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Investigating the Impact of Organisational Culture and Leadership on Knowledge Sharing Behavioural Intention Among Employees in Organisations in the United Arab Emirates

Hanan Abdulla Al Mheiri

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**Investigating the Impact of Organisational Culture and Leadership on
Knowledge Sharing Behavioural Intention Among Employees in
Organisations in the United Arab Emirates**

A thesis submitted in (partial) fulfilment of the requirements for the award of the degree

DOCTOR OF PHILOSOPHY

from

UNIVERSITY OF WOLLONGONG IN DUBAI

by

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Abstract

This study seeks to obtain a better understanding of the factors influencing employees' knowledge sharing behavioural intentions within the Emirati organisational context. While the literature provides some examples of studies on the subject in Western countries and Asia, there has been a lack of research around the topic in the Middle East, Gulf Cooperation Council (GCC) countries and the United Arab Emirates (UAE). Some organisations have placed a lot of emphasis on innovation and technology and forgotten what (ultimately) makes their business really successful – the human factor.

The study followed a mixed methodology approach; the quantitative method was the primary approach and qualitative methods were employed as a complementary technique to deepen the understanding of some of the quantitative data results. The theoretical foundation of this thesis is based on the theory of reasoned action (TRA) and the theory of planned behaviour (TPB). These theories are widely used in social psychology to explain many human behaviours. The model therefore is developed based on the latest evolution of the TRA and TPB framework as well as additional factors highlighted in the literature. Eleven variables were tested to examine their impact on the intention to share knowledge in an organisational context. Primary data were obtained from a questionnaire administered to three large government organisations in the UAE: of 1073 questionnaires, 881 were usable. A total of 21 (including the pilot interviews) semi-structured interviews were carried out in the same three organisations with organisational executives, KM managers and KM practitioners. Structural equation modelling was used to test the three study models. The results show that both inclusive leadership's and knowledge leadership's influence on organisational culture dimensions (participation, trust, agreement, team orientation, and openness) were highly significant. Interestingly, and contrary to expectations, the quantitative data show that neither participation nor team orientation had a significant impact on attitude toward knowledge sharing. Also, the results show that inclusive leadership has a positive an impact on attitude toward knowledge sharing whereas knowledge leadership was found to have a negative influence. In addition, all TRA constructs were significant for all three models. The results offer various insights into knowledge sharing behavioural intentions in organisations in the UAE. Policy makers, executive leaders and KM managers will be able to utilise the results and the practical implications of this study to create intervention

programs to enhance knowledge sharing intentions and practices in organisations.

The thesis provides an alternative view to the more common technological focus, moving it more onto human related factors. It is important for organisations to acknowledge the importance of both leadership and organisational culture on knowledge sharing behavioural intentions among employees. Like anything else that keeps evolving, organisational culture and leadership too evolves and therefore, organisations need to look for the best organisational culture and leadership style that will keep them on top of the market.

Keywords: knowledge sharing intention, organisational culture, theory of reasoned action, team orientation, trust, agreement, openness, knowledge leadership, inclusive leadership.

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Dedication

I worked nonstop for my dream of obtaining a PhD. There were times when I almost lost hope but I kept fighting because of the power I was given by special people in my life.

I dedicate my thesis to my family and my many friends. A special feeling of gratitude to my loving parents, my father, Abdulla Al Mehairi, who taught me that persistence is the key to success, and my mom, Eklhas Abdelfattah, who taught me to never turn down an opportunity for education. My mom lived in hard times where she wasn't able to get an education. My mother used to say "Your education is your weapon" and she was not wrong. If I have learned something, it is that we are what we know and with knowledge we are different; and, of course, we have a competitive advantage over others who do not have it. I lost my amazing mother during this challenging journey but she will always remain the source of my inspiration and my drive to make a great difference wherever and whenever possible. I thank both my parents for their prayers for me to be happy and successful.

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Publications

Al Mehairi, H. A. (2013). Cultural Influences on Knowledge Sharing Behaviours Through Open System Vs. Closed System Cultures: The Impact of Organisational Culture on Knowledge Sharing [Paper presentation]. 10th International Conference on Intellectual Capital, Knowledge Management and Organisational Learning, The George Washington University Washington, DC, USA.

Al Mehairi, H. A. and Binning, K. (2014). Employee Oriented vs. Work Oriented Cultures and the Moderating Role of Education on Intention to Share Knowledge *Proceedings of the 2014 11th International Conference on Information Technology: New Generations* (545–551). IEEE Computer Society. doi: 10.1109/ITNG.2014.50.

Al Mehairi, H. A. and Zakaria, N. (2011). *Exploring the effects of organizational culture on collaborative vs competitive knowledge sharing behaviors* [Paper presentation]. International Conference on Integrated Information, Greece.

Al Muhairi, H. and Zakaria, N. (2012). *Share it or keep it to yourself? Inculcating knowledge sharing behaviors at workplace using a culturally oriented framework* [Paper presentation]. International Business Information Management Association 18th IBIMA Conference. Istanbul, Turkey.

Al Mehairi, H. A. and Zakaria, N. (2014). “Understanding Organizational Culture for Effective Knowledge Sharing Behaviors in the Workplace.” *Organizational Cultures: An International Journal* 13(3), 33–52. doi:10.18848/2327-8013/CGP/v13i03/59257

*The change in the author’s family name (Al Muhairi, Al Mehairi and now recently to Al Mheiri) is due to a government initiative to standardize family name spellings).

Certification

I, Hanan Abdulla Al Mheiri, declare that this thesis submitted in fulfilment of the requirements for the conferral of the degree Doctor of Philosophy, from the University of Wollongong in Dubai, is wholly my own work unless otherwise referenced or acknowledged. This document has not been submitted for qualifications at any other academic institution.

Hanan Abdulla Al Mheiri

21 Jan 2022

Research Motivation

Working in the knowledge management domain at the Dubai Police General Headquarters for four years and at the Dubai Electricity and Water Authority for more than 15 years has given me the opportunity to pilot and implement many KM projects and operations. It has also given me the opportunity to be exposed to the challenges organisations face during implementation of KM initiatives and making them successful. I have had the opportunity to attend many governmental meetings, seminars, conferences, and workshops where companies shared their experiences of implementing KM systems. A lot of government firms face difficulties in effectively implementing knowledge management systems and sometimes they fail to achieve the potential objectives of KM. However, this failure in KM is not just a local issue that affects a couple of firms in the UAE; it is a global concern. According to Ambrosio (2000), approximately 50%–70% of knowledge management initiatives and projects fail to meet their objectives. This huge failure in the implementation of KM motivated me to investigate the reasons that could contribute to the failure or success of KM. Knowledge sharing is considered an essential factor for organisations to be able to effectively implement knowledge management (Chen et al. 2013; Damodaran & Olphert, 2000; Levin et al., 2002); and organisational culture is one of the most important factors affecting the success or failure of knowledge management (Storey & Barnett, 2000). Further, research has pointed out that organisational culture can affect knowledge sharing positively or negatively depending of the type of culture that is fostered within the organisation (Arling & Chun, 2011; Gagné, 2009; Hansen et al., 1999; Huysman & Wulf, 2006; Lin, 2007; Reyhav & Weisberg, 2010; Su et al., 2010; Tohidinia & Mosakhani, 2009). Sadly, it appears that sometimes management does not pay attention to the organisational culture that is the identity of the organisation and instead focuses only on enforcing global standards that might not suit their organisational culture. Thus, the central idea underlying this research is that knowledge management can be effective if organisations unite their efforts with a common objective and concentrate on guiding individual behaviour to share knowledge and fostering an organisational culture that is suitable for knowledge sharing (Storey & Barnett, 2000). Thus, this study seeks several outcomes. First, this study will address different organisational culture dimensions and identify which types are more supportive of knowledge sharing behaviour. Therefore, the outcomes of the study will help organisations to identify their organisational culture type and, based on the results, they

should be able to create an organisation culture that better enhances knowledge sharing among employees. Second, this study will raise awareness of the importance of knowledge sharing among an organisation's employees. Third, the thesis aims to help organisations and leadership to establish regulations and guidelines for knowledge sharing in the organisations' policies and strategies. Here, my motivation is to provide a mechanism to support companies in facilitating knowledge sharing behaviour among employees and to help them create the correct organisational culture to encourage knowledge sharing through the research models of this thesis.

List of Abbreviations

ATKS	Attitude Toward Knowledge Sharing
CMB	Common Method Bias
DGHRD	Dubai Government Human Resources Department
FAHR	Federal Authority for Government Human Resources
GCC	Gulf Cooperation Council
GEM	Government Excellence Model
H	Hypothesis
HTMT	Heterotrait-Monotrait Ratio
IL	Inclusive Leadership
IN	Injunctive Norms
ITSK	Intention to Share Knowledge
KL	Knowledge Leadership
KM	Knowledge Management
LO	Learning organisation
KS	Knowledge Sharing
KSB	Knowledge Sharing Behaviour
OC	Organisational Culture
PBC	Perceived Behavioural Controls
SEM	Structural Equation Modelling
SKGEP	Sheikh Khalifa Government Excellence Program
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UAE	United Arab Emirates
UOW	University of Wollongong
UOWD	University of Wollongong in Dubai
VIF	Variance Inflation Factor

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Chapter 1: Introduction

This chapter begins with an overview and background of the study topic. This is followed by the research aims and objectives along with the research questions. Information about the context where the study takes place is then presented. Finally, the structure of the thesis is presented and discussed.

1.1 Introduction

In order for organisations to thrive in today's dynamic workplace they must be aware of the advantage of knowledge sharing (KS) and the competitive advantages it can bring to a firm (Al-Adaileh & Al-Atawi, 2011; Damodaran & Olphert, 2000; Levin et al., 2002). KS requires individuals to interact and collaborate to share their knowledge with their co-workers, jointly create new knowledge and then transform it into organisational knowledge that benefits the whole organisation (Yang et al., 2020). However, many organisations fail to pay attention to knowledge sharing; this can have a significant impact, including financial disadvantages. For example, Babcock's (2004) study into Data Corp, an international market intelligence firm, has concluded that failure to share knowledge within Fortune 500 companies has led to annual losses in excess of \$31 million. Two key factors impact knowledge sharing among employees: organisational culture and the leadership of an organisation (Chua & Lam, 2005; Minyoung et al., 2012; Ruggles, 1998; Stewart, 1991; Storey & Barnett, 2000; Suliman & Moradkhan, 2013). Leadership is a crucial factor as it has an enormous impact on both organisational culture and knowledge sharing behaviour among employees (Gerpott et al., 2019; Minyoung et al., 2012; Suliman & Moradkhan, 2013). However, leadership evolves over time and there is no clear guidance within the literature on which particular leadership style promotes knowledge sharing among employees. Importantly, leaders within many organisations do not take any action to enhance their leadership style to improve organisational culture, instead focusing more on technological aspects. Various technological tools have been created to support knowledge sharing among employees (Call, 2005; Kaplan, 2002; Ribi  re & Calabrese, 2016; Tsui, 2016) but without proper leadership and a supportive culture, these initiatives might not be successful. One reason for this is the misconception around the domain of knowledge management (KM) as organisations and leaders think KM is about technology (Call, 2005; Ribi  re & Calabrese, 2016): however, the emphasis

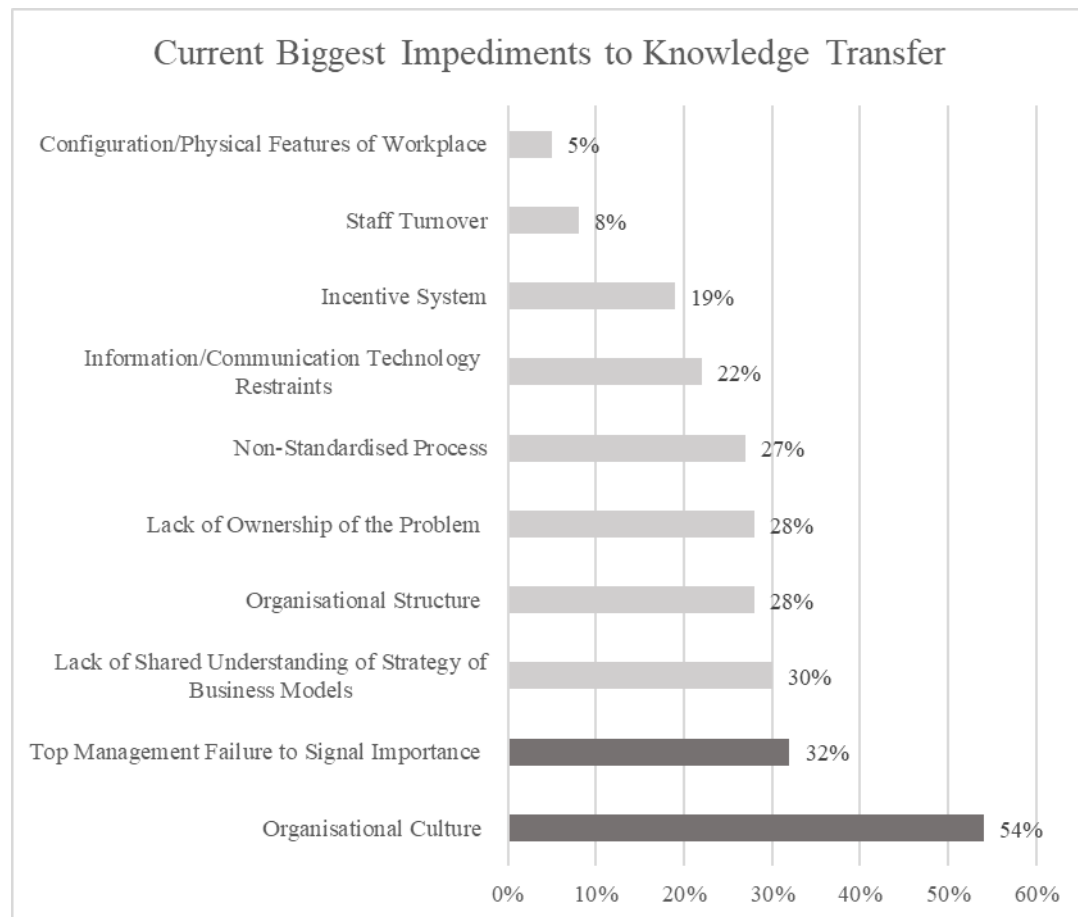
should be directed more on people and how they interact with one another as knowledge sharing is one of the most important factors in KM (Rivière & Calabrese, 2016). This thesis, therefore, seeks to address this gap by investigating employees' knowledge sharing behavioural intentions in an organisational context. The study aims to develop a framework for organisations to assist them to improve both leadership and organisational culture in order to nurture and improve knowledge sharing among employees. The key to improving and increasing the knowledge sharing behavioural intentions of employees is to focus on organisational culture and leadership rather than treating the symptoms of the problem by looking at technological solutions (Lyu & Zhang, 2016). Consequently, this study examines the role of both leadership and organisational culture in employees' knowledge sharing behavioural intentions. The study was conducted in the government sector, answering a call by Shariq et al. (2019) who pointed out that previous research focused primarily on the private sector. Based on the results of the research, the study offers some recommendations for policy makers and leaders in the UAE to enhance organisational culture and leadership and to increase knowledge sharing behavioural intentions among employees. The study utilises a mixed methods approach to provide a range of perspectives on the topic.

1.2 Background: Organisational Culture and Knowledge Sharing

In order for organisations to increase knowledge sharing behavioural intentions among employees their focus should be redirected from technology-based solutions to people and culture-based solutions. Chión et al. (2019) investigated the organisational culture, organisational structure, and technology infrastructure of knowledge sharing and their results showed that while both organisational culture and organisational structure have a significant positive impact on knowledge sharing, technology infrastructure does not. KS must be taken seriously because it is considered to be one of the most important elements in knowledge management (Al-Adaileh & Al-Atawi, 2011; Damodaran & Olphert, 2000; Levin et al., 2002). A number of researchers have identified some of the reasons that contribute to KM and KS failure. These are: 1) organisational culture (Chua & Lam, 2005; Storey & Barnett, 2000), (2) lack of managerial ability (Bantel & Jackson, 1989), (3) lack of KM awareness (Singh & Sharma, 2011), (4) insufficient implementation time being allocated (Guptara, 1999), and 5) technology (Chua & Lam, 2005). Further, as early as 1998, Ruggles reported on a study conducted by Ernst & Young in which 431 US and European organisations were studied (see Figure 1.1). In this study Ernst & Young

identified the biggest challenges to knowledge transfer as 1) the existence of an inappropriate organisational culture and 2) lack of leadership skills in terms of their inability to signal priorities within the organisation. Over two decades later, these problems still persist. This thesis seeks to address this gap by investigating different dimensions of organisational culture and studying their impact on knowledge sharing.

Figure 1.1 Current Biggest Impediments to Knowledge Transfer (after Ruggles, 1998, p. 88)



Several studies have highlighted that the failure of KM and KS between employees in organisations is caused by many factors; however, inappropriate organisational culture is presented at the top of the list (Chua & Lam, 2005; Ruggles, 1998; Schein, 1986; Storey & Barnett, 2000) with leadership as the second most important factor (Bantel & Jackson, 1989; Ruggles, 1998). Stewart (1991, p. 39) argued that achieving the desired outcomes from an investment in knowledge requires “a corporate culture that allows it to flow freely, which means breaking down hierarchies and getting rid of rules that stifle new ideas”. Magnier-Watanabe and Senoo (2010) present the benefits of a positive organisational culture asserting that knowledge sharing within these organisations is more likely to be implanted successfully. Damodaran and Olphert (2000) pointed out that

organisational culture, and more precisely creating a knowledge-sharing culture, is the most important condition for effective KM. Ayatollahi and Zeraatkar's (2020) study results revealed that both organisational culture and organisational leadership are very important factors in developing successful KM. Their study pointed out that organisational leaders play an exceptional role in influencing employees toward knowledge sharing and creating an organisational culture that facilitates knowledge sharing. They further elaborated that the organisational culture should support open and transparent communication among employees as this will lead to collaboration and knowledge sharing across organisational levels. Therefore, understanding the culture in organisations is vital to both improving knowledge sharing among employees and maximizing the competitive advantage of the organisation in general. Managers, especially knowledge management managers, need to understand knowledge sharing behaviour in order to create an environment that maximizes knowledge sharing among employees and increases the organisations' intellectual capital (Ayatollahi & Zeraatkar, 2020; Lakshman, 2007).

This study examines the impact of different organisational culture dimensions on knowledge sharing behavioural intentions. It also examines the role of leadership in influencing organisational culture and knowledge sharing behavioural intentions. This research focuses mainly on the government sector, and specifically targets large organisations in the UAE. The following section explains the context of the UAE and some of the leadership efforts in KM and KS in organisations.

1.3 Research Context: The United Arab Emirates

Despite numerous studies on knowledge sharing, little research has been done in the Middle East, Gulf Cooperation Council (GCC) countries and, more specifically, the UAE (Abdallah et al., 2012; Al Bastaki et al., 2020; Behery & Paton, 2008). Hence, this study takes place in the context of the UAE—a country that is considered to be relatively young by global standards because it was only federally founded on 2nd December 1971 under the leadership of HH Sheikh Zayed Bin Sultan Al Nahyan (Anadol & Behery, 2020). It consists of seven emirates: Abu Dhabi (the capital), Dubai, Sharjah, Ajman, Umm Al Quwain, Ras al-Khaimah and Fujairah, each ruled by a sheikh (Rehman, 2007; Suliman & Moradkhan, 2013). Sheikh Zayed believed that investment in people's well-being, knowledge and capabilities leads to the greatest reward for individuals and families

(Anadol & Behery, 2020). The emirate of Abu Dhabi occupies 86.7% of the total area which makes it the largest of the seven emirates: Dubai is the second largest, covering 5% (Jassem et al., 2011).

The UAE is one of the GCC countries which also include Saudi Arabia, Oman, Kuwait, Bahrain and Qatar (Al Bastaki et al., 2020). It covers 82,600 square kilometres and is located on the eastern side of the Arabian Peninsula (Suliman & Moradkhan, 2013). Resting between East and West, it contains desirable features of both civilizations (Anadol & Behery, 2020). However, while establishing new trends and modernisation, the UAE leadership has protected the country's heritage and Islamic principles to avoid a total separation from the past (al-Suwaidi, 2011). Social life in the UAE is highly influenced by cultural values and Islam as all UAE nationals integrate religion in daily life (Jassem et al., 2011). Although the official language in the UAE is Arabic, English is widely used and well understood in communications (Jassem et al., 2011). According to the most recent United Nations (UN) data, the country's population is 9,938,261 which includes 10% UAE nationals (also known as Emiratis), 58% South Asian, 8.5% Western expatriates and the remainder different nationalities (World Population Review, n.d.). This distribution shows the extent of cultural diversity present (Anadol & Behery, 2020) which is also reflected in the work place. This study therefore, also explores the impact of nationality when it comes to sharing knowledge between Emiratis and non-Emiratis.

1.4 Leadership Influence on Knowledge Sharing in the UAE

Anadol and Behery (2020) described the leaders of the UAE as not only competitive and goal-oriented but also following in Sheikh Zayed's footsteps in having a humanistic approach when dealing with people coming from diverse backgrounds to achieve prosperity for the country. The UAE leaders were ranked second in highest public trust in politicians globally as per the 2019 World Economy Forum (Anadol & Behery, 2020). There are many examples of UAE leaders looking after peoples' well-being: for instance, in 2016 the post of "Minister of Happiness" was created (Anadol & Behery, 2020).

The discovery of oil and gas deposits in the GCC enabled them to achieve rapid economic growth and social development (Al Bastaki et al., 2020). However, the government is aware that they need to transform the economy to a model which is driven by knowledge and innovation since the oil and gas reserves will not last forever (Al Bastaki et al., 2020; UAE, 2014, p. 18). The UAE government has emphasised the importance of knowledge

management and developed several initiatives to encourage both government and private organisations to enhance and nurture knowledge sharing among employees (Al Bastaki et al., 2020; Siddique, 2012). Siddique (2012) pointed out, for example, that the UAE is one of the few countries that has created national programmes to stress the strategic importance of KM and KS for the country's social and economic progression.

One of the Dubai Government's KM initiatives was establishing the Knowledge and Human Development Authority (KHDA) in 2006, which ensures and monitors the quality and development of education and human resources in the emirate (Siddique, 2012). In 2007, the Mohammed Bin Rashid Al Maktoum Foundation (MBRAF) was established with a \$10 billion endowment fund; it is now considered one of the major government efforts to further enhance and develop KM in the region (Siddique, 2012). Mohamed et al. (2008) provided a comprehensive review of the Mohammed Bin Rashid Al Maktoum Foundation's role in advancing KM and its four main pillars which are: 1) building a knowledge society, 2) leadership, 3) research and development, and 4) sustainability. Mohamed et al. (2008) further highlighted the limited research on KM related topics, not only in the UAE but also at regional level in organisations in the Arab world in general.

As well as the many establishments created in Dubai and the other emirates of the UAE to support KM initiatives and programmes, the federal UAE and Dubai governments also provide additional guidance to organisations through various government programs. For instance, the Federal Authority for Government Human Resources (FAHR) produced the "Guide of [*sic*] Knowledge Management in the Federal Government" in 2017 to provide a common understanding for all federal and Government organisations: the guide provided tips for organisations on how to establish "Knowledge Sharing Platforms" in order to help organisations produce and share knowledge, experience and skills among their employees (FAHR, 2017). Further, in order to provide alignment in government organisations toward common excellence standards and understanding, the Sheikh Khalifa Government Excellence Program (SKGEP) was established under Decree No. 165/22, session No. 9 on 12th June 2006 (Sheikh Khalifa Excellence Program, n.d.).

In 2019, His Highness Sheikh Khalifa Bin Zayed Al Nahyan, the President of the United Arab Emirates and His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai introduced the updated Government Excellence Model (GEM) as part of SKGEP (UAE, 2019). The program is

unique as it addressed some gaps that were identified in the previous excellence programs. GEM consists of three main pillars: 1) vision realisation (40%), 2) distinctive value (35%) and, 3) enablers (25%). Table 1.1 shows the breakdown for each pillar (UAE, 2019).

Table 1.1 The Government Excellence Model - Pillars and Criteria (UAE, 2019)

GEM Pillars	GEM Criteria
First Pillar: Vision Realization (40%)	1.1 First Criterion: Enhancing Wellbeing (10%)
	1.2 Second Criterion: Future Readiness (10%)
	1.3 Third Criterion: Strategic Directions and Competitiveness (10%)
	1.4 Fourth Criterion: Main Functions (10%)
Second Pillar: Distinctive Value (35%)	2.1 Fifth Criterion: New Generation Services (15%)
	2.2 Sixth Criterion: Intelligent Enablement (10%)
	2.3 Seventh Criterion: Talented Professionals (10%)
Third Pillar: Enablers (25%)	3.1 Eighth Criterion: Resources and Assets (5%)
	3.2 Ninth Criterion: Data and Knowledge Management (5%)
	3.3 Tenth Criterion: Partnerships and Integration (10%)
	3.4 Eleventh Criterion: Government Communication (5%)

GEM aims to provide government organisations with guidance to enhance organisational culture by ensuring employees' well-being and happiness. It also addresses the area of data and knowledge management which includes areas such as collaboration and knowledge sharing among employees as well as knowledge sharing with partners externally. In the first pillar, leaders of the UAE empower employees to take part in important decisions and take part in shaping the future. They also support employees to take part in designing main functions for entities and establish strategic alignments to ensure that entities are competitive (UAE, 2019). All of these factors where leaders empower employees to take part in shaping the future of government entities, implies the existence of inclusive leadership.

Similarly, GEM also places emphasis on knowledge leadership as it influences employee creativity and the process of generating new ideas and innovations as well as creating value by managing, sharing and creating new knowledge. It further emphasises the importance of having a culture of innovation to address challenges in an unconventional way and stresses the importance of fostering employees' creative mindsets to accomplish everyday duties (UAE, 2019). The Guide also stresses that leaders should create an environment of trust where employees are not afraid to make mistakes, take risks, learn from their mistakes and incorporate new learning for the future.

The Dubai Government Human Resources Department (DGHRD) passed an HR law, Executive Council Resolution No. (39) of 2018, which describes the role of immediate supervisors in addressing the performance management system of employees. Having such a system in place for performance appraisal brings clarity and trust among employees that the leadership will be evaluating them using an established clear and specific methodology and using standard criteria. This supports the creation of an organisational culture which is characterised by trust whereby employees are confident that their line managers will treat them fairly while appraising their performance. The law also highlighted the role of immediate supervisors in identifying and addressing opportunities, challenges, training and resources needs for their employees. Hence, this suggests that the management should be characterised as having knowledge leadership where they understand their teams' needs and provide them with the necessary resources (Yang et al., 2014). Further, the law addressed the role of leadership in supporting employees to build a strong team spirit but at the same time have the principles of fair competition (The Supreme Legislation Committee in the Emirate of Dubai, 2018). This also implies that the management should be characterised with knowledge leadership where they support their team to learn while cultivating a team spirit (Yang et al., 2014).

1.5 Research Aims and Objectives

The main objective of this research is to examine the impact of organisational culture and leadership on knowledge sharing behavioural intentions among employees within the UAE workplace. The study also seeks to examine the impact of leadership on organisational culture and determine if this can facilitate knowledge sharing among employees. The research also identify gaps in the literature concerning knowledge management, knowledge sharing, organisational culture, and leadership and establish the relationships of these concepts to the UAE organisational context. To sum up, this thesis aims to answer the following research questions:

- How do organisational culture dimensions (participation, trust, agreement, team orientation, and openness) impact employees' attitude toward knowledge sharing?
- How does leadership (inclusive leadership and knowledge leadership) impact employees' attitude toward knowledge sharing?
- How does leadership (knowledge leadership and inclusive leadership) influence organisational culture dimensions (participation, trust, openness, team orientation and agreement)?

Primarily, the thesis aims to achieve the following objectives:

- Identify and assess the role of organisational culture dimensions in injunctive norms and attitudes toward knowledge sharing in UAE organisations
- Provide managerial and policy implications to UAE organisations to promote a more effective organisational culture that supports knowledge sharing behavioural intentions for employees in organisations.
- Develop a comprehensive understanding of how organisational culture and leadership affect knowledge sharing behavioural intentions.

The research provides an understanding of knowledge sharing behaviour through the employees' intentions to share knowledge by adopting two major theories from social psychology, the theory of reasoned action (TRA) (Fishbein & Ajzen, 2010) and the theory of planned behaviour (TPB) (Ajzen, 1991). Examining knowledge sharing intention from a social psychological perspective offers an understanding and explanation of the process an individual goes through when making a decision about whether or not to share their knowledge with their co-workers. Therefore, this research aims to provide valuable insights for organisations and leadership to examine their organisational culture and transform it to a culture that supports knowledge sharing behaviour. Thus, the results of the study can be used to introduce appropriate intervention programs which can be utilised to change employees' behaviour to comply with knowledge sharing with their peers. Intervention programs can take many forms such as organisational policies, and awareness and training sessions: having a better understanding of the impact of leadership and organisational culture will contribute to the success of these intervention programs.

To answer the research questions, a mixed methods approach was utilised. In addition, a pilot study was conducted prior to the main study to test the measurement instrument and to provide insights whether to include additional factors for the main study. The primary research method is quantitative; the qualitative methods were used to gain further insights through the adoption of thematic analysis designed to support and explain the results of the quantitative research models.

1.6 Structure of the Thesis

Chapter 1 provides a background to the research topic, and stated the aims and objectives of the study. It also lays out the remaining structure of the thesis below.

Chapter 2 is the literature review. It first provides an overview of the key concepts of the study such as knowledge sharing behaviour, types of knowledge, organisational culture, and leadership. It also addresses the evolution of knowledge management, organisational culture and leadership in the literature. Following that, the chapter addresses the relevant concepts of the study such as organisational culture dimensions (participation, trust, agreement, team orientation, and openness) as well as knowledge leadership and inclusive leadership from relevant literature. It then highlights some of the current key gaps in the literature.

Chapter 3 presents the theoretical development where the theoretical foundation and rationale for the hypothesised relationships are presented and discussed. To answer the research questions and fulfil the research objectives, Chapter 3 covers three research models which are later empirically tested in Chapters 5 and 6. All three research models are designed in light of TRA and TPB framework. Model 1 examines the effect of both knowledge leadership and inclusive leadership as influencers for organisational culture dimensions whereby organisational culture affects knowledge sharing intention. Model 1 adopts a TRA and TPB theoretical framework, with organisational culture dimensions as background factors as well as adding both knowledge leadership and inclusive leadership as influencers on the background factors which is one of the main contributions to the theory: knowledge leadership and inclusive leadership improve the understanding of employees' motivation to share knowledge. Model 2 examines the effect of both knowledge leadership and inclusive leadership as background factors in the TRA and TPB framework and tests them as drivers for attitudes to sharing knowledge. Model 3 examines both knowledge leadership and inclusive leadership as moderators of the relationship between organisational culture dimensions and attitudes toward knowledge sharing.

Chapter 4 discusses the research methodology adopted in the study. This study uses a mixed methods approach in order to answer the research questions. The chapter starts by explaining the emergence of the mixed methodology approach in the literature. It then explains its application in the current study by explaining the research design and its four

main stages of the mixed methods design of the study. The chapter explains the procedures for both the quantitative and the qualitative methods. Although, the research follows a mixed methodology approach, the research is deductive in nature as the quantitative method is the primary research method with the qualitative methods utilised to support and help explain the knowledge sharing behaviour in the context of the United Arab Emirates. The data analysis preparation processes for both research methods are discussed. In addition, the chapter covers the techniques utilised to analyse the quantitative and qualitative data in detail. The chapter also discusses the data collection process, ethical considerations, sampling, questions, etc.

Chapter 5 focuses on the analysis, interpretation and presentation of the quantitative data for this study. It explains the context of the data collection process, outlines the characteristics of the participants and explains the techniques chosen to analyse the data. Then it details the process which took place to prepare the data for analysis. Following that, it explains in detail the process of evaluating the measurement model and the evaluation of the structural model. Three models are tested and discussed. The hypotheses are then tested using structural equation modelling (SEM) to further explore and confirm the relationships in the conceptual models. It discusses some analysis with regard to the controlling variables which were considered in the analysis. The chapter further provides a post hoc analysis to explore some moderating and mediating effects.

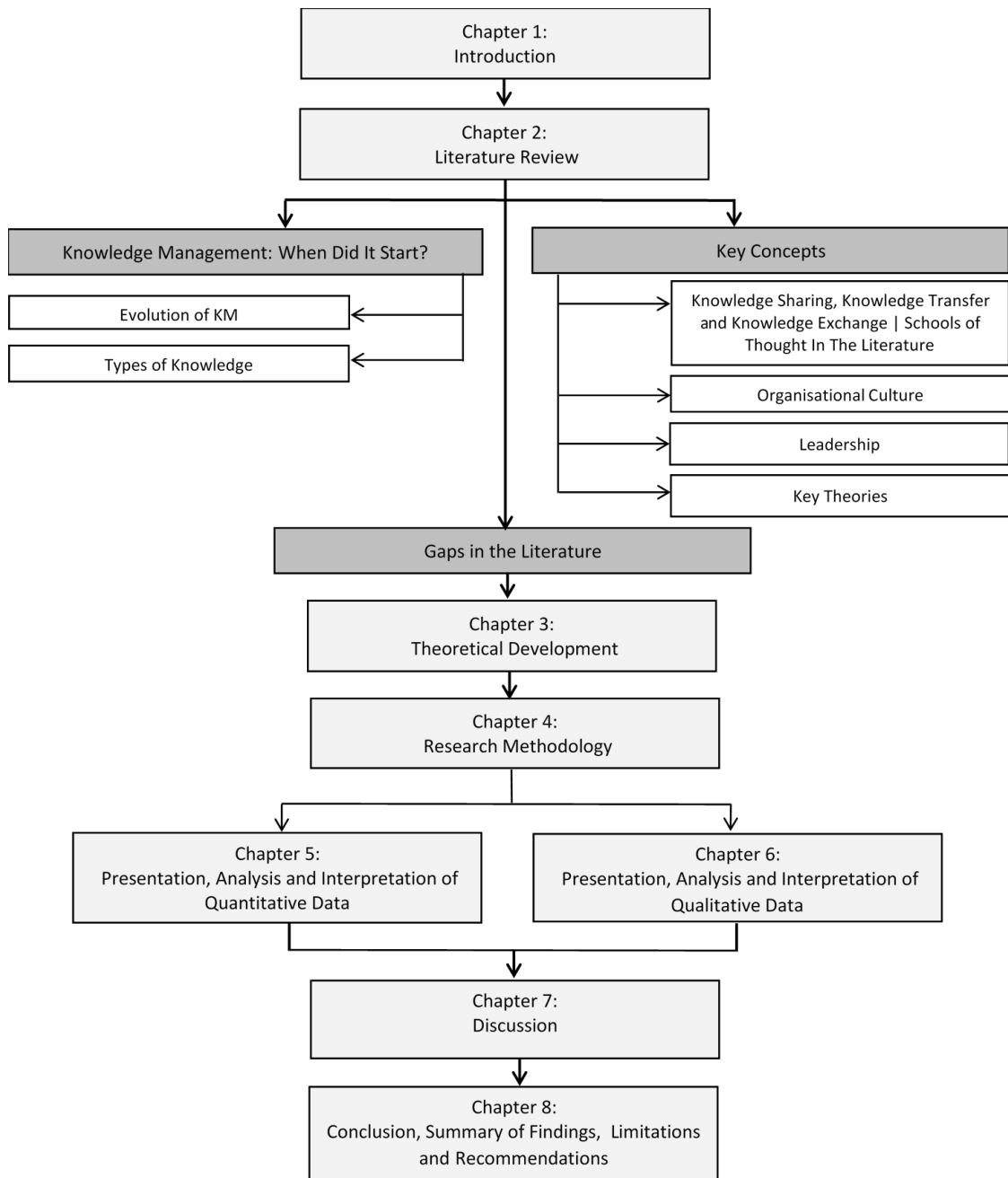
Chapter 6 presents the qualitative analysis. It explains the data collection for both the pilot and main interview procedures. The chapter presents some valuable insights from the interviewees on the main topic in addition to some insights related to the quantitative results.

Chapter 7 presents the discussion of quantitative and qualitative analysis collectively. The chapter highlights the results and their relation to answering the research questions. It also addresses the similarities and differences to other studies that have investigated the current constructs of the study to highlight the contribution of this study.

Chapter 8 concludes: it summarises the thesis, its theoretical and practical contributions and the practical implications. It also offers a set of recommendations for both policy makers and KM department heads in government entities in Dubai, the UAE, the GCC and Middle East region which could be considered when developing future KM initiatives

and programs. Finally, the limitations, and possible areas for future research are addressed.

Figure 1.2 Structure of the Thesis



1.7 Summary

This chapter has highlighted the knowledge gap whereby organisations are not aware of the factors that could cause KM failure. It also pointed out organisations' lack of awareness about the importance of organisational culture and how this can impact knowledge sharing among employees. In order for the UAE to continue to thrive, its

organisations have to focus on adopting a suitable leadership style and nurturing an equally suitable organisational culture that supports knowledge sharing. This thesis provides policy makers and UAE organisational leaders with an understanding of knowledge sharing behavioural intentions in organisations. It also examines the impact of both leadership and organisational culture on employees' knowledge sharing intentions. The study follows a mixed methodology approach, which provides more insights, especially on why things are done the way they are in the UAE context and also provides some insights and recommendations of how this can be improved in the future. This chapter began with an overview of and background to the study topic. Following that, the research aims and objectives were discussed along with the research questions. Finally, the structure of the thesis was presented.

Chapter 2: Literature Review

2.1 Introduction

Chapter 1 provided an introduction to and brief overview of the research topic, highlighting the importance of the research. This chapter provides a comprehensive review of the literature related to the emergence of the concept of knowledge, types of knowledge, and the development of knowledge management (KM). It also addresses misconceptions about KM in organisations. The chapter then covers some key concepts such as the differences between knowledge sharing, knowledge transfer and knowledge exchange. It also addresses the main concepts of the study including organisational culture evolution, organisational culture dimensions, leadership evolution, knowledge leadership and some of the common theories used to explain knowledge sharing behavioural intentions with a focus on the theory adopted in the present research. The final section points out the gaps found within the literature that this study seeks to address before a chapter summary.

2.2 Knowledge Management: When Did It Start?

Knowledge is considered a crucial resource for organisations that has to be managed in order to provide long-term sustainability (Probodha & Vasanthapriyan, 2019). Thus, successfully implementing knowledge management (KM) allows organisations to achieve and sustain a competitive advantage by continuously developing knowledge resources and assets (Probodha & Vasanthapriyan, 2019; Xue & Zhang, 2010). Jensen, and Webster (2009) explain that since KM and its processes such as knowledge creation and innovation brings to the firm a competitive advantage this has its downside. For example, some organisations have their own internal knowledge creation which is also called “closed-learning”. In this process they are more likely to protect their creations by the use of patents and secrecy which gives them the upper hand and control over the distribution.

Plato, in his philosophical works, for example, defined knowledge as the search for the truth (David, 2011). Aristotle, a disciple of Plato, spent a large proportion of his life in Plato’s academy before founding his own school, the Lyceum, based on a knowledge-sharing system; his wide-ranging works provided the foundations for the scientific

method (O'Connor & Robertson, 1999). Barnes (1982, p. 5), described how Aristotle perceived knowledge and the importance of knowledge sharing, stating that:

Aristotle believed that knowledge and teaching were inseparable. He thought, indeed, that a man could not claim to know a subject unless he was capable of transmitting his knowledge to others, and he regarded teaching as the proper manifestation of knowledge.

Hence, Aristotle argued that one cannot claim that they know something unless they are able to share it with others.

Another philosopher who has contributed to the concept of knowledge is Sir Francis Bacon, who coined the phrase “Knowledge is power” in 1597 (García, 2001). He believed that one can arrive at true knowledge through experimentation and observation and was one of the philosophers who brought the inductive method into modern science and philosophy as he believed that it is a conclusive approach to knowledge (Ochulor, 2011). This, however, could be seen as one of the weaknesses in Francis Bacon’s work because he only acknowledged inductive methods; his work therefore lacked hypothesis as he proposed that “one may look at facts and the hypothesis would suggest itself” (Ochulor, 2011, p. 83). Michael Polanyi has also written on tacit knowledge, first exploring it in *Personal Knowledge: Towards a Post-Critical Philosophy* in 1958, followed by *The Tacit Dimension* in 1966. At almost the same period of time, Fritz Machlup (1962) distinguished five forms of knowledge: (1) practical knowledge, (2) intellectual language, (3) small-talk and pastime knowledge (“entertainment and curiosity”), (4) spiritual and, (5) unwanted knowledge. Ikujiro Nonaka is a Japanese professor who is considered to be a guru in the field of knowledge management: he has studied the management of Japanese firms since the 1980s and focused on the notion of “knowledge creation” during the 1990s (Kausar & Yazdani, 2013). In 1995, with his co-author Hirotaka Takeuchi, he discussed different concepts such as tacit knowledge, the openness of mind and body, and middle-up-down management (Nonaka & Takeuchi, 1995). He also wrote *Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Innovation* in which he identified five enablers for strategy and knowledge creation: (1) instil a knowledge vision, (2) manage conversations, (3) mobilise knowledge activists, (4) create the right context, and (5) globalise local knowledge (Von Krogh et al., 2000, p.102-213).

Another key figure with regard to the importance of knowledge management is Carla

O'Dell, CEO of the American Productivity and Quality Center (APQC). In 1998, O'Dell co-wrote (with C. Jackson Grayson) *If Only We Knew What We Know: The Transfer of Internal Knowledge and Best Practices*. In it, they defined knowledge as, “information in action...knowledge is what people in an organisation know about their customers, products, processes, mistakes, and success, whether that knowledge is tacit or explicit” (p. 5). Grayson and O'Dell (1998) also identified seven steps to transfer knowledge in organisations: (1) create; (2) identify; (3) collect; (4) organise; (5) share; (6) adopt; and (7) use. At the end of their book, they provided “The Knowledge Management Assessment Tool (KMAT)” to guide and help organisations to self-assess their strengths and weaknesses in managing knowledge. In her second book along with her co-author Cindy Hubert (2011, p. 2) they widen the definition: “Until people take information and use it, it isn't knowledge” and define knowledge management as:

A systematic effort to enable information and knowledge to grow, flow, and create value. The discipline is about creating and managing the processes to get the right knowledge to the right people at the right time and help people share and act on information in order to improve organisational performance.
(p. 2)

O'Dell and Hubert (2011) also created a framework to help organisations develop a sound KM strategy. The framework consists of five levels: 1) initiate: growing awareness; 2) develop: growing involvement; 3) standardise: aligning processes and approaches; 4) optimise: driving organisational outcomes; and 5) innovate: continuously improving practice. Nancy M. Dixon, in her 2000 volume, *Common Knowledge: How Companies Thrive by Sharing What They Know*, laid out different sets of guidelines to help employees exchange both their explicit and tacit knowledge with other teams in the organisation.

Uit Beijerse (1999, p. 102) defines KM as:

achieving organizational goals through the strategy-driven motivation and facilitation of (knowledge-) workers to develop, enhance and use their capability to interpret data and information (by using available sources of information, experience, skills, culture, character, personality, feelings, etc.) through a process of giving meaning to these data and information.

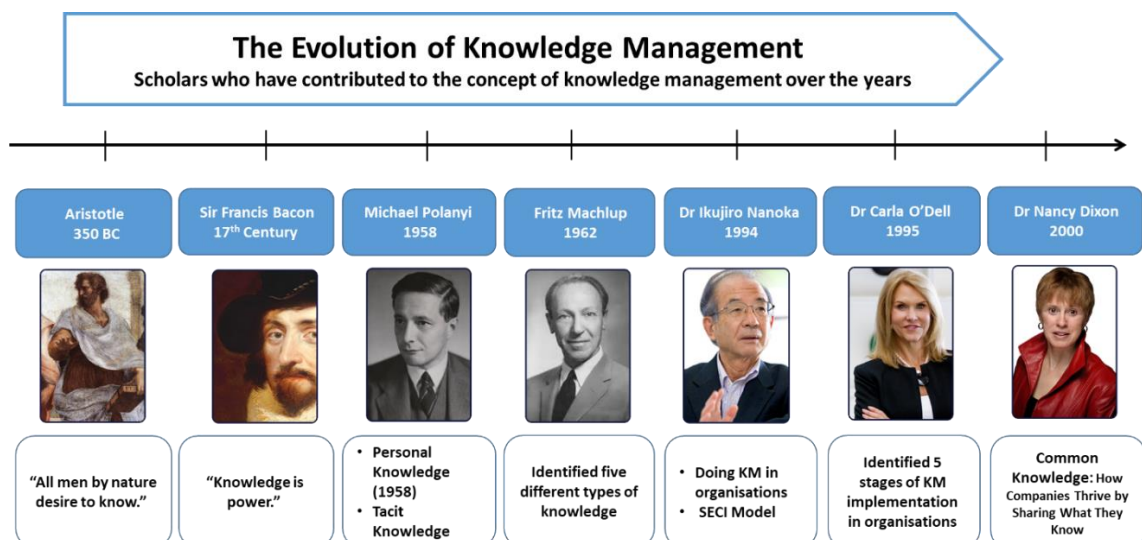
Learning Organizations (LO) will complement KM (Karkoulou et al. 2013). Pedler et al., (1991, p. 1) define a LO as “an organization that facilitates the learning of all its members and continuously transforms itself in order to meet its strategic goals”. Karkoulou et al. (2013) explain that both KM and LO require organisations to make conscious efforts to enable learning activities, and share knowledge and ideas in order to build effective

organisational culture and structure.

In 2018, the British Standards Institution published an ISO Standard implementation document (ISO 30401:2018) dedicated to Knowledge Management which it defined as “a systemic and holistic approach to improve results and learning. It includes optimizing the identification, creation, analysis, representation, distribution and application of knowledge to create organisational value” (p. 5). The APQC has also put together a glossary for key KM definitions and terms, defining KM as “The application of a structured process to help information and knowledge flow to the right people at the right time so they can act more efficiently and effectively to find, understand, share, and use knowledge to create value” (2018, p. 11). This definition is very similar to that of O’Dell and Hubert.

In summary, these definitions collectively show that knowledge management can be defined as an all-inclusive approach to improving learning and effectiveness through knowledge optimisation by ensuring that knowledge flows between organisational members, and that knowledge is shared with employees who need it when required. This definition demonstrates how knowledge sharing falls under the holistic approach of KM and summarises ideas that were previously by different scholars. It also highlights the importance of knowledge sharing and how it can create value for the organisation if done properly. From the above, in many ways KM is an interactive process, wherein there is a free interchange of concepts aimed at improving or creating new organisational competencies that then contribute to improving organisational performance.

Figure 2.1 The Evolution of Knowledge Management



Source: Developed for this study by the researcher.

Artwork/ photos sources: Aristotle in The School of Athens (1509). (<https://www.biography.com/scholar/aristotle>, accessed Nov 27, 2019); Unknown. Sir Francis Bacon (<https://quotesgram.com/sir-francis-bacon-quotes/> Accessed Nov 27, 2019); Elliott, & Fry (1930). Michael Polanyi (<https://www.npg.org.uk/collections/search/portrait/mw102534/Michael-Polanyi>, accessed Nov 27, 2019); Fritz Machlup (<https://freiheitslexikon.de/fritz-machlup/>, accessed Nov 27, 2019); Ikujiro Nonaka (<https://www.pocketbook.co.uk/blog/2016/05/17/ikujiro-nonaka-knowledge-management/>, accessed Nov 27, 2019); APQC (2019) Carla O'Dell (<https://www.apqc.org/profile/carla-odell>, accessed Nov 27, 2019); K4DP, Nancy Dixon (<https://www.k4dp.org/nancy-dixon/>, accessed Nov 27, 2019)

2.3 Misconceptions About Knowledge Management in Organisations

One of the major misconceptions about KM in organisations is their belief that KM is about technology (i.e., portals, shared folders, online systems, etc.) (Call, 2005; Ribière & Calabrese, 2016). Kaplan (2002) interviewed Shir Nir, a managing partner at Knowledge Transformation Partners (KTP), a New York KM consultancy, who said “The biggest misconception that IT leaders make is that knowledge management is about technology” (p. 6). Nir highlighted that organisations should focus their efforts on people instead of technology: “Usually people begin a KM project by focusing on the technology needs, whether they want a database or a portal. But the key is people and process” (Kaplan, 2002, p. 7). Technology, therefore, is just a small part of the overwhelmingly cultural endeavour (Call, 2005). Call also highlighted that KM is meant to help employees perform better, connect people to information when they need it, and connect people with people, stating that “It is important to realise that knowledge management is less of a technical problem, and more of a cultural problem” (p. 21). He further explained that while technology can be an advantage once there is a well-established KM system in place, KM cannot solely rely on technology. Over a decade later this gap still exists as highlighted by Husain and Gul (2019) who noted that most organisations adopt Wikis as part of their KM systems. However, they explained that many of these organisations face major problems with implementation such as lack of clear purpose, lack of management support and lack of organisational culture that supports sharing and collaboration.

Another risk of focusing KM efforts on technology is that it is expensive, both in money and effort, to build the system: additionally, these systems are very underutilised which does not fulfil the objectives of the KM initiative (Call, 2005). Similarly, Wensley (2016) pointed out that there are high-end information technology systems which have been successfully developed and integrated, but yet failed catastrophically; he gives the billion-

pound NHS information integration project in the United Kingdom as an example. Organisations therefore should take into consideration the countless examples of failures that derived from information systems in order to deliver the potential benefits for the organisation and their employees (Wensley, 2016).

Tsui (2016) shared his experience and lessons learned from working with 200 cases of Hong Kong and Asian enterprises: he pointed out that KM projects cannot be solely technical or solely people/process oriented: it is a combination of both which together delivers a good KM foundation. Similarly, Yang et al. (2020) also shared lessons learned for a project based in Siemens where they conducted eight cross-sectional interviews. Their findings contradicted the majority of the literature (e.g., Bartsch et al., 2013; Carrillo et al., 2013; De Long & Fahey, 2000; Disterer, 2002; Duffield & Whitty, 2015; Julian, 2008; Ranjbarfard et al., 2014) as they found that failure of KM systems is caused mainly by IT systems rather than people factors (i.e., organisational culture and leadership). This could be because of the current culture of the organisation as indicated by their study participants who highlighted that they have an open and collaborative culture and informal knowledge sharing takes place all the time. Edwards (2020) briefly compared articles about KM dated 1999 in the Web of Science database with those published in 2019 and found that the KM literature is gradually changing; it now offers a much more balanced view of people, processes and technology than it did in the 20th century. He then went on to look more in depth at the practical case studies of KM published in 2019. Restricting his analysis to those papers which included sufficient information on the people, process and technology elements, he found that “people helping to design and then operate processes” is the strongest relationship and “people design and then use technology” the weakest (Edwards, 2020, p. 219). This again could be due to the lack of awareness of the importance of having a clear purpose when adopting or designing new technologies to support KM activities.

Therefore, one of the gaps in organisations is that the focus of KM and knowledge sharing initiatives leans toward technology rather than people. This thesis, while adopting the general TRA framework, introduces and tests two of the most important factors (organisational culture and leadership) in the successful implementation of KM and enhancing knowledge sharing behavioural intentions among employees.

2.4 Types of Knowledge

There are three types of knowledge in the knowledge management literature: 1) explicit, 2) tacit and, 3) implicit.

Tiwana (2000, p. 45) defines explicit knowledge as “... that component of knowledge that can be codified, and transmitted in a systematic and formal language: documents, databases, webs, e-mails, charts, etc.” O’Dell & Hubert (2011) extend the definition of explicit knowledge, stating that “Explicit knowledge may not be useful without the context provided by experience” and assert that explicit knowledge could be described as formal or codified knowledge (p. 3). Similarly, Defillippi et al. (2009) defined explicit knowledge as “available through replication of written instructions, mathematical equations or scientific formulae that summarise the knowledge content” (p. 7).

Polanyi describes tacit knowledge as “the fact that *we can know more than we can tell*” (1966, p. 4), giving the example of face recognition: that we can recognise a face that we are familiar with even if it is among a million faces but usually cannot explain how we are able to do that and therefore, this knowledge cannot be translated into words. However, with the introduction of facial composite systems by various police forces it has become possible to communicate (at least, some of) our knowledge without having the precise verbal language that would otherwise be necessary (Polanyi, 1966). Defillippi et al. (2009) agree with Polanyi’s definition, referring to his classic example of learning how to ride a bicycle.

Tiwana (2000, p. 45) defined tacit knowledge as:

personal, context-specific knowledge that is difficult to formalize, record, or articulate; it is stored in the heads of people. Tacit knowledge consists of various components, such as intuition, experience, ground truth, judgment, values, assumptions, beliefs, and intelligence. The tacit component of knowledge is mainly developed through a process of trial and error encountered in practice.

Similarly, Defillippi et al. (2009) explain that tacit knowledge is “acquired through personal effort, involving the accumulation of experience and learning by doing, and becomes manifested in skilled performance” (p. 8). Tacit knowledge is important in making a decision or taking an action: as O’Dell & Hubert, (2011) explain, it is “what you know or believe from experience. It can be found in interactions with employees and customers. Tacit knowledge is hard to catalog, highly experiential, difficult to document,

and ephemeral. It is also the basis for judgment and informed action” (p. 3).

Tiwana’s summary of the characteristics of tacit and explicit knowledge is given in Table 2.1.

Table 2.1 Tacit and Explicit Knowledge (Tiwana, 2000, p. 45)

Characteristic	Tacit	Explicit
Nature	Personal, context-specific	Can be codified and explicated
Formalisation	Difficult to formalize, record, encode, or articulate	Can be codified and transmitted in a systematic and formal language
Development process	Developed through a process of trial and error encountered in practice	Developed through explication of tacit understanding and interpretation of information
Location	Stored in the heads of people	Stored in documents, databases, web pages, e-mails, charts, etc.
Conversation Processes	Converted to explicit through externalization that is often driven by metaphors and analogy	
IT Support	Hard to manage, share, or support with IT	Well supported by existing IT
Medium needed	Needs a rich communication	Can be transferred through conventional electronic channels

Nonaka and Takeuchi (1995) developed a theory of knowledge creation keeping in mind the level of the knowledge-creating bodies (individual, group or team, organisational, and inter-organisational). They also developed a framework where they explain the four modes of the knowledge conversion process, i.e., how knowledge is converted and shared. Their school of thought only focuses on tacit and explicit knowledge and they explain that knowledge conversion happens when tacit and explicit knowledge interact. These four modes of knowledge conversion consist of: socialisation, externalisation, combination and internalisation as displayed in Figure 2.2.

Figure 2.2 Four Modes of Knowledge Conversion (Nonaka & Takeuchi, 1995, p. 62)

	Tacit knowledge	to	Explicit knowledge
Tacit knowledge	Socialization		Externalization
From			
Explicit knowledge	Internalization		Combination

Nonaka and Takeuchi (1995) explain that socialisation (from tacit to tacit) is connected

to previous theories of group processes and organisational culture. They define socialisation as a “process of sharing experiences and thereby creating tacit knowledge such as shared mental models and technical skills” (p. 62). In a work environment, this is commonly referred to as on-the-job training where the same principle is applied (Nonaka & Takeuchi, 1995). Additionally, they highlighted that socialisation occurs regularly between product developers and customers: the interactions between the two parties begin prior to the introduction of the product to ensure that customers’ needs are met and continue after the development is completed and the product is available in the market. This ongoing process of creating new ideas ensures the relevancy of the product in the market and also ensures that the product is up-to-date.

Nonaka and Takeuchi (1995) define externalisation (from tacit to explicit) as “a process of articulating tacit knowledge into explicit concepts. It is a quintessential knowledge-creation process in that tacit knowledge becomes explicit, taking the shapes of metaphors, analogies, concepts, hypotheses, or models” (p. 64). However, they explained that this could be challenging because when we as humans attempt to conceptualise an image, we describe it mostly in language and thus verbal expressions can be inadequate and insufficient. Therefore, they proposed combining deduction (basing it on something existing) and induction (basing it on something new, based on people’s feedback, etc.) to overcome this challenge. Therefore, a person’s expression of ideas through both inductive and deductive analysis with supportive metaphors, analogies, narratives and visuals is very important (Nonaka & Nishiguchi, 2001). Another factor that supports externalisation is dialogue or “listening and contributing to the benefits of all participants” (Bohm, 1980 cited in Nonaka & Nishiguchi, 2001, p. 16).

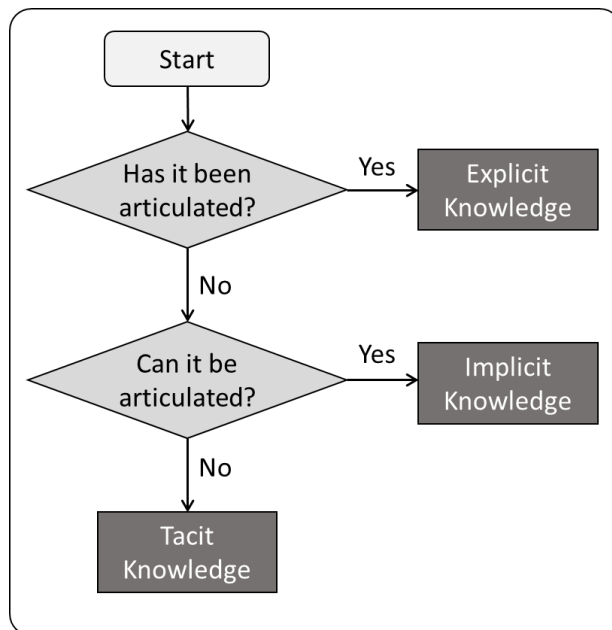
Combination (from explicit to explicit) is another element of information processing theory: Nonaka and Takeuchi define it as “a process of systemising concepts into a knowledge system” (1995, p. 67). They further elaborate that when individuals exchange explicit forms of knowledge such as documents, meeting minutes, etc., and reconfigure the existing information through sorting, adding, combining and categorising, this could lead to new knowledge. This form of knowledge creation is visible in formal education and trainings at schools and universities and MBA education is a key example of this type (Nonaka & Takeuchi, 1995).

Internalisation (from explicit to tacit) is closely related to organisational learning theory

and refers to the “process of embodying explicit knowledge into tacit knowledge. It is closely related to ‘learning by doing’” (Nonaka & Takeuchi, 1995, p. 69). Internalisation happens when experiences obtained from socialisation, externalisation and combination are internalised into people’s tacit knowledge in the form of mental models or technical know-how (Nonaka & Takeuchi, 1995).

The terms ‘implicit knowledge’ and ‘tacit knowledge’ have been used interchangeably in some studies (Park & Gabbard, 2018). Nickols’ (2000) school of thought differentiated between the two types as illustrated in Figure 2.3.

Figure 2.3 The Different Types Of Knowledge (Explicit, Implicit and Tacit) Nickols (2000, p. 3)



Therefore, implicit knowledge is gained through experience; it is, “practical skills, and know-how, but unlike tacit knowledge, implicit knowledge can be adequately articulated and codified like explicit knowledge” (Park & Gabbard, 2018, p. 327).

This research adopts the tacit-implicit-explicit knowledge school, but only focuses on the implicit and explicit, since the focus is sharing knowledge in the work environment which requires the sharing of articulated knowledge.

2.5 Key Concepts

2.5.1 *Knowledge Sharing, Knowledge Transfer and Knowledge Exchange: Schools of Thought in the Literature*

Knowledge sharing is a critical component in KM processes and without it, KM cannot be fully operational and thus successful (Al-Kurdi et al., 2020; Bartol & Srivastava, 2002; Cabrera & Cabrera, 2002; Pasher & Ronen, 2010). Yang and Chen (2007) highlighted that many leading firms (including Toyota, Texas Instruments (TI), Dow Chemical and Ford) have already achieved significant benefits through knowledge sharing. It is vital that employees share their personal insights and knowledge with their co-workers (Al-Kurdi et al., 2020). According to van den Hooff and de Ridder (2004), organisations only start to effectively benefit from knowledge sharing when both employees' and teams' knowledge are translated to organisational knowledge and this process only happens through knowledge sharing. However, it important to understand what knowledge sharing is: the literature provides extensive instances where the terms "knowledge sharing", "knowledge transfer" and "knowledge exchange" are used interchangeably (Gagné, 2009; Tangaraja et al., 2016). This can lead to confusion and even misleading findings which is problematic (Tangaraja et al., 2016). Therefore, knowledge sharing behaviour (KSB) in the context of the present study is defined as a one-way flow of knowledge (Bock et al., 2005); it should be noted that this is referred to as "knowledge transfer" by many other researchers (e.g., Liyanage et al., 2009; Rhodes et al., 2008; Szulanski, 2000; Wilkesmann & Wilkesmann, 2011).

Bock et al. (2005) define KSB as "the willingness of individuals in an organisation to share with others the knowledge they have acquired or created. The sharing could be done directly via communication or indirectly via some knowledge archive" (p. 88). Similarly, Teh and Yong (2011) define it as "the degree to which employees share their acquired knowledge with their colleagues. Inherently, the transfer of knowledge from one individual or one unit of an organisation to another significantly contributes to the organisational performance" (p. 11). Hansen and Avital (2005) define KSB as that by which "an individual voluntarily provides other social actors (within or outside an organisation) with access to his or her unique knowledge, skills, and experiences" (p. 6). For Amin et al. (2010), it is "voluntarily going an extra-mile and doing more than the role requirement" (p. 1429).

The focus of this research is that KSB as discussed by the studies above is a voluntary act in which a person is willing to provide guidance, expertise gained through education or training, and their knowledge in both explicit and implicit forms to their colleagues. To change an employee's behaviour is considered challenging and therefore KSB cannot be forced but rather has to be encouraged and facilitated (Bock et al., 2005). KSB is dependent on employees' willingness to share their know-how (how to do work-related tasks in terms of operational knowledge), know-where (guiding colleagues to locate resources that can help them in a particular situation) and know-whom (referring colleagues to people who can help or have the knowledge needed in a particular situation) when asked to do so (Bock et al., 2005).

2.5.2 Organisational Culture

The concept of organisational culture emerged in the 1950s in the anthropological literature (Kroeber & Kluckhohn, 1952) and was then gradually adopted by the social sciences (Becker & Geer, 1957; Van Maanen & Schein, 1977; Louis, 1980; Martin & Siehl, 1983) and business management (Ouchi, 1981; Schneider et al., 1996) literature (see Table 2.2). Petty et al. (1995) pointed out that organisational culture is not an easy concept to address, partly because the concept is borrowed from the anthropological literature and when researchers utilised it in an organisational context, they not only defined culture differently to the anthropologists but never quite managed to agree among themselves as to its precise nature. Nevertheless, many scholars have contributed to the evolution of organisational culture over the years as they addressed and described it in different contexts (e.g., Alvesson, 2002; Becker & Geer, 1957; Hofstede et al., 1990; Jelinek et al., 1983; Kroeber & Kluckhohn, 1952; Louis, 1980; Martin & Siehl, 1983; Schein, 1986; O'Reilly, 1989; Ott, 1989; Ouchi, 1981; Pettigrew, 1979; Schneider & Barbera, 2014; Swartz & Jordon, 1980; Uttal, 1983; Van Maanen & Schein, 1977).

Table 2.2 Origins of Organisational Culture by Theorists: Extending the work of Bellot (2011, p. 31) and Rousseau (1990, p. 155)

Name	Discipline	Definition
Kroeber & Kluckhohn (1952)	Anthropological literature	"Transmitted patterns of values, ideas, and other symbolic systems that shape behavior" (Rousseau, 1990, p. 155).
Becker & Geer (1970)	Social Psychology	"Set of common understandings, expressed in language" (Rousseau, 1990, p. 155).

Name	Discipline	Definition
Van Maanen & Schein (1977)	Social Science	“Values, beliefs and expectations that members come to share” (Rousseau, 1990, p. 155).
Pettigrew (1979)	Anthropological literature	“The system of generally and collectively accepted meanings which operate for a certain group on a certain occasion” (Bellot, 2011, p. 31).
Swartz & Jordon (1980)	Anthropological literature	“Pattern of beliefs and expectations shared by members that produce norms shaping behavior” (Rousseau, 1990, p. 155).
Louis (1980)	Social Science	“Three aspects: 1) some content (meaning and interpretation, 2) peculiar to, 3) a group” (Rousseau, 1990, p. 155).
Ouchi (1981)	Business Management	“Set of symbols, ceremonies, and myths that communicate the underlying values and beliefs of the organization and its employees” (Rousseau, 1990, p. 155).
Jelinek et al. (1983)**	Anthropological literature	“Underlying structure of meaning that persists over time, constraining people’s perception, interpretation, and behavior. This persistent structure is simultaneously adapted and changed over time as a function of people’s perception, interpretation and behavior. The underlying structures emphasized differ: myths, unconscious organizational dynamics, or even economic transaction agreements” (Jelinek et al., 1983, p. 337).
Uttal (1983)	Anthropological literature	“Shared values (what is important) and beliefs (how things work) that interact with an organization’s structures and control systems to produce behavioral norms (the way we do things around here)” (Rousseau, 1990, p. 155).
Martin & Siehl (1983)	Psychology/Sociology and Business (respectively)	OC is a “normative glue and a set of values, social ideals or beliefs that organization members share” (Rousseau, 1990, p. 155).
Schein (1987)	Social Psychology	“Culture is a pattern of shared basic assumptions, invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration that has worked well enough to be considered valid, and, therefore, is to be taught to new members of the group as the correct way to perceive, think, and feel in relation to those problems <i>reframing</i> ” (Bellot, 2011, p. 31).
O’Reilly (1989)**	Human Resources	“From a management perspective, culture in the form of shared expectations may be thought of as a social control system” (O’Reilly, 1989, p. 12).
Ott (1989)**	Ott (1989) believes that organisational culture is the balance and acceptance of diverse views from different disciplines (e.g., anthropology, ethno-archaeology, social psychology, artificial	“Organisational culture refers to a collection of theories that attempt to explain and predict how organisations and the people in them act in different circumstance” (Ott, 1989, p. 1).

Name	Discipline	Definition
	intelligence, sociology, organisational communication, psychology, business administration, public administration, and educational administration).	
Alvesson (2002)	Sociology	“Culture is regarded as a more or less cohesive system of meanings and symbols, in terms of which social interaction takes place. Social structure is regarded as the behavioral patterns which the social interaction itself gives rise to” (Bellot, 2011, p. 31).
Schneider (2000)	Business and Psychology	“No original definition; combined previous work to arrive at industry consensus” (Bellot, 2011, p. 31).
Hofstede et al. (1990)	Social Science	“Cultures manifest themselves, from superficial to deep, in symbols, heroes, rituals, and values. Organizational cultures differ mainly at the levels of symbols, heroes, and rituals, together labeled as “practices” (Bellot, 2011, p.31).
** Added by the author.		

Grayson and O’Dell (1998) described organisational culture as the “unseen hand” (p. 71) in organisations and a critical component in achieving sustainable success, along with other factors such as infrastructure, technology and measurement. They defined organisational culture as “the combination of shared history, expectations, unwritten rules, and social mores that affects the behaviour of everyone, from managers to mailroom clerks” (p. 71). Schneider et al. (1996) pointed out that organisational culture happens as a result of the feelings of employees combined with policies, practices and procedures as well as a group of abstract aspects such as what is to be believed, valued and worshipped. Thus, different scholars have defined organisational culture similarly and consistently.

Organisational culture has become the most frequently cited enabler of knowledge sharing (Ruggles, 1998; McDermott & O’Dell, 2001; Goh, 2002). Ruggles (1998) investigated 431 US and European organisations to identify the essential enablers and barriers to knowledge sharing in organisations and found that organisational culture is the most important factor, followed by organisational structure. Thus, KM requires a culture that encourages employees to create, capture, leverage and share knowledge, thus enabling them to advance the performance of an organisation (Ruggles, 1998).

A study conducted by De Long and Fahey (2000) recognised different types of culture that positively influence the central KM activities of knowledge creation, sharing and use.

The first is the learning culture, which encourages knowledge sharing. The second and the third are the cooperative and collaborative cultures, both of which involve working with others and therefore promote knowledge sharing. However, not all studies have reported a significant relationship between knowledge sharing and organisational culture. Yang and Chen (2007) found that organisational culture did not impact knowledge sharing in any meaningful way and suggested three possible reasons for their results. First, organisational culture, even though it affects many organisational activities (e.g., organisational learning, strategy, etc.), is difficult to measure because it is an intangible resource. Second, culture impacts knowledge sharing indirectly through other factors such as subjective norms. Third, culture can cover a wide range of concepts and therefore some unmeasured cultural factors might influence knowledge sharing (e.g., national culture). Therefore, their results could potentially represent a false negative, or a failure to find significant results: such conflicting or ambiguous results indicate a need for further research into the influence of different cultures on knowledge sharing intention.

Another gap in the literature is that most studies of knowledge sharing and organisational culture were conducted in either Western, Eastern or Asian cultures (e.g., Bock et al., 2005; Ardichvili et al., 2006; Arling & Chun, 2011; Burns et al., 2011; Hauschild et al., 2001; Huysman & Wulf, 2006; de Vries et al., 2006; Yang & Chen, 2007) and relatively few have been conducted in the Middle East. In 2012, Nafie published a study which mainly focused on the impact of national culture on corporate culture in Egypt. Another study by Haffar et al. (2013) was conducted in Syria and focused on examining the effect of four different organisational culture types on total quality management (TQM) with no relation to knowledge flow within the organisation or knowledge sharing. Further, Al-Swidi and Mahmood (2012) examined the mediating effect of organisational culture between TQM and organisational performance in Yemen: they acknowledged that an effective socialisation network and knowledge sharing environment is important in organisations.

Some research has also been conducted into knowledge sharing in Turkey. For example, Nayır and Uzunçarşılı (2008) conducted a case study on Sarkuysan, a Turkish company which produces electrolytic copper conductors. Their key findings focussed on effective knowledge management practices, including that knowledge sharing combined with a unique corporate culture which is characterised by trust can help companies to encourage a lasting knowledge management culture. Another example in Turkey by Kör and Maden

(2013) investigated the various knowledge management processes such as knowledge acquisition, knowledge application and knowledge sharing in relationship to innovativeness. They argue that, through innovativeness, employees can become more engaged in innovative activities and thus shape the corporate culture itself to be more innovative. Hence, innovativeness was regarded as a cultural element that leads technical and administrative innovation in their study. A further Turkish study by Baytok et al. (2014) investigated several knowledge management processes in thermal hotels which offered facilities such as spas, mud baths and thermo-mineral water baths. The findings showed that the employees share their knowledge but in formal ways rather than informal ones. While the study may have tapped in to some of the cultural elements in organisational culture, it did not look at the impact of organisational culture on knowledge sharing. In Cyprus, a study conducted by Tsolaki (2017) examined KSB in the banking sector: however, although it referred to the importance of organisational culture, it did not examine its impact on KSB. Nevertheless, the study did examine employees' perceptions of experiences that they shared with their co-workers in knowledge sharing and knowledge withholding situations.

Hejase et al.'s (2014) study in Lebanon took an interesting approach as they looked at the impact of organisational culture, trust, management support, technology, communication and social interaction, rewards, psychological ownership of knowledge, and organisational size amongst other factors on knowledge sharing. The study findings confirmed that there is a strong correlation between organisational culture, trust, management support, and psychological ownership of knowledge and the KSB of employees. However, factors such as rewards and technology did not have a significant influence.

In the Gulf Cooperation Council (GCC) countries, Al-Alawi et al. (2007) conducted a study in Bahrain in which they examined success factors in organisational culture that can impact knowledge sharing: they confirmed that the existence of trust, communication between staff, information systems, a reward system, and organisational structure supports knowledge sharing positively. Al-Adaileh and Al-Atawi (2011) examined the impact of several factors (innovation, morals, information flow, involvement, supervision, customer service and rewards) and organisational culture dimensions (openness to change, team orientation and trust) and their impact on knowledge exchange in the context of a Saudi telecom company.

Although KM has been explored in the UAE (Boumarafi & Jabnoun, 2008; Alrawi, 2008; Haak-Sahee & Darwish, 2014), there are no studies on the impact of organisational culture on knowledge sharing in the UAE working environment. Studies of knowledge sharing in the UAE (e.g., Ahmad & Daghfous, 2010; Behery, 2008; Seba, Rowley & Delbridge, 2012; Seba, Rowley & Lambert, 2012) did not look at the effect of organisational culture on KSB despite examining other aspects such as information technology, organisational structure and leadership. Alrawi et al. (2013) explored the effect of firms' culture as well as other factors such as internal environment, employees' perceptions, management attitudes, and firms' vision and mission on knowledge sharing; however, they did not give any details about their measurement system. Thus, it is hard for organisations and future researchers to adopt their methodology. Additionally, previous studies conducted in the UAE have taken a qualitative approach to getting a better understanding of knowledge sharing (e.g., Ahmad & Daghfous 2010; Seba, Rowley & Delbridge, 2012). Another recent Emirati-based study by Al Murawwi et al. (2014) examined the relationship between organisational culture and knowledge management in general but without special attention to knowledge sharing intention of employees in particular. However, to the best knowledge of the researcher, the perceptions of knowledge management managers and employees in the UAE of the existing organisational culture and its impact on KSB have not been investigated so far and the present study fulfils this gap.

Moreover, the UAE has experienced rapid economic growth with a raft of new companies being established (Ahmad & Daghfous, 2010). According to Ahmad and Daghfous, this has led to an increase in diversification of operations by many firms in the UAE which, in turn, has resulted in a situation where knowledge sharing is not effectively facilitated in internal learning and experience within those firms. Therefore, more studies are needed to investigate the impact of organisational culture on knowledge sharing within the Middle Eastern region, GCC countries and in the UAE. Additionally, given the demographics of the UAE, the majority of employees are non-Emiratis. Due to the government initiative in promoting the Emiratisation policy which implies an increasing number of Emiratis in the workplace, expatriates have become more cautious about protecting and withholding their knowledge (Haak-Sahee & Darwish, 2014). Therefore, it is important to study the impact of Emiratisation on knowledge sharing among Emirati and non-Emirati employees in organisations in the UAE.

2.5.3 *Organisational Culture Dimensions*

The previous section addressed the origin of organisational culture as a concept and definition. This section addresses the scholars which contributed to defining the dimensions of organisational culture. In the following section, key organisational culture dimensions are reviewed.

Cooke and Rousseau (1988) had an interesting approach to organisational culture as they identified different styles and grouped types of culture under each style. Their three styles are: 1) constructive, 2) passive/defensive, and 3) aggressive /defensive. Constructive styles refer to meeting employees' needs to keep them motivated in order to satisfy their need for achievements. Constructive styles include four organisational cultures: achievement, self-actualising, humanistic-encouraging and affiliative. Passive/defensive styles emphasise employees' security needs whereby they interact with their co-workers and line managers in self-protective ways to avoid failure and ensure acceptance. These styles consist of approval, conventional, dependent, and avoidance cultures. Finally, aggressive/defensive styles are also about employees' security needs; however, these are more extreme in that they deal with their duty and tasks in forceful ways to protect their rank and positions. These styles consist of oppositional, power, competitive, and perfectionistic cultures.

Hofstede articulated a set of organisational culture dimensions: 1) open system vs closed system, 2) easy-going work discipline vs strict work discipline, 3) employee-oriented vs work-oriented, 4) externally driven vs internally driven, 5) professional vs local, and 6) means-oriented vs goal oriented (Hofstede et al., 1990; Hofstede et al., 2010; Hofstede & Waisfisz, 2010). Each of these organisational culture dimensions has two extreme points on the spectrum. The first dimension is open system vs closed, whereby in an open system culture, new employees are welcomed and employees believe that anyone can join the organisation. The organisation thus offers high accessibility, from both within and outside. Additionally, the flow of information is easy which encourages internal and external communication. In contrast, in a closed culture, newcomers are not welcome and it is very difficult for them to assimilate. Employees in this type of culture are usually closed and reserved with both insiders and outsiders (Hofstede et al., 2010; Hofstede & Waisfisz, 2010). Easy-going work discipline vs strict work discipline is the second

dimension. An easy-going culture encourages creativity because it has a very loose internal organisational structure where predictability is minimal and not anticipated. Such a culture allows the employees high flexibility to take on tasks that may not be within their area of regular work. On the other hand, in a culture of strict work discipline employees are very cost-conscious, punctual and serious, as it is characterised by a very tightly binding internal structure (Hofstede et al., 2010; Hofstede & Waisfisz, 2010). The third dimension is employee-oriented vs work-oriented: in the former the managerial outlook is concerned about the employees and so they feel that the organisation cares about them and will help them resolve personal problems, even at the organisation's expense. On the contrary, an organisation guided by a work-oriented culture pressures its employees to perform and complete the work assigned to them, regardless of whether it is at the expense of their welfare (Hofstede et al., 2010; Hofstede & Waisfisz, 2010). The fourth dimension is externally-driven vs internally-driven. An externally-driven culture focuses on customer satisfaction and customer requirements: it values results and demonstrates more of a pragmatic view, focussing more on results than on procedures, whereas in an internally-driven culture, employees pay a lot of attention to procedures rather than business results (Hofstede et al., 2010; Hofstede & Waisfisz, 2010). The fifth dimension is professional vs local where an organisation guided by a professional culture encourages the development of the individual. Additionally, employees are identified by the work they do and are directed on a long-term basis (Hofstede et al., 2010; Hofstede & Waisfisz, 2010). At such an organisation, employees identify with their respective professions, and the contents and contexts of their job (Hofstede et al., 1990). In a very local culture, on the other hand, employees identify closely with their managers and/or the unit in which they work. Employees in this type of culture are given short-term directions, and have a social belief that they should be like everyone else (Hofstede et al., 2010; Hofstede & Waisfisz, 2010). In essence, this implies that workers operating within such an organisation will rely on meeting the directives of their superiors or the standards set for their particular piece of work (Hofstede et al., 1990). The last dimension is means-oriented vs goal-oriented whereby in a means-oriented culture, people are more concerned about how the work should be carried out; they focus on the process of the work rather than the outcome. In this type of culture people avoid taking risks and expend limited effort in their jobs; their work life is routine (Hofstede et al., 2010; Hofstede & Waisfisz, 2010). The employees in this type of organisational culture are guided by the management and want to have a complete picture of how to operate and work (Lin & Joe,

2012) and feel anxious and uncertain if they do not have a clear understanding of the task process (Hofstede et al., 1990). According to Hofstede and Waisfisz (2010), they avoid risk taking in performing their tasks and follow a routine structure in their work. In goal-oriented cultures, employees are primarily concerned with the results of their work: employees set individual and organisational goals with the use of all the resources at their disposal and, unlike the former, they take risks (Hofstede et al., 2010; Hofstede & Waisfisz, 2010).

Tucker et al. (1990) introduced cultural dimensions that were identified through interviews and discussions with 50 leaders and managers of mainly private and a few public organisations in the United States. The first dimension, orientation to customers, is about whether customers' interests are reflected in the current organisational standards and practices. The second is orientation to employees which is exactly the same as the first dimension but with respect to employees. The third is congruence among stakeholders which examines consistency and similarity among orientations. The fourth dimension is impact of mission which has to do with organisational mission and whether it is clearly distributed, perceived as valuable, consistently reflected in practice, and robust. The fifth dimension is managerial depth and maturity which refers to the extent to which the management is proactive, stable and long-term oriented. The sixth dimension is decision making and autonomy which is concerned with decisions and how these are disseminated to the lowest level in the organisation. The seventh is communication/openness which addresses the information flow within the organisation. The eighth dimension is human scale which addresses the size of each unit and whether they consist of "family sized" work units. The ninth dimension is incentive/motivation which addresses the organisational reward mechanism, i.e., whether positive efforts are rewarded or whether negative efforts are rewarded. The tenth dimension is co-operation vs. competition which refers to the balance between cooperation and competition between organisational members and whether destructive competition is rewarded. The eleventh is organisational congruence which describes how different elements within the organisation are integrated and compatible and how organisational theory compares to reality and practice. The twelfth dimension is performance under pressure which refers to how an organisation reacts to uncertain situations while maintaining its principles. The thirteenth, and last, dimension is theory-s/theory-t which refers to whether the organisation is concerned more with employee selection or employee training.

O'Reilly et al. (1991) produced an organisational culture profile in which they stressed the importance of understanding the fit between individuals' preferences and organisational cultures. They identified eight dimensions of organisational culture: 1) innovation and risk taking, 2) attention to detail, 3) orientation toward outcomes or results, 4) aggressiveness and competitiveness, 5) supportiveness, 6) emphasis on growth and rewards, 7) collaborative and team orientation and, 8) decisiveness (O'Reilly et al., 1991, p. 502). However, these dimensions were not explained so they were not useful to the current research.

Petty et. al. (1995) identified four organisational culture dimensions through their study where they sampled 12 organisations in the electric utility industry in the United States. The measures of culture were developed through a process involving the company employees: groups of employees discussed the Vision Statement and were asked to indicate what behaviours they believed should be occurring in the work environment which would be reflective of the Vision Statement. Four organisational culture dimensions emerged: 1) teamwork, 2) trust and credibility, 3) performance and common goals and, 4) organisational functioning. The first dimension, teamwork, refers to how employees perceive their colleagues – whether they find them adopting cooperative behaviours. Such behaviours are demonstrated in sharing information when needed, helping peers with their work, offering to help the work group to fulfil the objectives, sharing resources and prioritising the good of the group instead of looking after individual advantage and, finally, being rewarded as a team. The second dimension is trust and credibility which addresses the relationship between employees and their managers in terms of how managers behave in encouraging employees and whether employees trust their managers to meet their commitments. These behaviours include having open two-way communication while being encouraged to express opinions freely, being listened to, being treated fairly in terms of performance evaluations (e.g., promotions, raises), and having the space to make errors without extreme fear of punishment. The third dimension is performance and common goals which reflects how employees work in their teams, whether they behave in a consistent manner and with a goal in mind to improve productivity, reduce costs and be more efficient and effective. These behaviours include finding ways to utilise materials no longer in use, defining realistic, yet challenging, team goals and having a sense of harmony and collective goals. The final dimension is organisational functioning and this describes a group of observed behaviours which

indicate frustrations or interference while getting the job done. Examples include having incompatible goals, dependency on others to complete their work, not finding or having the supplies needed, different teams not being well coordinated, or being forced to work with defective or inappropriate equipment.

Gerowitz et al. (1996) identified four organisational culture dimensions in their study of the role of top management in the healthcare industry which targeted hospitals in Canada, the UK and the USA. The organisational cultures that they identified are: hierarchical/empirical, rational/market, clan/group, and open/development culture. Gerowitz (1998) also assessed the impact of total quality management (TQM) interventions on the culture and performance of top management; his findings suggest that culture is related to performance but TQM interventions are not associated with either performance or culture change. He noted that this could be due to the data gathering as it was collected at one point in time and suggested that a longitudinal study would allow these causal relationships to be better understood. The hierarchical/empirical culture has a high expectation of and emphasis on order and procedures where everything is predictable and the leadership style in this culture is seen as coordinator, organiser or administrator. Employees in this culture are rewarded based on whether they followed rules, policies and pre-defined procedures and regulations and the strategic emphasis is on stability and smooth operations. The rational/market culture refers to the influence of external competitiveness and goal achievements and its leadership style is being decisive, hard driver, achievement-oriented and considered expert. Employees are rewarded based on their ability to access external resources (i.e., markets, capital and technology). The organisation's strategic direction leans toward predictability, competitive advantage and market dominance. The clan/group culture refers to cohesiveness between employees and having a sense of family where the leaders are seen as mentors or parent figures. In this culture, employees are rewarded based on the traditions created and their ability to maintain interpersonal cohesion and the organisation's strategic emphasis is on employee commitment and morale. Finally, the open/development culture refers to employees who are dynamic, entrepreneurial and creative, and whose leaders are also entrepreneurs and risk takers. The reward system in this culture is based on taking and sharing risks and the organisation's strategic emphasis is on innovation and growth (Gerowitz, 1998).

In their 1997 study, van der Post et al. identified 15 organisational culture dimensions in their efforts to produce a reliable scale that would offer a valid measurement of

organisational culture. They are: 1) conflict resolution, 2) culture management, 3) customer orientation, 4) disposition toward change, 5) employee participation, 6) goal clarity, 7) human resource orientation, 8) identification with organisation, 9) locus of authority, 10) management style, 11) organisational focus, 12) organisation integration, 13) performance orientation, 14) reward orientation and, 15) task structure (van der Post et al., 1997, p. 149). The first dimension, conflict resolution, refers to the degree to which the organisation is perceived to encourage and support employees to openly express their views about conflicts and criticism and the extent to which managers are willing to listen to (or ignore) diverse views of employees. The second dimension is culture management and it refers to the extent to which the organisation intentionally engages in shaping its own culture. It addresses the organisation's efforts in hosting events, ceremonies, and activities in order to spread its values so that employees will understand and share the same vision. Customer orientation refers to the extent to which the organisation takes customer feedback seriously and actively responds to such feedback. The fourth dimension, disposition toward change, addresses whether employees are encouraged to explore better ways of getting the job done using creative and innovative approaches. It also refers to whether employees are allowed to experiment and take risks or if mistakes are severely punished. The fifth dimension is employee participation and asks whether employees perceive themselves as participating and involved in the decision-making process of the organisation. It is also about whether they can make decisions that impact their work or if they can contribute to organisational policies. The sixth dimension is goal clarity which questions whether the organisation has clearly communicated its objectives and performance expectations to employees. The seventh dimension, human resource orientation, asks if the organisation looks after its employees and see them as a valuable resource and great contributors to its success. Additionally, it also addresses whether employees are offered the training and development needed in order to help them reach their full potential. Identification with organisation, the eighth dimension, addresses organisational efforts to create opportunities for employees to socialise in order to extend friendships after work. It also entails that employees share a high degree of commitment toward achieving the organisation's strategic objectives. The ninth dimension is locus of authority and this refers to the amount of freedom, authority and independence that employees have in their jobs: are employees empowered to make decisions concerning their work? The tenth dimension is management style which refers to whether managers provide clear communication and support to their teams. It also addresses how employees

perceive their managers in terms of support, trust and ability to communicate with them freely about any concerns. The eleventh dimension, organisational focus, assesses the extent to which organisations focus on activities and initiatives that are aligned with the overall vision, mission and purpose of the organisation. The twelfth dimension is organisation integration and this addresses the extent to which different business units within the organisation are encouraged to work in coordination and cooperation with each other to effectively achieve overall organisational objectives. It also looks at whether employees can freely work with interdisciplinary teams outside their current department or unit to provide input or support or share information. Performance orientation, the thirteenth dimension, refers to the degree to which an organisation holds employees accountable for their work results and levels of performance. In addition, this dimension addresses whether employees perceive it important to have clear objectives and performance standards to execute work in the best possible way. The fourteenth dimension is reward orientation which covers the mechanism of reward allocations within the organisation – whether it is based on employee performance, favouritism or any other criteria that is not relevant to performance. The fifteenth and last dimension is task structure which refers to the emphasis which line managers put on applying rules and regulations in managing their employees' behaviour. It also addresses how employees observe the execution of their work: is it governed by rules and policies or is there an informal atmosphere where employees are allowed to think in creative ways in accomplishing their duties?

Ginevičius and Vaitkūnaite (2006, p. 206) identified twelve dimensions of organisational culture: 1) involvement, 2) cooperation (collaboration), 3) transmission of information, 4) learning, 5) care about clients, 6) adaptability, 7) strategic direction, 8) reward and incentive system, 9) system of control, 10) communication, 11) agreement and, 12) coordination and integration. The first dimension, involvement, refers to employees' participation in decision-making, and sharing ideas, suggestions and notes. It also addresses the conditions offered by the organisation such that employees look forward to going to work. The second dimension is cooperation (collaboration) – the relationship between managers and their subordinates. It asks whether managers consult with or collaborate with subordinates. It also addresses to what extent teamwork exists more than individual tasks, especially when it comes to projects and resolving challenges or problems. The third dimension is about transmission of information and is about the flow

of, information within the organisation. For example, does important information or news reach employees at the right time? It also addresses whether employees have the information they need to make appropriate work decisions, if managers and employees communicate clearly with one another without misunderstandings, and whether managers provide feedback to their employees. The fourth dimension, learning, addresses how much an organisation invests in employees in terms of enhancing their knowledge and skills by providing them with necessary training and whether managers work on improving themselves on a continuous basis. It also addresses the general atmosphere: do employees learn from each other and teach each other skills, knowledge and how to do things? The fifth dimension is care about clients and it addresses whether employees are always looking to improve services and products based on client feedback and needs. The sixth dimension is adaptability: how does the organisation respond to changes in the external environment? It also addresses whether employees and managers respond to external problems and whether employees keep up with the market and always try to improve their work accordingly. The seventh dimension is strategic direction: does the organisation have a long-term strategy and plans which are achieved purposefully; and does the organisation set an example for other organisations? The eighth dimension is the reward and incentive system, and this addresses whether employees are correctly rewarded according to their results and efforts and if they are rewarded for their ideas and innovations. Additionally, it covers whether any punishment system that exists is correct. The ninth dimension is the system of control and it addresses the level of freedom that employees have and how they perceive it. For example, do they think that the current rules and norms are directive or restrictive? What do the employees think about their managers; do they give too much freedom or do they micro-manage? The tenth dimension of communication addresses whether the communication between managers and their employees is friendly and informal or more formal. It also covers whether managers' approach is that of providing advice to help or more like a command. The eleventh dimension, agreement, addresses whether employees are unified as a family whereby they share similar norms and values. It also addresses whether employees agree with the most important decisions and whether they resolve conflicts smoothly when this happens. The twelfth dimension is coordination and integration, and this addresses whether it is easy or hard to work with other departments and units in common goals, tasks, etc.

Denison and Mishra (1995), Denison and Neale (1999) and Denison et al. (2012)

introduced two levels of organisational culture, one with external focus and the other with internal focus. The external focus has to do with aspects such as organisational change, adaptability of the organisation to the market, organisational strategic direction and so forth while the internal focus is more concerned with the employees and how well they work as a team, their agreements on critical issues and whether employees are empowered to manage their work, etc. Internal focus consists of two main dimensions: involvement and consistency. Involvement consists of three sub-dimensions – empowerment, team orientation, and capability development – and refers to employee participation and engagement in the organisation which reflects the organisation's dynamics and flexibility. Empowerment addresses whether employees have the authority and ability to manage their duties without restrictions by management. Team orientation refers to whether the organisation emphasises working cooperatively in teams where everyone feels accountable. Capability development is concerned with the efforts of the organisation with regard to employees' career development to ensure that they stay competitive and meet organisational objectives. The second main dimension of internal focus, consistency, refers to shared values, processes which could impact the internal focus, and business stability. Consistency has three sub-dimensions: core values, agreement and coordination. Core values refer to the sense of identity that employees create together based on clear expectations from management and their shared values. Agreement refers to employees' ability to reconcile critical issues, problems or disagreements when they happen. Coordination (and integration) refers to employees' ability to work with different cross-functional teams within the organisation to achieve common organisational goals without interference or complications.

The external focus also consists of two main dimensions: adaptability and mission (Denison & Mishra, 1995; Denison & Neale, 1999; Denison et al., 2012). Adaptability consists of three sub-dimensions: creating change, customer focus and organisational learning. Adaptability suggests that employees are able to understand market and customer needs and are able to learn new skills to respond to external factors raised by the market. Creating change refers to the organisation's ability to innovate new approaches to meet changing market demands quickly and proactively. Customer focus refers to the degree to which the organisation is concerned with satisfying customers and their needs. Organisational learning is concerned with organisational efforts to develop employees' capabilities, gain knowledge and support innovation. The second main

dimension in external focus, mission, refers to an organisation's ability to set out their purpose and direction in a way that is aligned with the external market to maintain organisational stability. Mission consists of three sub-dimensions: strategic direction and intent, goals and objectives, and vision. Strategic direction and intent refers to the organisational efforts in setting clear intentions and purposes toward achieving their strategy in making the organisation visible in the industry. Goals and objectives refers to providing all organisational members with clear directions for work by creating a clear set of goals which are aligned to the organisation's mission, vision and strategy. Finally, vision refers to how the organisation visualises its desired place within the industry.

In their comprehensive review of the literature, Ghosh and Srivastava (2014) created a reliable measurement for organisational culture. They introduced seven organisational culture dimensions: 1) trust, 2) respect for individuals, 3) attitude to risk, 4) action orientation, 5) participation, 6) openness and, 7) power distance. The first dimension, trust, addresses whether employees within the organisation are trusted to keep their word when it comes to commitment. In addition, the dimension involves the level of implicit trust among employees: specifically, it is concerned with perceptions of whether colleagues have good intentions and if managers are trusted to treat them fairly when it comes to assessing their job performance. Trust is a crucial dimension which has been highlighted and further segregated by McAllister (1995). McAllister (1995) conceptualised interpersonal trust as belonging to one of two categories: 1) cognition-based, or 2) affect-based. He defined the former as "grounded in individual beliefs about peer reliability and dependability" (p. 25) to which Casimir et al. (2012) further elaborated that it "is based on available knowledge, competence and responsibility of individuals" (p. 743). McAllister (1995) defined affect-based trust as "grounded in reciprocated interpersonal care and concern" (p. 25) to which Casimir et al. (2012) added that it "is based on the emotional bonds between individuals, which are expressions of care and concern as well as beliefs in the intrinsic value and reciprocity of such relationships" (p. 743). The second dimension is respect for individuals which addresses whether managers trust their employees to deliver what is expected of them and whether managers believe that good ideas and solutions to problems can come from any member within their teams. Attitude to risk, the third dimension, addresses whether employees are able to take risks and whether they take accountability for their decisions when errors happen. It also addresses whether employees feel safe and comfortable voicing their opinions to their

managers. The fourth dimension is action orientation which addresses whether actions are actually taken after extensive discussions or not. In addition, it also addresses whether initiated projects are actually completed or not. Ghosh and Srivastava described participation, their fifth dimension, as when “organizational members are encouraged to participate, everyone’s views are sought and members speak out [*sic*] their mind without apprehension” (p. 592). They explain further that employees are encouraged to take part in meetings and are not only welcome to express their views but other members to seek to understand each point of view. Moreover, in a culture that is characterised by participation, speaking the truth is the norm even when said truth may not be particularly welcome. The sixth dimension is openness – whether management believes in conveying and delivering important news and events to employees at all levels across the organisation. It also addresses whether employees find their managers and senior members to be approachable and accessible when needed. The seventh dimension is power distance and it addresses whether there is freedom of expression and confrontation and whether, in cases of confrontation, they may or may not lead to poorer team performance or losing social standing.

Based on the comprehensive literature review it is clear that organisational culture dimensions have been studied by many researchers (Cooke & Rousseau, 1988; Denison & Mishra, 1995; Denison & Neale, 1999; Denison et al., 2012; Hofstede, 1990; Hansen, 2003; Hofstede, Hofstede & Minkov, 2010; Hofstede Center, 2013; Hofstede & Waisfisz, 2010; Gerowitz et al., 1996; Ghosh & Srivastava, 2014; Ginevičius & Vaitkūnaite, 2006; O’Reilly et al., 1991; Petty et al., 1995; Tucker et al., 1990; van der Post et al., 1997). This study selected organisational culture dimensions based on:

1. Dimensions with an internal rather than external focus (Denison & Mishra, 1995; Denison & Neale, 1999; Denison et al., 2012) because the research topic is concerned with employees’ behaviour rather than on the market. Organisational culture dimensions with internal focus are also called “cultural dimensions relating to people” (Trompenaars, 2012, p. 117). Additionally, this study is concerned with internal focus because knowledge sharing is something that happens internally among employees within the same organisation. Inter-organisational knowledge sharing between organisations (i.e., knowledge sharing between organisation A and organisation B) (Rathi et al., 2014) is not the focus of this research.
2. Dimensions which are connected to employees’ knowledge sharing behavioural intentions. In order to narrow down the selection of the organisational culture

dimensions the knowledge sharing literature was reviewed to select organisational culture dimensions with the most relevance (e.g., Akhavan & Hosseini, 2016; Bock et al, 2005; 2010; Chow & Chan, 2008; Tsai et al., 2013). The present study focuses on studying knowledge sharing intention among employees, thus it is more relevant to focus on organisational culture dimensions with an internal focus which are linked directly with this intention. Clark (2000, p. 6) states that “cultures are not always obvious to participants, and yet they can be powerful forces in creating expectations and shaping behaviour”.

Based on this process Table 2.3 shows the selected organisational culture dimensions for this study.

Table 2.3 Selected organisational culture dimensions in the present study

No.	Dimension	Source
1	Trust	Petty et al. (1995); Ghosh & Srivastava (2014)
2	Participation	Ghosh & Srivastava (2014)
3	Openness	Ghosh & Srivastava (2014)
4	Team Orientation	Petty et al. (1995); Denison & Neale (1999)
5	Agreement	Denison & Mishra (1995); Denison & Neale (1999)

2.5.4 The Evolution of Leadership Theory

The history of leadership as a concept, emerged in the 1700s (Stogdill, 1974). However, the concept has been more visible since the 19th century when the Great Man Theory was first introduced by Carlyle (1841) and Galton (1869).

Seters and Field (1990) identified nine different eras of leadership as well as theories and frameworks used to measure the eras; they point out the shortcomings of each era that the next one addressed. The nine eras are: personality, influence, behaviour, situation, contingency, transactional, anti-leadership, culture, and transformational.

Seters and Field (1990) place the evolution of leadership theory in the “Personality Era” (1840s to 1920s), during which the first leadership theories were formalised: this era focused on internal and individualistic characteristics and processes as it was concerned with the leader’s personality, traits or behaviours which is a one-dimensional perspective. This era consisted of two periods: 1) the Great Man Period, and 2) the Trait Period. The Great Man Period focused on great leaders (mostly men, but also some women) in history who were role models. It was also evident that most of these effective leaders did not have a common personality but rather were extremely diverse. It was common at that time

for people to adopt whatever personality and behaviour they thought necessary to become a strong leader. However, imitating personalities is extremely challenging and so not very valuable to managers at organisations and so this era was enhanced by the introduction of the Trait Period which aimed to remove the link to specific individuals and instead focus on general traits. This added more value, so practising managers believed, because they thought that adopting those traits would enhance their leadership potential and enhance the performance of their followers. However, no empirical study has found that a single or group of traits or characteristics can be associated with leadership (Seters & Field, 1990; Jenkins, 1947). Traits were added to leadership theories that evolved after this era as explanatory variables, but the focus of these emerging theories were not centralised around the traits of a leader.

Seters and Field (1990) named the second era the “Influence Era”, as it focused on the relationship between individuals, not only on the characteristics of a solo leader as in the Personality Era. This era addresses aspects of power and influence and has two periods, Power Relations and Persuasion. In the Power Relations period, the leadership referred to the amount of power they had in terms of authority and how they utilised it. Although this kind of leadership (also known as dictatorial, authoritarian and controlling) has been confirmed to be ineffective and inappropriate in the business world, in the Persuasion period the leaders were still dominant but the intimidation and force factors was eliminated.

The “Behavioural Era” which followed set a totally new trend as the concentration was on what leaders actually did, rather than their personality, traits and source of power. Thus, leadership in this era was defined as a subset of human behaviour that leaders perform. The Early Behaviour Period focused on developing behaviour traits instead of personality traits as in previous eras, while the Late Behaviour Period focused on utilising leadership behaviours for managerial applications (making this period more advanced than the Early Behaviour Period) (Seters & Field, 1990). For instance, the Managerial Grid Model (Blake & Mouton, 1964), Theory X and Theory Y (McGregor, 1960, 1966), Four-Factor Theory (Bowers & Seashore, 1966), and Action Theory of Leadership (Argyris, 1976) were all used in organisational contexts for managerial applications.

The “Situational Era” which followed was a major milestone in developing and enhancing leadership theory as it recognised crucial factors other than leaders and their followers or

subordinates (Seters & Field, 1990). Hence, factors such as type of task, social status of the leader and subordinates, authority and power level of both leaders and followers as well as the impact of external environments were considered in this era. The acknowledgement of these situational aspects was crucial as these aspects determine the types of leader traits, skills, influence and behaviours that are likely to develop an effective leadership. The Situational Era had three phases: 1) the Environment Period, 2) the Social Status Period and, 3) the Socio-Technical Period. The first was about being a leader at the right place and the right time; the actual actions taken were not necessarily significant. In addition, if one leader were to leave, another would simply replace them. The Social Status Period focused on the agreement between a leader and group members as expectations were communicated when undertaking specific tasks as well as the roles of both leaders and subordinates being clearly defined. Therefore, this period focused more on social aspects in a particular situation unlike the previous Environment Period which had only focused on the task. The third category, the Socio-Technical Period, combined the environmental and social factors and is considered as an advancement of this era (Seters & Field, 1990).

In the Contingency Era there was a remarkable advance in leadership theory as it developed from a one-dimensional to a multi-dimensional theory, including all the elements from previous eras: this led to better explanations of leadership by incorporating the importance of considering the interaction of the leader, subordinates, and the situation (Seters & Field, 1990). Other theories that emerged during this era include the Contingency Theory (Fiedler, 1964, 1967), the Path-Goal Theory (Evans, 1970; House, 1971; House & Mitchell, 1974) and the Normative Theory (Vroom & Yetton, 1973; Vroom & Jago, 1988). The Contingency Theory stressed the need to allocate leaders to situations that best suited them, or to train them to change the current situation to one that suited their own style: it concentrated more on providing enablers and conditions for success to subordinates rather than only focusing on a situation or leader's behaviour (Seters & Field, 1990). The Path-Goal theory had less emphasis on the situation and leader behaviour, and more focus on creating enabling conditions for subordinates to facilitate their success. The Normative model entailed providing advice and guidance for leaders to make the most appropriate decisions given a situation and there is no doubt that this era had a significant impact on leadership theory as it had wide applicability for leaders, focusing, as it did, on changing leaders' behaviour to increase effectiveness in

various situations despite their personalities and traits (Seters & Field, 1990).

In the Transactional Era, leadership theory was strengthened once again: this era evolved to include aspects of leadership which included role differentiation and social interaction (Seters & Field, 1990). This era is similar to the Influence Era as it focused on the influence that a leader has on their team members. The development occurred as it included the reciprocal influence of the team members and the leader, and the expansion of their expected roles over time. Hence this era includes two periods: 1) the Exchange Period and, 2) the Role Development Period. In the Exchange Period various theories were introduced, including Leader Member Exchange Theory (Dansereau et al., 1975), Reciprocal Influence Approach (Greene, 1975) and Emergent Leadership (Hollander, 1958). These theories demonstrated the leadership of and transactions between a leader and their team members which could impact their relationship (Seters & Field, 1990). In Emergent Leadership theory, team members have to agree on the leader to be selected, thus the leaders in this period aimed to increase the participation of all members despite their diverse personalities. All the theories which emerged in this period still hold a strong position in the current leadership theory (Seters & Field, 1990). The Role Development Period consisted of exchange elements between leaders and their team members but with the focus on their relative roles (Seters & Field, 1990) and saw the emergence of Social Exchange Theory (Hollander, 1979; Jacobs, 1970) and the Role-Making Model (Graen & Cashman, 1975). In this period, the leaders' skills are evident and displayed through fulfilling objectives and goals; team members, in return, have a great respect for the leader (Seters & Field, 1990).

The Anti-Leadership Era was the next to emerge, but despite the amount of empirical research done in this era, unfortunately the results were not significant: so many variables were included in the leadership equation that they ended up explaining nothing at all – hence the name of this era. The era contained two periods, 1) the Ambiguity Period and, 2) the Substitute Period (Seters & Field, 1990). In the Ambiguity Period, Mitchell (1979) argued that perhaps leadership is only a “perceptual phenomenon in the mind of the observer” (p. 269). Seters and Field (1990) added that Miner (1975) had suggested that leadership as a concept should be abandoned altogether. Next, the concept of the romance of leadership emerged which referred to all organisational changes that could not be understood. The Substitute Period however, was a more constructive phase which progressed as result of the Situational Era and aimed to identify substitutes for leadership

(Seters & Field, 1990). The main idea of the Substitute Period was leader neutralisation in the workplace between the leaders and team members: as a result, leadership is less likely to have a strong impact on organisational performance (Seters & Field, 1990).

Subsequently, the Anti-Leadership Era was surpassed by the evolution of leadership theory and the introduction of the Culture Era as there was still something missing from the leadership equation. The Culture Era implied that leadership might not be limited to individuals, groups and teams but include the entire organisation and, for the first time in leadership theory development, the focus shifted from quantity and volume of work to quality of work through communicating expectations and values (Seters & Field, 1990). Some of the theories that contributed to this era were the McKinsey 7-S Framework (Pascale & Athos, 1981), Theory Z (Ouchi & Jaeger, 1978), In Search of Excellence Approach (Peters & Waterman, 1982), and Self-Leadership (Manz & Sims, 1987). Seters and Field also noted that the Culture Era was an extension to the Substitute Period as it suggested that the best leaders are those who prepare their teams and subordinates to be leaders themselves. Therefore, if leaders were able build a strong culture in the organisation this will generate the next leaders (1990).

Seters and Field (1990) explained that the Transformational Era witnessed an immense development compared to all previous eras of leadership. It differed from earlier eras by focusing on intrinsic rather than extrinsic motivation, encouraged leaders to be proactive instead of reactive in their thinking, radical instead of traditional, more innovative and creative, and ready to engage with new ideas. In addition, this era witnessed a switch in the focus of leadership from obedience to more enthusiastic commitment by team members. Its Charisma Period suggested that leadership should be visionary in order to transform the people fulfilling this vision and provide them with a strong sense of purpose and meaning. Its Self-Fulfilling Prophecy Period, on the other hand, considered that a leader can be motivated from the lower levels as well as the upper ones in the organisation; previous eras primarily focused on considering the transformation only occurring from the leader to the subordinate. Another aspect to this period is that work groups and teams selected leaders who, they were confident, would lead them to fulfil the task, drive and ensure strategic focus, and keep the group together (Seters & Field, 1990).

Seters and Field (1990) wondered what form the next, tenth, era of leadership would take. For leadership to be effective it has to adapt to the rapid changes that organisations and

societies experience on a daily basis: thus, the present study proposes that a new era has emerged in the 21st century, the *Knowledge Integration Era*. This new era consists of two types: inclusive leadership and knowledge leadership.

This research focuses on these two leadership styles that could be essential to the study of knowledge sharing intentions especially because they are emerging concepts and their impact on intention to share knowledge has not yet been examined. First, this research focuses on knowledge leadership because one of the key responsibilities of leadership is to promote continuous and ongoing knowledge sharing among employees (Yang et al., 2014). Lakshman (2009a) further explains that knowledge leadership is concerned with “leader-initiated and -influenced actions pertaining to organisation-wide management of knowledge, including the creation, sharing, leveraging and dissemination of knowledge for the benefit of the entire corporation” (p. 191). Second, this research focuses on inclusive leadership. Inclusive leadership differs from other leadership types in that other styles of leadership do not set up a coherent vision or framework for leaders to help them value both the differences and the commonalities of others so that every employee will feel included (Ryan, 2006). If employees feel excluded they will have feelings of embarrassment and humiliation (Ryan, 2006) that may well lead to them withdrawing from sharing their knowledge with their co-workers and vice versa. In the following section, both knowledge leadership and inclusive leadership are discussed in detail.

Table 2.4 shows a summary of the evolution of leadership theory in the different eras and periods and the key theories that emerged during that time. The table also includes the suggested emerging era, the Knowledge Integration Era.

Table 2.4 Evolution of Leadership Theory (Seters & Field, 1993, pp .31-32) and proposal of a new ‘Era of Integrative Knowledge’.

Major Leadership Eras		
Major Leadership Era	Period	Theories/Approaches
Personality Era	Great Man Period	Great Man Theory (Bowden, 1927; Carlyle, 1841; Galton, 1869)
	Trait Period	Trait Theory (Bingham, 1927)
Influence Era	Power Relations Period	Five Bases of Power Approach (French, 1956; French & Raven, 1959)
	Persuasion Period	Leader Dominance Approach (Schenk, 1928)

Major Leadership Eras		
Major Leadership Era	Period	Theories/Approaches
Behaviour Era	Early Behaviour Period	Reinforced Change Theory (Bass, 1960) Ohio State Studies (Fleishman, Harries & Burt, 1955) Michigan State Studies (Likert, 1961)
	Late Behaviour Period	Managerial Grid Model (Blake & Mouton, 1964) Four-Factor Theory (Bowers & Seashore, 1966) Action Theory of Leadership (Argyris, 1976) Theory X and Y (McGregor, 1960; McGregor, 1966)
Situation Era	Environment Period	Environment Approach (Hook, 1943) Open-Systems Model (Katz & Kahn, 1978)
	Social Status Period	Role Attainment Theory (Stogdill, 1959) Leader Role Theory (Homans, 1956)
	Socio-Technical Period	Socio-Technical Systems (Tris & Bamforth, 1951)
Contingency Era	-	Contingency Theory (Fiedler, 1964) Path-Goal Theory (Evans, 1970; House, 1971) Situational Theory (Hersey & Blanchard, 1969; 1977) Multiple Linkage Model (Yuki, 1971; 1989) Normative Theory (Vroom & Yetton, 1973; Vroom & Jago, 1988)
Transactional Era	Exchange Period	Leader Member Exchange Theory (Dansereau et al., 1975) Reciprocal Influence Approach (Greene, 1975) Emergent Leadership (Hollander, 1958)
	Role Development Period	Social Exchange Theory (Hollander, 1979; Jacob, 1970) Role-Making Model (Graen & Cashman, 1975)
Anti-Leadership Era	Ambiguity Period Substitute Period	Attribution Approach (Pfeffer, 1977) Leadership Substitute Theory (Kerr & Jermier, 1978)
Culture Era	-	McKinsey 7-S Framework (Pascale & Athos, 1981) Theory Z (Ouchi & Jaeger, 1978) In Search of Excellence Approach (Peters & Waterman, 1982) Self-Leadership (Manz & Sims, 1987)
Transformational Era	Charisma Period	Charismatic Theory (House, 1977) Transforming Leadership Theory (Burns, 1978)
	Self-Fulfilling Prophecy Period	SFP Leader Theory (Field, 1989; Eden, 1984) Performance Beyond Expectations Approach (Bass, 1985)
**Knowledge Integrative Era	Inclusive leadership	Inclusive leadership (Carmeli et al., 2010)
	Knowledge Leadership	Knowledge Leadership (Yang et al., 2014; Zhang & Cheng, 2015)
Source: Seters and Field (1993, pp. 31-32)		
** Era suggested by the present study.		

2.5.4.1 Knowledge Leadership

As previously stated, the concept of knowledge leadership emerged from the literature of Knowledge Management (KM) which has existed since the mid-1990s (Nonaka, 1994;

O'Dell, 2000; Dixon, 2002). At that time the Knowledge Management domain was not yet mature and thus unclear to most KM practitioners. It was often misunderstood or described as another IT system or portal and this explains the dramatic failures of many KM applications (Ambrosio, 2000). Despite the many attempts of the knowledge management experts who advised organisational leaders to reduce investments in IT and its systems, and emphasised the importance of instead investing in people's capacity to create new knowledge, most organisational leaders ignored the recommendations (Cavaleri et al., 2005). In fact, if the leadership fails to understand the essential distinction between information and knowledge, they will be unable to manage their organisations effectively or to exploit the power of knowledge to reach their highest performance (Cavaleri et al., 2005). Several researchers have tried to explain the concept of knowledge leadership (Cavaleri et al., 2005; Lakshman, 2005, 2007, 2009a, 2009b; Mabey et al., 2012; Skyrme, 2000; Viitala, 2004; Yang et al., 2014): some have contributed by defining knowledge leadership and each has explained key dimensions that constitute knowledge leadership.

Cavaleri et al. (2005) explained that one of the most crucial elements of becoming a knowledge leader is the ability to turn every learning experience into knowledge; in order to achieve that knowledge, leaders have to practice and be comfortable with personal reflection, experimentation and always looking for new ways to do things in the best possible way, and be able to deliberately and continuously learn from past work and life experiences. They also add that “yet creating knowledge from learning is hardly automatic—it requires the ability to reflect and reason” (p. 36). Knowledge leadership has been defined as “any attitude or action – joint or individual, observed or imputed – that prompts new and important knowledge to be created, shared and utilised in ways that ultimately bring a shift in thinking and collective outcomes” (Mabey et al., 2012, p. 2451). Skyrme (2000, p. 81) explored the concept of “knowledge leadership” and proposed that, unlike knowledge management:

knowledge leadership is about constant development and innovation—of information resources, of individual skills (an important part of the knowledge resource) and of knowledge and learning networks. It embraces both the sharing of what is known, and innovation—the two thrusts of a knowledge-enhanced strategy.

Therefore, he pointed out, knowledge leadership requires good cognitive thinking. However, he did not elaborate on or define leaders' behaviours when it comes to

knowledge leadership. Viitala (2004) worked on this gap, elaborating on the behaviour of leaders in order to present a clearer understanding of the “knowledge leadership” concept and to provide an empirical basis on which it is possible to combine the previously fragmented discussions. Viitala (2004, p. 528) cites Stogdill’s (1974) definition of knowledge leadership: a “process whereby an individual supports other group members in learning processes needed to attain group or organisational goals”. Adair (2004) defines a leader as, “the kind of person (with leadership qualities) who has the appropriate knowledge and skill to lead a group to achieve its ends willingly” (p. 120). Knowledge leadership in the present study is defined as a leadership style that is adopted to ensure that organisational vision is aligned with knowledge concepts which can be translated into real activities and practice in order to encourage an environment of learning, building organisational capabilities and innovation.

Different scholars have identified different dimensions of knowledge leadership. For instance, Yang et al. (2014) identified three dimensions: 1) leadership skills, 2) cooperation and trust and, 3) knowledge integration and innovation. They describe leadership skills as when the leader is well aware of and understands the essential knowledge of the market, always seeks continuous learning and is seen as a role model for others. The second dimension, cooperation and trust, refers to the leader’s understanding of the needs of the team and his/her ability to provide them with essential resources while managing expectations. This dimension also entails cooperation between the leader and team members to overcome any problems that may arise. Yang et al. (2014) also explain that in this dimension leaders build an environment of trust among their team members and both leader and team members are encouraged to share and apply knowledge which they have learned about their market or customers. In the third dimension, knowledge integration and innovation, leaders seek to enhance their teams’ innovative capabilities and create a reward system to accelerate team learning habits and behaviours as well as lead the team to implement innovative ideas. In this dimension leaders also look out for experiences that other departments have encountered and integrate these with their teams in order to create new knowledge (Yang et al., 2014).

Viitala (2004), however, identified the three dimensions as 1) orienteering of learning, 2) creating a climate that supports learning and, 3) supporting individual and group level learning processes. She explains that the first dimension entails leaders helping their team members see the bigger picture of where the organisation is heading and its vision and

goals. Additionally, leaders seek to clarify for their team what knowledge and capabilities will be required in the future with an emphasis on learning. Essential guidelines with regard to learning include leaders supporting team members to work as a unit, gathering feedback and market needs, providing team members with pre-defined performance and quality measurements to monitor, and guiding them on a continuous basis. In addition, leaders allocate time to communicate all important messages and give directions for the future and on performance to maintain quality, promoting and providing capabilities for ideation for their team members as well as encouraging the transfer and sharing of knowledge among the team.

Viitala's (2004) second dimension, creating a climate that supports learning, was adopted from psychology of learning because if employees are stressed and fear making mistakes when trying something new this could prevent them from learning. Thus, this dimension is about whether people are comfortable making mistakes together and learning from failures, asking for and offering help, guidance and advice when needed, all of which promotes a climate of safety and trust. In this dimension, leaders should make an effort to create a social climate that facilitates learning. Therefore, leaders play a significant role in supporting trust between team members, dealing with mistakes in a constructive and positive way and listening to and appreciating the ideas and views of their teams. They should also be prepared to accept feedback from their team members as well as encouraging their team to express their opinions and views freely and openly.

Viitala's (2004) third dimension, supporting individual and group level learning processes, is very close to the learning process itself. It focuses on the leadership's active role in supporting both individual and group level processes related to learning. The leaders in this dimension act more like a teacher or coach: they analyse and plan the competencies, knowledge, and skills needed by their team and help them acquire them. In addition, leaders have discussions with their team members in order to develop their professional skills and, as required, they are available to support their teams in developing their performance and course of action. Furthermore, in this dimension leaders not only support their teams to develop their knowledge and competencies but also help them reflect on their own knowledge and skills. One of the most important factors in this dimension is that leaders should provide their teams with guidance, support and feedback as well as acknowledging good work achieved by their teams and providing them with positive feedback. This dimension also requires that leaders should be role models so they

should be continuously learning their capabilities as this gives them credibility.

Another researcher who expressed an interest in the concept of “knowledge leadership” is Lakshman (2005, 2007, 2009a, 2009b). However, he focused on knowledge leadership from a macro perspective with a focus on the organisational level rather than a micro perspective, that is, employee focused. In his studies he explains how information and knowledge management play a critical executive leadership role that can have a significant impact in organisations.

2.5.4.2 Inclusive Leadership

Inclusive leadership is another concept that has emerged in the evolution of leadership theory (Carmeli et al., 2010; Hollander, 2012; van Dierendonck & Nuijten, 2011; Prime & Salib, 2014, 2015). Wuffli (2015) explained that the term *inclusive* has emerged as an expression in order to include less fortunate people who may be poor or underprivileged: in the scope of leadership theory, inclusive leadership refers to stressing the need to include all diverse team members and to create a better relationship between the leader and his or her followers. Carmeli et al. (2010) explained inclusive leadership as representing “leaders who exhibit openness, accessibility, and availability in their interactions with followers” (p. 250). Ryan (2006) wrote that inclusive leadership consists of three key elements: “1) it implies some sort of influence, 2) is a process, an array of practices, procedures, understandings, and values that persist over time, 3) is organized to achieve particular ends” (p. 17). Hollander (2012) defined inclusive leadership as being able to accomplish goals for common benefits: “doing things with people, rather than to people” (p. 3). He also stressed that inclusive leadership is a way to improve decision making and desired outcomes by utilising the whole team’s capabilities instead of just one person’s. He pointed out that inclusive leadership is essential as it creates an atmosphere that facilitates fairness and gives a feeling of inclusion. From a practitioner’s perspective, Catalyst, a leading non-profit organisation and consulting firm, has developed a framework it named EACH (**E**mpowerment, **A**ccountability, **C**ourage, **H**umility) for assessing and conceptualising inclusive leadership (Prime & Salib, 2014) using four of the eight dimensions introduced by van Dierendonck and Nuijten (2011). It should be noted, however, that van Dierendonck and Nuijten did not refer to any of their individual dimensions as inclusive leadership; rather, they termed the eight as a whole as ‘servant leadership’. Thus, servant leadership consists of empowerment, standing back,

accountability, forgiveness, humility, authenticity, courage and stewardship (van Dierendonck & Nuijten, 2011). The first dimension of inclusive leadership is empowerment. Empowerment is concerned with supporting people and motivating them toward personal development; it aims to nurture a pro-active and self-confident attitude among employees which imbues them with a sense of authority (van Dierendonck & Nuijten, 2011). Ergeneli et al. (2007) also stressed that empowerment is a supportive factor that responds to environmental changes at the right time. Therefore, empowerment in leadership entails behaviours such as coaching employees toward innovative performance, sharing information and, most importantly, supporting decision making that is self-directed (van Dierendonck & Nuijten, 2011). Additionally, empowerment focuses on the learning process of an individual as the realisation of one's personal abilities and what they can still learn (van Dierendonck & Nuijten, 2011). Prime and Salib (2014) defined empowerment as “[e]nabling direct reports to develop and excel” (p. 7) and their study confirmed that empowerment is the most significant attribute of inclusive leadership and one of the most important aspects that makes employees feel included. The second dimension of inclusive leadership based on van Dierendonck, and Nuijten (2011) and Prime and Salib (2014, 2015) is humility, defined as admitting mistakes while learning from criticism and different points of view as well as acknowledging and seeking the contributions of others to overcome one's limitations. Courage, the third dimension, involves putting personal interests aside to achieve what needs to be done (van Dierendonck & Nuijten, 2011; Prime & Salib 2014, 2015), and acting on convictions and principles even when it requires personal risk-taking. Finally, Prime and Salib refer to accountability as, “demonstrating confidence in direct reports by holding them responsible for performance they can control” (2015, p. 7). In their 2015 study, they found that these leadership attributes predicted two key elements of inclusion – uniqueness and belongingness; they also pointed out that inclusion happens when people value both the differences and the commonalities of each other and highlighted that when people feel included in their work groups or their workplaces, they are more likely to do two things – innovate and be a team player.

Carmeli et al. (2010) investigated inclusive leadership and suggested that it has three main dimensions: 1) availability, 2) accessibility and, 3) openness. They noted that an inclusive leader needs to be available for consultations if problems occur, have a continuous presence within their team, and be readily available to answer professional queries to help

team understanding. The second dimension is accessibility: managers should encourage their teams to access them when needed for emerging issues or to discuss emerging problems. The third and last dimension they proposed is openness: leaders should be open to hearing new ideas from their teams, attentive to any opportunity that may improve work processes and open to discussing and addressing ways to achieve goals and objectives with their teams (Carmeli et al., 2010).

Hollander (2012) also studied and investigated inclusive leadership empirically; he suggested that inclusive leadership has three main dimensions: 1) support-recognition, 2) communication, action and fairness, and 3) self-interest and respect. Support-recognition is about involving team members and asking them about their ideas with regard to their work, leaders appreciating their team members' work and recognising their contributions. In addition, in this dimension the leader encourages employees and team members to ask questions, gives them the freedom to make decisions which are related to their work, shows interest in the employees and team work and listens to their progress and any news they bring, even if it is bad. Hollander's second dimension, communication, action and fairness, involves communicating clear goals and objectives to the team to be achieved, as well as the process of achieving work-related tasks. This dimension also promotes fairness in a way that applies to everyone equally and consistently without exception and requires the leader to take appropriate action regarding any problems identified by their teams. The third and final dimension, self-interest and respect, expects leaders to monitor the morale of individuals and team members. In addition, if team members make a mistake they should discuss it privately rather than in public (Hollander, 2012). This dimension is also concerned with the respect of a leader toward his/her employees and team members. This respect is demonstrated by acknowledging their teams' ideas, giving them credit for their work and putting the interests of the entire team ahead of their own.

Table 2.5 Comparison of the Knowledge Integrative Era and Other Leadership Evolutionary Eras

	All Previous Eras (Seters & Field, 1993, pp .31-32)	Knowledge Integrative Era
Dimensionality	<ul style="list-style-type: none"> One-dimensional eras: Personality Era, Influence Era, Behaviour Era and Situation Era: Multidimensional eras: Contingency Era, Transactional Era, Culture Era, Transformational Era: Anti-Leadership Era: <i>Too</i> multidimensional as so many variables existed that they ended up not explaining anything 	<p>Below are suggested types that constitute this era. This era covers many of the elements which were introduced in earlier eras such as traits, behaviours, and situation but with focus on importance of leaders knowledge and importance of inclusion.</p> <p><i>Knowledge Leadership:</i></p> <ul style="list-style-type: none"> Multidimensional consists of: <ul style="list-style-type: none"> “Leadership skills, cooperation and trust and knowledge integration and innovation” (Yang at el., 2014, p.47) “Orienteering of learning, creating climate that supports learning and supporting individual and group level learning processes”(Viitala, 2004, p. 533-536) <p><i>Inclusive Leadership:</i></p> <ul style="list-style-type: none"> Multidimensional consists of: <ul style="list-style-type: none"> “Empowerment, accountability, humility and courage” (van Dierendonck, & Nuijten, p.251-252, 2011; Prime & Salib 2014, 2015) “Openness, availability, accessibility” (Carmeli et al., 2010, p.260). “Support-recognition, communication, action and fairness, and self-interest and respect” (Hollander, 2012, p. 221)
Direction of Leadership	<p>Personality Era, Influence Era, Behaviour Era and Situation Era, Contingency Era, Transactional Era, Anti-leadership Era, Culture Era:</p> <ul style="list-style-type: none"> Direction was focused primarily on leadership from the leader to the subordinate. <p>Transformational Era:</p> <ul style="list-style-type: none"> Lower or upper levels in the organisation. 	<p><i>Knowledge Leadership:</i></p> <ul style="list-style-type: none"> Lower or upper levels in the organisation. <p><i>Inclusive Leadership:</i></p> <ul style="list-style-type: none"> Lower or upper levels in the organisation.
Leadership Characteristics	<ul style="list-style-type: none"> Reactive Proactive Radical instead of traditional; more innovative and creative; and ready to engage with new ideas 	<p><i>Knowledge leadership:</i></p> <ul style="list-style-type: none"> Displays leadership skills of acquiring knowledge (Yang at el., 2014) Creates a learning climate (Viitala, 2004) ”Be knowledgeable about knowledge” (Skyrme, 2000, p. 79) Their ability to create “a knowledge enriching culture” (Skyrme, 2000, p.80) <p><i>Inclusive Leadership:</i></p> <ul style="list-style-type: none"> Empowering individuals and teams (van Dierendonck, & Nuijten, 2011; Prime & Salib 2014, 2015)
Note: Compiled by the researcher from multiple sources as indicated in the table.		

From Table 2.5, it is evident that leadership evolves like anything else in organisations. Therefore, for leaders to be supportive of knowledge sharing practices they also have to adapt to new strategies and new leadership skills. The role of leaders is also important in that they need to model the behaviours they expect of employees (Yew Wong, 2005). Specifically, they need to demonstrate their willingness to openly share knowledge within the organisation because this has been found to positively influence KM and knowledge sharing (Yew Wong, 2005). Despite the long evolution of leadership theory and leaders' crucial role in organisations, there is a lack of research addressing their role in managing information and knowledge (Lakshman, 2007). Fourteen years later this gap still exists. The literature on KM has frequently stressed the importance of having leadership support, pointing out that in many cases it has been the lack of such support that caused KM projects and initiatives to fail (Lakshman, 2007; Riege, 2005; Ruggles, 1998; Bantel & Jackson, 1989; Larson, 2016).

Riege (2005) reported 17 individual and 14 organisational factors in organisations which hinder knowledge sharing, most of which were challenges involving leadership and cultural aspects. Larson (2016), in his case study of the tax division in the Tokyo branch of a multinational tax firm in which a KM system had recently established reported that several of the tax managers showed concern at the transparency that the new system was providing. The established leadership style was not very conducive to knowledge sharing among employees: for example, some managers and partners believed that their research was their own work and refused to share it with the rest of the company without a compensation or reward system while others were worried about how others might perceive their work for different reasons. Some were aware of, and trying to cover up their own poor skills; some were shy; and yet others were concerned that sharing would expose their previous decisions, leaving them vulnerable to possible reprimands for any resultant mistakes or errors (Larson, 2016). Bavik et al. (2018) addressed one research gap, examining the influence of leadership on employees' knowledge sharing, taking into consideration the key role that leaders play in their teams' behaviour at work: they noted that some studies have argued the importance of empowering leadership on employees' knowledge sharing but pointed out that the how different leadership styles influence knowledge sharing behavioural intentions is yet to be investigated. Shariq et al. (2019) have examined the mediating and moderating impact of goal orientation and emotional intelligence on the relationship of what they call knowledge oriented leadership, and what

this study calls knowledge leadership and knowledge sharing. Their results confirmed that the relationship between knowledge oriented leadership and knowledge sharing is significant. However, they admitted that one of their study's biggest limitations is that it was conducted only in the private sector – which is an economy-based, not a knowledge-based, economy, and they recommended that future research should take place in the government sector. This thesis aims to fill this gap by investigating new emerging leadership styles such as inclusive leadership and knowledge leadership as previous studies relied mostly on old leadership styles, and also to focus on the government sector as they suggested.

2.5.5 Key Theories Used in The Knowledge Sharing Behaviour Literature

To answer the research question and fulfil the objectives, a review of KSB literature as well as the key theories utilised to predict KSB was undertaken. Some researchers have chosen to develop new framework models based on the literature and the scope of their research (e.g., de Vries et al., 2006; Gupta, 2008; Yang & Chen, 2007; Lin, 2007; van den Hooff & de Ridder, 2004) while others have utilised well-established theories to explain their models. The key theories used by researchers to explain and predict knowledge sharing intention and behaviour are: 1) Social Exchange Theory (Blau, 1964), 2) Social Capital Theory (Bourdieu, 1986) and, 3) Theory of Reasoned Action and Theory of Planned Behaviour (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). The following section offers a review of these key theories followed by an explanation of the rationale behind the choice of theory adopted in the present study is provided.

2.5.6 Social Exchange Theory (SET)

Social Exchange Theory explains knowledge sharing from a social exchange perspective which is formulated bearing in mind cost-benefit analysis (Blau, 1964). Accordingly, individuals evaluate the possible benefits and risks of social relationships and then construct their relationships with each other based on that (Tsai et al., 2013). Based on this theoretical framework, in an organisational context, employees should treat knowledge sharing as a transaction and, before they commit to any type of sharing, evaluate the potential benefits that might result (Liang et al., 2008) as well as the risks – assuming that knowledge is the most important resource (Wu et al., 2012). Huang et al. (2008) suggested that offering individuals an explicit monetary reward would motivate them to share their knowledge with their colleagues and found that this positive

relationship of anticipated extrinsic rewards on employees' attitude to share knowledge was supported. In contrast, other studies found divergent empirical findings when testing the same relation: several studies have confirmed that anticipated extrinsic rewards can actually have a negative effect on attitude toward knowledge sharing (Brock et al., 2005; Tsai et al., 2013). This may be because: 1) task related rewards can interfere with intrinsic motivators (e.g., sense of self-worth) which could eventually weaken the interest and excitement in knowledge sharing; 2) extrinsic rewards cannot hold over a long period of time (Brock et al., 2005); and, 3) where no reward was given, employees could perceive this as a punishment and thus it could have a negative impact on attitude toward knowledge sharing in future (Brock et al., 2010; Tsai et al., 2013). Most studies on the context of knowledge sharing in work environments found that anticipated extrinsic rewards either have no effect on attitude toward knowledge sharing (Lin, 2007; Brock et al., 2010; Zhang & Ng, 2013) or significant negative impact (Brock et al., 2005; Tsai et al., 2013). Thus, anticipated extrinsic rewards and their impact on attitude toward knowledge sharing are not part of this study.

Huang et al. (2008) found that anticipated reciprocal relationships between employees is more important in organisations. It has also been suggested that anticipated reciprocal relationships are an essential aspect of benefits in social exchange as well as an important factor for knowledge sharing (Brock et al., 2005; Huang et al., 2008) because they capture employees' desires to maintain their ongoing relationships with their co-workers. Thus, anticipated reciprocal relationships refer to individuals' belief that they can improve mutual relationships with their co-workers through knowledge sharing (Brock et al., 2005). When employees share their knowledge with their colleagues they develop relationships over time and they expect their co-workers to reciprocate in the future. Lin (2007) also confirmed that anticipated reciprocal relationships have a significant influence on attitude toward knowledge sharing. All in all, the social exchange theory framework is best used when determining knowledge sharing of employees from an extrinsic and intrinsic rewards perspective (Liao, 2008; Liang et al., 2008; Saavedra & Van Dyn, 1999; Tiwana & Bush, 2000; Xu & Cai, 2008; Zafirovski, 2003). However, extrinsic and intrinsic rewards are not part of this present study's scope, hence SET was not selected for this study.

2.5.7 *Social Capital Theory (SCT)*

Social capital theory shares a similarity with social exchange theory in terms of

emphasising reciprocal relationships. Bourdieu (1985) explains social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network or more or less institutionalized relationships of mutual acquaintance or recognition” (p. 248). Therefore, social capital theory suggests that social capital relies on a strong network that a person has with their colleagues which could lead them to access actual or potential resources (Bourdieu, 1985). Based on that rationale it is expected that an individual’s personal networks and relationships will strongly influence KSB: the stronger these relationships are, the more likely knowledge sharing is to occur (Chiu et al., 2006). In addition, social relationships are seen as a set of resources which are considered to be valuable assets which can benefit individuals (Chang & Chuang, 2011; Yang & Farn, 2009). Further the factors of social capital consist of trust, norms, obligations, expectations and identification and, examined in relationship with knowledge sharing, have been found to be positive relationships (Chang & Chuang, 2011; Wei et al., 2019). However, Bakker et al.’s 2006 study of their application of the social capital theory found that trust is a poor explanatory factor of knowledge sharing. White (2002) explains that social capital theory expresses the view of “my connections can help me” (p. 260). He further elaborates that social capital is seen as a means to achieve one’s own interest through networking and social support. Therefore, since SCT focuses on relationships at the personal level rather than the professional level in a workplace, this theory is not used in the present study. The objective is to examine what factors can support or hinder knowledge sharing among employees rather than a social outlook focus.

2.5.8 *Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)*

The present study adopts the theory of reasoned action and theory of planned behaviour framework (the rationale for selecting this framework will be discussed at the end of this section). This section provides the background to the theory and its evolution over the years. Fishbein and Ajzen collaborated multiple times to study beliefs, attitudes, intentions and behaviours which led them to establish the TRA in the 1970s. The TRA posits that a person’s performance of a specific behaviour is determined by their intention to perform that behaviour as well as by attitudes and subjective norms (Fishbein & Ajzen, 1975) – assuming that the behaviour is performed voluntarily. TPB is considered an extension of this initial work on TRA (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). Ajzen (1991) suggested a new determinant, Perceived Behavioural Control as he later found that people’s behaviour appeared not to be fully voluntary and thus under control;

this updated theory, in which the behaviour could be intentional and planned, was termed the theory of planned behaviour. The addition of perceived behavioural control also increased the prediction of behavioural intention accuracy. In the latest enhancement of the theory, Fishbein and Ajzen (2010) added an additional behaviour-predicting factor, descriptive norms, and returned to the original theory name. Descriptive norms is about how *significant others* are seen performing a particular behaviour (Fishbein & Ajzen, 2010). This was added because they recognised that perceived normative pressure not only reflects what others think an individual should do but also what they themselves are perceived to be doing (Fishbein & Ajzen, 2010). The theory also addressed subjective norms (renamed after the development to injunctive norms). Injunctive norms refer to “the degree to which one believes that people who bear pressure on one’s actions expect one to perform the behaviour in question multiplied by the degree of one’s compliance with each of one’s referents” (Bock et al., 2005, p. 107).

Fishbein and Ajzen’s 2010 theory of reasoned action is one of the major theories used in understanding human intention and behaviour. Explaining human behaviour is very challenging and many elements have to be considered in order to provide a more accurate view. These two theories have undergone through a lot of development since theories were first developed back in 1975 by Fishbein and Ajzen. TRA and TPB as a result of the TRA and TPB theories evolution the outcome was an updated TRA model which was developed in 2010 by Fishbein and Ajzen (see Figures 2.4 to 2.7). TRA has proved very useful to many researchers whose research questions involve predicting, explaining, or changing categories of behaviour.

TRA and TRB are thus chosen for this study as they provide a comprehensive framework for predicting and explaining behaviours given social contexts which fits with the research topic’s investigation of the impact of both organisational culture and leadership on KSB in the workplace. In addition, the constructs of the TRA framework (attitude toward a specific behaviour, injunctive norms, descriptive norms, and perceived behavioural controls) form the principle elements of behavioural intentions which then support the performance of the desired behaviour. In addition, the unique advantage of TRA is that, based on theory, researchers can introduce background factors to the model. In this present study the background factors are leadership and organisational culture.

Evolution of TRA and TPB

Figure 2.4 Schematic Presentation of Conceptual Framework for the Prediction of Specific Intentions and Behaviours (Fishbein & Ajzen, 1975, p. 16).

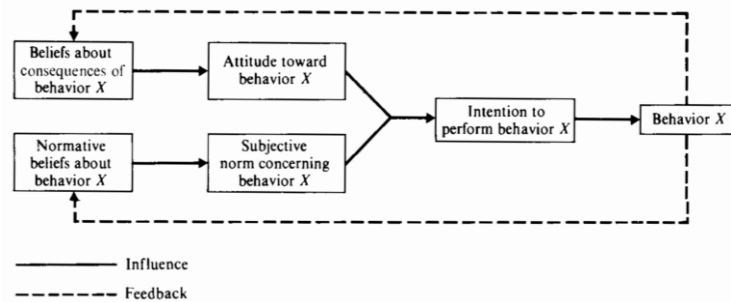


Figure 2.5 Theory of Planned Behaviour (Ajzen, 1991, p. 182)

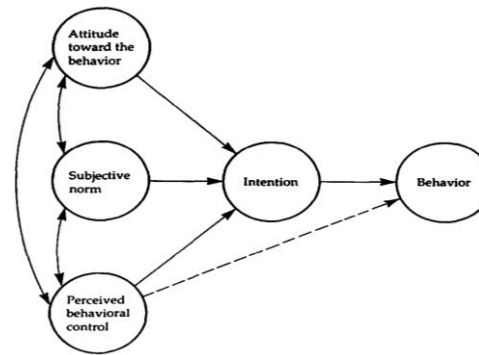


Figure 2.6 An Integrative Model (Fishbein, 2000, p. 274)

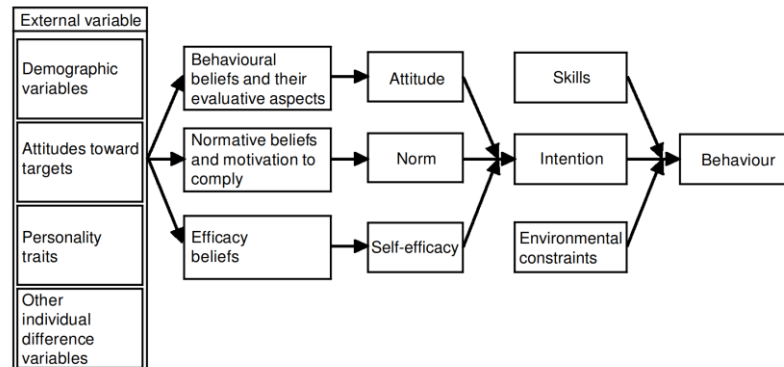
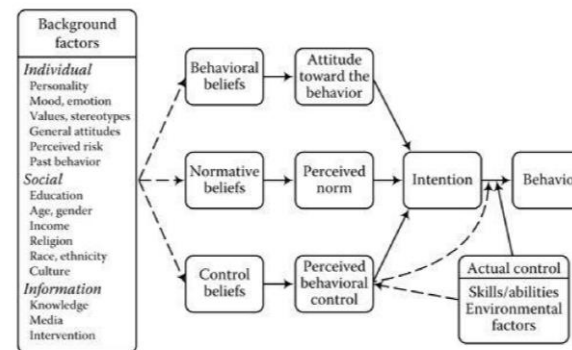


Figure 2.7 Schematic Presentation of the Reasoned Action Model (Fishbein & Ajzen, 2010, p. 22)



In light of the TRA framework, the dependent variable in the research model is “knowledge-sharing intention”. Although it would be more accurate to measure the knowledge-sharing *behaviour*, in reality this has limited feasibility and is hard to accomplish (Floress et al., 2018; Randall & Wolff, 1994). Floress et al. (2018) explained that there are two types of behaviours in terms of measurement: 1) observed/actual behaviour and, 2) self-reported behaviour. The former may be considered more reliable but this type of research can be challenging, time-consuming and costly (Floress et al., 2018). For instance, to be able to measure actual behaviour, one needs to have access to organisations’ files and be able to observe and record employees’ actions involving knowledge sharing. This kind of accessibility may be considered too intrusive and researchers’ requests are more likely to be turned down.

The relationship between intention and behaviour has been tested in a wide range of disciplines and thus has been proven and validated. Fishbein and Ajzen (2010) pointed out that, since the development of their theoretical framework, over 1000 empirical papers were written based on TRA model which appeared in professional journals. Based on meta-analysis studies by Armitage and Conner (2001), Randall and Wolff (1994), Sheppard et al. (1988), Notani (1998) and McDermott et al. (2015), they explored the relationships between intention and actual behaviour and found that the correlation between intention and behaviour varies from 0.41 to 0.53. Since measuring intention instead of actual behaviour is a common practice in the knowledge-sharing literature (e.g., Bock et al., 2005, Bock et al., 2010; Cheung et al., 2013; Huang et al., 2008; Zhang & Ng, 2013), this approach will be followed in this study. Measuring behaviour is challenging because when participants are asked to self-report their actual behaviour they may feel uncomfortable if they expose their true behaviour. Knowledge-sharing studies have mostly adopted intention in their efforts to overcome this challenge because it has been proven in the literature that intention is the most significant predictors of behaviour. According to TRA and TPB, when individuals intend to perform a specific behaviour they are more likely to actually perform the behaviour: for example, if someone is intending to go to the gym three days a week, they will have the mind-set to do so by planning for it which eventually helps in performing the behaviour (Ajzen, 1991; Fishbein, 2000; Fishbein & Ajzen, 1975, 2010). Despite these challenges, Kuo & Young (2008a) measured actual knowledge-sharing behaviour based on logged frequency which

was consistent with the mechanisms provided by Earl (2001) for capturing individual sharing. Thus, self-reported behaviour is often used by researchers by asking the study participants to report their actual behaviours (Floress et al., 2018).

2.6 Research Gaps in the Literature

This section summarises some of the research gaps that emerged from the literature review. Three critical gaps are identified, two related to the research topic in context of the Middle East region in general and one related to the UAE. The first gap is the limited studies that examine specific characteristics of organisational culture and its impact on knowledge-sharing behavioural intentions. The second is the limited research that examines the impact of leadership on both organisational culture and knowledge-sharing behavioural intentions. Specifically, based on the researcher's knowledge, no studies have been conducted testing the most evolved leadership styles (inclusive leadership and knowledge leadership) on organisational culture and knowledge sharing. There is also very limited research on the topic in the Middle East region. Finally, given the unique and diverse demographics of the UAE and its Emiratisation policy, there are almost no studies that examine the impact of this policy and how this may impact knowledge sharing between Emirati and non-Emirati employees.

2.6.1 Limited Research on Investigating Specific Organisational Culture Dimensions on Knowledge-Sharing Behavioural Intentions

Organisations need to realise which factors impact knowledge sharing behavioural intentions among their employees. Many organisations fail to acknowledge these factors which may lead to failure of knowledge-sharing initiatives and KM programs (Babcock, 2004). With the increased emphasis on innovation globally, organisations are often steered, sometimes wrongly, toward technology as a panacea, including knowledge sharing (Lyu & Zhang, 2016).

Chi6n et al. (2019) examined whether organisational culture, organisational structure and technology infrastructure affect knowledge-sharing in organisations. They found that organisational culture and organisational structure have a significant impact whereas technology infrastructure was not significant. Therefore, this study focuses on unique organisational culture dimensions: trust, openness, team orientation and agreement, and examines their impact on knowledge sharing attitudes. Examining the impact of specific

organisational culture dimensions on knowledge-sharing can provide more guidance for leaders on which cultural dimensions to focus on in order to nurture and promote knowledge-sharing behavioural intentions among employees.

2.6.2 Limited Research on Leadership Impact on Organisational Culture and Knowledge-Sharing Behavioural Intentions

Previous research has shown that leadership has a positive influence on team knowledge-sharing and overall team performance (Srivastava et al., 2006). However, in most leadership studies on knowledge-sharing researchers have studied leadership types and traits which emerged many decades ago. As with anything else, leadership keeps evolving and therefore leaders also need to adapt to new ways of dealing with organisational culture and employees. This study focuses on knowledge leadership and inclusive leadership influence on knowledge-sharing which has not been studied before. Leadership influence on organisational culture is also crucial: Pettigrew (1979) addressed the link between leadership and organisational culture, stressing that leaders influence their followers to create collective experiences where they align their teams to form an organisational culture. However, as Ogbonna and Harris (2000, p. 783) and Sharma and Sharma (2010, p. 104) note, there is very limited research examining the “relationship between organisational culture and leadership” [especially] “the impact of leadership on organisational culture. For example, some studies examined the impact of both leadership and organisational culture collectively on factors such as organisational commitment (Katper et al., 2020; Senjaya & Anindit, 2020), and employee performance (Dewi & Wibow, 2020; Erniwati et al., 2020; Paais, & Pattiruhu, 2020). Hence it is essential to examine the role of leadership and its influence on driving change in organisational culture as well as knowledge sharing intentions of employees.

2.6.3 Lack of Research in the Middle East and the UAE on the Research Topic

Despite the plethora of research on knowledge-sharing, there is lack of information specific to the Middle East on factors that enable knowledge-sharing (Al Bastaki et al., 2020). Behery and Paton (2008) further pointed out that business and management practices are generally under-researched in the UAE and the Middle East compared to other parts of the world. Abdallah et al. (2012) examined individual, organisational and technological factors affecting knowledge-sharing and they stressed that further

investigation is needed to study other factors that may hinder knowledge-sharing within organisations in the UAE. The Middle East, GCC and the UAE in particular are unique contexts that should be studied because not all the measurements used in the west and Asia can be fully utilised here.

2.7 Summary

This chapter provided a comprehensive review of the literature relevant to the study topic. It then addressed misconceptions in the literature with regard to KM and between knowledge transfer, knowledge exchange and knowledge sharing before explaining the definition of KSB used in the present study. The chapter then addressed the evolution of organisational culture and reviewed the organisational culture dimensions introduced by many researchers. Next, a rationale of the selected organisational culture for the present study was provided. After a review of the evolution of leadership and the eras of leadership, the concept of inclusive leadership and knowledge leadership, the focus of the present study, was discussed. The chapter addressed some of the key theories which have been used to predict and explain KSB and a rationale for the adopted theories was provided. Finally, the chapter summarised some of the key gaps in the literature and how this current study aims to fill these.

Chapter 3: Theoretical Development

3.1 Introduction

Chapter 2 presented the literature review, highlighting the previous research that informs this study, research gaps and the research context. This allowed the researcher to develop the objectives for the present study: to examine the impact of five selected organisational culture dimensions – participation, trust, agreement, team orientation, and openness – on knowledge sharing intention among employees. In addition, it aims to explore the impact of both inclusive leadership and knowledge leadership on the above-mentioned organisational culture dimensions and intention to share knowledge. Demir et al. (2011) stressed that it was crucial for employees to identify with the organisational culture as “[w]hen organisation members identify with the culture, the work environment tends to be more enjoyable, which boosts morale. This leads to increased levels of teamwork, sharing of information, and openness to new ideas” (p. 199).

This thesis aims to answer the following research questions:

- How do organisational culture dimensions (participation, trust, agreement, team orientation, and openness) impact employees’ attitude to knowledge sharing?
- How does leadership (inclusive leadership and knowledge leadership) impact employees’ attitude to knowledge sharing?
- How does leadership (knowledge leadership and inclusive leadership) influence organisational culture dimensions (participation, trust, openness, team orientation and agreement)?

Primarily, the thesis aims to achieve the following objectives:

- Identify and assess the role of organisational culture dimensions on injunctive norms and attitudes to knowledge sharing in UAE organisations
- Provide managerial and policy implications to UAE organisations to promote an organisational culture that is more effective at supporting employees’ knowledge sharing behavioural intentions.
- Develop a comprehensive understanding of how organisational culture and leadership affect knowledge sharing behavioural intentions.

Three research models are proposed. All three are designed in light of the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB) framework. Model 1 examines the effect of both knowledge leadership and inclusive leadership as

influencers for organisational culture dimensions whereby organisational culture affects knowledge sharing intention (see Figure 3.1). This model adopts the TRA and TPB framework, designating organisational culture dimensions as background factors in the theory and with both knowledge leadership and inclusive leadership as influencers on the background factors. Therefore, this model examines whether knowledge leadership and inclusive leadership improve the understanding of employees' motivation to share knowledge with their colleagues. Model 2 examines the effect of both knowledge leadership and inclusive leadership as background factors in the TRA and TPB framework; that is, they are tested as drivers for knowledge-sharing intentions (see Figure 3.2). Model 3 examines both knowledge leadership and inclusive leadership as moderators on the relationship between organisational culture dimensions and attitude toward knowledge sharing (see Figure 3.3).

Figure 3.1 Model 1 (Main Model): Knowledge Leadership and Inclusive Leadership as Influencers for Organisational Culture Dimensions in which Organisational Culture Affects Intention to Share Knowledge Through Attitude Toward Knowledge Sharing

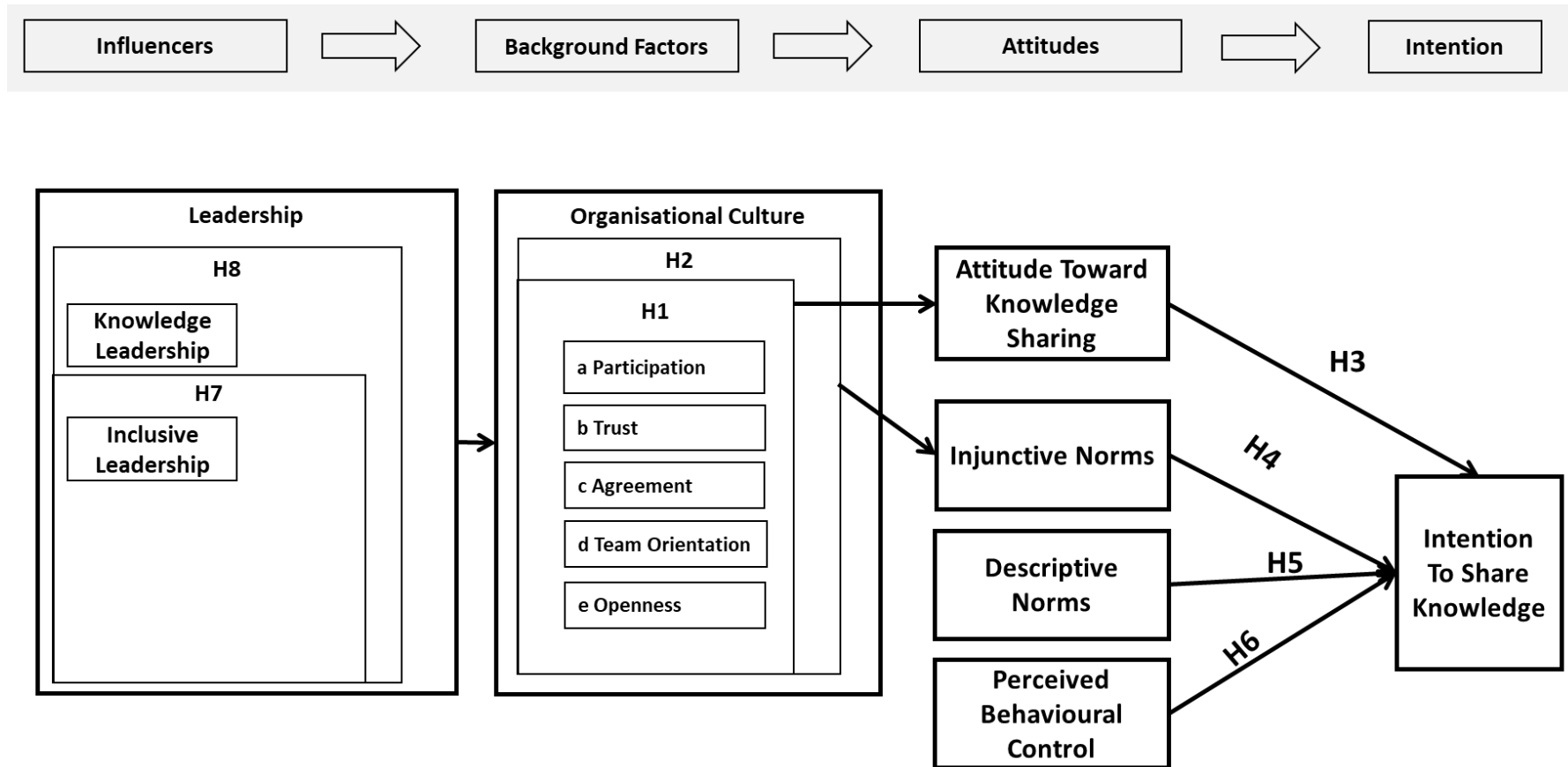


Figure 3.2 Model 2: Knowledge Leadership and Inclusive Leadership are Both Treated as Background Factors in the TRA/TPB Framework

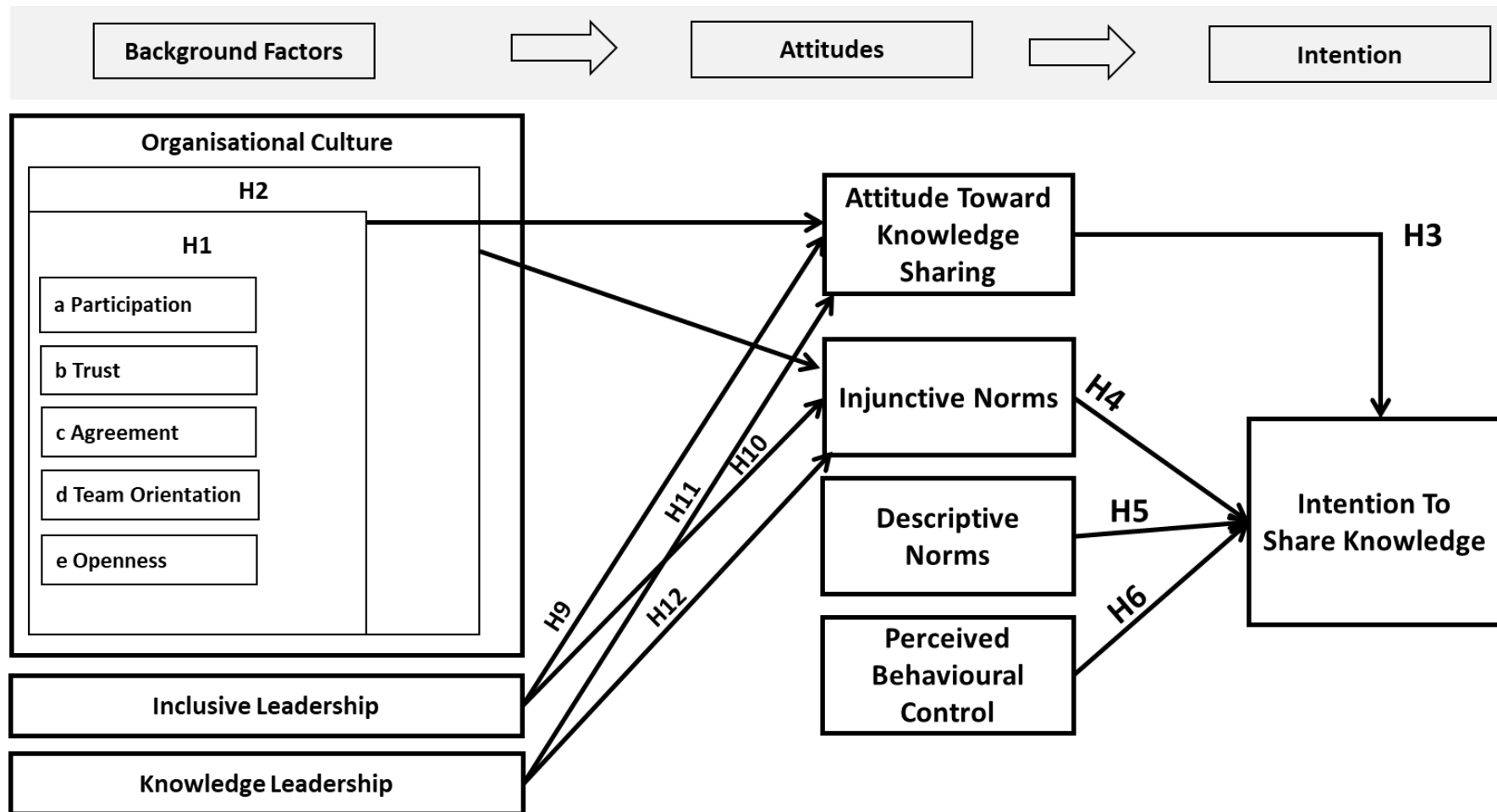
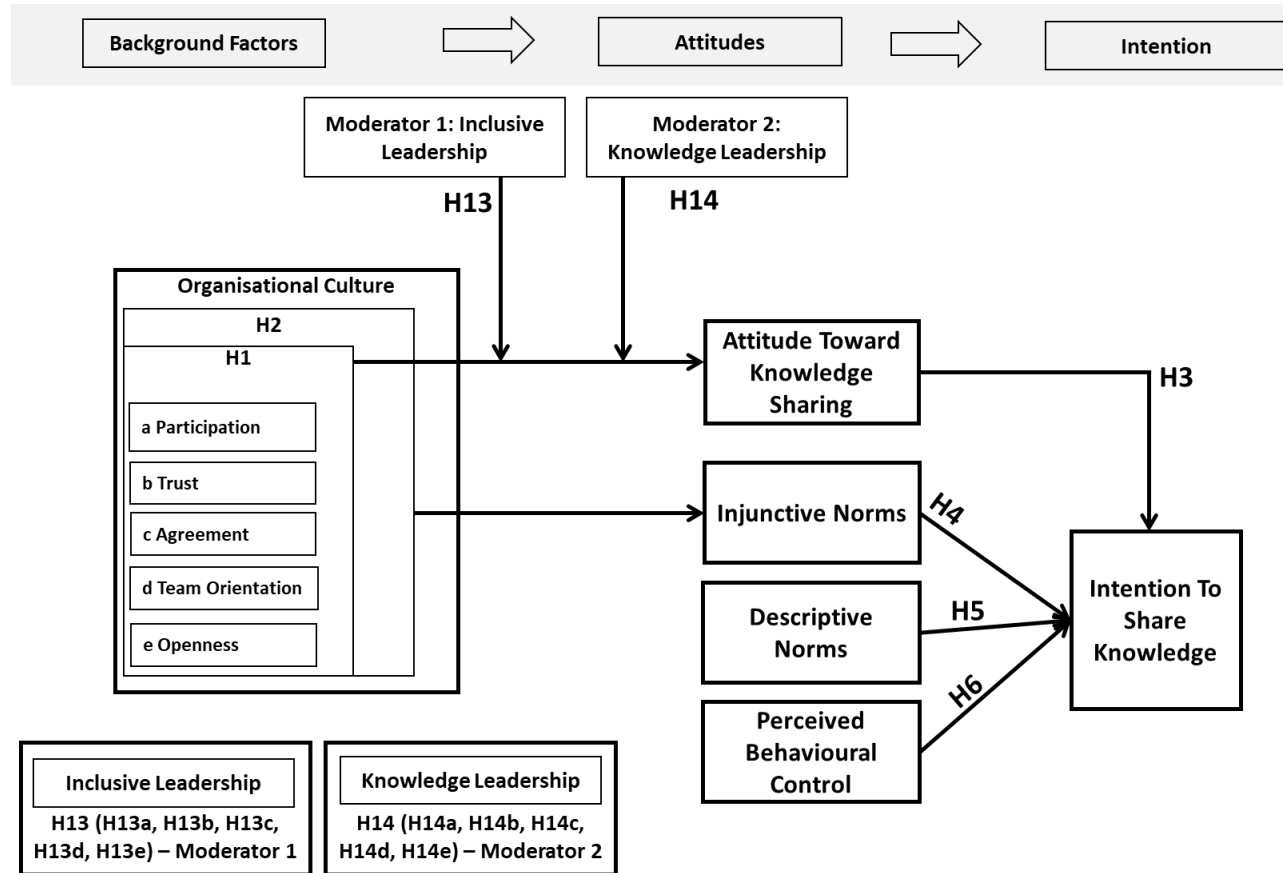


Figure 3.3 Model 3: Knowledge Leadership and Inclusive Leadership are Both Treated as Moderators Between Organisational Culture Dimensions and Attitude Toward Knowledge Sharing



3.2 Research Framework and Hypotheses Development

In order to explore the relationships between organisational culture, knowledge leadership and inclusive leadership, the following models are proposed:

1. Model 1 (Main Model): Knowledge leadership and inclusive leadership as influencers on organisational culture dimensions whereby organisational culture affects knowledge sharing intention.
2. Model 2: Knowledge leadership and inclusive leadership are both treated as background factors in the TRA and TPB framework.
3. Model 3: Knowledge leadership and inclusive leadership are both treated as moderators of the relationship between organisational culture and attitude to sharing knowledge.

Hypotheses 1, 2, 3, 4, 5 and 6 are identical for all three main study models so they will only be explained in Model 1 to avoid repetition. The same applies to the control variables in relation to intention to share knowledge: they will only be discussed in Model 1.

3.3 Model 1 (Main Model)

3.3.1 *Organisational Culture and Its Impact on Attitudes to Knowledge Sharing*

Organisational culture plays a vital role as an enabler in promoting knowledge sharing norms and learning motivations among members of an organisation, and an important role in the integration of people, relationships and technology to improve knowledge management processes (Hansen et al., 1999). For instance, an organisational culture that facilitates trust between employees and their managers will positively influence knowledge sharing (Su et al., 2010).

For any organisation that aims to shift from a culture that hinders knowledge sharing to one that appreciates it, it is important to create a climate that facilitates long-term and trusting relationships between employees (Brock et al., 2005). Therefore, perceived organisational culture significantly affects, either negatively or positively, organisational behaviour depending on the type of culture that is fostered in the organisation (Chua & Lam, 2005; Ruggles, 1998; Storey & Barnett, 2000).

3.3.1.1 Participation and attitude toward knowledge sharing

In a highly participatory culture, final decisions are not expected to be taken by the

manager or the highest in the hierarchy as this culture supports a collective decision-making process (Ghosh & Srivastava, 2014; Locke & Schweiger, 1979; Wagner, 1994). Additionally, in a participatory culture, employees are encouraged to speak their minds and each point is listened to: members do not withhold information or knowledge even if it is unpleasant because they seek to understand everything that one has to say about a topic (Ghosh & Srivastava, 2014). Thus, in such a culture, employees are more likely to share knowledge and information as they participate in discussions and solve problems. It is also expected that since this culture supports participation and sharing views, it will support knowledge sharing as employees share their lessons learned or tips they have learned during their meetings and so on. Suppiah and Sandhu (2011) investigated the influence of organisational culture on tacit knowledge behaviour and stressed that it is almost impossible for employees to share their tacit knowledge if they are not in an active participation environment. Similarly, Yip et al. (2012) described participation as being about employees' contributions to achieving organisational goals through sharing information and knowledge across the organisation. They further explained that employee participation is one of the key success factors for knowledge management implementation and that for organisations to ensure a successful KM implementation, knowledge sharing activities among employees must take place in order to create new knowledge which cannot happen without active participation. This leads to the following hypothesis:

- H1a: An organisational culture that promotes participation will have a positive effect on attitude toward knowledge sharing.

3.3.1.2 Trust and attitude toward knowledge sharing

In an organisational culture that is characterised by trust, employees feel that they are assessed fairly when it comes to evaluations and promotions and feel confident enough to take the initiative without fear of making mistakes (Petty et al., 1995). Ghosh and Srivastava (2014) explained that in a trust-based culture, employees are trusted to keep their word when it comes to commitment. In addition, the dimension involves the level of implicit trust among employees; specifically, it is concerned with whether colleagues trust their managers to give them fair treatment based on job performance (Ghosh & Srivastava, 2014). In such a culture, where trust is nurtured among employees, it is expected that knowledge sharing would happen as colleagues have good intentions and are committed to their work. In addition, since this culture promotes fair evaluation in

terms of promotion, employees are likely to be cooperative and share knowledge with their colleagues instead of being competitive and secretive. Sharma and Sharma (2010) found that in an organisation that provides an interesting environment and where there is trust between work partners, members are more likely to share information with each other: trust creates the foundation for a healthy atmosphere and offers suitable conditions which enable employees to cooperate and share their knowledge to perform better. Moreover, Hurley (2011) explained that, within high-trust teams, members support each other, easily share information and do not mind taking on challenging tasks as they have faith that they and their team members can accomplish anything together. With such cooperation and sharing of information it is expected that knowledge sharing will flow easily among employees. Casimir et al. (2012) highlighted that trust plays a crucial role in human social transactions and argued that it can accelerate knowledge sharing as this is considered as a social transaction. Casimir et al. (2012) explained that cognition-based trust refers to one's knowledge, and competencies. Whereas, affect based trust refers to the emotional connection between employees and their care and concern for one another. Therefore, based on this rationale, employees formulate trust based on their feelings and the emotions generated over time as they experience various situations with their colleagues. Hence, it is expected that employees will share their knowledge with their co-workers if they, 1) feel that their colleagues are knowledgeable and have a sense of responsibility to share their knowledge and, 2) if they have created a strong bond with their colleagues. An example of this can be found in a study by Boateng and Agyemang (2016) conducted in a public sector institution in Ghana, in which a female employee stated, "I would not share my knowledge with a co-worker whom I don't trust" (p. 39). In addition, Hurley (2011) explained that an environment of distrust can turn collaborative exchange into a stressful situation where people are anxious and miserable: in contrast, if the environment promotes trust between employees, this will encourage better collaboration, and will create a comfort zone for employees whereby they can freely exchange ideas. Figure 3.4 shows Hurley's distrust-trust continuum.

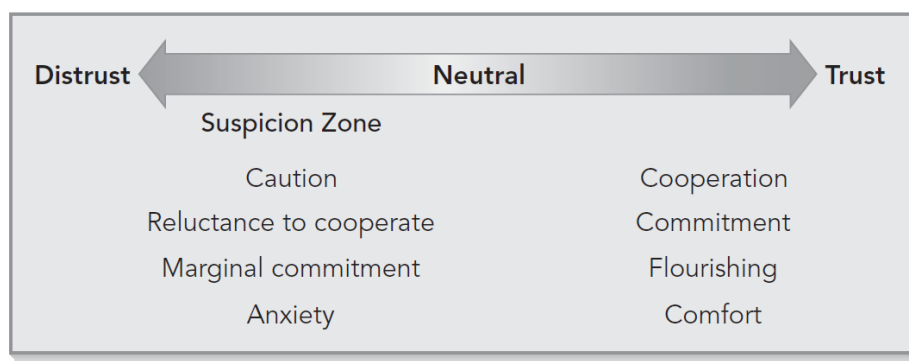


Figure 3.4 The Distrust-Trust Continuum (Hurley, 2011, p. 9)

Overall, most scholars have empirically examined and confirmed that there is a positive relationship between trust and knowledge sharing (e.g., Burke et al., 2011; Chang & Chuang, 2011; Chiu et al., 2006; Gamidullaeva & Vasin, 2018; Hau et al., 2013; Holste & Fields, 2010; Huang, 2009; Lin et al., 2009; Lucas, 2005; Park et al., 2004; Sankowska, 2013; Tsai & Ghoshal, 1998; Wickramasinghe & Widyaratne, 2012). However, others have not been able to find a significant relationship (e.g., Chow & Chan, 2008; Li, 2005; Bakker et al., 2006). This leads to the following hypothesis:

- H1b: An organisational culture that promotes trust will have a positive effect on attitude toward knowledge sharing.

3.3.1.3 Agreement and attitude toward knowledge sharing

Agreement culture promotes flexibility in internal processes and employees treat each other as extended family (Demir et al., 2011; Denison & Mishra, 1995; Denison & Neale, 1999) inasmuch as they share similar norms and values (Ginevičius & Vaitkūnaite, 2006). Therefore, this culture is expected to enhance learning and knowledge sharing among employees as it promotes flexibility in processes rather than relying on complex procedures and formal communications which could act as a hindrance. In addition, in such a culture with shared norms and values, it is more likely that employees will feel comfortable both seeking and sharing knowledge. In high agreement cultures people work toward a win-win solution and unified decisions, even in critical issues, so that they are able to resolve differences (Demir et al., 2011; Denison & Mishra, 1995; Denison & Neale, 1999; Ginevičius & Vaitkūnaite, 2006). Therefore, in order to come up with a unified solution it is likely that each member will share their knowledge and expertise.

This leads to the following hypothesis:

- H1c: An organisational culture that promotes agreement will have a positive effect on attitude toward knowledge sharing.

3.3.1.4 Team orientation and attitude toward knowledge sharing

Petty et al. (1995) describe team orientation culture as when cooperative behaviours are adopted by employees in their teams and work groups. They also highlighted that these behaviours include sharing information and resources, helping one another, and always prioritising the goals of the group over personal ones. Hence, it is expected that since this culture supports sharing information and resources, employees will also share their knowledge to achieve assigned group tasks and fulfil group objectives. Team orientation is about working together and being accountable to achieve the shared goals and objectives of a team or group (Chong & Choi, 2005). Additionally, team-oriented culture employees perceive themselves as a unit, where they trust each other and believe that they are treated fairly and consistently (Al-Adaileh & Al-Atawi, 2011). Therefore, it is expected that team-oriented culture will support knowledge sharing among employees as they feel responsible for achieving their common goals. Park et al. (2004) examined team orientation culture impact on knowledge sharing and confirmed a strong positive correlation between team orientation culture and knowledge sharing. Chong and Choi (2005) suggested that teamwork as a part of the organisational culture is a crucial factor for successful knowledge management implementation in general and knowledge sharing in specific.

This leads to the following hypothesis:

- H1d: An organisational culture that promotes team orientation will have a positive effect on attitude toward knowledge sharing.

3.3.1.5 Openness and attitude toward knowledge sharing

O'Reilly (1989) highlighted that when an organisational culture is characterised by openness, employees have open communications, share information among themselves, trust that information shared is correct and reliable, accept criticism (as they are good listeners) and think laterally. Therefore, it is expected that employees will share their knowledge with each other as they work together to find out more about a particular topic.

Communication is a vital part of openness as it is important to ensure the flow of information across organisational levels and that it reaches employees when needed (Cabrera et al., 2001; Ghosh & Srivastava, 2014; MacKenzie, 1995; Tucker et al., 1990). Additionally, MacKenzie (1995) found that the norms for an open culture are cooperation, supporting each other and sharing information. Rutten et al. (2016) stressed that when employees are open to sharing relevant knowledge, this can facilitate process optimisation and cost-saving, whereas lack of sharing may harm the organisation. Therefore, in an open culture sharing knowledge is likely to happen as people's attitudes favour cooperation and providing support to their co-workers.

This leads to the following hypothesis:

- H1e: An organisational culture that promotes openness will have a positive effect on attitude toward knowledge sharing.

3.3.1.6 Organisational Culture and its Impact on Injunctive Norms of Knowledge Sharing

The TRA introduced the concept of injunctive norms to represent the perceived social pressure resulting from the expectations of significant others on an individual. Hence, injunctive norms measure the degree to which significant others guide the individual whether to perform or not perform specific behaviour (Ajzen & Fishbein, 1980). In an organisational context, the important others may include supervisors, line managers and peer workers. For example, if co-workers feel that their manager and colleagues expect them to share their knowledge, this is more likely to drive social pressure which makes them formulate the intention to share their knowledge (Huang et al., 2008; Zhang & Ng, 2013). Earlier research confirmed that injunctive norms lead to social pressure that motivates individuals to a strong intention toward the behaviour (Bock et al., 2005; Huang et al., 2008). Based on the TRA and TPB framework, the relationship between the background factor organisational culture dimensions and its impact on both attitude toward knowledge sharing and on injunctive norms are examined. Some previous studies have examined the relationship between the background factors and intention to share knowledge (e.g., Bock et al., 2005; Bock et al., 2010; Casimir et al., 2012; Chuang et al., 2015; Ho et al., 2011; Ibragimova et al., 2012), whereas other studies which adopted the TRA and TPB framework did not examine the impact of injunctive norms at all (e.g.,

Akhavan & Hosseini, 2016; Bello & Oyekunle, 2014; Can & Hawamdeh, 2013; Ramayah et al., 2013). This study aims to examine the impact of injunctive norms of knowledge sharing on organisational culture dimensions because organisational culture is about social pressure and the unwritten rules within the organisation. This leads to the following hypotheses:

- H2a: An organisational culture that promotes participation will have a positive impact on injunctive norms.
- H2b: An organisational culture that promotes trust will have a positive impact on injunctive norms.
- H2c: An organisational culture that promotes agreement will have a positive impact on injunctive norms.
- H2d: An organisational culture that promotes team orientation will have a positive impact on injunctive norms.
- H2e: An organisational culture that promotes openness will have a positive impact on injunctive norms.

3.3.1.7 Attitude toward Knowledge Sharing and its Impact on Intention to Share Knowledge

Intention refers to the degree to which one believes that one will engage in the behaviour (Fishbein & Ajzen, 1975). Thus, intentions refer to the individuals' readiness to behave in a certain way. According to the theory of reasoned action and the theory of planned behaviour (Ajzen, 1991; Fishbein, 2000; Fishbein & Ajzen, 1975, 2010), when individuals have intentions to perform a specific behaviour they are more likely to do so. Although in terms of measurements, it would be more accurate to measure the actual knowledge sharing behaviour, this has limited feasibility and is difficult practically (Randall & Wolff, 1994). Thus, knowledge sharing studies have mostly adopted intention as their term of measurement in an effort to overcome this challenge (e.g., Bock et al., 2005; Can & Hawamdeh, 2013; Cheung et al., 2013; Huang et al., 2008; Zhang & Ng, 2013). A total of 29 studies were reviewed in order to investigate their approach to measuring knowledge sharing behaviour and all used intention to share knowledge as a proxy (Akhavan & Hosseini, 2016; Amin et al., 2010; Bello & Oyekunle, 2014; Bock et al., 2005; Bock et al., 2010; Can & Hawamdeh, 2013; Casimir et al., 2012; Chang & Shih,

2010; Chang et al., 2013; Cheung et al., 2013; Chow & Chan, 2008; Chuang et al., 2015; Dong et al., 2010; Huang et al., 2008; Ho et al., 2011; Ibragimova et al., 2012; Kuo & Young, 2008a, 2008b; Lee & Hong, 2014; Ramayah et al., 2013; Ryu et al., 2003; Samieh & Wahba, 2007; Stenius et al., 2015; Teh & Yong, 2011; Mongkolajala et al., 2012; Xue et al., 2011; Xue et al., 2012; Zhang & Ng, 2013; Zhikun & Fungfai, 2009). The relationship between intention and behaviour has been tested in a wide range of disciplines and been proven and validated. Table 3.1 lists some studies that showed high correlation between intention and actual behaviour.

Table 3.1 Meta-Analysis Studies Exploring the Relationships Between Intention and Actual Behaviour

Source	Number of Studies Examined	Number of Tests Performed on (I-BI) Relationship	Correlation Between (I-BI)	Discipline of the Studies Examined/Notes
Sheppard, Hartwick & Warshaw (1988)	87	N/G	0.53	Covered a wide variety of behaviour such as going to church, having children, purchasing football tickets.
Randall & Wolff (1994)	98	N/G	0.45	Covered variety of activities such as trying to lose weight, drinking soft drinks, writing a letter, exercising. The I-BI correlation was valid for as long as 15 years.
Notani (1998)	36	45	0.41	Included variety of topics such as academic context, organisational context, sport activities, and smoking behaviour.
Armitage & Conner (2001)	161	48	0.47	The authors did not explicitly mention the areas or disciplines they focused on; however, after reviewing their references, one can see that the main domain in which they focused on was physical activity.
McDermott et al. (2015)	42 journal articles and 4 unpublished dissertations	N/G	0.45	Medicine and Health Sciences Social and Behavioural Sciences
* I: Intention, BI: Behaviour				

As indicated above, the meta-analyses show that the correlation between intention and behaviour varies from 0.41 to 0.53.

In summary, most studies have found a strong relationship between intention and

behaviour in various fields, but this relationship has not yet been validated for knowledge sharing. However, measuring intention instead of actual behaviour is a common practice in the knowledge sharing literature and thus will be the approach followed in the study.

Attitude is defined as “a latent disposition or tendency to respond with some degree of favourableness or unfavourableness to a psychological object” (Fishbein & Ajzen 2010, p. 76). In the context of the present study attitude is defined as “[t]he degree of one’s positive feelings about sharing one’s knowledge” (Bock et al., 2005, p. 91). Attitude is considered as one of the antecedents of intention to perform the behaviour as it refers to the individual’s “beliefs about the positive or negative consequences they experience if they performed the behaviour” (Fishbein & Ajzen, 2010, p. 20). Thus, an individual’s attitude toward sharing her/his knowledge with their co-workers requires them to think about the advantages and disadvantages of (not) performing the behaviour (Huang et al., 2008).

According to the TRA and TPB attitude determines behavioural intentions of individuals, which then determines their future behaviour (Fishbein & Ajzen, 1975). Previous research has shown the significant positive relationship between attitude and intention to share knowledge in an organisational context (e.g., Bock et al., 2005; Can & Hawamdeh, 2013; Xue et al., 2011; Zhang & Ng, 2013). Hence, employees may be more motivated to engage in a knowledge sharing behaviour if their attitudes toward the behaviour are positive. This leads to the following hypothesis:

- H3: Attitude toward knowledge sharing has a positive effect on intention to share knowledge.

3.3.1.8 Injunctive Norms (Subjective Norms) of Knowledge Sharing and their Impact on Intention to Share Knowledge

In Fishbein and Ajzen’s (1975, 1980) earlier work they referred to injunctive norms as subjective norms which they defined as “an individual’s perception that most people who are important to her think she should (or should not) perform a particular behavior” (Fishbein & Ajzen, 2010, p. 131). Hence, the TRA and TPB framework injunctive norms represent perceived social pressure arising from the expectations of an individual’s significant others. In an organisational context, line managers, supervisors and colleagues can be considered as important others who could influence employees’ intentions to

perform a particular behaviour. Therefore, injunctive norms of knowledge sharing could affect individuals' intentions to share knowledge as much as colleagues, managers and leadership can affect their decision of whether or not to share knowledge (e.g., my colleagues think I should share my knowledge with other members in the organisation) (Bock et al., 2005; Bock et al., 2010). Various studies have examined the relationship between injunctive norms and intention to share knowledge and found it to be significant (e.g., Bock et al., 2005; Bock et al., 2010; Can & Hawamdeh, 2013; Chow & Chan, 2008; Chuang et al., 2015; Dong et al., 2010; Ho et al., 2011; Ibragimova et al., 2012; Kuo & Young, 2008a, 2008b; Mongkolajala et al., 2012; Ramayah et al., 2013; Ryu et al., 2003; Stenius et al., 2015; Teh & Yong, 2011; Tsai et al., 2013; Zhikun & Fungfai, 2009). Only one, by Zhang and Ng (2013), has found this relationship to be insignificant.

This leads to the following hypothesis:

- H4: Injunctive norms have a positive effect on intention to share knowledge.

3.3.1.9 Descriptive Norms of Knowledge Sharing and their Impact on Intention to Share Knowledge

Descriptive norms, unlike subjective norms, refer to “what significant others themselves do” (Rivis & Sheeran, 2003, p. 219). Fishbein and Azjen (2010) define descriptive norms as “the perceptions that others are or are not performing the behavior in question” (p. 131). The TRA has discovered that descriptive norms are a significant predictor of individuals' behaviour. Therefore, it suggests that the more the significant other(s) are performing a particular behaviour (in the study context knowledge sharing behaviour), the stronger the individual's intention to share knowledge will be. Rivis and Sheeran (2003) conducted a meta-analysis study to test the impact of descriptive norms on an individual's intention to perform a specific behaviour and found that including descriptive norms as an additional predictor for the TRA and TPB framework actually improved its predictive validity. Thus, this research follows the same approach. This leads to the following hypothesis:

- H5: Descriptive norms positively affect intention to share knowledge.

3.3.1.10 Perceived Behavioural Controls of Knowledge Sharing and their Impact on Intention to Share Knowledge

Ajzen (1985, 1988) introduced the construct of perceived behavioural control in the theory of planned behaviour that was later included in the TRA. This construct was introduced because Fishbein and Ajzen (2010) found that the behaviour in question might not be 100% volitional as many control factors can influence an individual's control over performing specific behaviour. Ajzen (1991, p. 188) explained perceived behavioural control as “the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles”. This is because even employees who have a favourable attitude toward knowledge sharing and have positive subjective norms of knowledge sharing would still need the necessary opportunities, resources, or tools to successfully perform the knowledge sharing behaviour with their co-workers (Zhang & Ng, 2013). Perceived behavioural control also can be seen as “people's perception of the ease or difficulty of performing the behaviour of interest” (Ajzen, 1991, p. 183). Basically, perceived behavioural control was categorised into two major constructs – self-efficacy and controllability (Kuo & Young, 2008a). Self-efficacy is not concerned “with the number of skills you have, but with what you believe you can do with what you have under a variety of circumstances” (Bandura, 1997, p. 37); thus, it refers to the individuals' own judgement of their own competences to accomplish a course of action that is essential to achieve a specific type of performance. Controllability, on the other hand, refers to the individuals' beliefs about the presence or absence of the requisite opportunities, resources, or tools needed to perform the behaviour (Zhang & Ng, 2013). Therefore, perceived behavioural controls addresses whether employees believe that they have the right competencies to share their knowledge with their colleagues, as some employees might have the knowledge but they might not be able to articulate it in a way that it is suitable for sharing. Additionally, employees may not have the tools, platforms and/or resources required to share knowledge.

This leads to the following hypothesis:

- H6: Perceived behavioural control positively affects intention to share knowledge.

3.3.2 *Leadership, Organisational Culture and Knowledge Sharing*

Suliman and Moradkhan (2013) pointed out that there is a strong relationship between various leadership styles and organisational culture. For Minyoung et al. (2012), leadership not only enhances employees' knowledge sharing behaviour but also the organisational culture: for example, leadership can shape the culture to become more participative in nature by giving employees an opportunity to take part in decision making. In addition, as Srivastava et al. (2006) found, when a leader engages with employees and offers them a chance to voice their opinions and freely express their suggestions, sharing becomes more relevant for them; their investigation into the influence of empowering leadership on knowledge sharing and team efficacy returned significantly positive results. The next paragraph explains the relationship between knowledge leadership and inclusive leadership and their impact on the organisational culture dimensions of this study.

Leadership can promote or hinder employees' knowledge sharing in the workplace (Carmeli et al., 2011). Therefore, it is essential for leaders to understand the organisational culture, as this will enable them to communicate the organisation's vision and make sure that employees are in line with its strategic directions (Sharma & Sharma, 2010). Several studies have investigated the relationship between leadership and organisational culture and, overall, leadership was found to be a strong driver for organisational culture (Bell et al., 2014; Lok & Crawford, 2004; Mitonga-Monga et al., 2012; Sharma & Sharma, 2010; Wang & Hsieh, 2013). Additionally, it is very important for leadership to be involved and educated about their role in removing barriers to employees' learning and sharing (O'Dell & Leavitt, 2004). In a benchmarking report conducted by the APQC one of the participants stated that "[t]he behaviour of leaders, particularly senior leaders, often has a strong impact on the others in the organisation. Leaders influence others directly by the expectations they set for others in the organisation. Moreover, they influence people indirectly as role models" (O'Dell & Leavitt, 2004, p. 5). Additionally, O'Dell and Leavitt (2004) highlighted that in every knowledge management benchmarking study conducted by the APQC, a key finding was that leadership was always highlighted as a crucial success factor for organisational culture. Carmeli et al. (2011) suggested that when leaders exhibit transformational leadership they help employees to identify with the organisation, resulting in enhanced knowledge sharing among employees. Leaders are in

a key position to drive change, which enables them to make choices to create value in the organisation (O'Dell & Leavitt, 2004). The following section explains the relationship of knowledge leadership and inclusive leadership to the present study's organisational culture dimensions (participation, trust, agreement, team orientation and openness).

3.3.2.1 Knowledge Leadership and Participation

Knowledge leadership is about attitudes and actions that promote collective outcomes through sharing of knowledge (Mabey et al., 2012). The knowledge leadership dimension which involves cooperation and trust (Yang et al., 2014), requires cooperation between the knowledge leader and team members to resolve any challenges that may occur. Thus, the leadership must seek participation from members equally to overcome these challenges. In addition, Mitonga-Monga et al.'s 2012 study confirms that there is a relationship between leadership behavioural style and employee participation. They also note that employees' participation is supported significantly by a leadership style that is task-driven while ensuring the quality of work – one which provides employees with respect, open communication and trust. In Yang et al.'s (2014) knowledge integration and innovation knowledge leadership dimension, leaders seek to enhance their teams' innovative capabilities, learning habits in order to put innovative ideas into practice. Therefore, knowledge leadership is maintaining a balance between work achievements while also maintaining cooperation and trust among team members.

This leads to the following hypothesis:

- H8a: Knowledge leadership has a positive impact on organisational culture that promotes employee participation.

3.3.2.2 Knowledge Leadership and Trust

Knowledge leadership, as explained by Yang et al. (2014), drives the organisational culture to become a trusting environment where members can work together and trust each other. In addition, Viitala (2004) highlighted that knowledge leadership supports freedom of learning and avoids punishment for mistakes which can create fear among employees: rather, it is about encouraging employees to learn from mistakes collectively rather than pointing fingers and blaming individuals. Therefore, when such practice is nurtured, employees will be more willing to ask for and offer help, and support and

cooperate with their colleagues which will eventually create a climate of safety and trust (Viitala, 2004).

This leads to the following hypothesis:

- **H8b:** Knowledge leadership has a positive impact on organisational culture that promotes trust among employees.

3.3.2.3 Knowledge Leadership and Agreement

Agreement is about creating a common understanding between team members and reaching a solution that all agree on to resolve any occurring problems or conflicts (Denison et al., 2012). Mabey et al. (2012) explained knowledge leadership as leaders acting to encourage their team members to create and share knowledge in a collective way to achieve desired outcomes. Additionally, knowledge leadership requires that leaders act as role models for their team members and that they play an important role in developing the team spirit, cooperation and building trust (Yang et al., 2014). Therefore, it is more likely that knowledge leaders who support cooperation among team members to resolve any challenges will also create an atmosphere among their teams conducive to agreeing on the process of tackling issues and making decisions collectively. This leads to the following hypothesis:

- **H8c:** Knowledge leadership has a positive impact on organisational culture that promotes agreement among employees.

3.3.2.4 Knowledge Leadership and Team Orientation

Team orientation is when colleagues in the workplace exhibit cooperative behaviours such as trusting one another, helping and reaching out to their peers, and making sacrifices for the overall good of the team (Al-Adaileh & Al-Atawi, 2011; Chong & Choi, 2005; Petty et al., 1995). As mentioned in the sections above and previously in the literature review chapter, Yang et al., (2014) pointed out that knowledge leadership behaviour includes leaders nurturing cooperation between their team members and displaying this behaviour themselves. Petty et al. (1995) highlighted that team orientation behaviours include employees being willing to share information, providing assistance to each other and always looking for ways to improve performance and achieve goals as a team rather than as individuals. Therefore, it is expected that knowledge leaders will be supportive of

team orientation as they encourage their teams to cooperate with each other, and share and exchange ideas and their knowledge in order to achieve work outcomes. This leads to the following hypothesis:

- H8d: Knowledge leadership has a positive impact on an organisational culture that encourages employees' team orientation.

3.3.2.5 Knowledge Leadership and Openness

Openness in organisational culture entails that peers within the workplace are open in communication, share information, listen to each other's points of view, and have intellectual honesty as they expect challenges and accept conflicts (O'Reilly, 1989). Establishing an open communication dialogue between leaders and their teams is essential to enhance employee satisfaction and commitment to the organisational overall competitiveness (Sharma & Sharma, 2010). As a knowledge leader is someone who sets an example for others and demonstrates excellent knowledge leadership skills (Yang et al., 2014), it is expected that if a leader exhibits openness characteristic, employees will follow their example. Additionally, Minyoung et al. (2012) stressed that it is important for leaders to provide opportunities for employees to be innovative by expressing their opinions and freely sharing their ideas and information with them and their co-workers. Viitala (2004, p. 537) identified three dimensions of knowledge: 1) orienteering of learning, 2) creating a climate that supports learning and, 3) supporting individual and group level learning processes. She explained that orienteering of learning involves leaders communicating the bigger picture to their teams by continuously helping them to see where the organisation is heading in terms of organisational vision and goals, and openly communicating with their teams in terms of what knowledge and capabilities they need training in to support their learning journey. Knowledge leaders always seek to encourage their team members to work as a unified group and provide their teams with feedback relevant to market requirements as well as with pre-defined expectations which helps the teams to work in alignment with organisational objectives (Viitala, 2004). Moreover, knowledge leaders make sure that they dedicate a regular time to communicate all important news, any sudden changes and future directions to sustain quality (Viitala, 2004). Her second dimension of knowledge leadership, "creating climate [*sic*] that supports learning" (p. 528), was originally adopted from psychology of learning and refers to the situation when employees fear making mistakes which can stop them from

learning: the role of a knowledge leader is to make people feel comfortable about making mistakes and learning from failures; rather than meting out punishment, they are open to and accept the possibility that their teams may make mistakes – and learn from them – leading to potentially better outcomes in the future (Viitala, 2004). This climate of learning provides team members with a safe and trusting atmosphere where they can seek guidance and advice from each other (Viitala, 2004). Knowledge leaders are also flexible and open to receiving feedback on their own work, and on the way they interact with team members to enhance their own performances as leaders (Viitala, 2004). Regarding the third dimension, knowledge leaders support their teams to have an open discussion at any time in a private setting whereby they can express themselves comfortably, sharing their opinions, feelings and views openly without restrictions (Viitala, 2004). This leads to the following hypothesis:

- H8e: Knowledge leadership has a positive impact on organisational culture that promotes openness among employees.

3.3.2.6 Inclusive Leadership and Participation

Nembhard and Edmondson (2006) explained that when a leader adopts an authoritative, unsupportive approach or even defensive attitude, employees will be unlikely to speak up as they will feel that it is unsafe to do so: in contrast, when a leader takes a democratic and supportive approach, employees are more likely to ask questions or communicate problems as they feel greater psychological safety in their interactions with their peers and leaders. Hence, the existence of inclusive leadership is expected to promote a participative culture for employees so that they feel encouraged to speak up and have discussions with their peers and colleagues without fear.

The role of leaders in creating a participative culture that supports participation in policy making has been stressed in Turkish and Japanese organisations (e.g., Aksu & Ozdemir, 2005; Kidd & Teramoto, 1995). According to Wuffli (2015), inclusive leadership refers to including all team members, regardless of diversity of background, in making organisational changes. It is also about including employees and empowering them to take part in those changes rather than imposing these changes on them (Hollander, 2012). Thus, the nature of this leadership allows employees to freely express their opinions to their peers and managers (Jamali & Sidani, 2008) and so it is expected that inclusive

leadership encourages all employees' participation in the organisational culture. This leads to the following hypothesis:

- H7a: Inclusive leadership has a positive impact on organisational culture that promotes employee participation.

3.3.2.7 Inclusive Leadership and Trust

Inclusive leadership as a concept is about including everyone, regardless of their role, grade or background (Wuffli, 2015). Hence, if employees feel that they will be included in important decisions regardless of how diverse they might be, this could lead them to trusting their leadership and their peers. Hollander (2012) also explained that inclusive leadership is about working with people, including them in every step of the way, rather than just enforcing systems and practices. He added that inclusive leadership is crucial as it establishes an atmosphere of fairness and provides individuals with inclusion. Therefore, it is expected that inclusive leadership will facilitate a culture of trust that connects people as they are treated the same, work together with their leaders and eventually create strong bonds. This leads to the following hypothesis:

- H7b: Inclusive leadership has a positive impact on organisational culture that promotes trust among employees.

3.3.2.8 Inclusive Leadership and Agreement

Inclusive leadership is about empowering employees and making their role visible as well as making them part of a community (Bennis, 1984). Chuang et al. (2012) explained that agreement culture is characterised by collectivistic attributes as it focuses on socialisation among peers who seek to establish common values, beliefs and goals. Thus, inclusive leadership is expected to promote an agreement culture for employees with a relaxed environment (Chuang et al., 2012) where employees are confident that they will not be left out at any time. Inclusive leadership is also likely to drive a culture of agreement as inclusive leadership is about the inclusion of all involved employees and this will create a platform where employees can discuss issues or conflicts to come up with win-win solutions.

This leads to the following hypothesis:

- H7c: Inclusive leadership has a positive impact on organisational culture that promotes agreement among employees.

3.3.2.9 Inclusive Leadership and Team Orientation

Inclusive leadership is expected to drive team orientation because the nature of inclusive leadership is based on collective decisions where employees are empowered. Willard-Grace et al.'s 2014 study in the health care industry found that regardless of the team structure, if there is no team orientation in place this affects employees negatively – and may result in staff burnout. They further explained that if the team is based on the structure alone this does not mean that they have good communication; they must have a team orientation culture to improve the quality of their work atmosphere. Inclusive leadership provides empowerment for employees which in return has been found to be an encouraging leadership style that help teams to resolve obstacles when they arise (Oedzes et al., 2019). Therefore, it is expected that inclusive leadership supports creating a team orientation culture which leads to the following hypothesis:

- H7d: Inclusive leadership has a positive impact on organisational culture that encourages employees' team orientation.

3.3.2.10 Inclusive Leadership and Openness

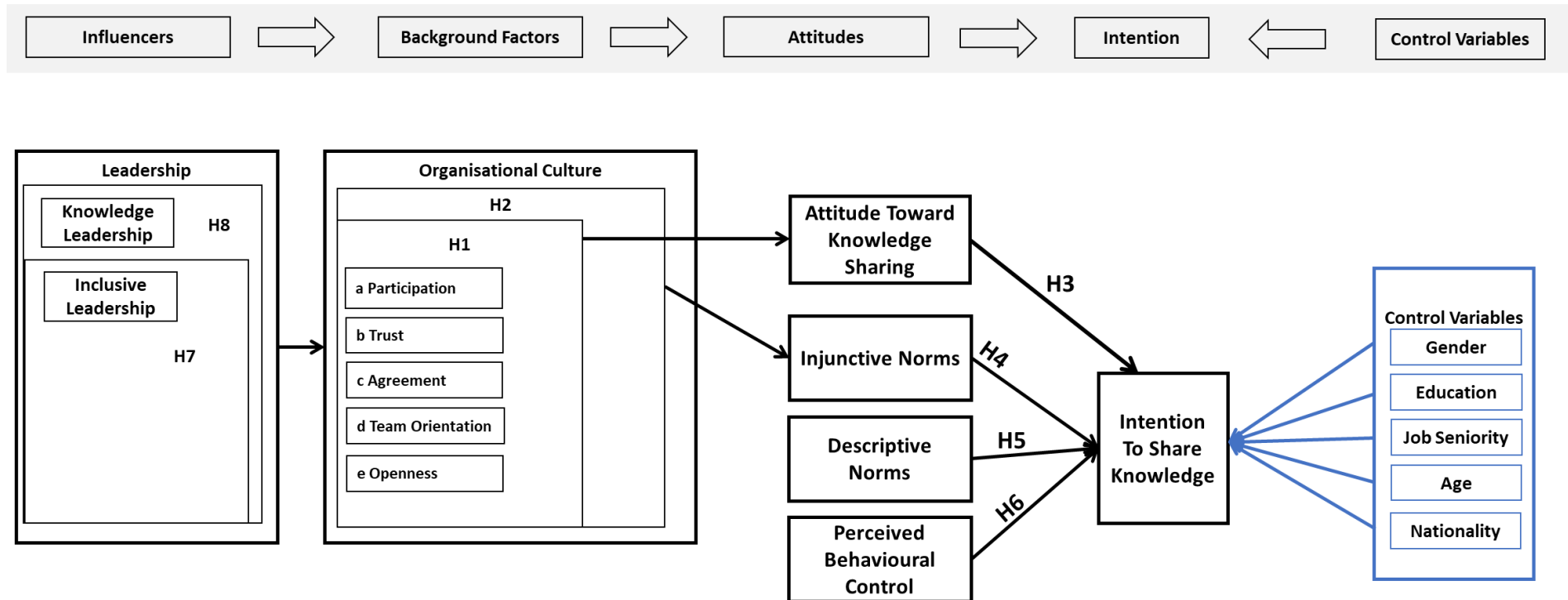
Carmeli et al. (2010) explained that inclusive leadership requires leaders to demonstrate openness in their relationship with their employees. Thus, an inclusive leader is willing and able to listen to and discuss objectives and ways to fulfil them with their employees. Additionally, inclusive leaders are willing to listen to new ideas, make continuous improvements, and take advantage of new opportunities that employees bring (Carmeli et al., 2010). Therefore, inclusive leaders are expected to drive open culture as they listen and discuss ways forward with their employees. Additionally, it is expected that inclusive leaders can help drive a culture of openness by communicating important news and events as they make efforts to take advantage of opportunities to make improvements for their employees (Ghosh & Srivastava, 2014). This leads to the following hypothesis:

- H7e: Inclusive leadership has a positive impact on organisational culture that promotes openness for employees.

3.3.3 *Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)*

As discussed in Section 2.5.3), the present study adopts the framework of the recent development of the TRA and TPB theories. The theories' main factors are attitude, injunctive norms, descriptive norms and perceived behavioural controls, all of which contribute to predict intention. In the following section the relationship between the background factor –organisational culture – and injunctive norms will be explained. In addition, each factor of the (TRA/TPB) framework will be explained in relation to the intention to share knowledge.

Figure 3.5 Control Variables in the Main Model



3.3.4 *Control Variables*

Knowledge sharing intention and behaviour between peers within the workplace can be affected by demographic characteristics (Al Mehairi & Binning, 2014; Bartol et al., 2009; Can & Hawamdeh, 2013; Carroll, 2002; Gratton et al., 2007; Holste & Fields, 2010; Lin & Joe, 2012; Miller & Karakowsky, 2005; Pinjani & Palvia, 2013; Ali, 2009; Bakker et al., 2006; Xue et al., 2011). Gratton et al. (2007) investigated team demographics in order to understand why collaboration and knowledge sharing fails among diverse teams: they studied 55 teams in 15 European and American well-established firms (ABN AMRO, BBC, BP, Citigroup, France Telecom, Lehman Brothers, Marriott, Nokia, PricewaterhouseCoopers, Reuters, Rogers Communications, Royal Bank of Scotland, Siemens AG, Standard Chartered Bank and XL Global Services). Their study was based on a quantitative approach, with 1,543 employee participants and found that employees formed subgroups based on gender, age, nationalities, educational levels, function and tenures within the company. The following section addresses the individual control variables which are taken into consideration in the present study which could potentially confound the results.

3.3.4.1 *Gender*

Ali (2009) identified gender as an issue, especially in the GCC and in Kuwait. Her study included a statement related to communication with the opposite gender. Of the 319 respondents in the study, 53% (170 respondents) agreed that they communicate with colleagues of the opposite gender. However, 35% did not agree with this statement as they do not engage in communication with opposite gender. Finally, 11% provided neutral responses, indicating that further research on this issue in the GCC context would be valuable. Miller and Karakowsky's 2005 study showed that the gender of team members influences knowledge sharing when they seek feedback from their peers. One of their arguments as to why gender should be considered as a control variable is that they believe that a) women are more concerned about their social relationships and thus they spend more time giving feedback and b) that women are more sensitive to others' opinions than men. Carroll (2002) found that friendships among women are more trusting than those between men and argues that women are more willing to share their tacit knowledge with their peers than men. Holste and Fields (2010) agreed and therefore they controlled for gender.

3.3.4.2 Education

Education is taken into account as a control variable in the present study. Al Mehairi and Binning (2014) found that education level had an impact on knowledge sharing behaviour and argued that this could be the result of poorly-educated people being more likely to have jobs where knowledge sharing norms are relatively unimportant whereas more highly educated employees are more likely to have jobs which require them to make decisions. Thus, knowledge sharing norms are important for them in order to interact with other strategic personnel within the organisations. Bakker et al. (2006) selected education as a control variable in their study as they stated that employees who have higher levels of education have more expertise than their colleagues with lower levels of education. Bartol et al. (2009) also controlled for education as they believed it could influence the amount of information and knowledge individuals convey to their co-workers.

3.3.4.3 Age

The effect of age on knowledge sharing was also confirmed by Bakker et al. (2006); their study indicated that individuals in older teams tend to share knowledge significantly more frequently than those in younger teams. Holste and Fields (2010) controlled their study for the influence of age because, they argued, younger employees are more individualistic and less trusting of others than older ones: thus, age might affect an individual's knowledge sharing behaviour. Xue et al. (2011) controlled for age but found it had no significant effect on knowledge sharing behaviour. Gratton et al. (2007) explained that similar attributes of peers (such as age) can influence knowledge sharing behaviour among them, and ultimately their performance. They elaborated that this attribute could create subgroups and become a barrier to creating trust which could affect the exchange of knowledge and information. Bartol et al. (2009) also controlled for age as they argued that this was a factor that could affect the knowledge sharing behaviour and amount of information that individuals are willing to convey.

3.3.4.4 Job Seniority

Another control variable considered in this research is job seniority (also referred to as job rank or job position in the literature) (Cavaliere et al., 2015; Guo & Yuan, 2012; Ifinedo, 2014; Merhi & Ahluwalia, 2019; Yazdanmehr & Wang, 2016). The rationale for considering job seniority as a control variable is that highly ranked employees are

expected to have more authority than lower-ranked ones. Hence, they are able to share knowledge freely and with fewer restrictions: lower-rank employees may need to obtain further approvals, especially for sharing knowledge across business units. Additionally, employees who are not in leadership positions might be equally generous and keen to share knowledge, but go unnoticed because they do not have this freedom to share in terms of authority. Cavaliere et al. (2015) examined knowledge sharing in manufacturing firms and their study confirmed that managerial role influences knowledge sharing.

3.3.4.5 Nationality

Nationality is another factor which can lead people to form subgroups and have specific preferences with regard to knowledge sharing (Gratton et al., 2007). Liu and Phillips (2011) pointed out that one of the limitations of their study is that they only focused on Taiwan and all the employees were Taiwanese. They noted that this could affect the generalisation of results as they believe that national culture plays an important role in knowledge sharing among teams. In the present study, nationality will be considered as either Emirati or non-Emirati. The expectation here is that nationality might interfere with finding results because of the Emiratisation policy in the UAE. According to Modarress et al. (2013, p. 188), “Emiratisation is an affirmative action policy of the United Arab Emirates Government that gives preferential hiring status to Emiratis over expatriates in order to preserve national identity, economic sustainability, and political stability”. Thus, this might create a sense of job insecurity among expatriates and therefore, they might not be, or be less, willing to share their knowledge in this research as well as more generally in their work context.

Therefore, in summary the present study will control for the influence of age, gender, nationality, job seniority and level of education on knowledge sharing intention as illustrated in Figure 3.5. Table 3.2 summarises the control variables considered with their references in the literature.

Table 3.2 Summary of Control Variables Considered in the Present Study

Control Variable	References
Gender	Ali (2009); Bartol et al. (2009); Can & Hawamdeh (2013); Carroll (2002); Gratton et al. (2007); Holste & Fields (2010); Miller & Karakowsky (2005); Xue et al. (2011)
Education	Al Mehairi & Binning (2014); Bakker et al. (2006); Bartol et al. (2009); Can & Hawamdeh (2013); Gratton et al. (2007); Liu & Phillips (2011)
Job Seniority	Bakker et al. (2006); Can & Hawamdeh (2013); Gratton et al. (2007); Lin & Joe (2012); Pinjani & Palvia (2013)
Age	Bakker et al. (2006); Bartol et al. (2009); Gratton et al. (2007); Holste & Fields (2010); Xue et al. (2011)
Nationality	Gratton et al. (2007)

3.4 Model 2

Knowledge leadership and inclusive leadership are both treated as background factors in the TRA and TPB framework; that is, they act as drivers to both attitude toward knowledge sharing and injunctive norms about knowledge sharing. Xue et al. (2011) tested the impact of empowering leadership on both attitude toward knowledge sharing and knowledge sharing behaviour, and found that it has a significant positive effect on both. As explained in the literature review, empowerment is part of inclusive leadership and in Xue et al.'s study empowering leadership consisted of leading by example, participative decision-making, coaching, informing and showing concern. All of these attributes are part of inclusive leadership. Minyoung et al. (2012) and Srivastava et al. (2006) had similar results in their examinations of the influence of empowering leadership on knowledge sharing; both confirmed it has a positive influence. Knowledge leadership is also about acknowledging the good work of teams and leaders giving constructive feedback (Viitala, 2004). Knowledge leaders should also be able to enhance learning from past experiences through the ability to reflect and reason (Cavaleri et al., 2005), therefore knowledge leaders should have the right skills to facilitate knowledge sharing among employees. This leads to the following hypotheses:

- H9: Inclusive leadership positively affects attitude toward knowledge sharing.
- H10: Inclusive leadership positively affects injunctive norms of knowledge sharing.
- H11: Knowledge leadership positively affects attitude toward knowledge sharing.

- H12: Knowledge leadership positively affects injunctive norms of knowledge sharing.

3.5 Model 3

Model 3 examines both knowledge leadership and inclusive leadership as moderators of the relationship between organisational culture dimensions and attitude toward knowledge sharing. The literature's treatment of leadership is interesting: sometimes it is investigated as a driver as explained in Model 2 (e.g., Xue et al., 2011) and sometimes as a moderator as in Model 3 (e.g., Chuang et al., 2016; Tseng, 2017). Therefore, it would be interesting to test whether knowledge leadership and inclusive leadership work better as a driver or moderator in the model. According to Hair et al. (2010) the moderating effect happens when a third variable or construct changes the strength of relationships between two related variables or constructs. Using moderating variables is becoming common as moderators are essential for understanding complex casual relationships (Chin et al., 2003). Based on Apostel et al. (2018), Oedze et al. (2019), Ötken and Cenkci (2012) and Doeleman et al. (2012) proposed that leadership can play a moderating role in different organisational areas. Chuang et al. (2016) examined the moderating effect of empowering leadership on the relationship between human resources management (HRM) systems and team knowledge acquisition and their results revealed that empowering leadership has a significant negative moderating effect on this relationship. This is an interesting result because it is not consistent with previous studies; therefore, this needs more investigation which will be achieved in this study.

Therefore, Model 3 suggests that the existence of inclusive leadership based on dimensions adopted from van Dierendonck and Nuijten, (2011) and Prime and Salib (2014, 2015) (i.e., empowerment, accountability, courage, and humility) is likely to influence the relationship between organisational culture and knowledge sharing intention. In addition, the existence of knowledge leadership based on dimensions adopted from Yang et al. (2014) (leadership skills, cooperation and trust, and knowledge integration and innovation) is likely to influence the relationship between organisational culture and knowledge sharing intention.

Thus, this leads to the following hypotheses:

- H13a: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by participation and employees' attitude toward knowledge sharing with their co-workers.
- H13b: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by trust and employees' attitude toward knowledge sharing with their co-workers.
- H13c: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by agreement and employees' attitude toward knowledge sharing with their co-workers.
- H13d: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by team orientation and employees' attitude toward knowledge sharing with their co-workers.
- H13e: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by openness and employees' attitude toward knowledge sharing with their co-workers positively.
- H14a: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by participation and employees' attitude toward knowledge sharing with their co-workers.
- H14b: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by trust and employees' attitude toward knowledge sharing with their co-workers.
- H14c: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by agreement and employees' attitude toward knowledge sharing with their co-workers.
- H14d: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by team orientation and employees' attitude toward knowledge sharing with their co-workers.
- H14e: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by openness and employees' attitude toward knowledge sharing with their co-workers.

3.6 Summary

Chapter 3 discussed the theoretical development that supports the research questions and allows the researcher to fulfil the research objectives. The chapter proposed three research models. All three models adopt the TRA and TPB framework. Model 1 examines the effect of both knowledge leadership and inclusive leadership as influencers on organisational culture dimensions, whereby organisational culture affects knowledge sharing intention. Model 2 examines the effect of both knowledge leadership and inclusive leadership as background factors in the TRA and TPB framework, that is they are tested as drivers for knowledge sharing intention. Model 3 examines both knowledge leadership and inclusive leadership as moderators of the relationship between organisational culture dimensions and attitude toward knowledge sharing. Based on the literature, leadership is sometimes treated as a driver for change and sometimes as a moderator in organisational context. Therefore, this study explores whether leadership works best as a driver as explained in Model 2 or as a moderator as explained in Model 3. Chapter 4, Research Methodology, addresses the selected research method utilised and key aspects of data collection, procedures and ethical considerations.

Chapter 4: Research Methodology

4.1 Introduction

Chapter 3 presented and discussed the theoretical development and the operationalisation of the research constructs as well as the three research models. This chapter focuses on the research methodology of the study. This research adopts a mixed methods approach in order to answer the research questions. This chapter reflects on the literature to explain the mixed methodology, discusses the research design and the main stages of the research and then describes the mixed methods design of the study. Illustrative figures are presented for clarification. The chapter also addresses the ethical considerations and scope of the study, as well as the eligibility criteria for participation. Although the research follows a mixed methodology approach it is deductive in nature. Therefore, the quantitative research method will be explained first, followed by the qualitative method since the primary method of the research is quantitative. The qualitative data is utilised for additional support to explain the results and the rationale behind the relationships of the research models. The qualitative data gathered in the study also supports and helps to explain knowledge sharing behaviour in the context of the UAE. The process followed for data preparation for the analysis is also discussed for each of the research methods. Next, the techniques utilised to analyse both sets of data are addressed in detail in their respective sections. Finally, the chapter addresses a pilot study that was conducted prior to the main study to validate the measurement, test the research model and determine, through qualitative interviews, if more factors should be included in the main study.

4.2 Mixed Methodology in Literature

Tashakkori and Teddlie (2003) captured the historical debates and the emerging journey of the mixed methods approach in research which started around the mid-to-late 1900s, including two major social science paradigms, the positivist/empirical approach and the constructivist/phenomenological orientation. Johnson and Onwuegbuzie (2004) further address those debates, explaining that paradigm purists view their paradigm as the ideal and they believe that, “qualitative and quantitative research paradigms, including their associated methods, cannot and should not be mixed” (p. 14). Tashakkori and Teddlie (2003) declared that the long ‘war’ between the two paradigms was eventually ended by

“Pacifists” who stated that “qualitative and quantitative methods are, indeed, compatible” (pp. 4-5). Nowadays, mixed methods research is becoming progressively popular and is considered to be a genuine, stand-alone research design – especially in the social sciences (Creswell, 2002, 2003; Greene et al. 1989; Tashakkori & Teddlie, 1998, 2003), all cited in Hanson et al., 2005). Despite the many studies that adopted a mixed methods approach in the field of KM (e.g., An et al., 2017; Teixeira et al., 2019; Xu & Quaddus, 2012), the movement towards the combination of both qualitative and quantitative methods in knowledge sharing behaviour literature is not well established.

Previous studies on knowledge sharing behaviours were entirely qualitative (e.g., Ardichvili et al., 2006; Bobrow & Whalen, 2002; Dulaimi, 2007; Endres et al., 2007; Riege, 2005) or entirely quantitative (e.g., Chen et al., 2009; Connelly & Kelloway, 2003; King & Marks, 2008; Lai & Lee, 2007; Liao, 2008; Lin, 2007; Noorderhaven & Harzing, 2008; Spencer, 2003; de Vries et al., 2006). Patton (1990, p. 14) pointed out the unique benefits and advantages of each method:

The advantage of a quantitative approach is that it is possible to measure the reactions of a great many people to a limited set of questions, thus facilitating comparison and statistical aggregation of the data. This gives a broad, generalizable set of findings presented succinctly and parsimoniously. By contrast, qualitative methods typically produce a wealth of detailed information about a much smaller number of people and cases. This increases understanding of the cases and situations studied but reduces generalizability.

Additionally, Turner et al. (2017) pointed out that using mixed methods offers better understanding and helps obtain more valid answers to the research questions. Additionally, they explained that a mixed method approach balances the weaknesses and strengths inherent in the use of a single-method study. Another important factor for using a mixed methodology approach is that since the research is adopting the TRA and TPB framework it is important to conduct interviews with a small sample of individuals representative of the research population to elicit readily accessible behavioural outcomes, normative referents and control factors (Fishbein & Ajzen, 2010).

In Table 4.1 , Creswell (2003) explains the distinction between qualitative, quantitative and mixed methods approaches as it crucial to be aligned with the research objective.

Table 4.1 Qualitative, Quantitative and Mixed Methods Approaches (Creswell, 2003, p. 19)

Tend to or Typically	Qualitative Approaches	Quantitative Approaches	Mixed Methods Approaches
Use these philosophical assumptions Employ these strategies of inquiry	Constructive/Advocacy/ Participatory knowledge claims Phenomenology, grounded theory, ethnography, case study, and narrative	Postpositivist knowledge claims Surveys and experiments	Pragmatic knowledge claims Sequential, concurrent, and transformative
Employ these methods	Open-ended questions, emerging approaches, text or image data	Closed-ended questions predetermined approaches, numeric data	Both open- and closed-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis
Use these practices of research, as the researcher	Positions himself or herself Collects participant meanings Focuses on a single concept or phenomenon Brings personal values into the study Studies the context or setting of participants Validates the accuracy of findings Makes interpretations of the data Creates an agenda for change or reform Collaborates with the participants	Tests or verifies theories or explanations Identifies variables to study Relates variables in questions or hypotheses Uses standards of validity and reliability Observes and measures information numerically Uses unbiased approaches Employs statistical procedures	Collects both quantitative and qualitative data Develops a rationale for mixing Integrates the data at different stages of inquiry Presents visual pictures of the procedures in the study Employs the practices of both qualitative and quantitative research

Quantitative research is “[e]xplaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics)” (Aliaga & Gunderson, 1999, p.3). Quantitative research is therefore conducted in order to be able to quantify data and generalise results from a sample to the population of interest (Malhotra, 2010). This is frequently based on questionnaires which aim to gather information by posing a variety of questions to respondents about their behaviour, intentions, attitudes, awareness, and motivation, as well as demographic data (Malhotra, 2010). Therefore, this method is suitable for the study as the objective is to examine the impact of organisational culture on knowledge sharing behaviour among employees in organisations.

Mack et al. (2005, p. 1) highlight the usefulness of qualitative research as it is “especially effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of particular populations”. Thus, this is relevant for the research because this research aims to understand the impact of organisational culture and

leadership on knowledge sharing behaviour in depth in the culture of the United Arab Emirates. There are many different types of qualitative data analysis, including discourse analysis, critical discourse analysis, content analysis, critical discourse analysis, thematic analysis, constant comparison method of data analysis, biographical or narrative analysis, conversation analysis and analysis of narratives (Hennink et al., 2020; Petty et al., 2012). This study follows a deductive thematic analysis based on the main relationships of the quantitative methods as it is the primary method for the present research.

4.2.1 Review of Existing Research Methodologies in The Research Topic

The literature review revealed that researchers focused on utilising one method of answering their research objectives which was either purely qualitative (e.g., Agyemang & Boateng, 2019; Ardichvili et al., 2006; Burns et al., 2011; Dulaimi, 2007; Kathiravelu et al., 2014; Latilla et al., 2019; Peltokorpi, 2006; Wilkesmann & Wilkesmann 2011; Zhang & Faerman, 2007) or purely quantitative (e.g., Abzari & Abbasi, 2011; Blouch et al., 2020; Bock et al., 2005; Bock et al., 2010; Huang et al., 2008; Kuo & Young, 2008a, 2008b; Oliveira & Pinheiro, 2020; Ramasamy & Thamaraiselvan, 2011; Suppiah & Sandhu, 2011; Xue et al., 2011; Xue et al., 2012; Yang 2007; Zhang & Ng, 2013). The review also found that there are mixed methods design studies in the broad domains of knowledge management, organisational culture, and leadership, but these did not address the key concepts of the present study or their relationships in a unified framework. Nor did they seek to gain an understanding of knowledge management from an employee perspective (e.g., Boh, 2008; Curry et al., 2018; Ovseiko et al., 2015; Stentz et al., 2012). Therefore, to fulfil the research questions and as best practice as suggested by TRA and TPB (Ajzen, 2002; Fishbein & Ajzen, 2010), interviews provide a better understanding of the impact of background factors (in this case, leadership and organisational culture) on knowledge sharing behavioural intentions. In addition, “interviews are well suited for capturing behaviours that have taken place in an authentic context” while surveys “can be effective in precision in control/measurement of variables and capturing behaviours that have taken place in an authentic context” Turner et al., (2017, p. 274). Additionally, qualitative and quantitative methods employed together takes advantage of the strengths of each particular approach and compensates for the limitations of the other (McDowell & MacLean, 1998).

4.2.2 Research Design

This research takes a deductive approach that entails working from clear and identified research questions and a known set of hypotheses which were presented and explained extensively in Chapter 3. Thus, this research takes a top-down approach as compared to the inductive approach. To test the research model, the TRA and TPB approaches by Ajzen (2002) and Fishbein and Ajzen (2010) are utilised. These theories are extensively used in various domains to predict different behaviours, including knowledge sharing behaviour (e.g., Bock et al., 2005; Bock et al., 2010; Huang et al., 2008; Xue et al., 2012; Zhang & Ng, 2013). The research models (as set out in Chapter 3) have a high level of complexity, therefore, they will be tested using a structural equation modelling technique which allows the testing of more than one relationship at the same time unlike other multivariate techniques (Hair et al., 2010). Even though this research follows a mixed methodology approach which includes qualitative methods, the analysis follows a deductive approach based on the main relationships of the models.

In order to test the approach and have a sound model, a pilot study was conducted. The main study took place later, in a similar setting (see Chapters 5 and 6). However, for the pilot qualitative method the aim was mostly to test the questions, refine them for the main study and ascertain if there were any missing elements in the research model that should be included for the main study. In addition, the pilot study was conducted to inform the main study. The results of the pilot study are discussed in this chapter in Section 4.7.

Figure 4.1 displays the research design of the present study while Figure 4.2 shows the research methodology approach in current research.

Figure 4.1 Research Design

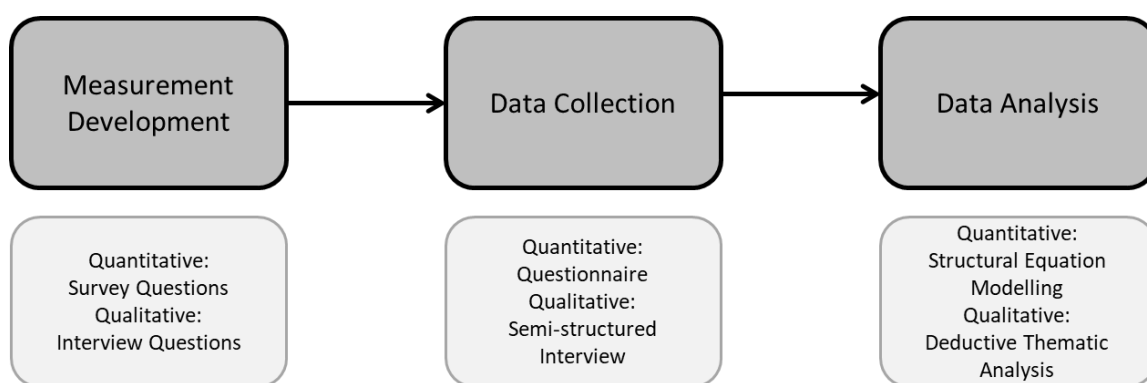
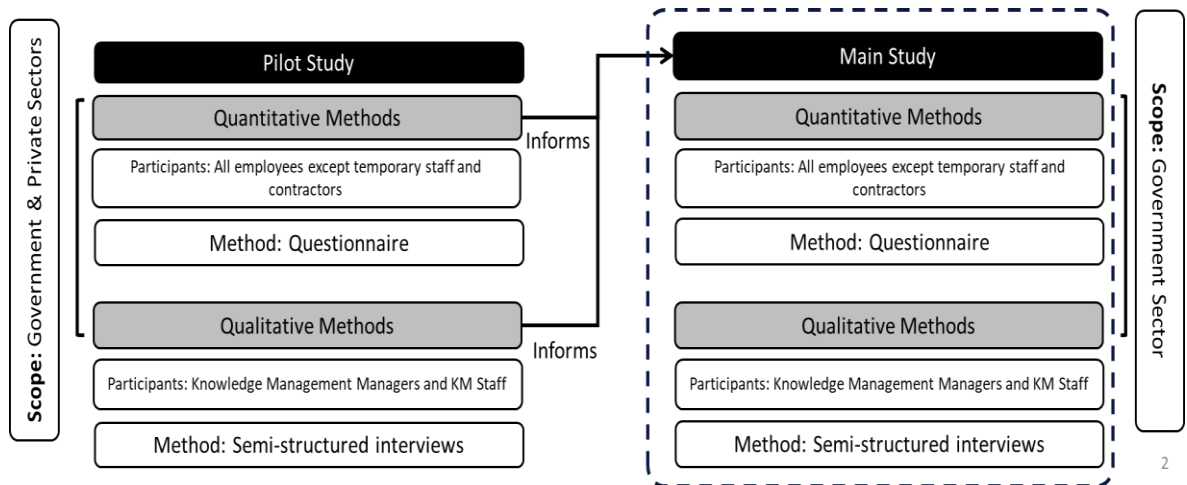


Figure 4.2 Research Methodology Approach in Current Research



The following sections explain the mixed method design which follows the concurrent strategy of conducting both methods in parallel at the same. Following that, each method will be discussed separately.

4.2.3 Stages Involved in the Mixed Methods Design of the Study

There were five main stages in the design which are described in detail below as well as being summarised in Figure 4.3.

4.2.3.1 Stage 1: Designing

Both the survey and interview questions were designed in parallel. The survey questions are based on well-defined and tested items from the literature and reverse coded items were included to check the quality of the data entry by respondents. The interview questions were designed for semi-structured interviews and so aligned with both main constructs in the model allowing the flexibility to explore questions which might emerge during the conversation. To ensure that participants answer the most important questions, these topics are addressed more than once but from different angles.

4.2.3.2 Stage 2: Data Collection

Both quantitative and qualitative data were collected. The pilot study data and the main study data were obtained through a mixed methodology approach. The quantitative data were collected mainly through an online questionnaire; where organisations did not provide internet access to, or employees' particular jobs did not require internet access

(e.g., employees with lower grades), hard copy questionnaires were provided. The semi-structured interviews were done in person.

4.2.3.3 Stage 3: Data Preparation

Data preparation differed from quantitative to qualitative: for example, in quantitative data:

Data entry for hard copy questionnaires

- Combine both online questionnaires and the ones entered manually.
- Cross-check entry quality.
- Upload the questionnaire entries in the statistical software
- Screen the data
- In case of missing data, follow the applicable statistical procedures to resolve it

whereas, for qualitative data:

- Transcribe interviews
- Translate interviews that were conducted in Arabic to English.
- Back translation to ensure correct meaning is delivered.
- Upload the interviews in the qualitative analysis software
- Start initial coding for all interviews.

4.2.3.4 Stage 4: Data Analysis

The quantitative data was analysed using Smart PLS and structural equation modelling. The high-level steps followed are listed in Table 4.2.

Table 4.2 High-Level Data Analysis Steps Followed in Quantitative Methods

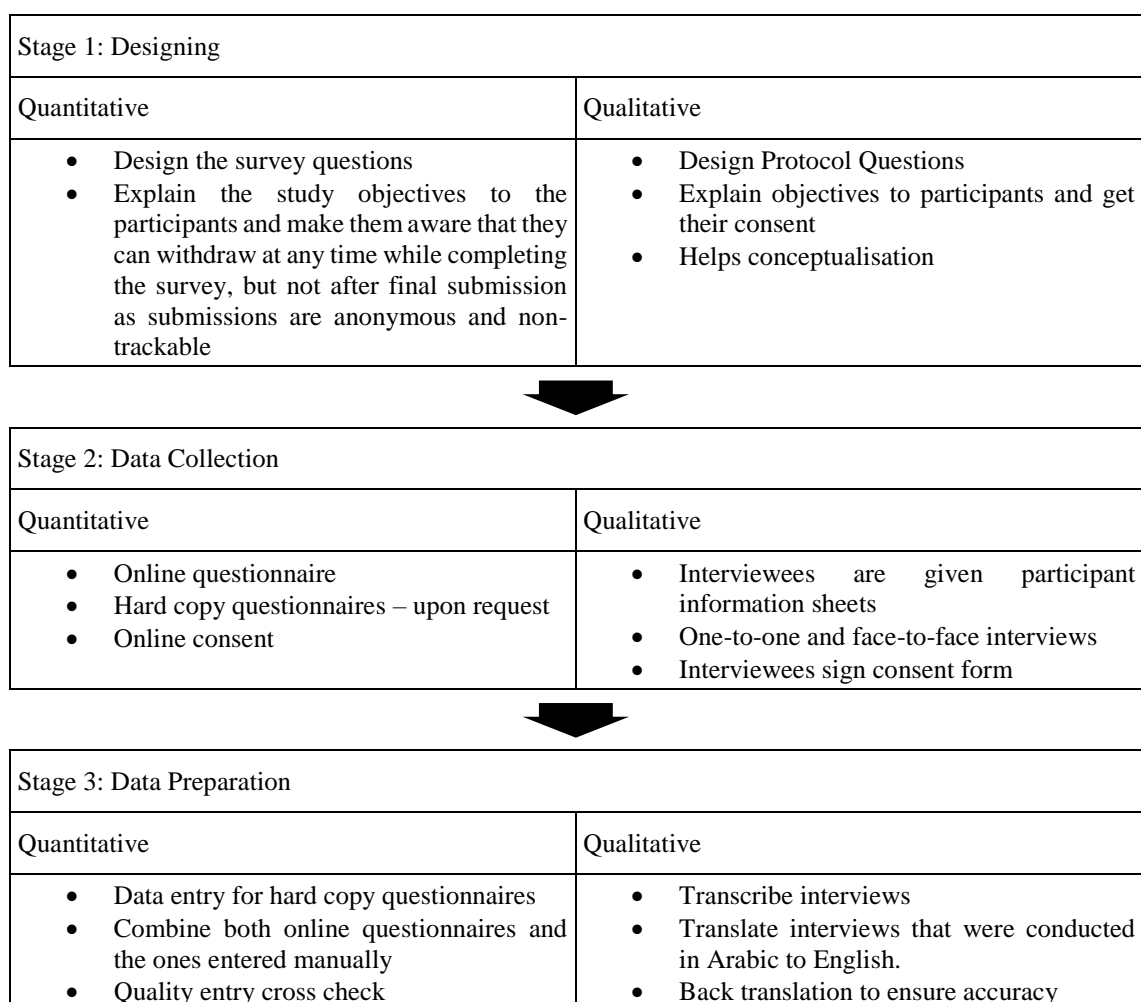
	Pilot study	Main Study
Evaluation of the Measurement Model	☑	☑
Evaluation of Reflective Measurement Models	☑	☑
Evaluation of Formative Measurement	☒ N/A	☑
Evaluation of Structural Model	☑	☑
Assessment of Moderating Effects	☒ N/A	☑

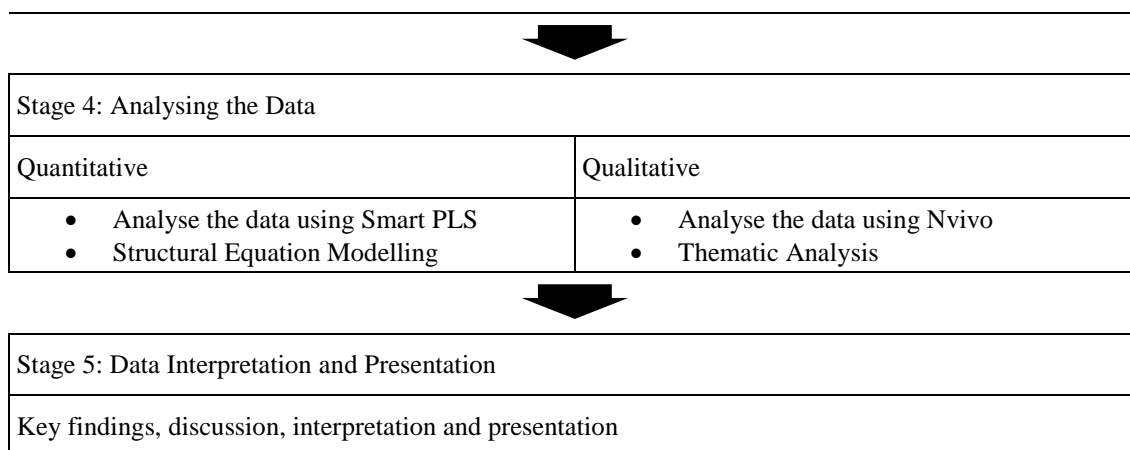
The qualitative data was analysed using NVivo 12 Pro and the method utilised was deductive thematic analysis. Details for both methods are given in Sections 4.5 and 4.6.

4.2.3.5 Stage 5: Data Interpretation and Presentation

This step entailed explaining the quantitative findings and relating them to qualitative findings to formulate conclusions. The blending of qualitative and quantitative methods strongly influences the conception of the overall study: when quantitative approaches encounter variations in results, qualitative analyses are used to explain the causes (McDowell & MacLean, 1998). The integrated findings are then summarised and presented, along with recommendations and suggestion for future research.

Figure 4.3 Summary of the 5 Stages Involved in Mixed Methods Design of the Study





4.2.4 Ethical Considerations

Nowadays, all research goes through a formal institutional assessment review board in order to ensure that the research is conducted in an ethical manner. Originally developed for medical science, these principles are now held to be applicable to all kinds of research (Hennink et al., 2020). The Belmont Report by the National Commission which was created in 1978 covered ethical principles for human subjects and identified three main principles (Hennink et al., 2020, (p. 71):

Respect of persons. Participants' welfare should always take precedence over the interests of science or society. Participants should be treated with courtesy and respect, and they should enter into research voluntarily and with adequate information.

Beneficence. Researchers should strive to maximize the benefits of the research for wider society, and to minimize the potential risks to research participants.

Justice. Researchers should ensure that research procedures are administered in a fair, non-exploitative, and well-considered manner.

Both the pilot study and the main study followed the ethical guidelines of, and were approved by, the University of Wollongong (UOW)/University of Wollongong in Dubai (UOWD) (see Appendices 1 and 2).

This procedure is comprehensive and requires the researcher to explain all aspects of the research: it is first reviewed by the research supervisors and then sent for the ethics committee for review and approval (any ethical concerns raised by the committee must be resolved before proceeding with data collection).

For example, in this particular study, with both the online and hard copy version of the survey, the researcher included a brief about the study, asked for informed consent, and explained how privacy of the participants' identities would be ensured, and measures to be taken regarding confidentiality and data protection. Prior to filling in the questionnaires, participants were informed that their participation was voluntary and that they could withdraw at any time and without giving a reason. They were also warned that once they hit the submission button it would be not possible to withdraw their submission but that it would not be able to be traced back to them.

Prior to the interview, potential interviewees were sent invitations, asking if they would agree to be interviewed and information about the interview format (e.g., anticipated length) (Whiting, 2008). Interviewees were informed that although they could withdraw during or immediately after the interview, once the interviews had been anonymised, it would not be possible. The invitation letter also explained that all information provided in the interview would remain strictly confidential. The interviews started with the researcher briefly introducing herself and explaining the purpose of the study. In addition, a participant information sheet for the study was given to all interviewees (see Appendix 2). Participants' understanding was checked and they were asked if anything needed clarification. The rationale (transcription) for using a digital recorder was explained (Whiting, 2008) and both verbal and written permission. Participants were again reassured that their responses would not be shared with their line managers or their company and that in the final work not even company names would be used, only industry sectors. Following that, the participants were assured that they can decline to answer any question (Whiting, 2008).

4.2.5 Scope of Study and Eligibility Criteria

The pilot study was undertaken in the UAE where both government and private sector employees were invited to take part in the study. Thus, the pilot study planned to assess employees' engagement in knowledge sharing behaviour in both the government and private sectors. However, none of the private sector organisations approached agreed to take part in the study. In addition, the aim of the study was to target large organisations that had KM departments, sections or units because this would provide a broader perspective on knowledge sharing behaviour and these larger organisations were more likely to have defined policies and guidelines related to knowledge sharing. The literature

review also showed that there have been previous studies of knowledge sharing in the private sector (e.g., Lei et al., 2019; Ryu et al., 2003; Teh & Yong, 2011; Zhang & Ng, 2013), there was little research on knowledge sharing in the government sectors (Shariq et al., 2019). Consequently, the focus of the main study was to include government organisations in the two largest Emirates in the UAE, Abu Dhabi and Dubai. In practice, however, the only government organisations that were prepared to engage in the study were in Dubai. Thus, the inclusion criteria were employees working in different departments of government organisations in Dubai. This provided a broad sample of respondents with different cultural backgrounds and educational levels as well as KM managers and KM practitioners. One exclusion criterion was contractors because they would not have sufficient knowledge of the culture of the organisation to offer an informed view as they do not work in or commit to the organisation on a long-term basis.

4.3 Quantitative Methods

Chapter 5 describes in detail the scope of data collection and the demographics involved in the study. The following sections explain the main study in terms of objective, rationale for selecting the research questions, and selection of measurement.

4.3.1 Objective

Guided by the research questions, the main study focused on examining the impact of organisational culture on knowledge sharing intention utilising the TRA and TPB frameworks. As the research follows a deductive approach, its primary method is quantitative. The purpose of employing quantitative methods is to test and confirm the research model based on a generated set of hypotheses.

4.3.2 Measurement Development

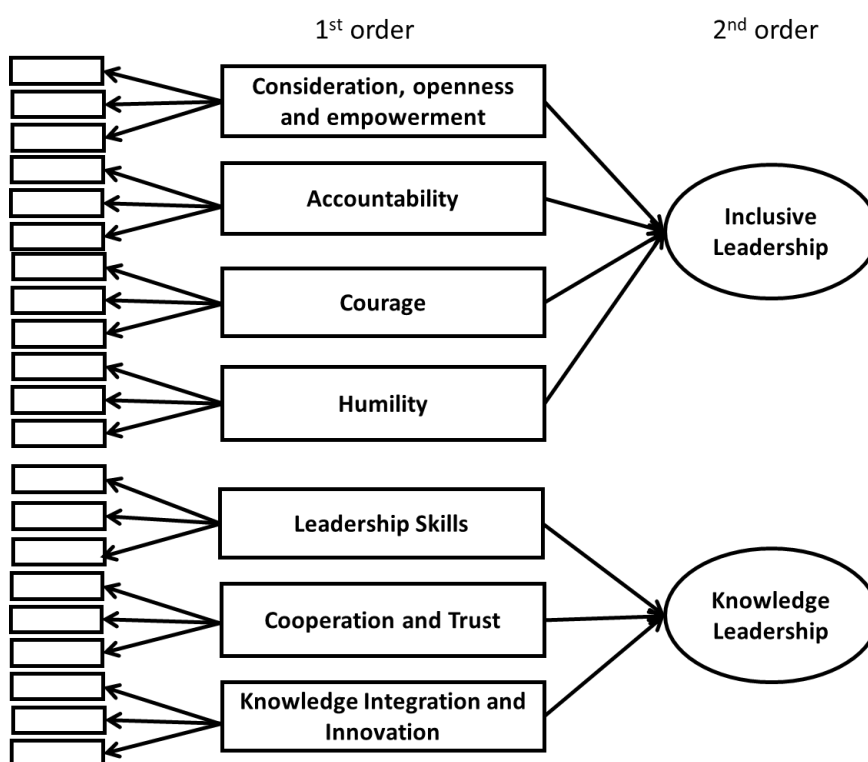
The main study measurement for knowledge sharing intention was adopted from Bock et al. (2005) who had also utilised the TRA and TPB frameworks in developing their questionnaire which was helpful for the current research.

The organisational cultures that were used for the main study were mainly adopted from Ghosh and Srivastava (2014) as they have worked on constructing a reliable and valid scale for measuring organisational culture: these dimensions included trust, participation and openness. Trust was highlighted as an important organisational culture dimension by

Casimir et al., (2012) and Petty et. al. (1995). Other dimensions were adopted from different studies: for example, team orientation (Denison & Neale, 1999; O'Reilly et al., 1991; Petty et. al., 1995) and agreement (Denison & Mishra, 1995; Denison & Neale, 1999).

The measurement of leadership consisted of measures for inclusive leadership and knowledge leadership. The measures used for inclusive leadership are adopted from van Dierendonck and Nuijten (2011) and Prime and Salib (2014, 2015). The measurements were originally developed by van Dierendonck and Nuijten and were later enhanced by Prime and Salib (2014, 2015) and termed inclusive leadership. The measurement of knowledge leadership was adopted from Yang et al. (2014). Both inclusive leadership and knowledge leadership are formative measures which are multi-dimensional. However, the first order measures for both are reflective as demonstrated in Figure 4.4.

Figure 4.4 Inclusive Leadership and Knowledge Leadership – Dimensions and Items



The TRA and TPB factors (attitude towards knowledge sharing, injunctive norms, intention to share knowledge, perceived behavioural controls and descriptive norms) are all adopted from Fishbein and Ajzen's (1975, 2010) original measurements. All measurements and items used are illustrated in Appendices 3 and 5.

4.4 Data Analysis

4.4.1 *Statistical Techniques Utilised*

When it comes to data analysis and what approach to adopt for such complex models there are two statistical techniques which can be considered: Covariance Based-Structural Equation Modelling (CB-SEM) and Partial Least Square- Structural Equation Modelling (PLS-SEM).

Hair et al. explain CB-SEM as a “[m]ultivariate technique combining aspects of factor analysis and multiple regression that enables the researcher to simultaneously examine a series of interrelated dependence relationships among the measured variables and latent constructs (variates) as well as between several latent constructs” (2014, p. 546) and PLS-SEM as:

PLS specifies relationships in terms of measurements and structural models, which are termed outer and inner models, respectively. It can handle all types of data, from nonmetric to metric, with very minimal assumptions about the characteristics of the data. PLS handles both reflective and formative constructs and all recursive models are identified, even with single-item constructs. It differs, as implied in the name, in that PLS is estimated with regression-based methods rather than MLE. PLS focuses on explanation of variance (prediction of the constructs) rather than covariance (explanation of the relationships between items), and significance testing of parameter estimates is not possible without using bootstrapping methods. (Hair et al., 2010, p. 775)

This study uses PLS-SEM because the model has both formative and reflective measures. Additionally, one of the organisation culture dimensions (openness) is a single item construct.

4.4.2 *Steps Followed in Data Analysis*

The same data analysis steps were followed for both the pilot and main study, other than the evaluation of formative measurements not being applicable to the pilot study as it did not have any formative measures.

- Evaluation of the Measurement Model

The empirical measurement model estimates the empirical measures of indicators and their relationships (Hair et al., 2017). In order to evaluate the measurement model, several reliability and validity criteria should be tested. Since the research includes both reflective

and formative measurement models, the criteria for the two are different. Table 4.3 summarises the reliability and validity criteria for each.

Table 4.3 Evaluation of the measurement model procedure (adapted from Hair et al., 2017, p.106)

Evaluation of the measurement model	
Reflective measurement models	Formative measurement models
Internal consistency (composite reliability) Indicator reliability Convergent validity (average variance extracted) Discriminant validity	Convergent validity Collinearity among indicators Significance and relevance of outer weights

- Evaluation of Reflective Measurement Models

Hair et al. (2017) explain the rules of thumb in order to assess the reflective measurement models (see Table 4.4): a valid reflective measurement model must have 1) internal consistency reliability, 2) indicator reliability, 3) construct reliability, 4) convergent validity, and 5) discriminant validity.

Table 4.4 Criteria for assessment of reflective measurement models (Hair et al., 2017)

Measurement	Description/Guidelines	Critical Values
Internal consistency reliability	“Is a form of reliability used to judge the consistency of results across items on the same test. It determines whether the items measuring a construct are similar in their scores (i.e. if the correlations between the items are large)” (p. 320).	“Composite reliability should be higher than 0.70 (in exploratory research, 0.60 to 0.70 is considered acceptable). Consider Cronbach’s alpha as the lower bound and composite reliability as the upper bound of internal consistency reliability” (p. 112).
Indicator reliability	“Is the square of a standardized indicator’s outer loading. It represents how much of the variation in an item is explained by the construct and referred to as the variance extracted from the item” (p. 319).	Loadings $\lambda \geq 0.7$. “The indicator’s outer loadings should be higher than 0.70. Indicators with outer loadings between 0.40 and 0.70 should be considered for removal only if the deletion leads to threshold value” (p. 122).
Construct reliability	Relationship between the indicators which are assigned to a certain construct (p. 111-112).	Construct reliability $\rho_c \geq 0.6$.
Convergent validity	“Is the extent to which a measure correlates positively with alternative measures of the same construct” (p. 112).	Average variance extracted AVE ≥ 0.5
Discriminant validity	“Is the extent to which a construct is truly distinct from other constructs by empirical standards” (p. 115). Difference in measurement between different constructs: Use the HTMT criterion to assess discriminant validity in PLS-SEM.	$\sqrt{\text{AVE}} \geq \text{correlations of the latent variable with the other variables};$ HTMT < 0.85 .

Measurement	Description/Guidelines	Critical Values
	<p>“The confidence interval of the HTMT statistic should not include the value 1 for all combinations of constructs. According to the traditional discriminant validity assessment be higher than all its cross-loadings with other constructs. Furthermore, the square root of the AVE of each construct should be higher than its highest correlation with any other construct (Fornell-Larcker criterion)” (p. 122).</p>	

- Internal Consistency Reliability

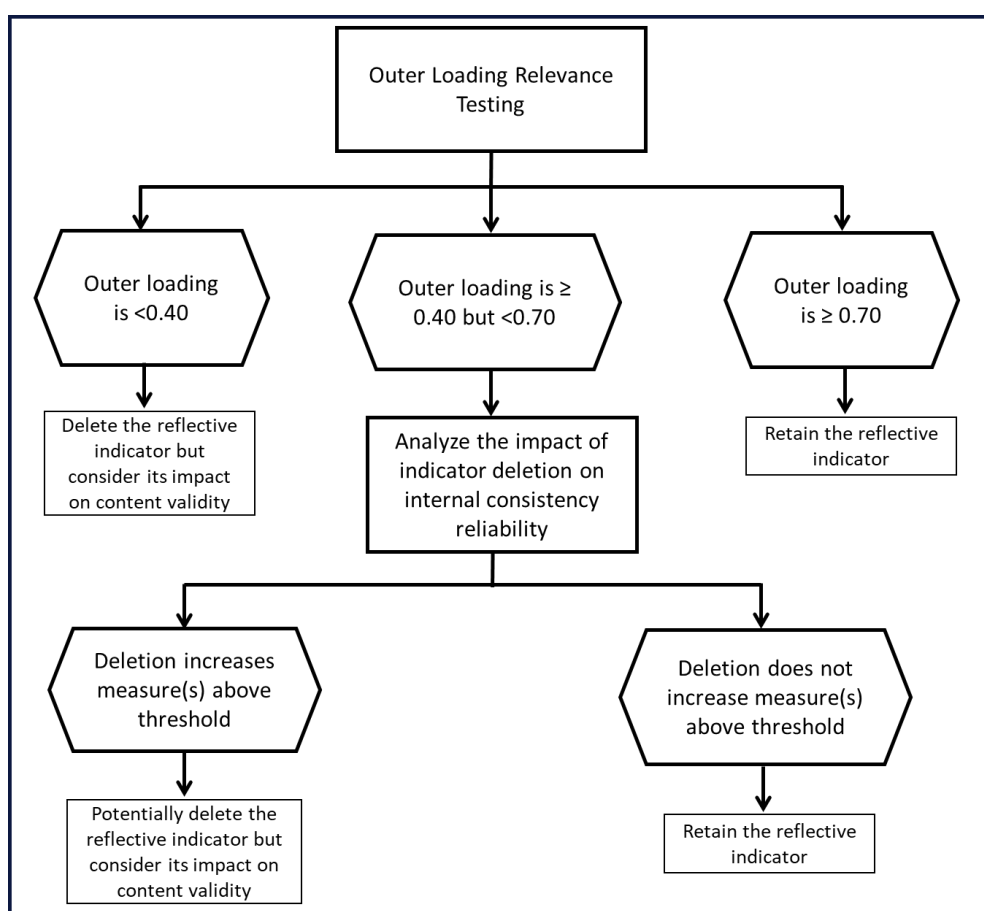
Internal consistency reliability can be determined by Cronbach’s alpha which estimates reliability according to the intercorrelations of the observed variables (Hair et al., 2017). Cronbach’s alpha commonly assumes that all indicators are equally reliable which means that they have equal outer loading on the construct. However, the case in PLS-SEM differs, as it prioritises the indicators based on their individual reliability (Hair et al., 2017). Another limitation of Cronbach’s alpha in PLS-SEM is that it is sensitive to the number of items represented in a scale and usually tends to underestimate the internal consistency reliability. Hence, a more appropriate measure should be applied which is composite reliability. The interpretation of composite reliability is similar to Cronbach’s alpha: whereas the values of Cronbach’s alpha range between 0 and 1, with the higher value indicating higher reliability, the composite reliability values range from 0.60 to 0.70 (considered acceptable in exploration research) and 0.70 and 0.90 (appropriate for more advanced stages of research) (Nunnally & Bernstein, 1994). The advantage of this measure is that it considers the different outer loadings of the indicator variables.

- Indicator Reliability

Indicator reliability refers to the size of the outer loadings (Hair et al., 2017). As a rule of thumb, the standardised outer loading should be 0.708 or higher for all indicators. The variance extracted from an item refers to an item which is explained by a construct. This can be observed through the square of a standardised indicator’s outer loading. A well-established rule of thumb is that 50% at least should be explained of each indicator’s variance by a latent variable (Hair et al., 2017). In recently developed scales, the outer loading could be weaker (<0.70); this is mostly in social sciences studies. However, Hair et al. (2017) explain that researchers must examine the effects of removal of indicators

on both composite reliability and content validity prior to eliminating indicators. When outer loadings fall between 0.40 and 0.70 generally it should be considered for elimination from the scale if deleting indicators improves the composite reliability. In some cases, weaker outer loadings indicators are kept if they contribute to the content validity of the construct. However, indicators with very low outer loadings (below 0.4) must always be removed from the construct. Figure 4.5 shows the recommendations regarding elimination of indicators based on outer loadings as per Hair et al.'s guidelines.

Figure 4.5 Recommendations of Indicators Elimination Based on Outer Loadings as per Hair et al.'s Guidelines (2017, p. 14)



- **Construct Reliability**

Reliability refers to “the extent to which a scale produces consistent results if repeated measurements are made” (Malhotra, 2010, p. 318). For example, a high association between scores obtained from different administrations of the scale indicates reliability. Reliability can be assessed by a variety of different approaches and in this research internal consistency reliability, an “approach for assessing the internal consistency of the

set of items when several items are summated in order to form a total score for the scale” (Malhotra, 2010, p. 319) is taken into consideration.

Unlike construct reliability, construct validity “addresses the question of what construct or characteristics the scale is, in fact, measuring” (Malhotra, 2010, p. 320). As all measurements adopted in the study are based on previous literature, it is assumed that there is an existing coherence between conceptual and operational definition of the constructs.

- Convergent Validity

In order to evaluate the convergent validity for reflective constructs, the outer loading of the indicators and the average variance extracted (AVE) should be considered (Hair et al., 2017). Validity refers to “the extent to which a measure correlates positively with alternative measures of the same construct” (p. 140). Therefore, the higher the outer loadings on a construct, the higher association of indicators, which means that these capture more of the construct. According to Hair et al. (2012, 2017) indicator reliability should be equal to or higher than 0.50.

- Discriminant Validity

Discriminant validity allows researchers to ensure that the measurements being tested are distinct from other constructs in the model (Hair et al., 2017). It is “the extent to which a measure does not correlate with other constructs from which it is supposed to differ. It involves demonstrating a lack of correlation among differing constructs” (Malhotra, 2010, p. 312). Therefore, the less correlation among measures from other constructs, the better (Campbell, 1960). If discriminant validity were not determined, then it would not be possible to conclude whether the structural paths in the model are real or were generated as a result of discrepancies as the constructs influence the variation of more than one variable (Farrell, 2010).

Three measures of discriminant validity are commonly used by researchers. The first involves looking at the cross-loadings which are indicated through the values of each indicator outer loading on the associated constructs: outer loadings should be greater than any of their cross-loadings on other constructs. The second, the Fornell-Larcker criterion, is widely used to assess discriminant validity (Hair et al, 2014; Hair et al., 2017). It

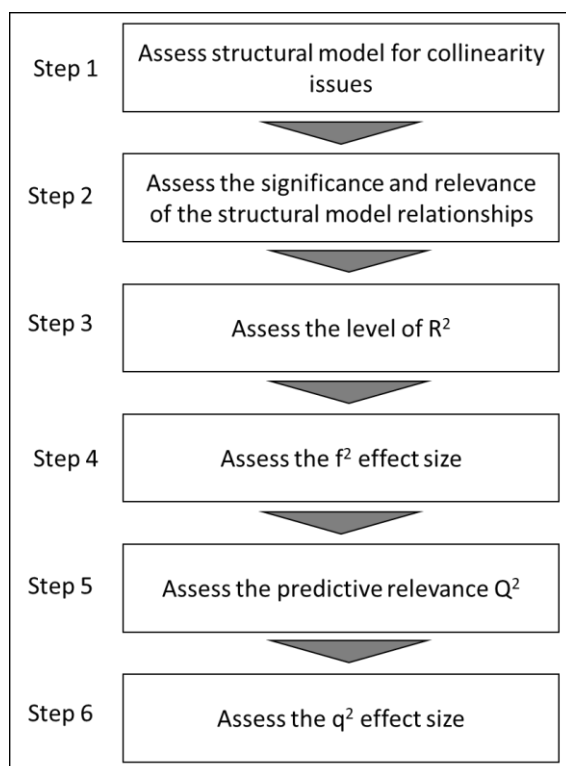
compares the square root of the AVE values with the latent variable correlations. More specifically, discriminant validity is obtained when the square root of the AVE is higher than the absolute value of the correlation shared between any of the other constructs (Fornell & Larcker 1981; Götz et al., 2010; Hair et al., 2017; Nitzl, 2016). Third, the Heterotrait-Monotrait Ratio (HTMT) is much more conservative and is more reliable than the Fornell-Larcker Criterion (Henseler et al., 2015).

- Evaluation of Structural Model

Having established the reliability and validity of measurement of the latent variables in previous section, all conditions are met to evaluate the structural model.

The next step, according to Hair et al. (2017), is to assess the PLS-SEM structural model results. This is done through testing the model's predictive capabilities and the relationships between constructs. Hair et al. summarise the steps in Figure 4.6.

Figure 4.6 Structural Model Assessment Procedure (Hair et al., 2017, p. 191)



- Model Fit Measures in PLS-SEM

PLS-SEM was initially designed for prediction purposes as previously there were no

validation criteria to evaluate a global model fit of a PLS-SEM which was problematic (Henseler & Sarstedt, 2013). Researchers then expanded its capabilities for theory testing by developing model fit measures (Hair et al., 2017). For instance, Henseler et al. (2014) and Hair et al. (2014) explained that the model quality can be determined by its ability to predict the endogenous constructs and referred to a set of criteria in order to facilitate the assessment. Testing model fit examines how well the hypothesised model fits the empirical data which can help in identifying model misspecifications (Hair et al., 2017). Hair et al. (2017) listed various model fit measures for PLS-SEM: 1) goodness-of-fit index, 2) standardised root mean square residual, 3) root mean square residual covariance, and, 4) exact fit test. However, despite developments from various researchers, Hair et al. (p. 194) pointed out that the question of “whether fit measured above adds any value to PLS-SEM analysis?” remains unanswered. A combination of explanation and prediction is common in statistical modelling, however, the distinction must be clarified and understood in order to develop and test theories in the right way (Shmueli, 2010). PLS-SEM requires a different kind of validation because it is concerned with prediction rather than explanatory modelling (Hair et al., 2017). Because the current research aims to predict and explain the intention of knowledge sharing, PLS-SEM was relevant. Hair et al. (2017) and Shmueli (2010) further explained that the validation of PLS-SEM results focuses on generalisation, which is to be able to predict sample data, or even better, out-of-sample data. That said, researchers are continuously seeking to further develop evaluation criteria which could better support the prediction-orientation nature of PLS-SEM (e.g., Rigdon, 2012, 2014). In addition, researchers are also focusing on ways to liberate PLS-SEM from its CB-SEM sibling (e.g., Sarstedt et al., 2014). Hair et al. (2017) further elaborated that using such fit indicators can be destructive as this may tempt the researcher to sacrifice predictive power in order to achieve better “fit” instead: hence, in the context of PLS-SEM, they advise researchers against the routine use of such statistics.

- Step 1: Assess Structural Model for Collinearity Issues

The first step in the structural model assessment procedure is to examine the structural model for collinearity issues. Hair et al. (2017) explain that “the estimation of path coefficient in the structural models is based on ordinary least squares regression (OLS) of each endogenous latent variable on its corresponding predecessor constructs” (pp.191-192) and that, similar to a regular multiple regression such as OLS, if there are critical

levels of collinearity among the predictor constructs this could affect the path coefficient results negatively. They further stress the importance of differentiating between PLS-SEM and CB-SEM because each has different mechanisms. Thus, in PLS-SEM, the structural model is mainly assessed on the basis of empirical criteria as there is no overall goodness of model fit as is the case in CB-SEM: instead the model is evaluated in terms of how it predicts the endogenous variables/constructs (Hair et al., 2017).

To assess the structural model for collinearity issues, Hair et al. (2017) recommend following the same approach for the measurement as the evaluation of formative measurement models (i.e., tolerance). To achieve this, a set of predictor constructs needs to be examined separately for each subpart of the structural model. On that basis, each set of predictor variables should be checked for critical values of collinearity between them (Hair et al., 2017). Variance inflation factor (VIF) values above 5 in the predictor constructs are critical as per the tolerance of VIF guidelines. Additionally, in such cases researchers should consider removing constructs, merging the predictors into one single construct or creating high-order constructs in order to treat collinearity issues (Hair et al., 2017). However, if the VIF values are below the threshold value of 5, it means that there are no collinearity issues and analysis can proceed.

- Step 2: Assess the Significance and Relevance of the Structural Model Relationships

Determining the significance and relevance of the structural model relationships can be achieved through evaluating the structural model path coefficients. In PLS-SEM, this is done by running the PLS algorithm which estimates the structural model relationships hypothesised in the research model among the constructs (i.e., the path coefficients) (Hair et al., 2017). The values of path coefficients normally vary between -1 and +1; in some cases, values can be smaller or larger, but they usually fall between these limits. This means that a path coefficient close to +1 represents a strong positive relationship, whereas, a path coefficient close to -1 represents a strong negative relationship. Additionally, a path coefficient is closer to 0 represents a weaker relationship (Hair et al., 2017).

A coefficient significance depends eventually on its standard error which is obtained when applying bootstrapping routine (Hair et al., 2017). The bootstrap standard error

allows the computation of the empirical t values as well as the “ p -values for all the structural path coefficients: when an empirical t -value is larger than the critical value the coefficient is statistically significant at a certain error probability (i.e., significance level)” (Hair et al., 2017, p. 196).

Eventually, bearing those critical values in mind, the choice of the significance level and the type of test (whether one or two tailed) depends on the area of research and the research objective (Hair et al., 2017). For instance, researchers in the area of marketing usually assume a significant level of 5% but this is not always the case. In consumer research studies researchers sometimes assume a significance level of 1% (Hair et al., 2017). Hair et al. explain that, generally if the study is exploratory, researchers usually assume a significance level of 10%, further adding that in cases when researchers would like to be stricter when testing the relationships in their study, they usually assume a 1% significance level. Therefore, the current study assumes a significance level of 10% with a two-tailed test to give more room to explore relationships in the model.

According to Hair et al. (2017), many researchers only focus on assessing the significance of effects rather than extending the assessment to examine the relevance of significant relationships. The latter is crucial because even though the path coefficients in the structural model may be significant, their size may be very small: this should be reflected when interpreting the results because, regardless of the significance of coefficients, this may not be worth managerial attention. They explain that these situations can happen due to the large sample sizes involved in the study.

- Step 3: Assess the Level of R^2

R^2 , also known as the coefficient of determination, is commonly used in PLS-SEM (Ringle et al., 2012). Hair et al. (2017) explain that it is a measure of the model’s predictive power and that “the coefficient represents the exogenous latent variables’ combined effects on the endogenous latent variable. Specifically, the coefficient represents the amount of variance in the endogenous constructs explained by all of the exogenous constructs linked to it” (p. 198). The R^2 value varies from 0 to 1, where higher values indicate higher levels of predictive accuracy and lower values lower levels of predictive accuracy. An acceptable R^2 value depends on the model complexity and research discipline. For example, in the domain of marketing, R^2 values of 0.75 are seen

as substantial, 0.50 indicates moderate fit and 0.25 is regarded as weak (Hair et al., 2017). However, selecting a model solely based on R^2 is not considered a good approach because of the R^2 shortcomings: for example, adding additional (non-significant) constructs to explain an endogenous latent variable in the structural model always increases the R^2 value. For instance, the more paths pointing toward a target construct, the higher the R^2 value will be. Researchers, therefore, usually look for models that are good at explaining the data with higher R^2 but that also have fewer exogenous constructs (Hair et al., 2017). Ringle et al. (2012) reviewed articles which used PLS-SEM in *MIS Quarterly* from 1991 to 2011 and reported that out of 109, 105 studies reported the R^2 but only 12 reported f^2 .

- Step 4: Assess Effect Size f^2

Chin (2010) highlighted the importance of clear reporting when it comes to PLS analyses, especially including f^2 (effect size). The higher the f^2 , the greater the impact of an independent construct to a dependent construct. Additionally, Nitzl (2016), stressed that the effect size f^2 is the second most important criterion for the evaluation of a model after the coefficient of determination R^2 .

Hair et al. (2017) defined f^2 as “a measure used to assess the relative impact of a predictor construct on an endogenous construct” (p. 317). This measure is referred to as the f^2 effect size and it has become widely used and encouraged by journal editors and reviewers. The effect size can be calculated using the following formula.

$$f^2 = \frac{R^2_{\text{included}} - R^2_{\text{excluded}}}{1 - R^2_{\text{included}}}$$

where both R^2_{included} and R^2_{excluded} are R^2 values of the endogenous latent variable when a selected exogenous latent variable is included in/excluded from the model (Hair et al., 2017).

f^2 values of 0.35 are seen as large, 0.15 as medium and 0.02 as small. In addition, if the effect size value is less than 0.02 this indicates that there is no effect (Hair et al., 2017).

- Step 5: Assess the Predictive Relevance Q^2

In addition to the previous assessment steps discussed, it is essential to assess the

predictive power or predictive relevancy of the research model. This is examined by evaluating Stone-Geisser's Q^2 value (Geisser, 1974; Stone, 1974). Hair et al. (2017, p. 325) defined Q^2 as:

a measure of a model's predictive power. The computation of Q^2 draws on the blindfolding technique, which uses a subset of the available data to estimate model parameters and then predicts the omitted data. Q^2 examines whether a model accurately predicts data not used in the estimation of model parameters (i.e., out-of-sample predictive power or predictive relevance).

In simple terms, if a PLS model shows a predictive relevance, this means that it accurately predicts data which is not used in the model estimation (Hair et al., 2017).

The Q^2 is determined by using the blindfolding procedure which is considered a sample re-use technique which systematically deletes data points and provides a prediction of their original values (Hair et al., 2017). For that reason, this procedure needs an omission distance, D , for which the literature suggests a value of between 5 and 12. For example, if the omission distance was defined as ($D=7$) this suggests that every seventh data point of a latent variable's indicator will be removed in a single blindfolding round. The number of blindfolding rounds is always equal to the specified omission distance, therefore, in this example, an omission distance of $D=7$ results in seven blindfolding rounds. This means that the blindfolding procedure has to eliminate and predict every data point of the indicators used in the measurement model of the selected latent variable in each of those seven rounds (Hair et al., 2017).

Additionally, Hair et al. (2017, p.207) explained that " Q^2 values larger than 0 suggest that the model has predictive relevance for a certain endogenous construct. In contrast, values of 0 and below indicate a lack of predictive relevance".

The Q^2 value can be calculated by using one of two approaches as explained by Hair et al., (2017, p. 207):

1. **The cross-validated redundancy approach** "which builds on the path model estimates of both the structural model (scores of the antecedent constructs) and the measurement model (target endogenous construct) of data prediction. Therefore, predictions by means of cross validated redundancy fit the PLS-SEM approach perfectly" or,

2. **The cross-validated communality approach** which “uses only the construct scores estimated for the target endogenous construct (without including the structural model information) to predict the omitted data points”.

Hair et al. (2017), recommend use the cross-validated redundancy approach to measure Q^2 as it contains one of the key elements of the path model which is the structural model information. This enables predicting eliminated data points.

- Step 6: Assess the q^2 Effect Size

Hair et al. (2017) defined the q^2 effect size as “a measure to assess the relative predictive relevance of predictor construct on an endogenous construct” (p. 325). Similar to assessing R^2 values, in the f^2 effect size approach, the relative impact of predictive relevance can be compared by means of measuring the q^2 effect size as defined in the formula below (Hair et al., 2017):

$$q^2 = \frac{Q^2_{\text{included}} - Q^2_{\text{excluded}}}{1 - Q^2_{\text{included}}}$$

To assess the relative predictive relevance q^2 , the values should be similar to f^2 as discussed in Step 4.

Since the main study models consists both reflective and formative measures, the PLS-SEM technique is the most appropriate as Ringle et al. (2012) confirmed that PLS-SEM can handle both reflective and formative measures. However, Diamantopoulos and Winklhofer (2001) added that relying on PLS-SEM when using formative measures is not problem-free due to the PLS-SEM restriction of estimating formative constructs error terms.

Ringle et al. (2012) further explained that this circumstance is challenging to defend in practice because scholars cannot be certain that all possible causes related to the latent variable are accounted for by the indicators. They stressed that establishing an acceptance level of measurement validity prior to the structural relationships is crucial in PLS-SEM studies.

- Formative vs Reflective Measures

The main study research models contain both formative and reflective measures. For

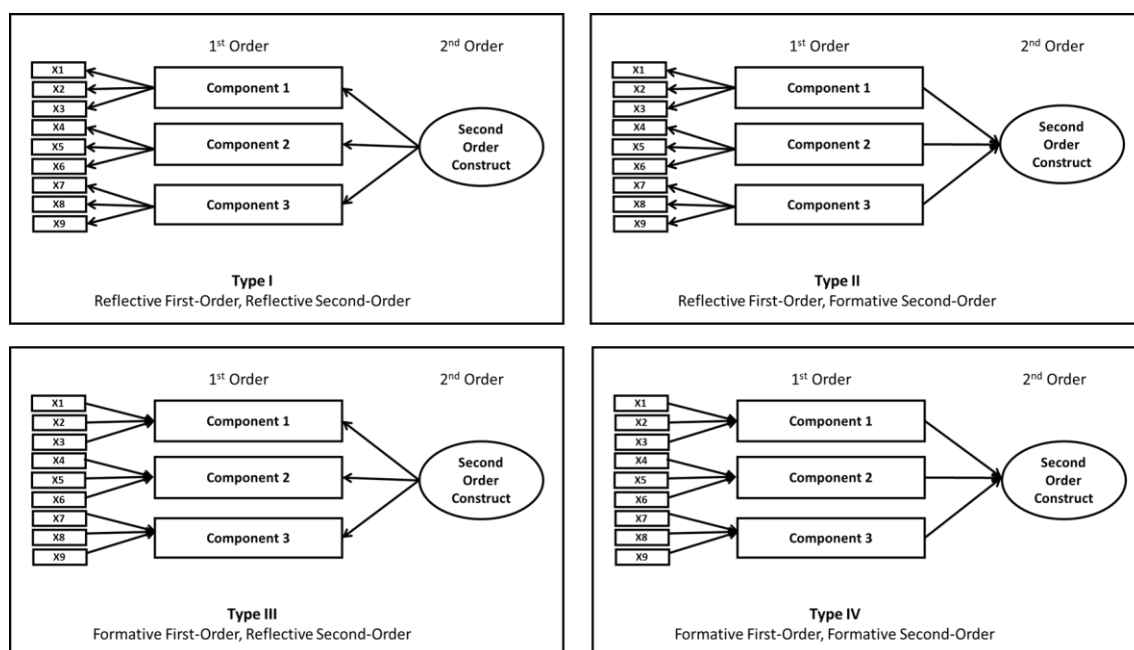
example, inclusive leadership has eight formative dimensions and the items that formulate each of these dimensions are reflective measures. Knowledge leadership, however, has six formative dimensions and the items that formulate each of these dimensions are reflective measures. The rest of the model consists of reflective measures as shown in Appendix 5.

According to Hair et al. (2010), formative measurement theory is “based on the assumption that measured variables cause the constructs” (p. 750) while reflective measurement theory is “based on the idea that latent constructs cause the measured variables and the error results in an inability of the construct to fully explain these measured variables” (p. 749). Hence, formative indicators assume that the measures have an impact on a latent construct, unlike the reflective model where all measures are assumed to be caused by a latent underlying construct (Becker et al., 2012; Jarvis et al., 2003). Table 4.5 further explains the differences between reflective and formative measures. For example, the indicators for formative measures are not interchangeable as they do not have a similar content or share a common topic. In addition, if one indicator is dropped it is considered to be quite serious as it may alter the meaning of the construct (Becker et al., 2012; Jarvis et al., 2003).

- **Multidimensional Constructs**

Some constructs can be operationalised as multidimensional and are known as hierarchical latent variable models. Becker et al. (2012) and Jarvis et al. (2003) illustrated the four types of hierarchical latent variable models as illustrated in Figure 4.7. The research model includes type II as highlighted in section Measurement Development Section earlier in this chapter. This is demonstrated in knowledge leadership and inclusive leadership constructs which means that it consists of formative measures and then each of the formative measures is measured using lower-order constructs that are reflectively measured as illustrated in Figure 4.8.

Figure 4.7 Re-drawing of the Four Types of Hierarchical Latent Variable Models Based on Becker et al. (2012, p. 363) and Jarvis et al. (2003, p.205)



To ensure that knowledge leadership and inclusive leadership measures are formative in the second order, the rules and guidelines set out by Jarvis et al. (2003) were adopted (see Table 4.5) as, based on those guidelines it is confirmed that those measures are formative.

Table 4.5 Decision Rules For Determining Whether A Construct Is Formative Or Reflective (Source: Jarvis et al.,2003, p.203).

	Formative model	Reflective model
1. Direction of causality from construct to measure implied by the conceptual definition <ul style="list-style-type: none"> Are the indicators (items) (a) defining characteristics or (b) manifestations of the construct? Would changes in the indicators/items cause changes in the construct or not? Would changes in the construct cause changes in the indicators? 	Direction of causality is from items to construct Indicators are defining characteristics of the construct Changes in the indicators should cause changes in the construct Changes in the construct do not cause changes in the indicators	Direction of causality is from construct to items Indicators are manifestations of the construct Changes in the indicator should not cause changes in the construct Changes in the construct do cause changes in the indicators
2. Interchangeability of the indicators/items <ul style="list-style-type: none"> Should the indicators have the same or similar content? Do the indicators share a common theme? 	Indicators need not be interchangeable Indicators need not have the same or similar content/indicators need not share a common theme.	Indicators should be interchangeable Indicators should have the same or similar content/indicators should share a common theme.

	Formative model	Reflective model
<ul style="list-style-type: none"> Would dropping one of the indicators alter the conceptual domain of the construct? 	Dropping an indicator may alter the conceptual domain of the construct.	Dropping an indicator should not alter the conceptual domain of the construct.
3. Covariation among the indicators <ul style="list-style-type: none"> Should a change in one of the indicators be associated with changes in the other indicators? 	Not necessary for indicators to covary with each other Not necessarily	Indicators are expected to covary with each other Yes
4. Nomological net of the construct indicators <ul style="list-style-type: none"> Are the indicators/items expected to have the same antecedents and consequences? 	Nomological net for the indicators may differ Indicators are not required to have the same antecedents and consequences	Nomological net for the indicators should not differ Indicators are required to have the same antecedents and consequences

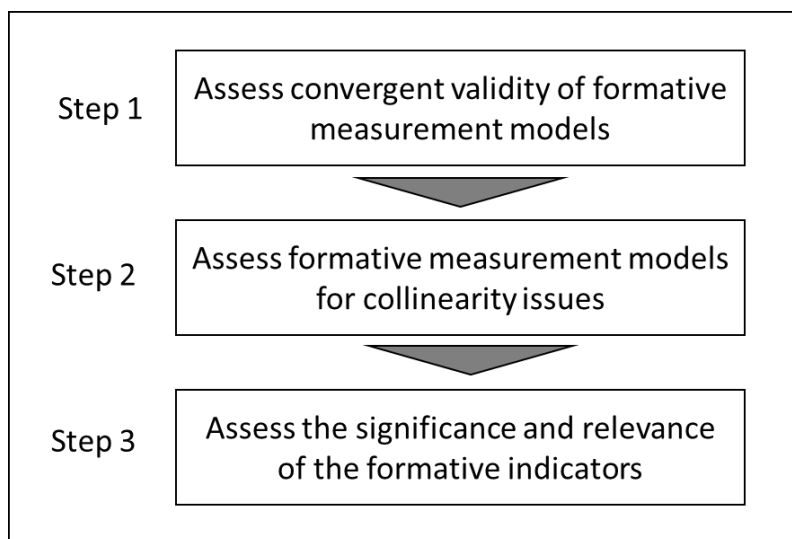
Content validity was established by ensuring consistency between the measurement items and the extant literature. In addition, measurement items were based on existing and pre-validated constructs which were adopted from previous studies (Ajzen, 2002; Ajzen & Fishbein, 2010; Bock et al., 2005; Bock et al., 2010; Carmeli et al., 2010; Ghosh & Srivastava, 2014; Ibragimova, 2006; Johnny & Narasimha, 2005; Prime & Salib, 2014, 2015; Ryu et al., 2003; Taylor & Todd 1995; van Dierendonck & Nuijten, 2011; Yang et al., 2014; Zhang & Ng, 2013).

- Evaluation of Formative Measurement

The evaluation criteria used to assess reflective measurements cannot be transferred to the assessment of formative measurements because formative measurement indicators represent the construct's independent causes. Therefore, high correlation is not expected. Hence, convergent validity and discriminant validity for formative measurement cannot be assessed in the same way as reflective measurement models (Hair et al., 2017).

To assess formative measurement models, Hair et al. (2017) introduced the steps demonstrated in Figure 4.9.

Figure 4.8 Formative Measurement Models Assessment Procedure (Adapted from Hair et al., 2017)



- Step 1: Assess Convergent Validity

Assessing convergent validity for formative measurement is also referred to as *redundancy analysis* and it examines “the extent to which a measure correlates positively with other (e.g., reflective) measures of the same construct using different indicators” (Hair et al., 2017, p.140). Therefore, when evaluating formative measurement models, it is crucial to test whether the formative measure constructs are correlating highly with any reflective measures of the same construct. In other words, this analysis assesses if information in the model is redundant by including it twice, once in the formative measurement and again in the reflective measurement (Hair et al., 2017). Generally, Hair et al., (2017, p. 151) “[a]ssess the formative construct’s convergent validity by examining its correlation with an alternative measure of the construct, using reflective measures or a global single item (redundancy analysis). The correlation between constructs should be 0.70 or higher”. However, since the formative measurements are part of multidimensional constructs, the first order constructs are reflectively measured while the second order are formatively measured. Therefore, a redundancy analysis is not required.

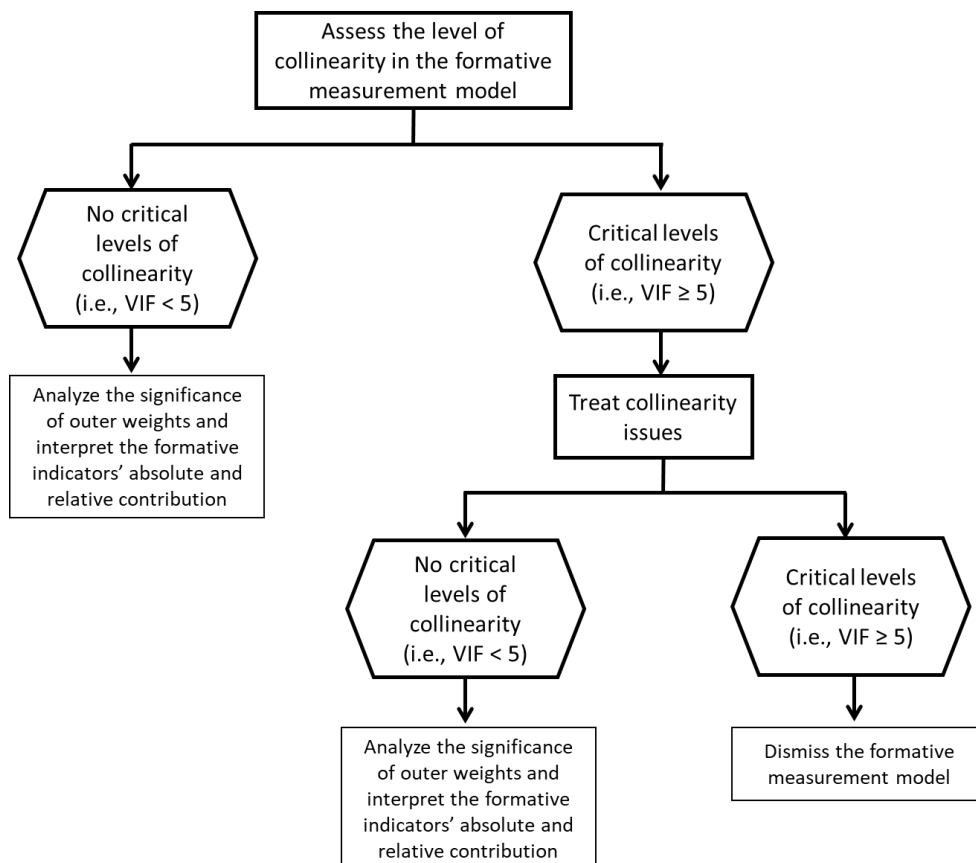
- Step 2: Assess Formative Measurement Models for Collinearity Issues

Unlike reflective indicators, formative indicators are not interchangeable, thus they are not expected to have high correlations between items in formative measurement models: multicollinearity between indicators therefore is essential to assess formative measures

because of the potential inflation of the indicator weights (Hair et al., 2012). Formative indicator weights are frequently smaller than reflective indicators' loadings, which can lead to misinterpretations of indicator relevance for the construct domain (Diamantopoulos & Winklhofer, 2001; Hair et al., 2012). Hair et al. (2017) explained the collinearity assessment in formative measurement models using the VIF in Figure 4.9.

The variance inflation factor (VIF) is commonly used to test multi-collinearity between formative indicators (Hair et al., 2017; Hair et al., 2020). To ensure manageable levels of multi-collinearity the VIF value should be less than 5.

Figure 4.9 Collinearity Assessment in Formative Measurement Models Using the VIF (Hair et al., 2017, p.145)



- Step 3: Assess the Significance and Relevance of the Formative Indicators

The third and last criterion for evaluating the contribution of formative indicators which determines its relevance, is the outer weights of indicators (Hair et al., 2017).

Hair et al. (2017, p. 151) explained the following guidelines with regard to the outer weights:

Examine each indicator's outer weight (relative importance) and outer loading (absolute importance) and use bootstrapping to assess their significance.

When an indicator's weight is significant, there is empirical support to retain the indicator.

When an indicator's weight is not significant but the corresponding item loading is relatively high (i.e., ≥ 0.50) or statistically significant, the indicator should generally be retained.

If the outer weight is non-significant and the outer loading relatively low (i.e., < 0.5), you should strongly consider to remove the formative indicator from the model.

The weights of formative measurements can be seen as regression coefficients as Bollen and Lennox (1991) present the formative concept through the following regression equation:

$Y = \beta_1 X_1 + \dots \beta_n X_n + \zeta$	Equation 1 Regression Equation
---	--------------------------------

where

Y = The construct being estimated

β_i = Beta weights for items

X_i = Item scores/observations

ζ = A disturbance term

This can be interpreted as the following: values close to +1/-1 indicate a strong relationship between the indicators and the construct in a standardised PLS model, while values close to 0 indicate a weak relationship (Götz et al., 2010). Therefore, the higher the absolute either positive or negative indicator weight, the more influence can be accredited to the strength of the content of the formative construct. However, indicators should not be eliminated based only on their weight as noted above.

After looking at the indicators' weights, the significance should also be considered; this indicates whether the formative indicators truly contribute to forming the construct (Hair et al., 2017). In PLS-SEM, the significance is assessed by applying the bootstrapping method which tests whether the outer loadings for formative measurement models are

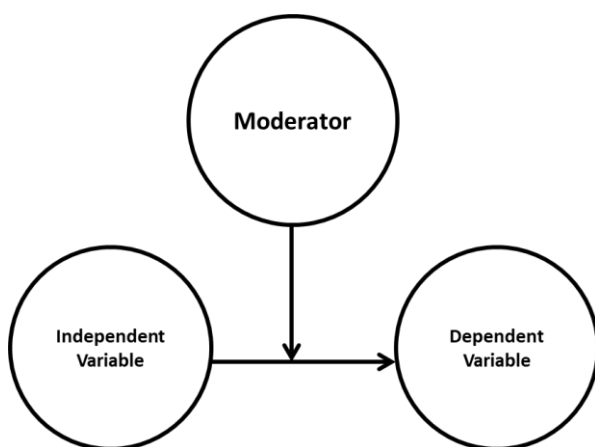
significantly different from zero.

- Assessment of Moderating Effects

Hair et al. (2017) defines moderation as “occur[ring] when the effect of an exogenous latent variable on an endogenous latent variable depends on the values of a third variable, referred to as a moderator variable, which moderates the relationship” (p. 322). In other words, moderator variables affect the relationship between two constructs in terms of the strength of a relationship which is determined by the moderator values. In addition, sometimes the moderator even can affect the direction of a relationship (Hair et al, 2017).

Where researchers aim to explore moderating relationships, this must be hypothesised initially and specifically tested (Hair et al., 2017). Hair et al. further explained that researchers should hypothesise whether the moderating relationship is focused on one relationship in the model or whether all relationships in the model are affected. Figure 4.10 shows a conceptual model of a moderating relationship.

Figure 4.10 Moderation - Conceptual Model



- Types of Moderator Variables

Moderators in a structural equation model can take different forms and can characterise noticeable traits such as age, gender, role, etc. They can also represent unobservable traits such as attitudes and behaviours toward something (e.g., impulsive buying, etc.) (Hair et al., 2017).

Moderators similar to other constructs can be measured using a single item or number of items and their indicators can be reflective or formative (Hair et al., 2017). However, Hair

et al. (2017) highlighted that the most essential distinction related to the moderator's measurement scale as it involves distinguishing between categorical (typically dichotomous) and continuous moderators. Since the study uses a Likert scale in the questionnaire, both moderators in the study (i.e., knowledge leadership and inclusive leadership) can be modelled as continuous moderators.

- Two-Stage Approach

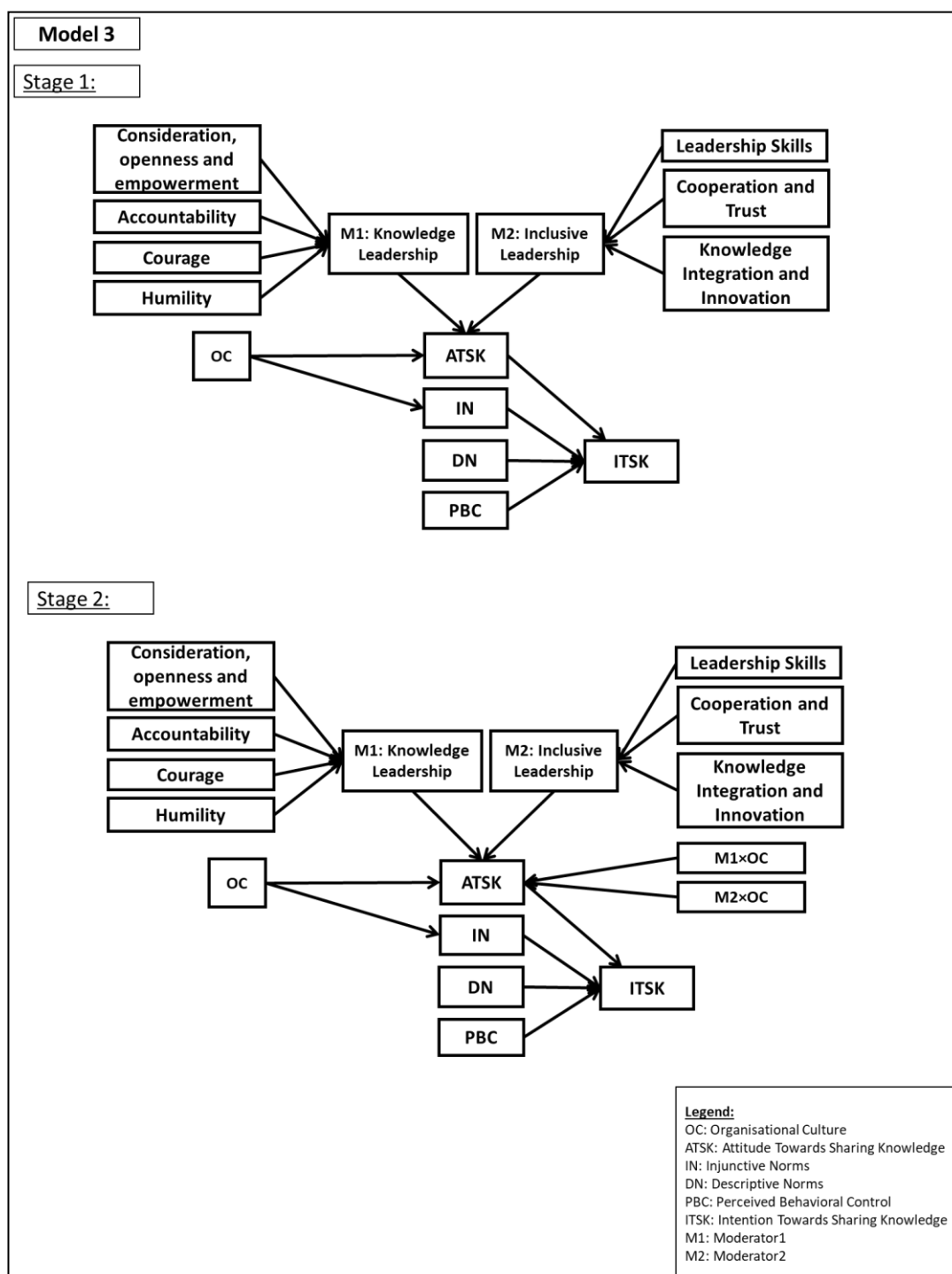
This research adopts the two-stage approach as proposed by Chin et al. (2003) with the aim of running a moderation analysis when the exogenous construct and/or the moderator are formatively measured. Hair et al. (2017) referred to the two-stage approach as “an approach to model the interaction term when including a moderator variable in the model. The approach can be used when the exogenous construct and/or the moderator variable are measured formatively” (p. 329). They further explained that if there are formative measures involved, only a two-stage approach can be used and the two stages of moderation as (Hair et al., 2017, p.251-252):

Stage 1: The main effects model (i.e., without the interaction term) is estimated to obtain the scores of the latent variables. These are saved for further analysis in the second stage.

Stage 2: The latent variable scores of the exogenous latent variable and moderator variable from Stage 1 are multiplied to create a single-item measure used to measure the interaction term. All other latent variables are represented by means of single items of their latent variable scores from Stage 1.

Figure 4.12 illustrates the two-stage approach for the research Model 3 where moderation is tested. The main effects in Stage 1 is run to obtain the latent variables scores for M1 (knowledge leadership) and M2 (inclusive leadership). Therefore, M1 and M2 are each measured with single items of scores from Stage 1. The single items produced in Stage 1 are used in Stage 2 to estimate the moderation effect.

Figure 4.11 Applying Two-Stage Approach Using Research Model



- Assessment of Mediating Effects

Researchers, as well as being interested in evaluating the direct effect between constructs, also wanted to find out about the indirect effect that can be caused through one or more mediators (Hair et al., 2017). Hair et al. explained mediation as

a situation in which one or more mediator variable(s) explain the process through which an exogenous construct influences an endogenous construct. Thus, a mediator variable governs the nature (i.e., the underlying mechanism or process) of the relationship between two constructs. (p. 321).

- Types of Mediation Effects

Baron and Kenny (1986) introduced a mediation analysis approach three decades ago which is still used by many researchers. More evolved research (e.g., Hayes, 2013) resolved some conceptual and methodological problems that existed in older literature. Additionally, Hair et al. (2017) built on Zhao et al. (2010) and Nitzl et al. (2016) to offer a synthesis of the overall mediation methods, characterising two types of no mediation and three types of mediation (see Table 4.6):

Table 4.6 Types of no mediation and types of mediation (Adapted from Hair et al., (2017, p. 232)

Types of no mediation	
Direct-only no mediation	The direct effect is significant, but not the indirect effect.
No-effect no mediation	Neither the direct nor indirect effects are significant.
Three types of mediation	
Complementary mediation	The indirect effect and the direct effect are both significant and point in the same direction.
Competitive mediation	The indirect effect and the direct effect are both significant and point in opposite directions.
Indirect-only mediation	The indirect effect is significant, but not the direct effect.

One of the main advantages of PLS path modelling compared to regression analysis is the ability to test mediating effects as part of a complete model (Nitzl & Chin, 2017). Nitzl and Chin explained that complex models have the tendency to have indirect effects whereby the impact is mediated by one or more constructs and that in such cases considering only direct effects can be inaccurate and results could be misleading.

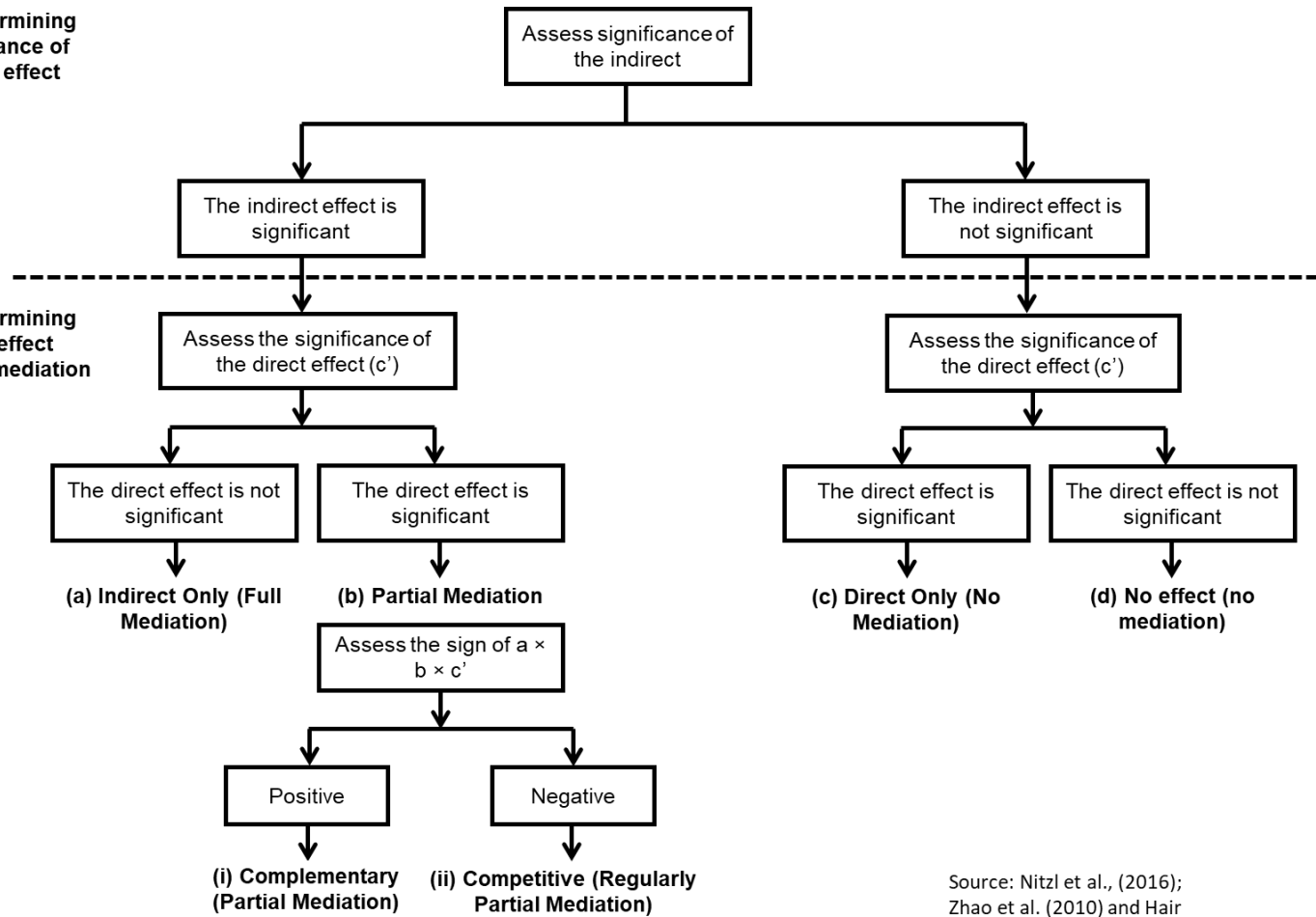
Post hoc analysis was conducted to test the mediating effect of both attitude toward knowledge sharing and injunctive norms on the links between the background factors of the organisational culture dimension (openness, trust, agreement, team orientation, participation and intention towards sharing knowledge).

To validate the mediating role of attitude toward knowledge sharing and injunctive norms, the steps and recommendations by Nitzl et al. (2016), Zhao et al. (2010) and Hair et al. (2017) were followed as explained in Figure 4.12.

Figure 4.12 Mediator Analysis Procedure in PLS

Step1: Determining the significance of the indirect effect

Step2: Determining the type of effect and/ or of mediation



Source: Nitzl et al., (2016); Zhao et al. (2010) and Hair et al., (2017)

4.5 Qualitative Methods

The qualitative data of this research were collected through semi-structured interviews. In this study, qualitative methods were not the primary method of collecting data, therefore, the method was to support and/or explain results of the quantitative study. In addition, the qualitative pilot study was helpful as it informed the main study and some constructs were included based on the qualitative study findings.

The interview protocol was written so as to cover the main concepts and relationships in the quantitative research models in order to be able to fulfil its function of supporting the quantitative results. Organisations were first approached for permission to recruit their employees as participants by means of letters sent from the President of UOWD to the CEOs.

4.5.1 Objective

The primary method of the current research is quantitative while qualitative is aimed to support in understanding and explaining the quantitative results.

4.5.2 Rationale for Choosing Interview Questions Type

Table 4.7 Myers' classification of interviews' types (2009 p. 124)

Types of interview	Description
Structured interviews	The use of pre-formulated questions, strictly regulated with regard to the order of the questions, and sometimes regulated with regard to the time available.
Semi-structured interviews	The use of some pre-formulated questions, but no strict adherence to them. New questions might emerge during the conversation.
Unstructured interviews	Few, if any, pre-formulated questions. In effect, interviewees have free rein to say what they want. Often no set time limit.

Of the three types of interviews, semi-structured interviews were chosen. Semi-structured interviews require some pre-formulated questions, but allow individual questions to be explored at a deeper level with each respondent and the emergence of new questions during the interview (Myers, 2009). This also provides some sense of consistency across the interviews because the interviewer starts with a similar set of questions in each interview (Myers, 2009). New questions that emerge in one interview can also be used in the interviews that follow. Myers also pointed out that semi-structured interviews are one of the most popular types used in business and management. He explains that the

uniqueness of this approach is that it combines the best of both the structured and unstructured interview approaches while minimising the risks. This is due to the structure it provides by having pre-formulated questions while allowing for some conversational improvisation. Thus, this gives the interviewees the opportunity to talk about important facts, examples or insights as they arise during the interview (Myers, 2009).

4.5.3 Interview Protocol Design

The questions were developed based on the main constructs on the research model. Therefore, there were questions dedicated to understanding the organisational culture, leadership and knowledge sharing within the organisation. In addition, a section of the interview protocol was written based on the TRA and TPB framework guidelines as suggested by Fishbein and Ajzen (2010). The design of questions consisted of 34 main questions in addition to 21 optional probing questions which were asked depending on the situation. A further four questions were only put to KM managers (see Appendix 6 for all interview questions in both English and Arabic).

4.5.4 Procedures Followed Before, During and After Interviewing

Whiting (2008, p. 37) developed a semi-structured interview checklist for researchers which was followed:

- purpose of the interview,
- clarification of topic under discussion,
- format of the interview,
- approximate length of interview,
- assurance of confidentiality,
- Purpose of digital recorder and asking permission to use it,
- Assure participant that he or she can decline to answer a question,
- Assure participant that there will be opportunity during the interview to ask questions.

After the interview, interviewees were also asked to sign a consent form to confirm that they had been fully informed of the purpose of the research and they were happy for their data to be used. They were also asked if they could be contacted further should any clarifications be needed during the transcription process.

Potential difficulties, problems, and pitfalls of interviews (adapted from Myers &

Newman, 2007, pp. 4-5) and the steps that were taken and considered to overcome them are illustrated in Table 4.8.

Table 4.8 Potential Difficulties, Problems, and Pitfalls of Interviews and Steps Taken to Overcome Them

The Challenge	Description of the Challenge	Steps Taken to Overcome Challenge
Artificiality of the interview	The qualitative interview involves interrogating someone who is a complete stranger and involves asking subjects to give or to form opinions under time pressure.	Proper introduction of the interviewer and the purpose of the study can reduce the tension of the interview. Additionally, at the beginning, the interviewer gives the participants a participant sheet which explains their right to withdraw if they are not comfortable continuing the interview at any point. Explaining the anonymity of the interview: that names will not be used so the interviewees cannot be identified.
Lack of trust	As the interviewer is a complete stranger, there is likely to be a concern on the part of the interviewee with regard to how much the interviewer can be trusted. This means that the interviewee may choose not to divulge information that he or she considers 'sensitive'. If this is potentially important information for the research, the data gathering remains incomplete.	Dickson-Swift et al. (2007) wrote that researchers need to exhibit a certain degree of discretion, respect, and appreciation because interviewing people is not just signing a form agreeing to offer information; participants are allowing researchers to enter their lives, and sharing their personal information which could be challenging. Thus, researchers need to be aware of that.
Lack of time	The lack of time for the interview may mean that the data gathering is incomplete. However, it can also lead to the opposite problem – of subjects creating opinions under time pressure (when these opinions were never really strongly held to start with). In this case more data are gathered but the data gathered are not entirely reliable.	This challenge was resolved by communicating with the interviewees prior to the interviews to manage their expectations of the length of the interviews. Date and time of interview was also selected by the interviewee. Therefore, they are more likely to choose a day where are less busy and thus feel more relaxed during the interview.
Level of entry	The way in which the researcher enters the organisation for data gathering is important. For instance, if the researcher entered at a lower level, this might make it nearly impossible to interview key people, executives and senior managers. In addition, some key executives whose role includes gatekeeping may limit the researchers' ability to tackle a broader range of topics.	This was resolved through approaching interviewees by official communications initially directed to the organisation CEOs. These formal letters explained the aim and objectives of the study and included a copy of the survey and the interview protocol questions. This helped to obtain approval.

The Challenge	Description of the Challenge	Steps Taken to Overcome Challenge
Elite bias	If a researcher only interviews highly-ranked people within the organization, this may lead to failure to understand the broader situation – or ‘elite bias’.	The interviews were targeted at senior managers, executives, KM practitioners and KM managers who had spent at least two years in the organisation. The survey was sent to all employees of the participating organisations, therefore there was a balance between the two samples.
Hawthorne effects	Qualitative interviews are intrusive and can potentially change the situation. The researcher may interfere with the social setting and potentially interfere with peoples’ behaviour.	The interviewer conducted pilot interviews in order to test the questions and ascertain how interviewees were likely to react to the questions. Additionally, the questions were written in a way that is formal and not too sensitive. Using the semi-structured approach allows the interviewees to elaborate without the restrictions of structured interviews.
Constructing knowledge	Naïve interviewers may assume that the data is on the surface and they can easily extract it. They may not realise that this process is also about knowledge construction. On the other hand, when sharing their stories, interviewees are addressing issues which they might not have considered so explicitly before. Therefore, interviewees try to construct a story that is logical and consistent because they generally want to appear knowledgeable and rational.	Pilot testing is essential for interviewer to try out the entire process prior to the main study. Additionally, the interviews were conducted with no prior expectations or assumptions. When the stories or examples shared by interviewees were not clear, probing questions were very helpful.
Ambiguity of language	The meaning of words used in questions are sometimes ambiguous, and it is not always clear that the interviewees fully understand the questions.	This was resolved by carefully listening to the interviewees. If the answer given did not cover the material sought by a specific question then the question is asked again, using a different approach, simpler analogy or explanation to help interviewees’ comprehension.
Interviews can go wrong	Interviews can come with problems and pitfalls. There is a possibility that the interviewer may offend or insult the interviewee unintentionally, which may lead to them withdrawing from the interview.	The interview protocol had ethics approval from UOW/UOWD. In this process, the researcher has to identify any sensitive questions, etc. The particular topic of this research is organisational so it is less sensitive than other topics such as: religion or race. All interviews were conducted successfully and no problems were encountered.

4.5.5 Main Study Interviews

Clarke (1999) defined the interview uniquely as “a conversation with purpose” (p. 71). It is indeed a conversation which should be smooth and which the interviewee should find a useful and enjoyable experience. However, it has to have a structure and purpose otherwise it would not fulfil the objectives of the research. Similar to the quantitative data

collection and analysis section the data were collected from the same three main industries – energy and utilities, law and security, and law enforcement. Seventeen main study interviews were conducted over a period of 922 minutes (just under 15.5 hours). The four pilot study interviews were also utilised in the analysis for a total of 21 interviews. As a guideline, Kervin et al. (2006) recommended that at roughly 20-50 participants should take part in descriptive exploratory research. Therefore, since the nature of the research is deductive and confirmatory in nature the number of participants is satisfactory for the study. Main interviews were conducted in either English or Arabic, based on the interviewee's mother tongue or preference in cases where they were bilingual. All interviews were transcribed, reviewed and Arabic interviews were translated and back-translated. To prepare the qualitative data all participants were given false names to ensure that their identity remains anonymous.

4.6 Qualitative Analysis

This research adopts a deductive thematic analysis approach. In the following sections, more details about the software used for qualitative data analysis, transcription, translation, coding, and deductive thematic analysis will be provided.

4.6.1 *Qualitative Analysis Software*

From the 1960s onwards, the utilisation of analysis software and computers in terms of basic content analysis of text became very common in humanities (Silverman, 2010). Since then there have been significant advances in the computer software programs developed for qualitative data analysis (Fossey et al., 2002; Remler & Van Ryzin, 2014). Qualitative analysis software can now incorporate audio and video recordings, photos, and documents which can easily be digitally stored, organised and has qualitative capability tools which allow researchers to segment, code and categorize content (Remler & Van Ryzin, 2014). Current widely-used professional programs include NVivo, Atlas.ti, Ethnograph and MAXQDA and free software includes AnSWR, EZ-text and RQDA (Remler & Van Ryzin, 2014). Remler and Van Ryzin (2014, p. 81) pointed out some of these programs' functionalities which enable researchers to perform many tasks that are challenging or impossible to do manually:

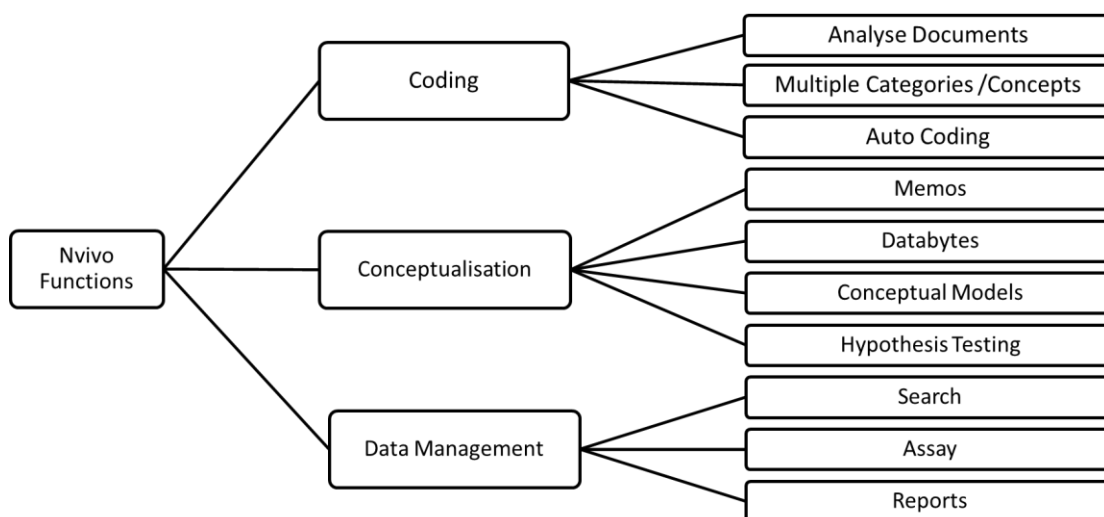
- Store and organise qualitative data in electronic form, including text, images, and audio files.

- Search interviews or field notes for keywords or phrases
- Create coding categories, as well as flexibly edit or rearrange categories as the analysis proceeds.
- Apply codes to segments of text, images, or audio files
- Use codes to retrieve or gather selected segments of text, images, or audio files
- Group or combine codes together into themes
- Track or count the co-occurrence of categories or themes
- Visualise qualitative data as graphs or models

However, despite its usefulness, the software cannot replace human abilities in analysing data (Fossey et al., 2002; Petty et al., 2012; Remler & Van Ryzin, 2014). Fossey et al. (2002, p. 729) stressed that “[c]omputer software does not, and cannot, analyse qualitative data for the researcher”. It is a good aid for researchers but it does not do the thinking for them (Fossey et al., 2002; Petty et al., 2012; Remler & Van Ryzin, 2014).

Jones (2007, p. 73) summarizes the functionalities of NVivo in Figure 4.13.

Figure 4.13 The Functionality of NVivo (adopted from Jones, 2007. p. 73)



NVivo is the most commonly used program due to its flexibility (Petty et al., 2012; Rowley, 2012; Jones, 2007). Therefore, this study used NVivo 12 Pro for qualitative data analysis. All interviewed done including pilot interviews were suitable and therefore total of 21 interviews were utilised for the analysis.

4.6.2 *Transcription*

The transcription of audio-recorded interviews is a common practice in qualitative research (MacLean et al., 2004). Thus, all interviews were recorded to ensure that the main ideas were captured while allowing the researcher to focus on the interviewee's answers and ask additional probing questions when needed. The content of a transcript depends very much on the way it is heard and perceived by the transcriptionist (MacLean et al., 2004). Padgett (2016) recommends that researchers should transcribe their own interviews as this enables them to: 1) explain vague statements, etc., 2) clarify unfamiliar terminology, 3) provide additional details or clarification, and 4) get timely feedback from the interviewees if needed.

Petty et al. (2012) pointed out that interviews can take between 30 and 90 minutes to complete but ten times that time to transcribe. For this piece of research, some of the interviews were transcribed by the researcher, but, due to time constraints others were done by a professional transcriber. After the text was transcribed, it was reviewed by the interviewer to check quality and accuracy.

4.6.3 *Translation*

Some translation was required as some interviews were conducted in Arabic. The questions were originally written in English and translated into Arabic. Professional translators were employed to ensure accuracy and this was checked by back-translations.

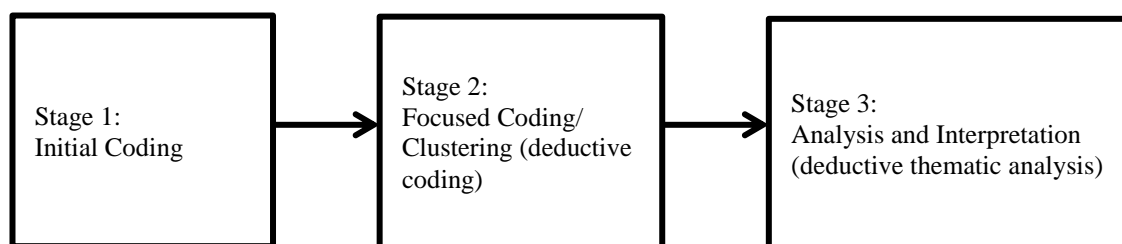
4.6.4 *Profiles of Study Participants (Qualitative Interviews)*

The interviews focused on senior management leading Knowledge Management (KM) departments, sections, units or programs in their respective organisations, focusing particularly on KM practitioners, middle management, senior management and top management. This segment was selected because the research focuses on leaders and how they can empower knowledge sharing behaviour by affecting the organisational culture. The inclusion criteria for the study was that participants should have a minimum of two years in the organisation (to ensure more insightful answers as they would understand their organisation culture). Of the 21 people who took part, seven were females and fourteen males. Twelve had bachelor degrees, six master degrees and three doctorates and they ranged in rank from junior to top management with service length from 2-25 years.

The profiles of the participants in the qualitative interviews are presented in terms of their codes based on the industry they are in, job rank, gender, education level, and years of experience in the organisation in Appendix 7.

4.6.5 Stages of Qualitative Analysis

Figure 4.14 Summary of Qualitative Analysis Stages



- Stage 1: Initial Coding

Initial coding or basic coding (Auerbach & Silverstein, 2003) is the first essential step in qualitative analysis which helps prepare the data for analysis. It also makes qualitative data analysis simpler and aids in data reduction as well as being useful for retrieving and organising the data which makes the analysis faster (Myers, 2009). Miles and Huberman (1994) defined codes as “tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study. Codes are attached to ‘chunks’ of varying size – words, phrases, sentences, or whole paragraphs, connected or unconnected to a specific setting” (p. 56). Remler and Van Ryzin defined coding as “a process of tagging the text or other qualitative data using a system of categories a coding scheme—essentially the creation of variables” (2015, p. 79). Coding also helps in quantifying the data as it enables sorting and counting. Bhattacharjee (2012) added that coding is a “process of classifying and categorizing text data segments into a set of codes (concepts), categories (constructs), and relationships” (p. 114) while Hennink et al. (2020) saw it as “a process that involves indexing the entire data using the codes developed, so that researchers can focus of specific issues in the data” (p. 226).

Similarly, Fossey et al. (2002) defined coding as:

labelling segments of data to identify themes, or processes, is central to effective data retrieval in two ways. It enables the researcher to locate and bring together similarly labelled data for examination and to retrieve data related to more than one label when wanting to consider patterns, connections, or distinctions between them. (p. 729)

- Types of Coding

Hennink et al. (2020) divided types of codes into two categories based on research design:

- 1) Deductive Coding: deductive codes are originated based on the research topic and the research literature. Codes are also generated from the interview guide/protocol. Therefore, deductive codes cannot be generated or developed based on the data. It is recommended to generate inductive codes after deductive codes are generated to avoid missing any unique issues raised by the participants.
- 2) Inductive Coding: inductive codes are on the other end of the spectrum whereby the codes are guided by the data and reading all the issues raised by the study participants. Inductive coding is important because the participants may have a different view on the topics discussed than the researcher.

Since the research is based on well-established theories of human behaviour (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and knowledge sharing (Bock et al., 2005) the aim is to use deductive coding and after this process is completed, to report some of the codes that emerged from the interviews for further future research.

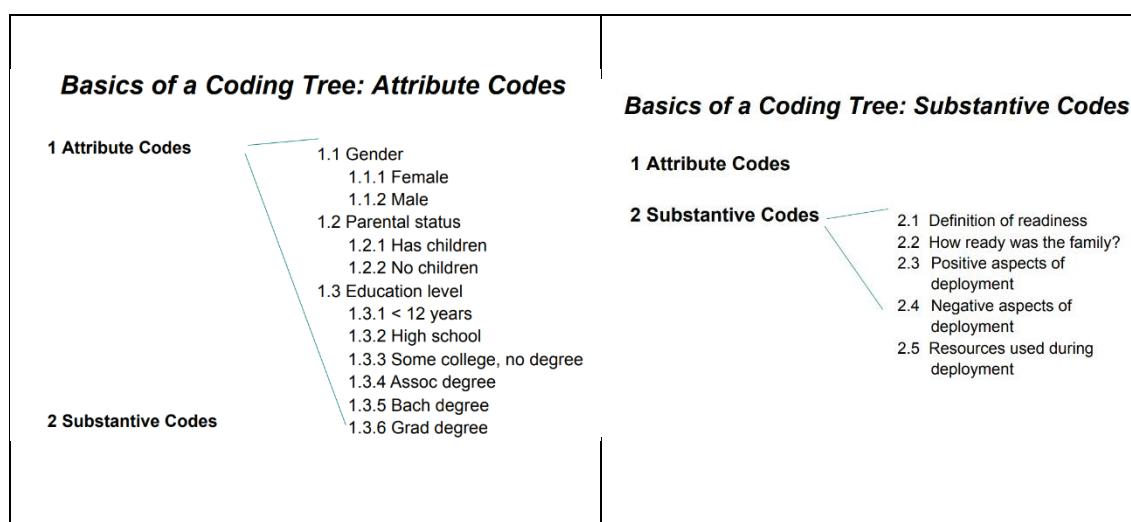
- Stage 2: Focused Coding/Clustering

This stage aims to (cluster) group similar codes by looking for redundant codes to reduce the long list of codes to a smaller, more manageable number, making the cluster a coherent category (Auerbach & Silverstein, 2003). Auerbach and Silverstein note that during data analysis it may become evident that participants express the same idea, using the same or similar words. These ‘repeating ideas’ are considered to be the beginning building blocks for assembling the theoretical narrative and are combined from all of the transcripts into a composite list for the entire research sample (Auerbach & Silverstein, 2003).

Harrell and Bradley (2009) describe the coding tree as “the list of themes, or codes, that will be applied to research data” (p. 103). They also divided the trees into two categories: attribute codes, and substantive codes. Attribute codes refer to participants’ demographic information whereas substantive codes reflect the content of the interview session (Harrell & Bradley, 2009).

After uploading the transcription files, the ideas and topics covered were given codes and sub-codes: for example, leadership was coded as a (parent node) with two sub-codes (child nodes) – inclusive leadership and exclusive leadership. Therefore, the parts of the interview that referred to the broad concept of leadership were tagged to leadership (the parent node), but parts that referred to inclusive leadership characteristics were tagged to inclusive leadership (the child node).

Figure 4.15 Basics of A Coding Tree (Adapted from Harrell and Bradley (2009, pp. 104-105))



- Stage 3: Analysis Using Thematic Analysis

Thematic analysis is a widely used method of analysing qualitative data (Braun & Clarke, 2006; Petty et al., 2012). Braun and Clarke defined thematic analysis as “a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail” (p. 6). Similarly, Terry et al. (2013) defined thematic analysis as “a method used to systematically identify recurring themes, patterns of living, behaviour and experience which then become a description of phenomenon” (p. 80). In other words, “a theme is an implicit topic that organizes a group of repeating ideas” (Auerbach & Silverstein, 2003, p. 35).

Similar to coding, thematic analysis can be divided into two types: deductive thematic analysis which relies or is based on pre-existing literature and theories and inductive thematic analysis which provides the opportunity for researchers to extract new emerging themes (Rezaei & Seyri, 2019).

This research utilises deductive thematic analysis as it aims to further explain and analyse

themes from the existing literature which were identified earlier in the theoretical development chapter and are demonstrated in the research models (Figures 3.5 and 3.2 are reproduced for easier reference) below:

Figure 3.5 Model 1 Including Control Variables

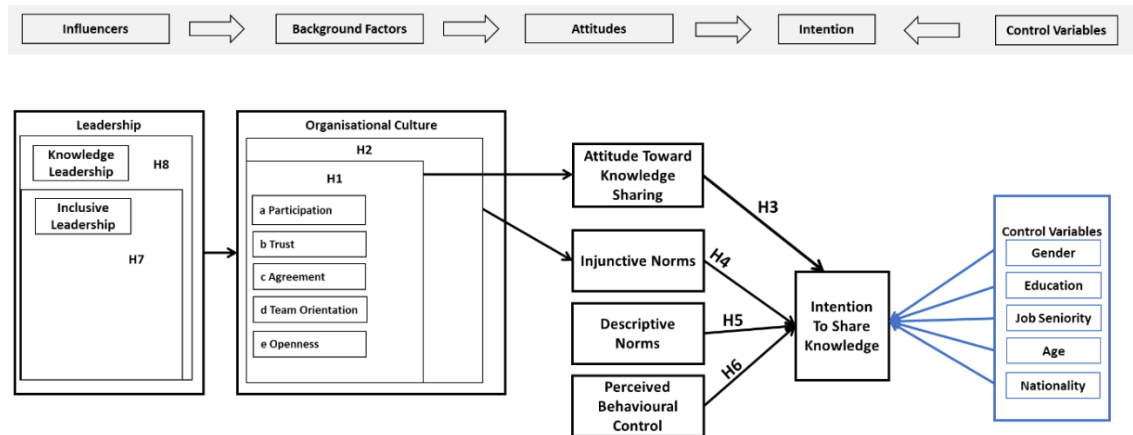
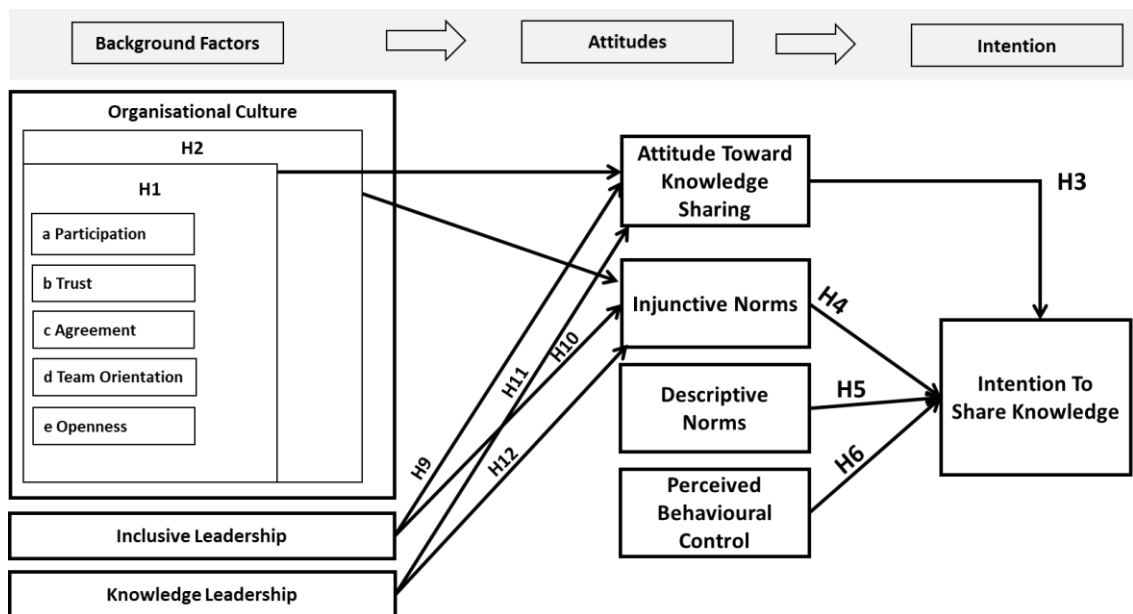


Figure 3.2 Model 2: Knowledge Leadership and Inclusive Leadership are Both Treated as Background Factors in the TRA/TPB Framework



Therefore, the main focus of the qualitative analysis is to focus on the main relationships of the two models which are:

- Leadership impact on organisational culture
- Leadership impact on attitude toward knowledge sharing
- Organisational culture impact on attitude toward knowledge sharing

- Organisational culture impact on injunctive norms
- Demographic factors (gender, education, job experience, age and nationality) and their impact on attitude toward knowledge sharing.

This therefore, will help to provide a deeper understanding and explanation of the quantitative results.

4.7 Pilot Study

4.7.1 Introduction

Piloting is essential practice for both qualitative and quantitative research as it is sensible to try different styles of questioning prior to one's main study (Silverman, 2010). According to Chenail (2009), pilot testing is essential because it can inform us if the researcher is off track so it acts like an advance warning. Turner (2010) wrote that a pilot test is crucial because it can identify flaws, limitations or any other weaknesses within the interview design so that the necessary changes can be made prior to the main study. In addition to the reasons given by Turner, the main purpose of the quantitative pilot was to test the validity of the scales in the overall TRA/TPB framework while that of the qualitative pilot was to ascertain if any other factors highlighted by the pilot participants should be included in the main study. The sections below clarify the detailed objectives of the pilot study, procedures followed and the analysis. Finally, a conclusion of the mixed methods is presented.

4.7.2 Quantitative

4.7.2.1 Objectives of the Quantitative Pilot Study

- To test the key steps which will be followed in the main study and get an idea of how data will be obtained (e.g., approaching organisations formally, how long responses take, what response rate might be expected, etc.).
- To test the validity of the scales; especially, to test the measurement of organisational culture and examine it in the overall framework of the TRA.
- To test the initial hypothesised relationships of the organisational culture dimensions on attitude toward knowledge sharing.

4.7.2.2 Data Collection

All ethical procedures were followed, and a copy of the questionnaires, information about the purpose of the study and participant information sheet and disclaimer were sent beforehand. Of 512 returned questionnaires, 97 were eliminated because they were more than 50% incomplete which could cause bias issues (Gaskin, 2021). Hence, 415 questionnaires were usable. The respondents came from various industries: 60% from government sector and 40% from the private sector; 61% were men, and 39% were women.

4.7.2.3 Quantitative Results

The organisational culture dimensions adopted in the pilot study were those introduced by Hofstede (1990) based on his previous work on national culture (Hofstede, 1980, 1983a, 1983b, 1983c, 1983d). Hofstede's six key dimensions are: 1) open system vs closed system; 2) easy going work discipline vs strict work discipline; 3) employee oriented vs work oriented; 4) externally driven vs internally driven; 5) professional vs local; and, 6) goal oriented vs means oriented.

To evaluate the construct measurements and estimate the structural equation model, partial least squares (PLS) and the analysis software application SmartPLS 3.2.9 were utilised (Ringle et al., 2015). In order to ensure reliable and valid reflective measurements, the following criteria must be fulfilled: 1) internal consistency reliability; 2) indicator reliability; 3) construct reliability; 4) convergent validity; and, 5) discriminant validity (Hair et al., 2017). In order to evaluate the convergent validity, 37 out of 66 items were deleted based on their low loadings; all bar one of these items were from Hofstede's organisational culture construct measurements. The critical values of composite reliability and Cronbach's alpha were fulfilled for employee oriented vs work oriented, externally driven vs internally driven and goal oriented vs means oriented but not for easy going vs strict work, professional vs local, and open system vs closed system. The HTMT was conducted in order to check the discriminant validity. Based on HTMT most dimensions lacked discriminant validity except for open system vs closed system and easy going work discipline vs strict work discipline. The results of the constructs' measurement evaluation are displayed in Appendix 8 (Table 1).

The pilot study model treated organisational culture dimensions as independent variables

whereby organisational culture influences knowledge sharing intention and subjective norms of knowledge sharing as displayed in Appendix 8 (Figure 1).

The analysis shows that only one of the organisational culture dimensions is significant, i.e., is influencing both attitude toward knowledge sharing and subjective norms. It confirmed that an organisational culture characterised by an easy-going work discipline positively affects attitudes toward knowledge sharing and subjective norms. The remaining organisational culture dimensions and their impacts on attitudes toward knowledge sharing and subjective norms were not supported. However, interestingly, the results revealed that the open system culture vs closed system culture impact on attitude toward knowledge sharing was significant, but in the opposite direction. This means that closed system culture supports knowledge sharing more than the open system culture, the opposite of what was expected. This could be because the sample was drawn mainly from law enforcement and the security industry and in such industries, even in a closed system culture, leaders encourage the sharing of operational knowledge to ensure that the job gets done. Furthermore, all participating organisations had a dedicated knowledge management team or department, which means that they are mature in developing processes and systems that would make knowledge flow from one employee to another even if it is a closed culture.

4.7.3 *Qualitative*

4.7.3.1 Objectives of the qualitative pilot study

- To check for any redundant questions and eliminate them
- To check if there are any irrelevant questions and eliminate them
- To test the duration of interview and decide whether it is enough, or should be longer or shorter to obtain enough content
- Ensure that the questions are written in a way that encourages interviewees to elaborate
- To identify any ambiguities and challenging questions which were troubling for interviewees, in order to re-write them in a clearer manner
- Test the interview by interviewing employees from various industries to get different perspectives and reactions to the questions. This helps to standardise the questions and provide clarity to the wider target
- To observe if there are any other factors highlighted by participants which should

be included in the main study.

4.7.3.2 Pilot Interviews

Pilot testing is essential as it helps to crystallise the questions, making them more accurate and more relevant to the research topic (DeJonckheere & Vaughn, 2019; Turner, 2010). Therefore, one of the objectives of pilot testing is to look for any redundancies in the questions: after conducting the pilot interviews, a search was carried out for phrases that referred to areas that interviewees had covered previously (e.g., ‘I mentioned before’, ‘as I stated earlier’, ‘as I told you before’). The pilot test also allows researchers to communicate with the interviewees about their feedback to help identify ambiguities and challenging questions (Chenail, 2009). Another purpose of the pilot test is to observe the flow of questions from one idea to another and decide whether the transition is smooth. The pilot study also gives an additional insight to check whether all aspects of the research can be covered in a reasonable time (DeJonckheere & Vaughn, 2019). Therefore, the pilot interviews provided an approximate idea of how long the interviews would take – important information for managing participants’ expectations about the time commitment in the invitation letter for the main study interviews (Chenail, 2009). There were a total of four pilot interviews which took, collectively, 160 minutes (2.7 hours). The pilot study participants were from the Risk and Disaster Management, Smart Government Services, Academia and Tourism sectors. The interviewees were people accessible to the researcher. The pilot study targeted employees who had been working at their organisation for at least two years and who thus, would understand the organisations’ culture and so be able to reflect better on it (temporary employees and graduate trainee employees were excluded). According to Chenail (2009), the researcher should apply the same criteria for pilot study participants as for the main study and this was done. In the pilot interview process, the aim was to interview several employees from different companies and different backgrounds and industries. This process helps to observe the reactions to those questions by different professionals and standardise the questions to provide clarity to a wider audience to inform the main study. Finally, one of the most essential objectives of the pilot interviews was to observe if there were any other factors highlighted by participants which should be included in the main study.

4.7.3.3 Qualitative Results

The qualitative pilot study fulfilled all the desired objectives. Redundant questions were identified through respondents repeating their answers and eliminated. The pilot revealed that some questions should be rearranged in terms of the sequencing to allow a smoother flow of the ideas. It was also observed that some questions did not elicit material directly related to the topic so these questions were deleted. The pilot study, after coding the interviews, suggested two main themes or factors – trust and leadership. All four interviewees said that trust should be embedded within the organisational culture. In addition, they stressed that part of the leadership role is to create a culture of trust, as well as knowledge sharing, among employees. Three of the four also linked trust with Emiratisation. The following section summarises the most important themes that emerged from the pilot interviews.

- Embedding Trust Within Organisational Culture

Government Smart Services 3 was asked what factors would make knowledge sharing easier. He stressed that there should be trust among employees and it is leadership's responsibility to ensure this happens: "That's why, there should be trust built in among employees which will encourage them to share without fear or feeling insecurity and this is what leaders should work on". He was also asked what factors would make knowledge sharing more difficult, to which he replied that if leadership was vague with no clear directions communicated to employees, this can create ambiguity with regard to knowledge sharing, especially in a blame culture. Risk and Disaster Management 4 stressed the importance of trust when asked, "Can you tell me what could be the factors or circumstances that would enable you to comply with knowledge sharing?" She explained that there should be trust among peers, trust that whatever is shared by peers is correct and reliable, trust that knowledge shared is not going to be misused and trust that the shared knowledge is going to be utilised. When asked "Do you think that same gender employees would share their knowledge more with each other or they share more with the opposite gender? Why?", she replied, "It's interesting! It's a combination of personality and background information and issue of trust", adding, "I think it all depends on the trust more than gender". To, "From your point of view, do younger or older employees seem to be sharing their knowledge with their co-workers more? And why do you think that might be?" she replied, "Age does not make a difference: it's mentality,

the experience, the background, the trust component”.

- Impact of Nationality on Knowledge Sharing

Risk and Disaster Management 4 was asked “Have you witnessed a situation when a non-local has withheld knowledge from a local? Tell me about it. Why do you think it happened?” She explained:

Yes, my previous experience is that when non-locals do not feel appreciated after they share their knowledge, they get annoyed and they stop sharing. There is also the security factor, as all organisations have to hire Emiratis like any other country with the nationalisation law; and there have been some incidents where non-locals were refusing to share knowledge with locals.

Government Smart Services 3 was further asked, “In your opinion, do you think that Emiratisation could have an impact on knowledge sharing? If yes, in what way and why?” He shared his opinion that Emiratisation could indeed trigger a security alarm for non-Emiratis who might think:

‘If I start transferring that knowledge to the other employees and locals my value in the organisation might be seen as minimal over time, and me, as a non-local, might be dispensable and need to be changed and bring a local in my place.’ Therefore, I would assume that non-locals will have less trust to share their knowledge.

He added that this policy should also make the organisation realise the importance of creating knowledge sharing mechanisms to ensure that knowledge is transferred to Emiratis at an early stage; this would help them build their capabilities and make sure that knowledge is captured and transferred where it needs to be with the organisation.

- Role of Leadership in Influencing Organisational Culture

Government Smart Services 3 shared his view that leadership can impact an organisation’s culture. More specifically, he stressed that leaders can make culture more trusting and transparent:

Leaders have a big role in changing the culture of an organisation and are able to spread trust and transparency among employees. So, if trust exists, employees will always be keen to share their knowledge with their colleagues on an ongoing basis and when they decide to leave, it would be mostly on a positive note.

Academia 1 stressed the role of leadership and its influence on organisational culture. He

pointed out that he and his colleagues have struggled as their leadership has changed five times over four years and each new manager always wants to implement their own strategy; this inconsistency and instability impacts the organisational culture, and not in a positive way.

- **Role of Leadership in Facilitating Knowledge Sharing Among Employees**

Participants highlighted the role of leadership when comes to knowledge sharing. Government Smart Services (3) pointed out that one of the reasons why employees do not share knowledge with other teams is organisational policies: that leaders, in some cases, give clear directions to their teams to withhold knowledge from other teams in order to maintain their power and also prevent any criticism of their work.

Government Smart Services (3) when asked, “In your experience, does your company care more about tasks or more about employees? Can you illustrate that with an example?” added that while his company valued people’s capabilities and the uniqueness of each employee’s skills and knowledge and what they can bring to the table, this was not at the expense of projects be achieved and objectives fulfilled.

Additionally, Risk and Disaster Management (4) stressed the leadership role in making knowledge sharing successful:

The leadership, for sure, plays a big role when making knowledge sharing flawless in the organisation. Because the leadership comes up with the directions and guidelines toward knowledge sharing. If the guidelines are clear and highlight the benefits of knowledge sharing this could motivate employees to share knowledge as they know that leadership not only approves it but also supports it.

Therefore, she explained, leaders should provide direction and guidelines toward knowledge sharing but also support it in reality not just on paper.

All participants agreed that leadership plays a key role when it comes to knowledge sharing among employees: they either can make it successful or worse by hindering knowledge sharing between teams.

4.8 Conclusion

The quantitative pilot study revealed that the results supported the hypothesised

relationship of an organisational culture that is characterised by an easy-going (vs strict) work discipline positively affecting attitudes toward knowledge sharing, and the more easy-going the culture is, the more knowledge sharing will happen. This is probably due to the flexibility this culture provides which does not constrain employees' ways of thinking or their collaboration with each other which facilitates knowledge sharing without boundaries. Another possibility is that an easy-going culture is open to new ways of performing work that could be easier, more efficient and faster.

In contrast, in a very strict work discipline culture, knowledge sharing cannot be supported due to the internal structure as employees might not be free to share their knowledge with their colleagues or across ranks. Furthermore, a strict work discipline culture is based on routine rather than the exploration of new ideas and so is less likely to provide an environment of collaboration. Lacking motivation, employees are less likely to share knowledge and may well think that *not* sharing is the norm within this culture.

Easy-going organisational cultures will also affect subjective norms positively: in such a culture, employees are likely to assume that important others (e.g., leadership, management and colleagues) would want them to collaborate and exchange ideas, aspects which support knowledge sharing. In a strict work discipline culture, however, important others are more likely to expect employees to perform their work in standard ways, following the same routine without exploring new approaches of doing things. With such expectations, actions that fall outside of the job description, such as helping a colleague, may be seen by employees as irrelevant.

Another key finding, that a closed system culture promotes knowledge sharing among employees more than an open system culture, was contrary to the original hypothesis. This may be due to the presence of a clear system for KM as well as leadership that clearly communicates expectations regarding knowledge sharing to employees. Therefore, as a way forward for the main study, leadership will be included in the model. The role of leadership was also pointed out during the qualitative pilot interviews and, according to Ruggles (1988), is the second most important factor affecting knowledge sharing after organisational culture. In contrast, it could not be shown that an open system culture influences the subjective norms of knowledge sharing.

Further, the organisational culture dimensions of professional vs local, employee-oriented

vs work-oriented and goal-oriented vs means-oriented were found to have no significant influence on attitude toward knowledge sharing and subjective norms. On the other hand, the constructs based on the TRA framework (subjective norms and attitude towards knowledge sharing) (Ajzen and Fishbein, 1975, 1980; Bock, et al., 2005) were found to have a significant influence on intention to share knowledge which is consistent with many previous studies (Bock et al., 2005; Chang & Shih, 2010; Huang et al., 2008; Kuo & Young, 2008a, 2008b; Ramayah et al., 2013; Teh & Yong, 2011; Xue et al., 2011, Xue et al., 2012; Zhang et al., 2013).

In summary, the quantitative pilot study was valuable as it revealed that Hofstede's organisational culture dimensions lacked reliability and validity of the constructs' measurements when performing the analysis, and also had a poor degree of explanation. Therefore, for the main study, it was decided to use other organisational culture dimensions by Ghosh and Srivastava (2014) which are more reliable and valid. It was also decided to add the (new) TRA constructs of descriptive norms and perceived behavioural controls to the model in order to examine all the factors that may help to improve prediction of knowledge sharing behaviour. Furthermore, in line with the TRA evolution, the subjective norms were renamed 'injunctive norms'.

The qualitative pilot study revealed that trust in the organisational culture and the importance of leadership in the organisational culture are important factors. It stressed that leadership has a role in enhancing or hindering knowledge sharing among employees in organisations. Therefore, the main study will further investigate the role of leadership as a driver for organisational culture and as a moderator between organisational culture and attitude to sharing knowledge to further improve the degree of explanation of employees' knowledge sharing behavioural intentions. Leadership impact on knowledge sharing behavioural intentions will also be investigated. Finally, Hofstede's organisational culture dimensions will be replaced by other dimensions based on the literature and relevance to knowledge sharing behaviour.

Table 4.9 shows the key differences between the pilot and the main study and explains the key rationale for some of the choices to modify the main study model. The key findings of the main model can be found in Chapter 7.

Table 4.9 Comparison Between the Pilot Study and Main Study (All Additions and Eliminations of Constructs Based on the Finding of the Pilot Study)

	Pilot Study	Main Study	Remarks
Key References	Organisational culture: Hofstede et al. (2010); Hofstede and Waisfisz, (2010). Knowledge sharing: Bock et al., (2005), Fishbein and Ajzen (2010).	Organisational culture: Ghosh and Srivastava (2014), Denison & Neale (1999), Petty et al. (1995) Knowledge sharing: Bock et al. (2005); Fishbein, and Ajzen (2010). Knowledge Leadership: Yang et al. (2014) Inclusive Leadership: van Dierendonck and Nuijten (2011); Prime and Salib (2014, 2015)	
Organisational Culture Constructs	Hofstede's organisational culture dimensions: Open system vs closed system Professional vs local Employee-oriented vs work-oriented Goal-oriented vs means-oriented Easy-going work discipline vs strict work discipline	Organisational culture dimensions: Participation Openness Trust Team Orientation Agreement	It was decided to replace Hofstede's organisational culture dimensions due to poor reliability and validity of Hofstede's organisational culture constructs and its poor degree of explanation.
Theory of Reasoned Action (TRA) Constructs Used	Intention to share knowledge Attitude toward sharing knowledge Subjective norms (injunctive norms)	Intention to share knowledge Attitude toward sharing knowledge Injunctive norms (subjective norms) Descriptive norms Perceived Behavioural Controls	The additional TRA constructs were added because of the enhancement to the TRA framework and therefore, the aim was to examine all factors that can help in predicting the knowledge sharing behaviour. Additionally, based on the TRA evolution, the subjective norms were renamed injunctive norms.
Added Constructs	n/a	TRA Constructs: Descriptive Norms Perceived Behavioural Controls Leadership: Inclusive leadership Knowledge leadership	TRA Constructs: Explained above. Leadership: To improve the degree of explanation of knowledge sharing behaviour. Leadership was also cited as an important factor in facilitating knowledge sharing behaviour (Ruggles, 1998).

	Pilot Study	Main Study	Remarks
			The pilot interviews revealed the importance of leadership.
Sample Size	415	877	
Data Collection	Open to employees who work in government sector within the United Arab Emirates (online) 2 organisations from Dubai officially participated	Focused in the Emirate of Dubai 3 organisations	The pilot study revealed that getting access to organisations from all over the Emirates would be very challenging and some organisations refused to take part. Therefore, the scope of the main study is limited to those organisations operating in Dubai which are more mature in terms of participating in empirical research.
Sector	Government Private	Government	
Scale	5 point Likert scale	5 point Likert scale	
Key Findings	The construct measurements of the organisational culture dimensions by Hofstede do not work well in the UAE culture. The construct measurements of the organisational culture dimensions by Hofstede explain the dependent variables (e.g., intention toward sharing knowledge, subjective) very poorly.	The new construct measurements for organisational culture by Ghosh & Srivastava (2014) work better in the model than the previous organisational culture dimensions by Hofstede. The construct measurements of the organisational culture dimensions by Ghosh & Srivastava (2014) explain the dependent variables (e.g., intention towards sharing knowledge, injunctive norms) better. Inclusive leadership and knowledge leadership are found to be important factors in explaining the dependent variables (e.g., intention towards sharing knowledge, injunctive norms). Inclusive leadership and knowledge leadership are found to be key drivers for organisational culture dimensions.	The change of measurements and the inclusion of the additional constructs for both TRA and leadership types were successful in terms of better explaining the knowledge sharing behaviour.

4.9 Summary

This chapter presented details of the mixed methods research methodology of the study. It began by addressing mixed methodology practices within the literature, and then explained the research design and the main stages followed in the mixed methods design of the study. Next, it presented and explained the ethical considerations of the study. The chapter also addressed the scope of the study and eligibility criteria. Both quantitative and qualitative methods were then explained in separate sections. Finally, the chapter discussed the pilot study conducted in order to validate the measurements, test the research model and observe through qualitative interviews if more factors should be included in the main study.

Chapter 5 will address the quantitative data analysis and Chapter 6 the qualitative data analysis. Chapter 7 will then present the thesis discussion, summarising the key findings of the study.

Chapter 5: Presentation, Analysis and Interpretation of Quantitative Data

5.1 Introduction

Chapter 4 presented and discussed the research methodology used.

This chapter focuses on the analysis, interpretation and presentation of the quantitative data for this study. The chapter starts by explaining the data collection context and outlines the participants' demographics. Then, it explains the techniques used to analyse the data and how the data was prepared for analysis. Following that, it explains in detail the process of evaluating the measurement model and the evaluation of the structural models. This study examines three models to determine the hypothesised relationships as explained previously in Chapter 3. The hypotheses are tested using structural equation modelling (SEM) to further explore and confirm the relationships in the conceptual models. The chapter also covers some analysis with regard to the controlling variables which were considered in the analysis. At the end of the chapter, some further post hoc analysis to explore some moderating and mediating effects is presented.

5.2 Data Collection

The data were collected based on the simple random sampling technique as this allows equal participation of subjects (Sharma, 2017). Hence it is considered to offer a fair opportunity of selecting the sample since each member has an equal chance of being included in the study (Sharma, 2017). The data were collected in the UAE, specifically the Emirate of Dubai, as it is the fastest growing emirate with the highest population of 1,137,347 (double that of Abu Dhabi, the UAE's capital city as of 2019 (Abu Dhabi, United Arab Emirates Population, 2020)). In addition, Dubai is well-known for having an internationally diverse population. Moreover, according to Pervan et al. (2015), of the UAE's seven Emirates, Dubai was a pioneer in implementing major improvements and establishing a strong presence in the business world. In the main study, ten large government organisations in Dubai and five large government organisations in Abu Dhabi were approached to take part; however, no organisations from Abu Dhabi and only three from Dubai agreed to, or were able to, take part in the research within the study's timeframe. All three of the organisations from Dubai were Government organisations and, as a result, the study focused on the Emirate of Dubai and within the government

sector only.

As discussed in Chapter 4, the data collection method utilised for the quantitative phase of the study was a questionnaire. A total of 1073 questionnaires were returned, of which 881 were complete: 192 incomplete questionnaires were excluded. The 881 completed questionnaires were screened and un-engaged responses were removed in order to provide meaningful results. Responses were considered un-engaged when, for example, the participant selected the same answer to all questions regardless of the kind of question. This led to a further four responses being excluded and a total of 877 questionnaires were deemed usable and considered for the subsequent analysis. This process of data cleaning is essential, as it does not only identify missing values, but also includes consistency-checks to identify data that are out of range, logically inconsistent, or have outlier/extreme values (Malhotra, 2010).

One of the possible risks of this research is common method bias (CMB) which is caused when constructs are measured using the same method; for instance, this happens with self-reported questionnaires (Chang et al., 2010; Podsakoff & Organ, 1986; Podsakoff et al., 2003). This becomes even more critical when the dependent variable and independent variables are measured by the same method (Chang et al., 2010). For example, respondents were asked to share their own perceptions and experiences on a set of constructs in the same questionnaire which could produce spurious correlations due to response styles, social desirability, and priming effects which are independent (Meade et al., 2007). Additionally, CMB could occur when the measurement for both the independent and the dependent variables in the same questionnaire.

To avoid common method bias, various strategies suggested by Chang et al. (2010) were followed, including assuring respondents about the anonymity and confidentiality of the study to encourage honest answers, and changing the order of questions which are related to different constructs to make it harder for respondents to combine related items and thus hindering the creation of those correlations needed to produce common method bias. Similarly, Podsakoff et al. (2003) offered some recommendations for controlling common method bias in research. Podsakoff et al. (2003) explained in the case where the predictor and criterion variables cannot be obtained from different sources and in different contexts, the next step is to see if the CMB can be identified. In this research context it cannot be

identified, therefore Podsakoff et al. (2003) offers three solutions to overcome this challenge. First, is to use all procedural remedies related to questionnaire design. Second are the strategies recommended by Chang et al. (2010); for example, response anonymity was guaranteed as questionnaires were not traceable and did not require personal information (i.e. name, email ID etc). Third, is to use statistical remedies through the use of the single common factor approach. Therefore, data were checked for common method bias using the Harman (1976) single-factor test (Podsakoff & Organ, 1986). The first factor, principal axis analysis without rotation, accounted for only 16% of the overall variance in the latent construct measurements. Because this single factor accounted for only a minor portion of the variance, no common factor emerged; therefore, it is unlikely that common method variance significantly influenced the results (Podsakoff & Organ, 1986). Another way to evaluate if CMB is critical is to run the collinearity statistics (VIF) for the inner path model (Kock, 2015). The range of the VIF values are between 1.830 and 3.650. Since this range is below the critical threshold of 5, this indicates that there is no serious problem with CMB in the data (Hair et al., 2017).

Table 5.1 shows the number of questionnaires completed and the number which were usable for the study.

The sample explored three industries: energy and utilities (46%), law and security (50%), and law enforcement (4%). The law and security organisation sizes varied from 1200 to 30,000 employees, the energy and utilities industry averaged around 13,000 employees and law enforcement accounted for around 1200. Overall, 28% of the respondents were men, and 72% women.

Unfortunately, since each organisation had a security policy in place which forbade sharing employees' emails, the link to the survey had to be sent to the coordinator for each organisation to be forward and so it was not possible to calculate a true response rate. The coordinators sent the link to all business units, but there is no guarantee that all mailing groups were included or that the invitation reached all the inboxes. Other researchers have also faced this challenge: in 2018, Duan and Edwards used Qualtrics software to send a total of 102,237 survey invitations by email; however, only 578 surveys were opened. Similarly, Kianto et al. (2013) identified 10,000 contacts from their databases, but their tracking software showed that only 4,064 actually received the

invitation email. To overcome this issue, the researcher focused on considering the number of responses needed that would ensure building an adequate model. According to Hair et al. (2017), to spot a minimum of R^2 value of 0.10 in any of the constructs at a significance level of 1%, a minimum sample size of 158 is required. Hence, with 877 usable questionnaires, the minimum sample size is fulfilled.

The mean for all items is about 4 which means participants are most likely to agree with the item statements even though the minimum and maximum values as well as the standard deviation show that the participants chose the full range of possible answers. Finally, the values for excess kurtosis and skewness are often highly different from 0 which shows that many items are not normally distributed. Table 5.3 shows the descriptive statistics for each item used for the construct measurement.

Table 5.1 Descriptive Statistics - Dubai (Government Sector)

#	Industry	No. of Received Questionnaires	No. of Completed Questionnaires	No. of Employees	Electronic/Hard Copy Distribution
1	Law and Security	449	441	30,000	Both electronically (71) and hard copy (370)
2	Energy and Utilities	573	405	13,000	Distribution of online link to all employees
3	Law Enforcement	51	35	1,200	Distribution of online link to all employees
Total		1073	Completed: 881 Usable: 877		

Table 5.2 Respondents Sample by Industry and Demographics

Demographics	n	(%)
<i>Industry:</i>		
Law and Security	439	50.1
Energy and Utilities	403	46.0
Law Enforcement	35	4.0
<i>Gender:</i>		
Male	246	28.1
Female	631	71.9
<i>Age:</i>		
21-24	112	12.7
25-29	153	17.4
30-34	185	21.1

Demographics	n	(%)
35-39	170	19.4
40-44	122	13.9
45-49	50	5.7
50-54	49	5.6
55-59	24	2.7
60 and over	12	1.4
<i>Education:</i>		
High School or Equivalent	247	28.2
Diploma	86	9.8
High Diploma	37	4.2
Bachelor's Degree	381	43.4
Master's Degree	118	13.5
Doctoral Degree	8	0.9

Demographics	n	(%)
<i>Role:</i>		
Upper Management	35	4.0
Middle Management	203	23.1
Junior Management	195	22.3
Administrative Staff	344	39.2
Support Staff	73	8.3
Consultant	27	3.1
<i>Tenure:</i>		
2-3 Years	181	20.6
4-5 Years	120	16.1
6-8 Years	230	26.2
9-10 Years	79	9.0
11-15 Years	102	11.6
16-20 Years	76	8.7
Over 20 Years	89	10.1

Table 5.3 Descriptive Statistics: Item Measurements

Latent Variable	Item	Mean	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
Attitude Toward Knowledge Sharing	ATKS01	4.121	1	5	0.908	1.303	-1.101
	ATKS02	3.754	4	1	5	1.313	-0.717
	ATKS03	4.111	1	5	0.926	1.474	-1.161

Latent Variable		Item	Mean	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
		ATKS04	4.192	1	5	0.891	1.815	-1.238
Injunctive Norms		IN01	4.151	1	5	0.975	1.181	-1.199
		IN02	4.158	1	5	0.987	1.254	-1.240
		IN03	4.079	1	5	0.907	0.746	-0.900
		IN04	4.260	1	5	0.872	1.985	-1.315
		IN05	4.086	1	5	0.949	1.026	-1.068
		IN06	4.087	1	5	0.874	1.337	-1.022
Intention to Share Knowledge		ITSK01	4.030	1	5	0.969	0.801	-0.979
		ITSK02	4.029	1	5	0.922	0.728	-0.886
		ITSK03	4.133	1	5	0.922	1.474	-1.168
		ITSK04	4.149	1	5	0.908	1.181	-1.086
		ITSK05	4.252	1	5	0.875	1.711	-1.280
		ITSK06	4.406	1	5	0.857	3.370	-1.745
Descriptive Norms		DN01	4.058	1	5	1.005	0.777	-1.062
		DN02	3.888	1	5	1.008	0.042	-0.738
		DN03	3.894	1	5	1.110	0.144	-0.886
		DN04	3.879	1	5	1.059	0.079	-0.779
Perceived Behavioural Controls		PBC01	3.360	3	1	5	1.304	-1.043
		PBC02	3.763	1	5	0.998	0.178	-0.664
		PBC03	3.895	1	5	0.934	0.727	-0.843
		PBC04	3.971	1	5	0.938	0.716	-0.889
		PBC05	4.226	1	5	0.831	2.189	-1.255
Organisational Culture	Trust	OCTS01	4.220	1	5	0.865	1.646	-1.213
		OCTS02	4.201	1	5	0.878	1.429	-1.170
		OCTS03	3.924	1	5	1.089	0.296	-0.947
		OCTS04	4.119	1	5	0.893	1.224	-1.071
		OCTS05	4.000	1	5	0.997	0.548	-0.947
		OCTS06	4.066	1	5	1.046	0.794	-1.137
	Participation	OCPA01	4.111	1	5	0.975	1.168	-1.183
		OCPA02	4.136	1	5	0.924	1.226	-1.141
		OCPA03	3.986	1	5	0.964	0.547	-0.897
		OCPA04	3.857	1	5	1.077	0.141	-0.844
	Openness	OCO01	4.179	1	5	0.919	1.395	-1.191
		OCO02	3.770	1	5	1.180	0.011	-0.897
	Team Orientation	OCTO01	4.103	1	5	0.876	1.559	-1.098
		OCTO02	4.164	1	5	0.891	1.513	-1.170
		OCTO03	4.079	1	5	0.898	1.248	-1.035

Latent Variable		Item	Mean	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
		OCTO04	4.186	1	5	0.912	2.013	-1.325
		OCTO05	3.647	1	5	1.206	-0.250	-0.744
	Agreement	OCAT01	3.958	1	5	0.990	0.752	-0.954
		OCAT02R	2.010	1	5	0.904	1.038	0.953
		OCAT03	3.097	1	5	1.309	-1.071	-0.189
		OCAT04	3.932	1	5	0.874	0.744	-0.781
		OCAT05	4.047	1	5	0.877	1.454	-1.035
Knowledge Leadership	Leadership Skills	KLLS01	4.157	1	5	0.938	1.179	-1.147
		KLLS02	4.092	1	5	1.021	0.834	-1.127
	Cooperation and Trust	KLCT01	4.091	1	5	1.008	1.092	-1.188
		KLCT02	4.179	1	5	0.910	1.133	-1.133
		KLCT03	4.082	1	5	1.034	0.888	-1.156
	Knowledge Integration and Innovation	KLKII01	3.979	1	5	1.099	0.595	-1.089
		KLKII02	3.651	1	5	1.195	-0.542	-0.590
		KLKII03	3.859	1	5	1.081	0.176	-0.857
		KLKII04	3.925	1	5	1.081	0.246	-0.924
Inclusive Leadership	Empowerment	ILCOE01	3.969	1	5	1.059	0.256	-0.913
		ILCOE02	3.944	1	5	1.119	0.242	-0.980
		ILCOE03	4.055	1	5	1.062	0.684	-1.122
		ILCOE04	4.003	1	5	1.080	0.799	-1.138
		ILCOE05	4.090	1	5	1.007	0.840	-1.113
		ILCOE06	4.141	1	5	1.020	1.092	-1.241
		ILCOE07	4.123	1	5	1.050	0.948	-1.231
		ILCOE08	4.046	1	5	1.132	0.680	-1.190
		ILCOE09	3.934	1	5	1.133	0.135	-0.953
		ILCOE10	4.213	1	5	0.987	1.635	-1.384
		ILCOE11	3.927	1	5	1.090	0.548	-1.010
	Accountability	ILACB01	4.094	1	5	0.962	1.271	-1.156
		ILACB02	4.100	1	5	0.987	1.040	-1.142
		ILACB03	3.546	1	5	1.169	-0.340	-0.606
	Courage	ILCO01	3.569	1	5	1.139	-0.369	-0.563
		ILCO02	3.826	1	5	1.040	0.122	-0.762
	Humility	ILH01	3.807	1	5	1.053	-0.017	-0.719
		ILH02	3.901	1	5	1.043	0.471	-0.912
		ILH03	3.872	1	5	1.063	0.408	-0.895

5.3 Evaluation of The Measurement Model

Hair et al.'s (2017) guideline to evaluate measurement models in PLS-SEM (as discussed in Chapter 4 and shown in Table 4.4) was followed to ensure fulfilling the criteria for assessment of reflective measurement models.

5.3.1 *Evaluation of Reflective Measurement Models*

The results of the evaluation of reflective measurements are reported in the following steps:

Step 1: Construct Reliability “Internal Consistency Reliability”

To test construct reliability, both Cronbach's alpha and composite reliability are calculated. Cronbach's alpha and composite reliability should be equal to or greater than 0.70 and, as shown in Table 5.4, all indicators are between the values of 0.815 and 0.945. Some items were deleted (ATKS02, OCAT02, OCAT03, PBC01, and PBC02) based on their low loadings. The values of deleted items are displayed in Table 5.4 although the composite reliability values displayed in the table were performed after the removal of these items.

Step 2: Convergent Validity

As previously noted, Hair et al. (2012, 2017) pointed out that the indicator reliability should be equal to or higher than 0.50. Table 5.4 shows that most values are critical; although some of the indicator reliability of the items are <0.50 (IN05, IN06, OCAT01, OCTS03, OCTS05, OCTS06 and PBC03), these items were not removed as Hair et al. (2017) indicated that indicators with outer loadings between 0.40 and 0.70 should be considered for removal only if the deletion leads to an increase in the composite reliability and an acceptable threshold value of 0.708 or higher. Since Cronbach's alpha and composite reliability were fulfilled, the items were not deleted. The AVEs for all constructs were all higher than 0.50 which means that they fulfil this criterion as well.

Step 3: Discriminant Validity

Table 5.5 shows the items' cross-loadings in order to check the discriminant validity. To fulfil the discriminant validity criterion on the item level, each indicator's cross-loading

should be the highest value for its directly connected construct. There was one exception, item OCTS06, which has a higher cross-loading to participation construct of 0.765 compared to its loading on the trust construct of 0.643.

Other criteria for testing discriminant validity are Fornell-Larcker and HTMT. To fulfil these criteria, items OCTO04, OCTO05 and OCO02 were deleted. Similarly, for the reflective second order constructs which branch out of the formative measurements, knowledge leadership and inclusive leadership. Hence, ILACB03, KLCT01 and KLIK01 were deleted to fulfil discriminant validity requirements.

The final Fornell-Larcker criterion is shown in Table 5.6 and the final HTMT shown in Table 5.4. As the Fornell-Larcker criterion is only applicable for reflective measurement, no values are computed for knowledge leadership and inclusive leadership which are specified as formative measurements in the study. There is no confidence interval of HTMT including the value 1, therefore there is no lack of discriminant validity. In summary, the results show satisfactory discriminant validity at both the construct and item level after item purification.

Table 5.4 Evaluation of the Reflective Measurements

Latent Variable	Indicators	Convergent Validity			Internal Consistency		Discriminant Validity
		Loadings	Indicator Reliability	AVE	Composite Reliability	Cronbach's Alpha	
		≥0.70	≥0.50	≥0.50	≥0.70	≥0.70	HTMT confidence interval does not include 1
Attitude Toward Sharing Knowledge	ATKS01	0.854	0.729	0.791	0.919	0.867	Yes
	ATKS02	0.281	0.078				
	ATKS03	0.916	0.839				
	ATKS04	0.897	0.805				
Descriptive Norm	DN01	0.841	0.707	0.641	0.877	0.815	Yes
	DN02	0.83	0.689				
	DN03	0.771	0.594				
	DN04	0.756	0.572				
Injunctive Norm	IN01	0.816	0.666	0.587	0.894	0.857	Yes
	IN02	0.827	0.684				
	IN03	0.813	0.661				

Latent Variable	Indicators	Convergent Validity			Internal Consistency		Discriminant Validity
		Loadings	Indicator Reliability	AVE	Composite Reliability	Cronbach's Alpha	
		≥0.70	≥0.50	≥0.50	≥0.70	≥0.70	HTMT confidence interval does not include 1
	IN04	0.798	0.637				
	IN05	0.638	0.407				
	IN06	0.683	0.466				
Intention to Share Knowledge	ITSK01	0.74	0.548	0.638	0.913	0.885	Yes
	ITSK02	0.761	0.579				
	ITSK03	0.848	0.719				
	ITSK04	0.851	0.724				
	ITSK05	0.841	0.707				
	ITSK06	0.743	0.552				
Organisational Culture Dimensions	Agreement	OCAT01	0.692	0.735	0.893	0.819	Yes
		OCAT02	0.111				
		OCAT03	0.046				
		OCAT04	0.738				
		OCAT05	0.774				
	Openness	OCO01	1	1.000	1.000	1.000	Yes
		OCO02	0.763				
	Participation	OCPA01	0.806	0.809	0.944	0.921	Yes
		OCPA02	0.863				
		OCPA03	0.846				
		OCPA04	0.721				
		OCTO01	0.852				
	Team Orientation	OCTO02	0.869	0.851	0.945	0.912	Yes
		OCTO03	0.834				
		OCTO04	0.866				
		OCTO05	0.642				
	Trust	OCTS01	0.874	0.711	0.924	0.898	Yes
		OCTS02	0.882				
		OCTS03	0.735				
		OCTS04	0.895				
		OCTS05	0.819				
		OCTS06	0.643				
		PBC01	0.071	0.767	0.908	0.85	Yes

Table 5.5 Cross Loading

	TRA Factors					Inclusive Leadership				Knowledge Leadership			Organisational Culture				
	ATKS	ITSK	IN	DN	PBC	ILACB	ILCO	ILCOE	ILH	KLCT	KLKII	KLLS	OCAT	OCO	OCPA	OCT	OCTS
ATKS01	0.852	0.514	0.582	0.402	0.448	0.212	0.159	0.245	0.201	0.227	0.184	0.223	0.264	0.260	0.248	0.266	0.232
ATKS03	0.915	0.520	0.612	0.404	0.413	0.263	0.167	0.263	0.194	0.237	0.173	0.232	0.298	0.292	0.243	0.298	0.293
ATKS04	0.894	0.550	0.594	0.369	0.407	0.254	0.135	0.245	0.161	0.211	0.178	0.198	0.295	0.297	0.261	0.282	0.275
ITSK01	0.410	0.738	0.524	0.428	0.424	0.283	0.239	0.199	0.226	0.210	0.226	0.226	0.264	0.223	0.288	0.228	0.234
ITSK02	0.417	0.760	0.567	0.414	0.477	0.305	0.223	0.227	0.256	0.203	0.194	0.211	0.254	0.239	0.259	0.250	0.244
ITSK03	0.523	0.848	0.551	0.440	0.437	0.287	0.211	0.200	0.211	0.185	0.157	0.202	0.253	0.234	0.272	0.232	0.283
ITSK04	0.505	0.852	0.528	0.466	0.473	0.311	0.249	0.229	0.234	0.247	0.186	0.243	0.240	0.263	0.256	0.249	0.285
ITSK05	0.558	0.842	0.595	0.547	0.515	0.311	0.213	0.267	0.214	0.277	0.215	0.275	0.319	0.308	0.296	0.323	0.319
ITSK06	0.431	0.744	0.545	0.504	0.493	0.305	0.215	0.263	0.231	0.290	0.191	0.275	0.317	0.305	0.266	0.300	0.305
IN01	0.619	0.522	0.832	0.451	0.474	0.272	0.214	0.362	0.275	0.303	0.258	0.277	0.359	0.405	0.337	0.382	0.285
IN02	0.589	0.526	0.847	0.526	0.499	0.273	0.283	0.435	0.347	0.363	0.333	0.385	0.366	0.402	0.403	0.341	0.323
IN03	0.538	0.558	0.821	0.545	0.507	0.263	0.244	0.354	0.312	0.324	0.277	0.287	0.372	0.326	0.367	0.339	0.384
IN04	0.538	0.576	0.793	0.457	0.473	0.228	0.187	0.325	0.263	0.270	0.232	0.278	0.366	0.350	0.322	0.328	0.287
IN05	0.316	0.462	0.610	0.330	0.307	0.255	0.125	0.169	0.185	0.151	0.096	0.179	0.202	0.154	0.180	0.164	0.157
IN06	0.412	0.557	0.657	0.437	0.400	0.247	0.164	0.198	0.191	0.202	0.149	0.203	0.273	0.226	0.237	0.241	0.249
DN01	0.401	0.561	0.564	0.841	0.503	0.273	0.408	0.561	0.501	0.526	0.522	0.527	0.368	0.445	0.514	0.429	0.347
DN02	0.330	0.502	0.493	0.830	0.519	0.243	0.315	0.430	0.359	0.391	0.387	0.347	0.466	0.379	0.468	0.465	0.481
DN03	0.306	0.387	0.433	0.771	0.457	0.247	0.436	0.532	0.510	0.483	0.516	0.533	0.350	0.365	0.435	0.368	0.323
DN04	0.354	0.392	0.422	0.756	0.472	0.212	0.274	0.384	0.343	0.355	0.371	0.343	0.404	0.325	0.381	0.374	0.432
PBC03	0.392	0.427	0.460	0.508	0.840	0.244	0.241	0.350	0.278	0.336	0.287	0.314	0.326	0.330	0.317	0.348	0.288
PBC04	0.397	0.479	0.503	0.557	0.892	0.301	0.291	0.426	0.337	0.381	0.339	0.364	0.364	0.340	0.404	0.405	0.360
PBC05	0.449	0.611	0.564	0.537	0.894	0.317	0.262	0.321	0.249	0.321	0.252	0.259	0.320	0.316	0.307	0.319	0.325
ILACB01	0.248	0.334	0.324	0.264	0.302	0.900	0.348	0.336	0.300	0.309	0.217	0.272	0.324	0.314	0.332	0.302	0.337
ILACB02	0.232	0.328	0.252	0.276	0.279	0.854	0.391	0.347	0.312	0.339	0.318	0.322	0.322	0.294	0.377	0.295	0.360
ILCO01	0.102	0.201	0.210	0.348	0.216	0.361	0.858	0.486	0.526	0.477	0.503	0.487	0.328	0.274	0.453	0.309	0.324

	TRA Factors					Inclusive Leadership				Knowledge Leadership			Organisational Culture				
	ATKS	ITSK	IN	DN	PBC	ILACB	ILCO	ILCOE	ILH	KLCT	KLKII	KLLS	OCAT	OCO	OCPA	OCT	OCTS
ILCO02	0.183	0.290	0.272	0.442	0.311	0.388	0.931	0.598	0.682	0.576	0.566	0.587	0.422	0.404	0.521	0.442	0.384
ILCOE07	0.301	0.330	0.421	0.595	0.405	0.359	0.570	0.891	0.628	0.700	0.674	0.672	0.524	0.515	0.607	0.530	0.518
ILCOE08	0.257	0.265	0.378	0.542	0.393	0.311	0.531	0.902	0.608	0.671	0.699	0.672	0.514	0.486	0.618	0.496	0.496
ILCOE09	0.191	0.191	0.306	0.496	0.327	0.305	0.542	0.884	0.615	0.634	0.653	0.635	0.476	0.433	0.578	0.512	0.446
ILCOE10	0.256	0.259	0.394	0.522	0.360	0.373	0.551	0.906	0.626	0.651	0.665	0.658	0.487	0.484	0.624	0.520	0.480
ILCOE11	0.212	0.205	0.313	0.456	0.315	0.356	0.493	0.815	0.596	0.592	0.597	0.571	0.424	0.390	0.574	0.443	0.440
ILH01	0.164	0.258	0.294	0.475	0.268	0.316	0.606	0.584	0.874	0.556	0.577	0.586	0.387	0.375	0.480	0.398	0.389
ILH02	0.193	0.262	0.346	0.495	0.319	0.307	0.613	0.666	0.922	0.655	0.663	0.651	0.442	0.435	0.567	0.453	0.384
ILH03	0.190	0.258	0.312	0.486	0.293	0.325	0.648	0.645	0.926	0.655	0.660	0.664	0.419	0.408	0.557	0.431	0.400
KLCT02	0.250	0.312	0.363	0.534	0.401	0.380	0.548	0.682	0.632	0.954	0.733	0.783	0.550	0.535	0.653	0.578	0.555
KLCT03	0.228	0.247	0.325	0.511	0.339	0.313	0.579	0.727	0.674	0.943	0.786	0.806	0.500	0.510	0.654	0.549	0.512
KLKII02	0.124	0.155	0.210	0.481	0.271	0.224	0.557	0.649	0.636	0.706	0.902	0.690	0.479	0.457	0.635	0.495	0.466
KLKII03	0.194	0.261	0.307	0.546	0.309	0.304	0.553	0.694	0.646	0.749	0.946	0.749	0.516	0.522	0.687	0.527	0.506
KLKII04	0.210	0.243	0.318	0.534	0.332	0.294	0.571	0.740	0.676	0.774	0.949	0.767	0.519	0.529	0.679	0.536	0.496
KLLS01	0.258	0.307	0.370	0.523	0.347	0.344	0.588	0.697	0.673	0.770	0.735	0.962	0.503	0.536	0.643	0.527	0.501
KLLS02	0.198	0.259	0.309	0.518	0.317	0.290	0.561	0.697	0.658	0.830	0.779	0.941	0.469	0.482	0.636	0.492	0.490
OCAT01	0.273	0.240	0.360	0.450	0.306	0.252	0.347	0.507	0.396	0.504	0.489	0.459	0.832	0.530	0.568	0.731	0.602
OCAT04	0.277	0.323	0.374	0.363	0.317	0.339	0.349	0.413	0.349	0.393	0.402	0.375	0.859	0.499	0.527	0.581	0.539
OCAT05	0.266	0.324	0.373	0.461	0.359	0.353	0.397	0.505	0.438	0.531	0.505	0.484	0.880	0.569	0.633	0.659	0.618
OCO01	0.318	0.330	0.421	0.478	0.373	0.347	0.388	0.529	0.449	0.551	0.544	0.537	0.621	1.000	0.653	0.678	0.554
OCPA01	0.248	0.294	0.362	0.497	0.317	0.384	0.505	0.643	0.542	0.659	0.661	0.640	0.598	0.586	0.898	0.613	0.686
OCPA02	0.277	0.347	0.390	0.530	0.385	0.384	0.495	0.636	0.532	0.633	0.648	0.618	0.618	0.586	0.929	0.621	0.687
OCPA03	0.272	0.335	0.403	0.518	0.372	0.370	0.502	0.615	0.524	0.597	0.650	0.578	0.634	0.615	0.920	0.621	0.629
OCPA04	0.212	0.244	0.331	0.494	0.316	0.299	0.466	0.561	0.534	0.592	0.625	0.586	0.563	0.564	0.849	0.542	0.564
OCT01	0.294	0.320	0.368	0.496	0.361	0.323	0.407	0.531	0.456	0.550	0.534	0.522	0.704	0.627	0.628	0.922	0.579
OCT02	0.297	0.303	0.381	0.471	0.386	0.320	0.400	0.529	0.430	0.545	0.499	0.472	0.709	0.617	0.586	0.932	0.594

	TRA Factors					Inclusive Leadership				Knowledge Leadership			Organisational Culture				
	ATKS	ITSK	IN	DN	PBC	ILACB	ILCO	ILCOE	ILH	KLCT	KLKII	KLLS	OCAT	OCO	OCPA	OCT	OCTS
OCT03	0.283	0.297	0.363	0.458	0.371	0.298	0.382	0.518	0.419	0.551	0.513	0.492	0.706	0.632	0.634	0.913	0.582
OCTS01	0.277	0.325	0.351	0.465	0.357	0.323	0.316	0.463	0.347	0.489	0.450	0.464	0.605	0.482	0.604	0.565	0.870
OCTS02	0.250	0.330	0.347	0.435	0.330	0.359	0.283	0.427	0.337	0.465	0.418	0.422	0.579	0.450	0.581	0.520	0.874
OCTS03	0.169	0.183	0.205	0.256	0.157	0.244	0.206	0.290	0.202	0.290	0.270	0.265	0.396	0.316	0.400	0.334	0.709
OCTS04	0.260	0.298	0.326	0.411	0.339	0.324	0.339	0.440	0.328	0.433	0.399	0.392	0.612	0.469	0.572	0.553	0.884
OCTS05	0.262	0.256	0.243	0.293	0.259	0.290	0.247	0.310	0.242	0.326	0.297	0.291	0.522	0.383	0.488	0.467	0.800

Legend:

TRA Factors	
ATKS	Attitude Toward Knowledge-sharing
ITSK	Intention to Share Knowledge
IN	Injunctive Norm
DN	Descriptive Norms
PBC	Perceived Behavioural Controls
Inclusive Leadership	
ILACB	Accountability
ILCO	Courage
ILCOE	Empowerment
ILH	Humility

Knowledge Leadership	
KLCT	Cooperation and Trust
KLKII	Knowledge Integration and Innovation
KLLS	Leadership Skills
Organisational Culture	
OCAT	Agreement
OCO	Openness
OCPA	Participation
OCT	Team Orientation
OCTS	Trust

Table 5.6 Discriminant Validity test using Fornell-Larcker Criterion

	Attitude Towards Sharing Knowledge	Agreement	Descriptive Norm	Injunctive Norm	Inclusive Leadership	Intention to share knowledge	Knowledge Leadership	Openness	Perceived Behavioural Control	Participation	Team Orientation	Trust
Attitude Towards Sharing Knowledge	0.889											
Agreement	0.322	0.857										
Descriptive Norm	0.440	0.495	0.800									
Injunctive Norm	0.665	0.428	0.603	0.766								
Inclusive Leadership	0.286	0.555	0.576	0.417	n/a							
Intention to share knowledge	0.594	0.345	0.587	0.698	0.373	0.799						
Knowledge Leadership	0.247	0.571	0.589	0.359	0.778	0.297	n/a					
Openness	0.318	0.621	0.478	0.415	0.525	0.330	0.579	1.000				
Perceived Behavioural Control	0.474	0.382	0.610	0.585	0.419	0.590	0.381	0.373	0.876			
Participation	0.282	0.672	0.567	0.409	0.691	0.342	0.738	0.654	0.388	0.899		
Team Orientation	0.317	0.766	0.515	0.398	0.562	0.332	0.601	0.678	0.404	0.667	0.922	
Trust	0.300	0.683	0.492	0.373	0.546	0.350	0.572	0.553	0.370	0.714	0.634	0.802

Notes: n/a: not applicable because of the formative measurements.

5.3.2 Evaluation of Formative Measurement

As explained in Chapter 4, the evaluation of formative measurement follows different steps than reflective measurement. They are set out below.

Step 1: Assess Convergent Validity

Since the formative measurements are multidimensional, the first order constructs are reflectively measured while the second order are formatively measured. Therefore, a redundancy analysis is not required.

Step 2: Assess Formative Measurement Models for Collinearity Issues

Multicollinearity for formative measurements (knowledge leadership and inclusive leadership) were tested as shown in Table 5.7. To assess the multicollinearity of formative measurements, the variance inflation factor (VIF) should be lower than 5 (Diamantopoulos et al., 2008; Nitzl, 2016).

Table 5.7 Estimation of the Formative Measurement Parameters

Formative Measurements	Weight	P-value	Variance inflation factor (VIF)
Inclusive Leadership (van Dierendonck, & Nuijten, 2011; Prime & Salib 2014, 2015)			
Consideration, openness and empowerment	0.349	0.00	1.990
Courage	0.251	0.00	2.066
Accountability	0.338	0.00	1.259
Humility	0.320	0.00	2.388
Knowledge Leadership (Yang et al., 2014)			
Cooperation and trust	0.384	0.00	4.094
Knowledge integration and innovation	0.310	0.00	3.197
Leadership skills	0.375	0.00	3.978

Step 3: Assess the Significance and Relevance of the Formative Indicators

The third and last criterion for evaluating the contribution of formative indicators are the outer weights of indicators and their significance (Hair et al., 2017).

Table 5.7 above summarises the results for two formative measurements, inclusive leadership and knowledge leadership. As indicated, all weights were highly significant.

The analysis of weights of the two multi-dimensional variables (inclusive leadership and knowledge leadership) provides interesting insights into the importance of each sub-dimension. The results show that the (consideration, openness and empowerment) component has the strongest effect on inclusive leadership (outer weights 0.349), followed by the accountability component (outer weight 0.338) while courage has the weakest effect (outer weight 0.251, all significant at $p < 0.01$). This is particularly interesting in the context of leadership, in which leaders are generally associated with courage. For knowledge leadership, cooperation and trust (outer weight 0.384) and leadership skills (outer weight 0.375) had the biggest impact, while knowledge integration and innovation (outer weight 0.310) had the weakest effect (all significant at $p < 0.01$). This is again an interesting finding in the leadership context because, based on business today, leaders need to integrate knowledge in their processes and innovate. It is also noteworthy that cooperation and trust are the base for everything which is logical in sense that trust should be the foundation of everything.

5.3.3 Evaluation of Structural Model

To evaluate the structural model, Hair et al.'s (2017) steps were followed as explained in Chapter 4. To estimate the structural equation model and to perform the analysis software application SmartPLS 3.2.8 was utilised (Ringle et al., 2015).

Step 1: Assess Structural Model for Collinearity Issues

Model 1 (Main Model)

Table 5.8 Multi-Collinearity Assessment: VIF Values for Model 1

	Attitude Toward Knowledge Sharing	Agreement	Injunctive Norms	Intention to Share Knowledge	Openness	Participation	Team Orientation	Trust
Attitude Toward Knowledge Sharing				1.83				
Agreement	3.012		3.012					
Descriptive Norms				1.866				
Injunctive Norm				2.411				
Inclusive Leadership	2.915	2.684	2.915		2.684	2.684	2.684	2.684
Knowledge Leadership	3.402	2.684	3.402		2.684	2.684	2.684	2.684

	Attitude Toward Knowledge Sharing	Agreement	Injunctive Norms	Intention to Share Knowledge	Openness	Participation	Team Orientation	Trust
Openness	2.188		2.188					
Perceived Behavioural Controls				1.834				
Participation	3.65		3.65					
Team Orientation	3.074		3.074					
Trust	2.651		2.651					

As VIF values are all below 5, there are no problems in the inner model with multicollinearity.

Model 2

Table 5.9 Multi-Collinearity Assessment : VIF Values for Model 2

	Attitude Toward Knowledge Sharing	Injunctive Norms	Intention to Share Knowledge
Attitude Toward Knowledge Sharing			1.83
Agreement	2.998	2.998	
Descriptive Norms			1.866
Injunctive Norms			2.411
Inclusive Leadership	2.773	2.773	
Knowledge Leadership	3.231	3.231	
Openness	2.188	2.188	
Perceived Behavioural Controls			1.834
Participation	3.533	3.533	
Team Orientation	3.057	3.057	
Trust	2.436	2.436	

As VIF values are all below 5, there are no problems in the inner model with multicollinearity.

Model 3

Table 5.10 Multi-Collinearity Assessment : VIF Values for Model 3

	Attitude Toward Knowledge Sharing	Injunctive Norms	Intention to Share Knowledge
Attitude Toward Knowledge Sharing			1.83
Agreement	3.152	3.168	
Descriptive Norms			1.866
Injunctive Norms			2.411
Inclusive Leadership	2.979	3.163	
Knowledge Leadership	3.747	3.727	
Openness	2.883	2.885	
Perceived Behavioural Controls			1.834
Participation	4.458	4.511	
Team Orientation	3.578	3.58	
Trust	2.732	2.736	

As VIF values are all below 5, there are no problems in the inner model with multi-collinearity.

Step 2: Assess the Significance and Relevance of the Structural Model Relationships

To fulfil this step, the PLS algorithm was run for all three research models; the results are reported in the following sections. To confirm the statistical significance, the bias-corrected and accelerated (BCa) bootstrapping with 5000 draws was used for all three models.

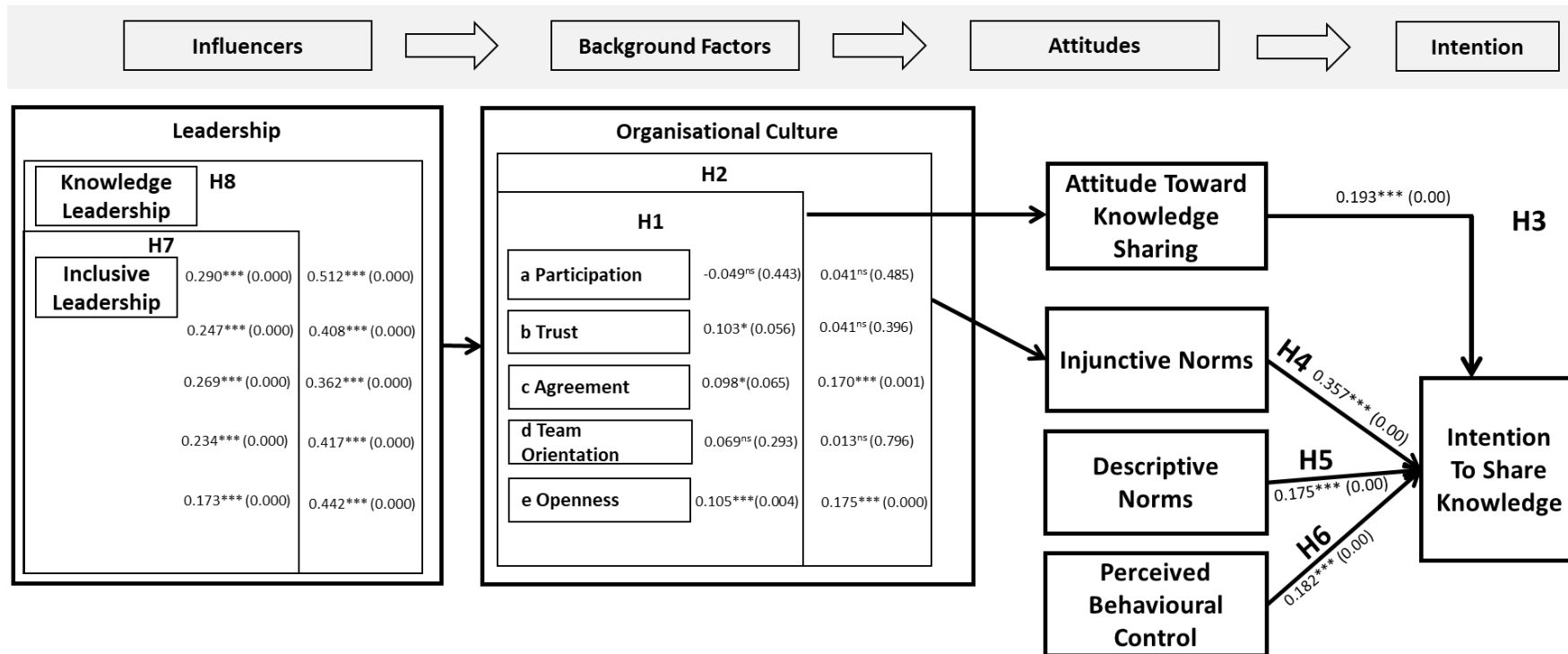
Hypothesis testing:

Table 5.11, Table 5.12, Table 5.10, Figure 5.1, Figure 5.3, and Figure 5.4 show an overview of the path coefficients and their significance in the models:

- Model 1: Main Model (leadership as driver for organisational culture): knowledge leadership and inclusive leadership as influencers for organisational culture dimensions. (N.B.: the TRA factors, the control variables and post hoc mediation analysis will only be explained once in the main model to avoid repetition.)
- Model 2: (leadership as a background factor): knowledge leadership and inclusive leadership are both treated as background factors in the TRA framework

- Model 3: (leadership as a moderator): knowledge leadership and inclusive leadership are both treated as moderators between organisational culture dimensions and attitude toward knowledge sharing.

Figure 5.1 Model 1: Knowledge Leadership and Inclusive Leadership as Influencers for Organisational Culture Dimensions Whereby Organisational Culture Affects Knowledge Sharing Intention



***p<0.01, **p<0.05, *p<0.10, ns: not significant

Note: The values shown are the path coefficients with the p-values based on the two-tailed test.

Structural Model (1) Path Coefficients:

Model 1 treats knowledge leadership and inclusive leadership as influencers for organisational culture dimensions whereby organisational culture ultimately affects knowledge sharing intention. The results show that all main effects in the model are significant with a $p < 0.01$. Specifically, inclusive leadership has a positive impact on organisational culture that promotes participation (H7a, 0.290***), trust (H7b, 0.247***), agreement (H7c, 0.269***), team orientation (H7d, 0.234***), and openness (H7e, 0.173***).

Additionally, the results show that knowledge leadership has a positive impact on organisational culture that promotes participation (H8a, 0.512***), trust (H8b, 0.408***), agreement (H8c, 0.362***), team orientation (H8d, 0.417***), and openness (H8e, 0.442***).

The analysis shows that three of the organisational culture dimensions are significant as they influence attitude toward knowledge sharing in the model. An organisational culture that is characterised by trust (H1b, 0.103**), agreement (H1c, 0.065**), and openness (H1e, 0.105***) positively affects attitude toward knowledge sharing. However, the organisational culture dimensions of participation (H1a, -0.049^{ns}), and team orientation (H1d, 0.069^{ns}) and their impact on attitude to knowledge sharing are not supported.

On the other hand, when exploring the effect of different organisation cultures on injunctive norms of knowledge sharing, the significance varies. The results show that when an organisation culture is characterised by participation (H2a, 0.041^{ns}), trust (H2b, 0.041^{ns}), and team orientation (H2d, 0.013^{ns}), it does not have any significant influence on injunctive norms. In contrast, an organisation culture that is characterised by agreement (H2c, 0.001***) and openness (H2e, 0.175***) has a significant influence on them. Furthermore, attitude toward knowledge sharing positively impacts intention to share knowledge (0.193***) and it is confirmed that injunctive norms positively affect intention to share knowledge (0.357***). In other words, the more individuals believe that their important others want them to share their knowledge with their co-workers, the more they will intend to share their knowledge. It was also confirmed that both descriptive norms (0.175***) and perceived behavioural controls (0.182***) positively influence intention to share knowledge.

Therefore, Hypotheses 3, 4, 5, and 6 are supported, confirming the results from previous studies that took place in different contexts, applying the TRA framework to explain behavioural intentions (Fishbein & Ajzen, 1975, 2010).

Table 5.11 Results of Hypothesis Testing for Model 1

Hypotheses	Path Coefficients	P-Values	Results
H1a: An organisational culture that promotes participation will have a positive effect on attitude toward knowledge sharing.	-0.049	0.443	Not Supported
H1b: An organisational culture that promotes trust will have a positive effect on attitude toward knowledge sharing.	0.103	0.056	Supported
H1c: An organisational culture that promotes agreement will have a positive effect on attitude toward knowledge sharing.	0.098	0.065	Supported
H1d: An organisational culture that promotes team orientation will have a positive effect on attitude toward knowledge sharing.	0.069	0.293	Not Supported
H1e: An organisational culture that promotes openness will have a positive effect on attitude toward knowledge sharing.	0.105	0.004	Supported
H2a: An organisational culture that promotes participation will have a positive impact on injunctive norms.	0.041	0.485	Not Supported
H2b: An organisational culture that promotes trust will have a positive impact on injunctive norms.	0.041	0.396	Not Supported
H2c: An organisational culture that promotes agreement will have a positive impact on injunctive norms.	0.170	0.001	Supported
H2d: An organisational culture that promotes team orientation will have a positive impact on injunctive norms.	0.013	0.796	Not Supported
H2e: An organisational culture that promotes openness will have a positive impact on injunctive norms.	0.175	0.000	Supported
H3: Attitude toward knowledge sharing has a positive effect on intention to share knowledge. <i>In other words, the more favourable individuals' attitudes to knowledge sharing practices are, the stronger their intention to share knowledge.</i>	0.193	0.000	Supported
H4: Injunctive norms have a positive effect on intention to share knowledge. <i>In other words, the more that individuals believe that their significant others want them to share their knowledge with their co-workers, the more likely they will intend to share their knowledge and vice versa.</i>	0.357	0.000	Supported
H5: Descriptive norms positively affect intention to share knowledge. <i>In other words, the more the significant others are performing the behaviour or sharing knowledge, the</i>	0.175	0.000	Supported

Hypotheses	Path Coefficients	P-Values	Results
<i>stronger the intention to share knowledge will be.</i>			
H6: Perceived behavioural control positively affects intention to share knowledge. <i>In other words, individuals perceived behavioural control over knowledge sharing has a positive effect on their intention to share knowledge.</i>	0.182	0.000	Supported
H7a: Inclusive leadership has a positive impact on organisational culture that promotes employee participation.	0.290	0.000	Supported
H7b: Inclusive leadership has a positive impact on organisational culture that promotes trust among employees.	0.247	0.000	Supported
H7c: Inclusive leadership has a positive impact on organisational culture that promotes agreement among employees.	0.269	0.000	Supported
H7d: Inclusive leadership has a positive impact on organisational culture that encourages employees' team orientation.	0.234	0.000	Supported
H7e: Inclusive leadership has a positive impact on organisational culture that promotes openness for employees.	0.173	0.000	Supported
H8a: Knowledge leadership has a positive impact on organisational culture that promotes employee participation.	0.512	0.000	Supported
H8b: Knowledge leadership has a positive impact on organisational culture that promotes trust among employees.	0.408	0.000	Supported
H8c: Knowledge leadership has a positive impact on organisational culture that promotes agreement among employees.	0.362	0.000	Supported
H8d: Knowledge leadership has a positive impact on an organisational culture that encourages employees' team orientation.	0.417	0.000	Supported
H8e: Knowledge leadership has a positive impact on organisational culture that promotes openness among employees.	0.442	0.000	Supported
***p<0.01, **p<0.05, *p<0.10, ns: not significant Based on a two-tailed test			

Control Variables

To fully account for the differences in the population within the organisations, the effects of five control variables (gender, education, job seniority, nationality and age) were tested in the main model. More specifically, this analysis was performed in order to provide better understanding of how knowledge sharing attitude and intention to share knowledge flow in the organisation. It provides more insights on population difference when it comes to knowledge sharing and which populations share more knowledge. For example, do Emiratis share more knowledge with their co-workers or do non-Emiratis? Do females

share more knowledge with their co-workers or do males? By including the control variables, the other path coefficients are controlled for the influence of gender, education, job seniority, nationality and age.

Examining control variables is based on their direct impact on the target variables: in this case intention to share knowledge and attitude toward knowledge sharing. Testing control variables by connecting them with target variables is in line with PLS modelling as the PLS algorithm maximised the explained part of the target variable (Henseler et al., 2009). The five control variables were tested all together in a single PLS test. Figure 5.2 shows the control variables in the total model of the present research.

Table 5.12 shows the control variables' effects on attitude toward knowledge sharing and intention to share knowledge. The results show that gender had a significant (-0.045*) effect on intention to share knowledge, which reveals that female employees intend to share knowledge less than male employees in the UAE organisational context. Similarly, the results show that gender had a significant (-0.106***) effect on attitude toward knowledge sharing. This means that female employees have a less favourable attitude toward knowledge sharing than male employees. Additionally, education was found to have a significant effect on attitude toward knowledge sharing (0.106***): employees with higher levels of education have a more favourable attitude. Similarly, it was found that education has a significant effect on intention to share knowledge (0.044*): employees with higher levels of education have more intention to share knowledge. Job seniority also had an effect on attitude to sharing knowledge (-0.067**): employees with higher job seniority had a less favourable attitude. However, job seniority had no significant effect on intention toward share knowledge (0.033^{ns}).

The control variables age and nationality do not have any significant influence on either attitude toward knowledge sharing or intention to share knowledge. Furthermore, looking at effect sizes, none of the control variables show a relevant effect size as all f^2 are below the critical value <0.02 .

Figure 5.2 Examining the Effects of Control Variables in the Main Model

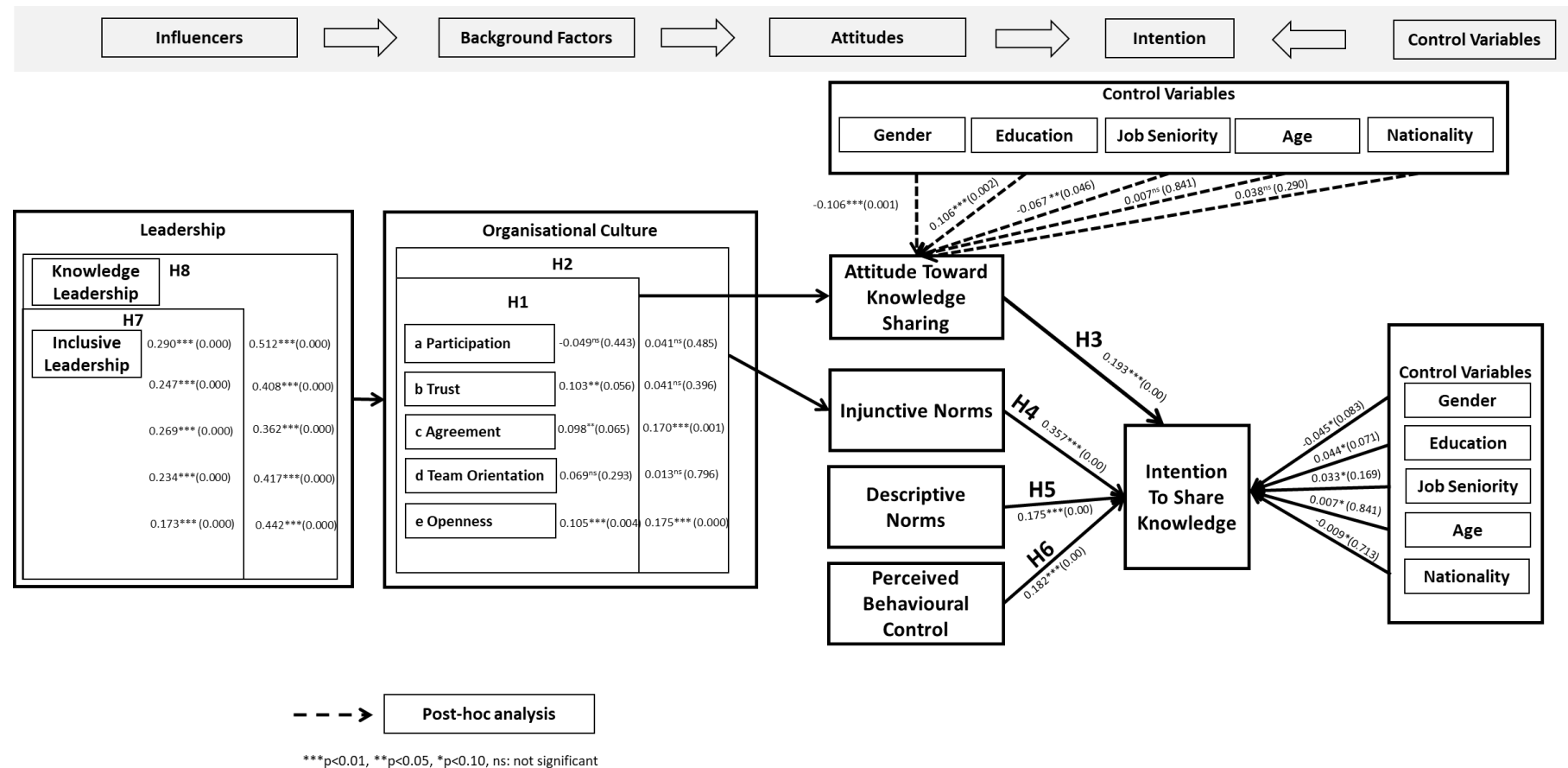


Table 5.12 Control Variables in the Total Model

Control Variables	Path Coefficients	P-Values	f2	Results
Gender → ATKS	-0.106	0.001	0.012	Female employees have a less favourable attitude toward knowledge sharing than male employees.
Gender → Intention KS	-0.045	0.083	0.004	Female employees intend to share knowledge less than male employees.
Education → ATKS	0.106	0.002	0.012	People with more education have a more favourable attitude toward knowledge sharing.
Education → Intention KS	0.044	0.071	0.004	People with more education have more intention toward share knowledge.
Job Seniority → ATKS	-0.067	0.046	0.005	People with higher job seniority have a less favourable attitude toward sharing knowledge.
Job Seniority → Intention KS	0.033	0.169	0.002	Not significant
Age → ATKS	0.007	0.841	0.000	Not significant
Age → Intention KS	-0.022	0.359	0.001	Not significant
Nationality → ATKS	0.038	0.290	0.001	Not significant
Nationality → Intention KS	-0.009	0.713	0.000	Not significant
Legend: ATKS - Attitude toward knowledge sharing ITSK - Intention to share knowledge				

Table 5.13 Gender Differences Among Other Control Variables (Age, Education, Job Seniority and Nationality)

Control Variable (Gender)	Path Coefficients of Females	P-Values Females	Path Coefficients of Males	P-Values Males	Difference between the two groups (path- coefficients)	Difference between the two groups (p- values)	Results with regard to the group difference
Age → ATKS	0.026	0.526	-0.088	0.240	0.115	0.159	Not significant
Age → ITSK	-0.044	0.062	0.029	0.657	0.073	0.188	Not significant
Education → ATKS	0.117	0.005	0.060	0.411	0.056	0.487	Not significant
Education → ITSK	0.077	0.004	-0.052	0.351	0.129	0.018	Females with more education intend to share knowledge more than equivalent males.
Job Seniority → ATKS	-0.054	0.215	-0.132	0.045	0.078	0.331	Not significant
Job Seniority → ITSK	0.048	0.088	0.014	0.764	0.034	0.529	Not significant
Nationality → ATKS	0.039	0.355	0.007	0.893	0.031	0.677	Not significant
Nationality → ITSK	-0.004	0.883	-0.029	0.621	0.025	0.644	Not significant
Legend: ATKS - Attitude toward knowledge sharing ITSK - Intention to share knowledge							

Table 5.14 Education Differences Among Other Control Variables (Age, Gender, Job Seniority and Nationality)

Control Variable (Education)	Path Coefficients of More Education	P-Values of More Education	Path Coefficients of Less Education	P-Values of Less Education	Difference between the two groups (path- coefficients)	Difference between the two groups (p- values)	Results with regard to the group difference
Age → ATKS	-0.004	0.938	0.021	0.724	0.025	0.739	Not significant
Age → ITSK	-0.053	0.113	0.019	0.559	0.072	0.134	Not significant
Gender → ATKS	-0.086	0.031	-0.133	0.010	0.047	0.465	Not significant
Gender → ITSK	-0.005	0.896	-0.105	0.005	0.100	0.055	Females with less education intend to share knowledge less than equivalent males.
Job Seniority → ATKS	-0.068	0.142	-0.084	0.103	0.017	0.813	Not significant
Job Seniority → ITSK	-0.005	0.900	0.067	0.015	0.072	0.136	Not significant
Nationality → ATKS	0.042	0.369	0.053	0.323	0.011	0.875	Not significant
Nationality → ITSK	-0.027	0.440	0.017	0.605	0.044	0.375	Not significant
Legend: ATKS - Attitude toward knowledge sharing ITSK - Intention to share knowledge							

Table 5.15 Nationality Differences Among Other Control Variables (Age, Gender, Education and Job Seniority)

Control Variable (Education)	Path Coefficients of Emirati	P-Values of Emirati	Path Coefficients of Non-Emirati	P-Values of Non-Emirati	Difference between the two groups (path-coefficients)	Difference between the two groups (p-values)	Results with regard to the group difference
Age → ATKS	-0.028	0.522	0.071	0.234	0.099	0.179	Not significant
Age → ITSK	-0.020	0.464	-0.017	0.670	0.003	0.957	Not significant
Education → ATKS	0.098	0.012	0.114	0.070	0.016	0.825	Not significant
Education → ITSK	0.041	0.103	0.069	0.140	0.028	0.565	Not significant
Gender → ATKS	-0.113	0.003	-0.034	0.448	0.079	0.201	Not significant
Gender → ITSK	-0.051	0.070	-0.013	0.797	0.039	0.467	Not significant
Job Seniority → ATKS	-0.088	0.031	-0.018	0.756	0.070	0.318	Not significant
Job Seniority → ITSK	0.032	0.212	0.041	0.362	0.009	0.848	Not significant
Legend: ATKS - Attitude toward knowledge sharing ITSK - Intention to share knowledge							

Table 5.16 Job Seniority Differences Among Other Control Variables (Age, Gender, Education and Nationality)

Control Variable (Education)	Path Coefficients of High Job Seniority	P-Values of High Job Seniority	Path Coefficients of Low Job Seniority	P-Values of Low Job Seniority	Difference between the two groups (path-coefficients)	Difference between the two groups (p-values)	Results with regard to the group difference
Age → ATKS	-0.024	0.737	0.03	0.473	0.054	0.507	Not significant
Age → ITSK	-0.023	0.609	-0.024	0.394	0.001	0.983	Not significant
Education → ATKS	0.152	0.02	0.109	0.006	0.042	0.575	Not significant
Education → ITSK	0.054	0.249	0.048	0.074	0.006	0.913	Not significant
Gender → ATKS	-0.096	0.071	-0.099	0.009	0.003	0.967	Not significant
Gender → ITSK	-0.077	0.085	-0.038	0.222	0.039	0.493	Not significant
Nationality → ATKS	0.096	0.189	0.023	0.568	0.072	0.370	Not significant
Nationality → ITSK	0.068	0.18	-0.042	0.144	0.11	0.051	Nationality (Emiratis vs non-Emiratis) has no significance on ITSK although the difference between these two groups is significant (e.g., Emiratis with higher job seniority have higher intention to share knowledge than Emiratis with less job seniority)
Legend: ATKS - Attitude toward knowledge sharing ITSK - Intention to share knowledge							

Table 5.17 Age Differences Among Other Control Variables (Gender, Education, Job Seniority and Nationality)

Control Variable (Education)	Path Coefficients of Older Employees	P-Values of Older Employees	Path Coefficients of Younger Employees	P-Values of Younger Employees	Difference between the two groups (path- coefficients)	Difference between the two groups (p-values)	Results with regard to the group difference
Education → ATKS	0.101	0.034	0.109	0.028	0.008	0.908	Not significant
Education → ITSK	0.045	0.155	0.047	0.185	0.002	0.970	Not significant
Gender → ATKS	-0.136	0.001	-0.066	0.158	0.070	0.256	Not significant
Gender → ITSK	-0.017	0.584	-0.082	0.046	0.065	0.206	Not significant
Job Seniority → ATKS	-0.114	0.014	-0.004	0.943	0.110	0.102	Not significant
Job Seniority → ITSK	0.025	0.393	0.053	0.135	0.028	0.541	Not significant
Nationality → ATKS	-0.004	0.939	0.073	0.155	0.077	0.268	Not significant
Nationality → ITSK	-0.005	0.867	0.000	0.995	0.005	0.915	Not significant
Legend: ATKS - Attitude toward knowledge sharing ITSK - Intention to share knowledge							

In summary, the results of the group tests are quite similar to the results when including the control variables as direct effects in the research model. They reveal that females with higher education intend to share knowledge more than equivalent males and that job seniority and nationality (Emiratis vs non-Emiratis) have no significance on ITSK. However, the difference between these two groups is significant: Emiratis with higher job seniority have a stronger intention to share knowledge than Emiratis with less job seniority. Neither age nor nationality has any significant effect on either attitude to knowledge sharing or intention to share knowledge.

5.3.4 Post hoc Mediation Analysis

Assessment of Mediating Effects

To validate the mediating effect of attitude toward knowledge sharing and injunctive norms, the steps and recommendations of Nitzl et al. (2016), Zhao et al. (2010) and Hair et al. (2017) were followed (see Figure 5.3). In their guidelines they explained that in order to identify a mediating effect the indirect effect must be significant. If the direct effect is not significant, this is a full mediation; if the direct and indirect effects are significant, this is considered a partial mediation. PLS version 3.2.7 was used to test mediation. Using a 5000 bootstrapping sample was specified to estimate the significance for both direct and indirect effects.

The results of the indirect and direct effects, as well as the p-values with a two-tailed test, are presented in Table 5.18.

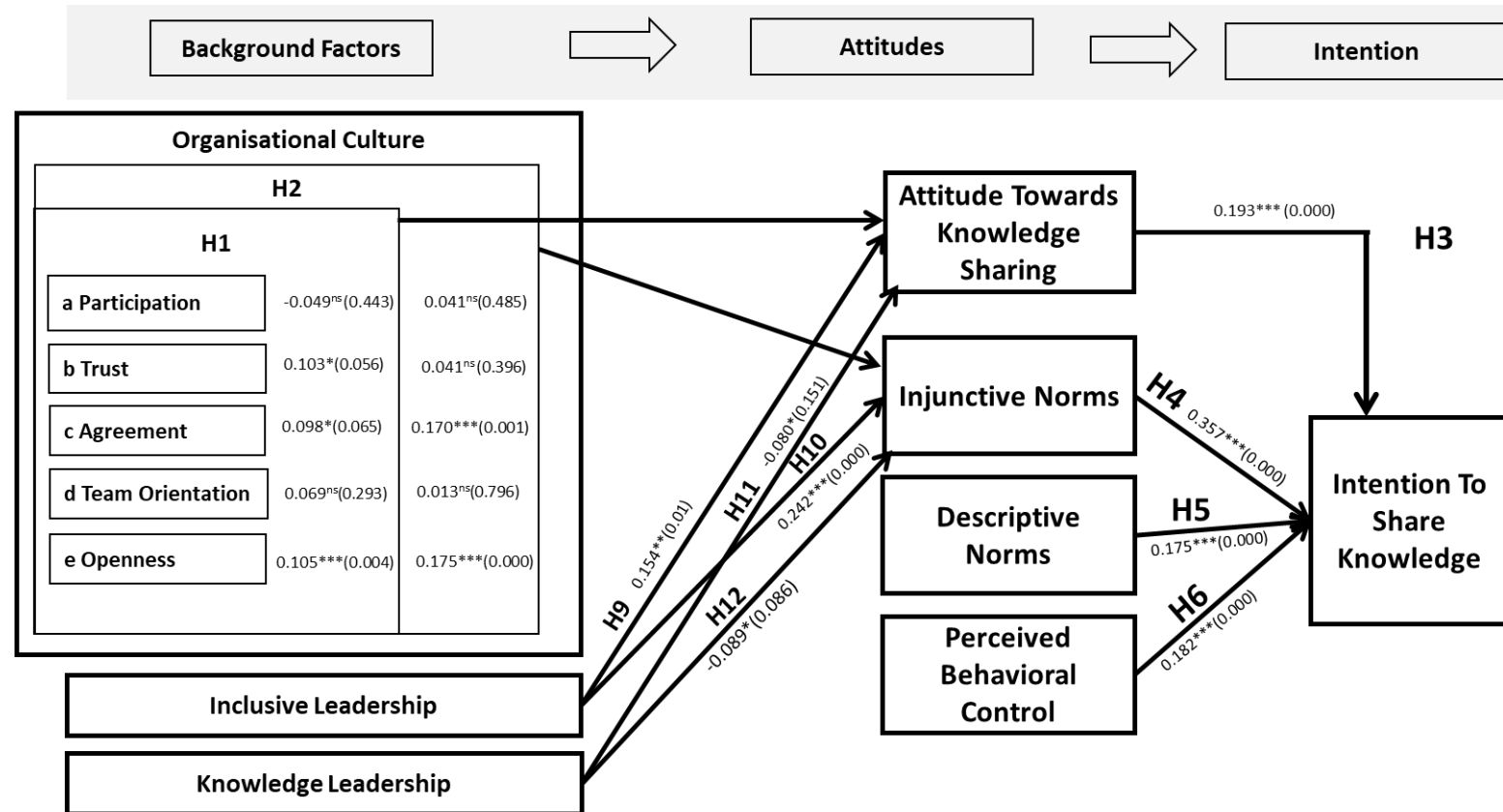
Table 5.18 Mediation Results (direct and indirect effects)

	Indirect Effect			Direct Effect			Status
	Path co- efficients	Indirect P Values		Path co- efficients	Direct P Values		
Agreement →ATKS → ITSK	0.018	0.100	Significant	-0.017	0.745	Non-Significant	Full Mediation
Openness → ATKS→ITSK	0.029	0.024	Significant	-0.009	0.817	Non-Significant	Full Mediation
Participation → ATKS → ITSK	-0.009	0.465	Non-Significant	-0.024	0.625	Non-Significant	No Effect
Team Orientation →ATKS → ITSK	0.013	0.306	Non-Significant	-0.033	0.537	Non-Significant	No Effect
Trust → ATKS → ITSK	0.020	0.092	Significant	0.068	0.066	Significant	Partial Mediation
Agreement → IN → ITSK	0.060	0.004	Significant	-0.017	0.745	Non-Significant	Full Mediation
Openness → IN → ITSK	0.062	0.001	Significant	-0.009	0.817	Non-Significant	Full Mediation
Participation → IN →ITSK	0.015	0.466	Non-Significant	-0.024	0.625	Non-Significant	No Effect
Team Orientation → IN → ITSK	0.005	0.765	Non-Significant	-0.033	0.537	Non-Significant	No Effect
Trust → IN → ITSK	0.015	0.406	Non-Significant	0.068	0.066	Significant	No Mediation
Legend: ATKS - Attitude to sharing knowledge ITSK - Intention to share knowledge IN - Injunctive norms							

As seen in Table 5.18, the results provide evidence that the relationships between agreement and openness and intention to share knowledge are fully mediated by attitude toward knowledge sharing. Additionally, the relationship between trust and intention to share knowledge is partially mediated by attitude toward knowledge sharing.

On the other hand, the results also indicate that the relationships between participation and team orientation and intention to share knowledge are not mediated by attitude toward knowledge sharing. Similarly, the relationships between agreement and openness and intention to share knowledge are fully mediated by injunctive norms. Additionally, the results reveal that the indirect effect between agreement and intention to share knowledge by injunctive norms is 0.042 higher than by attitude toward knowledge sharing. Similarly, the indirect effect between openness and intention to share knowledge by injunctive norms is 0.033 higher than by attitude toward knowledge sharing. The relationships between trust, participation and team orientation and intention to share knowledge are not mediated by injunctive norms.

Figure 5.3 Model 2: Knowledge Leadership and Inclusive Leadership Are Both Treated as Background Factors in the TRA Framework



***p<0.01, **p<0.05, *p<0.10, ns: not significant

Note: The values shown are the path coefficients with the p-values | based on two-tailed test

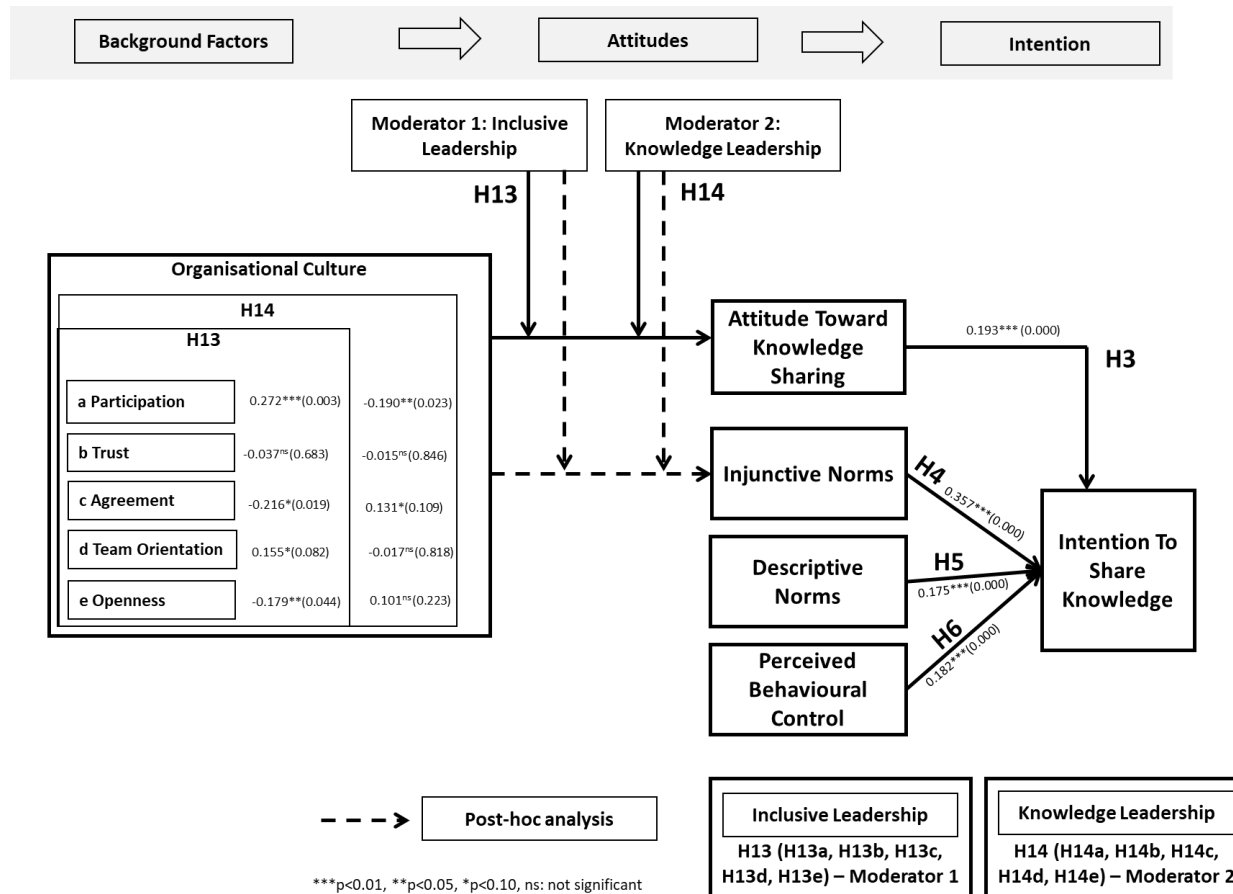
Structural Model (2) Path Coefficients:

Model 2 treats knowledge leadership and inclusive leadership as background factors in the TRA framework which makes them drivers for attitude toward knowledge sharing. The analysis shows that H1a, H1b, H1c, H1d, and H1e as well as H2a, H2b, H2c, H2d, and H2e are identical to Model 1 in regard to the path co-efficient and their significance. Model 2 results confirm that inclusive leadership positively affects attitude toward knowledge sharing (0.154***) as well as that inclusive leadership positively affects injunctive norms (0.242***). However, the knowledge leadership effect on attitude toward knowledge sharing (-0.080^{ns}) is not supported and injunctive norms (-0.089*) is significant negatively, thus also not supported. This was assumed to have a positive relationship. To investigate this further, inclusive leadership was eliminated from the model: however, the influence of knowledge leadership on injunctive norms was still not significant (0.049^{ns}) which means that there is no crowding out effect between knowledge leadership and inclusive leadership.

Table 5.19 Results of Hypothesis Testing for Model 2

Hypotheses	Path Coefficients	P-Values	Results
H9: Inclusive leadership positively affects attitude toward knowledge sharing.	0.154	0.013	Supported
H10: Inclusive leadership positively affects injunctive norms of knowledge sharing.	0.242	0.000	Supported
H11: Knowledge leadership positively affects attitude toward knowledge sharing.	-0.080	0.151	Not Supported
H12: Knowledge leadership positively affects injunctive norms of knowledge sharing.	-0.089	0.086	Not Supported Significant in the opposite direction
***p<0.01, **p<0.05, *p<0.10, ns: not significant Based on a two-tailed test			

Figure 5.4 Model 3: Knowledge Leadership and Inclusive Leadership Are Both Treated As Moderators Between Organisational Culture Dimensions and Attitude Toward Knowledge Sharing



Note: The values shown are the path coefficients with the p-values | based on two-tailed test

Structural Model (3) Path Coefficients

Model 3 treats knowledge leadership and inclusive leadership as moderators between organisational culture dimensions and attitude toward knowledge sharing.

The results confirm that inclusive leadership moderates the relationship between an organisational culture that is characterised by participation (0.272***), team orientation (0.155*) and employees' attitude toward knowledge sharing with their co-workers. The moderating effect of inclusive leadership on the relationship between an organisational culture that is characterised by trust (-0.037^{ns}) and attitude toward knowledge sharing was not supported: the moderating effect of inclusive leadership on the relationship between an organisational culture that is characterised by agreement (-0.119***), openness (-0.179**) and attitude toward knowledge sharing was also not supported but is significant in the opposite direction.

On the other hand, the moderating effects of knowledge leadership on the relationship of all organisational culture dimensions and attitude toward knowledge sharing were not supported. Specifically, the moderating effect of knowledge leadership on the relationship between an organisational culture that is characterised by trust (-0.015^{ns}), agreement (0.131^{ns}), team orientation (-0.017^{ns}), openness (0.101^{ns}), and attitude toward knowledge sharing was not supported; the relationship between participation (-0.190**) and attitude toward knowledge sharing was also not supported but the moderating effect is significant in the other direction.

Table 5.20 Results of Hypothesis Testing for Model 3

Hypotheses	Moderating Effects (Path Coefficients)	P-Values	Results
H13a: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by participation and employees' attitude toward knowledge sharing with their co-workers.	0.272	0.003	Supported
H13b: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by trust and employees' attitude toward knowledge sharing with their co-workers.	-0.037	0.677	Not Supported
H13c: Inclusive leadership positively moderates the relationship between an organisational culture	-0.119	0.022	Not Supported

Hypotheses	Moderating Effects (Path Coefficients)	P-Values	Results
that is characterised by agreement and employees' attitude toward knowledge sharing with their co-workers.			Significant in the opposite direction
H13d: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by team orientation and employees' attitude toward knowledge sharing with their co-workers.	0.155	0.098	Supported
H13e: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by openness and employees' attitude toward knowledge sharing with their co-workers positively.	-0.179	0.042	Not Supported Significant in the opposite direction
H14a: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by participation and employees' attitude toward knowledge sharing with their co-workers.	-0.190	0.025	Not Supported Significant in the opposite direction
H14b: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by trust and employees' attitude toward knowledge sharing with their co-workers.	-0.015	0.842	Not Supported
H14c: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by agreement and employees' attitude toward knowledge sharing with their co-workers.	0.131	0.118	Not Supported
H14d: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by team orientation and employees' attitude toward knowledge sharing with their co-workers.	-0.017	0.825	Not Supported
H14e: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by openness and employees' attitude toward knowledge sharing with their co-workers.	0.101	0.211	Not Supported
***p<0.01, **p<0.05, *p<0.10, ns: not significant Based on a two-tailed test			

Step 3: Assess the level of coefficient of determination (R^2)

According to Hair et al. (2017), the R^2 value varies from 0 to 1, where higher values indicate higher levels of predictive accuracy and lower values indicate lower levels of predictive accuracy. Table 5.21 reports the R^2 for all three research models.

Table 5.21 Coefficient of Determination (R^2)

Construct	R ²		
	Model 1	Model 2	Model3
Intention to Share Knowledge	0.574	0.574	0.574
Attitude Toward Sharing Knowledge	0.140	0.143	0.167
Injunctive Norms	0.249	0.252	0.264

All research models show a similar coefficient of determination (R^2). An acceptable R^2 value depends on the model complexity and research discipline. For example, in the domain of marketing, R^2 values of 0.75 are seen as substantial, 0.50 indicates moderate fit and 0.25 is regarded as weak (Hair et al., 2017). Since, the current research context is not as developed as the marketing area, somewhat lower critical values were used (Chin, 2010). For this research context, the R^2 for intention to share knowledge is substantial, for attitude toward sharing knowledge it is weak, and for injunctive norm it is moderate. As a summary, because the main focus is to explain intention to share knowledge, the degree of explanation is good.

Step 4: Assess effect size (f^2)

The effect size is evaluated for dependent variables of intention to share knowledge. The higher the f^2 , the greater the impact of an independent construct on a dependent construct (Chin, 2010).

Table 5.22 Assessing the Effect Size (f^2)

Construct	f ²		
	Model 1	Model 2	Model3
Attitude toward sharing knowledge	0.053	0.048	0.048
Injunctive Norms	0.109	0.124	0.124
Descriptive Norms	0.039	0.039	0.039
Perceived Behavioural Controls	0.044	0.043	0.043

Similar to R^2 , the f^2 test revealed that all three research models are similar. More specifically, Model 1 shows the effect sizes for attitude toward knowledge sharing (0.053), injunctive norms (0.109), descriptive norms (0.039), and perceived behavioural controls (0.044).

Models 2 and 3 show the same effect sizes: attitude toward knowledge sharing (0.048),

descriptive norms (0.039), perceived behavioural controls (0.043), and injunctive norms (0.124). Even though the values for effect sizes in both Models 2 and 3 are identical and somewhat different to Model 1, the effect sizes for all models are small. Therefore, three of the four constructs explain the intention to share knowledge almost equally whereas injunctive norms explain intention to share knowledge around three times more. Therefore, injunctive norms seem to have the most important influence on intention to share knowledge.

Step 5: Assess the Predictive Relevance Q^2

Model 1: The Q^2 values for intention to share knowledge (0.340), attitude toward knowledge sharing (0.101) and injunctive norms (0.135) are all > 0 , thus the model has predictive relevance.

Model 2: The Q^2 values for intention to share knowledge (0.340), attitude toward knowledge sharing (0.101) and injunctive norms (0.135) are all > 0 , thus the model has predictive relevance.

Model 3: The Q^2 values for intention to share knowledge (0.340), attitude toward knowledge sharing (0.115) and injunctive norms (0.140) are all > 0 , thus the model has predictive relevance.

To sum up, all three models are suitable to predict the influence of organisational culture dimensions on knowledge sharing intention, attitude toward sharing knowledge and injunctive norms as shown in Table 5.23.

Table 5.23 Predictive Relevance (Q^2)

Construct	Q2		
	Model 1	Model 2	Model3
Intention to share knowledge	0.340	0.340	0.340
Attitude toward sharing knowledge	0.101	0.101	0.115
Injunctive norms	0.135	0.135	0.140

Step 6: Assess the q^2 Effect Size

Model 1: The results show that the independent constructs have no predictive relevance

for intention to share knowledge, apart from injunctive norms which show a small predictive effect size: attitude toward knowledge sharing (0.018), injunctive norms (0.079), descriptive norms (0.013), and perceived behavioural controls (0.015).

Model 2: The effect sizes on intention to share knowledge are: attitude toward knowledge sharing (0.018), injunctive norms (0.046), descriptive norms (0.013), and perceived behavioural controls (0.015). Again, only injunctive norms show a small effect size on intention to share knowledge, whereas all other remaining factors show no predictive effect.

Model 3: The results show that all independent constructs reveal no effect size on intention to share knowledge apart from injunctive norms: attitude toward knowledge sharing (0.018), injunctive norms (0.047), descriptive norms (0.014), and perceived behavioural controls (0.015).

3.3.5.1 Moderation Results

In order to gain deeper insight into whether inclusive leadership and knowledge leadership have a moderating effect on the relationship between organisational culture and knowledge sharing intentions, a moderation test was performed on each individual organisational culture dimension.

Moderation effects of both knowledge leadership and inclusive leadership were modelled using a two-stage approach with standardized data (Hair et al., 2017). The interaction terms (e.g., OC×knowledge leadership) reflect the moderator effects. All path coefficients of the moderation effects are reported in Table 5.25 and Table 5.27.

The moderating effects in Model 3 show that the hypothesised moderation relationship of inclusive leadership on participation (H13a) and attitude toward knowledge sharing is supported. This means that in cases of a high inclusive leadership (+1 Standard Deviation), participation has a positive influence on attitude toward knowledge sharing (path coefficient of 0.223) and in cases of low inclusive leadership (-1 Standard Deviation), it has a negative influence (path coefficient of -0.321).

Similarly, the hypothesised moderation effect of inclusive leadership on team orientation (H13d) and attitude toward knowledge sharing is supported. This means that with high

cases of inclusive leadership (+1 Standard Deviation), team orientation has a positive influence on attitude toward knowledge sharing (the path coefficient is 0.224) and with low cases of inclusive leadership (-1 Standard Deviation) it has a negative influence (path coefficient of -0.086). Additionally, when inclusive leadership is at the mean, team orientation has no significant effect on attitude toward knowledge sharing.

Contrary to expectations, the hypothesised moderation effects on inclusive leadership and trust (H13b), agreement (H13c), openness (H13e) and attitude toward knowledge sharing are not supported. Additionally, H13c and H13e are significant in the opposite direction. This means that in cases of high inclusive leadership (+1 Standard Deviation), both agreement (path coefficient of -0.021) and openness (path coefficient of -0.074) have a negative influence on attitude toward knowledge sharing. In cases of low inclusive leadership (-1 Standard Deviation), both agreement (path coefficient of 0.217) and openness (path coefficient of 0.284) have a positive influence on attitude toward knowledge sharing. Where inclusive leadership is at the mean both agreement and openness have a slight significant effect on attitude toward knowledge sharing.

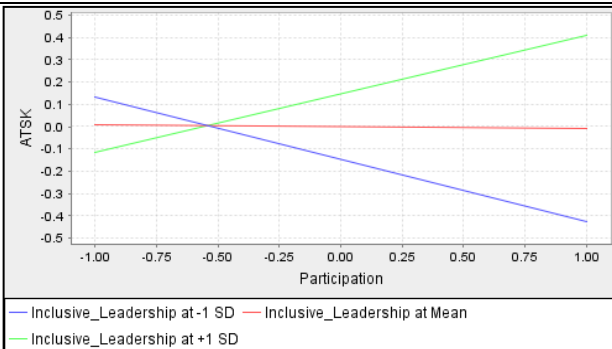
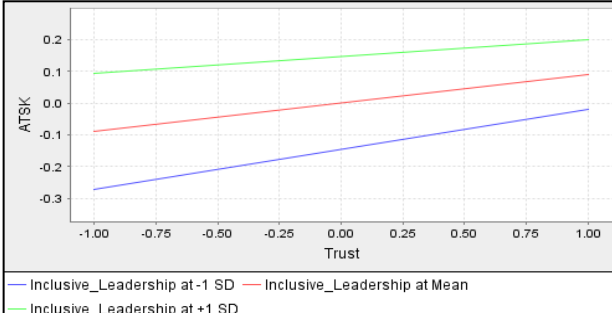
When looking at the moderation effects of knowledge leadership on the relationship between organisational culture dimensions in the model, the findings show that knowledge leadership's effects on participation (H14a), trust (H14b), agreement (H14c), team orientation (H14d), openness (H14e) and attitude toward knowledge sharing are not supported. In addition, H14a is significant in the opposite direction. This means in case of high knowledge leadership (+1 Standard Deviation), participation has a negative influence on attitude toward knowledge sharing (path coefficient of -0.239). In cases of low knowledge leadership (-1 Standard Deviation), participation has a positive influence on attitude toward knowledge sharing (path coefficient of 0.141). Finally, when knowledge leadership is at the mean, participation has no effect on attitude toward knowledge sharing.

Table 5.24 Model 3 Moderation Effects:– Inclusive Leadership Moderating the Relationship Between Organisational Culture Dimensions and Attitude Toward Knowledge Sharing

Moderator: Inclusive Leadership (IL) Dependent Variable: Attitude Towards Knowledge Sharing				
#	Independent Variable	Testing Method (All independent variables are in the model)		
		Path coefficient	P-value	Significance
1	Participation	0.272	0.003	Significant
2	Trust	-0.037	0.677	Not significant
3	Agreement	-0.119	0.022	Significant
4	Team Orientation	0.155	0.098	Significant
5	Openness	-0.179	0.042	Significant

In addition, Table 5.25 shows a diagram plot for each moderation effect of inclusive leadership on the relationship between organisational culture dimensions and attitude to knowledge sharing.

Table 5.25 Plot Diagram of Moderation Effects: Inclusive Leadership Moderating The Relationship Between Organisational Culture Dimensions and Attitude Toward Knowledge Sharing

Inclusive leadership	
 <p>— Inclusive_Leadership at -1 SD — Inclusive_Leadership at Mean — Inclusive_Leadership at +1 SD</p>	<p>H13a: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by participation and employees' attitude toward knowledge sharing with their co-workers.</p> <p>Significant.</p>
 <p>— Inclusive_Leadership at -1 SD — Inclusive_Leadership at Mean — Inclusive_Leadership at +1 SD</p>	<p>H13b: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by trust and employees' attitude toward knowledge sharing with their co-workers.</p> <p>Not significant; only significance in direct effect.</p>

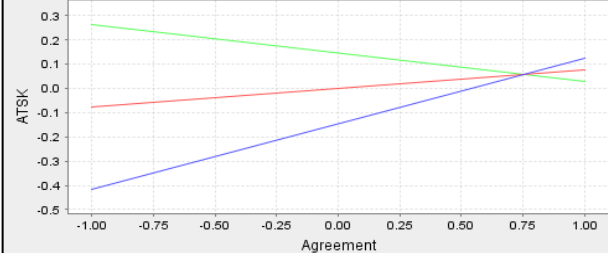
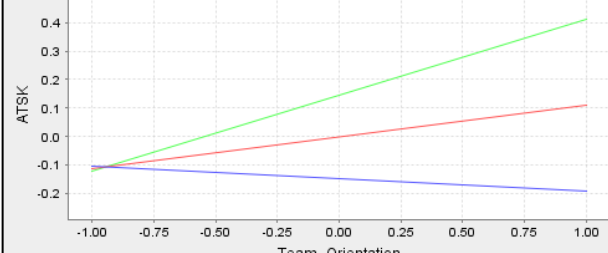
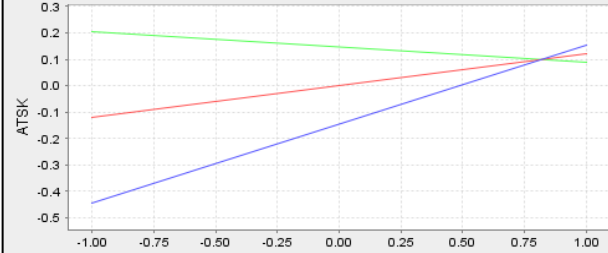
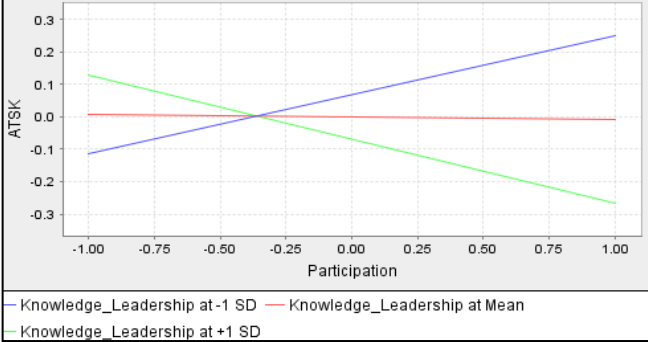
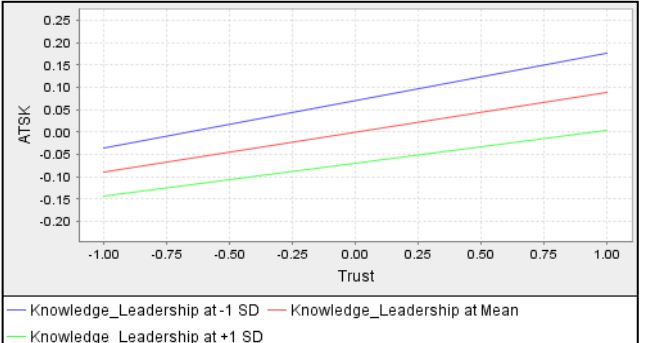
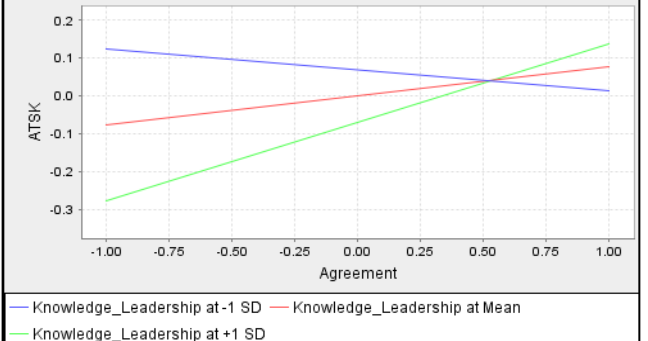
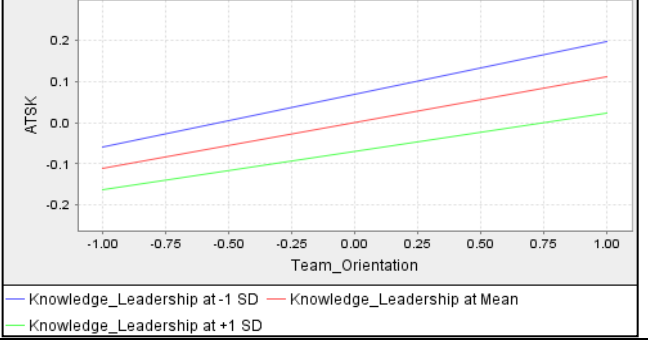
 <p>— Inclusive_Leadership at -1 SD — Inclusive_Leadership at Mean — Inclusive_Leadership at +1 SD</p>	<p>H13c: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by agreement and employees' attitude toward knowledge sharing with their co-workers.</p> <p>Not supported, but significant in the other direction.</p>
 <p>— Inclusive_Leadership at -1 SD — Inclusive_Leadership at Mean — Inclusive_Leadership at +1 SD</p>	<p>H13d: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by team orientation and employees' attitude to knowledge sharing with their co-workers.</p> <p>Significant.</p>
 <p>— Inclusive_Leadership at -1 SD — Inclusive_Leadership at Mean — Inclusive_Leadership at +1 SD</p>	<p>H13e: Inclusive leadership positively moderates the relationship between an organisational culture that is characterised by openness and employees' attitude toward knowledge sharing with their co-workers.</p> <p>Not supported but significant in the other direction.</p>
<p>Note: Inclusive leadership is at the mean: This is the case of how the model is without effect of the moderator</p>	

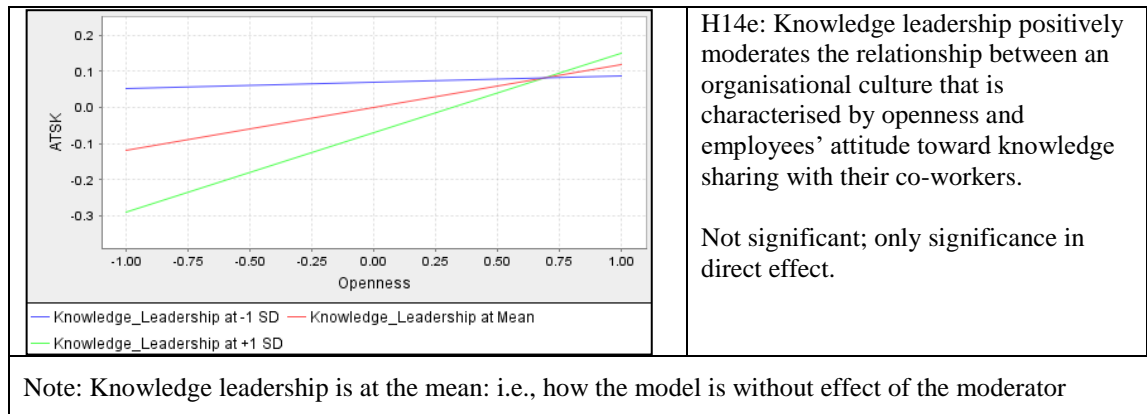
Table 5.26 Model 3 Moderation Effects: Knowledge Leadership Moderating The Relationship Between Organisational Culture Dimensions and Attitude Toward Knowledge Sharing

Moderator: Knowledge Leadership (KL)				
Dependent Variable: Attitude Towards Knowledge Sharing				
#	Independent Variable	Testing Method (All independent variables are in the model)		
		Path coefficient	P-value	Significance
1	Participation	-0.190	0.025	Significant
2	Trust	-0.015	0.842	Not significant
3	Agreement	0.131	0.118	Not significant
4	Team Orientation	-0.017	0.825	Not significant
5	Openness	0.101	0.211	Not significant

Table 5.27 shows diagram plots for each moderation effect of knowledge leadership on the relationship between organisational culture dimensions and attitude toward knowledge sharing.

Table 5.27 Plot Diagram Of Moderation Effects: Knowledge Leadership Moderating The Relationship Between Organisational Culture Dimensions and Attitude Towards Knowledge Sharing

Knowledge leadership	
 <p>Knowledge_Leadership at -1 SD Knowledge_Leadership at Mean Knowledge_Leadership at +1 SD</p>	<p>H14a: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by participation and employees' attitude toward knowledge sharing with their co-workers.</p> <p>Not supported but significant in the other direction.</p>
 <p>Knowledge_Leadership at -1 SD Knowledge_Leadership at Mean Knowledge_Leadership at +1 SD</p>	<p>H14b: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by trust and employees' attitude toward knowledge sharing with their co-workers.</p> <p>Not significant, only significance in direct effect.</p>
 <p>Knowledge_Leadership at -1 SD Knowledge_Leadership at Mean Knowledge_Leadership at +1 SD</p>	<p>H14c: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by agreement and employees' attitude toward knowledge sharing with their co-workers.</p> <p>Not significant, only significance in direct effect.</p>
 <p>Knowledge_Leadership at -1 SD Knowledge_Leadership at Mean Knowledge_Leadership at +1 SD</p>	<p>H14d: Knowledge leadership positively moderates the relationship between an organisational culture that is characterised by team orientation and employees' attitude toward knowledge sharing with their co-workers.</p> <p>Not significant.</p>



3.3.5.2 Moderation post hoc analysis

A post hoc analysis is a further analysis which was not pre-planned as it is performed on the data that was collected to find patterns that were not primary objectives of the study. Thus, it is considered as additional analysis after performing all main analysis of the research. In Model 3, the moderating effects of both inclusive leadership and knowledge leadership on the relationship between attitude toward knowledge sharing and organisational culture dimensions were tested. As injunctive norms of knowledge sharing were the second mediator in the model, the thought behind this analysis is that the background factors within the TRA framework have an impact on both attitude toward knowledge sharing as well as injunctive norms. In addition, both attitude toward knowledge sharing and injunctive norm have an effect on intention to share knowledge. Table 5.28 shows the moderation effects of inclusive leadership on the relationship between organisational culture dimensions and injunctive norms. The results reveal there was no moderating effects of inclusive leadership in the model.

Table 5.28 Model 3 Moderation Effects: Inclusive Leadership Moderating The Relationship Between Organisational Culture Dimensions and Injunctive Norms

Moderator: Inclusive Leadership (IL) Dependent Variable: Injunctive Norm				
#	Independent Variable	Testing Method (All independent variables are in the model)		
		Path coefficient	P-value	Significance
1	Participation	0.024	0.602	Not significant
2	Trust	0.068	0.303	Not significant
3	Agreement	-0.028	0.733	Not significant
4	Team Orientation	-0.024	0.735	Not significant
5	Openness	-0.102	0.177	Not significant

Similarly, a moderation post hoc analysis was performed in order to explore the moderating effects of knowledge leadership on the relationship between organisation culture dimensions and injunctive norms.

When looking at the moderating effects of knowledge leadership on organisational culture dimensions and injunctive norms, the findings show that knowledge leadership only moderates the relationship between trust and injunctive norms. This means that in cases of high inclusive leadership (+1 Standard Deviation), trust (effect is -0.074) has a negative influence on injunctive norms, while in the case of low knowledge leadership (-1 Standard Deviation), it (effect is 0.156) has a positive influence. In addition, where knowledge leadership is at the mean, trust does not have a significant influence on injunctive norms. Table 5.29 and Table 5.30 demonstrate the full results of the moderation analysis.

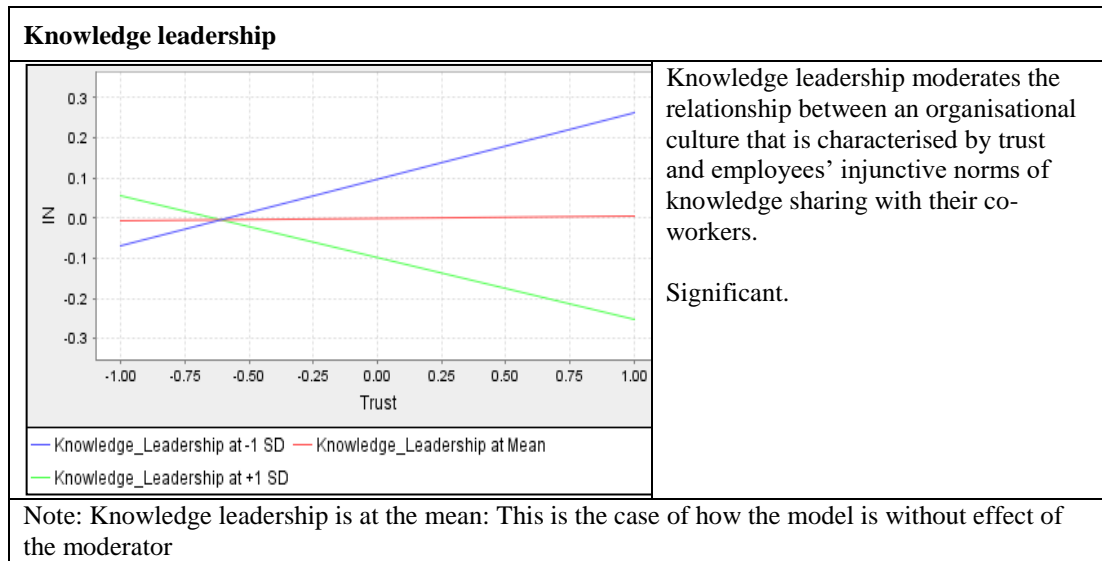
Table 5.29 shows the moderation effects of knowledge leadership on the relationship between organisational culture dimensions and injunctive norms. The results reveal there were no moderation effects except for trust.

Table 5.29 Model 3 Moderation Effects: Knowledge Leadership Moderating The Relationship Between Organisational Culture Dimensions and Injunctive Norms

Moderator: Knowledge Leadership (KL) Dependent Variable: Injunctive Norms				
#	Independent Variable	Testing Method (All independent variables are in the model)		
		Path coefficient	P-value	Significance
1	Participation	-0.014	0.748	Not significant
2	Trust	-0.115	0.066	Significant
3	Agreement	0.011	0.879	Not significant
4	Team Orientation	0.092	0.142	Not significant
5	Openness	0.042	0.528	Not significant

Table 5.30 shows the diagram plot for the moderation effect of knowledge leadership on the relationship between an organisational culture that is characterised by trust and injunctive norms as it is the only significant effect.

Table 5.30 Plot Diagram of Moderation Effects: Knowledge Leadership Moderating The Relationship Between Organisational Culture Dimensions and Injunctive Norms



5.4 Summary

Chapter 5 fulfilled its objective by analysing and interpreting the quantitative data. It explained the context of the study and the data collection process. It also explained the technique used to analyse the three study models. The analysis followed the steps explained in Chapter 4 which included evaluation of the measurement model. This consists of evaluation of both reflective and formative measurements and finally evaluation of the structural model which was followed by analysing all three research models. At the end of the chapter, further post hoc analysis explored and shed additional light on moderating and mediating effects.

Chapter 6: Presentation, Analysis and Interpretation of Qualitative Data

6.1 Introduction

Chapter 4 discussed the research methodology and explained both the quantitative and qualitative methodologies. Chapter 5 presented the quantitative analysis and interpretation of the quantitative data.

This chapter aims to analyse the qualitative data following a deductive thematic analysis based on the main relationships tested by the quantitative research methods. This chapter also aims to provide some explanation and insights for the quantitative data which were not supported as initially hypothesised. Next, it covers some of the demographic factors (age, gender, job experience, education and nationality) which could impact knowledge sharing behavioural intentions among employees. This chapter includes the analysis of both pilot study and main study participants. Pilot study participants were from the Risk and Disaster Management, Smart Government Services, Academia and Tourism sectors; main study participants were from three industry sectors: Utilities, Law and Security, and Law Enforcement (see Appendix 7 for details).

6.2 Leadership Impact on Organisational Culture

In order to understand if leadership can influence the culture of organisations, respondents were asked a series of questions to ascertain if leadership would be emphasised by participants in general. The interviews also included questions which contained some of the characteristics of both inclusive leadership and knowledge leadership. An example that demonstrates leadership influence on organisation culture is that of Law and Security 14. She shared her experience which showed that the leadership has resulted in the organisational culture being less trusting, less team oriented, and less open. It also explains that when knowledge is shared it is shared to the minimum.

I went through an experience whereby my line manager was the strangest person I have ever seen [laughing]. Everything for him was a secret. So, sometimes when we received requests from other departments, he used to tell me to reply briefly to them – as simple as one line –and never elaborate... I observed that he didn't want us to solve the problem, only treat its symptoms.

Another example came from Law Enforcement 19 who, at end of his interview when he was asked if he wished to add anything, said:

I just want to stress that leadership has a very significant role in nurturing the knowledge sharing culture ... and without top management support we wouldn't be able to accomplish many things, especially with regard to knowledge management.

From these two examples, it is evident that leadership can affect organisation culture for better or worse in terms of knowledge sharing among employees in an organisational context. A further interesting example was given by Academia 1 who illustrated the huge impact leadership has on organisational culture: “we had five CEOs in the last four years and every CEO had his own style of leadership and it is the employees that suffered”.

Law Enforcement 19 explained that his organisation had been through a dramatic change in the organisational culture and also highlighted several other factors such as the smart transformation of processes, i.e., the change from manual to online/electronic. He also pointed out that the number of physical customer care counters had reduced as many requests were now received through the mobile application and how management attitudes had changed over the years: “Previously the mentality of top management was to keep the way we do things, but today top management wants to predict what the need will be in 20 years' time and plan for it today”.

6.3 Inclusive Leadership and Organisational Culture

The impact of inclusive leadership on organisational culture was evident throughout the interviews. One of the sub-dimensions of inclusive leadership which became evident was humility, that is leaders are able to learn from the different views and opinions of others. Law Enforcement 19 shared the example of when he had been asked a question in a meeting with the CEO and Deputy CEO: at the time he did not know the answer but did know that one of his junior staff was handling this operation so he told them that he would check and get back to them.

Then I asked the employee and she showed me how is the calculation is done. There is nothing wrong if we learn from junior staff... The era of people who assume they know everything has ended: we don't know everything and we shouldn't know everything. But at least we should know who has the knowledge and reach out to them.

Another example was provided by Law and Security 16 with regard to his manager. He explained that he had previously noticed that when something happened his manager used to only listen to one side of the story: Law and Security 16 then provided him with advice

which he listened to. He said “I told him that we need to hear this from both sides and he started to listen. So, I see that he accepts advice and change if the advice was good”.

Law Enforcement 18 shared his experience which demonstrated how inclusive leadership facilitates both openness and agreement in organisational culture. He described his manager’s approach as providing employees with freedom to think and brainstorm several solutions and agree on it. Sometimes his manager gives them additional insights to improve the solution but he does not interfere with their thought process: “He gives us space and doesn’t interfere. He also empowers us sometimes even if he doesn’t fully agree with the solution”.

6.4 Knowledge Leadership and Organisational Culture

Utilities 8 gave an example where lack of knowledge leadership skills existed and how it impacted the organisational culture when asked “How does your manager react towards good and bad news regarding work?”

It depends. On what information; let’s divide them into two. Technical information, the manager would, you know, tell you go solve it, find other issues, or find other people who can solve it for you. There is another type of problem, strongly related to the culture and they don’t react positively to those which unfortunately impacts work a lot. Sometimes, he assigns some individuals to work with us, but some of them do not cooperate. So, in these cases, we report these incidents to him. Accordingly, he reacts to this by giving a warning; this is bad in the culture. These kinds of problems are more frequent than the technical ones.

This example shows that his manager does not deal well with challenges and is not making any effort to build an environment of trust: as a result of the example above, employees might be reluctant to share problems when they occur in future.

6.5 Leadership Impact on Knowledge Sharing Behavioural Intentions

Law Enforcement 18 demonstrated that leadership plays a crucial role in order to nurture an organisational culture that supports knowledge sharing. He remarked, “What would make knowledge sharing more difficult would be if the top management didn’t support the culture of knowledge sharing”.

The rest of the respondents all noted how both inclusive leadership and knowledge leadership can influence employees’ knowledge sharing behavioural intentions.

6.5.1 *Inclusive Leadership Impact on Knowledge Sharing*

Law and Security 14 highlighted one of the characteristics of inclusive leadership that should be visible in the organisation – accountability.

I think the advantages of having a policy is that it would provide clarity and promotes the importance of knowledge capturing and sharing in the organisation. For example, it is the responsibility of all employees to capture knowledge and upload it to the knowledge database. Nowadays, we measure the maturity of organisation by organisational knowledge.

This example shows that the leadership has formalised the processes by enforcing a policy that is followed by all employees equally and thus manages the expectations that knowledge sharing is everyone's responsibility. Law Enforcement 18 highlighted that lack of clear and communicated accountabilities could affect knowledge sharing negatively: this also shows low degree of openness in the organisational culture.

Based on our core business function, rules can be produced at any time, and rules can change or be amended and therefore employees should be notified and knowledge about why these changes are made should be shared. We faced some challenges in the past when one rule was generated and the department affected was not informed. Therefore, there should be a systematic way to spread this new knowledge as this, of course, impacts the organisation.

Law and Security 12 shared two extreme examples of her current and previous managers in which her previous manager showed a low degree of inclusive leadership which in turn created a low degree of openness in the culture. She compared this to her new manager who is more inclusive and how this had transformed the organisational culture to be more open.

[Where] I am working in at the moment, yes, I see that top management, my direct manager and my co-workers are very cooperative and they share their knowledge with me and they appreciate me for sharing my knowledge. My current manager always listens to me if I have any comment to improve or any suggestions and he takes it to heart. But if you will allow me to compare my previous manager [sarcastic laugh]. Actually, no, we cannot compare. His way of communication was totally wrong and he did not want to receive any feedback from anyone. I remember that I even once filed a complaint against him because of that.

Law and Security 12 was asked how she reacted if she was in a meeting and she did not understand something. She stressed that she would always ask if she was unclear or had doubts about the issues discussed. She said, "I don't care what others think about me; if they think I am stupid or not. Because this stupid question can prevent something bad

from happening or [help] to do something better”. This also demonstrates that there is a high degree of inclusive leadership where questions are welcomed as her manager encourages her to ask questions and provides her with the information she needs to do her work.

Respondents were asked “Do your manager and co-workers appreciate it when you share knowledge?” Most of the respondents replied that their managers acknowledged their contributions. For example, “Yes, very much. Sometimes they write appreciation emails and they copy the entire team and this indicates that the knowledge being shared by some is well received and its useful for the team to grow, and it’s been appreciated” (Utilities 5). Law and Security 17 said, “Yes, he has done so many initiatives. For example, he has organised several gatherings for the department staff to get to know each other. He also rewards employees and acknowledges them when they accomplish something”. This shows a high level of inclusive leadership as the leadership provides recognition for employees’ work contributions. Law and Security 12 said that his peers and his reporting employees were very appreciative when he shared his knowledge with them. They acknowledged and respected that he had gained knowledge over the years and always approached him when they needed to clarify something. However, his experience with his previous line managers was different:

For my line manager, over the 20 years I worked I had many bosses, so many of them did not appreciate my knowledge at all. But my current boss is very supportive and he always takes my view on things.

Two respondents, however, had opposite views. For instance, Utilities 11 said, “I don’t think so!” and Utilities 10 said, “Sometimes [laughing]”; when she was asked to elaborate, she explained:

I think, sometimes, that knowledge sharing is welcomed, and I think other times that maybe it’s not, so I think with everything in this world, perhaps its timing, and perhaps it’s [to do] with personalities, but in general I do believe that they are a team, and I think the whole team shares its knowledge quite openly or quite freely, and I think mostly it’s appreciated.

Law and Security 14 shared an example which shows inclusive leadership whereby her manager is attentive to new opportunities to improve work processes and how this helps to nurture an agreement culture. She explained that when her team work on an idea collectively, they propose several scenarios and everyone has to agree on the best

solution. She elaborated, “None of the ideas I’ve suggested to my management have been rejected, whether my own idea or a collective idea with a team. Maybe because each idea we propose is to solve an existing problem”.

6.5.2 *Knowledge Leadership Impact on Knowledge Sharing*

Knowledge leadership requires that leaders should have various interpersonal and organisational skills that enable them to drive cultural change and facilitate knowledge transfer among employees (Yang et al., 2014).

Utilities 6 commented on one of the knowledge leadership sub-dimensions, cooperation and trust. He explained how his manager reacts when problems occur, demonstrating lack of cooperation from the management: “If I encounter any problem at work and I ask my manager, she says, ‘for any problems, don’t come with a problem, come with a solution’. This is her approach”. This shows a low degree of knowledge leadership because managers should be willing to work with their teams to solve problems or at least try to help them to think about solutions collectively.

Respondents were asked “Does your manager have initiatives in place to try to improve the atmosphere of the workplace?” Utilities 6 answered:

Actually, no. The atmosphere was impacted by the organisational culture and style of how things are and mentality of leadership. Our manager, I think, she did not do many activities to change that... When I started working I was a bit shocked because, although my manager is younger than me, she has a sort of traditional approach to business. This isn’t going to work for the long term.

He further explained her approach as commanding, giving rules and limitations instead of working with the team and listening to them. He advised her that she needed to change her style by listening to employees as they might have important insights and that her current approach was not practical and could not be sustained. Utilities 8 commented, “There were initiatives, but they stayed as ideas, nothing was applied. Talking about initiatives is different to implementing them”. And Utilities 9 groaned, “No I can’t recall anything”.

Utilities 6 was asked, “What kinds of factors would make knowledge sharing easier or more difficult?” He addressed the importance of knowledge leadership whereby knowledge leaders must set an example for others: “First thing, there should be

management support and management involvement. For example, the management should be involved in the process of knowledge sharing itself and be role models,” adding, “There are many factors that could make knowledge sharing difficult. For example, if there was lack of leadership support and lack of involvement of the management in the knowledge sharing programs, there will be lack of involvement from employees”. Utilities 10 stated that she does not see much knowledge sharing, either by top management or her team as well as her line manager. The respondents also addressed how knowledge leadership contributes to building a culture of trust. Utilities 7:

[It has a b]ig role, because leadership can facilitate the politics within the organisation if they have the right skills. They can have too many or little formalities. They can also help in creating a trusting culture or lots of distrust. They can provide clarity or they can contribute to making the situation unclear.

These examples reveal that there is a low degree of knowledge leadership as knowledge leaders should always be eager to gain new knowledge to set an example to the others and not only rely on traditional ways of management.

Other respondents’ views were different and revealed a high degree of knowledge leadership: for example, for Law Enforcement 19, “Top management and senior management are very supportive and they share their knowledge all the time. We also take advantage of the knowledge week [an event arranged by the organisation dedicated to KM activities] to share our knowledge on latest trends”. Utilities 5 explained how leadership supported knowledge-sharing initiatives:

The organisation always believes in the leadership direction of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, and tries to always enhance knowledge-sharing practice as the leadership’s directions. Therefore, there is sharing of knowledge among the divisions and departments and people. Usually, there are a lot of activities happening in the organisation [such as Sharing Reward Scheme, Book Reviews, sharing platform and many other sharing activities]. These activities always help people to gain knowledge, and also share it with other people.

Utilities 5 was also asked about factors that could make knowledge-sharing easier. He stressed that leadership should support and be highly involved in the knowledge-sharing activities to set an example for their employees. He further explained, “On the other hand, knowledge-sharing can be difficult, if there is lack of leadership and management support and lack of involvement of the leadership and management in the knowledge sharing

programs”. Law Enforcement 18 described an example where leadership set a good example for their teams to enhance knowledge sharing:

One of the positive things in our organisation is that we have a caring general manager who is keen to attend all the activities and programs that our knowledge management section provides. His participation and support in these activities raises awareness in one way or another for senior management. Therefore, senior managers started to host knowledge programs in their units, even with our guidance whenever it is needed.

Some respondents shared their experiences of the knowledge integration and innovation sub-dimension. Law Enforcement 19 described a situation where he felt overloaded with work and his line manager was the CEO. So, he had a discussion with him about the responsibilities assigned to him. And the CEO responded:

‘I am doing this to prepare you for a more leading position: I don’t want you to handle a position without experiencing all these challenges’. So, I appreciated his trust, transparency and prediction of future and sharing these plans with me. This made me more motivated and excited about work.

This example shows how leaders develop a reward system to stimulate their team members’ learning behaviour. Additionally, Law and Security 17 shared his experience, “Our top management and our team have a WhatsApp group and we talk freely with top management. They are very supportive and we don’t abuse this group: it’s only for sharing good and worthy ideas”.

Utilities 8, however, narrated how his manager did not take any action to enhance his innovative ability, but instead showed favouritism to other team members creating an atmosphere of mistrust: “Honestly speaking, my manager doesn’t care, so I stopped proposing new ideas. I have a bunch of new ideas right now in my drawer, waiting for my new manager to come”. Utilities 8 also said that his manager was not willing to listen to any suggestions: “Let’s say I’m not one of those people or teams that are from their inner circle. He just listens to their inner circle”. Law and Security 13 shared an interesting perspective:

Currently my manager’s background is only focused on management so sharing is mostly concerned about how to go about delivery of projects and how to manage targets, etc. But he is not concerned about technical or specialised knowledge which can impact the business which I think can be a problem in the long run.

Another thought expressed by Utilities 9:

It all depends on how I frame my idea. If the employees will end up with the credits then it's more likely to be rejected. But if I try to link it to some direction of his, then he would accept it because he could take part of the credit.

These examples shows that leaders do not trust all team members equally. Additionally, some leaders are concerned with measuring performance instead of enhancing the team's specialised knowledge. Further, they do not take the initiative to lead their team members to execute innovative ideas unless it serves them regardless of any potential overall benefit of the organisation. At the same time, the leadership in this example do not practice approaches to stimulate team learning behaviour.

Therefore, the qualitative data provides good insights that inclusive leadership and knowledge leadership may have an impact on attitude toward knowledge sharing. However, some of the insights given by the participants shed some light on why knowledge leadership influence on attitude toward knowledge sharing was not confirmed by quantitative methods:

- 1- Some of the participants perceived that their leaders' interpersonal and organisational skills were used for their personal growth and benefits, not to drive cultural change and facilitate knowledge transfer among their teams.
- 2- Some participants observed that their managers were concerned with management issues rather than focusing on and taking time to enhance the team members' innovative ability within their technical and specialised domains.
- 3- One participant highlighted that his leader did not trust team members equally and favoured some over others.
- 4- Some participants highlighted that unless their ideas benefitted the leaders' agenda, they were likely to be rejected.

6.6 Organisational Culture Impact on Knowledge Sharing Behavioural Intentions

The qualitative data shows that the organisational culture has an impact on knowledge sharing behavioural among employees. Law and Security 13 described how organisational culture affected knowledge sharing among employees. He also pointed out that an organisation's size and structure can have an impact on the culture: for instance,

the larger the organisation, the harder the knowledge sharing would be and the more vertical the structure, the more difficult it is to share knowledge. His organisation had a vertical structure and was mostly confined to formal knowledge sharing. He remarked, “However, we have a lot of formal events where knowledge sharing happens. But friendly day-to-day knowledge sharing? Not so much, as everything should be formal and part of work processes”.

The interviews also revealed that the specific organisational dimensions of this study (participation, trust, agreement, team orientation and openness) have an impact on knowledge sharing. The following section addresses each dimension and how it affects knowledge sharing.

6.6.1 Participation Impact on Knowledge Sharing Behavioural Intentions

One of the organisational culture dimensions that was stressed during the interviews was participation. Utilities 6 shared a story of how the organisational culture had changed from one of low participation to encourage more employee participation.

I believe it has changed dramatically as people were afraid to talk and express their ideas, and opinions freely with regard to many organisational topics such as policies, etc. However, nowadays, this has changed because management supports that each employee has the right to give his ideas and give his/her point of view about the organisation’s policies: even [though] the policies are approved by the management, employees are supposed to read those policies and give feedback before approval is processed.

Two respondents referred to participation’s impact on knowledge sharing: Law and Security 14 shared her experience of a high participation culture: “...we try to include everyone in the discussion as we believe that everyone will share what they know. Then, when we decide on a decision, we make sure that we all agree on it”.

On the other hand, Utilities 11, when asked, “Do your manager and co-workers appreciate it when you share knowledge?” expressed her view that sometimes people participate out of shame or because of prior expectations that they should know everything.

I don’t think so! I don’t think so because in other organisations where I have worked there was never anything wrong with not knowing. However, here, when you are sharing your knowledge, people...mm...[hesitation] Usually you get a reaction, yay I know! Because I feel the culture here is, if you say you don’t know something, especially when you are in a higher position, it’s a bad thing; whereas other companies where I worked, it’s not a bad thing at all. It’s impossible for all of us to know everything and you can learn from

everyone regardless of position and title.

Thus, it appears that it is possible for an organisation to ‘support’ participation, but not necessarily for the correct reasons; workers may feel that their participation is forced, rather than supported.

Law and Security 16 shared another example of forced participation by the management. He stated, “I was appointed to join two committees in my life which weren’t relevant to me because my speciality is very different and I wasn’t happy about that”. This example, shows that even if there was participation it would not be valuable due to the particular area of knowledge discussed on these committees.

Two respondents shed light on additional issues with regard to participation in an organisation. For example, Government Smart Services 3 explained that sometimes participation happens for the wrong reason, and ends up having no value: “the others might just be afraid to say I don’t know. So, they might talk, talk and talk but actually not give you the answer or not give you any valuable information”. Additionally, when Utilities 7 was asked to describe a situation where she thought that knowledge sharing among employees was essential for the organisation, she noted that inviting employees to take part is somewhat challenging when done at a late stage. She explained:

Lots of things are happening in terms of final vision. As employees, we are not involved from the beginning, then we need to do it for the sake of doing. Improvisation in the process is not happening and there are times I have sent an email with employment ideas [and it has been] ignored. No mechanism to ensure that this is done.

The qualitative results show that participation have a positive impact on attitude toward knowledge sharing.

Thus, some participants shared interesting views which help to explain quantitative data the results, as participation impact on knowledge sharing could not be confirmed. To summarise, participation could have been seen by respondents as not important because:

1. Not all participation is a valuable exchange/sharing of knowledge, especially if it is forced rather than voluntary. Additionally, if participation is happening just for the sake of taking part, the comment or discussion might not add any value.
2. Participation could happen at the end of an activity instead of engaging

employees at the very beginning; this could lessen the enthusiasm of employees to share knowledge.

6.6.2 *Trust Impact on Knowledge Sharing Behavioural Intentions*

The impact of an organisational culture characterised by trust on knowledge sharing was the most discussed by respondents. Utilities 10 explained that in order for employees to share their knowledge with their peers there should be a trusting culture where they feel secure to share:

Knowledge sharing happens in a trusting environment, so if you feel that you are safe, and that people within this environment can be trusted, then you'll like knowledge sharing. If you don't, or if you personally don't feel confident, then you won't like knowledge sharing so much.

Some respondents discussed the two extremes of trust (high and low) within an organisational culture and its impact on knowledge sharing. For example, Law and Security 14 described how a high trust organisational culture can nurture knowledge sharing across organisational levels:

I am so lucky to work with [this team]. They are aware and they fully understand the importance of knowledge sharing. I trust that they will always share their knowledge with me and also trust that they will share their knowledge about anything that I ask about or I need help with. They have helped me a lot to gain the knowledge I have today.

Whereas Utilities 11 described a culture with low trust where employees pretend that they do not want to share. A trusting organisational culture allows employees to talk freely with their peers about difficulties and being vulnerable and know that they will listen to them without being judgemental. She remarked:

I believe in many instances people are not sharing not because they don't want to; it's because they simply don't know. But then they don't want to appear like they don't know so then they prefer to pretend that they cannot share, you know what I mean! So there's a difference between knowing and sharing and not knowing but not wanting to show that you don't know.

Utilities 8 was asked if he was satisfied with the current organisational culture. If he were to suggest improvements for organisational culture, what would he recommend? He replied that he was not satisfied with his organisation's culture and would recommend "build[ing] a new culture where trust is the foundation; I think it is already implemented in multinational and international companies, where knowledge sharing is key to success

and is supported by the leadership”.

Risk and Disaster Management 4 was asked, “Can you tell me what would be the factors or circumstances that would enable you to comply with knowledge sharing?”:

Trust is a big issue if we look at it on a deeper level. First, I need to trust the person who is sharing the information and I need to trust that what they are sharing is correct. I need to trust the person I am sharing my knowledge and information with, that this knowledge will not be misused ... Also, I need to trust that my knowledge sharing is appreciated and received and it's going to be utilised for something and that also increases the desire to share the knowledge. Instead of sharing knowledge and ... no action is taken.

Government Smart Services 3 also commented on this issue: “They might not share knowledge themselves because of a lot factors like job security, not being unique anymore if I tell others that, and give them power to discuss such topics...”.

Thus, respondents highlighted several issues involving trust which will eventually increase the engagement of employees in sharing knowledge. These are:

1. Employees should feel safe to share and exchange ideas.
2. Employees should feel confident sharing knowledge with their peers and realise that sharing knowledge does not mean losing power.
3. Employees should have the confidence to acknowledge when they do not know something.
4. Trust that when knowledge is shared it will not be misused.
5. Trust that the employees who are sharing only share valid knowledge.
6. Trust that not only that knowledge sharing will be appreciated but also that the knowledge shared will be utilised.

6.6.3 *Openness Impact on Knowledge Sharing Behavioural Intentions*

When an organisation is characterised by openness, its employees are approachable and have open communication: the leadership communicates important news and events to organisational members across all levels. Law Enforcement 19 explained the shift in his organisation's culture from low openness to high openness and how this impacted both obtaining and sharing knowledge:

I believe nowadays obtaining and sharing knowledge in our organisation is not hard. I think the management mentality matured over the years. Maybe this was an issue in the previous generation when communication was manual

and face-to-face most of the time. I think nowadays management and employees are more open-minded and easy-going. They access information using various technologies to obtain and share knowledge. When someone needs help with something which they don't know how to do, they easily approach their co-workers.

Law Enforcement 20 had a similar opinion and expanded this view:

I see that it is easy to both share and obtain knowledge. There are many channels whereby employees can share knowledge. For obtaining knowledge the same thing: we have systems online whereby employees can find the information they need. In addition to the employee profile system, it is easy to get be connected to the expert in any needed field.

Two respondents shared examples of leadership communicating knowledge sharing events with employees.

Law Enforcement 19:

Look at this email. It is an invitation for people to participate in the Knowledge Management Conference that we will be hosting in a few days. This is sent out to all our employees who wish to take part or attend the sessions. So, I think this is an example of how our organisation promotes and supports knowledge sharing.

This implied having an open culture in which the top management believes in communicating important news and events with organisational members across all levels.

Law and Security 15 shared another example: "Yes, we organise around 56 workshops on a yearly basis just to spread awareness of knowledge sharing culture".

On the other hand, some respondents also stressed their experience of lack of openness culture and how this affected knowledge sharing. For example, Law Enforcement 21 said:

In our daily work life when we discuss a project, or initiative or a program, what happens is there is always a lack of communication, lack of getting the right information, and also involving wrong people with wrong expertise instead of involving people with the right expertise for those projects.

Additionally, Risk and Disaster Management 4 highlighted the importance that colleagues be willing and open to receive the knowledge regardless of their position or job rank within the organisation:

Also, people whom I share knowledge with should be open to receive the knowledge despite their level in the organisation, because some people feel that they are at certain level so you shouldn't be better than them. So, this creates a doubt that maybe knowledge sharing will not be welcomed and

appreciated.

Government Smart Services 3 shared additional insights as the nature of their work is project-based and collaboration is needed in order to succeed. However, when employees share knowledge they are very selective and cautious and only share just to complete the task in hand without bearing in mind the overall benefit of the organisation:

But when it comes to knowledge sharing I believe people filter what knowledge is to be shared. It is not the type of open knowledge sharing where the guy will come and tell you everything you need to know, but instead he will feed you knowledge as he sees is fit to complete the duty or the task. But not what he thinks should be better for the overall good of the organisation or better for even the career progression or career development of recipient.

6.6.4 Team Orientation Impact on Knowledge Sharing Behavioural Intentions

The respondents shared various views on organisational culture characterised by team orientation. Team orientation culture requires cooperation and collaboration across functional roles to be actively encouraged so that employees are able to see the relationship between their work and the goals of the organisation. The first group of respondents highlighted that they have a high team orientation and explained how this affects knowledge sharing among them and the others highlighted how a low team orientation, which is more supportive to individual projects, affects knowledge sharing. Law Enforcement 18 said:

The culture of our organisation here is mostly based on teamwork and team projects, not on individual work. Therefore, here you will see employees are ready to get involved in any team and we never witnessed any resistance towards that. We even have cross-departmental teams so they work outside of their scope of work. If this tells us something it is for sure an indication that the organisation is supportive of teamwork spirit.

He also talked about his experience working in the KM section where he had observed a strong team spirit and harmony among team members. The KM section consists of three units which sometimes have integrated programs which require them to work as one big team. Law Enforcement 19 shared an example which demonstrated the importance of having a team oriented culture and how this supported their knowledge sharing experience:

One time I got a case which we never encountered previously. We received a complaint from a citizen reporting an authority and we did not know in that case from whom we should obtain the approval. Then, different teams came together to collectively think of ways to deal with this case until it got

resolved. So it was very important that we gather as one team and share knowledge from different expertise to come up with the best ideal solution to the situation at hand.

The other group of respondents demonstrated how lack of team orientation affected their knowledge sharing experience. Law and Security 15 recalled how he had been asked to lead a brainstorming meeting about their current services, a project which had been allocated to his team; however, the previous team did not share knowledge or handover properly before they met the partners. He expressed:

When we arrived for the session the data and information that we needed was not shared with us. For example, how many people using this service, how many complaints are made about the service, what were the existing KPIs for this service, etc. These are simple details that we should know before we discuss how to improve it. So, if all this had been shared previously, the session would be more productive and we will save time.

Law and Security 16 shared a similar experience:

Yes, many occasions. I remember once I was appointed to manage a project and then I came to discover by chance that this project was given to a team previously and they failed. Now, if I was handed over this project from its initial team, they could have shared lessons learned so we can avoid failure and avoid what didn't work previously instead of starting from scratch all over again. Sometimes, the leadership do not realise that and they keep moving a project from team to another.

Utilities 11 highlighted the importance of team orientation even in individual assignments as employees can benefit from each other's lessons learned:

When working on projects knowledge sharing is extremely important because sometimes we might be working on projects and we are working on them individually and each project has a project manager. However, we would have shared the experience or what we are working on those projects: we would find that there are so many things that we can do – work with each other and improve each other's work.

The participants were asked "Is your company supportive to individual projects or team projects?" Ten respondents said that their organisation is supportive to team projects while the rest were split between both individual and team projects, and only on an individual level. Utilities 10 commented: "I think it rewards individual projects more than team. But I think it wants to do team. It says team but it does individual. I think" while Utilities 11 said: "Based on my experience, individual projects: and that makes it more difficult to implement a culture of knowledge sharing here".

Participants were asked a series of questions such as:

- In what kind of situations would you share knowledge, but you would be unhappy about it?
- Have you ever been asked to share your knowledge and you were unhappy about it? Why?

These questions are meant to get a sense of the organisational culture and which factors could prevent them from sharing knowledge with their colleagues.

Utilities 10 shared an example when she was unhappy sharing her knowledge:

I was unhappy because I wanted to keep a specific role and I was not allowed to do that. I was in charge of a project since the very beginning and I was told that I had to give up that project. I didn't want to give up that project. And then the person who was employed, in my opinion was not as qualified as me to do the project, so I was asked to share my knowledge with them, and I wasn't happy because I felt I was giving my knowledge to somebody with less qualifications, more money and now they had the project that I wanted. So maybe this was emotionally immature, but this is a very honest answer for how I felt [laughing].

This example shows how lack of clarity from leadership on the reasons for the switch in roles can affect team orientation and can prevent a person from behaving as a team player.

Utilities 6 shared another perspective when he was not happy about sharing his knowledge which prevented him from being a team player and forced him to share his knowledge reluctantly. He explained that sharing should happen among employees who have similar competency levels so that the receiver can digest this amount of knowledge. In his case he was asked to share his knowledge with a junior staff member which he felt was “not logical to share because the person is not ready to get this amount of knowledge and their brain will simply not absorb this amount of knowledge”. The aim of KM, he said, is all about delivering the right knowledge to the right person, not just about sharing for the sake of sharing. He also stressed that unfortunately, this has to do a lot with leadership and went on to describe how the leadership emphasise teamwork but without considering the entire picture. Utilities 6 added that “the management forces that inappropriate sharing so you start spending time and effort to explain to them; after an hour they will ask you a question to explain [something which you already explained] ... This is a waste of time”.

Utilities 7 agreed with Utilities 6 that the knowledge receiver should be competent and knowledgeable about the topic: “Yes, I was asked to share my knowledge with someone who doesn’t know the background of the main topic. In addition, the person’s level is not ready”. She stressed that the knowledge receiver should have a minimum level of knowledge about the topic or good cognitive ability before specific knowledge is shared. She further explained that she does not mind sharing if the person has no knowledge about the topic but is interested in it and has a positive attitude towards learning, adding that successful teamwork requires at least two people who are interested in working together.

Law Enforcement 19 described a collaboration agreement between his department and another department: while he was happy to share his knowledge with the staff from other departments, the key staff members who were supposed to share their knowledge with his department did not:

Therefore, following my business ethics and morals I had to share what I know but he didn’t, so I wasn’t pleased about that. When there is a knowledge exchange I believe there should be good collaboration from all parties involved to make the experience pleasant and meaningful. Because this behaviour can affect collaborations in future.

Thus, the qualitative results show that team orientation affects attitude toward knowledge sharing. However, some respondents provided some insights which explain the quantitative data results, as team orientation impact on knowledge sharing could not be confirmed because:

1. Team orientation does not matter because when team starts a project and it then gets reassigned to another team, the initial team feels frustrated and annoyed so they only share minimal knowledge.
2. Team orientation does not matter because leadership reassigns projects from one team to another without allowing proper knowledge sharing between both teams. So, each team is working in silos.
3. Team orientation does not matter because sometimes employees are forced to hand over their projects and share their knowledge with other teams who are less qualified which makes them unhappy about sharing.
4. The organisation is rewarding individual projects more than team projects

which could make its culture less conducive to employees sharing their knowledge with their peers.

5. Sometimes individuals and cross-functional teams do not share knowledge equally. This can affect future collaborations as, based on past experience, employees might not be willing to share even though they are part of a bigger team.

6.6.5 Agreement Impact on Knowledge Sharing Behavioural Intentions

Respondents shared views on their organisational cultures characterised by low to high agreement. In an agreement culture, employees always agree about most important things, and when disagreements do occur, they work hard to achieve ‘win-win’ solutions. In low agreement culture employees often do not approve of changes and resist or behave indifferently. Law and Security 14 shared her experience with her team:

When we discuss any topics as colleagues [we try] to include everyone in the discussion as we believe that everyone will share what they know. Then we decide about a decision we make sure that we all agree on it.

Law and Security 15 shared an example demonstrating the leadership role in creating an agreement culture:

When I have a new idea my manager first hears it out, discusses the idea with me and then gives me his opinion. He may at first have had an initial opinion about something, but if my approach was well studied he changes his mind and agrees on it.

Utilities 11 gave a contrary example of when she was invited to give her ideas and share her knowledge but the team was resistant to new ideas and there was no effort to achieve a solution that everyone agreed on. She sadly remarked:

Well, what I am unhappy with is when you share your knowledge and people dismiss it, without even thinking about it. They are very dismissive and say ‘No, this is not how we do it’ and ‘This is how it has always been done’ and then I wanted to ask why did you even ask me then in the first place!

6.7 Organisational Culture Impact on Injunctive Norms

As discussed in Chapter 3, it is expected that organisational culture will have an impact on employees’ injunctive norms of knowledge sharing. Injunctive norms are about social pressure, how employees believe that their important others (e.g., CEO, line manager, and

colleagues) want them to behave (Fishbein and Ajzen, 1975-1981). Chapter 3 also addressed employees' motivation to comply by performing the behaviour (Fishbein & Ajzen, 1975). However, the results from the quantitative analysis were intriguing because the impact of the organisational culture dimensions of participation, trust and team orientation on injunctive norms were not confirmed. Therefore, looking at the qualitative data provides some useful insights to explain these results.

6.7.1 Participation Impact on Injunctive Norms

In order to get some insights on the leadership in organisations and how they wanted their employees to behave towards knowledge sharing, respondents were asked “What factors would make knowledge sharing more difficult? or “What are the factors or circumstances that would make it difficult for you to comply or would prevent you from knowledge sharing with your co-workers? Can you share some of these factors?”

Respondents shared some insights which explain why participation impact on injunctive norms was not confirmed by quantitative methods.

Law and Security 17 shared an example where it is important for leaders to be characterised by knowledge leadership whereby they set an example for their employees to take part in knowledge sharing activities which will encourage them to participate, too:

Leadership engagement is very important: if leadership and top management do not believe in the role of knowledge management or importance of knowledge sharing, any initiative towards that would be really impossible to succeed. Leaders should be role models and take part in knowledge sharing activities. Then they need to encourage their teams to take part in knowledge sharing activities. But if they just ask employees to take part and they seem like they do not believe in these activities, employees will simply withdraw and will not be motivated.

Law and Security 14 mentioned the leadership role as she explained that leaders can either support or hinder knowledge sharing and make it easier or more difficult between employees. She also highlighted the issue of fear for some employees when sharing their knowledge: if they feel that the system is supportive of protecting their ideas, they will be more willing to take part in knowledge sharing. She remarked:

If there was a system that protects people's rights if they share knowledge, this will encourage more people to share their knowledge without being overprotective about what they know.

Utilities 7 felt that it was important to have support from leadership as well as having a policy in place that supports knowledge sharing. She stressed:

If the policy doesn't support knowledge sharing, that could be a problem. If there is no support from the management, this could be a problem. If the people are not ready and willing to share knowledge this could be a problem. Therefore, there should be a good administration system to facilitate knowledge sharing.

Utilities 11 had a similar view and emphasised the role of leadership in providing clear guidance for employees taking part in knowledge sharing activities:

Lack of support from management, not having clear policies and procedures in place. Not having clear definitions in place in terms of what do we want to achieve in the organisation, what does knowledge sharing mean to us? I think it is important for leadership executives to create clear policies towards sharing and enforce them so that all employees comply with the system.

Similarly, Law Enforcement 19 shared: "If the policies on knowledge sharing are not clear, this may make it more difficult to happen". In all these examples, employees highlighted that leadership expectation should be properly communicated. In addition, it is crucial to have approved policies and systems in place which facilitate knowledge sharing. As a result, employees will have more clarity about leadership expectations and direction and where the organisation is heading in general.

6.7.2 Trust Impact on Injunctive Norms

Law Enforcement 19 highlighted that if the leadership only focuses on competition, that can lead to lack of trust between peers:

If the organisation culture doesn't offer job security to employees, people may be worried about sharing their knowledge. Additionally, if leaders are encouraging employees to be competitive with each other, this will lead to lack in trust in one another and this may prevent them sharing their knowledge.

Therefore, in this case, leadership can impact the injunctive norms of employees toward knowledge sharing as employees get messages from the leadership that they should be more competitive than collaborative.

6.7.3 Team Orientation Impact on Injunctive Norms

Government Smart Services 3 stressed that one reason why employees are hesitant to share knowledge across units within the organisation could be due to organisational

politics. He mentioned that sometimes leaders may give clear orders for their teams to avoid participating in knowledge sharing activities so that they do not lose their power to other teams:

It is, maybe, some organisations have politics as well, and the leadership in the organisation might instruct their team not to share knowledge with cross-functional teams so the other teams do not have the upper hand or understand much more and start criticising them.

Risk and Disaster Management 4 highlighted that management could be selective when it comes to sharing and this can discourage cooperation and collaboration across functional roles:

Knowledge sharing [can be] difficult if the management is not supporting the sharing of information and controlling who can share and who can't share...they will pick who will share and who cannot share although everyone should be treated equally.

Law Enforcement 18 explained the importance of having a team orientation culture in place. First, he highlighted the importance of having a knowledge flow with the organisation as this will standardise processes instead of them being chaotic and random. He also felt that several departments within an organisation should work closely together to ensure proper knowledge culture and fulfil KM requirements:

Knowledge sharing, if it was not a strategic priority, this may be ignored. ... Ninety per cent of the weakness of knowledge in organisations nowadays is due to the way leaders think: therefore, if we have weak leaders who don't share, most likely we end up with weak employees. Knowledge is related to three areas of the organisation which are top management, human resources, and strategy and therefore, if those three main departments or units did not cooperate in spreading knowledge culture and the philosophy of knowledge, the organisation will not see any value in knowledge management.

Thus, a lack of leadership support of cooperation across various teams and departments might send confused signals to employees that the organisation is not supportive to team orientation.

From the above it is clear that the organisational culture dimensions of participation, trust and team orientation have an impact on injunctive norms of knowledge sharing. It is possible that the main reason for employees not sharing knowledge is the leadership's significant impact on injunctive norms which sends confused signals to employees. However, if the leadership set an example for their employees by sharing, this would enhance knowledge sharing among employees. Therefore, more research is required in

this area, especially qualitative research, to help understand these behaviours.

6.8 Demographic Factors and Their Influence on Knowledge Sharing

6.8.1 Age

In order to observe if age has an impact on knowledge sharing among employees in the organisations, participants were asked “From your point of view, do younger or older employees seem to be sharing their knowledge with their co-workers more? And why do you think that might be?” Out of the 21 interviewees, three respondents said that age does not really matter when it comes to knowledge sharing, but they thought that older people shared more. For example, Tourism 2 said, “I don’t think it’s the age. I think it’s the position, as the higher rank you become in the organisation the busier you are and the less time you have to share the information and knowledge”. The majority of the respondents (12) believed that younger employees share knowledge more than older employees. For instance, Utilities 10 commented: “Younger. I think that, I think younger people naturally communicate more, we do when we’re younger”. Utilities 6 agreed and elaborated:

Younger, definitely. Because younger people are more aware of the importance of sharing and collaboration as it was embedded within their educational systems. Young employees, they like to talk, share, use social networking channels. They are always keen to share what they know. But the older employees, they don’t have that knowledge in their [generation], so they don’t believe in sharing knowledge, they have different mentalities. Sometimes, I find them believing that they are the best, they are the source of knowledge; however, they never assume that they might not know if they have the right knowledge. They also sometimes don’t acknowledge the abilities of the new generation and that they can make a huge impact in business.

Three respondents thought that older employees share more knowledge than younger employees. For example, Law Enforcement 21 said that “older people are more willing to share because they have experiences which they accumulated over the years”. Likewise, Law and Security 16 stated that:

I think that older employees are sharing knowledge more with employees. To start with they are experienced and knowledgeable and therefore, they have something to share. In addition, they are mature and they have accumulative experience and they will always choose the right time to share their knowledge.

Interestingly, some of the respondents gave unconventional answers. Law and Security 12 believed that both older and younger employees have problems with sharing their

knowledge:

I think we have problems in both generations. For example, old people – there are some wise people who want to share and continue to learn and some old people don't want to share or learn anything new. For young generations, some of them are smart and excited, but some are just lazy and have no ambitions at all.

Two respondents believed that both older and younger employees share knowledge equally. Utilities 9:

I think that both younger and older employees share knowledge equally because people tend to develop their knowledge base; some people worked for a long period on a specific matter so they are experts in that. I also see that people share what they know whether they are young or old.

Similarly, Law Enforcement 20 commented “I think there is a balance as I see older employees are wise and always keen to share their knowledge and experiences. But [also], I see that new joiners are excited and keen to share their learnings and knowledge”.

Table 6.1 Summary of Respondents with Regard to Age Impact on Knowledge Sharing

Age Does Not Matter	Younger Employees Share Knowledge More	Older Employees Share Knowledge More	Both Younger and Older People Do Not Share Knowledge	Both Younger and Older People Share Knowledge Equally
3	12	3	1	2

6.8.2 Gender

In order to understand whether gender has an impact on knowledge sharing, participants were asked “How do you describe knowledge sharing across genders and within the same gender?” Out of the 21 interviewees, seven believed that gender does not matter when it comes to knowledge sharing. Utilities 5 said, “I think gender doesn't make a big difference”. Five respondents, however, believed that sharing happens more within the same gender due to UAE culture and tradition. For example, Law and Security 13 said “I feel I would talk and share knowledge with the same gender compared to women and this is because I believe our Emirati culture”. Law Enforcement 21 had a similar view: “Based on our work and culture, males like to work more with males and females more with females. Because our culture is reserved”. However, seven respondents thought that knowledge sharing happens more across genders. For instance, Law Enforcement 18 said, “I think that knowledge sharing is happening more across genders. From my experience, I see that women seek knowledge about work from men, but when it comes to socialising

they socialise more with women”. Law Enforcement 20 remarked “I think across gender knowledge sharing exists because we have committees of mixed gender. But I think people in the organisation are more comfortable dealing with their same gender because of our Emirati culture”. Interestingly, two respondents said that knowledge sharing happens both across gender and within the same gender for men only as they perceive that knowledge sharing among women does not happen. Law and Security 16 joked:

Male and male okay, male and female okay, female and female not okay [laughing]...We noticed that when a female is in a managerial position and she has other females reporting to her this has been always a problem. I think there is a jealousy problem or something but I am not sure.

Law and Security 17 shared a similar view: “Female and female working together is very hard, always fighting [laughing]. I don’t know why exactly, whether it’s nature, jealousy or what exactly, but it is there. I see that knowledge across gender is okay and between males”.

These comments, while more based on perceptions than evidence, suggest that there are some cross-gender issues at play in some organisations that could be considered sexist in nature.

Table 6.2 Summary of Respondents Views of Gender Impact on Knowledge Sharing

Gender Does Not Matter	Sharing Within Same Gender	Sharing Across Gender	Sharing Across Gender and Within the Same Gender for Men – But Not for Women
7	5	7	2

6.8.3 Job Experience

The quantitative analysis focused on job rank and job seniority within the organisation. However, for the qualitative interviews experience in terms of number of years with the organisation, also referred to as tenure in the literature (Bakker et al., 2006; Lin & Joe, 2012; Pinjani & Palvia, 2013), was considered. Pinjani and Palvia (2013) point out that tenure is important because the longer employees are with the organisation, the longer they would have interacted and had time to develop harmonious relationships. Bakker et al. (2006) share a similar view as they believe that when employees have the chance to work together with their colleagues for a longer period of time, they will come to know each other much better. Additionally, they will be familiar with each team member’s expertise and where to find them for knowledge (Bakker et al., 2006). Holste and Fields

(2010) also used tenure as a control variable and they argued that the longer the period employees spend in the organisation may increase the tendency for them to share their knowledge, specifically tacit knowledge with their peers. According to the qualitative data, 12 respondents believed that employees with more experience share knowledge more than those who are less experienced. For example, Utilities 10 explained that:

I think that years of experience affect it [knowledge sharing] because you're more comfortable and confident in an area the longer you have been there, the more comfortable and confident you feel, and when you feel comfortable and confident, you're more likely to share.

Similarly, Utilities 7 highlighted that "If you're more experienced, you happen to know more, share more; if you're less experienced, obviously not so much". None of the respondents believed that less experienced employees share more than more experienced employees. The remaining nine respondents believed that job experience does not really make a difference when it comes to knowledge sharing. Some of the respondents shared interesting views. For example, Utilities 11 explained that:

I do not think that more experience means that employees share more knowledge. Because having 10 years of experience in an organisation doesn't mean that you have actually gained and learnt year upon year. One time I read something very interesting, that people think they have 10 years of experience let's say, but actually they have one year of experience because for 9 years they have been doing the same thing over and over again.

Table 6.3 Summary of Respondents Views of Job Experience Impact on Knowledge Sharing

Job Experience Does Not Matter	More Experienced Employees Share More	Less Experienced Employees Share More
9	12	0

6.8.4 Education

The respondents were asked for their views on whether education has an impact on knowledge sharing among employees. Specifically, they were asked for their opinion on whether employees with higher or lower levels of education share knowledge more with their co-workers. Ten respondents believed that education does not have an impact on knowledge sharing. Law and Security 12 replied: "I don't think that education plays a role in that. I think it all depends on the personality of a person". Nine respondents believed that employees with more education tend to share their knowledge more with their peers more than those who have lower levels of education. Law and Security 14 also thought that employees with more education are more likely to share but also that mixing

employees with different levels of education can make a difference when it comes to knowledge sharing. He remarked:

I think education plays a role when knowledge sharing happens. I think employees with higher education tend to share knowledge more because they are confident, have something to share and they value the importance of knowledge sharing. Having said that, if we mix people from educational backgrounds, for example, people who [graduated] high school and people with a university degree, I assume there will be sharing of knowledge because of the diverse level of education.

Utilities 6 commented:

I think education may play a role in that and the way we are taught in school. For example, older generations were taught totally differently at schools because this was the level of enhancement; exposure to other education systems was low. However, new generations now, for example, are exposed to the latest technologies. They are exposed to new educational methods, and approaches.

None of the respondents believed that employees with less education tend to share more knowledge with their co-workers.

Table 6.4 Summary of Respondents Views of Education Impact on Knowledge Sharing

Education Does Not Matter	Employees with Higher Education Share their Knowledge More	Employees with Lower Education Share their Knowledge More	Unconventional Answers
10	9	0	2

6.8.5 Nationality/Emiratization

Interviewees were asked for their views on whether nationality has an impact on knowledge sharing among employees. In this particular study, the focus was to observe knowledge sharing between Emiratis and non-Emiratis and ascertain if there is any impact of Emiratization. Therefore, respondents were asked, “In your opinion, do you think that Emiratization could have an impact on knowledge sharing? If yes, in what way and why?” There were also asked a set of follow-up questions to help understand the situation at a deeper level, as listed below:

1. Have you witnessed a situation when an expatriate has withheld knowledge from a local? Tell me about it. Why do you think it happened?
2. Have you witnessed a situation when a local has withheld knowledge from an

expatriate? Tell me about it. Why do you think it happened?

3. Have you witnessed a situation when a local has withheld knowledge from a local? Tell me about it. Why do you think it happened?
4. Have you witnessed a situation when an expatriate has withheld knowledge from an expatriate? Tell me about it. Why do you think it happened?

The majority of respondents (13) believed that Emiratisation has an impact on knowledge sharing between Emiratis and non-Emiratis. Utilities 7 explained her view:

Oh, big time. Expatriates have big and bad, insecurity. They don't share knowledge with their local colleagues. Basically, expats are 80% of the UAE population. If I teach how to do my job, I'm going to lose my job, right? This insecurity stops employees from sharing knowledge, but if the organisation will assure me that "Look, it's not going to happen" and I've been given incentives, I will go out of my way to train you and share my knowledge with you.

Law and Security 15 felt that "I think, yes, it has an impact on non-locals because they start withholding knowledge for job security purposes". The remaining eight respondents believed that Emiratisation does not have an impact on knowledge sharing between Emiratis and non-Emiratis. Utilities 6 said:

If you want me to talk about my personal belief, I believe it doesn't. Because Emiratisation is talking about hiring more nationals and this rule is in almost all countries which is nationalisation of citizens. I think this is the right for every country and every national.... Some expats, they don't like it because they are insecure which they shouldn't be. They should have known from the start that they are coming here for a period of time and they should be fulfilling their career objectives and this is a step in their journey.

Law and Security 13 agreed:

I do not see it as a major issue with the organisation and I believe that we need to work with other nationalities. Working with other nationalities is essential as this will provide diverse experiences and expertise to the organisation and will offer various learning opportunities.

Table 6.5 Summary of Respondents Views on Nationality/Emiratisation's Impact on Knowledge Sharing

Nationality/Emiratisation Has an Impact on Knowledge Sharing	Nationality/Emiratisation Does Not Have an Impact on Knowledge Sharing
13	8

All in all, the majority of respondents believed that nationality/Emiratisation had an effect

on knowledge sharing.

6.9 Summary

Chapter 6 presented the qualitative analysis and interpretation of qualitative data following a deductive thematic analysis as explained in Chapter 4. The focus of this deductive thematic analysis was to analyse the main relationships which were examined by the quantitative research methods. Those main relationships are:

- Leadership's (inclusive leadership and knowledge leadership) impact on organisational culture
- Organisational culture (participation, trust, openness, team orientation, and agreement) and its impact on knowledge sharing among employees
- Leadership's (inclusive leadership and knowledge leadership) impact on knowledge sharing among employees

This chapter also further explored some of the results of quantitative data which were not supported as initially hypothesised. It also addressed some demographic factors (age, gender, job experience, education and nationality) and how these variables impact knowledge sharing among employees.

Chapter 7 discusses both quantitative and qualitative data.

Chapter 7: Discussion

7.1 Introduction

The objective of this study was to investigate the influence of both leadership and organisation culture on knowledge sharing intention among employees as well as to investigate the influence of leadership on organisational culture. To answer the research questions, a mixed methods approach was employed as explained in Chapter 4. Chapter 4 also includes the results of the pilot study which evaluated both quantitative and qualitative methods prior to the main study. Quantitative methods are the primary research method employed for the present research with the qualitative component introduced as a complementary method to help understand any deviations from the expected outcomes as hypothesised earlier in Chapter 3. Chapters 5 and 6 include the presentation, analysis and interpretation of the quantitative and qualitative data, respectively. Chapter 7 discusses the results of both the quantitative and qualitative data analysis using an integrated approach. The discussion follows a similar approach to Chapter 5 as the discussion addresses the models in the following order:

1. Model 1 (Main Model): Knowledge leadership and inclusive leadership as influencers on organisational culture dimensions
2. Model 2: Knowledge leadership and inclusive leadership are both treated as background factors in the TRA framework.
3. Model 3: Knowledge leadership and inclusive leadership are both treated as moderators between organisational culture dimensions and attitude toward knowledge sharing.

Following this discussion, the chapter presents a comparison between both quantitative and qualitative results. The findings will be discussed with reference to the key hypotheses and relevant literature. Finally, a summary of the chapter will be presented.

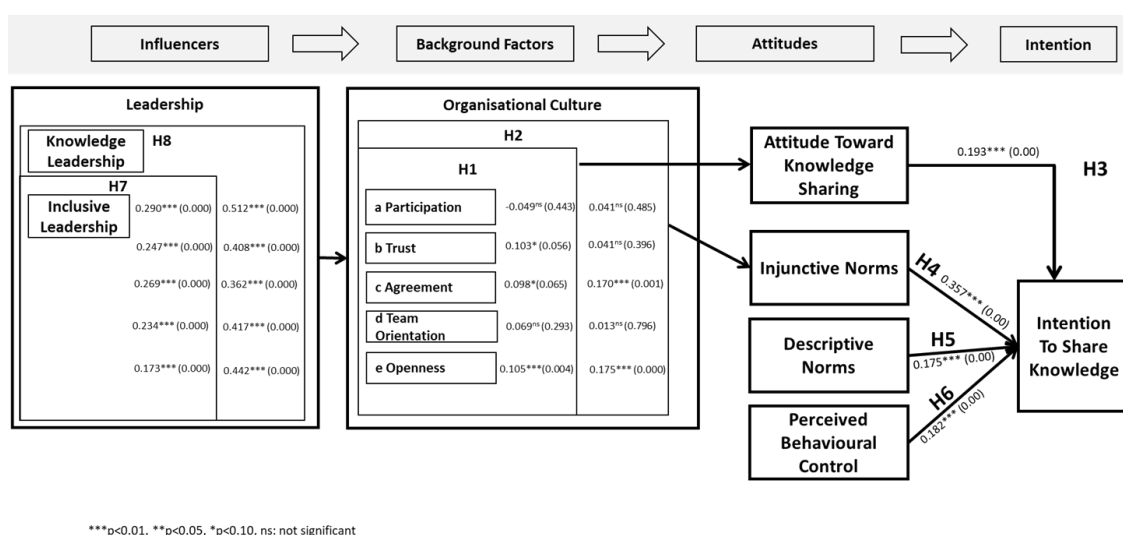
7.2 Model 1 (Main Model): Knowledge Leadership and Inclusive Leadership As Influences On Organisational Culture Dimensions

7.2.1 Leadership Impact on Organisational Culture Dimensions

Model 1 treats knowledge leadership and inclusive leadership as influences on organisational culture dimensions whereby organisational culture ultimately affects knowledge sharing intention. The results showed that all main effects in the model are highly significant as seen in Figure 5.1 (reproduced below for ease of reference).

Results of Model 1 (Main Model)

Knowledge leadership and inclusive leadership as influencers for organisational culture dimensions whereby organisational culture affects knowledge sharing intention



Note: The values shown are the path coefficients with the p-values based on the two-tailed test.

This means that both inclusive leadership and knowledge leadership have a positive impact on the organisational culture dimensions of participation, trust, agreement, team orientation and openness: neither of these had been empirically tested before. However, the results are aligned with the rationale and conceptual theoretical foundation discussed in Chapter 3. This also aligned with the findings by Jamali and Sidani (2008) that leadership and management role is critical when creating a participatory learning environment. Furthermore, the role of leaders in creating a participative culture that supports participation in policy making has been stressed in Turkish and Japanese organisations (e.g., Aksu & Özdemir, 2005; Kidd & Teramoto, 1995). This is interesting

because the results confirm the efforts of the UAE and Dubai Governments to ensure having an ideal organisational culture. For example, the Government Excellence Model encourages employees to take part in drafting policies and the leadership encourages employees to share their views to improve work practices (UAE, 2019).

Several studies have noted the connection between leadership and trust where leadership influences a culture of trust, connecting people together; thus, employees feel that they are treated equally, work together with their leaders and eventually create strong bonds (Ghosh & Srivastava, 2014; Hollander, 2012; McAllister, 1995; Petty et al., 1995; Wuffli, 2015). The current study confirmed that inclusive leadership influences a culture of trust whereby inclusive leadership helps employees to create good relationships with one another, to share ideas, feelings and hopes, as well as helping them talk freely with their colleagues about any difficulties encountered at work. Inclusive leadership also supports a fair appraisal process for employees which makes employees trust their leadership. In the UAE and Dubai governments context, building an optimal organisational culture with ideal conditions is supported by the rulers of the UAE as seen in the current Excellence Government Model: these conditions include “right resources and support, quality of safety and physical conditions, instilling a sense of purpose, positive relations, and climate of trust” (UAE, 2019, p. 47).

In the same way, inclusive leadership was confirmed to have a positive significant influence on agreement. Inclusive leadership is about empowering employees and making their roles’ visible as well as making them part of a community (Bennis, 1984) which facilitates an agreement culture between its members, so that the environment is relaxed as it focuses on socialisation among peers who seek to establish common values, beliefs and goals (Chuang et al., 2012). These results are also aligned with the UAE and Dubai governments guidelines which are provided to organisations to ensure wellbeing efforts are in place, and harmony exists between employees and with other government entities (UAE, 2019, p. 43). It also encourages organisations to “creat[e] a harmonious and cohesive community that enjoys a high standard of living in a safe and sustainable environment” (p. 18).

Furthermore, the influence of inclusive leadership on team orientation was confirmed which is aligned to the hypothesised relationships in Chapter 3. According to a study by

Willard-Grace et al. (2014) in the health care industry, if the team is based on structure alone this does not necessarily mean that they have good communication; they must also have a team orientation culture. In the UAE and Dubai Governments context, the Government Excellence Model stressed the role of leadership in inspiring wellbeing orientation through developing teams' essential capabilities in their main functions to deliver positive impact. In addition, leadership is expected to create seamless cohesion and synergy between employees and spread the feeling of a community and team spirit (UAE, 2019, p. 27). Therefore, the results are aligned with the UAE leaders' vision for organisations.

Overall, the influence of inclusive leadership on openness was also supported as aligned with the theoretical development foundation (Carmeli et al., 2010; Ghosh & Srivastava, 2014; Sharma & Sharma, 2010). For example, inclusive leadership requires leaders to demonstrate openness in their communications with their employees: thus, an inclusive leader should be willing to listen and discuss objectives and ways to fulfil them with their employees (Carmeli et al., 2010). Additionally, inclusive leaders should be willing to listen to new ideas, make continuous improvements, and take advantage of new opportunities that employees propose (Carmeli et al., 2010; Sharma & Sharma, 2010). Inclusive leadership's influence on openness within the UAE and Dubai organisational context was also highlighted in the Government Excellence Model which reminds leadership of the importance of having open communications not only between employees but also between government entities as well as highlighting the importance of having feedback channels to promote a positive dialogue with the community (UAE, 2019).

Additionally, the results show that knowledge leadership has a positive impact on organisational cultures that promote participation, trust, agreement, team orientation and openness. Specifically, there is an alignment with the literature about the hypothesised relationship between knowledge leadership and participation. For instance, Mitonga-Monga et al. (2012) found that the leadership behavioural styles (particularly problem-solving, ideas, suggestions and change) significantly influence employee participation. These leadership behavioural styles are all related to knowledge leadership. As knowledge leadership implies that a leader should act to enhance their team's innovative ability to execute innovative ideas and create new knowledge (Yang et al., 2014), in 2018

the Dubai Government Human Resources Department implemented an HR law which required immediate supervisors to identify and address opportunities, challenges and employees' training and resources needs (The Official Portal of Dubai Government Human Resources Department, 2018). This implies that the management should be characterised by knowledge leadership where they understand the need and expectations of their teams and provide them with the necessary resources when needed (Yang et al., 2014). Therefore, the results are aligned with the efforts of the UAE and Dubai Governments.

Additionally, knowledge leadership and its relationship with trust in organisational culture is also supported as suggested in Chapter 3. Sharma (2010) explained that when leaders in an organisation create conditions to facilitate cooperation and higher performance, trust is more likely to emerge. In the UAE and Dubai Governments context, the Government Excellence Model stressed the role of leadership in building trust between employees as it is the crucial foundation to long-term success. It also stated that "[t]rust is primarily fostered through transparency, alignment of objectives interests, and open communication (p. 49)". In addition, the above-mentioned 2018 HR law requires immediate supervisors to discuss performance ratings with their employees transparently and to document these discussions. Furthermore, it is their role to assign guided distribution percentages of performance ratings based on prescribed percentages which are applied for all the employees in the organisation (DGHRD, 2018). This helps to create a culture in which employees trust that they will be treated equally to their peers in the organisation. It also emphasises the role of knowledge leaders when a reward system is needed to stimulate team members' learning behaviour. Therefore, having a unified system in place and leaders implementing it fairly increases trust in the organisation.

Similarly, the results align with the hypothesised relationship between knowledge leadership influence on agreement (Denison et al., 2012; Mabey et al., 2012; Yang et al., 2014). Knowledge leadership requires that leaders be role models for their teams and work together with them to resolve any conflict and come up with win-win solutions (Mabey et al., 2012; Yang et al., 2014). The Government Excellence Model stressed the role of leadership in building agreement between employees to support the achievement of the entity's strategy and "establish[ing] collaborative win-win relationships that create mutual benefits and breaks the silos" between employees (p. 19)". It also emphasises

following a knowledge leadership style where knowledge leaders cooperate with their team members to solve problems and setting a good example for them (Yang et al., 2014).

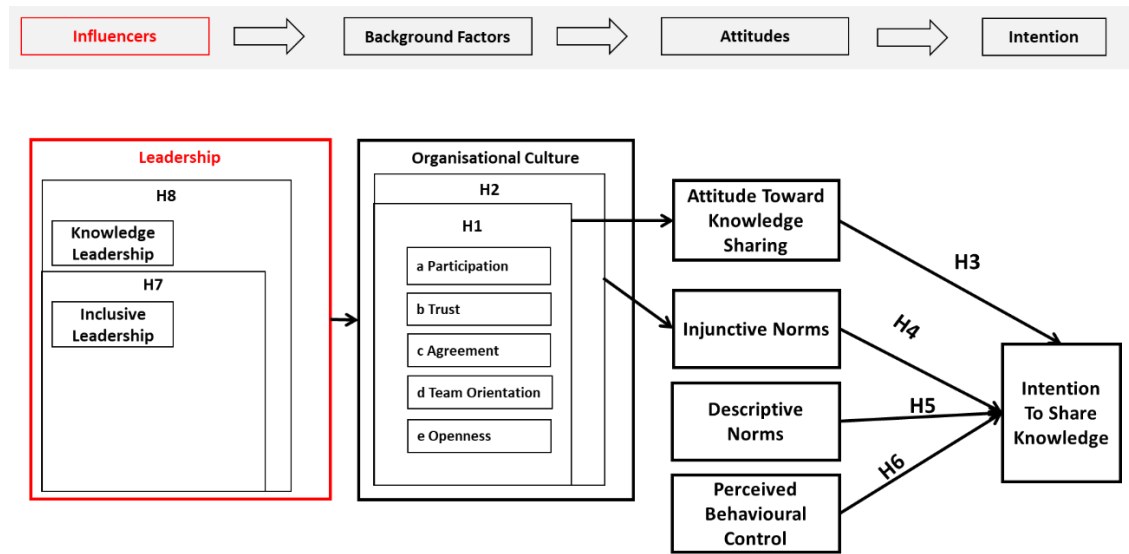
Likewise, the results confirm that knowledge leadership has a positive significant influence on team orientation which confirms the rationale suggested in Chapter 3. In its 2018 HR law concerning the performance management system of employees, the Dubai Government Human Resources Department stated that immediate supervisors should encourage employees to cooperate with each other and create team spirit while adhering to the values and principles of fair and positive competition (DGHRD, 2018). This suggests that the management should follow a knowledge leadership in which they encourage team members' learning behaviour while fostering team spirit among employees (Yang et al., 2014).

Finally, the results confirm that knowledge leadership has a positive significant influence on openness as suggested in Chapter 3. Once again, the results of the study confirm the efforts of the UAE and Dubai Governments as the Government Excellence Model stressed the role of knowledge leadership and how it should build a culture of openness within the overall organisational culture: "Excellence can be better achieved when the government entity is viewed as an open system within a dynamic ecosystem with inter-related activities" (UAE, 2019, p. 14).

Based on the qualitative data analysis, leadership impact on organisational culture was evident. In addition, both inclusive leadership's and knowledge leadership's impact on organisational culture was addressed and confirmed by participants.

Therefore, it is evident from the results that the present study contributes to the TRA and TPB frameworks by adding the two influencing factors of inclusive leadership and knowledge leadership to the background factors (in this case, organisational culture dimensions) in the theory as demonstrated in Figure 7.2.

Figure 7.1 Model 1: Influencers which Impact the Background factors in the TRA and TPB Framework



7.2.2 The Impact of Organisational Culture on Attitude Toward Knowledge Sharing

The results reveal, in the UAE organisational context, that individual attitudes toward knowledge sharing is positively influenced by an organisational culture that is characterised by trust, agreement and openness. The positive influence of trust on knowledge sharing had already been observed by many previous studies (e.g., Chang & Chuang, 2011; Chiu et al., 2006; Burke et al., 2011; Hau et al., 2013; Holste & Fields, 2010; Gamidullaeva and Vasin, 2018; Huang, 2009; Lucas, 2005; Lin et al., 2009; Park et al., 2004; Sankowska, 2013; Tsai & Ghoshal, 1998; Wickramasinghe & Widyaratne, 2012), although a few, such as Chow and Chan (2008), Bakker et al., (2006), and Li (2005) found the opposite.

However, not all hypothesised relationships between organisational culture dimensions and attitude to sharing knowledge were confirmed. The results show that the impact of the two organisational culture dimensions, participation and team orientation, on attitude toward knowledge sharing was not significant. Based on previous literature, it is not possible to ensure successful KM activities, including knowledge sharing between employees, without active participation (Ghosh & Srivastava, 2014; Locke & Schweiger, 1979; Wagner, 1994; Yip et al., 2012). Specifically, the literature shows that when an organisation's culture is characterised by high participation, knowledge sharing will be higher. For example, if the culture encourages employees to participate in decisions and

share their thoughts, etc., this will encourage them to share their knowledge about a topic or how to perform a task. In contrast, when an organisational culture is characterised by low employee participation, employees tend not to make any contribution towards the organisation's objectives as there is no capacity for them to contribute.

Based on qualitative data, participation's impact on attitude toward knowledge sharing was confirmed.

However, some participants provided some insights on why participation's impact on knowledge sharing could not be confirmed:

1. Participation is not necessarily valuable participation, i.e., knowledge is shared. For example, Government Smart Services 3 said "...So they might talk, talk and talk but actually not give you the answer or not give you any valuable information".
2. Participation could happen at the end of an activity, which could impact the engagement of employees to share knowledge. For example, Utilities 7 said, "As employees we are not involved from the beginning; then we need to do it for the sake of doing".

Therefore, further research is required on this area, especially qualitative research to understand the relationship between participation and attitude toward knowledge sharing.

In addition, team orientation culture's influence on attitude toward knowledge sharing could not be confirmed in the study, unlike to previous literature (Al-Adaileh & Al-Atawi, 2011; Chong & Choi, 2005). One reason could be because in certain contexts where leadership expects members to act like a team, employees may believe that team orientation is irrelevant.

Based on qualitative data, team orientation's impact on attitude toward knowledge sharing was confirmed.

However, some participants provided some insights on why team orientation's impact on knowledge sharing could not be confirmed:

1. Team orientation does not matter because when a team starts a project and it then gets reassigned to another team, the initial team feels frustrated and

annoyed so they only share minimal knowledge.

2. Team orientation does not matter because leadership reassigns projects from team to another without allowing proper knowledge sharing between both teams. So each team are working in silos.
3. Team orientation does not matter because sometimes employees are forced to hand over their projects and share their knowledge with other teams who are less qualified which makes them unhappy about sharing.
4. The organisation rewards individual projects more than team projects, which could make the culture less conducive to employees sharing their knowledge with their peers.
5. Some employees are asked to join teams which are not relevant to their speciality which hinders their contribution and knowledge sharing.
6. When individuals and cross-functional teams do not share knowledge equally, this can affect future collaborations as, based on past experience, employees might not be willing to share even though they are part of a bigger team.

Thus, the qualitative analysis confirmed that all organisational culture dimensions of the present study (participation, trust, agreement, team orientation, and openness) had an impact on attitude toward knowledge sharing. However, it could be area for future research to investigate why participation and team orientation do not influence attitude toward knowledge sharing in organisations.

7.2.3 Theory of Reasoned Action and Theory of Planned Behaviour: Main Factors

The results revealed that attitude toward knowledge sharing positively influences intention to share knowledge, which is a proxy for knowledge sharing behaviour. This means that for employees in the organisational context in the UAE, and specifically in the Dubai Government, the more positive the attitude toward knowledge sharing, the greater the intention to share knowledge will be. Therefore, the results align with previous studies which also confirmed a significant relationship of attitude on intention for knowledge sharing behaviour in organisational context (e.g., Bock et al., 2005; Can & Hawamdeh, 2013; Xue et al., 2011; Zhang & Ng, 2013).

In addition, the results confirmed that injunctive norms positively influence intention to share knowledge. In other words, if individuals believe that their ‘important others’ (i.e., CEOs, line managers or colleagues) want them to share their knowledge with their co-workers the more likely it is that they will intend to share their knowledge. This is aligned with the majority of studies which examined the relationship between injunctive norms and intention to share knowledge and found it significant (e.g., Bock et al., 2005; Bock et al., 2010; Can & Hawamdeh, 2013; Chow & Chan, 2008; Chuang et al., 2015; Dong et al., 2010; Ho et al., 2011; Ibragimova et al., 2012; Kuo & Young, 2008; Mongkolajala et al., 2012; Ramayah et al., 2013; Ryu et al., 2003; Stenius et al., 2015; Teh & Yong, 2011; Tsai et al., 2013; Zhikun & Fungfai, 2009).

The results also confirmed that descriptive norms positively influence intention to share knowledge. This means that the actual behaviour of ‘important others’, whether they share or do not share their knowledge, influences employees’ intention to share knowledge. For example, if employees observe that their CEOs, line managers and colleagues share their knowledge, they will be more likely to share their knowledge with their peers. Finally, it was also found that perceived behavioural controls positively influence intention to share knowledge. This means that employees perceive that knowledge sharing is easy and something within their control. It also means that they have the resources and opportunities to share knowledge with their peers as well as the ability to do so.

Since both descriptive norms and perceived behavioural controls were factors that were added to a later version of the TRA, there is a lack of studies in the KM and KS literature that tests this relationship. However, a study by Alajmi (2012) which found that descriptive norms and perceived behavioural controls influence intention to share knowledge, which is aligned with the current study.

7.2.4 Organisational Culture Dimensions and Injunctive Norms of Knowledge Sharing

Injunctive norms represent the perceived social pressure which results from the expectation of ‘significant others’ on an individual. In an organisational context, these important others may include CEOs, line managers and colleagues. Earlier research has confirmed that injunctive norms lead to social pressure that prompts individuals to a strong intention toward the behaviour (Bock et al., 2005; Huang et al., 2008). Therefore,

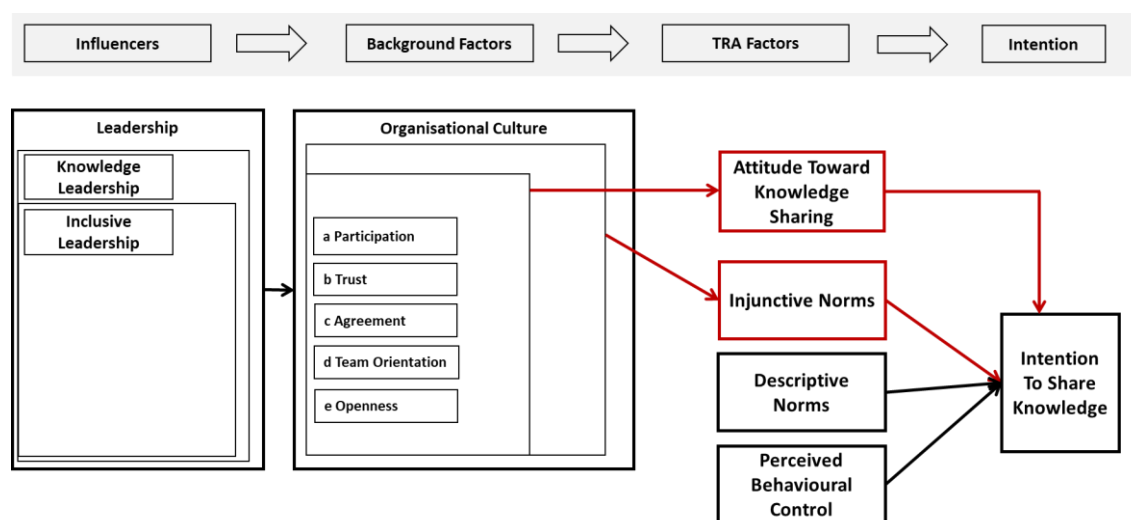
it was hypothesised earlier that an organisational culture that promotes participation, trust, agreement, team orientation and openness, will have a positive impact on injunctive norms. However, the results show that out of these organisational culture dimensions, only agreement and openness have a significant impact on injunctive norms; participation, trust and team orientation's impacts on knowledge sharing were not significant. One reason why agreement has a positive influence on knowledge sharing is that when a culture is characterised by agreement, employees have to think together to reach to win-win solutions; therefore, injunctive norms become more explicit. Similarly, with a culture that is characterised by openness, there is open communication so peers' expectations are articulated more and this could be why they have a strong influence on injunctive norms.

The qualitative data confirmed the impact of participation, trust and team orientation on injunctive norms but did not provide any additional insights to explain these results; therefore, future research is required in this area.

7.2.5 Organisational Culture Dimensions, Attitude Toward Knowledge Sharing, Injunctive Norms and Intention to Share Knowledge

Post hoc analysis was performed to investigate the mediating effects of both attitude toward knowledge sharing and injunctive norms on the relationship between the organisational culture dimensions (openness, trust, agreement, team orientation, participation) and intention toward sharing knowledge.

Figure 7.2 Main Model: Highlighting the Mediation Relationships



The results provide evidence that the relationships between agreement and openness and intention to share knowledge are fully mediated by attitude to share knowledge.

The full mediation of both attitude toward knowledge sharing and injunctive norms on the agreement and openness – intention toward knowledge sharing relationship – uncovers several other relevant insights. It first confirms the importance of having an organisational culture that is characterised by openness which facilitates attitude toward knowledge sharing that ultimately influences intention to share knowledge. In other words, a culture of openness encompasses elements such as open communications and the ease of approachability of senior staff, which ensures the flow of information across organisational levels. Such a culture allows employees access to information when needed and they are more likely to have the mind-set to share their knowledge with their peers and actually perform the behaviour.

Second, it also stresses the importance of having an organisational culture that is characterised by agreement which facilitates employees' attitude toward knowledge sharing that ultimately influences intention to share knowledge. This is because a culture of agreement consists of factors such as being unified as family, ability to resolve conflicts when they occur, and having a common understanding on most rules, norms and values. This, in turn, creates a culture of agreement which impacts employees' mind-set to increase their attitude toward knowledge sharing with their peers and actually perform the behaviour. They are likely to share their knowledge when they discuss solutions, issues or conflicts as they try to resolve differences and come up with win-win solutions when this happens.

Third, both openness and agreement affect the social pressure that results from the expectations of 'significant others' which in turn affects the intention of employees to perform the behaviour. Therefore, the mediation provided by injunctive norms provides an understanding of how both openness and agreement relate to intention to share knowledge. By increasing injunctive norms, in fact, openness and agreement facilitate the atmosphere whereby employees can engage in sharing information, experiences and knowledge with their peers. Injunctive norms, thus, are a key factor that allows understanding of an individual's likelihood to (not) perform which then translates into (not) performing the knowledge sharing behaviour.

Finally, openness and agreement create the right atmosphere for employees to engage in sharing information, experiences and knowledge with their peers. Attitude toward knowledge sharing, thus, is a key factor that allows us to understand individuals' likelihood to (not) perform which translates into performing the knowledge sharing behaviour.

Additionally, the results reveal that the indirect effect of agreement on intention to share knowledge by injunctive norms is three times higher (0.060) than by attitude toward knowledge sharing (0.018). Similarly, the indirect effect of openness on intention to share knowledge by injunctive norms is about two times higher than that of attitude toward knowledge sharing. This is interesting, because it indicates that social pressure by important others in the UAE culture is more influential than attitude toward knowledge sharing. In other words, it is important for employees to comply with their CEOs', line managers' and colleagues' norms of knowledge sharing.

The partial mediation of trust on intention toward knowledge sharing relationship through attitude toward knowledge sharing reveals an interesting insight. The results show the direct main effect of trust on intention to share knowledge (0.068) while the indirect effect of trust on intention to share knowledge through attitude toward knowledge sharing is 0.020. That means only 23% of the total effect from trust to intention to share knowledge is mediated through attitude toward knowledge sharing. An organisational culture that is characterised by trust mainly influences intention to share knowledge directly. In contrast, the indirect effect of injunctive norms on the relationship between trust and intention toward knowledge sharing is not significant.

Finally, results indicate that the relationships between participation and team orientation on intention to share knowledge have no effect either directly or indirectly through attitude toward knowledge sharing and injunctive norms. This result could be due to the context – the study took place in public government organisations – where, for example, it is not common to formulate teams outside of formal boundaries. This was also addressed by Willard-Grace et al. (2014) who explain that a team based on structure alone does not necessarily have good communication: it must also have a team orientation culture to improve the quality of their work atmosphere. Additionally, for participation one reason could be that government employees might have lower motivation to share

even if the culture was participative, possibly because some employees are more motivated by extrinsic rewards. For example, some employees will not engage in such activities unless they know that there will be some sort of acknowledgement (e.g., rewarding ceremony, appreciation certificate) or monetary rewards. Those employees will share within the boundaries of their job descriptions but they will not make any extra effort to share their knowledge. This is not only the case for direct relationship between both participation and team orientation on intention to share knowledge but also on the mediated relationship of participation and team orientation and intention to share knowledge through attitude.

7.2.6 Control Variables

7.2.6.1 Gender

The results confirm a significant effect of gender on both attitude toward knowledge sharing (-0.106^{***}) and intention to share knowledge (-0.045^*). In specific, the results show that within the Dubai organisational context men share more knowledge than women which contradicts previous studies (e.g., Carrol, 2002; Holste & Fields, 2010; Miller & Karakowsky, 2005). This may be due to cultural reasons. Of the qualitative data respondents, seven said that gender does not impact knowledge sharing among employees and a further seven responded that knowledge sharing happens more cross gender. However, five respondents highlighted that knowledge sharing happens more within the same gender, while two (both male) said that sharing happens cross gender but only within the same gender for men, not for women, claiming that there are issues such as jealousy among women in the workplace. Therefore, although these responses are perceptions rather than evidence, this suggests that there may be within-gender issues in some organisations that could be further investigated in future.

7.2.6.2 Education

The study results confirm a significant effect of education on both attitude to sharing knowledge, and intention toward knowledge sharing and is consistent with previous studies (e.g., Al Mehairi & Binning, 2014; Bakker et al., 2006; Bartol et al., 2009; Liu & Phillips, 2011) as it confirmed that employees with higher levels of education have a more positive attitude to sharing knowledge and intention toward knowledge sharing. This is also aligned with the qualitative data results as nine respondents agreed that employees

with higher education have a higher tendency to share knowledge with their peers. Additionally, no respondents believed that employees with lower education share knowledge with their peers more than more highly educated colleagues. Education was included as a control variable in the present study as it had been highlighted as an important control factor in the knowledge sharing literature (e.g., Al Mehairi & Binning, 2014; Bakker et al., 2006; Bartol et al., 2009; Liu & Phillips, 2011). Al Mehairi & Binning (2014) confirmed that education level influenced knowledge sharing behaviour. They argued that employees with lower educational levels may have jobs which are not sophisticated and therefore, knowledge sharing may not be crucial, whereas employees with higher educational levels are expected to occupy jobs which require decision-making and discussions with their colleague and this in turn requires them to share knowledge with their co-workers. Similarly, Bakker et al. (2006) controlled for education in their study because they believed that employees with higher educational levels are expected to have more expertise more than those with lower levels of education.

7.2.6.3 Age

Age was considered as a control variable in the present study as recommended in the knowledge sharing literature (e.g., Bakker et al., 2006; Bartol et al., 2009; Holste & Fields, 2010; Gratton et al., 2007). The arguments proposed by researchers include that age affects the amount of information one has and willingness to share it with others (Bartol et al., 2009). Another study confirmed that older teams share more knowledge than younger teams (Bakker et al., 2006). The present study results show an insignificant effect of age on both attitude to sharing knowledge and intention toward knowledge sharing which is inconsistent with previous studies. However, it is aligned with a study by Xue et al. (2011) which took place in the United States: they controlled for age and found it had no significant effect on knowledge sharing behaviour. This means that within the UAE culture, age does not matter when it comes to sharing between different age groups in the organisations. These are interesting results as, based on the qualitative data results, the majority of respondents believed that younger employees tend to share more knowledge than older employees. Some of the respondents explained that younger employees are energetic and they are willing to share whereas older employees are settled and try to avoid engagements in general. One of the reasons might be that older employees recognise that knowledge is a source of power and are reluctant to give it up. Equally,

older employees may be more fearful of having to find another position if they give away their knowledge freely. On the other hand, when employees lack the knowledge necessary to perform a work task they are more likely going to ask someone who has worked there longer than someone who joined recently. Hence, qualitative analysis suggests that participants were simply biased against older employees: this may be true and could be an area for exploration for future studies.

7.2.6.4 Job Seniority

Job seniority is suggested as a control variable in the literature (e.g., Cavaliere et al., 2015; Ifinedo, 2014; Merhi & Ahluwalia, 2019; Yazdanmehr & Wang, 2016; Yuan, 2012). The aim of considering job seniority as a control variable is to examine whether employees who are in higher or lower positions in the organisational hierarchy share knowledge more with their peers in the organisation. The rationale proposed Chapter 3 is that employees of higher rank will have more authoritative roles which allow them to share their knowledge with their peers more than those who are of lower rank. Therefore, in the current study the job ranks considered were: 1) upper management, 2) middle management, 3) junior management, 4) administrative staff, 5) support staff, 6) consultant. In line with the eligibility criteria set in the pilot study, employees who were working on a temporary basis and graduate trainees were excluded from the study. The study results confirm that job seniority has a significant effect on attitude to sharing knowledge. This means that employees with higher job positions/higher ranks have a more positive attitude toward sharing knowledge than employees with lower job seniority/lower ranks. However, the results also revealed that job seniority has no effect on intention to share knowledge. This means, even though employees with higher ranks have more positive attitudes toward knowledge sharing, they do not end up performing the actual behaviour, i.e., sharing knowledge with their peers.

7.2.6.5 Nationality

Nationality was considered for the present study as it has pointed out that it can lead people to form subgroups and have specific preferences with regard to knowledge sharing (Gratton et al., 2007). In the present study, nationality was looked at as two categories: Emiratis and non-Emiratis. It was expected that nationality could affect knowledge sharing among employees, especially between Emiratis and non-Emiratis due to the

Emiratisation policy in the UAE. Emiratisation means that organisations show preference in hiring Emiratis over expatriates in order to sustain national identity and political stability (Modarress et al., 2013). Therefore, it was expected this could raise issues of job security among expatriates which may affect their willingness to share their knowledge with Emiratis. However, based on the quantitative results of the study, nationality did not have any significant influence on either attitude toward knowledge sharing or intention to share knowledge. This is an interesting result which contradicts the expectations. This could be due to the fact that expatriates are mature in terms of career choices and have a career plan which involves changing jobs. Therefore, they deal with their current job professionally as they do not mind sharing their knowledge with locals. However, based on the qualitative interviews, the majority of respondents believed that Emiratisation has an impact on knowledge sharing between Emiratis and non-Emiratis. Therefore, this could be an area for future research in order to understand nationalisation in different countries and how it may impact knowledge sharing, especially in multinational organisations.

7.3 Model 2: Knowledge Leadership and Inclusive Leadership Are Both Treated as Background Factors in The TRA Framework

7.3.1 *Inclusive Leadership's and Knowledge Leadership's Impact on Attitude Toward Knowledge Sharing and Injunctive Norms*

In Model 2, leadership was tested as a driver (background factor) as per the TRA framework. The results show that inclusive leadership influences individual attitudes toward knowledge sharing as well as injunctive norms of knowledge sharing; this supports the hypothesised relationships in Chapter 3. In the UAE and Dubai government organisational context the results align with the efforts of the government as addressed in the Government Excellence Model (UAE, 2019).

However, the results show that knowledge leadership does not have an influence on attitudes toward knowledge sharing. Additionally, they show that knowledge leadership has an influence on injunctive norms of knowledge sharing, but not in the way it was expected. Knowledge leadership had a negative influence instead of positive as assumed previously. Therefore, to investigate this more, the model was tested for a crowding out effect (as mentioned in chapter 5) by eliminating inclusive leadership from the model.

However, the results did not change, which means that there is no crowding out effect is interfering with the results.

This is interesting because the UAE and Dubai governments have several efforts that highlight the importance of having the qualities and characteristics of knowledge leadership. For instance, the Government Excellence Model states that leaders should promote a culture that is conducive to learning and knowledge creation. Therefore, leadership efforts are recommended to focus on making the right knowledge available for the right people at the right time as well as providing employees with needed resources (UAE, 2019).

On the other hand, knowledge leadership was found to have a negative influence on injunctive norms of knowledge sharing. This could be because the participants were asked a set of questions to assess knowledge leadership (Yang et al., 2014, p. 47); they were asked if their managers:

- Take actions to enhance team members' innovative ability
- Develop a reward system to stimulate the team members' learning behaviour
- Integrate practical experience from different departments to create new knowledge
- Lead the team members to execute innovative ideas
- Understand the needs and expectations of the team members and provide the necessary resources, and
- Always try to gain new knowledge to set an example to the others.

Therefore, most of the items addressed innovation (e.g., innovation ability, creating new knowledge, and executing innovative ideas). Therefore, knowledge leadership could have a negative impact on injunctive norms as it includes some aspects of innovation which requires novelty of ideas (Rank et al., 2004). Therefore, employees might be under the impression that they should not share ideas with peers without first protecting their intellectual property rights (Turney, 2005). Another reason is that when leaders are characterised by higher knowledge leadership they are more likely to set an example for employees to encourage them to share knowledge with their peers.

The qualitative data shows that both inclusive leadership and knowledge leadership have

a positive impact on attitude toward knowledge sharing.

Some of the insights given by the participants shed light on why knowledge leadership's influence on attitude toward knowledge sharing was not confirmed by quantitative methods:

1. Some of the participants perceived that their leaders' interpersonal and organisational skills were used for their self-personal growth and their personal benefits, not to drive cultural change and facilitate knowledge transfer among their teams.
2. Some participants observed that their managers are concerned with management issues rather than focusing on and taking action to enhance the team members' innovative ability within their technical and specialised domains. Therefore, innovation seems to be heading in different directions.
3. Some participants highlighted that unless ideas benefitted the leaders' agenda, were likely to be rejected.

7.4 Model 3: Knowledge Leadership and Inclusive Leadership Are Both Treated as Moderators on the Relationship Between Organisational Culture Dimensions and Attitude Toward Knowledge Sharing

Model 3 treats knowledge leadership and inclusive leadership as moderators between the organisational culture dimensions and attitude toward knowledge sharing. In addition, as a post hoc analysis, the moderation effect of leadership on the relationship between organisational culture dimensions and injunctive norms of knowledge sharing was investigated.

7.4.1 Inclusive Leadership Moderating the Relationship Between the Organisational Culture Dimensions and Attitude Toward Knowledge Sharing

The results revealed that inclusive leadership moderates the relationship between an organisational culture that is characterised by participation and team orientation, and employees' attitude toward knowledge sharing with their co-workers. It was also found that the moderating effect of inclusive leadership on the relationship between an organisational culture that is characterised by trust and attitude toward knowledge sharing was not supported. The moderating effect of inclusive leadership on the relationship between an organisational culture that is characterised by agreement and openness and attitude toward knowledge sharing were also not supported but were significantly

negative. Although inclusive leadership has previously been found to be a strong driver for trust, it is not a moderator between the relationship of trust and attitude toward knowledge sharing. The opposite direction of significance between the moderating relationship of inclusive leadership on the organisational culture dimensions (agreement and openness and attitude toward knowledge sharing) could be caused due to the micro-characteristics of each of these organisational culture dimensions and the nature of inclusive leadership style. For example, in an open culture, employees might think that since I am heard by the leadership and my opinions are included in decisions why should I share my knowledge with teammates where I can directly share it with leadership. Similarly, in an agreement culture, where the style of leadership is inclusive, employees might think why should I comprise and agree with the overall group, where I can push my ideas and thoughts directly to the leadership.

7.4.2 Knowledge Leadership Moderating the Relationship Between Organisational Culture Dimensions and Attitude Toward Knowledge Sharing

The moderating effects of knowledge leadership on the relationships between all organisational culture dimensions and attitude toward knowledge sharing were not supported. In particular, the moderating effect of knowledge leadership on the relationships between an organisational culture that is characterised by trust, agreement, team orientation and openness, and attitude toward knowledge sharing were not supported. In addition, the relationship between participation and attitude toward knowledge sharing was not supported, but the moderating effect was significant in the other direction. This could be due to the micro-characteristics of knowledge leadership and participation. Knowledge leadership focuses more on the relationship between a leader and their team members rather than on how team members work together. For example, knowledge leadership focuses on the leaders' skills and how they should be a role model to set an example for others. In case of conflict the leaders resolve issues together with team members. Participation focuses on how teams interact with one another and give each member an equal chance to take part, be heard and even communicate bad news openly. However, if knowledge leaders hold meetings to resolve issues or discuss new initiatives, employees might seek to take advantage of such an opportunity to communicate directly with leaders to get their points across instead of focusing on collective solutions or discussions with their peers.

Therefore, the findings based on Models 2 and 3 suggest that knowledge leadership is a stronger driver for organisational culture than a moderator between organisational culture dimensions and attitude toward knowledge sharing.

7.4.3 Inclusive Leadership Moderating the Relationship Between Organisational Culture Dimensions and Injunctive Norms of Knowledge Sharing

A post hoc analysis moderation was performed in order to explore the moderating effects of inclusive leadership on the relationship between organisation culture dimensions and injunctive norms. The thought behind this analysis is that the background factors within the TRA framework have an impact on attitude toward knowledge sharing as well as injunctive norms. In addition, both attitude towards knowledge sharing and injunctive norm have an effect on intention toward sharing knowledge. The results revealed no moderating effects of inclusive leadership on the relationship between the organisational culture dimensions and injunctive norms. This means that inclusive leadership works best as a driver for injunctive norms (social pressure) as explained in Model 2 rather than as a moderator of the relationship between organisational culture dimensions and injunctive norms as in Model 3. This result is logical because injunctive norms are about important others. Therefore, inclusive leadership is a driver for injunctive norms, as it can influence employees' injunctive norms of knowledge sharing.

7.4.4 Knowledge Leadership Moderating the Relationship Between Organisational Cultures and Injunctive Norms of Knowledge Sharing

Similarly, a post hoc analysis moderation was performed in order to explore the moderating effects of knowledge leadership on the relationship between organisation culture dimensions and injunctive norms. The results revealed there was no moderation effects apart from trust. Therefore, the leader could be playing a moderating, as well a driver, role when driving trust among their team members.

7.5 Overall Summary of Research Models

Table 7.1 Overall Summary of the Three Research Models

	Model 1: Leadership as Driver for Organisational Culture	Model 2: Leadership as Driver for Attitude Toward Knowledge Sharing	Model 3: Leadership as a Moderation Between the Relationship of Organisational Culture and Attitude to Sharing Knowledge
Participation	IL: Significant	N/A	IL: Significant

	Model 1: Leadership as Driver for Organisational Culture	Model 2: Leadership as Driver for Attitude Toward Knowledge Sharing	Model 3: Leadership as a Moderation Between the Relationship of Organisational Culture and Attitude to Sharing Knowledge
	KL: Significant		KL: not supported
Team Orientation	IL: Significant KL: Significant	N/A	IL: Significant KL: not supported
Trust	IL: Significant KL: Significant	N/A	IL: not supported KL: not supported
Agreement	IL: Significant KL: Significant	N/A	IL: not supported but significant in the opposite directions KL: not supported
Openness	IL: Significant KL: Significant	N/A	IL: not supported but significant in the opposite directions KL: not supported
Attitude Toward Knowledge Sharing	N/A	IL: Significant KL: Significant but in the opposite direction	Covered in each OC dimension since this moderation relationship
Injunctive Norms	N/A	IL: Significant KL: Significant but in the opposite direction	IL: no effect KL: no effect except for trust

The results show that the impact of both inclusive leadership and knowledge leadership on all organisational culture dimensions are all significant. This makes inclusive leadership and knowledge leadership strong drivers for organisational culture dimensions as evident in Model 1. Model 2 looked at inclusive leadership and knowledge leadership as drivers for attitude toward knowledge sharing and injunctive norms: the results were significant for inclusive leadership, but knowledge leadership's impact on attitude toward knowledge sharing and injunctive norms was significant in the opposite direction. Finally, inclusive leadership and knowledge leadership are mostly not significant as moderators on the relationship between organisational culture and attitude to sharing knowledge in Model 3. For example, for inclusive leadership moderating the relationship between organisational culture dimensions and attitude toward knowledge sharing, only participation and team orientation are significant. Therefore, Model 1, in which the leadership is a driver for organisational culture, could be seen as a better model where leadership acts as an influence on the organisational culture which ultimately influences attitude toward knowledge sharing positively.

The results are very interesting because, based on literature, leadership was found both as driver and moderator. So, when testing Models 1 and 2, it was found that when inclusive leadership was used as a driver for the organisational culture dimensions of participation

and team orientation, it was not significant whereas, when inclusive leadership was tested as a moderator on the relationship between those two dimensions and attitude toward knowledge sharing the results were significant. This also worked vice versa; for example, when using inclusive leadership as a driver for the organisational culture dimensions of trust, agreement and openness, the results were significant: however, when using inclusive leadership as a moderator in in Model 3, those dimensions were not significant. This means that both inclusive leadership and knowledge leadership are drivers for all organisational culture dimensions but can only moderate some dimensions of organisational culture.

7.6 Summary

This chapter discussed the three main research models that guided the study, while highlighting the gaps that were addressed through the research questions. It also outlined how the proposed models extend the body of knowledge. An overall all summary was presented to discuss both quantitative and qualitative data results and some suggestions for future research were proposed.

Chapter 8: Conclusion

8.1 Introduction

Chapter 7 discussed the research findings for both the quantitative and qualitative data. This chapter will summarise the thesis structure and provide a snapshot of what each chapter covered. Overview of the research will be also highlighted and both theoretical, and practical contributions of the current study will be discussed. Next, the managerial, contextual and policy implications will be addressed. Finally, the limitations of the study will be presented and suggestions for future research will be provided.

8.2 Overview of the Research

This thesis discussed the history and evolution of knowledge management, organisational culture and leadership over the years. It also highlighted that, just as organisations evolve and adapt, so, too, must their leaders: they need to adopt leadership styles and create an organisational culture that suits these changes and enhances knowledge sharing among employees. It also explained the relationships between leadership, organisational culture, and employees' attitude toward knowledge sharing.

The thesis fulfilled the research objectives by answering the research questions:

- How do organisational culture dimensions (participation, trust, agreement, team orientation, and openness) impact employees' attitudes toward knowledge sharing?
- How does leadership (inclusive leadership and knowledge leadership) impact employees' attitude toward knowledge sharing?
- How does leadership (knowledge leadership and inclusive leadership) influence organisational culture dimensions (participation, trust, openness, team orientation and agreement)?

Primarily, the thesis aimed to achieve the following objectives:

- Identify and assess the role of organisational culture dimensions on injunctive norms and attitude toward knowledge sharing in UAE organisations
- Provide managerial and policy implications to UAE organisations to promote a more effective organisational culture that supports knowledge sharing behavioural intentions in employees in organisations.

- Develop a comprehensive understanding of how organisational culture and leadership affect knowledge sharing behavioural intentions.

The thesis offered three models:

- Model 1 in which both knowledge leadership's and inclusive leadership's impact on organisational culture was tested, and was confirmed to be highly significant. It also examined the impact of organisational culture dimensions on intention to share knowledge both directly and indirectly through attitude toward knowledge sharing and injunctive norms. Depending on the particular organisational culture dimension, the results between no effect, no mediation, partial and full mediation.
- Model 2 in which both knowledge leadership's and inclusive leadership's impact on attitude to sharing knowledge was tested, and was confirmed to be highly significant for inclusive leadership.
- Model 3 in which both knowledge leadership and inclusive leadership were tested as moderators of the relationship between organisational culture dimensions and attitude toward knowledge sharing. The model confirmed that, depending on the type of organisational culture, sometimes leadership plays a stronger role as a driver and sometimes as a moderator.

All three models were empirically tested using a mixed methods approach.

8.3 Summary of The Results

The quantitative data and analysis provided evidence that Model 1 is the ideal model out of the three as demonstrated in Chapter 7, which addressed the overall research models summary. Therefore, Model 1 makes a contribution to the TRA and TPB frameworks, which extends the body of knowledge. Organisational culture dimensions' impact on attitude to sharing knowledge was significant for all dimensions apart from team orientation and participation. Similarly, injunctive norms were significant for all dimensions apart from participation, trust and team orientation. Model 2 also confirms that inclusive leadership can influence attitude toward knowledge sharing where knowledge leadership was not confirmed. Model 3 provided an insight that leadership can function as a moderator in some cases or in some organisational culture types, but compared to Models 1 and 2 leadership works best as an influencer on organisational culture. The qualitative data, and its analysis, was complementary to help understand

some of the results found by quantitative data, hence it provided some insights on why some results were not significant within the quantitative analysis. Table 8.1 shows the main research relationships and key findings.

Table 8.1 Major Relationships – Summary and Highlights

Research Relationships	Quantitative	Qualitative
Leadership impact on organisational culture in organisations	Both inclusive leadership and knowledge leadership had a strong influence on organisational culture	Leadership impact on organisational culture was also highlighted through qualitative data. In addition, both inclusive leadership's and knowledge leadership's impact on organisational culture was addressed by study participants.
Organisational culture impact on knowledge sharing behavioural intentions	Organisational culture dimensions' impact on attitude toward knowledge sharing was significant for all dimensions apart from participation and team orientation	All organisational culture dimensions of the study (participation, trust, agreement, team orientation, and openness) and their impact on attitude toward knowledge sharing were considered important by participants. Interviews provided some insights on why participation and team orientation impact on knowledge sharing could not be confirmed by the quantitative method.
Leadership impact on knowledge sharing behavioural intentions in organisations	Inclusive leadership on attitude to sharing knowledge was confirmed; however, knowledge leadership's impact on attitude toward knowledge sharing was not confirmed.	From qualitative data, the majority of participants highlighted that leadership impacts organisational culture in a way that can make it better or worse. Both inclusive leadership and knowledge leadership were highlighted as having an impact on organisational culture by participants. Interviews provided some insights on why knowledge leadership's impact on knowledge sharing could not be confirmed by the quantitative method.
Organisational culture impact on injunctive norms	Organisational culture dimensions' impact on injunctive norms was significant for all dimensions apart from participation, trust, and team orientation	Organisational culture dimensions' impact on injunctive norms, participation, trust and team orientation was highlighted by participants. Interviews did not provide insights on why injunctive norms were not confirmed by quantitative methods. Therefore, this could be an area for future research, especially for qualitative research.

In addition, the study looked at some control variables which were also analysed using both quantitative and qualitative methods. The control variables included in the quantitative data analysis were age, gender, education, job rank, and nationality. All were significant in the quantitative analysis apart from age and nationality. Therefore, it would be interesting to explore nationality because of the variations received from both the quantitative and qualitative analyses. Another area that would be interesting to explore is gender as, based on the results, male employees tend to share more knowledge than

female employees. This could be due to cultural factors that are unique to the UAE and GCC countries and is therefore worthy of further investigation.

Table 8.2 Control Variables / Quantitative Analysis

Control Variables	Quantitative
Age	Not Significant
Gender	Significant
Education	Significant
Job Rank	Significant
Job Experience	n/a
Nationality (Emiratis/non Emiratis)	Not significant

8.4 Theoretical and Empirical Contributions

This study makes several theoretical and practical contributions (see Table 8.3). Theoretically, this study has contributed to the area of KM by addressing two of the key factors that contribute to the success or failure of knowledge sharing, organisational culture and leadership.

First, this thesis has extended the current TRA and TPB (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975, 2010) by adding a new layer, the influencer factors. This thesis has shown both inclusive leadership and knowledge leadership to be influencing factors that significantly affect the background factors in TRA. Such an extension was not identified in prior studies as noted during the review of the published literature (e.g: Obrenovic et al., 2020; Syed et al., 2021; Zaitul et al., 2021). As a result, this thesis provides a new approach to the examination of knowledge sharing behavioural intentions and other behaviours when using the TRA.

Second, this thesis has reconceptualised how organisational culture is defined in knowledge sharing behavioural studies. Five organisational culture dimensions (participation, trust, agreement, team orientation and openness) were defined in this thesis, and their impact on knowledge sharing behavioural intentions have been both tested quantitatively and explored qualitatively. Based on the quantitative and qualitative results, the organisational culture dimensions of trust, agreement and openness were found to have an impact on knowledge sharing. The new re-conceptualisation of organisational culture provides a fresh perspective of how future research can adapt

organisation culture in their research, especially when examining work related behaviours where organisational culture plays an important role.

Third, this thesis has provided evidence of a new effect of organisation culture on intention to share knowledge through two mediators, attitude to sharing knowledge and injunctive norms. The literature review did not reveal any previous studies that had adapted the TRA and TPB specially to examine knowledge sharing behavioural intentions or look at the indirect relationships between background factors and the intention. Without considering the mediation effect, many of the organisational culture dimensions may have not shown to be significant. It is possible, therefore, a re-examination of the prior studies that did not find any significant effect of organisational culture dimensions on intention, with the consideration of the mediation effect might show different results. Accordingly, future research may like to take these results as a guideline to include the mediation effect when studying similar organisational topics.

Fourth, this thesis has extended the current TRA model (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975, 2010) as the results of the study show that there are important effects to look at in terms of moderation relationships. This study examined the moderating impact of knowledge leadership and inclusive leadership on the relationship between organisational culture dimensions (participation, trust, agreement, team orientation and openness) and attitude toward knowledge sharing. The results show that both knowledge leadership and inclusive leadership can moderate the relationship between organisational culture (background factors) and attitude to sharing knowledge. Thus, this step is reusable in future research based on the context of the study and the behaviour being studied. Therefore, the present study contributed to understanding leadership, organisational culture and knowledge sharing in an organisational context, especially in the public government sector.

The thesis also had several empirical contributions that helped to answer several calls for further research related to KS, KM and OC literature. The study shed light on the importance of some demographic factors such as gender and nationality. For example, it found that male employees share knowledge more than female employees which is interesting because, based on literature and studies conducted in Western countries, the opposite was expected (Carroll, 2002; Holste & Fields, 2010). Additionally, nationality

in terms of Emiratisation and knowledge sharing between Emiratis and non-Emiratis was not found to be statistically significant quantitative methods. However, the results of the qualitative methods were more in keeping with the initial expectations that Emiratisation and nationality in terms of Emiratis and non-Emiratis could have an influence on knowledge sharing. More specifically, most respondents believed that non-Emiratis withhold their knowledge from Emiratis because of job security fears. Therefore, this thesis offers a deeper perspective on demographic factors from both the quantitative and qualitative point of view with regard to employees' behavioural knowledge sharing intentions. However, once again, further quantitative studies to test the results of the qualitative exploratory research would be valuable.

Furthermore, a mixed methodology was utilised to answer the research questions which is considered an additional contribution to the thesis. The study was conducted in two phases, a pilot study followed by the main study. Both included interviews and questionnaires. Based on the outcomes of the pilot study, the main study was improved. Additionally, the previous studies that examined knowledge sharing behavioural intentions had used only one method –either qualitative (e.g., Ardichvili et al., 2006; Dulaimi, 2007, Peltokorpi, 2006) or quantitative (e.g., Abzari & Abbasi, 2011; Bock et al., 2005, Huang & Huang, 2012; Ramasamy & Thamaraiselvan, 2011; Suppiah & Sandhu; 2011; Yang, 2007). In addition, most of the studies that adopted TRA and TPB followed a quantitative research method. Therefore, a mixed methodology approach as an application of TRA and TPB brings more theoretical advances which helps researchers to customise questions based on their current situations and contexts. Further, this study brings a unique operationalisation of organisational culture in the Middle East, GCC and UAE context. Based on the pilot qualitative study some organisational culture dimensions were addressed by respondents which then were included in the main study. Thus, the study included OC dimensions relevant to the Middle East, GCC and the UAE. Previous studies conducted in the Middle East and Arab countries all used established measures of Western countries without any additional enhancement.

Additionally, there is a lack of empirical research investigating the effect of organisational culture on knowledge sharing behaviour in the Middle East, except of the few (e.g., Al-Adaileh & Al-Atawi, 2011; Kurmaresan & Swrooprani, 2013). Therefore, this research contributes to the literature concerned with that context. Moreover, although the literature

review identified some studies that addressed knowledge sharing behaviour in the UAE (Ahmad & Daghfous, 2010; Behery, 2008; Seba, Rowley & Delbridge, 2012; Seba, Rowley & Lambert, 2012), they did not look at the effect of organisational culture on knowledge sharing behaviour but other aspects such as information technology, organisational structure and leadership. Thus, this research approach differs from previous studies conducted in the region of the Middle East, GCC and the UAE.

Table 8.3 Summary of Theoretical and Empirical Contributions

No.	Contribution	Type of contribution
1	Extended the TRA and TPB framework (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975, 2010) by examining influencing factors on the background factors within the TRA framework to ascertain if these had an impact on the desired behaviour.	Theoretical
2	Offered a reconceptualisation of organisational culture which works well in understanding human behaviours in work-related contexts.	Theoretical
3	Extended the TRA and TPB framework (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975, 2010) by examining empirically the direct and indirect impact of organisational culture dimensions (participation, trust, agreement, team orientation and openness) on intention to share knowledge through two mediators, attitude to share knowledge and injunctive norms.	Theoretical
4	Extended the TRA model (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975, 2010) by examining empirically the moderating impact of knowledge leadership, and inclusive leadership on the relationship between organisational culture dimensions (participation, trust, agreement, team orientation and openness) and attitude toward knowledge sharing.	Theoretical
5	The study shed light on the importance of some demographic factors such as gender and nationality. For example, the study confirmed that male employees share knowledge more than female employees. Additionally, the qualitative interviews found that most interviewees believed that Emiratisation influences knowledge sharing among employees.	Empirical
6	<p>A mixed methodology was utilised to answer the research questions and this is considered an additional contribution to the thesis for several reasons:</p> <ul style="list-style-type: none"> • All previous studies that examined knowledge sharing behavioural intentions adopted either qualitative research methods (e.g., Dulaimi 2007, Ardichvili et al., 2006; Peltokorpi, 2006) or quantitative methods (e.g., Abzari & Abbasi, 2011; Bock et al., 2005, Huang & Huang, 2012; Ramasamy & Thamaraiselvan, 2011; Suppiah & Sandhu, 2011; Yang, 2007). • A mixed method pilot study was conducted prior to the main study which introduced a unique operationalisation of organisational culture in the Middle East, GCC and the UAE context. Previous studies conducted in the Middle East and the Arab Countries adopted established measures of Western countries. Additionally, the pilot study highlighted the importance of considering leadership. Thus, knowledge leadership and inclusive leadership were considered in the main study enhanced model. • Confirmed past inconsistencies in previous empirical research: the research aimed to fill the gaps in the understanding of the role of organisational culture and how it can affect knowledge sharing behaviour. Previous studies were inconsistent in terms of impact of organisational culture significance on knowledge sharing. 	Empirical
7	There is a lack of empirical research investigating the effect of organisational culture on knowledge sharing behaviour in the Middle East, except of the few (e.g., Al-Adaileh & Al-Atawi, 2011; Kurmaresan & Swrooprani, 2013).	Empirical

	Therefore, this research will contribute to the literature concerned with that context.	
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8.5 Practical Contributions/Implications

The findings of this thesis have significant contextual, managerial and policy implications. The following section addresses each of these in detail.

8.5.1 Contextual Implications

From a contextual perspective this research will fill a gap in the literature on the Middle East, GCC countries and the UAE in particular. Hofstede's early work (1984) revealed that GCC countries share many cultural similarities, and recent studies have found that GCC countries not only share cultural characteristics but also economic, political, governmental, and geographical similarities (Kartam et al., 2000; Ellaboudy 2010; Jaeger & Adair, 2013). There is limited research that has been done in the Middle East generally, GCC countries and the UAE in particular (e.g., Dedoussis, 2004; Javidan et al., 2006).

Therefore, this thesis contributes to the research gap in the area of factors that influence employees' behavioural intentions to share knowledge with their co-workers with a geographical focus on the Middle East, GCC countries and the UAE. Further, based on the literature review, this study is one of the first to take into consideration organisational culture factors and leadership factors in relation to knowledge sharing intention in the UAE and specifically in Dubai government organisations. This thesis is unique as it demonstrates the nature of the relationship between different factors and employees' intention to share knowledge in the UAE and Dubai governments context. Although this study focused on the United Arab Emirates, it could be useful in the government sector of other GCC countries, as many cultural values and aspects of historical heritage are similar. For example, this study has considered knowledge sharing across genders, which may be pertinent to other Muslim-majority countries where sensitivities exist in association with the intermingling of women and men in the workplace.

Moreover, this thesis can be considered as foundational for future research for researchers who aim to explore the field of knowledge management with a particular interest in knowledge sharing behaviour, leadership and organisational culture in the UAE or GCC context. Therefore, managers must consider factors such organisational culture, leadership and knowledge sharing initiatives when designing benchmarking with leading

organisations.

Table 8.4 Summary of Contextual Contributions

Contribution	Type of contribution
This study is considered one of the first studies that taken into consideration organisational culture factors and leadership factors in relation to knowledge sharing intention in the United Arab Emirates and particularly in Dubai government operating organisations.	Contextual

8.5.2 Managerial Implications

The results of this thesis provide several practical implications for leaders, KM managers, and organisations. As noted previously in the literature, when organisations set up the KM programs they focus on the process and technology aspects. However, many of these programs do not succeed due to a total absence of or little focus on people aspects (i.e., organisational culture and leadership). This thesis has shown how knowledge leadership, inclusive leadership and organisational culture affect KS behaviour which is a critical element in any KM program.

First, managers should realise that without proper organisational culture in place, knowledge sharing among employees cannot happen. Second, it was also found that inclusive leadership and knowledge leadership have a significant positive impact on organisational culture which ultimately drives knowledge sharing attitude. Therefore, managers need to ensure that they inculcate an organisational culture and adopt characteristics of inclusive leadership and knowledge leadership in order to encourage knowledge sharing among employees. This understanding is expected to help organisational leaders who would like to apply the findings to enhance knowledge sharing behaviour within their organisations. In addition, this research provides leaders with a better understanding of their organisational culture and sheds some light on leadership practices that they should adopt themselves to promote knowledge sharing among employees. Hence, leaders will realise the value of change management as well as adopting best practices involved with creating a culture that would cultivate knowledge sharing between employees. Seeking to understand these factors and their influence on employees' knowledge sharing behavioural intentions will provide guiding inputs to the design of knowledge sharing intervention programs that aim to change employees' behaviours. The success of such programs will have a significant impact on employees' behaviours and, as a result, enhanced knowledge sharing practices will emerge in the

organisation.

Additionally, the findings from this research provide guidance for executive leadership and senior managers to acknowledge and recognise the role of driving the organisational culture in ways that best nurture and promote employees' knowledge sharing behaviour to increase collaboration between individuals and teams. For instance, leadership can create reward schemes to enhance collaboration across organisational functions. From an organisational perspective, KS behaviour is expected to facilitate KM strategies in organisations. Promoting knowledge sharing can be challenging without the right enablers in place, therefore the main focus of KM implementation should be on ensuring that both leadership and organisational culture are all supportive of employees' knowledge sharing behavioural intentions in the organisation.

8.5.3 *Policy Implications*

Previous studies related to this research topic, that also adopted the TRA and TPB framework, are limited by their examination of two way relationships (e.g. Raza et al., 2020; Sharif et al., 2021). However, this study offers managers a holistic view of the impact on the work environment in organisations. It highlights the finding that leadership and organizational culture work as integral systems and both can harm or complement knowledge-sharing intentions among employees. Additionally, several guides have been produced by the Federal Government, the UAE and Dubai Government that provide frameworks for KM implementations. However, the current policies and guides do not address the role of leadership in order to drive change in organisational culture and knowledge sharing behaviour among employees. Some of these guides incorporate high level general practices of KM, KS, organisational culture and leadership. Since the current research is based on the context of the UAE, the thesis provides additional insights for the Federal, UAE and Dubai governments to enhance these policies and guides with more specific direction. Therefore, current policies and guides should capture and put an emphasis on the role of leadership by highlighting injunctive norms (i.e., telling people what they should do) and descriptive norms (i.e., they should set an example of desired behaviour). As part of enhancing descriptive norms, leaders should engage in knowledge-sharing events themselves and send regular messages to their teams to highlight the importance of knowledge-sharing. Table 8.5 presents a summary of the practical implications.

Table 8.5 Summary of Practical Implications

No.	Contribution	Type of Implication
1	Executive leadership teams and KM managers will acknowledge and recognise leadership behaviours and the importance of adopting characteristics and behaviours of inclusive leadership and knowledge leadership in order to encourage knowledge sharing among employees.	Managerial
2	The research will assist executive leadership teams and KM managers to acknowledge and recognise the role of driving the organisational culture that best nurture and promotes employees' knowledge sharing behaviour to increase collaboration between individuals and teams. Understanding these factors and their influence on employees' knowledge sharing behavioural intentions will provide guiding inputs to the design of knowledge sharing intervention programs that aim to change employees' behaviours.	Managerial
3	This thesis should provide perspective for both federal and local governments in the UAE while regulating government guidelines, policies and incentives related to knowledge management implementation and practices including knowledge sharing as the thesis stresses the importance of having a suitable organisational culture and leadership to improve knowledge sharing among employees in organisations.	Policy

8.6 Limitations and Directions for Future Research

8.6.1 Limitations

The thesis has six main limitations.

First, it measures intention to share knowledge rather than actual knowledge sharing behaviour. However, this is a common limitation in knowledge sharing studies where behaviour measurement is challenging because if participants are asked to self-report they may feel uncomfortable if they expose their true behaviour. Further, lack of access to organisations' records was an additional hindrance to measuring actual behaviour. The use of intention to share knowledge as a proxy is, therefore, accepted and widespread in the research area.

Second, this study only included the government sector. Although the study responded to Shariq et al.'s (2019) call for further studies in the government sector, it initially set out to study both government and private sector organisations but was thwarted by a lack of private sector participants. However, it would be beneficial for future research to include both government and private sectors in the same study to ascertain if there any interesting differences in terms of knowledge sharing behaviour and organisational culture dynamics. Future studies could also examine the effects of the local context in the UAE/GCC/Middle East and compare the national culture effect in UAE/GCC/Middle East with countries

outside the GCC and Middle East area.

Third, this thesis followed a mixed methodology approach which is referred to as a mixed concurrent dominant status design (Leech & Onwuegbuzie, 2009). This research design involves conducting a study that includes two aspects (e.g. qualitative and quantitative) concurrently, while one of those aspects have greater emphasis (Leech & Onwuegbuzie, 2009). Therefore, it is plausible that if the study had followed a mixed sequential either dominant or equal status design, there could be additional useful insights. According to Leech and Onwuegbuzie (2009), mixed sequential dominant status design refers to conducting the study in two phases in sequence, while one of the phases either qualitative or quantitative phase have a greater emphasis. Furthermore, mixed sequential equal status design is also conducted in sequence, but both the quantitative and qualitative phases have an equal weight.

Fourth, knowledge sharing requires two parties – the knowledge donor and the knowledge receiver. The study examines knowledge sharing behavioural intentions from the knowledge donor's point of view. So, a limitation of this study is that the knowledge receiver may not be interested in receiving the knowledge and this is beyond the scope of this study.

Fifth, the study addressed several control variables such as age, gender, job experience, education and nationality. However, another limitation is that industry type was not explored. Knowledge sharing behaviour may differ from industry to industry. For example, some industries may believe that knowledge sharing is their essence of operation while other industries may believe that their knowledge is their main asset.

Finally, data collected for this study were captured from one source in one time period.

8.6.2 Directions for Future Research

There is a lack of studies on the impact of organisational culture on knowledge sharing in the Middle East culture, the GCC in general and UAE in particular; this offers another area for future research. An additional gap was noted by Yang and Chen (2007) in that there might be other cultural factors interacting with the knowledge sharing behaviour, such as the national culture. This offers another area for research going forward. Again, there is a need for further empirical studies to be conducted in the Middle East and the

GCC, but especially in the UAE.

The focus of this study was large government organisations based in Dubai. These organisations were selected as they have defined KM systems and a dedicated department or team that works in the KM domain. However, in future, small and medium organisations should be examined because organisational culture, leadership and knowledge sharing happens in all sizes, even if the way it happens differs. Hence, there is a potential area for further research to examine organisations of all sizes in both sectors.

The present study showed some contradictions regarding Emiratisation and how this process impacts knowledge sharing between Emiratis and non-Emiratis in a work organisational context. Based on the quantitative methods results, Emiratisation was not seen as a significant factor affecting knowledge sharing. However, during the interviews most participants stated that Emiratisation does have an impact on knowledge sharing among employees and gave several examples of cases where non-Emiratis withheld knowledge from Emiratis. Therefore, this area could be explored further in future studies.

The qualitative data provided some useful insights about knowledge leadership, participation and team orientation and why their impact was not significant by quantitative research methods. The insights from this study could be utilised to refine the measurements for knowledge leadership, participation and team orientation in future studies in order to test some of the dimensions uncovered by the qualitative research.

Future researchers who are interested in this study topic could consider conducting the study using either a mixed sequential either dominant or equal status design, which could provide more insights.

An additional area for future research is to include both points of view of knowledge sharing behaviour, that is, knowledge donor and knowledge receiver. In addition, future research could consider the type of industry as a control variable.

Further, the study addressed several control variables such as age, gender, job experience, education and nationality. However, another limitation is that industry type was not explored. Knowledge sharing behaviour may differ from industry to industry. For example, some industries may believe that knowledge sharing is their essence of operation while other industries may believe that their knowledge is their main asset.

Finally, future research should consider collecting data from multiple sources, and incorporating temporal separation of measures across time periods. Furthermore, using other statistical tests, such as the latent marker variable (MLMV) approach, may be used to assess common method bias.

8.7 Summary

This thesis aimed to answer the following research questions:

- How do organisational culture dimensions (participation, trust, agreement, team orientation, and openness) impact employees' attitude towards knowledge sharing?
- How does leadership (inclusive leadership and knowledge leadership) impact employees' attitude towards knowledge sharing?
- How does leadership (knowledge leadership and inclusive leadership) influence organisational culture dimensions (participation, trust, openness, team orientation and agreement)?

Knowledge sharing is one of the most important factors in KM. The failure of KM implementation and KS initiatives in organisations can be due to many factors. This study focuses on leadership and organisational culture, the two most crucial factors that can influence whether KM and KS practices succeed or fail. This study has confirmed their importance. Organisations are advised to assess their organisational culture in order to put in place the right solutions for better knowledge sharing. Overall, the study examined the impact of organisational culture and leadership on knowledge sharing behavioural intentions among employees in organisational context. It provided in-depth quantitative analysis supported by deductive thematic qualitative analysis. The findings answered the research questions and various interesting outcomes were revealed. The research further extends the existing literature and makes several important theoretical and practical contributions. This thesis also suggested directions for future research and pointed out some of the current limitations of the study.

List of References

- Abdallah, S., Khalil, A., & Divine, A. (2012). The impact of knowledge sharing on innovation capability in United Arab Emirates organizations. *International Journal of Economics and Management Engineering*, 6(12), 3588-3591.
- Abzari, M., & Abbasi, R. (2011). Investigating impact of organizational climate on intention to knowledge sharing behavior by using theory of planned behavior (TPB). *Interdisciplinary Journal of Contemporary Research in Business*, 2(12), 121-134.
- Adair, J. (2004). *The John Adair Handbook of Management and Leadership*. Replika Press.
- Agyemang, F. G., & Boateng, H. (2019). Tacit knowledge transfer from a master to an apprentice among hairdressers. *Education+ Training*, 61(1) 108-120.
- Ahmad, N., & Daghfous, A. (2010). Knowledge sharing through inter-organizational knowledge networks. *European Business Review*, 22(2), 153-174.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.) *Action Control* (11-39). Springer.
- Ajzen, I. (1988). *Attitudes, personality, and behavior*. OUP.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. doi:10.1016/0749-5978(91)90020-t
- Ajzen, I. (2002). Constructing a TPB Questionnaire: Conceptual and methodological considerations. <http://www-nix.oit.umass.edu/~ajzen/tpb.html>
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Prentice-Hall.
- Akhavan, P., & Hosseini, S. M. (2016). Social capital, knowledge sharing, and innovation capability: An empirical study of R&D teams in Iran. *Technology Analysis & Strategic Management*, 28(1), 96-113.
- Aksu, A. A., & Özdemir, B. (2005). Individual learning and organization culture in learning organizations. *Managerial Auditing Journal*, 20(4) 422-441.
- Al Bastaki, S., Haak-Saheem, W., & Darwish, T. K. (2020). Perceived training opportunities and knowledge sharing: The case of the United Arab Emirates. *International Journal of Manpower*, 42(1) 113-130.
- Al Mehairi, H. A., & Binning, K. (2014, 2014). *Employee oriented vs. work oriented cultures and the moderating role of education on intention to share knowledge* Paper presented at the 11th International Conference on Information Technology. New Generations Las Vegas.
- Al Murawwi, M. A., Behery, M., Papanastassiou, M., & Ajmal, M. (2014). Examining the relationship between organizational culture and knowledge management: The

- moderation effect of organizational divisions at an Abu Dhabi gas company. *SAM Advanced Management Journal*, 79(2), 48-59.
- Al-Adaileh, R. & Al-Atawi, M. 2011. Organisational culture impact on knowledge exchange: Saudi Telecom context. *Journal of Knowledge Management*, 15(2), 212-230.
- Alajmi, B. M. (2012). The intention to share: Psychological investigation of knowledge sharing behaviour in online communities. *Journal of Information & Knowledge Management*, 11(03), 1250022.
- Al-Alawi, A. I., Al-Marzooqi, N. Y., & Mohammed, Y. F. (2007). Organizational culture and knowledge sharing: Critical success factors. *Journal of Knowledge Management*, 11(2), 22-42.
- Ali, M. M. S. (2009). *Cultural influences on knowledge sharing in Kuwaiti higher education institution: A case study approach*. [Doctoral dissertation, Loughborough University]. <https://hdl.handle.net/2134/8202>
- Aliaga, M., & Gunderson, B. (1999). *Interactive statistics*. Prentice Hall.
- Al-Kurdi, O. F., El-Haddadeh, R., & Eldabi, T. (2020). The role of organisational climate in managing knowledge sharing among academics in higher education. *International Journal of Information Management*, 50, 217-227.
- Alrawi, K. W. (2008). Knowledge management and organization's perception in the United Arab Emirates: Case study. *International Journal of Commerce and Management*, 18(4), 382-394.
- Alrawi, K., Hamdan, Y., Al-Taie, W., & Ibrahim, M. (2013). Organizational culture and the creation of a dynamic environment for knowledge sharing. *International Journal of Management and Innovation*, 5(1), 1.
- al-Suwaidi, A. (2011). The United Arab Emirates at 40: A balance sheet. *Middle East Policy*, 18(4), 44-58.
- Al-Swidi, A. K., & Mahmood, R. (2012). Total quality management, entrepreneurial orientation and organizational performance: The role of organizational culture. *African Journal of Business Management*, 6(13), 4717-4727.
- Alvesson, M. (2002). *Postmodernism and social research*. OUP.
- Ambrosio, J. 2000. Knowledge Management Mistakes. *Computerworld*, <http://www.computerworld.com/industrytopics/energy/story/0,10801,46693,00.html>.
- Amin, A., Hassan, M. F. B., & Ariffin, M. B. M. (2010). *Framework of intrinsic and extrinsic motivators of knowledge sharing: A case of training institutes of an oil and gas company in Malaysia*. Paper presented at the 2010 International Symposium on Information Technology.
- An, X., Bai, W., Deng, H., Sun, S., Zhong, W., & Yu, D. (2017). A knowledge

- management framework for effective integration of national archives resources in China. *Journal of Documentation*, 73(1), 18-34.
- Anadol, Y., & Behery, M. (2020). Humanistic leadership in the UAE context. *Cross Cultural & Strategic Management*, 27(4), 645-664.
- Apostel, E., Syrek, C. J., & Antoni, C. H. (2018). Turnover intention as a response to illegitimate tasks: The moderating role of appreciative leadership. *International Journal of Stress Management*, 25(3), 234-249.
- Ardichvili, A., Maurer, M., Li, W., Wentling, T., & Stuedemann, R. (2006). Cultural influences on knowledge sharing through online communities of practice. *Journal of Knowledge Management*, 10(1), 4-107.
- Argyris, C. (1976). Leadership, learning, and changing the status quo. *Organizational Dynamics*, 4(3), 29-43.
- Arling, P. A., & Chun, M. W. S. (2011). Facilitating new knowledge creation and obtaining KM maturity. *Journal of Knowledge Management*, 15(2), 231-250.
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *The British Journal of Social Psychology*, 40(4), 471-499.
- Auerbach, C., & Silverstein, L. B. (2003). *Qualitative data: An introduction to coding and analysis*: NYU Press.
- Ayatollahi, H., & Zeraatkar, K. (2020). Factors influencing the success of knowledge management process in health care organisations: A literature review. *Health Information & Libraries Journal*, 37(2), 98-117.
- Babcock, P. (2004). Shedding Light on Knowledge Management. *HR Magazine*, 49(5), 46-50.
- Bakker, M., Leenders, R. T. A., Gabbay, S. M., Kratzer, J., & Van Engelen, J. M. (2006). Is trust really social capital? Knowledge sharing in product development projects. *The Learning Organization*, 13(6), 594-605.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, 10, 107-124.
- Barnes, J. (1982). *Aristotle*. OUP.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bartol, K. M., & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership & Organizational Studies*, 9(1),

64-76.

- Bartol, K. M., Liu, W., Zeng, X., & Wu, K. (2009). Social exchange and knowledge sharing among knowledge workers: The moderating role of perceived job security. *Management and Organization Review*, 5(2), 223-240.
- Bavik, Y. L., Tang, P. M., Shao, R., & Lam, L. W. (2018). Ethical leadership and employee knowledge sharing: Exploring dual-mediation paths. *The Leadership Quarterly*, 29(2), 322-332.
- Baytok, A., Soyballı, H. H., & Zorlu, O. (2014). Knowledge management processes in thermal hotels: An application in Afyonkarahisar Province, Turkey. *Journal of Economic and Social Studies*, 4(1), 159-182.
- Becker, H. S., & Geer, B. (1957). Participant observation and interviewing: A comparison. *Human Organization*, 16(3), 28-32.
- Becker, J.-M., Klein, K., & Wetzels, M. (2012). Hierarchical latent variable models in PLS-SEM: Guidelines for using reflective-formative type models. *Long Range Planning*, 45(5-6), 359-394.
- Behery, M. H. (2008). Leadership, knowledge sharing, and organizational benefits within the UAE. *Journal of American Academy of Business*, 12(2), 227-237.
- Behery, M. H., & Paton, R. A. (2008). Performance appraisal-cultural fit: Organizational outcomes within the UAE. *Education, Business and Society: Contemporary Middle Eastern Issues*, 1(1), 34-49.
- Bell, C., Chan, M., & Nel, P. (2014). The impact of participative and directive leadership on organisational culture: An organisational development perspective. *Mediterranean Journal of Social Sciences*, 5(23), 1970-1985.
- Bello, O. W., & Oyekunle, R. A. (2014). Attitude, perceptions and motivation towards knowledge sharing: Views from universities in Kwara State, Nigeria. *African Journal of Library, Archives & Information Science*, 24(2), 123-134.
- Bellot, J. (2011). Defining and assessing organizational culture. *Nursing Forum*, 46(1), 29-37. doi:10.1111/j.1744-6198.2010.00207.x.
- Bennis, W. (1984). The four competencies of leadership. *Training and Development Journal*, 38(8), 14-19.
- Bhattacharjee, A. (2012). *Social science research: Principles, methods, and practices*. Textbooks Collection. 3. http://scholarcommons.usf.edu/oa_textbooks/3
- Blake, R. R., & Mouton, J. S. (1964). *The managerial grid*. Gulf Publishing Company.
- Blau, P. M. (1964). *Exchange and power in social life*. Transaction Publishers
- Blouch, R., Yasmeen, A., Khan, M. M., & Shakeel, W. (2020). Unleashing knowledge sharing in a developing country: A case of healthcare industry. *Global knowledge*,

- memory and communication*, 70(1/2), 60-78.
- Boateng, H., & Agyemang, F. G. (2016). A qualitative insight into key determinants of knowledge sharing in a public sector institution in Ghana. *Information Development*, 32(1), 35-43.
- Bobrow, D. G., & Whalen, J. (2002). Community knowledge sharing in practice: The eureka story. *Reflections*, 4(2), 47-59.
- Bock, G.-W., Lee, J. Y., & Lee, J. (2010). Cross cultural study on behavioral intention formation in knowledge sharing. *Asia Pacific Journal Information System*, 20(3), 1-32.
- Bock, G.-W., Zmud, R. W., Kim, Y.-G., & Lee, J.-N. (2005). Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS Quarterly*, 29(1), 87-111.
- Boh, W. F. (2008). Reuse of knowledge assets from repositories: A mixed methods study. *Information & Management*, 45(6), 365-375.
- Bollen, K., & Lennox, R. (1991). Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin*, 110(2), 305-314.
- Boumarafi, B., & Jabnoun, N. (2008). Knowledge management and performance in UAE business organizations. *Knowledge Management Research & Practice*, 6(3), 233-238.
- Bourdieu, P. (1986). The Forms of Capital. In J. Richardson, *Handbook of theory and research for the sociology of education* (pp. 241-258). Greenwood.
- Bowers, D. G., & Seashore, S. E. (1966). Predicting organizational effectiveness with a four-factor theory of leadership. *Administrative Science Quarterly*, 11(2), 238-263. doi:10.2307/2391247
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Burke, M., Fathi, N. M., Eze, U. C., & Goh, G. G. G. (2011). Key determinants of knowledge sharing in an electronics manufacturing firm in Malaysia. *Library Review*, 60(1), 53-67.
- Burns, A. T., Acar, W., & Datta, P. (2011). A qualitative exploration of entrepreneurial knowledge transfers. *Journal of Knowledge Management*, 15, 270 - 298.
- Cabrera, A., & Cabrera, E. F. (2002). Knowledge-sharing dilemmas. *Organization Studies*, 23(5), 687-710.
- Cabrera, A., Cabrera, E. F., & Barajas, S. (2001). The key role of organizational culture in a multi-system view of technology-driven change. *International Journal of Information Management*, 21, 245-261.
- Call, D. (2005). Knowledge management – not rocket science. *Journal of Knowledge*

- Management*, 9(2), 19-30.
- Campbell, D. T. (1960). Recommendations for APA test standards regarding construct, trait, or discriminant validity. *American Psychologist*, 15(8), 546.
- Can, A., & Hawamdeh, S. (2013). Organizational justice and the intent to share: Knowledge sharing practices among forensic experts in Turkey. *Journal of Information Science Theory and Practice*, 1(4), 12-37. doi:10.1633/JISTaP.2013.1.4.2
- Carmeli, A., Atwater, L., & Levi, A. (2011). How leadership enhances employees' knowledge sharing: The intervening roles of relational and organizational identification. *The Journal of Technology Transfer*, 36(1), 257-274.
- Carmeli, A., Reiter-Palmon, R., & Ziv, E. (2010). Inclusive leadership and employee involvement in creative tasks in the workplace: The mediating role of psychological safety. *Creativity Research Journal*, 22(3), 250-260.
- Carroll, M. N. (2002). Gender differences in trust and loyalty within single sex friendships. National Undergraduate Research Clearinghouse, 5. <http://www.webclearinghouse.net/volume/>
- Casimir, G., Ng, Y. N. K., & Cheng, C. L. P. (2012). Using IT to share knowledge and the TRA *Journal of Knowledge Management*, 16(3), 461-479.
- Cavaleri, S., Seivert, S., & Lee, L. W. (2005). *Knowledge leadership: The art and science of the knowledge-based organization*. Routledge.
- Cavaliere, V., Lombardi, S., & Giustiniano, L. (2015). Knowledge sharing in knowledge-intensive manufacturing firms. An empirical study of its enablers. *Journal of Knowledge Management*, 19(6):1124-1145.
- Chang, H. H., & Chuang, S.-S. (2011). Social capital and individual motivations on knowledge sharing: Participant involvement as a moderator. *Information & Management*, 48(1), 9-18.
- Chang, S. J., van Witteloostuijn, A., & Eden, L. (2010). Editorial: Common-method variance in international business research. *Journal of International Business Studies*, 41(2), 178-184.
- Chang, S. S.-C., & Shih, J. C. (2010). *Knowledge acquisition, sharing intention, and sharing behavior*. Paper presented at the Proceedings of the 2010 International Conference on e-Education, e-Business, e-Management and e-Learning.
- Chen, C.-W., Chang, M.-L., Tseng, C.-P., Chen, B.-C., & Chang, Y. Y.-C. (2013). Critical human factor evaluation of knowledge sharing intention in Taiwanese enterprises. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 23(2), 95-106. doi:10.1002/hfm.20300
- Chen, I. Y. L., Chen, N.-S., & Kinshuk. (2009). Examining the factors influencing participants' knowledge sharing behavior in virtual learning communities. *Educational Technology & Society*, 12(1), 134-148.

- Chenail, R. J. (2009). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. *The Weekly Qualitative Report* 2 (3), 14-21.
- Cheung, C. M. K., Lee, M. K. O., & Lee, Z. W. Y. (2013). Understanding the continuance intention of knowledge sharing in online communities of practice through the post-knowledge-sharing evaluation processes. *Journal of the American Society for Information Science and Technology*, 64(7), 1357-1374. doi:10.1002/asi.22854
- Chin, W. W. (2010). How to write up and report PLS analyses. In V. Esposito Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.) *Handbook of partial least squares* (pp. 655-690). Springer.
- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information Systems Research*, 14(2), 189-217.
- Chión S. J., Charles, V., & Morales, J. (2019). The impact of organisational culture, organisational structure and technological infrastructure on process improvement through knowledge sharing. *Business Process Management Journal*, 26(6), 1443-1472.
- Chiu, C.-M., Hsu, M.-H. & Wang, E.T.G. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support Systems*, 42(3), 1872-1888.
- Chiu, C.-M., Hsu, M.-H., & Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support Systems*, 42(3), 1872-1888.
- Chong, S., & Choi, Y. (2005). Critical factors of knowledge management implementation success. *Journal of Knowledge Management Practice*, 6(3), 21-37.
- Chow, W. S., & Chan, L. S. (2008). Social network, social trust and shared goals in organizational knowledge sharing. *Information & Management*, 45(7), 458-465.
- Chua, A., & Lam, W. (2005). Why KM Projects fail? A multi-case analysis. *Journal of Knowledge Management*, 9(3), 6-17.
- Chuang, C.-H., Jackson, S. E., & Jiang, Y. (2016). Can knowledge-intensive teamwork be managed? Examining the roles of HRM systems, leadership, and tacit knowledge. *Journal of Management*, 42(2), 524-554. doi:10.1177/0149206313478189
- Chuang, F.-M., Morgan, R. E., & Robson, M. J. (2012). Clan culture, strategic orientation and new product performance in Chinese marketing ventures: An exploration of main and moderating effects. *Journal of Strategic Marketing*, 20(3), 267-286.
- Chuang, S.-S., Chen, K.-S., & Tsai, M.-T. (2015). Exploring the antecedents that influence middle management employees' knowledge-sharing intentions in the context of total quality management implementations. *Total Quality Management & Business*

- Excellence*, 26(1-2), 108-122. doi:10.1080/14783363.2013.809941
- Clarke, A. (1999). *Evaluation research: An introduction to principles, methods and practice*. Sage.
- Connelly, C. E., & Kelloway, E. K. (2003). Predictors of employees' perceptions of knowledge sharing cultures. *Journal of Leadership and Organization Development*, 24(5), 295-301.
- Cooke, R. A., & Rousseau, D. M. (1988). Behavioral norms and expectations: A quantitative approach to the assessment of organizational culture. *Group & Organization Studies*, 13(3), 245-273.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd Ed). Sage Publications.
- Curry, L. A., Brault, M. A., Linnander, E. L., McNatt, Z., Brewster, A. L., Cherlin, E., . . . Bradley, E. H. (2018). Influencing organisational culture to improve hospital performance in care of patients with acute myocardial infarction: A mixed-methods intervention study. *BMJ Quality & Safety*, 27(3), 207-217.
- Damodaran, L., & Olphert, W. 2000. Barriers and facilitators to the use of knowledge management systems. *Behaviour & Information Technology*, 19(6), 405-413.
- Dansereau Jr, F., Graen, G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior and Human Performance*, 13(1), 46-78.
- David, W. (2011). Plato's conception of knowledge. *Classical World*, 105(1), 57-75.
- De Long, D. W., & Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. *Academy of Management Perspectives*, 14(4), 113-127.
- de Vries, R. E., Van den Hooff, B., & de Ridder, J. A. (2006). Explaining knowledge sharing: The role of team communication styles, job satisfaction, and performance beliefs. *Communication Research*, 33(2), 115-135.
- Dedoussis, E. (2004). A cross-cultural comparison of organizational culture: Evidence from universities in the Arab world and Japan. *Cross Cultural Management: An International Journal*, 11(1), 15-34.
- Defillippi, R., Arthur, M., & Lindsay, V. (2009). *Knowledge at work: Creative collaboration in the global economy*. John Wiley & Sons.
- DeJonckheere, M., & Vaughn, L. M. (2019). Semi-structured interviewing in primary care research: a balance of relationship and rigour. *Family Medicine and Community Health*, 7 doi:10.1136/fmch-2018-000057.
- Demir, C., Ayyildiz Unnu, N. A., & Erturk, E. (2011). Diagnosing the organizational culture of a Turkish pharmaceutical company based on the competing values framework. *Journal of Business Economics and Management*, 12(1), 197-217.

- Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(2), 204-223.
- Denison, D. R., & Neale, W. S. (1999). *Denison organizational culture survey: Facilitator guide*. Denison Consulting, LLC.
- Denison, D., Nieminen, L., & Kotrba, L. (2012). Diagnosing organizational cultures: A conceptual and empirical review of culture effectiveness surveys. *European Journal of Work and Organizational Psychology*, 23(1), 145-161.
- Dewi, N., & Wibow, R. (2020). The effect of leadership style, organizational culture and motivation on employee performance. *Management Science Letters*, 10(9), 2037-2044.
- DGHRD (Dubai Government Human Resources Department). (2018) , Dubai Executive Council Resolution No. (39) of 2018 Concerning the Performance Management System of Employees of the Government of Dubai https://www.dghr.gov.ae/admin/Documents/ECR%2039%20of%202018%20_Performance%20Appraisal_English%2015052019.pdf.
- Diamantopoulos, A., & Winklhofer, H. M. (2001). Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 38(2), 269-277.
- Diamantopoulos, A., Riefler, P., & Roth, K. P. (2008). Advancing formative measurement models. *Journal of Business Research*, 61(12), 1203-1218.
- Dickson-Swift, V., James, E. L., Kippen, S., & Liamputtong, P. (2007). Doing sensitive research: What challenges do qualitative researchers face? *Qualitative Research*, 7(3), 327-353.
- Dixon, N. M. (2000). *Common knowledge: How companies thrive on sharing what they know*. Harvard University Press.
- Doeleman, H. J., ten Have, S., & Ahaus, K. (2012). The moderating role of leadership in the relationship between management control and business excellence. *Total Quality Management & Business Excellence*, 23(5/6), 591-611.
- Dong, G., Liem, C. G., & Grossman, M. (2010). Knowledge-sharing intention in Vietnamese organizations. *VINE*, 40(3/4), 262-276. doi:10.1108/03055721011071395
- Dulaimi, M. F. (2007). Case studies on knowledge sharing across cultural boundaries. *Engineering, Construction and Architectural Management*, 14 (6), 550-567.
- Earl, M. (2001). Knowledge management strategies: Toward taxonomy. *Journal of Management Information Systems*, 18(1), 215-233.
- Edwards, J. (2020). Are the knowledge management times ‘a-changin’? In A. Garcia-Perez, & L. Simkin (Eds.), *Proceedings of the 21st European conference on knowledge management ECKM 2020* (pp. 212-221). Academic Conferences and Publishing International.

- Ellaboudy, S. (2010). The global financial crisis: economic impact on GCC countries and policy implications. *International Research Journal of Finance and Economics*, 41, 180-193.
- Endres, M. L., Endres, S. P., Chowdhury, S. K., & Alam, I. (2007). Tacit knowledge sharing, self-efficacy theory, and application to the open source community. *Journal of Knowledge Management*, 11, 92-103.
- Ergeneli, A., Ari, G. S., & Metin, S. (2007). Psychological empowerment and its relationship to trust in immediate managers. *Journal of Business Research*, 60, 41-49.
- Erniwati, S., Ramly, M., & Alam, R. (2020). Leadership style, organizational culture and job satisfaction at employee performance. *Point Of View Research Management*, 1(3), 09-18.
- Evans, M. G. (1970). The effects of supervisory behavior on the path-goal relationship. *Organizational Behavior and Human Performance*, 5(3), 277-298.
- FAHR (Federal Authority for Government Human Resources). (2017). *Guide to knowledge management in the federal government*. <https://www.fahr.gov.ae/Portal/Userfiles/Assets/Documents/a3f395eb.pdf>.
- Farrell, A. M. (2010). Insufficient discriminant validity: A comment on Bove, Pervan, Beatty, and Shiu (2009). *Journal of Business Research*, 63(3), 324-327.
- Fiedler, F. E. (1964). A contingency model of leadership effectiveness. *Advances in Experimental Social Psychology*, 1(1), 149-190.
- Fiedler, F. E. (1967). *A theory of leadership effectiveness*. McGraw Hill.
- Fishbein, M. (2000). The role of theory in HIV prevention. *AIDS Care*, 12(3), 273-278.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley.
- Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. Psychology Press.
- Floress, K., Reimer, A., Thompson, A., Burbach, M., Knutson, C., Prokopy, L., . . . Ulrich-Schad, J. (2018). Measuring farmer conservation behaviors: Challenges and best practices. *Land Use Policy*, 70, 414-418.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Fossey, E., Harvey, C., McDermott, F., & Davidson, L. (2002). Understanding and evaluating qualitative research. *Australian & New Zealand Journal of Psychiatry*, 36(6), 717-732.
- Gagné, M. (2009). A model of knowledge-sharing motivation. *Human Resource*

Management 48(4), 571-589.

- Gamidullaeva, L., & Vasin, S. (2018). *The Relationship Between Trust and Knowledge Exchange in Russian Organizations*. Paper presented at the European conference on knowledge management.
- García, J. R. (2001). Scientia potestas est – Knowledge is power: Francis Bacon to Michel Foucault. *Neohelicon*, 28(1), 109-121.
- Gaskin, J. (2021), Data prep, Gaskination's StatWiki. http://statwiki.gaskination.com/index.php?title=Data_Prep#Missing_Data
- Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika*, 61(1), 101-107.
- Gerowitz, M. B. (1998). Do TQM interventions change management culture? Findings and implications. *Quality Management in Healthcare*, 6(3), 1-11.
- Gerowitz, M., Lemieux-Charles, L., Heginbothan, C., & Johnson, B. (1996). Top management culture and performance in Canadian, UK and US hospitals. *Health Services Management Research*, 9(2), 69-78.
- Gerpott, F. H., Fasbender, U., & Burmeister, A. (2019). Respectful leadership and followers' knowledge sharing: A social mindfulness lens. *Human Relations*, 73(6), 789-810. doi:10.1177/0018726719844813
- Ghosh, S., & Srivastava, B. K. (2014). Construction of a reliable and valid scale for measuring organizational culture. *Global Business Review*, 15(3), 583-596.
- Ginevičius, R., & Vaitkūnaite, V. (2006). Analysis of organizational culture dimensions impacting performance. *Journal of Business Economics and Management*, 7(4), 201-211.
- Goh, S. C. (2002). Managing effective knowledge transfer: An integrative framework and some practice implications. *Journal of Knowledge Management*, 6(1), 22-30.
- Götz, O., Liehr-Gobbers, K., & Krafft, M. (2010). Evaluation of structural equation models using the partial least squares (PLS) approach. In V. Esposito Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.) *Handbook of Partial Least Squares* (pp. 691-711). Springer.
- Graen, G., & Cashman, J. F. (1975). *A role-making model of leadership in formal organizations: A developmental approach*. Kent State University Press.
- Gratton, L., Voigt, A., & Erickson, T. (2007). The knowledge management puzzle: Human and social factors in knowledge management. *MIT Sloan Management Review Magazine, Summer*. <https://sloanreview.mit.edu/article/bridging-faultlines-in-diverse-teams/>.
- Grayson, J. and O'Dell, C. (1998) *If only we knew what we know: The transfer of internal knowledge and best practice*. The Free Press.

- Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11(3), 255-274.
- Greene, J., Caracelli, V., & Graham, W. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11(3), 255 - 274.
- Guo, K. H., & Yuan, Y. (2012). The effects of multilevel sanctions on information security violations: A mediating model. *Information & Management*, 49(6), 320-326.
- Gupta, K. S. (2008). A comparative analysis of knowledge sharing climate. *Knowledge and Process Management*, 15(3), 186-195.
- Guptara, P. (1999). Why knowledge fails: How to avoid the common pitfalls. *Knowledge Management Review* (9), 26-29.
- Haak-Sahee, W., & Darwish, T. K. (2014). The role of knowledge management in creating a culture of learning: The case of Dubai Municipality. *Management Decision*, 52(9), 1611-1629.
- Haffar, M., Al-Karaghoul, W., & Ghoneim, A. (2013). The mediating effect of individual readiness for change in the relationship between organisational culture and TQM implementation. *Total Quality Management & Business Excellence*, 24(5/6), 693-706. doi:10.1080/14783363.2013.791112
- Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). Pearson.
- Hair Jr, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101-110.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage Publications.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106-121. doi:10.1108/EBR-10-2013-0128
- Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.
- Hansen, C. W. (2003). Relations between organizational culture, process improvement, and software quality. (Masters). Norwegian University of Science and Technology, Trondheim.
- Hansen, M. T., Nohria, N., & Tieney, T. (1999). What's your strategy for managing knowledge? *Harvard Business Review*, 77(2), 106-116.

- Hansen, S., & Avital, M. (2005). Share and share alike: The social and technological influences on knowledge sharing behavior. *Sprouts: Working Papers on Information Environments, Systems and Organizations*, 5.
- Hanson, W. E., Creswell, J. W., Clark, V. L. P., Petska, K. S., & Creswell, J. D. (2005). Mixed methods research designs in counseling psychology. *Journal of Counseling Psychology*, 52(2), 224–235.
- Harrell, M. C., & Bradley, M. A. (2009). *Data collection methods. semi-structured interviews and focus groups*. RAND.
- Hau, Y. S., Kim, B., Lee, H., & Kim, Y.-G. (2013). The effects of individual motivations and social capital on employees' tacit and explicit knowledge sharing intentions. *International Journal of Information Management*, 33(2), 356-366.
- Hauschild, S., Licht, T., & Stein, W. (2001). Creating a knowledge culture *McKinsey Quarterly*, 1, 74-81.
- Hayes, N. (Ed.) (2013). *Doing qualitative analysis in psychology*. Psychology Press.
- Hejase, H. J., Haddad, Z., Hamdar, B., Al Ali, R., Hejase, A. J., & Beyrouti, N. (2014). Knowledge sharing: Assessment of factors affecting employee' motivation and behavior in the Lebanese organizations. *Journal of Scientific Research and Reports*, 3(12), 1549-1593.
- Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative research methods*. (2nd ed.). SAGE Publications Limited.
- Henseler, J., & Sarstedt, M. (2013). Goodness-of-fit indices for partial least squares path modeling. *Computational Statistics*, 28(2), 565-580.
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., . . . Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*, 17(2), 182-209.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In R. R. Sinkovics & P. N. Ghauri (Eds.) *New Challenges to International Marketing*. (pp. 277-319). Emerald Group Publishing Limited.
- Ho, S.-C., Ting, P.-H., Bau, D.-Y., & Wei, C.-C. (2011). Knowledge-sharing intention in a virtual community: A study of participants in the Chinese Wikipedia. *Cyberpsychology, Behavior, and Social Networking*, 14(9), 541-545.
- Hofstede, G. (1980). *Culture's Consequences, International Differences in Work-related Values*. Sage Publications.

- Hofstede, G. (1983a). Dimensions of national cultures in fifty countries and three regions. In J. B. Deregowski, S. Dziurawiec (eds.) and R. C. Annis. *Expiscations in cross-cultural psychology: Selected papers from the Sixth International Congress of the international association for cross-cultural psychology held at Aberdeen, July 20-23, 1982*, pp. 335-355). Swets and Zeitlinger.
- Hofstede, G. (1983b). National cultures in four dimensions: A research-based theory of cultural differences among nations. *International Studies of Management & Organization*, 13(1-2), 46-74.
- Hofstede, G. (1983c). The cultural relativity of organizational practices and theories. *Journal of International Business Studies*, 14(2), 75-89.
- Hofstede, G. (1983d). National cultures revisited. *Behavior Science Research*, 18(4), 285-305.
- Hofstede, G. (1984). Cultural dimensions in management and planning. *Asia Pacific Journal of Management*, 1(2), 81-99.
- Hofstede, G., & Waisfisz, B. (2010). Organizational culture dimensions. <http://geert-hofstede.com/organisational-culture-dimensions.html>
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind* (3rd ed.). McGraw-Hill Education.
- Hofstede, G., Neuijen, B., Ohayv, D. D., & Sanders, G. (1990). Measuring organizational cultures: A qualitative and quantitative study across twenty cases. *Administrative Science Quarterly*, 35(2), 286-316.
- Hollander, E. P. (1958). Conformity, status, and idiosyncrasy credit. *Psychological Review*, 65(2), 117-127. doi:10.1037/h0042501
- Hollander, E. P. (1979). *Leadership dynamics: A practical guide to effective relationships*. Free Press.
- Hollander, E. P. (2012). *Inclusive leadership: The essential leader-follower relationship*. Routledge.
- Holste, J. S., & Fields, D. (2010). Trust and tacit knowledge sharing and use. *Journal of Knowledge Management*, 14(1), 128-140.
- House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative Science Quarterly*, 16(3), 321-339. doi:10.2307/2391905
- House, R. J., & Mitchell, T. R. (1974). Path-goal theory of leadership. *Journal of Contemporary Business and Management* 9, 81-97.
- Huang, C.-C. (2009). Knowledge sharing and group cohesiveness on performance: An empirical study of technology R&D teams in Taiwan. *Technovation*, 29(11), 786-797.
- Huang, Q., Davison, R. M., & Gu, J. (2008). Impact of personal and cultural factors on

- knowledge sharing in China. *Asia Pacific Journal of Management*, 25(3), 451-471.
- Hurley, R. F. (2011). *The decision to trust: How leaders create high-trust organizations*. John Wiley & Sons.
- Husain, S., & Gul, R. (2019). *Research trends in knowledge management: Past, present and future*. Paper presented at the Proceedings of the 2019 3rd International Conference on Information System and Data Mining, Houston, TX, USA.
- Huysman, M., & Wulf, V. (2006). IT to support knowledge sharing in communities, towards a social capital analysis. *Journal of Information Technology*, 21(1), 40-51.
- Ibragimova, B. (2006). *Propensity for knowledge sharing: An organizational justice perspective*. (Dissertation/Thesis). ProQuest, UMI Dissertations Publishing.
- Ibragimova, B., Ryan, S. D., Windsor, J. C., & Prybutok, V. R. (2012). Understanding the antecedents of knowledge sharing: An organizational justice perspective. *Informing Science: The International Journal of an Emerging Transdiscipline*, 15, 183-206.
- Ifinedo, P. (2014). Information systems security policy compliance: An empirical study of the effects of socialisation, influence, and cognition. *Information & Management*, 51(1), 69-79.
- Irawanto, D. W. (2015). Employee participation in decision-making: Evidence from a state-owned enterprise in Indonesia. *Management*, 20(1), 159-172.
- Jacobs, T. O. (1970). *Leadership and Exchange in Formal Organizations*, Human Resources Research Organization.
- Jaeger, M., & Adair, D. (2013). Organisational culture of construction project managers in the GCC countries. *Engineering, Construction and Architectural Management*, 20(5), 461-473.
- Jamali, D., & Sidani, Y. (2008). Learning organizations: Diagnosis and measurement in a developing country context. *The Learning Organization*.
- Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research*, 30(2), 199-218.
- Jassem, A., Djebarni, R., & Mellahi, K. (2011). Determinants of job satisfaction in the UAE. *Personnel Review*, 40(1), 126-146.
- Javidan, M., Dorfman, P. W., De Luque, M. S., & House, R. J. (2006). In the eye of the beholder: Cross cultural lessons in leadership from Project GLOBE. *Academy of Management Perspectives*, 20(1), 67-90.
- Jelinek, M., Smircich, L., & Hirsch, P. (1983). Introduction: A code of many colors. *Administrative Science Quarterly*, 28(3), 331-338.

- Jensen, P. H., & Webster, E. (2009). Knowledge management: does capture impede creation? *Industrial and Corporate Change*, 18(4), 701-727. doi:10.1093/icc/dtp025
- Johnny, C. F. S., & Narasimha, B. (2005). Explaining the intentions to share and reuse knowledge in the context of IT service operations. *Journal of Knowledge Management*, 9(6), 30-41. doi:10.1108/13673270510629945
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.
- Jones, M. (2007). Using software to analyse qualitative data. *Malaysian Journal of Qualitative Research*, 1(1), 64-76.
- Kaplan, S. (2002). KM the right way; A step-by-step approach that will ensure that your expensive KM system actually gets used. *CIO*, 15(19), 1-81.
- Karkouliau, S., Messarra, L. C., & McCarthy, R. (2013). The intriguing art of knowledge management and its relation to learning organizations. *Journal of Knowledge Management*, 17(4), 511-526.
- Kartam, N. A., Al-Daihani, T. G., & Al-Bahar, J. F. (2000). Professional project management practices in Kuwait: Issues, difficulties and recommendations. *International Journal of Project Management*, 18(4), 281-296.
- Kathiravelu, S. R., Mansor, N. N. A., Ramayah, T., & Idris, N. (2014). Why organisational culture drives knowledge sharing? *Procedia-Social and Behavioral Sciences*, 129, 119-126.
- Katper, N. K., Iqbal Chaudhry, N., Tunio, M. N., & Athar Ali, M. (2020). Impact of Leadership Style and Organizational Culture on Organizational Commitment. *Sukkur IBA Journal of Management and Business*, 7(1), 92-106.
- Kausar, A. R., & Yazdani, N. (2013). *Ikujiro Nonaka: A KM guru*. Paper presented at the 3rd International Conference on Business Management (ICoBM) UMT, Lahore, Pakistan. <http://escholar.umat.edu.pk:8080/jspui/bitstream/123456789/941/1/IC3-Oct-2012-009.pdf>
- Kervin, L. K., Vialle, W. J., Herrington, J. A. & Okely, A. D. (2006). *Research for Educators*. Thomson/Social Science Press.
- Kianto, A., Andreeva, T., & Pavlov, Y. (2013). The impact of intellectual capital management on company competitiveness and financial performance. *Knowledge Management Research & Practice*, 11(2), 112-122.
- Kidd, J. B., & Teramoto, Y. (1995). The learning organization: The case of the Japanese RHQs in Europe. *Management and International Review*, 35(Special Issue 1995/2), 39-56).
- King, W. R., & Marks Jr., P. V. (2008). Motivating Knowledge Sharing Through a Knowledge Management System. *Omega*, 36(1), 131-146.

- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10.
- Kör, B., & Maden, C. (2013). The relationship between knowledge management and innovation in Turkish service and high-tech firms. *International Journal of Business and Social Science*, 4(4), 293-304.
- Kroeber, A. L., & Kluckhohn, C. (1952). Culture: A critical review of concepts and definitions. *Papers. Peabody Museum of Archaeology & Ethnology, Harvard University*.
- Kuo, F. Y., & Young, M. L. (2008a). A study of the intention–action gap in knowledge sharing practices. *Journal of the American Society for Information Science and Technology*, 59(8), 1224-1237.
- Kuo, F.-Y., & Young, M.-L. (2008b). Predicting knowledge sharing practices through intention: A test of competing models. *Computers in Human Behavior*, 24(6), 2697-2722. doi:10.1016/j.chb.2008.03.015
- Lai, M.-F., & Lee, G.-G. (2007). Risk-avoiding cultures toward achievement of knowledge sharing. *Business Process Management Journal*, 13(4), 522-537.
- Lakshman, C. (2005). Top executive knowledge leadership: Managing knowledge to lead change at general electric. *Journal of Change Management*, 5(4), 429-446. doi:10.1080/14697010500401540
- Lakshman, C. (2007). Organizational knowledge leadership: A grounded theory approach. *Leadership & Organization Development Journal*, 28(1), 51-75.
- Lakshman, C. (2009a). Corporate social responsibility through knowledge leadership in India: ITC Ltd and Y.C. Deveshwar. *Asian Business & Management*, 8(2), 185-203.
- Lakshman, C. (2009b). Organizational knowledge leadership: An empirical examination of knowledge management by top executive leaders. *Leadership & Organization Development Journal*, 30(4), 338-364.
- Larson, S. (2016). Knowledge management success and failure: The tale of two cases. In J. Liebowitz (Ed.), *Successes and Failures of Knowledge Management* (pp. 129-139). Morgan Kaufmann.
- Latilla, V. M., Frattini, F., Petruzzelli, A. M., & Berner, M. (2019). Knowledge management and knowledge transfer in arts and crafts organizations: Evidence from an exploratory multiple case-study analysis. *Journal of Knowledge Management*, 23(7), 1335-1354.
- Lee, H. S., & Hong, S. A. (2014). Factors affecting hospital employees' knowledge sharing intention and behavior, and innovation behavior. *Osong Public Health and Research Perspectives*, 5(3), 148-155.
- Leech, N. L., & Onwuegbuzie, A. J. (2009). A typology of mixed methods research designs. *Quality & Quantity*, 43(2), 265-275.

- Lei, H., Nguyen, T. T., & Le, P. B. (2019). How knowledge sharing connects interpersonal trust and innovation capability. *Chinese Management Studies*, 13(2), 276-298.
- Levin, D. Z., Cross, R., Abrams, L. C., & Lesser, E. L. (2002). Trust and knowledge sharing: A critical combination. In E. Lesser & L. Prusak, *Creating value with knowledge: Insights from the IBM Institute for Business Value*, doi:10.1093/0195165128.003.0003.
- Li, L. (2005). The effects of trust and shared vision on inward knowledge transfer in subsidiaries' intra-and inter-organizational relationships. *International Business Review*, 14(1), 77-95.
- Liang, T.-P., Liuy, C.-C., & Wuz, C.-H. (2008). *Can social exchange theory explain individual knowledge-sharing behavior? A meta-analysis*. Paper presented at the International Conference on Information Systems (ICIS), Paris.
- Liao, L.-F. (2008). Knowledge-sharing in R&D departments: A social power and social exchange theory perspective. *The International Journal of Human Resource Management*, 19(10), 1881-1895.
- Lin, C.-P., & Joe, S.-W. (2012). To share or not to share: Assessing knowledge sharing, interemployee helping, and their antecedents among online knowledge workers. *Journal of Business Ethics*, 108(4), 439-449.
- Lin, H.-F. (2007). Knowledge sharing and firm innovation capability: An empirical study. *International Journal of Manpower*, 28(3-4), 315-332.
- Lin, M.-J. J., Hung, S.-W., & Chen, C.-J. (2009). Fostering the determinants of knowledge sharing in professional virtual communities. *Computers in Human Behavior*, 25(4), 929-939.
- Liu, Y., & Phillips, J. S. (2011). Examining the antecedents of knowledge sharing in facilitating team innovativeness from a multilevel perspective. *International Journal of Information Management*, 31(1), 44-52.
- Liyanage, C., Elhag, T., Ballal, T., & Li, Q. (2009). Knowledge communication and translation—a knowledge transfer model. *Journal of Knowledge Management*.
- Locke, E., & Schweiger, D. (1979). Participation in decision-making: One more look. In B. M. Staw (Ed.), *Research in Organizational Behavior*. JAI Press (pp. 265-339).
- Lok, P., & Crawford, J. (2004). The effect of organisational culture and leadership style on job satisfaction and organisational commitment. *Journal of Management Development*, 23(4) 321-338.
- Louis, M. R. (1980). Organizations as culture-bearing milieux. In L. R. Pondy, P. J. Frost, G. Morgan, & T. C. Dandridge (Eds.), *Organizational symbolism* (pp. 39-54). Jossey Bass.
- Lucas, L. M. (2005). The impact of trust and reputation on the transfer of best practices.

- Journal of Knowledge Management*, 9(4), 87-101.
- Lucas, L. M. (2005). The impact of trust and reputation on the transfer of best practices. *Journal of Knowledge Management*, 9(4), 87-101.
- Lyu, H., & Zhang, Z. (2016). Incentives for knowledge sharing: Impact of organisational culture and information technology. *Enterprise Information Systems*, 1-20. doi:10.1080/17517575.2016.1273393
- Mabey, C., Kulich, C., & Lorenzi-Cioldi, F. (2012). Knowledge leadership in global scientific research. *The International Journal of Human Resource Management*, 23(12), 2450-2467. doi:10.1080/09585192.2012.668386
- Machlup, F. (1962). *The production and distribution of knowledge in the United States*. Princeton University Press.
- Mack, N., Cynthia, W., Kathleen, M., Greg, G., & Emily, N. (2005). *Qualitative research methods: A data collector's field guide*. Family Health International.
- Mackenzie, S. (1995). Surveying the organizational culture in an NHS trust. *Journal of Management in Medicine*, 9(6), 69-77.
- MacLean, L. M., Meyer, M., & Estable, A. (2004). Improving accuracy of transcripts in qualitative research. *Qualitative Health Research*, 14(1), 113-123.
- Magnier-Watanabe, R. & Senoo, D. (2010). Shaping Knowledge Management: Organization and National Culture. *Journal of Knowledge Management*, 14(2), 214-227.
- Malhotra, N. (2010). *Marketing research: An applied orientation* (6th ed.). Pearson Education, Inc.
- Manz, C. C., & Sims, H. P. (1987). Leading workers to lead themselves: The external leadership of self-managing work teams. *Administrative Science Quarterly*, 32(1), 106-129.
- Martin, J., & Siehl, C. (1983). Organizational culture and counterculture: An uneasy symbiosis. *Organizational Dynamics*, 12(2), 52-64.
- McAllister, D. J. (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38(1), 24-59.
- McDermott, M. S., Oliver, M., Svenson, A., Simnadis, T., Beck, E. J., Coltman, T., . . . Sharma, R. (2015). The theory of planned behaviour and discrete food choices: A systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 1-11.
- McDermott, R., & O'Dell, C. (2001). Overcoming cultural barriers to sharing knowledge. *Journal of Knowledge Management*, 5(1), pp. 76-85.
- McDowell, I., & MacLean, L. (1998). Blending qualitative and quantitative study

- methods in health services research. *Health Informatics Journal*, 4, 15 - 22.
- McGregor, D. (1960). *The human side of enterprise*. McGraw-Hill.
- McGregor, D. (1966). *Leadership and motivation*. MIT Press.
- Meade, A. W., Watson, A. M., & Kroustalis, C. M. (2007). Assessing common methods bias in organizational research. Paper presented at the 22nd Annual Meeting of the Society for Industrial and Organizational Psychology, New York.
- Merhi, M. I., & Ahluwalia, P. (2019). Examining the impact of deterrence factors and norms on resistance to information systems security. *Computers in Human Behavior*, 92, 37-46.
- Merhi, M. I., & Ahluwalia, P. (2019). Examining the impact of deterrence factors and norms on resistance to information systems security. *Computers in Human Behavior*, 92, 37-46.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Sage Publications.
- Miller, D. L., & Karakowsky, L. (2005). Gender influences as an impediment to knowledge sharing: When men and women fail to seek peer feedback. *The Journal of Psychology*, 139(2), 101-118.
- Miner, J. B. (1975). The uncertain future of the leadership concept: An overview. In J. G. Hunt & L. L. Larson (eds) *Leadership Frontiers*, (pp. 197-208). Kent State University Press.
- Minyoung, C., Myungsun, K., Soo, P., & Seokhwa, Y. (2012). Empowering leadership and knowledge sharing: Moderating role of employee's exchange ideology. *European Journal of Management*, 12(2), 1-3.
- Mitchell, T. R. (1979). Organizational behavior. *Annual Review of Psychology*, 30(1), 243-281.
- Mitonga-Monga, J., Coetzee, M., & Cilliers, F. (2012). Perceived leadership style and employee participation in a manufacturing company in the Democratic Republic of Congo. *African Journal of Business Management*, 6(15), 5389-5398.
- Modarress, B., Ansari, A., & Lockwood, D. L. (2013). Emiratisation: From policy to implementation. *International Journal of Human Resources Development and Management*, 13(2), 188- 205.
- Mohamed, M. S., O'Sullivan, K. J., & Ribi re, V. (2008). A paradigm shift in the Arab region knowledge evolution. *Journal of Knowledge Management*, 12(5), 107-120.
- Mongkolajala, M. H., Panichpathom, S., & Ngarmyarn, A. (2012). The development of tacit knowledge sharing behaviour among employees in organizations. *International Journal of Business and Social Research*, 2(5), 158-163.
- Mongkolajala, M. H., Panichpathom, S., & Ngarmyarn, A. (2012). The development of tacit knowledge sharing behaviour among employees in organizations. *International*

- Journal of Business and Social Research*, 2(5), 158-163.
- Myers, M. D. (2009). *Qualitative research in business and management*. Sage Publications.
- Myers, M. D., & Newman, M. (2007). The qualitative interview in IS research: Examining the craft. *Information and Organization*, 17(1), 2-26.
- Nafie, R. (2012). National culture transformation and its impact on multinational corporate culture: Case study of Egypt. *World Journal of Social Sciences*, 2(1), 84-94.
- Nayır, D. Z., & Uzunçarşılı, Ü. (2008). A cultural perspective on knowledge management: the success story of Sarkuysan company. *Journal of Knowledge Management*, 12, 141-155.
- Nembhard, I. M., & Edmondson, A. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, 27(7), 941-966.
- Nickols, F. (2000). *The knowledge in knowledge management*. Butterworth-Heinemann.
- Nitzl, C. (2016). The use of partial least squares structural equation modelling (PLS-SEM) in management accounting research: Directions for future theory development. *Journal of Accounting Literature*, 37, 19-35.
- Nitzl, C., & Chin, W. W. (2017). The case of partial least squares (PLS) path modeling in managerial accounting research. *Journal of Management Control*, 28(2), 137-156.
- Nitzl, C., Roldan, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems*, 116(9), 1849-1864.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation *Organization Science*, 5(1), 14-37.
- Nonaka, I., & Nishiguchi, T. (2001). *Knowledge emergence: Social, technical, and evolutionary dimensions of knowledge creation*. Oxford University Press.
- Nonaka, I., and Takeuchi, K. (1995). *The knowledge creating company*. Oxford University Press.
- Noorderhaven, N., & Harzing, A.-W. (2008). Knowledge sharing and social interaction within MNEs. *Journal of International Business Studies*, 40(5), 719-741.
- Notani, A. S. (1998). Moderators of perceived behavioral control's predictiveness in the theory of planned behavior: A meta-analysis. *Journal of Consumer Psychology*, 7(3), 247.
- Nunnally, J. & Bernstein, I. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Obrenovic, B., Jianguo, D., Tsoy, D., Obrenovic, S., Khan, M. A. S., & Anwar, F. (2020).

- The enjoyment of knowledge sharing: Impact of altruism on tacit knowledge-sharing behavior. *Frontiers in Psychology*, 11, 1496.
- O'Dell, C. and Hubert, C. (2011). *The new edge in knowledge: How knowledge management is changing the way we do business*. John Wiley & Sons.
- O'Dell, C. S. (2000). *Stages of implementation: A guide for your journey to knowledge management best practices*. APQC.
- O'Dell, C. S., & Leavitt, P. (2004). *The executive's role in knowledge management*. APQC.
- O'Reilly, C. (1989). Corporations, culture, and commitment: Motivation and social control in organizations. *California Management Review*, 31(4), 9-25.
- O'Reilly, C. A., Chatman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *The Academy of Management Journal*, 34(3), 487-516.
- Ochulor, C. L. (2011). Francis Bacon's qualification as a principal empiricist philosopher/La qualification du Francis Bacon est comme un principal philosophe empiriste. *Canadian Social Science*, 7(5), 229-235.
- Oedzes, J. J., Rink, F. A., Walter, F., & Vegt, G. S. V. D. (2019). Informal hierarchy and team creativity: The moderating role of empowering leadership. *Applied Psychology*, 68(1), 3-25.
- Ogbonna, E., & Harris, L. C. (2000). Leadership style, organizational culture and performance: Empirical evidence from UK companies. *International Journal of Human Resource Management*, 11(4), 766-788.
- Oliveira, M. J. S. P., & Pinheiro, P. (2020) Factors and barriers to tacit knowledge sharing in non-profit organizations. A case study of volunteer firefighters in Portugal. *Journal of the Knowledge Economy*, 1-20. doi.org/10.1007/s13132-020-00665-x.
- Ötken, A. B., & Cenkci, T. (2012). The impact of paternalistic leadership on ethical climate: The moderating role of trust in leader. *Journal of Business Ethics*, 108(4), 525-536.
- Ott, J. S. (1989). *The organizational culture perspective*. Brooks/Cole Publishing Company.
- Ouchi, W. G. (1981). *Theory Z: How American business can meet the Japanese challenge*. Addison-Wesley.
- Ouchi, W. G., & Jaeger, A. M. (1978). Type Z organization: Stability in the midst of mobility. *The Academy of Management Review*, 3(2), 305-314.
- Ovseiko, P. V., Melham, K., Fowler, J., & Buchan, A. M. (2015). Organisational culture and post-merger integration in an academic health centre: A mixed-methods study. *BMC Health Services Research*, 15(1), 1-14.

- Paaais, M., & Pattiruhu, J. R. (2020). Effect of motivation, leadership, and organizational culture on satisfaction and employee performance. *The Journal of Asian Finance, Economics, and Business*, 7(8), 577-588.
- Padgett, D. K. (2016). *Qualitative methods in social work research*. Sage Publications.
- Park, H., Ribière, V., & Schulte, W. D. (2004). Critical attributes of organizational culture that promote knowledge management technology implementation success. *Journal of Knowledge Management*, 8(3), 106-117.
- Park, J., & Gabbard, J. L. (2018). Factors that affect scientists' knowledge sharing behavior in health and life sciences research communities: Differences between explicit and implicit knowledge. *Computers in Human Behavior*, 78, 326-335.
- Pascale, R. T., & Athos, A. G. (1981). The art of Japanese management. *Business Horizons*, 24(6), 83-85.
- Pasher, E., & Ronen, T. (2010). *Complete guide to knowledge management: A strategic plan to leverage your company's intellectual capital*. Wiley.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Sage Publications.
- Pedler, M., Burgoyne, J., & Boydell, T. (1991). The Learning Company: A Strategy for Sustainable Development. *McGraw-Hill*. Maidenhead.
- Peltokorpi, V. (2006). Knowledge sharing in a cross-cultural context: Nordic expatriates in Japan. *Knowledge Management Research & Practice* 4, 138-148.
- Pervan, S., Al-Ansaari, Y., & Xu, J. (2015). Environmental determinants of open innovation in Dubai SMEs. *Industrial Marketing Management*, 50, 60-68.
- Peters, T. J., & Waterman, Jr., R. H. (1982). *In search of excellence: Lessons from America's best-run companies*. Harper & Row.
- Pettigrew, A. M. (1979). On studying organizational cultures. *Administrative Science Quarterly*, 24(4), 570-581.
- Petty, M. M., Beadles, N. A., Lowery, C. M., Chapman, D. F., & Connell, D. W. (1995). Relationships between organizational culture and organizational performance. *Psychological Reports*, 76(2), 483-492.
- Petty, N. J., Thomson, O. P., & Stew, G. (2012). Ready for a paradigm shift? Part 2: Introducing qualitative research methodologies and methods. *Manual Therapy*, 17(5), 378-384.
- Pinjani, P., & Palvia, P. (2013). Trust and knowledge sharing in diverse global virtual teams. *Information & Management*, 50(4), 144-153.
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531-544.

- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *The Journal of Applied Psychology*, 88(5), 879.
- Polanyi, M. (1958). *Personal knowledge: Towards a post-critical philosophy*. The University of Chicago Press.
- Polyani, M. (1966). *The tacit dimension*. The University of Chicago Press.
- PopulationStat. (n.d.). Abu Dhabi, United Arab Emirates population. Retrieved December 7, 2020, from <https://populationstat.com/united-arab-emirates/abudhabi>.
- Prime, J., & Salib, E. R. (2014). *Inclusive leadership: The view from six countries*. Catalyst.
- Prime, J., & Salib, E. R. (2015). *The secret to inclusion in Australian workplaces: Psychological safety*. Catalyst.
- Probodha, J., & Vasanthapriyan, S. (2019). Analysis of knowledge sharing barriers in Sri Lankan software companies. *International Journal of Knowledge Management*, 15(4), 78-93.
- Ramasamy, M., & Thamaraiselvan, N. (2011). Knowledge sharing and organizational citizenship behavior. *Knowledge and Process Management*, 18(4), 278-284.
- Ramayah, T., Yeap, J. A. L., & Ignatius, J. (2013). An empirical inquiry on knowledge sharing among academicians in higher learning institutions *Minerva* 51, 131-154.
- Randall, D. M., & Wolff, J. A. (1994). The time interval in the intention-behaviour relationship: Meta-analysis. *British Journal of Social Psychology*, 33(4), 405-418.
- Rank, J., Pace, V. L., & Frese, M. (2004). Three avenues for future research on creativity, innovation, and initiative. *Applied Psychology*, 53(4), 518-528.
- Rathi, D., Given, L. M., & Forcier, E. (2014). Interorganisational partnerships and knowledge sharing: The perspective of non-profit organisations (NPOs). *Journal of Knowledge Management*, 18(5), 867-885.
- Raza, I., & Awang, Z. (2020). Knowledge sharing in multicultural organizations: evidence from Pakistan. *Higher Education, Skills and Work-Based Learning*, 10(3), 2042-3896.
- Rehman, A. A. (2007). *Dubai & Co.: Global strategies for doing business in the Gulf States*. McGraw Hill Professional.
- Remler, D. K., & Van Ryzin, G. G. (2014). *Research methods in practice: Strategies for description and causation* (2nd ed.). Sage Publications.
- Reychav, I., & Weisberg, J. (2010). Bridging intention and behavior of knowledge sharing. *Journal of Knowledge Management*, 14(2), 285-300.

- Rezaei, S., & Seyri, H. (2019). Iranian doctoral students' perceptions of publication in English: Motives, hurdles, and strategies. *Journal of Applied Research in Higher Education, 11*(4), 941-954.
- Rhodes, J., Lok, P., Hung, R. Y. Y., & Fang, S. C. (2008). An integrative model of organizational learning and social capital on effective knowledge transfer and perceived organizational performance. *Journal of Workplace Learning, 20*(4), 245-258.
- Rivière, V., & Calabrese, F. A. (2016). Why are companies still struggling to implement knowledge management? Answers from 34 experts in the field. In J. Liebowitz (Ed.), *Successes and failures of knowledge management* (pp. 13-34). Morgan Kaufmann.
- Riege, A. (2005). Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management, 9*, 18-35.
- Rigdon, E. E. (2012). Rethinking partial least squares path modeling: In praise of simple methods. *Long Range Planning, 45*(5), 341-358.
- Rigdon, E. E. (2014). Rethinking partial least squares path modeling: Breaking chains and forging ahead. *Long Range Planning, 47*(3), 161-167.
- Ringle, C. M., Sarstedt, M., & Straub, D. (2012). Editor's Comments~ A critical look at the use of PLS-SEM in *MIS Quarterly*. *MIS Quarterly, 36*(1), iii-xiv.
- Ringle, C., Wende, S., & Becker, J.-M. (2015). SmartPLS 3 Boenningstedt: SmartPLS GmbH. www.smartpls.com.
- Rivis, A., & Sheeran, P. (2003). Descriptive norms as an additional predictor in the theory of planned behaviour: A meta-analysis. *Current Psychology, 22*(3), 218-233.
- Rousseau, D. M. (1990). Assessing organizational culture: The case for multiple methods. In B. Schneider (Ed.), *Organizational climate and culture* (pp. 153-193). Jossey-Bass Publishers.
- Rowley, J. (2012). Conducting research interviews. *Management Research Review, 35*(3/4), 260-271.
- Ruggles, R. (1998). The state of the notion: Knowledge management in practice. *California Management Review, 40*(3), 80-89.
- Rutten, W., Blaas-Franken, J., & Martin, H. (2016). The impact of (low) trust on knowledge sharing. *Journal of Knowledge Management, 20*(2), 199-214.
- Ryan, J. (2006). *Inclusive leadership*, Jossey-Bass Publishers.
- Ryu, S., Ho, S. H., & Han, I. (2003). Knowledge sharing behavior of physicians in hospitals. *Expert Systems with Applications, 25*(1), 113-122.
- Saavedra, R., & Dyne, L. V. (1999). Social exchange and emotional investment in work groups. *Motivation and Emotion, 23*(2), 105-123.

- Samieh, H. M., & Wahba, K. (2007). *Knowledge sharing behavior from game theory and socio-psychology perspectives* Paper presented at the 40th Hawaii International Conference on System Sciences Hawaii.
- Sankowska, A. (2013). Relationships between organizational trust, knowledge transfer, knowledge creation, and firm's innovativeness. *The Learning Organization*, 20(1), 85-100.
- Sarstedt, M., Ringle, C. M., Henseler, J., & Hair, J. F. (2014). On the emancipation of PLS-SEM: A commentary on Rigdon (2012). *Long Range Planning*, 47(3), 154-160.
- Schein, E. H. (1986). What you need to know about organizational culture. *Training and Development Journal*, 40(1), 30-33.
- Schneider, B., & Barbera, K. M. (2014). *The Oxford handbook of organizational climate and culture*. Oxford University Press.
- Schneider, B., Brief, A. P., & Guzzo, R. A. (1996). Creating a climate and culture for sustainable organizational change. *Organizational Dynamics*, 24(4), 7-19.
- Seba, I., Rowley, J., & Delbridge, R. (2012). Knowledge sharing in the Dubai Police Force. *Journal of Knowledge Management*, 16(1), 114-128.
- Seba, I., Rowley, J., & Lambert, S. (2012). Factors affecting attitudes and intentions towards knowledge sharing in the Dubai Police Force. *International Journal of Information Management*, 32(4), 372-380.
- Senjaya, V., & Anindita, R. (2020). The role of transformational leadership and organizational culture towards organizational commitment through job satisfaction among mining industry employees. *Jurnal Aplikasi Manajemen*, 18(4), 767-782.
- Seters, D. A. V., & Field, R. H. G. (1990). The evolution of leadership theory. *Journal of Organizational Change Management*, 3(3), 29-45.
- Sharif, S., Lodhi, R. N., Iqbal, K., & Saddique, F. (2021, ahead-of-print). Gender disparity in leadership boosts affective commitment and tacit knowledge sharing about libraries. *International Journal of Organizational Analysis*. doi:10.1108/IJOA-12-2020-2549
- Shariq, S. M., Mukhtar, U., & Anwar, S. (2019). Mediating and moderating impact of goal orientation and emotional intelligence on the relationship of knowledge oriented leadership and knowledge sharing. *Journal of Knowledge Management*, 23(2), 332-350.
- Sharma, S. K., & Sharma, A. (2010). Examining the relationship between organisational culture and leadership styles. *Journal of the Indian Academy of Applied Psychology*, 36(1), 97-105.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, 15(3), 325-343.

- Shmueli, G. (2010). To explain or to predict? *Statistical Science*, 25(3), 289-310.
- Siddique, C. M. (2012). Knowledge management initiatives in the United Arab Emirates: A baseline study. *Journal of Knowledge Management*, 16(5), 702-723.
- Silverman, D. (2010). *Doing qualitative research* (3rd ed.). Sage Publications.
- Singh, A. K., & Sharma, V. (2011). Knowledge management antecedents and its impact on employee satisfaction: A study on Indian telecommunication industries. *The Learning Organization*, 18(2), 115-130.
- SKGEP (Sheikh Khalifa Government Excellence Program). (n.d.) *About the program* UAE Government. <https://www.skgep.gov.ae/en/programme/about-the-program>.
- Skyrme, D. J. (2000). Developing a knowledge strategy: From management to leadership. In D. Morey, M. Maybury & B. Thuraishingham (eds.) *Knowledge management: Classic and contemporary works* (pp. 61-84). MIT Press
- Spencer, J. W. (2003). Firms' knowledge-sharing strategies in the global innovation system: Empirical evidence from the flat panel display industry *Strategic Management Journal*, 24, 217-233.
- Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance. *Academy of Management Journal*, 49(6), 1239-1251.
- Stenius, M., Hankonen, N., Haukkala, A., & Ravaja, N. (2015). Understanding knowledge sharing in the work context by applying a belief elicitation study. *Journal of Knowledge Management*, 19(3), 497-513.
- Stentz, J. E., Clark, V. L. P., & Matkin, G. S. (2012). Applying mixed methods to leadership research: A review of current practices. *The Leadership Quarterly*, 23(6), 1173-1183.
- Stewart, T. A. (1991). Brainpower: How intellectual capital is becoming America's most important asset. *Fortune*, 3 June. 44-60.
- Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. *Journal of the Royal Statistical Society: Series B (Methodological)*, 36(2), 111-133.
- Storey, J., & Barnett, E. (2000). Knowledge management initiatives: Learning from failure. *Journal of Knowledge Management*, 4, 145-156.
- Su, W. B., Li, X. & Chow, C. W. 2010. Exploring the extent and impediments of knowledge sharing in Chinese business enterprise. *International Journal of Knowledge Management*, 6(4), 24-46.
- Suliman, A., & Moradkhan, E. (2013). Leadership and national culture in the UAE. *Global Conference on Business and Finance Proceedings*, 8(2), 408-115.
- Suppiah, V., & Sandhu, M. S. (2011). Organisational culture's influence on tacit

- knowledge-sharing behaviour. *Journal of Knowledge Management*, 15(3), 462-477.
- Swartz, M., & Jordon D. (1980). *Culture: An anthropological perspective*. Wiley.
- Syed, A., Gul, N., Khan, H. H., Danish, M., Haq, S., Sarwar, B, AZHAR,U. Ahmed, W. (2021). The Impact of Knowledge Management Processes on Knowledge sharing Attitude: The Role of Subjective Norms. *The Journal of Asian Finance, Economics, and Business*, 8(1), 1017-1030.
- Szulanski, G. (2000). The process of knowledge transfer: A diachronic analysis of stickiness. *Organizational Behavior and Human Decision Processes*, 82(1), 9-27.
- Tangaraja, G., Rasdi, R. M., Samah, B. A., & Ismail, M. (2016). Knowledge sharing is knowledge transfer: A misconception in the literature. *Journal of Knowledge Management*.
- Tashakkori, A., & Teddlie, C. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (eds.) *Handbook of mixed methods in social and behavioral research*. (pp. 3-51). Sage.
- Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144-176. doi:10.1287/isre.6.2.144
- Teh, P.-L., & Yong, C.-C. (2011). Knowledge sharing in IS personnel: Organizational behavior's perspective. *Journal of Computer Information Systems*, 51(4), 11-21.
- Teixeira, E. K., Oliveira, M., & Curado, C. (2019). Linking knowledge management processes to innovation: A mixed-method and cross-national approach. *Management Research Review*, 43(3), 332-349. doi:10.1108/MRR-10-2018-0391
- Terry, D., Le, Q., Terry, M., & Kirschbaum, M. (2013). Qualitative research from concepts to approaches. In T. Lê & Q. Lê (Eds.), *Conducting research in a changing and challenging world* (pp.79-89). Nova Science Publishers.
- Tiwana, A. (2000). *The knowledge management toolkit: Practical techniques for building a knowledge management system*. Prentice Hall.
- Tiwana, A., & Bush, A. (2000). *Peer-to-peer valuation as a mechanism for reinforcing active learning in virtual communities: Actualizing social exchange theory*. Paper presented at the 33rd Hawaii International Conference on System Sciences.
- Tohidinia, Z., & Mosakhani, M. (2009). Knowledge sharing behaviour and its predictors. *Journal of Knowledge Management*, 110(4), 611-630.
- Trompenaars, F. (2010). Cultural Dimensions Relating to People. In J. Dumetz, F. Trompenaars, M. Belbin, C. Hampden-Turner, P. Wooliams, J. Tournand, . . . D. Foster *Cross-cultural management textbook: Lessons from the world leading experts in cross-cultural management* (pp. 117-145). CreateSpace Independent Publishing Platform

- Tsai, M.-T., Chang, H.-C., Cheng, N.-C., & Lien, C.-C. (2013). Understanding IT professionals' knowledge sharing intention through KMS: A social exchange perspective. *Quality & Quantity*, 47(5), 2739-2753.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41(4), 464-476.
- Tseng, S.-M. (2017). Investigating the moderating effects of organizational culture and leadership style on IT-adoption and knowledge-sharing intention. *Journal of Enterprise Information Management* 30(4), 583-604.
- Tsolaki, C. (2017). Knowledge sharing behavior: An empirical study in the Cyprus cooperative banking sector. *International Journal of Human Resource Development and Management*, 7(1), 13-27.
- Tsui, E. (2016). Lessons learned from nearly 200 cases of KM journeys by Hong Kong and Asian Enterprises. In J. Liebowitz (Ed.), *Successes and failures of knowledge management* (pp. 83-95). Morgan Kaufmann.
- Tucker, R. W., McCoy, W. J., & Evans, L. C. (1990). Can questionnaires objectively assess organisational culture? *Journal of Managerial Psychology*, 5(4), 4-11.
- Turner, D. W. (2010). Qualitative interview design: A practical guide for novice investigators. *The Qualitative Report*, 15(3), 754-760.
- Turner, S. F., Cardinal, L. B., & Burton, R. M. (2017). Research design for mixed methods: A triangulation-based framework and roadmap. *Organizational Research Methods*, 20(2), 243-267.
- Turney, J. (2005). Defining the limits of the EU essential facilities doctrine on intellectual property rights: The primacy of securing optimal innovation. *Northwestern Journal of Technology and Intellectual Property*, 3(2), Article 5.
- UAE. (2014). Vision 2021. https://www.vision2021.ae/docs/default-source/default-document-library/uae_vision-arabic.pdf?sfvrsn=b09a06a6_6.
- UAE. (2019) Government Excellence Model Manual GEM 2.0 – Volume 2. <https://gem.gov.ae/docs/default-source/default-document-library/gem-2-0-manual---english.pdf>.
- Uit Beijerse, R. P. Questions in knowledge management: Defining and conceptualizing a phenomenon. *Journal of Knowledge Management*, 3, 94-109.
- Uttal, B. (1983). The corporate culture vultures. *Fortune*, 108(8), 66-72.
- Van den Hooff, B., & de Ridder, J. A. (2004). Knowledge sharing in context: The influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of Knowledge Management*, 8(6), 117-130. doi:10.1108/13673270410567675
- van der Post, W. Z., de Coning, T. J., & M. Smit, E. v. (1997). An instrument to measure

- organizational culture. *South African Journal of Business Management*, 28(4), 147-169.
- van Dierendonck, D., & Nuijten, I. (2011). The servant leadership survey: Development and validation of a multidimensional measure. *Journal of Business and Psychology*, 26(3), 249-267. doi:10.1007/s10869-010-9194-1
- Van Maanen, J. E., & Schein, E. H. (1977). Toward a theory of organizational socialization. *Massachusetts Institute of Technology*, 1, 209-264.
- Viitala, R. (2004). Towards knowledge leadership. *Leadership & Organization Development Journal*, 25(6), 528-544.
- Von Krogh, G., Ichijo, K., & Nonaka, I. (2000). *Enabling knowledge creation: How to unlock the mystery of tacit knowledge and release the power of innovation*. Oxford University Press.
- Vroom, V. H., & Jago, A. G. (1988). *The new leadership: Managing participation in organizations*. Prentice-Hall, Inc.
- Vroom, V. H., & Yetton, P. W. (1973). *Leadership and decision-making*. University of Pittsburgh Press.
- Wagner III, J. A. (1994). Participation's effects on performance and satisfaction: A reconsideration of research evidence. *Academy of Management Review*, 19(2), 312-330.
- Wang, D.-S., & Hsieh, C.-C. (2013). The effect of authentic leadership on employee trust and employee engagement. *Social Behavior and Personality: An International Journal*, 41(4), 613-624.
- Wei, C., Chang, Y., Wang, W., Chou, H., & Chen, K. (2019, 15-18 Dec. 2019). *Factors that influence sharing behaviors in sharing economy based on the theory of social capital and social exchange: Example of Taiwan-based USPACE*. Paper presented at the 2019 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM).
- Wensley, A. K. P. (2016). KM successes and failures: Some personal reflections on major challenges. In J. Liebowitz (Ed.), *Successes and failures of knowledge management* (pp. 71-82). Morgan Kaufmann.
- White, L. (2002). Connection matters: Exploring the implications of social capital and social networks for social policy. *Systems Research and Behavioral Science*, 19(3), 255-269.
- Whiting, L. S. (2008). Semi-structured interviews: Guidance for novice researchers. *Nursing Standard*, 22(23), 35-40.
- Wickramasinghe, V., & Widyaratne, R. (2012). Effects of interpersonal trust, team leader support, rewards, and knowledge sharing mechanisms on knowledge sharing in project teams. *Vine*, 42(2), 214-236.

- Wilkesmann, M., & Wilkesmann, U. (2011). Knowledge transfer as interaction between experts and novices supported by technology. *VINE*, 41(2), 96-112.
- Willard-Grace, R., Hessler, D., Rogers, E., Dubé, K., Bodenheimer, T., & Grumbach, K. (2014). Team structure and culture are associated with lower burnout in primary care. *The Journal of the American Board of Family Medicine*, 27(2), 229-238.
- World Population Review (n.d.). *United Arab Emirates Population 2020 (Live)* Retrieved December 7, 2020, from <https://worldpopulationreview.com/countries/united-arab-emirates-population>.
- Wu, D. D., Wu, Y., & Zhu, W. (2012). An integrated theoretical model for determinants of knowledge sharing behaviours. *Kybernetes*, 41(10), 1462-1482.
- Wuffli, P. A. (2015). *Inclusive leadership: A framework for the global era*. Springer.
- Xu, J., & Quaddus, M. (2012). Examining a model of knowledge management systems adoption and diffusion: A partial least square approach. *Knowledge-Based Systems*, 27, 18-28.
- Xu, Y., & Cai, S. (2008). Voluntary knowledge sharing in organizations. *Journal of Knowledge Management*, 10, 14-21.
- Xue, Y., Bradley, J., & Liang, H. (2011). Team climate, empowering leadership, and knowledge sharing. *Journal of Knowledge Management*, 15(2), 299-312.
- Xue, Y., Liang, H., Hauser, R., & O'Hara, M. T. (2012). An empirical study of knowledge sharing intention within virtual teams. *International Journal of Knowledge Management*, 8(3), 47-61.
- Yang, C., & Chen, L.-C. (2007). Can organizational knowledge capabilities affect knowledge sharing behavior? *Journal of Information Science*, 33(1), 95-109.
- Yang, H., van Rijn, M. B., & Sanders, K. (2020). Perceived organizational support and knowledge sharing: Employees' self-construal matters. *The International Journal of Human Resource Management*, 31(17), 2217-2237.
- Yang, J.-T. (2007). Knowledge sharing: Investigating appropriate leadership roles and collaborative culture. *Tourism Management*, 28(2), 530-543. doi:10.1016/j.tourman.2006.08.006
- Yang, L.-R., Huang, C.-F., & Hsu, T.-J. (2014). Knowledge leadership to improve project and organizational performance. *International Journal of Project Management*, 32(1), 40-53.
- Yang, S.-C., & Farn, C.-K. (2009). Social capital, behavioural control, and tacit knowledge sharing—A multi-informant design. *International Journal of Information Management*, 29(3), 210-218.
- Yang, Y., Brosch, G., Yang, B., & Cadden, T. (2020). Dissemination and communication of lessons learned for a project-based business with the application of information

- technology: A case study with Siemens. *Production Planning & Control*, 31(4), 273-286. doi:10.1080/09537287.2019.1630682
- Yazdanmehr, A., & Wang, J. (2016). Employees' information security policy compliance: A norm activation perspective. *Decision Support Systems*, 92, 36-46.
- Yew Wong, K. (2005). Critical success factors for implementing knowledge management in small and medium enterprises. *Industrial Management & Data Systems*, 105(3), 261-279.
- Yip, M. W., Ng, A. H. H., & Lau, D. H. C. (2012). Employee participation: Success factor of knowledge management. *International Journal of Information and Education Technology*, 2(3), 262-264.
- Zafirovski, M. (2003). Some amendments to social exchange theory: A sociological perspective. *Theory & Science*.
http://theoryandscience.icaap.org/content/vol004.002/01_zafirovski.html
- Zaitul, Z. (2021). Determinants of Individuals' Tacit Knowledge Sharing. *Journal of Information & Knowledge Management*, 19(3), 1-17.
- Zhang, J., & Faerman, S. R. (2007). Distributed leadership in the development of a knowledge sharing system. *European Journal of Information Systems*, 16(4), 479-493.
- Zhang, P., & Ng, F. F. (2013). Explaining knowledge-sharing intention in construction teams in Hong Kong. *Journal of Construction Engineering and Management*, 139(3), 280-293.
- Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206.
- Zhikun, D., & Fungfai, N. (2009). Knowledge sharing among architects in a project design team: An empirical test of theory of reasoned action in China. *Chinese Management Studies*, 3(2), 130-142.

List of Appendices

Appendix 1: Pilot Study (Quantitative and Qualitative) Approval

<div> </div> <p>In reply please quote: HE13/343</p> <p>22 August 2013</p> <p>Mrs Hanan Al Mehairi hanan.almuhairi@gmail.com</p> <p>Mrs Al Mehairi</p> <p>Thank you for your response dated 21 August 2013 to the HREC review of the application detailed below. I am pleased to advise that the application has been approved.</p> <p>Ethics Number: HE13/343</p> <p>Project Title: The impact of organisational culture on knowledge sharing behaviour among employees in organisations</p> <p>Researchers: Mrs Hanan Al Mehairi, Dr Latif Tchanchane, Dr Alison Thirlwall</p> <p>Approval Date: 22 August 2013</p> <p>Expiry Date: 21 August 2014</p> <p>The University of Wollongong/Illawarra Shoalhaven Local Health District Social Sciences HREC is constituted and functions in accordance with the NHMRC <i>National Statement on Ethical Conduct in Human Research</i>. The HREC has reviewed the research proposal for compliance with the <i>National Statement</i> and approval of this project is conditional upon your continuing compliance with this document.</p> <p>A condition of approval by the HREC is the submission of a progress report annually and a final report on completion of your project. The progress report template is available at http://www.uow.edu.au/research/rso/ethics/UOW009385.html. This report must be completed, signed by the appropriate Head of School, and returned to the Research Services Office prior to the expiry date.</p> <p>As evidence of continuing compliance, the Human Research Ethics Committee also requires that researchers immediately report:</p> <ul style="list-style-type: none"> proposed changes to the protocol including changes to investigators involved serious or unexpected adverse effects on participants unforeseen events that might affect continued ethical acceptability of the project. <p>Please note that approvals are granted for a twelve month period. Further extension will be considered on receipt of a progress report prior to expiry date.</p> <p>Ethics Unit, Research Services Office University of Wollongong NSW 2522 Australia Telephone (02) 4221 3386 Facsimile (02) 4221 4338 Email: rso-ethics@uow.edu.au Web: www.uow.edu.au</p>	<div> <p>2</p> </div> <p>If you have any queries regarding the HREC review process, please contact the Ethics Unit on phone 4221 3386 or email rso-ethics@uow.edu.au.</p> <p>Yours sincerely</p> <p>Cheryl Jecht Ethics Assistant on behalf of the Social Sciences Human Research Ethics Committee</p> <p>Cc: Dr Latif Tchanchane, UOWD Dr Alison Thirlwall, UOWD</p>
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Appendix 2: Participant Information Sheet



PARTICIPANT INFORMATION SHEET FOR PROFESSIONAL EMPLOYEES IN BOTH GOVERNMENT AND PRIVATE SECTORS IN THE UNITED ARAB EMIRATES

PROJECT TITLE: Investigating the impact organisational culture and leadership on knowledge sharing behavioural intentions among employees in organisations in the United Arab Emirates

PURPOSE OF THE RESEARCH

This is an invitation to participate in a study conducted by researchers at the University of Wollongong. The purpose of the research is:

- To identify the impact of organisational culture on knowledge sharing behaviour and to determine which of these organisational cultures has the most significant impact on knowledge sharing behaviour.
- To investigate possible factors that contribute to knowledge sharing behavior.
- To produce a culturally-based knowledge sharing model that can be applied with a little modification anywhere in the public and /or private sectors within the United Arab Emirates.

INVESTIGATORS

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METHODS AND DEMANDS ON PARTICIPANTS

You are invited to participate in an interview which may last about 1 -1.5 hours. The interview will be audio recorded only for the purpose of transcription. Before the interview, I will be asking you some personal and demographic information, such as your profession, tenure and etc. This is mainly to help us with data analysis. We are interested in your personal opinions and beliefs regarding knowledge sharing behaviour as you perceive in the organisation you work in.

POSSIBLE RISKS, INCONVENIENCES AND DISCOMFORTS

To ensure anonymity, a pseudo name will be used to keep your identity confidential. All information provided in this interview will remain strictly confidential. The interview transcription will be returned to you to ensure all information disclosed has your consent. Only research team will have access to the data and your data will not be disclosed to any other organization. Please be assured that the information you provide in this research will only be used for the purposes of academic research. Since no identity information is collected in this research, the interview data will be analysed with reference to certain social categories and focusing on shared patterns.

We foresee no risks to you or your organization from conducting this interview. However, a possible discomfort could be the length of the interview itself as it might take up to 1.5 hours. Your involvement in the study is completely voluntary, and you may withdraw your participation from the interview at any time. You may also withdraw the data you have provided at any point. Refusal to participate in the study will not affect your relationship with your employer or any other government agency. In addition, refusal to participate will not affect your relationship with the University of Wollongong.

ETHICS REVIEW AND COMPLAINTS

This study has been reviewed by the Social Sciences Human Research Ethics Committee of the University of Wollongong. If you have any concerns or complaints regarding the way this research has been conducted you can contact the UOW Ethics Officer on (02) 4221 3386 or email rs0-ethics@uow.edu.au.

Thank you for your participation in this research.

Hanan Abdulla Al Mheiri

Appendix 3: Main Study Questionnaire (English and Arabic)

Investigating the Impact of Leadership and Organisational Culture on Behavioural Knowledge-sharing Intentions Among Employees in Organisations in the United Arab Emirates

دراسة أثر الثقافة المؤسسية والقادة على سلوكيات التبادل المعرفي بين الموظفين في المؤسسات بدولة الإمارات العربية المتحدة

ABOUT THE STUDY

In order for an organisation to be effective in Knowledge Management (KM), and survive in this knowledge age, knowledge-sharing needs to be taken seriously. However, many institutions ignore common elements that contribute to the success of knowledge-sharing, such as organisational culture. The objective of this study is to explore the impact of organisational culture on knowledge-sharing behaviour. This study aims to accomplish that through examining specific organisational culture dimensions that are more related to employees' interactions and communications. Thus, the main purpose of this study is to investigate what types of culture promote or hinder knowledge-sharing among employees.

مقدمة عن الدراسة

من أجل أن تكون المؤسسة فعالة في إدارة (، وأن تستمر في أداء عملها في KM المعرفة) عصر المعرفة هذا، فإنه لا بد من أن يُؤخذ موضوع التبادل المعرفي على محمل الجد ومع ذلك، فإن العديد من المؤسسات تتجاهل العناصر المشتركة التي تساهم في نجاح التبادل المعرفي، مثل الثقافة المؤسسية، الهدف من هذه الدراسة هو التعرف على أثر الثقافة المؤسسية على سلوكيات التبادل المعرفي، وتهدف إلى إنجاز ذلك من خلال دراسة أبعاد الثقافة المؤسسية المحددة التي تكون أكثر ارتباطاً بتفاعلات واتصالات الموظفين، وبالتالي، فإن الغرض الرئيسي من هذه الدراسة هو بحث أنواع الثقافة التي تعزز أو تحول دون التبادل المعرفي بين الموظفين.

ABOUT THE QUESTIONNAIRE

Please be aware that you are free to withdraw consent and discontinue participation in the research at any time. However, once your answers are submitted through the system you cannot withdraw your participation because the participation is not trackable as your personal information are not required or obtained. Please be assured that your anonymity will be protected at all times.

مقدمة عن الاستبيان

يرجى أن تكون على علم، أنك حر في سحب الموافقة والتوقف عن المشاركة في البحث في أي وقت، ومع ذلك، فإنه بمجرد أن يتم إرسال الأجوبة من خلال النظام لا يمكنك سحب مشاركتك، لأن المشاركة لا يمكن تتبعها حيث إنه لا يشترط تقديم المعلومات الشخصية الخاصة بك، يرجى التأكد من أن عدم الكشف عن هويتك ستكون محمية في جميع الأوقات.

CONSENT FOR PARTICIPATING IN RESEARCH

The outcomes and the results if this research will be published in academic journals and/or publications. You are invited to participate in my research in

الموافقة على المشاركة في البحث

و / أو نتائج البحث سيتم نشرها في المجالات

by sharing your thoughts, feelings, and actions about the study. This questionnaire has been approved by the Ethics Committee of Wollongong University in Dubai and Australia. Be assured that no adverse physical or psychological effects are expected from participation in this project.

SURVEY INSTRUCTIONS

This survey is expected to take around 25 to 30 minutes. Therefore, we would like to thank you for your time and remind you that by taking this survey you are making an academic contribution and assisting with important research. By completing this survey, you are contributing to improving organisational culture as this study will seek to create solutions for organisational culture that could be followed in organisations which hinder knowledge-sharing among employees.

DEFINITIONS

In this survey context, **knowledge** means the individual's know-how or something which is helpful in solving problems in the organisation. Knowledge-sharing means providing or transferring one's knowledge to others. **Knowledge-sharing** is possible through various methods such as formal and/or informal meetings and information systems.

Contribute to saving the environment by filling this survey online through this link:

<https://kwiksurveys.com/s/7zUIbF08>

المطبوعات الأكاديمية، لذا ندعوكم بأفكاركم، ومشاعركم، وسلوكياتكم حول موضوع الدراسة، هذا الاستبيان تمت الموافقة عليه من لجنة الأخلاقيات في جامعة ولونغونغ الأسترالية بدبي وأستراليا لذا نؤكد لكم أنه من غير المتوقع أن تكون هناك آثار مادية أو نفسية سلبية من المشاركة في هذا المشروع.

إرشادات الاستبيان

الأخوة والأخوات المشاركين يرجى أن تكونوا على علم بأن هذه الدراسة قد تأخذ منكم حوالي 25 إلى 30 دقيقة، لذا نتقدم بالشكر مسبقاً لوقتكم وتذكروا أنه بتعبئكم لهذه الدراسة تُقدمون مساهمة أكاديمية وتساعدون في إجراء بحث أكاديمي وعملي، ومن خلال استكمالكم لهذا الاستبيان، فإنكم تساهمون في تحسين الثقافة المؤسسية لا سيما وأن هذه الدراسة ستسعى إلى إيجاد حلول للثقافة المؤسسية التي يمكن اتباعها في المؤسسات التي تحول دون التبادل والتشارك المعرفي بين الموظفين.

تعريفات مساعدة للمشاركين في هذا الاستبيان

في سياق هذا الاستبيان، **المعرفة** تعني الدراية الفردية أو الشيء الذي يكون مفيداً في حل المشاكل في المؤسسة. التبادل المعرفي يعني توفير أو نقل المعرفة من شخص للآخرين. ويكون **التبادل المعرفي** ممكناً من خلال وسائل مختلفة مثل الاجتماعات الرسمية و/أو غير الرسمية ونظم المعلومات.

ساهم في الحفاظ على البيئة من خلال تعبئة هذا الاستبيان على الإنترنت من خلال هذا الرابط:
<https://kwiksurveys.com/s/7zUIbF08>

Section 1:
Demographic Information:

القسم الأول:
البيانات الشخصية (الديموغرافية):

1.1	Emirate / City		الإمارة / المدينة	1.1
1.2	Which of the following categories best describes the industry you primarily work in (regardless of your actual position)?	<input type="checkbox"/> Police Force / Security <input type="checkbox"/> Energy الطاقة الشرطة و الأمن <input type="checkbox"/> Hotels / Hospitality / Tourism <input type="checkbox"/> Environment البيئة الفنادق / الضيافة / السياحة <input type="checkbox"/> Hospitals / Medical / Health Care <input type="checkbox"/> Telecommunications الاتصالات المستشفيات / الرعاية الطبية / الصحية <input type="checkbox"/> Oil and gas النفط والغاز <input type="checkbox"/> Space الفضاء <input type="checkbox"/> Roads and Transportation الطرق و المواصلات <input type="checkbox"/> Airlines الطيران <input type="checkbox"/> Research and Development البحث والتطوير <input type="checkbox"/> Education التعليم <input type="checkbox"/> Legal Services /Law/ Courts الخدمات القانونية / القانون / المحاكم Other (Please Specify): ----- -----	أي من الفئات التالية تصف بشكل أفضل الصناعة التي تعمل فيها بالدرجة الأولى (بغض النظر عن وظيفتك الفعلية)؟	

1.3	Please Specify Sector of Employment:	() Government حكومي () Semi-Government شبه حكومي () Private خاص	يرجى تحديد قطاع العمل:	1.3
1.4	How long have you been working for your current organisation?		منذ متى وأنت تعمل بالمؤسسة الحالية؟	1.4
1.5	What is your nationality? / Where are you from?		ما هي جنسيتك؟ / من أي بلد أنت؟	1.5
1.6	Please select your gender:	Male ذكر () Female أنثى ()	الرجاء تحديد جنسك:	1.6
1.7	Please select your age:	Under 18 () , 18-21 () , 22-24 () , 25-29 () , 30-34 () , 35-39 () , 40-44 () , 45-49 () , 50-54 () , 55-59 () , 60 and over () 60 عام أو أكبر	الرجاء اختيار الفئة العمرية:	1.7
1.8	What is the highest level of education you have completed?	() High School or equivalent () Diploma () High Diploma () Bachelor's Degree () Master's Degree () Doctoral Degree	ما هي أعلى درجة علمية حصلت عليها؟	1.8
1.9	Which of the following best describes your role in your company?	() Upper Management () Middle Management () Junior Management () Administrative Staff () Support Staff () Consultant () Temporary Employee () Graduate Trainee	أي مما يلي أفضل وصف لدورك في شركتك؟	1.9

Section 2:

Please tick (√) one answer only from (Very Unlikely,... to..., Very Likely) in which you see is appropriate for you.

القسم الثاني:

الرجاء ضع علامة (√) عند اجابة واحدة فقط من (محتمل جداً، ... إلى....، مستبعد) التي تراها مناسبة لك.

	Very Unlikely مستبعد جداً 1	Unlikely مستبعد 2	Neutra 1 محايد 3	Likely مرجح 4	Very Likely مرجح جداً 5	
2.1 My knowledge-sharing knowledge-sharing with other organisational members is good.						2.1 تبادل المعرفة مع أعضاء المؤسسة الآخرين جيد.
2.2 My knowledge-sharing knowledge-sharing with other organisational members is harmful. (item is reverse-coded).						2.2 تبادل المعرفة مع أعضاء المؤسسة الآخرين ضار.
2.3 My knowledge-sharing knowledge-sharing with other organisational members is an enjoyable experience.						2.3 تبادل المعرفة مع أعضاء المؤسسة الآخرين تجربة ممتعة
2.4 My knowledge-sharing knowledge-sharing with other organisational members is valuable to me.						2.4 تبادل المعرفة مع أعضاء المؤسسة الآخرين قيم بالنسبة لي.
3.1 My CEO thinks that I should share my knowledge with other members in the organisation.						3.1 يعتقد رئيسي التنفيذي أنه يتعين عليّ أن أشارك معرفتي مع الأعضاء الآخرين في المؤسسة.
3.2 My boss thinks that I should share my knowledge with other members in the organisation.						3.2 يعتقد مديري أنه يتعين عليّ أن أشارك معرفتي مع الأعضاء الآخرين في المؤسسة.
3.3 My colleagues think I should share my knowledge with other members in the organisation.						3.3 يعتقد زملائي أنه يتعين عليّ أن أشارك معرفتي مع الأعضاء الآخرين في المؤسسة.
3.4 Generally speaking, I try to follow the						3.4 بشكل عام، أنا أحاول أن اتبع سياسة وقصد الرئيس

	Very Unlikely مستبعد جداً 1	Unlikely مستبعد 2	Neutra 1 محايد 3	Likely مرجح 4	Very Likely مرجح جداً 5	
CEO's policy and intention.						التنفيذي.
3.5 Generally speaking, I accept and carry out my boss' decision even though it is different from mine						3.5 بشكل عام، أنا أقبل وأنفذ قرارات مديري على الرغم من أنها مختلفة عن قراراتي.
3.6 Generally speaking, I respect and put in practice my colleagues' decisions.						3.6 بشكل عام، أنا أحترم قرارات زملائي وأضعها موضع التنفيذ.
4.1 I will share my work reports and official documents with members of my organisation more frequently in the future.						4.1 سوف أشارك تقارير العمل والوثائق الرسمية الخاصة بي مع أعضاء مؤسستي بشكل متكرر في المستقبل.
4.2 I will always provide my manuals, methodologies and models for members of my organisation.						4.2 سأقدم دائماً الكتيبات والمنهجيات والنماذج الخاصة بي لأعضاء مؤسستي.
4.3 I intend to share my experience or know-how from work with other organisational members more frequently in the future.						4.3 أعزم تبادل خبرتي أو درايتي المكتسبة من العمل مع أعضاء المؤسسة الآخرين بشكل متكرر في المستقبل.
4.4 I will always provide my know-where or know-whom at the request of other organisational members. <ul style="list-style-type: none"> – Know-where: refers to being aware of and being able to locate the places of resources that can help us in a particular situation. – Know-whom: refers to being aware of the people who can help or have the knowledge we need in a particular 						4.4 سأقدم دائماً درايتي بالأمكنة ودرايتي بالأشخاص بناء على طلب أعضاء المؤسسة الآخرين. الدراية بالأمكنة: تشير إلى الإدراك والقدرة على تحديد أماكن الموارد التي يمكن أن تساعدنا في وضع معين. الدراية بالأشخاص: تشير إلى إدراك الأشخاص الذين يمكنهم تقديم المساعدة لنا أو لديهم المعرفة التي نحتاجها في وضع معين.

	Very Unlikely مستبعد جداً 1	Unlikely مستبعد 2	Neutra 1 محاييد 3	Likely مرجح 4	Very Likely مرجح جداً 5	
situation.						
4.5 I will try to share my expertise from my education or training with other organisational members in a more effective way.						سأحاول تبادل الخبرات التي حصلت عليها من 4.5 التعليم أو التدريب مع أعضاء المؤسسة الآخرين بطريقة فعالة.
4.6 I always intend to share knowledge with my colleague, if they ask.						4.6 أعتزم دائماً تبادل المعرفة مع زملائي، إذا طلبوا ذلك.
5.1 I observe that my manager shares his/her knowledge with other members of the organisation.						5.1 ألاحظ أن مديري يتبادل المعرفة الخاصة به / بها مع الأعضاء الآخرين في المؤسسة.
5.2 I observe that most of my colleagues like to share their knowledge with their co-workers.						5.2 ألاحظ أن معظم زملائي يرغبون في تبادل معارفهم مع زملائهم في العمل.
5.3 When it comes to knowledge-sharing with my co-workers, I'd like to become like my manager.						5.3 عندما يتعلق الأمر بالتبادل المعرفي مع زملائي في العمل، أود أن أصبح مثل مديري
5.4 When it comes to knowledge-sharing with my co-workers, I'd like to become like my other colleagues.						5.4 عندما يتعلق الأمر بالتبادل المعرفي مع زملائي في العمل، أود أن أصبح مثل زملائي الآخرين
6.1 I find sharing my knowledge with co-workers is difficult.						6.1 أجد أن تبادل معرفتي مع زملاء العمل أمر صعب
6.2 Sharing my knowledge with co-workers is within my control.						6.2 تبادل معرفتي مع زملاء العمل في حدود تحكمي
6.3 I have the resources to support my knowledge-sharing with co-workers.						6.3 لديّ الموارد لدعم تبديلي المعرفي مع زملاء العمل

	Very Unlikely مستبعد جداً 1	Unlikely مستبعد 2	Neutra 1 محايد 3	Likely مرجح 4	Very Likely مرجح جداً 5	
6.4 I have the opportunities to share knowledge with co-workers.						6.4 لديّ الفرص للتبادل المعرفي مع زملاء العمل
6.5 I have the ability to share knowledge with co-workers.						6.5 لديّ القدرة على التبادل المعرفي مع زملاء العمل

Section 3:

القسم الثالث:

(على إجابة واحدة فقط من (لا على الإطلاق، إلى ...، إلى حد كبير) التي ✓يرجي وضع علامة ()
Please tick (✓) one answer only from (not at all, to..., to a large extent) which you see is appropriate for you.
تري أنها مناسبة لك.

Question 7	السؤال السابع					
	Not at All لا على الإطلاق 1	Rarely نادراً 2	Sometim es أحياناً 3	To a good Extent إلى حد جيد 4	To a Large Extent إلى حد كبير 5	
7.1 My manager asks for my ideas about my work.						7.1 مديري يسأل عن أفكارتي حول عملي
7.2 My manager gives me recognition for my work contributions.						7.2 مديري يمنحني التقدير لإسهاماتي في العمل
7.3 My manager encourages me to ask questions about my work.						7.3 مديري يشجعني على طرح الأسئلة حول عملي
7.4 My manager listens to information from staff, even if bad news.						7.4 مديري يستمع إلى المعلومات من الموظفين، حتى إذا كانت أخباراً سيئة

Question 7			السؤال السابع			
	Not at All لا على الإطلاق	Rarely نادراً	Sometimes أحياناً	To a good Extent إلى حد جيد	To a Large Extent إلى حد كبير	
	1	2	3	4	5	
7.5 My manager shows interest in how I am doing my job.						7.5 مديري يظهر الاهتمام بالكيفية التي أؤدي بها عملي
7.6 My manager is attentive to new opportunities to improve work processes.						7.6 مديري منتبه للفرص الجديدة لتحسين سير العمل
7.7 My manager gives me the information I need to do my work well.						7.7 مديري يمنحني المعلومات التي أحتاجها لأداء عملي بشكل جيد.
7.8 My manager encourages me to use my talents.						7.8 مديري يشجعني على استخدام مواهبي.
7.9 My manager helps me to further develop myself.						7.9 مديري يساعدني على تطوير نفسي.
7.10 My manager encourages his/her staff to come up with new ideas.						7.10 مديري يشجع الموظفين لديه / لديها على التقدم بأفكار جديدة.
7.11 My manager gives me the authority to take decisions which make work easier for me.						7.11 مديري يمنحني سلطة اتخاذ القرارات التي تجعل العمل أسهل بالنسبة لي.
7.12 My manager is concerned with how things are, or are not, being done.						7.12 مديري يشعر بالقلق تجاه الكيفية التي يتم بها إنجاز، أو عدم إنجاز الأمور
7.13 My manager provides clear goals to be achieved.						7.13 مديري يطرح أهدافاً واضحة ليتم إنجازها
7.14 My manager is fair and applies rules consistently to all.						7.14 مديري عادل ويُطبق اللوائح بشكل مستمر على الجميع
7.15 My manager takes needed action on problems identified by staff.						7.15 مديري يتخذ الإجراء المطلوب بشأن المشاكل التي يتم تحديدها من قبل الموظفين
7.16 My manager makes comments to put me						7.16 مديري يصدر تعليقات لإحباطي

Question 7			السؤال السابع			
	Not at All لا على الإطلاق	Rarely نادراً	Sometimes أحياناً	To a good Extent إلى حد جيد	To a Large Extent إلى حد كبير	
	1	2	3	4	5	
down.						
7.17 My manager blames me in front of others when things go wrong.						7.17 مديري يُلقي باللوم عليّ أمام الآخرين عندما تسير الأمور بشكل خاطئ
7.18 My manager takes credit for work I did.						7.18 مديري ينسب إلى نفسه العمل الذي أنجزه
7.19 My manager thinks of his/her own interests only.						7.19 مديري يفكر في المصالح الخاصة به / بها فقط
7.20 My manager is available for professional questions or problems that I would like to consult him/her on.						7.20 مديري متاح للأسئلة المهنية أو المشاكل التي أُرغب في التشاور معه / معها بخصوصها
7.21 My manager is ready to listen to my requests.						7.21 مديري على استعداد للاستماع إلى طلباتي
7.22 My manager encourages me to access him/her on emerging issues.						7.22 مديري يشجّعني على الوصول إليه / إليها بشأن المسائل المستجدة
7.23 My manager is accessible to discuss emerging problems.						7.23 مديري يمكن الوصول إليه لمناقشة المشاكل المستجدة
7.24 My manager holds me responsible for the work I carry out.						7.24 مديري يحملني المسؤولية عن العمل الذي أقوم به
7.25 I am held accountable for my performance by my manager.						7.25 أنا أكون مسؤولاً عن أدائي أمام مديري
7.26 My manager holds me and my colleagues responsible for the way we handle a job.						7.26 مديري يحملني وزملائي المسؤولية عن طريقة التعامل مع العمل
7.27 My manager takes risks even when he/she is not certain of the support from his/her own						7.27 مديري يتحمل المخاطر حتى عندما لا يكون / تكون متأكداً من دعم مديره/ها الخاص

Question 7			السؤال السابع			
	Not at All لا على الإطلاق	Rarely نادراً	Sometimes أحياناً	To a good Extent إلى حد جيد	To a Large Extent إلى حد كبير	
	1	2	3	4	5	
manager.						
7.28 My manager takes risks and does what needs to be done in his/her view.						7.28 مديري يتحمل المخاطر ويفعل ما يجب القيام به من وجهة نظره/ها الخاصة
7.29 My manager tries to learn from the criticism he/she gets from his/her superior.						7.29 مديري يحاول التعلم من الانتقادات التي توجه له/ لها من رؤسائه/ها الأعلى
7.30 My manager admits his/her mistakes to his/her superior.						7.30 مديري يعترف بأخطائه/ها إلى رؤسائه/ها الأعلى
7.31 My manager learns from the different views and opinions of others.						7.31 مديري يتعلم من وجهات النظر المختلفة وآراء الآخرين
7.32 If people express criticism, my manager tries to learn from it.						7.32 إذا عبّر الناس عن انتقاداتهم، يحاول مديري أن يتعلم منها

Section 4:

Please tick (✓) one answer only from (Strongly Disagree, to..., Strongly Agree) which you see is appropriate for you.

القسم الرابع:

(على إجابة واحدة فقط من (لا أوافق بشدة، إلى ...، أوافق بشدة) التي ✓يرجى وضع علامة (Strongly Disagree, to..., Strongly Agree) ترى أنها مناسبة لك.

Question 8		السؤال الثامن				
	Strongly Disagree لا أوافق بشدة 1	Disagree لا أوافق 2	Neutral محايد 3	Agree أوافق 4	Strongly Agree أوافق بشدة 5	
8.1 My manager always tries to gain new knowledge to set an example to the others.						8.1 مديري يحاول دائماً اكتساب معرفة جديدة ليكون مثالاً يحتذى بالنسبة الى الآخرين
8.2 My manager demonstrates excellent knowledge leadership skills.						8.2 مديري يُظهر معرفة ممتازة بالمهارات القيادية
8.3 My manager understands the needs and expectations of the team members and provides the necessary resources.						8.3 مديري يفهم احتياجات وتوقعات أعضاء الفريق ويوفر الموارد اللازمة.
8.4 My manager and the team members cooperate to solve problems.						8.4 مديري وأعضاء الفريق يتعاونون على حل المشاكل
8.5 My manager builds an environment of trust.						8.5 مديري يُنشئ جواً من الثقة
8.6 My manager takes action to enhance the team members' innovative ability.						8.6 مديري يتخذ إجراءات للنهوض بالقدرات الابتكارية لدى أعضاء الفريق
8.7 My manager develops a reward system to stimulate the team members' learning behaviour.						8.7 مديري يطور نظام المكافآت لتحفيز السلوك التعليمي لدى أعضاء الفريق
8.8 My manager integrates practical experience from different departments to create new knowledge.						8.8 مديري يدمج الخبرة العملية من الإدارات المختلفة لخلق معارف جديدة

Question 8		السؤال الثامن				
	Strongly Disagree لا أوافق بشدة 1	Disagree لا أوافق 2	Neutral محايد 3	Agree أوافق 4	Strongly Agree أوافق بشدة 5	
8.9 My manager leads the team members to execute innovative ideas.						8.9 مديري يقود أعضاء الفريق لتنفيذ الأفكار الابتكارية
8.10 My manager explains the aims and future directions of the organisation and our own unit .						8.10 مديري يوضح الأهداف والتوجهات المستقبلية للمؤسسة والوحدة الخاصة بنا
8.11 My manager discusses with us what knowledge and skills will be needed at our workplace in the future.						8.11 مديري يناقش معنا أي المعارف والمهارات التي ستكون هناك حاجة إليها في مكان عملنا في المستقبل
8.12 My manager plans with us ways of getting feedback on the quality of our work.						8.12 مديري يضع معنا الخطط حول السبل الكفيلة بالحصول على تعليقات حول جودة عملنا
8.13 My manager discusses our activities and the quality of our results.						8.13 مديري يناقش معنا أنشطتنا وجودة نتائجنا
8.14 My manager arranges common discussions at our place of work.						8.14 مديري يرتب المناقشات المشتركة في مكان عملنا
8.15 My manager endeavours continuously to promote the operation of our unit.						8.15 مديري يسعى بشكل مستمر لتعزيز عمليات وحدتنا
8.16 My manager promotes transfer and sharing of knowledge at our place of work.						8.16 مديري يشجع نقل وتبادل المعرفة في مكان عملنا
8.17 My manager supports the constructive dealing with faults and problems with our co-operation.						8.17 مديري يدعم التعامل البناء مع الأخطاء والمشاكل المتعلقة بالتعاون بيننا
8.18 My manager endeavours to improve the atmosphere of our place of work.						8.18 مديري يسعى لتحسين الأجواء في مكان عملنا

Question 8		السؤال الثامن				
	Strongly Disagree لا أوافق بشدة 1	Disagree لا أوافق 2	Neutral محايد 3	Agree أوافق 4	Strongly Agree أوافق بشدة 5	
8.19 My manager encourages in our community of work a confidential atmosphere, in which it is easy to express thoughts and views openly.						8.19 مديري يشجع في مجتمع العمل لدينا أجواء الخصوصية، التي يسهل فيها التعبير عن الأفكار والآراء بشكل علني
8.20 My manager is willing to receive feedback relating to him/herself in order to develop his/her work.						8.20 مديري على استعداد لتلقي الملاحظات المتصلة به/ بها تحديداً من أجل تطوير العمل الخاص به / بها
8.21 My manager knows his/her employees.						8.21 مديري يعرف الموظفين لديه / لديها
8.22 My manager takes care that the knowledge and skills of each member of the community of work increase.						8.22 مديري يهتم بزيادة المعرفة والمهارات لكل فرد من أفراد مجتمع العمل
8.23 My manager recognises what combination of knowledge and skills is needed in our unit and he/she is able to achieve it.						8.23 مديري يعترف بأن المزج بين المعارف والمهارات في وحدتنا أمر مطلوب وهو / هي قادر على تحقيق ذلك
8.24 Discussions with my manager about development have been useful from the standpoint of my professional skills.						8.24 المناقشات مع مديري حول التطوير كانت مفيدة من وجهة نظر مهاراتي المهنية
8.25 My manager notices good accomplishments and gives positive feedback on them.						8.25 مديري يلاحظ الإنجازات الجيدة ويُبدي ردود فعل إيجابية بشأنها
8.26 My manager will, when required, be able to support me in developing my performance and course of action.						8.26 مديري سيكون قادراً، إذا اقتضي الأمر، على تقديم الدعم لي في تطوير أدائي ومسار عملي

Question 8		السؤال الثامن				
	Strongly Disagree لا أوافق بشدة 1	Disagree لا أوافق 2	Neutral محايد 3	Agree أوافق 4	Strongly Agree أوافق بشدة 5	
8.27 My manager has a correct conception of the strong and weak points of my proficiency.						8.27 مديري لديه تصور صحيح حول نقاط القوة والضعف في كفاءتي
8.28 My manager expects that I develop my skills continuously.						8.28 مديري يتوقع أن أطور مهاراتي بشكل مستمر
8.29 I plan with my manager ways of developing my proficiency.						8.29 أضع مع مديري الخطط حول الطرق الكفيلة بتطوير كفاءتي

Section 5:

القسم الخامس:

(على إجابة واحدة فقط من (لا أوافق بشدة، إلى ...، أوافق بشدة) التي ✓يرجى وضع علامة (Strongly Disagree, to..., Strongly Agree) which you see is appropriate for you. ترى أنها مناسبة لك.

Question 9		السؤال التاسع				
	Strongly Disagree لا أوافق بشدة 1	Disagree لا أوافق 2	Neutral محايد 3	Agree أوافق 4	Strongly Agree أوافق بشدة 5	
9.1 My colleagues and I have a sharing relationship. We freely share our ideas, feelings, and hopes.						9.1 أنا وزملائي لدينا علاقة تبادل. نحن نتبادل بحرية أفكارنا، ومشاعرنا، وآمالنا
9.2 I can talk freely to my colleagues about difficulties I am having at work and know						9.2 يمكنني أن أتحدث بحرية مع زملائي عن الصعوبات التي أواجهها في العمل وأعلم أنهم سيكونون

Question 9		السؤال التاسع				
	Strongly Disagree لا أوافق بشدة 1	Disagree لا أوافق 2	Neutral محايد 3	Agree أوافق 4	Strongly Agree أوافق بشدة 5	
that they will want to listen.						راغبين في الاستماع
9.3 My colleagues and I would feel a sense of loss if one of us was transferred and we could no longer work together.						زملائي وأنا سنشعر بنوع من الخسارة إذا تم نقل واحد منّا، ولن يكون بإمكاننا العمل معا
9.4 If I shared my problems with my colleagues, I know they would respond constructively and caringly.						إذا تحدثت عن مشاكلي مع زملائي، فإنني أعلم أنهم سيتجاوبون بطريقة بناءة وودية
9.5 I would have to say that my colleagues and I have both made considerable emotional investments in our working relationships.						أود أن أقول إن زملائي وأنا حققنا سوياً 9.5 استثمارات عاطفية كبيرة في علاقات العمل
9.6 I believe that my manager will treat me fairly while appraising my performance.						أنا أثق في أن مديري سيعاملني بإنصاف أثناء 9.6 تقييم أدائي
9.7 Everybody is encouraged to participate in meetings.						يتم تشجيع الجميع على المشاركة في الاجتماعات 9.7
9.8 In meetings we seek to understand everyone's viewpoint.						في الاجتماعات نحن نسعى لفهم وجهة نظر كل 9.8 فرد
9.9 Members are prepared to challenge assumptions of the group.						يتم إعداد الأعضاء لتحدي افتراضات المجموعة 9.9
9.10 Speaking the truth, even if it is bitter, is encouraged.						يتم تشجيع التحدث جهرًا عن الحقيقة، حتى إذا 9.10 كانت مرة
9.11 The top management believes in communicating important news and events with organisational members across all levels.						تؤمن الإدارة العليا بإيصال الأخبار والأحداث 9.11 المهمة إلى أعضاء المؤسسة على جميع المستويات

Question 9		السؤال التاسع				
	Strongly Disagree لا أوافق بشدة 1	Disagree لا أوافق 2	Neutral محايد 3	Agree أوافق 4	Strongly Agree أوافق بشدة 5	
9.12 Most senior members of my organisation are approachable/accessible.						معظم كبار أعضاء مؤسستي يمكن تبادل الحديث معهم/ الوصول إليهم
9.13 Cooperation and collaboration across functional roles are actively encouraged in this organisation.						التعاون والعمل المشترك عبر الأدوار الوظيفية يتم تشجيعه بنشاط في هذه المؤسسة.
9.14 Working in this organisation is like being part of a team.						العمل في هذه المؤسسة أشبه بكونك جزءاً من فريق.
9.15 Work is sensibly organised in this organisation so that each person can see the relationship between his/her work and the goals of the organisation.						يتم تنظيم العمل بشكل معقول في هذه المؤسسة بحيث إن كل شخص يمكنه أن يرى العلاقة بين العمل الموكل له / لها وأهداف المنظمة.
9.16 Teams are the primary building blocks of this organisation.						فرق العمل هي اللبنة الأساسية لهذه المؤسسة.
9.17 This organisation relies on horizontal control and coordination to get work done, rather than hierarchy.						تعتمد هذه المؤسسة على المراقبة والتنسيق الأفقي للحصول على العمل المنجز، بدلاً من التسلسل الهرمي.
9.18 Employees are unified as a family.						9.18 الموظفون متحدون مثل الأسرة
9.19 Employees always agree about most important things, when solving questions, problems or conflicts.						9.19 يتفق الموظفون دائماً عن الأشياء الأكثر أهمية، وعند حل المسائل، أو المشاكل أو النزاعات
9.20 Employees often do not approve of changes and resist or behave indifferently.						9.20 الموظفون في كثير من الأحيان لا يوافقون على التغييرات ويقاومون أو يتصرفون بلا مبالاة
9.21 Employees agree about most rules, norms, values (they think these things are						9.21 الموظفون يتفقون حول معظم القواعد والمعايير والقيم (إنهم يعتقدون أن هذه الأمور هي الصحيحة)

Question 9		السؤال التاسع				
	Strongly Disagree لا أوافق بشدة 1	Disagree لا أوافق 2	Neutral محايد 3	Agree أوافق 4	Strongly Agree أوافق بشدة 5	
right).						
9.22 When disagreements occur, we work hard to achieve “win-win” solutions.						9.22 عندما تحدث خلافات فإننا نعمل بجد للتوصل إلى حلول "ترضي الأطراف".
9.23 It is easy for us to reach consensus, even on difficult issues.						9.23 من السهل بالنسبة لنا الوصول إلى توافق في الآراء، حتى في القضايا الصعبة.

Appendix 4: Main Study (Quantitative and Qualitative) Approval



APPROVAL LETTER
In reply please quote: HE15/316

14 November 2015

Mrs Hanan Al Mehairi
UOW Dubai

Dear Mrs Hanan Al Mehairi

Thank you for your response dated 9 September 2015 to the HREC review of the application detailed below. I am pleased to advise that the application has been approved.

Ethics Number: HE15/316

Project Title: Investigating the impact of organisational culture on knowledge sharing behaviour among employees in organisations in the United Arab Emirates

Researchers: Mrs Hanan Al Mehairi, Dr Latif Tchanchane, Dr Alison Thirlwall

Approval Date: 11 September 2015

Expiry Date: 10 September 2016

The University of Wollongong/Illawarra Shoalhaven Local Health District Social Sciences HREC is constituted and functions in accordance with the NHMRC *National Statement on Ethical Conduct in Human Research*. The HREC has reviewed the research proposal for compliance with the *National Statement* and approval of this project is conditional upon your continuing compliance with this document.

Approval by the HREC is for a twelve month period. Further extension will be considered on receipt of a progress report prior to expiry date. Continuing approval requires:

- The submission of a progress report annually and on completion of your project. The progress report template is available at <http://www.uow.edu.au/research/ethics/human/index.html>. This report must be completed, signed by the researchers and the appropriate Head of Unit, and returned to the Research Services Office prior to the expiry date.
- Approval by the HREC of any proposed changes to the protocol including changes to investigators involved
- Immediate report of serious or unexpected adverse effects on participants
- Immediate report of unforeseen events that might affect continued ethical acceptability of the project.

If you have any queries regarding the HREC review process, please contact the Ethics Unit on phone 4221 3386 or email rso-ethics@uow.edu.au.

Yours sincerely

Associate Professor Melanie Randle
Chair, UOW Social Sciences Human Research Ethics Committee

Ethics Unit, Research Services Office
University of Wollongong NSW 2522 Australia
Telephone (02) 4221 3386 Facsimile (02) 4221 4338
Email: rso-ethics@uow.edu.au Web: www.uow.edu.au

Appendix 5: Measurements of the Main Study

Scales and Items					
No	Type	Variable Name	Codes	Item Description	Adopted from
1	Reflective	Attitude Towards Sharing Knowledge	ATSK01	My knowledge-sharing with other organisational members is good.	Bock et al. (2005) Bock et al. (2010) Ryu et al. (2003)
			ATSK03	My knowledge-sharing with other organisational members is an enjoyable experience.	
			ATSK04	My knowledge-sharing with other organisational members is valuable to me.	
2	Reflective	Injunctive Norms	IN01	My CEO thinks that I should share my knowledge with other members in the organisation.	Bock et al. (2005) Bock et al. (2010)
			IN02	My boss thinks that I should share my knowledge with other members in the organisation.	
			IN03	My colleagues think I should share my knowledge with other members in the organisation.	
			IN04	Generally speaking, I try to follow the CEO's policy and intention.	
			IN05	Generally speaking, I accept and carry out my boss' decision even though it is different from mine	
			IN06	Generally speaking, I respect and put in practice my colleagues' decisions.	
3	Reflective	Intention Toward Sharing Knowledge	ITSK01	I will share my work reports and official documents with members of my organisation more frequently in the future.	Bock et al. (2005) Bock et al. (2010) Ryu et al. (2003)
			ITSK02	I will always provide my manuals, methodologies and models for members of my organisation.	
			ITSK03	I intend to share my experience or know-how from work with other organisational members more frequently in the future.	
			ITSK04	I will always provide my know-where or know-whom at the request of other organisational members.	
			ITSK05	I will try to share my expertise from my education or training with other organisational members in a more effective way.	
			ITSK06	I always intend to share knowledge with my colleague, if they ask.	
4	Reflective	Descriptive Norms	DN01	I observe that my manager shares his /her knowledge with other members of the organisation.	Ajzen & Fishbein (2010) *edited by researcher
			DN02	I observe that most of my colleagues like to share their knowledge with their co-workers.	

Scales and Items					
No	Type	Variable Name	Codes	Item Description	Adopted from
			DN03	When it comes to knowledge-sharing with my co-workers, I'd like to become like my manager.	
			DN04	When it comes to knowledge-sharing with my co-workers, I'd like to become like my other colleagues.	
5	Reflective	Perceived Behavioural Controls	PBC03	I have the resources to support my knowledge-sharing with co-workers.	Taylor & Todd (1995) Ajzen (2002) Ibragimova (2006) Johnny & Narasimha (2005) Zhang & Ng (2013)
			PBC04	I have the opportunities to share knowledge with co-workers.	
			PBC05	I have the ability to share knowledge with co-workers.	
6	1 st Order: Inclusive Leadership Formative	2 nd Order: Inclusive Leadership Empowerment (Reflective)	ILCOE01	My manager asks for my ideas about my work.	van Dierendonck, & Nuijten (2011) Prime & Salib (2014, 2015)
			ILCOE02	My manager gives me recognition for my work contributions.	
			ILCOE03	My manager encourages me to ask questions about my work.	
			ILCOE04	My manager listens to information from staff, even if it is bad news.	
			ILCOE05	My manager shows interest in how I am doing my job.	
			ILCOE06	My manager is attentive to new opportunities to improve work processes.	
			ILCOE07	My manager gives me the information I need to do my work well.	
			ILCOE08	My manager encourages me to use my talents.	
			ILCOE09	My manager helps me to further develop myself.	
			ILCOE10	My manager encourages his/her staff to come up with new ideas.	
			ILCOE11	My manager gives me the authority to take decisions which make work easier for me.	
		2 nd Order: Inclusive Leadership Accountability (Reflective)	ILACB01	My manager holds me responsible for the work I carry out.	
			ILACB02	I am held accountable for my performance by my manager.	
			ILACB03	My manager holds me and my colleagues responsible for the way we handle a job.	
		2 nd Order:	ILCO01	My manager takes risks even when he/she is not certain of the	

Scales and Items					
No	Type	Variable Name	Codes	Item Description	Adopted from
		Inclusive Leadership Courage (Reflective)		support from his/her own manager.	
			ILCO02	My manager takes risks and does what needs to be done in his/her view.	
		2 nd Order: Inclusive Leadership Humility (Reflective)	ILH01	My manager tries to learn from the criticism he/she gets from his/her superior.	
			ILH02	My manager admits his/her mistakes to his/her superior.	
			ILH03	My manager learns from the different views and opinions of others.	
			ILH04	If people express criticism, my manager tries to learn from it.	
7	1 st Order: Knowledge Leadership Formative	2 nd Order: Knowledge Leadership Skills (Reflective)	KLLS01	My manager always tries to gain new knowledge to set an example to the others.	Yang et al. (2014)
			KLLS02	My manager demonstrates excellent knowledge leadership skills.	
		2 nd Order: Knowledge Leadership Cooperation and Trust (Reflective)	KLCT01	My manager understands the needs and expectations of the team members and provides the necessary resources.	
			KLCT02	My manager and the team members cooperate to solve problems.	
			KLCT03	My manager builds an environment of trust.	
		2 nd Order: Knowledge Leadership Knowledge Integration and Innovation (Reflective)	KLKII01	My manager takes action to enhance the team members' innovative ability.	
			KLKII02	My manager develops a reward system to stimulate the team members' learning behaviour.	
			KLKII03	My manager integrates practical experience from different departments to create new knowledge.	
			KLKII04	My manager leads the team members to execute innovative ideas.	
8	Reflective	Organisational Culture Trust	OCTS01	My colleagues and I have a sharing relationship. We freely share our ideas, feelings, and hopes.	Ghosh & Srivastava (2014)
			OCTS02	I can talk freely to my colleagues about difficulties I am having at work and know that they will want to listen.	
			OCTS03	My colleagues and I would feel a sense of loss if one of us was transferred and we could no longer work together.	

Scales and Items					
No	Type	Variable Name	Codes	Item Description	Adopted from
			OCTS04	If I shared my problems with my colleagues, I know they would respond constructively and caringly.	
			OCTS05	I would have to say that my colleagues and I have both made considerable emotional investments in our working relationships.	
			OCTS06	I believe that my manager will treat me fairly while appraising my performance.	
9	Reflective	Organisational Culture Participation	OCPA01	Everybody is encouraged to participate in meetings.	Ghosh & Srivastava (2014)
			OCPA02	In meetings we seek to understand everyone's viewpoint.	
			OCPA03	Members are prepared to challenge assumptions of the group.	
			OCPA04	Speaking the truth, even if it is bitter, is encouraged.	
10	Reflective	Organisational Culture Openness	OCO01	The top management believes in communicating important news and events with organisational members across all levels.	Ghosh & Srivastava (2014)
11	Reflective	Organisational Culture Team Orientation	OCTO01	Cooperation and collaboration across functional roles are actively encouraged in this organisation.	Denison & Mishra (1995)
			OCTO02	Working in this organisation is like being part of a team.	
			OCTO03	Work is sensibly organised in this organisation so that each person can see the relationship between his/her work and the goals of the organisation.	Denison & Neale (1999)
12	Reflective	Organisational Culture Agreement	OCAT01	Employees are unified as a family.	Denison & Mishra (1995) Denison & Neale (1999)
			OCAT04	Employees agree about most rules, norms, values (they think these things are right).	
			OCAT05	When disagreements occur, we work hard to achieve "win-win" solutions.	

Appendix 6: Interview Protocol Questions

SEMI STRUCTURED INTERVIEW (English Version)

PROTOCOL QUESTIONS

Date of the Interview: / / 2017

INTERVIEWEE BACKGROUND:

Name		Job Title	
Organisation		Department / Section	
Years of Service		Phone	
Email		Approximate number of employees at organisation	

EXPERIENCE WITH THE ORGANISATION

1. To begin, I'd like to learn about your association with the organisation, what attracted you to the organisation?
2. Now that you have actually joined the organisation, what do like the most about it?

EXISTING KNOWLEDGE MANAGEMENT SYSTEM (KMS) IN THE ORGANISATION

1. Can you give me a brief overview of the existing system of knowledge management in your company?
2. Does your KMS include policies on knowledge-sharing?
 - a. If yes:
 - What is your company's policy towards knowledge-sharing?
 - Does your company's management discuss the policy with you?
 - How is the company's overall policy communicated?
 - b. If no:
 - What do you think would be the advantages/disadvantages of having a policy for knowledge-sharing?
3. Beside the policies and rules towards knowledge-sharing, how does the company support/promote knowledge-sharing?

Probes:

- Do employees get promotion if they share knowledge?
- Does your company host events that introduce the importance of knowledge-sharing?
- Does your manager and co-workers appreciate when you share knowledge?)

4. How do you deal with the problem of losing knowledge when people leave the company (e.g., retirement, resignation)? Does the existing system support the retention of employee's knowledge? Are you satisfied with this method?

EXISTING KNOWLEDGE-SHARING BEHAVIOUR OF EMPLOYEES IN THE ORGANISATION

1. In your organisation, is it easy or hard to share and obtain knowledge??
2. From your experience with the organisation, please give me a situation where you thought knowledge-sharing among employees was essential for the organisation?
3. Do you prefer formal or informal ways of learning and knowledge-sharing and why?

Probes:

- Is your organisation more supportive to formal ways of learning and knowledge-sharing?
- Why do you think that this is the preferred method by your organisation?
- How is the situation in your organisation, is it easy to share and obtain knowledge?

THEORY OF REASONED ACTION (BELIEF ELICITATION)

1. What is your understanding of knowledge-sharing?
2. What do you think are the advantages/disadvantages of knowledge-sharing among employees in the organisation?
3. What could be the consequences of knowledge-sharing?
4. What could be the consequences of withholding knowledge?
5. Who will approve of knowledge-sharing and who disapprove of it?
6. What kinds of factors will make easier? (Control Factors) or: What could be the factors or circumstances that would enable you to comply with knowledge-sharing?
7. What are the factors that would make it more difficult? (Control Factors) or: What

about the factors or circumstances that would make it difficult for you to comply or would prevent you from knowledge-sharing with your co-workers? Would you share some of these factors with me?

8. Do top management, your direct manager, and your co-workers share their knowledge with you and the rest of your team?

Organisational Culture

There is a famous saying by Sir Francis Bacon where he stated that “**Knowledge is power**”. When people acquire new knowledge, they believe that it is the key to their success and are likely to guard it instead of sharing.

Probes:

- How would you describe your co-workers, are they cooperative or competitive?
 - Is your company supportive of individual projects or team projects?
 - In your experience, does your company care more about tasks or more about employees? Can you illustrate that with an example?
 - Would you describe employees in your organisation as being open to new challenges and risks? Or do they prefer routine work with clear processes?
 - When you don't understand something at work, do you prefer to avoid asking what might appear to others to be “dumb questions”? If not, how do you usually deal with in this situation?
1. If you were to describe the work environment in your organisation in five words what would you say?

COMPLIANCE WITH KNOWLEDGE-SHARING

When it comes to your compliance with knowledge-sharing in your organisation, there might be individuals or groups who think you should or should not comply. Who do you think would disapprove or approve of your knowledge-sharing?

Probes:

- Have you ever been asked to share your knowledge and you were unhappy about it? Why?

- In what kind of situations would you share knowledge but be unhappy about it?
2. Imagine if you are a knowledge management manager, if you could develop knowledge-sharing within the organisation, what steps would you take?

POSSIBLE QUESTIONS FOR KM MANAGERS IN ORGANISATIONS:

1. What steps is the organisation taking to motivate individuals to share their knowledge with their co-workers?
2. If you could develop the way knowledge-sharing is nurtured within the organisation what steps would you take?
3. How can you encourage knowledge-sharing internally while putting the right controls in place to avoid it being breached externally?
4. After employees leave the organisation, how do you ensure that information is not conveyed to his/her new employer?

SENIOR EMPLOYEES WHO WORKED FOR 5 YEARS OR MORE:

1. (The name of the person), you have worked in the organisation for (# of years of service); have you witnessed any change in the organisational culture since you joined till today?
 - a. If **yes**? In what way has the culture of the organisation changed? Why do you think this change has happened?
 - b. If **no**? Are you satisfied with the current organisational culture? If you were to suggest improvements for the organisational culture what would your recommendations be?

LEADERSHIP IN THE ORGANISATION:

Inclusive Leadership

1. When you come up with a new idea about work how does your manager react to that?
2. How does your manager react to good news or bad news regarding work?
3. If you or your colleagues at work identified a problem and reported it to the manager how does the manager react?
4. How do you perceive your manager? Is he/she fair with you and your colleague

and does he/she consistently apply the rules to everyone?

Knowledge Leadership

1. When you first joined the organisation did your potential manager talk to you about the future plans for the organisation and explain the aims and future directions of the unit you will be working on? Does the organisation have follow up procedures where you are updated about the aims and future directions?
2. How does your manager deal with faults and problems? (do they deal with them in a constructive way or otherwise?)
3. Does your manager have initiatives you can share with me where he/she tried to improve the atmosphere of the workplace?
4. Have you ever suggested something to your manager to develop his/her work?
 - (If yes) Why do you think he/she was open to suggestions?
 - (If no) why do you think your manager is not willing to receive feedback from you regarding how they perform their work?
5. Did you ever have a useful discussion with your manager about development of your professional skills? Can you share an example?

CONTROL FACTORS

1. How do you describe knowledge-sharing across genders and within the same gender?
2. How do you see the effect of employees' years of experience and background education affecting knowledge-sharing among employees?
3. From your point of view, do younger or older employees seem to be sharing their knowledge with their co-workers more? And why do you think that might be?

KNOWLEDGE EXCHANGE AND EMIRATISATION:

9. In your opinion, do you think that Emiratisation could have an impact on knowledge-sharing? **If yes**, in what way and why?

Probes:

- Have you witnessed a situation when an expatriate has withheld knowledge from a local? Tell me about it. Why do you think it happened?
- Have you witnessed a situation when a local has withheld knowledge from an

expatriate? Tell me about it. Why do you think it happened?

- Have you witnessed a situation when a local has withheld knowledge from a local? Tell me about it. Why do you think it happened?
- Have you witnessed a situation when an expatriate has withheld knowledge from an expatriate? Tell me about it. Why do you think it happened?

IN CONCLUSION

We reached the end of our interview. Please feel free to add anything that we didn't cover in our interview that you wish to speak about.

Thank you very much for your time and I will be sending you the interview transcription for your review and confirmation once it is done.

SEMI STRUCTURED INTERVIEW (Arabic Version)

PROTOCOL QUESTIONS

أسئلة المقابلات - شبه منظمه

تاريخ المقابلة :

خلفية ضيف المقابلة:

الاسم	المسمى الوظيفي	
المؤسسة / الشركة	القسم / الإدارة	
سنوات الخدمة	الهاتف	
البريد الإلكتروني	العدد التقريبي للموظفين في المنظمة	

التجربة مع المؤسسة

1. بدايةً، أود أن أتعرف على علاقتك بالمؤسسة، ما الذي جذبك للانضمام إليها؟
2. الآن بعد أن التحقت فعلياً بالمؤسسة، ما أكثر شيء يعجبك فيها؟

في المؤسسة (KMS) النظام الحالي لإدارة المعرفة

3. هي يمكن أن تعطيني نظرة عامة مختصرة على النظام الحالي لإدارة المعرفة في شركتك؟
4. هل يتضمن نظام إدارة المعرفة سياسات حول التبادل المعرفي؟

إذا كانت الإجابة على السؤال السابق بنعم:

- ما هي سياسة شركتك تجاه التبادل المعرفي؟
- هل تناقش إدارة الشركة السياسة معكم؟
- كيف يتم الإبلاغ بالسياسة العامة للشركة؟

إذا كانت الإجابة على السؤال السابق بلا:

- برأيك ما هي العيوب والمزايا التي يمكن أن ينطوي عليها وجود سياسة للتبادل المعرفي؟
- بغض النظر عن السياسات والقواعد الخاصة بالتبادل المعرفي، كيف تدعم الشركة أو تروج للتبادل المعرفي بين الموظفين؟

أسئلة استيضاحية:

- هل يحصل الموظفون على ترقية إذا قاموا بالتبادل المعرفي؟
- هل تستضيف المؤسسة التي تعمل بها فعاليات تتحدث عن أهمية التبادل المعرفي؟
- هل تتلقى تقديرًا من مديرك وزملاءك عندما تشارك ما لديك من معرفة؟
- هل النظام الحالي يدعم (عند التقاعد أو الاستقالة) كيف تتعامل مع مشكلة فقدان المعرفة عندما يترك أشخاص الشركة الاحتفاظ بمعرفة الموظف؟ هل أنت راضٍ عن هذه الطريقة؟

السلوك الذين يتبعه الموظفون حاليًا للتبادل المعرفي في المؤسسة

5. في المؤسسة التي تعمل بها، هل التبادل المعرفي والحصول على المعرفة يعتبر أمر سهل أم صعب؟
6. من واقع خبرتك مع المؤسسة، أخبرني بموقف رأيت فيه أن التبادل المعرفي بين الموظفين كانت أمرًا ضروريًا للمؤسسة
7. هل تفضل الطرق الرسمية أم غير الرسمية للتعلم والتبادل المعرفي، ولماذا؟

أسئلة استيضاحية:

- هل منظمتك أكثر دعمًا للطرق الرسمية أو الطريق الغير رسمية للتعلم والتبادل المعرفي؟
- لماذا تعتقد أن هذه هي الطريقة المفضلة لمؤسستك؟
- على الحصول على المعرفة يعد أمرًا سهلاً أو أمرًا معقدًا في المؤسسة التي تعمل بها؟

(استنباط الاعتقادات) نظرية التصرفات المعللة

8. كيف ترى أو ما مفهومك عن التبادل المعرفي؟
9. من وجهة نظرك ماهي عيوب ومزايا التبادل المعرفي بين الموظفين في المؤسسة؟
10. ما هي عواقب التبادل المعرفي؟
11. ما هي عواقب حجب المعرفة؟
12. من اللذين يوافقون على التبادل المعرفي ومن بالعادة يرفض التبادل المعرفي في المؤسسة؟

عوامل التحكم:

13. ما هي العوامل التي يمكن أن تجعل التبادل المعرفي أكثر سهولة؟ أو ما هي العوامل أو الظروف التي قد تمكنك بالامتثال بالتبادل المعرفي؟
14. ما هي العوامل التي يمكن أن تجعل التبادل المعرفي أكثر صعوبة؟ أو ما هي العوامل أو الظروف التي قد تمنعك من الامتثال بالتبادل المعرفي؟
15. هل ترى أن الإدارة العليا والمدير المباشر والزملاء يتبادلون معرفتهم معك أنت وبقية فريقك؟

الثقافة المؤسسية

16. عندما يكتسب الناس المعرفة فإنهم يعتقدون أنها هي "المعرفة قوة" هناك مقولة مشهورة للسير فرانسيز بيكون يقول فيها مفتاح نجاحهم ويميلون إلى حمايتها بدلاً من مشاركتها.

أسئلة استيضاحية:

- كيف تصف زملاءك، هل هم متعاونون أم تنافسيون؟
- هل تدعم شركتك المشروعات الفردية أم المشروعات الجماعية
- من خلال تجربتك، هل تعتني شركتك أكثر بالمهام أم بالموظفين؟ هل يمكنك توضيح ذلك بمثال؟
- بإجراءات الروتيني هل يمكنك أن تصف الموظفين في منطمتك بأنهم منفتحون تجاه التحديات والمخاطر؟ أم يفضلون العمل واضحة؟
- ؟ إذا لم يكن الأمر كذلك، فكيف "أسئلة غبية" عندما لا تفهم شيئاً ما في العمل، فهل تفضل تجنب طرح أسئلة قد تبدو للآخرين تنصرف عادة في هذا الموقف؟
- إذا كنت طلب منك وصف بيئة العمل في المؤسسة التي تعمل بها في خمس كلمات فماذا يمكن أن تقول؟

الامتثال بالتبادل المعرفي:

17. في المؤسسة التي تعمل بها، فقد يكون هناك أفراد أو مجموعات تعتقد أنهم يجب المعرفي عندما يتعلق الأمر بالامتثال للتبادل من الذي تعتقد أنه سيرفض أو يوافق على تبادل المعرفي؟

أسئلة استيضاحية:

- هل سبق لك أن طلب منك تبادل معرفتك ولم تكن سعيداً بذلك؟ لماذا؟
- ما هي المواقف التي يمكن أن تبادل بها معرفتك لكنك لن تكون سعيداً بذلك؟
- في المنظمة التي تعمل بها ، ماذا لو كنت مدير إدارة المعرفة، إذا كنت ستضع خطة لتقوم بها بتعزيز التبادل المعرفي ، فما هي الخطوات التي سوف تتخذها؟

أسئلة محتملة لمدراء إدارة المعرفة في المؤسسات:

18. ما هي الخطوات التي تتخذها المؤسسة لتحفيز الموظفين على التبادل المعرفي؟
19. إذا كان بوسعك وضع خطة يمكن من خلالها تعزيز التبادل المعرفي بين الموظفين، فما هي الخطوات التي سوف تتخذها؟
20. كيف يمكنك على تشجيع الموظفين على التبادل المعرفي داخليا، وفي نفس الوقت ضبط عند تسريب هذه المعرفة خارجيا للمؤسسات الأخرى؟
21. بعد أن يترك الموظفون المؤسسة، كيف تضمن أن المعلومات لن يتم نقلها إلى جهة عملهم الجديدة؟

أسئلة للموظفين اللذين أكملوا خمس سنوات أو أكثر في المؤسسة:

22. منذ انضمامك للمؤسسة إلى هذا اليوم ، هل شهدت أي تغيير على الثقافة المؤسسية من عملت في المؤسسة وحتى اليوم؟

إذا كانت الإجابة بنعم:

- لماذا حدث هذا التغيير؟ صف لي كيف تغيرت الثقافة المؤسسية؟

إذا كانت الإجابة بلا:

- هل أن راض عن الثقافة المؤسسية الحالية؟
- إذا طلب منك أن تقترح توصيات لتحسين الثقافة المؤسسية فماذا ستكون توصياتك؟

القيادة في المؤسسة:

القيادة الشاملة

23. عندما تبتكر فكرة جديدة عن العمل، كيف يكون رد فعل مديرك عليها؟
24. كيف يكون رد فعل مديرك تجاه الأخبار الجيدة أو السيئة في العمل؟
25. إذا اكتشفت أنت أو زملاؤك في العمل مشكلة وأبلغتم المدير بها فكيف يتعامل المدير مع ذلك؟
26. ما رأيك في مديرك؟ هل مديرك عادل معك ومع زملائك ويطبق ذات القواعد على الجميع؟

قيادة المعرفة

27. عند انضمامك للمنظمة في البداية، هل تحدث إليك مديرك المحتمل عن الخطط المستقبلية للمنظمة وأوضح الأهداف والتوجهات المستقبلية للوحدة التي سوف تعمل بها؟ هل لديكم إجراءات متابعة يتم فيها إطلاعكم على أحدث الأهداف والتوجهات المستقبلية؟
28. كيف يتعامل مديركم مع الأخطاء والمشكلات؟ (هل يتعاملون معها بطريقة بئاء أم غير ذلك؟)
29. هل لدى مديرك مبادرات يمكن أن يشارك معك من خلالها كيف حاول تحسين أجواء مكان العمل؟
30. هل سبق أن قدمت اقتراحاً لمديرك لتطوير عمله؟

(إذا كانت الإجابة نعم)

31. لماذا تعتقد أن مديرك منفتح تجاه الاقتراحات؟

(إذا كانت الإجابة لا)

32. لماذا تعتقد أن مديرك غير مستعد لتلقي آراء منك بخصوص طريقة أدائه لعمله؟
33. هل سبق أن أجريت مناقشة مفيدة مع مديرك بشأن تطوير مهاراتك المهنية؟ هل يمكنك ذكر مثال؟

عوامل التحكم

34. كيف تصف التبادل المعرفي بين الجنسين وبين نفس الجنس؟
 35. كيف ترى تأثير سنوات خبرة الموظفين وخلفيتهم التعليمية على التبادل المعرفي؟
 36. من وجهة نظرك، هل يبدو الموظفين الأصغر عمرا أو الأكبر عمرا أكثر إقبالا على التبادل المعرفي بين زملائهم ولماذا؟

تبادل المعرفة والتوطين

37. هل تعتقد أن التوطين يمكن أن يؤثر على التبادل المعرفي بين الموظفين؟ ولماذا؟

أسئلة استيضاحية:

- هل شهدت موقفاً حجب فيه أحد الموظفين الوافدين معرفته عن أحد الموظفين المواطنين؟ لماذا تعتقد أن هذا حدث؟ أذكر لي مثلاً رأيت فيه ذلك.
- هل شهدت موقفاً حجب فيه أحد الموظفين المواطنين معرفته عن أحد الموظفين الوافدين؟ لماذا تعتقد أن هذا حدث؟ أذكر لي مثلاً رأيت فيه ذلك.
- هل شهدت موقفاً حجب فيه أحد الموظفين المواطنين معرفته عن موظف مواطن آخر؟ لماذا تعتقد أن هذا حدث؟ أذكر لي مثلاً رأيت فيه ذلك.
- هل شهدت موقفاً حجب فيه أحد الموظفين الوافدين معرفته عن موظف وافد آخر؟ لماذا تعتقد أن هذا حدث؟ أذكر لي مثلاً رأيت فيه ذلك.

الخاتمة

لقد وصلنا إلى نهاية حوارنا، لا تتردد في إضافة أي شيء لم نغطه في حوارنا وترغب في التحدث عنه،
 شكراً جزيلاً على وقتك، وعلى مشاركتك في الدراسة.

Appendix 7: Profiles of Study Respondents (Qualitative Interviews)

**The profiles shaded in grey are participants in the pilot study while the rest are main study participants. However, all qualitative interviews were used in the analysis in the main study when relevant.

Participant Codes Indicating Industry	Rank in Organisation	Gender	Degree Level	Years in Organisation	Nationality
Academia 1	Senior Management	Male	Master's	10 years	Non-Emirati
Tourism 2	Senior Management	Female	Bachelor's	5 years	Non-Emirati
Government Smart Services 3	Top Management	Male	Master's	8 years	Emirati
Risk and Disaster Management 4	Junior Management	Female	Master's	8 years	Emirati
Utilities 5	KM Practitioner Junior Management	Male	Master's	2 years	Non-Emirati
Utilities 6	KM Practitioner	Male	Bachelor's	6 years	Non-Emirati
Utilities 7	Middle Management	Female	Bachelor's	13 years	Non-Emirati
Utilities 8	Junior Management	Male	Doctorate	8 years	Emirati
Utilities 9	Junior Management	Male	Master's	3 years	Non-Emirati
Utilities 10	KM Practitioner Junior Management	Female	Bachelor's	6 years	Non-Emirati
Utilities 11	KM Practitioner Junior Management	Female	Bachelor's	3 years	Non-Emirati
Law and Security 12	Senior Management	Female	Doctorate	20 years	Emirati
Law and Security 13	Senior Management Engineer	Male	Bachelor's	11 years	Emirati
Law and Security 14	Senior Management	Female	Master's	23 years	Emirati
Law and Security 15	Senior Management	Male	Bachelor's	23 years	Emirati
Law and Security 16	Senior Management	Male	Bachelor's	23 years	Emirati
Law and Security 17	Senior Management	Male	Doctorate	23 years	Emirati
Law Enforcement 18	Senior Management	Male	Bachelor's	13 years	Emirati
Law Enforcement 19	Top Management KM Manager	Male	Bachelor's	15 years	Emirati
Law Enforcement 20	Top Management	Male	Bachelor's	24 years	Emirati
Law Enforcement 21	Top Management	Male	Bachelor's	25 years	Emirati

Appendix 8: Pilot Study References

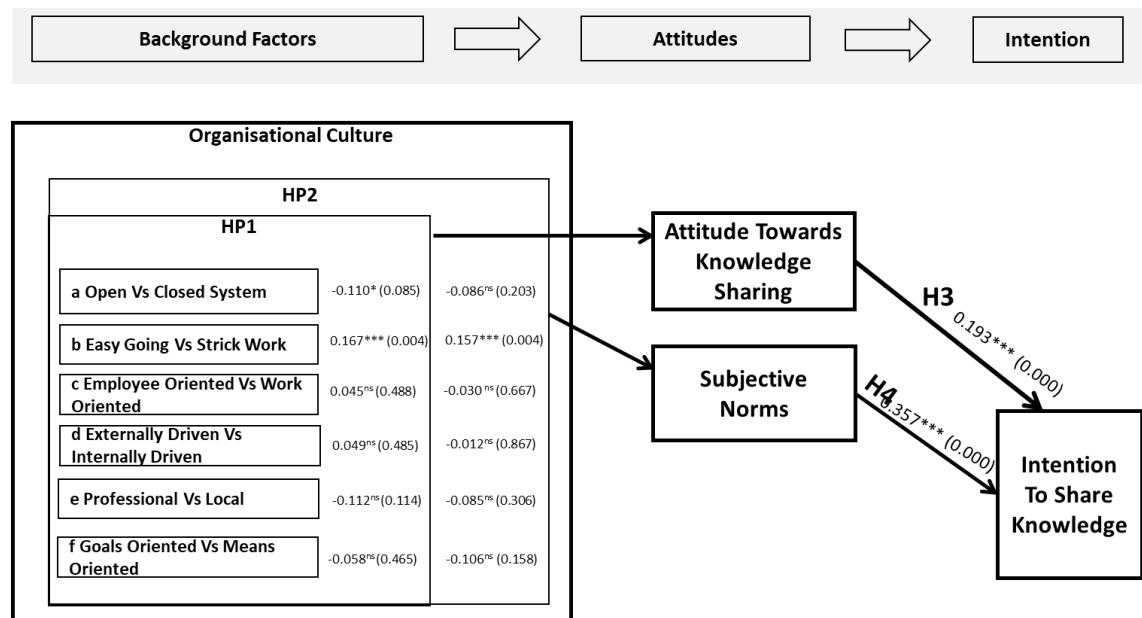
Table 1 Reliability and Validity Assessment for Reflective Measurements for the Pilot Study

Results Summary for Reflective Measurement Models							
Latent Variable	Indicators	Convergent Validity			Internal Consistency		Discriminant Validity
		Loadings	Indicator Reliability	AVE	Composite Reliability	Cronbach's Alpha	
		≥0.70	≥0.50	≥0.50	≥0.70	≥0.70	HTMT confidence interval does not include 1
Goals Oriented vs Means Oriented	Q10_1	0.501	0.251	0.626	0.834	0.700	No
	Q10_2	0.640	0.410				
	Q10_3_R	-0.133	0.018				
	Q12_1	0.599	0.359				
	Q12_5	0.752	0.566				
	Q12_8_R	0.069	0.005				
	Q13_3	0.804	0.646				
Employee Oriented vs Work Oriented	Q13_10	0.815	0.815	0.674	0.804	0.533	No
	Q10_4	0.738	0.545				
	Q10_5	0.461	0.213				
	Q10_6_R	-0.068	0.005				
	Q11_11	0.244	0.060				
	Q12_9	0.897	0.805				
	Q13_1	0.040	0.002				
	Q13_2_R	-0.189	0.036				
	Q13_11	0.651	0.424				
	Q14_7_R	-0.065	0.004				
	Q14_9_R	-0.049	0.002				
Easy Going vs Strict Work	Q14_12_R	-0.144	0.021	0.728	0.841	0.661	Yes
	Q11_4	0.945	0.893				
	Q11_5_R	0.331	0.110				
	Q11_6	0.751	0.564				
	Q11_12	-0.145	0.021				
	Q12_3_R	0.242	0.059				
	Q12_6_R	0.310	0.096				
Externally Driven vs Internally Driven	Q14_8	0.105	0.011	0.633	0.837	0.734	No
	Q14_11	0.507	0.257				
	Q11_7_R	0.087	0.008				
	Q11_8	-0.335	0.112				
	Q11_9	-0.225	0.051				
	Q13_5	0.822	0.676				
Professional vs Local	Q13_8	0.716	0.513	0.571	0.800	0.635	No
	Q14_2	-0.118	0.014				
	Q14_4_R	0.843	0.711				
	Q10_7	0.765	0.585	0.571	0.800	0.635	No
	Q10_8_R	-0.043	0.002				

Results Summary for Reflective Measurement Models							
Latent Variable	Indicators	Convergent Validity			Internal Consistency		Discriminant Validity
		Loadings	Indicator Reliability	AVE	Composite Reliability	Cronbach's Alpha	
		≥0.70	≥0.50	≥0.50	≥0.70	≥0.70	HTMT confidence interval does not include 1
	Q10_9_R	0.111	0.012				
Q12_2	0.677	0.458					
Q12_7	0.534	0.285					
Q13_9	0.743	0.552					
Q14_5_R	0.227	0.052					
Open System vs Closed System	Q11_1_R	0.700	0.490	0.584	0.806	0.634	Yes
	Q11_2_R	-0.349	0.122				
	Q11_10	0.510	0.260				
	Q13_4	-0.267	0.071				
	Q13_7_R	-0.197	0.039				
	Q14_1_R	-0.068	0.005				
	Q14_3_R	-0.196	0.038				
	Q14_6_R	0.128	0.016				
	Q14_10	0.690	0.476				
Q14_13	0.886	0.785					
Attitude Toward Sharing Knowledge	Q7_1_ATKS1	0.733	0.537	0.681	0.895	0.842	Yes
	Q7_2_ATKS2_R	0.208	0.043				
	Q7_3_ATKS3	0.836	0.699				
	Q7_4_ATKS4	0.858	0.736				
	Q7_5_ATKS5	0.866	0.750				
Subjective Norms	Q8_1_SN_NOB1	0.768	0.590	0.555	0.861	0.797	Yes
	Q8_2_SN_NOB2	0.836	0.699				
	Q8_3_SN_NOB3	0.783	0.613				
	Q8_5_SN_MTC1	0.653	0.426				
	Q8_6_SN_MTC2	0.668	0.446				
Intention to Share Knowledge	Q9_1_ITSK_EK1	0.760	0.578	0.690	0.918	0.888	Yes
	Q9_2_ITSK_EK2	0.832	0.692				
	Q9_3_ITSK_IK1	0.865	0.748				
	Q9_4_ITSK_IK2	0.821	0.674				
	Q9_5_ITSK_IK3	0.872	0.760				
Note: the strikethrough values were deleted for low loadings and to fulfil discriminant validity requirements.							

Results of Research Model – Quantitative Pilot Study

Figure 1: Research Model – Pilot Study



***p<0.01, **p<0.05, *p<0.10, ns: not significant