development

- What kind of training do you provide to the employees?

- How frequent are these trainings provided?

- How are the training needs for each employee determined?

- What are the development programmes that the organisation provides to its employees?

Reward Systems

- How long do you think employees will be interested and motivated in sharing their knowledge with others if they are not rewarded or recognised? What do you think needs to be done for improving employee motivation in sharing knowledge?

Information Technology

- Could you describe the type of IT tools/platforms being used in the organisation to enable knowledge sharing in the organisation?

- Is there a specific platform that you use (for example, internal networking platforms, appropriate software, etc.) to help employees share their knowledge?

Recommendations towards Knowledge Sharing

- What are your recommendations towards improving knowledge sharing in the organisation?

- What are the hurdles that you believe can create issues in knowledge sharing?

- What measures should the management take to improve knowledge-sharing practices in the employees?

APPENDIX III: DESCRIPTIVE TABLES

Table III-1: Descriptive results for Perceived Benefits

Perceived Benefits		SD	D	N	A	SA
PB1: I think it is important to share knowledge	Freq	2	1	2	190	229
	%	0.50%	0.20%	0.50%	44.80%	54.00%
PB2: I like to share knowledge	Freq		2	13	193	216
	%		0.50%	3.10%	45.50%	50.90%
PB3: I find sharing knowledge personally satisfying	Freq	35	155	32	84	118
	%	8.30%	36.60%	7.50%	19.80%	27.80%
PB: I share knowledge because, I feel proud of myself	Freq	51	181	46	77	69
	%	12.00%	42.70%	10.80%	18.20%	16.30%
PB5: I share knowledge because I want my superior to think I am competent	Freq	86	168	54	72	44
	%	20.30%	39.60%	12.70%	17.00%	10.40%
PB6: I share knowledge because I want to be respected by my co-workers	Freq	52	178	66	99	29
	%	12.30%	42.00%	15.60%	23.30%	6.80%
PB7: I share knowledge because I might get a reward	Freq	101	132	78	75	38
	%	23.80%	31.10%	18.40%	17.70%	9.00%
PB8: I share knowledge because it may help me get promoted	Freq	40	206	36	96	46
	%	9.40%	48.60%	8.50%	22.60%	10.80%
PB9: I share knowledge because I want to improve the performance and reputation of the organisation	Freq	4	43	32	195	150
	%	0.90%	10.10%	7.50%	46.00%	35.40%

Note: SD=Strongly Agree; D=Disagree; N=Neither Agree nor Disagree; A=Agree; SA=Strongly Agree

Table III-2: Descriptive results for Organisational Commitment

Organisational Commitment		SD	D	N	A	SA
OC1: When it comes to knowledge sharing, there is internal competition in my organisation	Freq	18	16	40	206	144
	%	4.20%	3.80%	9.40%	48.60%	34.00%
OC2: Individual performance is important in my organisation	Freq	4	14	41	227	138
	%	0.90%	3.30%	9.70%	53.50%	32.50%
OC3: Knowledge is recognised as a key resource in my organisation	Freq	5	11	52	217	139
	%	1.20%	2.60%	12.30%	51.20%	32.80%
OC4: My job role allows me to share knowledge	Freq	3	9	49	220	143
	%	0.70%	2.10%	11.60%	51.90%	33.70%
OC5: I have access to necessary communication tools	Freq	3	8	50	267	96
	%	0.70%	1.90%	11.80%	63.00%	22.60%

Note: SD=Strongly Agree; D=Disagree; N=Neither Agree nor Disagree; A=Agree; SA=Strongly Agree

Table III-3: Descriptive results for Social Interaction

Social Interaction		SD	D	N	A	SA
SI1: My colleagues reciprocate by sharing knowledge with me	Freq		1	89	290	44
	%		0.20%	21.00%	68.40%	10.40%
SI2: My team members are cooperative in sharing knowledge	Freq		12	32	315	65
	%		2.80%	7.50%	74.30%	15.30%
SI3: My manager uses personal relationships to build trust and strengthen employees' relationships to enhance the sharing of knowledge informally.	Freq	1	5	35	328	55
	%	0.20%	1.20%	8.30%	77.40%	13.00%
SI4: My organisation encourages the use of social events such as lunches, drinks and dinners to provide informal settings to allow people to socialise, talk together and share knowledge	Freq	15	23	95	269	22
	%	3.50%	5.40%	22.40%	63.40%	5.20%
SI5: We have a conducive workplace settings of office layout for speaking, and sharing knowledge informally with colleagues	Freq	15	37	60	263	49
	%	3.50%	8.70%	14.20%	62.00%	11.60%
SI6: We practice spontaneous informal communications to encourage social interaction for smooth knowledge sharing	Freq	14	40	29	268	73
	%	3.30%	9.40%	6.80%	63.20%	17.20%

Note: SD=Strongly Agree; D=Disagree; N=Neither Agree nor Disagree; A=Agree; SA=Strongly Agree

Table III-4: Descriptive results for Trust

Trust		SD	D	N	A	SA
TR1: The knowledge shared by team members is reliable	Freq	3	3	32	314	72
	%	0.70%	0.70%	7.50%	74.10%	17.00%
TR2: The knowledge shared by team members is timely	Freq		17	92	224	91
	%		4.00%	21.70%	52.80%	21.50%
TR3: Overall, the people in my team are very trustworthy	Freq		2	50	227	145
	%		0.50%	11.80%	53.50%	34.20%
TR4: We are usually considerate of one another's feelings on this team	Freq	4	2	63	245	110
	%	0.90%	0.50%	14.90%	57.80%	25.90%
TR5: I can rely on other members of my team to share and receive reliable information	Freq		37	53	215	119
	%		8.70%	12.50%	50.70%	28.10%
TR6: My team members are responsible for any mistake relating to the task	Freq	20	163	61	97	83
	%	4.70%	38.40%	14.40%	22.90%	19.60%

Note: SD=Strongly Agree; D=Disagree; N=Neither Agree nor Disagree; A=Agree; SA=Strongly Agree

Table III-5: Descriptive results for Organisational Support

Organisational Support		SD	D	N	A	SA
OS1: My supervisors expect me to share knowledge	Freq	3	11	67	264	79
	%	0.70%	2.60%	15.80%	62.30%	18.60%
OS2: My supervisors give me positive feedback if I share knowledge	Freq	7	15	65	274	63
	%	1.70%	3.50%	15.30%	64.60%	14.90%
OS3: My supervisors view knowledge sharing as essential for our organisation	Freq	3	13	70	265	73
	%	0.70%	3.10%	16.50%	62.50%	17.20%
OS4: My closest colleagues think that it is very important that everyone feels responsible for sharing knowledge internally in our organisation	Freq	13	51	104	227	29
	%	3.10%	12.00%	24.50%	53.50%	6.80%
OS5: My organisation provides me adequate time to share knowledge	Freq	19	45	136	188	36
	%	4.50%	10.60%	32.10%	44.30%	8.50%
OS6: The hierarchy in our organisation is not a barrier to the flow of ideas and information	Freq	26	71	90	193	44
	%	6.10%	16.70%	21.20%	45.50%	10.40%
OS7: Information flow easily throughout the organisation regardless of employee roles or other boundaries	Freq	33	92	63	139	97
	%	7.80%	21.70%	14.90%	32.80%	22.90%

Note: SD=Strongly Agree; D=Disagree; N=Neither Agree nor Disagree; A=Agree; SA=Strongly Agree

Table III-6: Descriptive results for Reward System

Reward System		SD	D	N	A	SA
RS1: The reward systems that are applied to me are directly tied to my efforts in sharing knowledge	Freq	42	164	46	109	63
	%	9.90%	38.70%	10.80%	25.70%	14.90%
RS2: Frequent high-quality knowledge sharing increases my salary	Freq	63	139	78	93	51
	%	14.90%	32.80%	18.40%	21.90%	12.00%
RS3: Frequent knowledge sharing leads to positive performance evaluation	Freq	44	158	57	100	65
	%	10.40%	37.30%	13.40%	23.60%	15.30%
RS4: Employees in our organisation are visibly rewarded for knowledge sharing and reuse	Freq	30	195	44	132	23
	%	7.10%	46.00%	10.40%	31.10%	5.40%
RS5: Employees are rewarded for sharing their knowledge and experience with their colleagues	Freq	32	206	43	96	47
	%	7.50%	48.60%	10.10%	22.60%	11.10%
RS6: The knowledge-sharing rewards available are effective in motivating me to spread my knowledge	Freq	28	167	67	130	32
	%	6.60%	39.40%	15.80%	30.70%	7.50%
RS7: The appraisal and/or reward system encourage employees to interact, work together in different sections and share the knowledge passed by various section	Freq	35	195	36	94	64
	%	8.30%	46.00%	8.50%	22.20%	15.10%
RS8: Employees are rewarded on teamwork and collaboration rather than merely on individual performance	Freq	21	171	52	142	38
	%	5.00%	40.30%	12.30%	33.50%	9.00%

Note: SD=Strongly Agree; D=Disagree; N=Neither Agree nor Disagree; A=Agree; SA=Strongly Agree

Table III-7: Descriptive results for Information Technology

Information Technology		SD	D	N	A	SA
IT1: Information Technology facilitates collaborative knowledge sharing through various tools in our organisation	Freq	14	36	64	272	38
	%	3.30%	8.50%	15.10%	64.20%	9.00%
IT2: Effective cataloguing and archiving procedures are in place for document management in our organisation	Freq	13	33	48	287	43
	%	3.10%	7.80%	11.30%	67.70%	10.10%
IT3: IT supports effective communication among leaders and the employees in our organisation	Freq	11	66	36	283	28
	%	2.60%	15.60%	8.50%	66.70%	6.60%
IT4: The organisation provides various tools and technologies to facilitate knowledge sharing and exchange	Freq	11	54	48	276	35
	%	2.60%	12.70%	11.30%	65.10%	8.30%
IT5: The technological tools available at the organisation for sharing knowledge are effective	Freq	12	53	33	300	26
	%	2.80%	12.50%	7.80%	70.80%	6.10%
IT6: I feel comfortable using the knowledge sharing technologies available	Freq	11	51	49	254	59
	%	2.60%	12.00%	11.60%	59.90%	13.90%
IT7: Employees use IT technology to share their knowledge inside the company	Freq	12	24	66	298	24
	%	2.80%	5.70%	15.60%	70.30%	5.70%

Note: SD=Strongly Agree; D=Disagree; N=Neither Agree nor Disagree; A=Agree; SA=Strongly Agree

Table III-8: Descriptive results for Knowledge Sharing Behaviour

KS Behaviour		SD	D	N	A	SA
KSB1: I usually spend a lot of time sharing knowledge with other members in the community	Freq	12	78	86	205	43
	%	2.80%	18.40%	20.30%	48.30%	10.10%
KSB2: I usually actively share my knowledge with other members in the community	Freq	12	39	51	237	85
	%	2.80%	9.20%	12.00%	55.90%	20.20%
KSB3: I usually respond to others' comments on my messages	Freq	3	41	62	262	56
	%	0.70%	9.70%	14.60%	61.80%	13.20%
KSB4: I usually involve myself in discussions of various topics rather than specific topics	Freq	23	137	62	136	66
	%	5.40%	32.30%	14.60%	32.10%	15.60%
KSB5: I tell the other members of this community what I know, when they ask me about it	Freq		15	24	276	109
	%		3.50%	5.70%	65.10%	25.70%
KSB6: Knowledge-sharing behaviour are actively promoted on a day-to-day basis in the organisation	Freq		19	60	281	64
	%		4.50%	14.20%	66.30%	15.10%
KSB7: There is a high level of face-to-face interaction among colleagues in the workplace	Freq	12	46	84	214	68
	%	2.80%	10.80%	19.80%	50.50%	16.00%
	Freq	12	6	52	287	66
KSB8: Teamwork discussion and collaboration enhance communication between colleagues	%	2.80%	1.40%	12.30%	67.70%	15.60%

Note: SD=Strongly Agree; D=Disagree; N=Neither Agree nor Disagree; A=Agree; SA=Strongly Agree