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Fatema Ali Omer Almenhali

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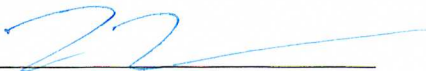
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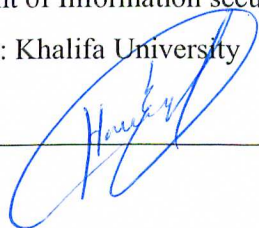
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KNOWLEDGE GOVERNANCE IN ABU DHABI: MODELLING-IN
THE 'IMPLICIT' FOR ORGANIZATIONAL INNOVATION

Fatema Ali Omer Almenhali

This thesis is submitted in partial fulfilment of the requirements for the degree of
Master of Governance and Public Policy

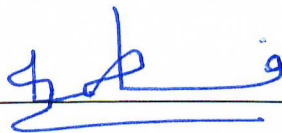
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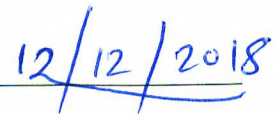
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I, Fatema Ali Omer Almenhali, the undersigned, a graduate student at the United Arab Emirates University (UAEU), and the author of this thesis entitled “*Knowledge Governance in Abu Dhabi: Modelling-in the ‘Implicit’ for Organizational Innovation*”, hereby, solemnly declare that this thesis is my own original research work that has been done and prepared by me under the supervision of Dr. Samiul Hasan, in the College of Humanities and Social Sciences at UAEU. This work has not previously been presented or published, or formed the basis for the award of any academic degree, diploma or a similar title at this or any other university. Any materials borrowed from other sources (whether published or unpublished) and relied upon or included in my thesis have been properly cited and acknowledged in accordance with appropriate academic conventions. I further declare that there is no potential conflict of interest with respect to the research, data collection, authorship, presentation and/or publication of this thesis.

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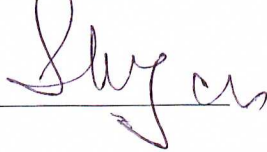
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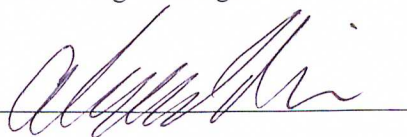
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Abstract

This thesis, on knowledge governance, focuses mainly on the processes, strategies, and structure of capturing and transferring implicit knowledge among employees in the Abu Dhabi government entities. It identifies the method of utilizing and factors influencing the success of acquiring, storing, and transferring implicit knowledge through the activation of a Personal Knowledge Network (PKN) to improve organizational performance. The work is based on comprehensive literature review of relevant academic and government resources, direct observation of the researcher, and a two-stage interview of personnel from different entities of the Abu Dhabi government. The discussions with the key players in knowledge management highlighted the needs of having a unified knowledge governance model. This research reveals the requirements for a model of knowledge management in Abu Dhabi government entities. The findings from the first stage of the interviews helped finalize the knowledge governance model to help capture the implicit knowledge in a Personal Knowledge Network (PKN). To examine the validity and applicability of the PKN model, and to understand its possible benefits, in the second stage around 25 interviews were conducted in five government entities in AD Emirate. The interviewees indicated that the elements of the model are effective and interrelated, and that there is a likely to be positive relationship between the application of the model and the four factors of success in knowledge management: Human oriented, Organization-oriented, Management-oriented and technology-oriented. The interviewees also believe that the application of the model is likely to achieve the desired outcomes of raising the productivity and performance of the individuals and the organization. The thesis recommends the use of the proposed model as a foundation stone to implement effective KM and promoting knowledge sharing culture in the government entities in Abu Dhabi. Further research to identify other factors influencing the application and outcome of the model, and to evaluate the outcomes of the model would be helpful for the government to apply the model and unify and generalize it among its entities.

Keywords: Knowledge management, knowledge governance, implicit knowledge, personal knowledge network (PKN), organizational innovation (OI).

Title and Abstract (in Arabic)

حوكمة المعرفة في امارة ابوظبي: الابتكار المؤسسي من خلال نمذجة المعرفة الضمنية

المخلص

الهدف من هذه الأطروحة في حوكمة ادارة المعرفة هو التركيز الأساسي على الاستراتيجيات والعمليات وهيكل ادارة المعرفة المطلوبة لحصر ونقل المعرفة الضمنية بين الموظفين في المؤسسات الحكومية في إمارة أبوظبي. تتضمن هذه الأطروحة أهم الطرق الناجحة والعوامل المؤثرة في حصر المعرفة الضمنية، تخزينها، نقلها، استخدامها والاستفادة منها من خلال تفعيل ما يسمى بشبكة المعرفة الشخصية (PKN) والتي تساهم في تحسين وتطوير الأداء الفردي والمؤسسي .

يستند العمل على مراجعة شاملة للدراسات الأكاديمية والحكومية السابقة ذات الصلة ، والملاحظة المباشرة للباحث في بيئة العمل الحكومية، ومقابلات مع موظفين من قطاعات مختلفة في حكومة أبوظبي من ذوي الصلة بموضوع الأطروحة. أبرزت المناقشات مع الجهات الرئيسية والفعالة في إدارة المعرفة الحاجة إلى وجود نموذج موحد لحوكمة المعرفة في القطاع الحكومي. كما أوضحت الدراسة عن أبرز المتطلبات لبناء نموذج ناجح والتي تم تضمينها في تطوير نموذج حوكمة إدارة المعرفة للمؤسسات الحكومية في امارة أبوظبي .

ساعدت نتائج المرحلة الأولى من المقابلات في وضع الصيغة النهائية لنموذج حوكمة المعرفة للمساعدة في التعرف على المعرفة الضمنية في شبكة المعرفة الشخصية (PKN).

لدراسة صحة وتطبيق نموذج شبكة المعرفة الشخصية (PKN) وفهم فوائده المحتملة ، أجريت 25 مقابلة في خمسة قطاعات حكومية في إمارة أبوظبي. أشار الأشخاص الذين تمت مقابلتهم إلى أن عناصر النموذج فعالة ومرتبطة ، وأنه من المحتمل أن تكون هناك علاقة طردية بين تطبيق النموذج وعوامل النجاح الأربعة لإدارة المعرفة والمتعلقة بالتوجهات التالية: رأس المال البشري ، المؤسسي، الإداري والتكنولوجي. كما يعتقد الأشخاص الذين تمت مقابلتهم أن تطبيق النموذج من المرجح أن يحقق النتائج المرجوة من رفع الإنتاجية والأداء للأفراد والمؤسسة.

توصي الأطروحة باستخدام النموذج المقترح كحجر أساس لتطبيق ادارة المعرفة بشكل فعال وتشجيع ثقافة تبادل المعرفة في القطاعات الحكومية في إمارة أبوظبي. مزيد من البحوث المستقبلية قد تساهم في تحديد العوامل الأخرى التي تؤثر على تطبيق النموذج والنتائج المتوقعة لذلك. كما أن تقييم نتائج تطبيق النموذج من شأنه أن يعزز عملية توحيد وشمولية التطبيق في حكومة أبوظبي.

مفاهيم البحث الرئيسية: إدارة المعرفة، حوكمة المعرفة، المعرفة الضمنية، شبكة المعرفة الشخصية، الابتكار المؤسسي.

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Dedication

To my beloved Country "UAE ♥"

Table of Contents

Title	i
Declaration of Original Work	ii
Copyright	iii
Approval of the Master Thesis	iv
Abstract	vi
Title and Abstract (in Arabic)	vii
Acknowledgements	ix
Dedication	x
Table of Contents	xi
List of Tables.....	xv
List of Figures	xvi
List of Abbreviations.....	xvii
Chapter 1: Introduction	1
1.1 Overview	1
1.2 Knowledge Management.....	4
1.3 Innovation and Knowledge Management in the Abu Dhabi Public Sector	6
1.4 The Research Problem.....	10
1.5 The Objectives of the Research	11
1.6 Limitations of the Work	16
Chapter 2: Knowledge Management: A Theoretical Foundation – Literature Review	18
2.1 Introduction	18
2.2 Knowledge, Knowledge Governance, and Knowledge Management.....	18
2.2.1 Knowledge and Its Classification	19
2.2.2 Knowledge Management and Governance: The Concept and Its Application	20
2.3 Knowledge Management as a Network.....	26
2.3.1 Knowledge as Network: Concept and Features	27
2.3.2 SECI Japanese model by Nonaka and Takeuchi.....	30

2.4 Factors that influence KM and Knowledge sharing	33
2.5 Knowledge Governance Framework and its Benefits	39
2.6 Knowledge Governance Organizational Innovation, and Performance	42
2.7 Conclusion	46
Chapter 3: Research Methodology	47
3.1 Introduction	47
3.2 Qualitative Approach.....	48
3.2.1 Secondary Sources of Information.....	48
3.2.2 Empirical Study: Direct Observation	49
3.2.3 Empirical Study: Unstructured Interviews.....	50
3.2.3.1 Purposes and Protocols of the Unstructured Interviews.....	52
3.2.3.2 Selection of Organizations and Respondents	53
3.3 Examining the Proposed Model’s Applicability	55
3.4 Methods of Analyzing the Collected Information and Data.....	58
3.4.1 Transcription	59
3.4.2 Familiarization with the Interview	59
3.4.3 Coding and identifying thematic frame	60
3.4.4 Charting.....	61
3.4.5 Mapping and Interpretation.....	61
3.5 Chapter Summary	62
Chapter 4: A Knowledge Management Model for AD: Structure, Process, and Features.....	63
4.1 Introduction	63
4.2 Knowledge Governance Model: It’s Need in Abu Dhabi	64
4.3 The Knowledge Governance Model: Governance for Personal Knowledge Network (G4PKN).....	69
4.3.1 Personal Knowledge Network (PKN).....	71
4.3.2 KM Process	73
4.3.3 Governance as an Entail Input	76
4.3.3.1 Formal Mechanisms	80
4.3.3.2 Informal Mechanisms.....	89
4.3.4 Integration Among the Components	92
4.3.5 Outcomes	93
4.3.5.1 Mode of Knowledge Transfer (SECI and its Connection to Network).....	94
4.3.5.2 Performance.....	95
4.4 Conclusion	97
Chapter 5: Examining the Proposed Model: its Need, Validity and Applicability	99

5.1 Introduction	99
5.2 Framework Analysis	100
5.2.1 Transcription	101
5.2.2 Familiarization	103
5.2.3 Coding and Identifying Thematic Frame	104
5.2.4 Charting	108
5.2.5 Mapping and Interpretation	109
5.3 Results Analysis	110
5.3.1 The Needs of Applying a Knowledge Management (KM) Governance Model	120
5.3.1.1 Situational Analysis	120
5.3.1.2 Implicit Knowledge Drainage	123
5.3.1.3 Challenges	124
5.3.1.4 Factors Influencing Knowledge Sharing	126
5.4 Structure and Validity of the Model	129
5.4.1 The Model's Structure and Components	129
5.4.1.1 Structure and Components	130
5.4.1.2 Formal and Informal Mechanisms	130
5.4.1.3 Personal Knowledge Network (PKN)	131
5.4.1.4 KM Process	132
5.4.2 Knowledge Retention	133
5.4.2.1 Integration of the Components	135
5.5 Applicability of the KM model in AD Government Entities	136
5.5.1 Introduction	136
5.5.2 Applicability of the KM Model: Main Enablers	136
5.5.3 Applicability of the KM Model: Influential Factors	139
5.5.3.1 Leadership and Governance	139
5.5.3.2 People, Process, and Technology	140
5.5.4 Cultural Implications Outcome	141
5.6 Conclusion	142
Chapter 6: Discussions and Conclusions	144
6.1 Introduction	144
6.2 Challenges of Knowledge Management and Need for a KM Model	144
6.3 The Proposed Model: Appreciation and Validation	146
6.4 Implementation of KM Model and Benefits	149
6.5 Future Research	152
6.6 Conclusion	153
References	155
Appendices	163
Appendix – A	163

Appendix – B..... 167
Appendix – C..... 168

List of Tables

Table 3.1: Sectors, Organizations, Respondents, Sample size, and Duration of the Discussions	54
Table 3.2: Model Applicability Matrix	56
Table 5.1: Need of KM Model: Charting the Themes with the Responses	111
Table 5.2: Validity of the Model: Charting the Themes with the Responses	114
Table 5.3: Applicability of the KM Model in AD Government Entities: Charting the Themes with the Responses.....	116

List of Figures

Figure 1.1: Thesis Problem Statement	11
Figure 1.2: Thesis Objectives.....	12
Figure 1.3: Importance of Knowledge Management and Knowledge Sharing	15
Figure 2.1: Knowledge Management Concepts	26
Figure 2.2: Japanese SECI Model.....	32
Figure 2.3: Factors that influence KM and Knowledge sharing	37
Figure 3.1: Methods of Collecting Data.....	48
Figure 3.2: Purposes of the Unstructured Interviews.....	51
Figure 4.1: Three Typical Knowledge- Related Problems and Knowledge- Sharing Goals for Organizations	69
Figure 4.2: Governance for Personal Knowledge Network.....	70
Figure 4.3: From PKM to PKN.....	71
Figure 4.4: KM Process Model	75
Figure 4.5: KM Governance, Formal and Informal Mechanisms	79
Figure 4.6: Formal Governance Models	80
Figure 4.7: Road Map for the Change- Management Process in KM.....	84
Figure 4.8: Incentives by Type and Resource Intensity.....	86
Figure 4.9: Models	90
Figure 4.10: Relationship between KM Process and Organizational Performance	96
Figure 5.1: The Analysis Framework.....	108

List of Abbreviations

AD	Abu Dhabi
ADAEP	Abu Dhabi Award for Excellence in Government Performance
ADEK	Department of Education and Knowledge
DED	Department of Economic Development
DUPM	Department of Urban Planning and Municipalities
EFQM	European Foundation for Quality Management
G4PKN	Governance for Personal Knowledge Network
GCC	Gulf Cooperation Council
GSEC	General Secretariat of the Executive Council
HRA	Abu Dhabi Human Resource Authority
IT	Information Technology
KBV	Knowledge-Based View (KBV)
KM	Knowledge Management
KPIs	Key Performance Indicators
OI	Organizational Innovation
PKN	Personal Knowledge Network
QCC	Abu Dhabi Quality and Conformity Council
RBV	Resource-Based View (RBV)
SECI	Socialization, Externalization, Combination, Internalization
UAE	United Arab Emirates

Chapter 1: Introduction

1.1 Overview

“The control of Knowledge is the crux of tomorrow’s worldwide struggle for power in every human institution” (Alvin Toffler discussed in Al-Khoury, 2014). In this Information Age, knowledge has become the core asset and fundamental source of wealth in any organization; it is the brain that thinks inside the entity and the wheel to move the organization for a competitive environment, continuous improvement and innovation (Biygautane & Al Yahya, 2011). Over the past decade, investigations on Knowledge Management (KM) have appeared to take a new direction in management literature. People now understand that retaining and managing knowledge is essential for organizational success and have more interest in knowledge management (Biygautane & Al Yahya, 2011).

Knowledge management defined as organization’s capability to collect, organize, share and evaluate the knowledge exist with people among the organization in order to improve the performance which is a driver for increasing an organization’s efficiency and effectiveness (Biygautane & Al Yahya, 2011). Knowledge management should not be interpreted only in the technical terms because it is not only focused on the way in which the information system can be used and the process of automation, rather it is dynamic and has social components (Webb, 2017). All type of knowledge in any discipline can be classified in two categories: 1) explicit knowledge i.e. structured and documented data; and 2) implicit or tacit knowledge i.e. the expressed indirect knowledge such as skills and people’s experiences (Al-Khoury, 2014). KM thus involves both types of knowledge.

In the recent past, after a sequence of challenges, many governments have begun to realize the importance and identify new methods and activities in KM to be competitive (Al-Khouri, 2014). The condition has led to the need for success in various initiatives that entail KM in distinct government programs. Therefore, the need for implicit knowledge research is increasing with the declining budgets and government's pursuit of sustainable resources (Biygautane & Al Yahya, 2011). Dealing with implicit knowledge is very important but difficult as there is no unified knowledge governance framework or model that can be applied and followed (Al Khouri, 2014).

The need to use KM to provide options in organizations is high in Abu Dhabi especially under the current situation where the global fuel prices are dropping drastically. In fact, Ramanigopal (2012) notes that the oil and gas industry is highly reliant on KM practices because one needs information on earth science, expertise in engineering, and the maintenance of facilities. The main purpose of this research is to develop a knowledge governance model of capturing, documenting, retaining and disseminating the knowledge in government organizations in Abu Dhabi, an Emirate of the UAE. UAE has developed and currently considered among the top countries which are having the highest rates of commercial activities specifically due to the commercial and trade hub Dubai.

In the past few years, there have been some improvements in the United Arab Emirates, such as the advancement of technology and its incorporation in different fields (Hasanali, 2002). In a study carried out by Yaghi and Al-Jenabi (2018), it was claimed that the incorporation of ICT in knowledge management in organizations is helpful in increasing happiness of employees.

As a result, managers in various departments welcomed the involvement of government in governance through ICT. In this regard, knowledge management is critical not only for the performance of institutions but ensuring the satisfaction of employees at work (Yaghi & Al-Jenabi, 2018). This study also revealed that the ICT programs succeeded because it incorporated moral aspects as well as rational principles that served the interests of the public. Thus, it is important for the governments and private entities to work towards ensuring that the knowledge management principles they adopt are embraced by all members of staff. Smart governments are continually making use of ICT tools to deliver services to the citizens. Yaghi and Al-Jenabi (2018) observe that smart governments that use advanced ICT systems not only enable citizens to request for services but also facilitate the delivery of the product through online systems. They opined, that although the initial cost of establishing ICT systems is high, the level of efficiency and ease of access of services by the citizenry from government far outweighs the cost.

In another study carried out last year among organizations in the United Arab Emirates, Yaghi and Jenabi (2017) found out that government entities have a relatively suitable environment within which to implement ICT systems. Citizens like accessing government services through ICT tools like mobile phones and other remotely controlled smart devices because of the convenience of undertaking these processes at any location. However, governments are encumbered by a myriad legal and structural challenges in the use of smart technologies. The efficiency of smart governments is pegged on the reliability of the internet and public ICT literacy. In this regard, it is incumbent upon government to create sufficient infrastructure for the operation of ICT systems (Yaghi & Al-Jenabi, 2017).

Governments can consider partnerships with private firms to establish ICT infrastructure and educate the public on the use of smart systems in accessing government services (Yaghi & Al-Jenabi, 2017).

This makes the economy of the UAE lead the list of innovation-based economies among the Arab countries, and the 23rd among the global innovation-based economies (Serenko & Bontis, 2017). On the other hand, the development of the UAE has also brought capabilities and competitive edge to the UAE that it easily can sustain and participate actively with a strong position in the global competition. Moreover, the human development index of the region has also been increased and made the UAE has the highest human development index in among the Arab countries, and the 30th in the world (Serenko & Bontis, 2017). The concept of knowledge management can be applied in the activities of the public and private sectors and future higher development of the UAE. Abu Dhabi, being the largest in size and population, has more responsibility in the UAE's endeavor in improving development and happiness through knowledge management.

1.2 Knowledge Management

KM can either be explicit or implicit. Implicit or tacit knowledge is distinguished from explicit knowledge in terms of ease of accessibility. Whereas explicit knowledge is easily available and transferable in an organization, implicit knowledge is integrated in the activities performed by employees, and central to knowledge management in modern governance (Davies, 2015). Governments must thus ensure that citizens continually advance in both the use and transfer of knowledge for the efficiency of government processes (Davies, 2015).

As opposed to explicit knowledge that is observable, implicit knowledge is often integrated in an organization through processes. Thus, the beneficiaries of implicit knowledge learn by doing and government can facilitate this process by creating systems where certain services in government can only be accessed through smart systems (Ramanigopal, 2012).

To sustain the benefit of implicit knowledge, organizations and institutions must also create a favorable internal environment for knowledge sharing because people must be comfortable with each other to open up and share (Davies, 2015). Abu Dhabi must proactively engage the citizens in development of Knowledge management systems through modern ICT devices through the media and other educational forums (Ramanigopal, 2012).

Webb (2017) notes that it will not be wrong to state that knowledge management systems are resources, and does not have any end. Thus, if knowledge management is being linked with the United Arab Emirates and its emirates particularly, the Abu Dhabi, then it can be said that the overall vision of the UAE is being supported by the knowledge management. Knowledge management is leading the mission and vision of the UAE as well as the strategic goals of the UAE towards developing a competitive knowledge-based economy (Lai et al., 2014). Moreover, knowledge management is also an aid in maintaining the focus of the governmental authorities over the significant challenges of the UAE and Abu Dhabi including the reliance on the foreign workforce, the lack of knowledge resources, scarcity of local competencies, etc. In addition, knowledge management is also beneficial as it provides the support to the government objective which is focused on the enhancement of the public service delivery (Amaya, 2013).

Further, the most important benefit of knowledge management is that improves the decision-making capability leading to better results and outcomes (Donate & de Pablo, 2015). In summation, knowledge management also helps in adopting the best practices as well as contributes to the achievement of organizational excellence (Lai et al., 2014).

Nonetheless, there is an apparent lack of the employees' willingness to share and transfer knowledge among the colleagues because no policy or framework is requiring the employees to share knowledge; random sharing and transferring of knowledge in the GCC organizations may occur voluntarily (Amaya, 2013). In the public sector in the GCC countries, in Abu Dhabi in particular, with significant reliance on a large number of foreign experts, there seems to be an absence of understanding the importance of knowledge management as a strategic driver (Biygautane & Al Yahya, 2011). Knowledge management initiatives must commence with the public sector in order to achieve lasting results across the organizations in Abu Dhabi, as explained in the next section.

1.3 Innovation and Knowledge Management in the Abu Dhabi Public Sector

The UAE government has invested in human capital through many initiatives in education, training, research, and development but the problem of KM still exists; capturing the knowledge and transferring the skills and capabilities as national resources in the country is a big challenge in every organization. The public sector organizations in the emirate of Abu Dhabi— one of the largest employers in the public sector in the UAE are no exception (Biygautane & Al Yahya, 2011).

Knowledge management in Abu Dhabi is also being focused with the aspect of the management of knowledge and learning in the region to develop the economy and the overall country (Taherparvar, Esmailpour & Dostar, 2014), which, in turn, is it to affect the progress of the society positively.

Increased efficiency in knowledge management is thus a focus of Abu Dhabi Vision 2030 and is encapsulated in the vision “United in Knowledge”. By this approach, Abu Dhabi aims to augment the impact and implement innovation in the emirate. In this regard when the practices of knowledge management were being focused in Abu Dhabi, the General Secretariat of its Executive Council (GSEC) conducted a series of workshops on knowledge management in 2008 and 2009. The details and concepts of leadership and governance in the innovation and knowledge management focused on the leading role of the public sector. In addition, the role of knowledge management in the development of the foundations of the knowledge economy in Abu Dhabi was also discussed (Noruzy et al., 2013).

Furthermore, the General Secretariat of the Executive Council also formed a KM Steering Committee for the government departments. There are also the new ‘Knowledge Management Unit’ (KMU) and the Abu Dhabi Award for Excellence in Government Performance under the ADAEP Office. The core function of the KMU is to promote as well as spread knowledge management practices in Abu Dhabi government. It also targets development of an Abu Dhabi government Knowledge Management Portal.

Moreover, knowledge management is also being part of the public sector of the Abu Dhabi in a way that it is being associated with the Department of Economic Development, DED (Al-Dhaheri, 2013).

In accordance with Abu Dhabi Vision 2030, the economic vision is planned to enhance the overall economic transformation towards Knowledge-Based Economy and for that, the Abu Dhabi economic knowledge initiatives has been undertaken (Alegre, Sengupta & Lapiedra, 2013). Under these initiatives, the dissemination of know-how in the economy is the primary duty of the Economic Development Department.

Following the above directives some AD government organizations have undertaken KM programs. For example, the Department of Urban Planning and Municipalities has taken KM to provide better quality services for the residents, investors, and visitors in Abu Dhabi Emirate to create competitive advantage and ensure sustainable growth. Further, the Department is working to develop a KM platform to enhance knowledge exchange and collaboration among the AD municipalities. It also conducts forums and workshops in KM practices (Al-Dhaheri, 2013). Another example of innovation in KM in AD government is the Department of Education and Knowledge (ADEK). The ADEK has a KM division that develops a process and solution for right KM in the organization to ensure that the knowledge is retained and shared. The ADEK developed a lot of automated tools to gather, store and share data and knowledge in an easy way which can help and support decision makers and planners. As a result, the ADEK won Abu Dhabi Award for Excellence in Government Performance (ADAEP) in KM driver in 2015 (ADEC, 2015). As evident in the discussion above, this author's field experience, direct observation and discussion with official in several organizations, different approaches of understanding and practicing knowledge management are existent in Abu Dhabi government entities; which is identified as one of the challenges that the government is working hard to resolve it (Bixler, 2002).

These differences are not unusual because knowledge management depends on four key pillars: Leadership, Organizations, Technology, and Learning (Bixler, 2002). Each organization in the AD thus views knowledge management from different perspectives considering their needs and type of services. Some organizations look to KM as a source of human development, so they embedded KM as the role of professional development within Human Resources Department. Others believe that KM is all about a right infrastructure that enhances the data storage and develops tools and systems that simplify the data access and allows the retrieving and using these data. For example, the Abu Dhabi Quality and Conformity Council has a division called 'Information and Engagement Services' with a KM team under the 'Quality and Infrastructure Services'. This division plays the IT role in the organization (QCC, 2017).

Some organizations in AD Government such as the Department of Transportation (DoT), and Abu Dhabi Sewerage Services Company (ADSC) formulate internal committee with members from different sectors to address KM. Very few entities have KM as a separate division with clear functions and roles which may become the central hub in the organization connecting different divisions of the organization like IT, HR and the core business; for example, Department of Education and Knowledge and Abu Dhabi Police. The bigger challenge, however, is dealing with implicit knowledge which is considered a valued asset of each organization. High dependence on expatriate workforce and a lack of internal mechanisms and tools to retain the implicit knowledge and capabilities reduce the opportunities of taking advantage of the current resources and increase the cost on the government (Al-Khouri, 2014).

The role of knowledge management is to create a process that has the best leverage of the knowledge in the organization by valuing the organization's intangible assets (Al-Khouri, 2014) and build the knowledge sharing environment in AD government. The knowledge management strategy chosen should enhance the growth of the vibrant AD government as it takes up the challenge to maintain its economic leadership in the GCC region. To further understand the core of the current study, the research problem is explained in detail in the next section.

1.4 The Research Problem

Based on the current economic trends, Abu Dhabi has a vibrant economy, and is poised to be an economic force in the region (Andersson and Formica, 2018). Consequently, it ought to adopt innovative knowledge management strategies (Davies, 2015). However, the Emirate lacks a unified governance model with a critical framework for the operation of modern knowledge management strategies, and a consciousness about the power of implicit knowledge sharing and its ability to transform the economy. Notably, some government organizations in AD lack a culture of knowledge sharing and this affects the economic performance of the institutions. The absences of a supportive environment of knowledge sharing lead to increase the percentage of unwillingness's employees to share their knowledge and experiences. There is thus a danger of loss of skills and knowledge when employees leave the respective organizations. Knowledge management is central in delivery of services to the citizens in the complex modern environments (Ramanigopal, 2012). The problem statement is summarized in Figure 1.1. Abu Dhabi must take advantage of knowledge management systems to win the confidence of citizens and investors as it seeks to entrench its leadership in the region economically.

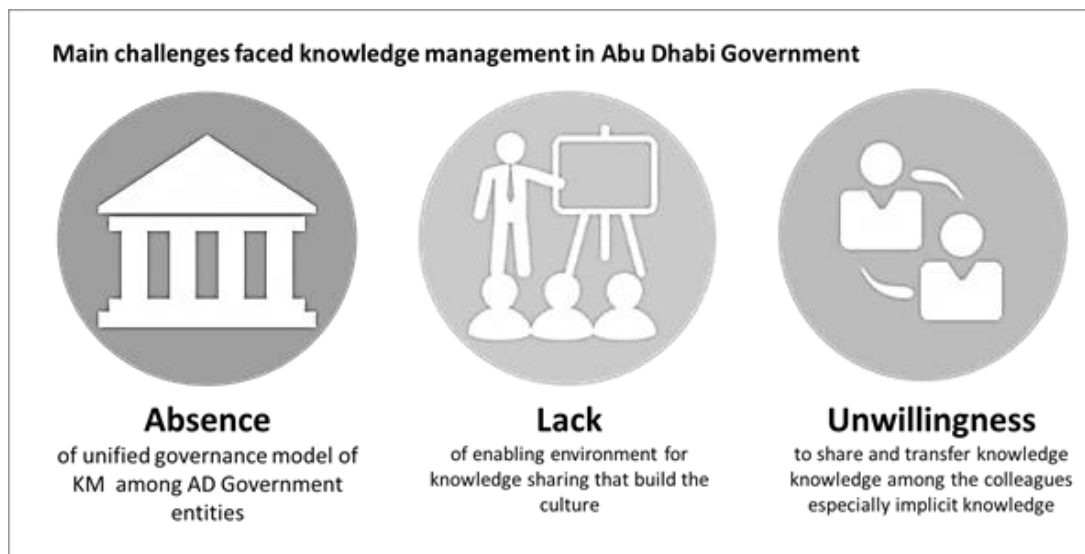


Figure 1.1: Thesis Problem Statement

1.5 The Objectives of the Research

The main purpose of this thesis is to develop a knowledge governance model of capturing, documenting, retaining and disseminating the knowledge in AD government organizations using the Personal Knowledge Network (PKN). PKN focuses on the knowledge management within the organization that deviates from the traditional method and instead focus on each individual as the beginning and the end in the knowledge management process (Ramanigopal, 2012). Whereas the traditional model focuses on knowledge acquisition, PKN enables staff not only to acquire knowledge but to share it for enhanced utility (Davies, 2015).

This thesis proposes a universal knowledge management model for the public sector in Abu Dhabi Emirate and examines the validity of the model and perception analyses of possible benefits in knowledge governance likely to be achieved by the application of the proposed model.

The research thus entails five inter-related tasks and summarized in Figure 1.2:

- a) Identifying features and facets of knowledge, and features and factors of knowledge management (especially in terms of capturing and sharing implicit knowledge).
- b) Understanding the nature of knowledge management and knowledge sharing in Abu Dhabi Government entities.
- c) Determining the main challenges and factors influencing the knowledge sharing process in AD public sector organization
- d) Recommending a knowledge governance model for capturing knowledge based on knowledge network and the role of Personal Knowledge Network (PKN) to overcome the challenges in managing and sharing knowledge in AD public sector organizations.
- e) Examining the validity and applicability of the proposed model in AD government organizations.

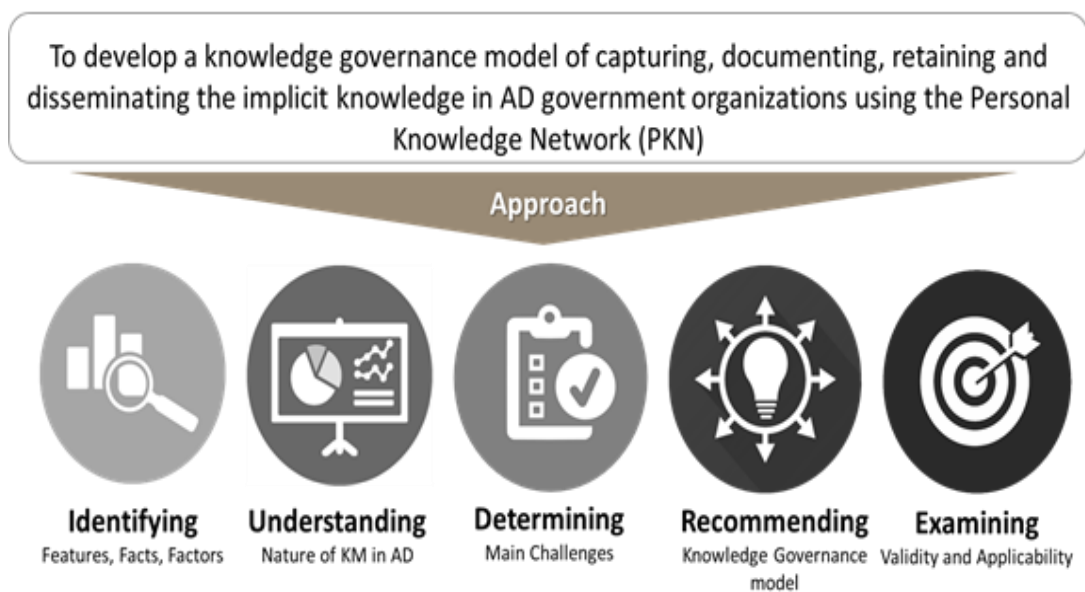


Figure 1.2: Thesis Objectives

Proper knowledge management may significantly affect an organization's performance by improving decision making, increasing flexibility, enhancing competitive advantage, ensuring better customer management, enhancing investment in human capital and retaining resources (Gilaninia, Askari & Dastour, 2013). Wiig (2000) looks at knowledge management (KM) from a universal perspective in term of its overall influence in the stakeholders by building the society's intellectual capital through transparency in sharing the information and knowledge and involving the public in the process of decision and policy-making (Discussed in Biygautane & Al Yahya, 2011).

Knowledge management is not only using data and information systems as a technical term; it has a much broad meaning and dynamic social component. Riege and Lindsay (2006) defined the practical meaning and social components of KM and identified four main reasons for adopting KM in public sector organizations. First, KM facilitates knowledge transfer among the employees and enhances public service effectiveness. Second, it retains the existing knowledge in the organization by developing knowledge repository and increases knowledge accessibility. Third, KM helps the decision makers achieve the desired outcomes gaining access to knowledge and information; and finally, KM increases the knowledge partners' engagement and responsiveness. Al-Khouri (2014) suggests three more reasons for KM – improvement in decision-making capabilities, strengthening of learning organizations, and stimulating cultural change and innovation within the organization.

On the other hand, Sarersalo (2015) recognized three more reasons to apply KM in an organization e.g. KM helps the organization to identify their unique assets and differentiate it from other competitors.

It enhances personal social and professional network and relations which assist a lot in transferring the knowledge and maintaining the organization's resources; and an accumulative outcome of invested time and money (Sarersalo, 2015).

According to Gilaninia, Askari & Dastour (2013), implementing KM efficiently lead to several advantages that can be obtained by the organization. In particular, it is preventing knowledge drawdown by retaining intellectual assets of human experiences and skills as well as developing the assets and maximizing the organization's productivity. Also, a proper KM may help in enhancing the access to information and knowledge and providing a decision support dashboards and tools which lead to improving the decision-making process. Creating a competitive advantage by providing a good understanding of gaps in competitive opportunities is another advantage. Moreover, this develops the culture of knowledge sharing that becomes an investment in human capital which increases the flexibility and adaptability using the design thinking concept and encourages employees for better problem solving and improve customer management and engagement (Gilaninia, Askari & Dastour, 2013). Al-Dhaheri (2013) highlighted the importance of knowledge management in the UAE. KM may support the UAE vision and strategic goals of building a competitive knowledge-based economy, retain the national skills and knowledge resources, expand the public services, support the decision-making capabilities and adopt the best practices and international standards to achieve organization excellence (Al-Dhaheri, 2013). The six main reasons showing the importance of KM and KS from above discussion are summarized in Figure 1.3.



Figure 1.3: Importance of Knowledge Management and Knowledge Sharing

The purpose of knowledge management in any organization is to build organizational learning environment within the entity. However, as identified by this researcher, through personal experience and communications with some staff, many AD entities initiate and practice their own model to manage knowledge processes, capture and share the knowledge especially the implicit knowledge based on their own needs and understanding of knowledge management. These models do not cover different pillars, aspects, and criteria of universal KM framework. However, the six main criteria for an excellent KM system is defined by the European Foundation for Quality Management (EFQM). These criteria (leadership, KM strategy, human resource development, partnerships and resources, management of knowledge process, and communication) are explained and included in the Guideline of the Abu Dhabi Award for Excellence in Government Performance (ADAEP, 2015).

This Guideline also suggests that the key objective of KM is to enhance efficiency and productivity of the organization through cooperation and knowledge sharing (ADAEP, 2015). The knowledge management Guideline provided by the ADAEP can be considered a roadmap to KM for any entity. However, the efficiency and effectiveness of an organization is not defined by the ADEAP and is dependent on the organization's methods. As such, it is important for the Abu Dhabi government to standardize the pillars and methods of knowledge management, and the main functions and responsibilities of KM to make it efficient and increase organizational efficiency.

The present study attempts to fill this gap of a non-unified KM in different AD government entities by suggesting a model that may capture the implicit knowledge inside the organization. The work is based on accepted scientific research methodology and proposes a unified Knowledge Governance Framework for the AD government entities. There are recommendations to capture and maintain the implicit knowledge and improve knowledge processes in the organization. As perceived by the research participants from varied government organizations in AD, the model is likely to be helpful in identifying a clear roadmap for the AD public sector organizations by utilizing their internal capabilities in achieving their respective organizational goals through an efficient KM system.

1.6 Limitations of the Work

The Implicit KM governance as a discipline and a tool to improve competitiveness is still in its infancy, especially in government entities, which is evidenced by limited discussion in the current literature. However, it is certain that the public sector has started to realize its relevance for running government entities and starting to practice.

Government entities have to encounter these by assuming a proactive approach to gain from proper KM. This thesis depicts that implicit KM is limited in the public sector due to lack of awareness and variations, and the need for a unified KM model.

Thus, the thesis has reached its aims, but there are some limitations. First of all, the concept and practice of knowledge management and knowledge governance is vague and is also new to the government. The government has introduced KM governance recently and advised the organizations to implement it to ensure business continuity and increase the organizations' ability to maintain knowledge and functions. Thus, the respondents of this research possibly had varied understanding of KM, especially implicit knowledge.

Second, the diversity and difference in the factors that influencing knowledge management makes it difficult to determine which factor is most effective. Third, the changes in the government structure and the new status of many organizations after the merger and the appearance of new entities within the time of the research study lead to difficulty in reaching some organization and understanding the nature of KM there as they were in transition.

Finally, testing the applicability of the proposed model is based on the respondents' perception and experience in certain organizations. Further, the study did not cover all government organizations and did not apply the model and measure the real outcomes. These could be dealt with in some future research.

Chapter 2: Knowledge Management: A Theoretical Foundation – Literature Review

2.1 Introduction

This chapter provides an overview of previous research on knowledge, Knowledge management, and knowledge governance. It focuses on the importance of knowledge sharing and the factors that influence this process; it introduces the Personal Knowledge Network (PKN) model and how it plays a role in enhancing the overall process to reach the desired goals of the organization. This chapter starts by explaining the fundamental concepts, the need for a unified model to govern the KM process especially the knowledge transfer, treating knowledge as network and how to use this network to enrich the organization's innovation, culture, and performance. The knowledge gained from those efforts and models will be used to develop a governance model to capture the implicit knowledge inside the organization by applying PKN theory. This chapter is divided into five sections and discusses the following topics:

- a) Knowledge, knowledge governance, and knowledge management
- b) Knowledge Management as a Network
- c) Factors that influence KM and Knowledge sharing
- d) Knowledge Governance framework and its benefits
- e) Knowledge governance, organizational innovation, and performance

2.2 Knowledge, Knowledge Governance, and Knowledge Management

The concept and the terminology of Knowledge and Knowledge management sprouted in the management science community in several and different illustrations. This section highlights the definition of knowledge, and its classification.

Also, it illustrates the concept of knowledge management and knowledge governance and their application based on various theories.

2.2.1 Knowledge and Its Classification

Knowledge, in the context of this work, may be defined, as information processed by individuals including ideas, facts, expertise and judgments relevant for the individual's, teams, and organization's performances (Discussed in Amayah, 2013). Knowledge may be tangible, rational or technical including the organization's mission, strategies, goals, policies, procedures, studies, and reports (Gilaninia, Askari & Dastour, 2013).

Knowledge can be classified into two main categories: implicit and explicit. All type of knowledge such as individual, structural or cultural belongs to one of these two types. According to Michael Polanyi (Discussed in Biygautane & Al Yahya, 2011), implicit or tacit knowledge is an individual, unspoken and cognitive knowledge that exist mostly in people's minds and is not easy to be shared and communicated to other people. People acquire its main components "know-how and know-what" from their experiences in the organization. Implicit knowledge is not well recognized, captured or documented. On the other hand, explicit knowledge, known as structural knowledge, is well documented and is the repository for any organization. It is easy to access, capture, and share this type of knowledge. Both implicit and explicit knowledge build the organizational knowledge including people skills, competencies, experience, and the documented structural knowledge retained in the publications, systems, manuals, etc. (Biygautane & Al Yahya, 2011).

There is also a social or cultural form of knowledge that individuals unconsciously acquire through social or cultural values of their organizations or societies (Biygautane & Al Yahya, 2011). Briefly, knowledge is all about what is known through relations, interactions, reading, senses, and learning (Al-Khoury, 2014). According to Omotayo (2015), knowledge can be created and acquired from people, routines, and systems gained through experiences and reflect on people's perceptions, opinions morals, and values (Omotayo, 2015). Thus, to take advantage of this knowledge and ensure its preservation, transmission, and usage organization has to understand and implement knowledge management that focuses on knowledge as an actual asset and use it match its needs. The following section illustrates the different theories of knowledge management and governance and its application based on previous studies.

2.2.2 Knowledge Management and Governance: The Concept and Its Application

This section explains the different perceptions of knowledge and knowledge management, the main objectives of applying KM in the organization and knowledge governance aspects, mechanisms and importance.

Knowledge management is a system of enabling individuals in an organization to collectively acquire, share and leverage knowledge to achieve organizational objectives. It is a formal process of engaging the organization's people, processes, and technology that captures knowledge and delivering it to the right people at the right time (discussed in Geisler & Wickramasinghe, 2015). Today, the success of any organization depends on the knowledge-base that increases the organizational competitiveness and decision-making capabilities (Al-Khoury, 2014).

Knowledge management (KM) as a term and concept has been defined differently by many authors based on different perspectives and models that revolve around two main views of knowledge which are: knowledge as an object and knowledge as a process (Chatti, 2012).

In the Knowledge as an object perspective, knowledge primarily is seen as an object that can be captured, stored and utilized. KM in this context is related to technology and perceived to be a technological matter that creates knowledge repositories where 'knowledge' can work in a structured way. Authors who perceive 'knowledge as an object' defines 'knowledge management' as management and sharing of a 'repository', For example:

- a) "Knowledge management aims to capture the knowledge that employees need in a central repository and filter out the surplus" (Bair, 1997).
- b) "Knowledge management promotes an integrated approach to identifying, capturing, retrieving, as well as evaluating an enterprise's information assets. These information assets may include databases, documents, policies, procedures, as well as the uncaptured tacit expertise and experience stored in individual's heads" (Fenn, 1996).
- c) "Knowledge management is the creation, archiving, and sharing of valued information, expertise, and insight within and across communities of people and organizations with similar interests and needs, the goal of which is to build competitive advantage" (Rosenberg, 2006).

On the other hand, many authors defined 'knowledge' as a process. For instance, according to Nonaka and Takeuchi (2005) "human knowledge is created and expanded through social interaction between tacit knowledge and explicit knowledge".

Knowledge management to this group of authors become a process that includes a cycle of identifying, acquiring, creating, storing, utilizing, sharing knowledge to improve an organization's performance (Al-Khouri, 2014). According to Knapp (1998) "KM is a set of processes for transferring intellectual capital to value-processes such as innovation and knowledge creation and knowledge acquisition, organization, application, sharing, and replenishment" (discussed in Chatti, 2012). Nonetheless, both views of knowledge and its management are important because the Knowledge-Based View (KBV) builds upon and extends the Resource-Based View (RBV) to create a knowledge pool that can be used to facilitate better and more informed decisions (Al-Khouri, 2014).

However, Omotayo (2015) who discussed the third dimension of knowledge: knowledge as a network, he described it as a set of knowledge that is shared among a group of people who share a similar culture and environment (Omotayo, 2015). Chatti (2012) argues that knowledge is a network, not an objective or a process. The modern organization must create a sustainable model for intangible assets and intellectual resources (Gilaninia, Askari & Dastour, 2013) as a network. Chatti (2012) designs an alternative model of personal knowledge network (PKM) for knowledge sharing aligning with the new knowledge management era. This personal knowledge network (PKN) model views knowledge as a personal network and knowledge ecology, unlike traditional KM/PKM models that view knowledge as an object or process. This Model recognizes the personal and network dimensions of knowledge starting from the knowledge worker (people) through a continuous creation of personal knowledge network (PKM) internally and externally using both implicit or tacit (people), and explicit knowledge (information) (Chatti, 2012).

In the middle of this model, the knowledge ecology must exist where there is a complex adaptive system that develops from the bottom-up connection of PKNs. The knowledge ecology in the PKN is “a field of theory and practice that focuses on discovering better social, organizational, behavioral, and technical conditions for knowledge creation and utilization.” Knowledge ecologies shape the boundaries of work and learning and connect the power of PKNs and generate needs for knowledge governance, not just the management (Chatti, 2012).

According to Alavi and Leidner (2001), knowledge management refers to the process of identifying and leveraging of organization’s knowledge with the aim of increasing innovativeness and responsiveness (Alavi & Leidner, 2001). It is an essential part of the strategic management process and requires new perspectives and techniques (Gilaninia, Askari & Dastour, 2013). AS such Gilaninia, Askari, and Dastour (2013) argue that knowledge is action based and if recognized, appreciated, motivated and disseminated it adds value to the organization by focusing on innovation, building relationships and sharing of expertise in a specific area of concern. Knowledge management in any organization may have three defined purpose (Alavi & Leidner, 2001):

1. Making knowledge visible and play a big role in the organization by providing document, tools, and relations.
2. Encouraging the knowledge sharing culture by developing knowledge-intensive culture.
3. Building the knowledge infrastructure through technical system and people’s relations and networks.

Thus, KM contains three main factor's design learning cycles into all activities, developing systematic ways of applying new knowledge, and enhancing the process of converting individual's knowledge to organizational knowledge, and vice versa (Suresh, 2013). KM may thus be better understood through a discussion on knowledge governance.

The term "governance" refers to several meanings depending on its use. It referred to change a condition of command rule or a new process or method of governing. According to Rhodes (1996), there are six uses of governance: the minimal state, corporate governance, the new public management, good governance, socio-cybernetic system, and self-organizing networks (Rhodes, 1996). Governance in the socio-cybernetic system can be seen as a structure that occurs as common outcomes and total effects of the interacting intervention efforts of all involved stakeholders. Also, these interactions are based on the acknowledgment of interdependencies. This means that no single actor has all knowledge and information required to create policy, solve a problem or take a decision in the governing model without referring to other stakeholders (Rhodes, 1996). Thus, self-organizing, inter-organizational networks show how people's interactions play a big role in the policy outcomes where networks become a pervasive feature of service delivery. Networks developed in the organizations seeking to meet the objectives, maximize outcomes and avoid the dependencies of certain actors by exchanging resources such as information, money, and expertise and describing the differences of the interdependent actors involved in any process (Rhodes, 1996).

Knowledge governance is an organization tool that defines the way an organization can manage formally and informally the knowledge management activities and process to achieve the organization's goals. Knowledge governance is classified into two categories: formal knowledge governance that includes organizational structure, leadership, reward system, and job design and description, and informal knowledge governance that contains organization culture, management style, personal network and managerial support (Cao & Xiang, 2012). Both formal and informal knowledge governance influence knowledge sharing and, formal knowledge governance can affect informal knowledge governance where the organization can adapt this to promote knowledge sharing (Cao & Xiang, 2012).

A fundamental aspect of knowledge governance is knowledge sharing. Thus, Knowledge sharing is essential and refers to the ways of delivering information and knowledge, and collaborating with others in solving problems, creating new ideas, and developing relevant policies and procedures (Amayah, 2013). In a broader context, knowledge sharing is the process that enables both implicit and explicit knowledge to be transferred and disseminated among individuals across various channels and mode of knowledge conversion. Thus, Nonaka and Konno suggesting "knowledge creation is a spiraling process of interactions between tacit and explicit knowledge" offers a SECI (socialization, externalization, combination, and internalization) model that may increase organization learning and productivity (discussed in Chatti, 2012). The key organizational factors, e.g., strategy, structure, culture, and technology influence the effectiveness of knowledge transfer. It should be understood as well as considered for the preparation of an efficient, effective and cutting-edge knowledge governance model (Saretsalo, 2015).

A fundamental part of knowledge sharing is connecting people and building relationships that allow and facilitate the transferring of knowledge between various bodies. All these concepts of KM are summarized in Figure 2.1. The next section explores a new perception of knowledge management that increases the knowledge sharing between individuals whereas it defines KM as a network.

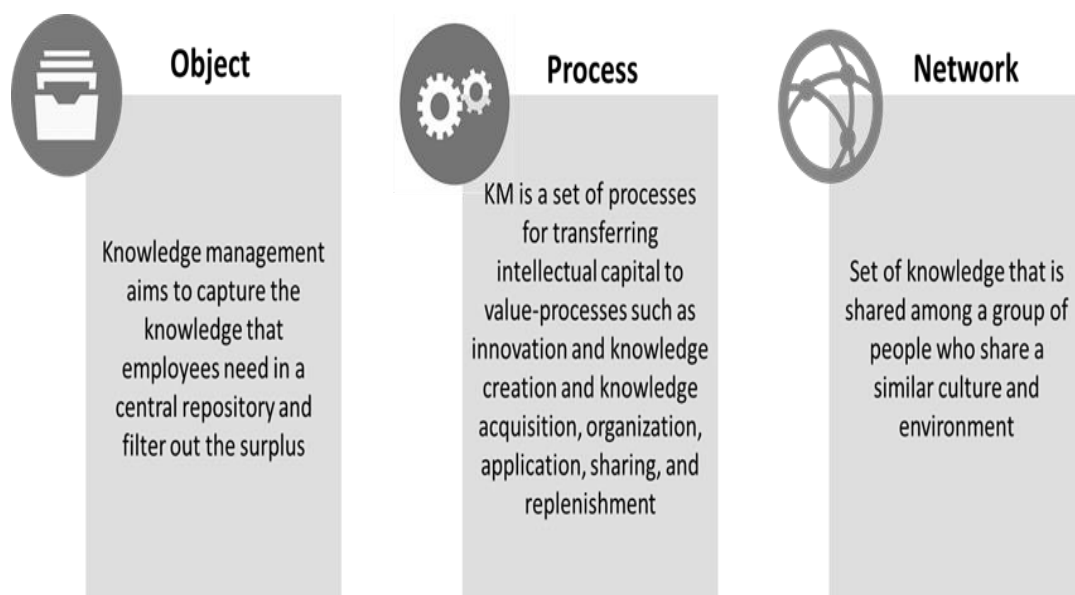


Figure 2.1: Knowledge Management Concepts

2.3 Knowledge Management as a Network

This section introduces a new concept of knowledge management “Knowledge as a Network,” illustrate its concept, definition, and features and how it is work in sharing and transferring knowledge across the organization. Also, this section discusses the Japanese knowledge management model that works in transferring knowledge from one type to another to ensure capturing the implicit knowledge inside the organization.

2.3.1 Knowledge as Network: Concept and Features

In the 21st century, new requirements in the working environments are created as a result of the continuous structural transformation that deals with knowledge and information everywhere. Since knowledge and information technology have become the key components in the organization, efficient use and retention of knowledge in both organizational and individual levels are required where individual should have the willingness and capability to create, use and share the knowledge (Haunschild, Schmiege & Steinhofel, 2016). According to Phelps, Heidl, and Wadhwa (2012), knowledge network can be defined as a set of nodes (individuals, collective's teams, members, etc.) that works as a knowledge repository in the organization connected by social relationships. This support and allow the nodes to acquire, create and transfer knowledge with one another (Phelps, Heidl & Wadhwa, 2012).

According to Haunschild, Schmiege & Steinhofel (2016) often the focus in the area of KM is limited to the organizational level, and less attention is given to individuals. However, individuals are the owners of this knowledge, and active knowledge management should engage the owners to fill the gaps to achieve the efficiency of KM in the organization. Regularly personal KM is provided unsystematic and more reactive rather than proactive (Haunschild, Schmiege & Steinhofel, 2016). Phelps, Heidl, and Wadhwa (2012) argue that there are three important dimensions of knowledge network: knowledge creation, knowledge transfer and knowledge adoption (ability to use and implement a separate element of knowledge). Knowledge elements that influence knowledge network in any system according to Phelps, Heidl, and Wadhwa (2012), first, nodes or repositories of knowledge and the factors that create, organize and transfer knowledge.

Second, social relationships, between these nodes, which work as a medium between nodes in which information and knowledge moves and flows, and help the nodes to evaluate each other. Third, the knowledge structure and it refer to the outline of relationships among a set of nodes. Finally, knowledge network properties (Phelps, Heidl & Wadhwa, 2012). The last dimension is the level of analysis either it is 'interpersonal' that focused on the individuals and their relationships, 'inter-organizational' which focused on the organizations and their inter-connections or 'intra-organizational' relationships which have dual focused on cooperative teams within the organization and the relationships between them (Phelps, Heidl & Wadhwa, 2012).

According to Chatti (2012), knowledge is inherently personal as deeply embodied in an individual's actions, experience, ideas, values, and emotions. This knowledge is created, augmented, improved and used by a person. In the last few years, there has been growing attention in Personal Knowledge Management (PKM) as a new model to KM (Chatti, 2012). PKM refer to a set of processes that focuses on individuals in the context of their work (Chaudhry, 2014), it is a bottom-up approach and focuses on individuals to help them become more active in personal, organizational and social environments (Chatti, 2012). The PKM framework concentrates on developing and maintaining a personal network where individuals brought their competencies and expertise and take responsibility to make good use of it (Chaudhry, 2014). According to Chaudhry (2014), the main issue in the PKM model is information and knowledge accessibility and meaningfulness as well as the personal capital management and the maintenance of a social network. Chatti (2012) also argues that the failures in KM mainly result from viewing knowledge as an object or process because they are just an enabler to the whole system.

Further, to align with the rapid change in the knowledge era and to reflect the nature of knowledge; knowledge has to be viewed as a personal network (Chatti, 2012). Chaudhry (2014) argues that working through the personal networks is a robust approach that promotes connectivity in the organization, the availability of different technologies and tools supporting the building and maintaining of personal networks are facilitating more effective ways to share and manage knowledge. Chatti (2012) proposed the Personal Knowledge Network (PKN) as an alternative perspective on KM and PKM. The PKN model views knowledge as a personal network and embodies an ecological approach to KM (Chatti, 2012). PKN consists of a set of people with whom an individual sustains relations and interacts to support and manage knowledge to support the objectives and activities effectively. (Chaudhry, 2014). According to Khachloul and Mezghani (2011), employee's motivations to spend effort in sharing knowledge are affected by the organization's socialization channels. Also increasing the size of the networks lead to better employee's capacity as the knowledge, and continuous learning is located in relations as well as in the mental schemas and experiences (Khachloul & Mezghani, 2011).

The mechanism of PKN influences inter-organization at good practices of knowledge transfer because of two primary drivers: 1) resources access and 2) social interactions. This plays a significant role in facilitating the acquisition of knowledge from a range of resources (Khachloul & Mezghani, 2011). Ge'raudel et al. (2006) proposed four resources that can be accessed and used through the personal network to support R&D: information, knowledge, personal support, and social influence (Discussed in Khachloul & Mezghani, 2011). Also, Chollet (2005) identifies four categories of resources accessible to R&D: visibility, strategic information, technical knowledge and material resources (Discussed in Khachloul & Mezghani, 2011).

Overall, there is a high increase in many fields in exploring how knowledge have effects on both organization's and personal's performance and the influence of social relationships and the networks on the efficiency and effectiveness of the organization (Phelps, Heidl & Wadhwa, 2012). In fact, the organizational knowledge depends on the knowledge of their employees (Haunschild, Schmiege & Steinhofel, 2016). This knowledge either it is explicit or implicit have to be captured through different methods of knowledge transfer, the following section shows how this different type of knowledge can be acquired, retain and use within a clear process to be exchanged from implicit to explicit and vice versa.

2.3.2 SECI Japanese model by Nonaka and Takeuchi

Knowledge management is based on well identified and analyzed available resources in the organization considering human as the most critical resource (Gierszewska, 2012). According to Nonaka and Konno (1998), implicit knowledge is always personal, and difficult to formalize, communicate and share with others. It is embedded in an individual's values, emotions, actions and experiences (Nonaka & Konno, 1998). Implicit knowledge is acquired through individual processes and interaction such as interactive conversation and storytelling that is difficult to articulate from one individual to another (Gierszewska, 2012).

Nonaka and Takeuchi proposed the Japanese model of knowledge management, which categorized knowledge into implicit and explicit knowledge. They studied knowledge creation, transfer and use to build the SECI model to capture the transformation between implicit and explicit knowledge in four phases: Socialization, Externalization, Combination, and Internalization (Gierszewska, 2012).

According to Nonaka and Konno (1998), socialization is the process of communicating, and sharing of tacit knowledge between individuals (Nonaka & Konno, 1998) by observing and practicing the observed skills (Gierszewaska, 2012). It is about creating new implicit knowledge and exchange it through joint activities and personal experiences such as informal meetings, informal conversation and living in the same environment (Nonaka & Konno, 1998).

Externalization is the process of converting and translating of implicit knowledge to intelligible forms of explicit knowledge (Nonaka & Konno, 1998) such as documents, patents, manuals audio, video, tools and software applications (Gierszewaska, 2012). Combination is a process of expanding the explicit knowledge by combining and gathering a different type of formal (explicit) knowledge to generate new formal knowledge (Gierszewaska, 2012). It is the way of structuring and applying formal knowledge in the organization and transferring it from individuals and team level to the entire organization level (Gierszewaska, 2012). The combination phase depends on three main activities which are capturing and adding new explicit knowledge, dissemination of explicit knowledge to spread the knowledge among the organization. Such as using presentations and meeting and editing the explicit knowledge to be more usable by creating and developing documents such as reports and plans (Nonaka & Konno, 1998). Internalization is the fourth stage in the SECI model; it is the practice of creating new knowledge by converting the explicit knowledge to organizational tacit knowledge (Nonaka & Konno, 1998). It is demonstrated on the employee's job-related tasks and activated by implementing and following the job description, management decision and policies (Gierszewaska, 2012).

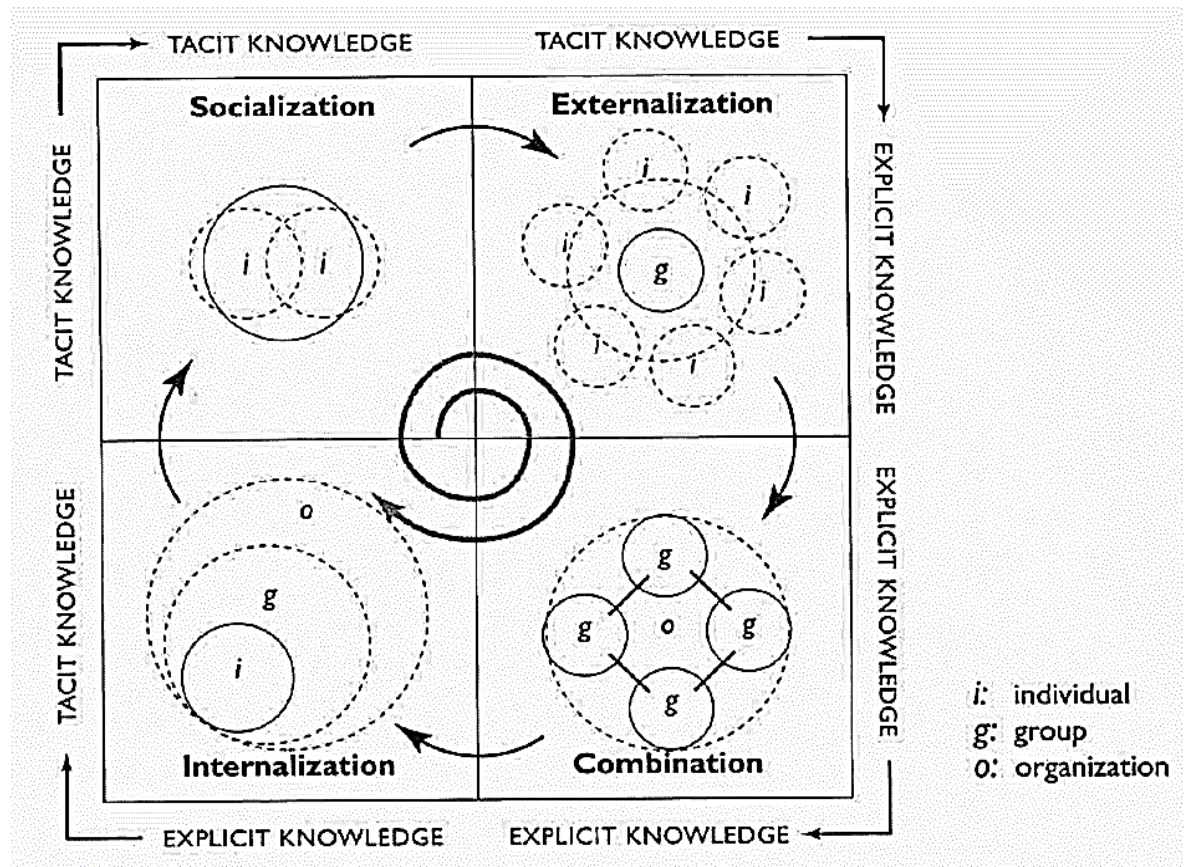


Figure 2.2: Japanese SECI Model (Nonaka & Konno, 1998)

In summary, the SECI model illustrated in Figure 2.2 defines the dynamic process where explicit and tacit knowledge are exchanged and transformed (Nonaka & Konno, 1998). The Japanese approach focuses on human behaviors and nature in the organization (Gierszewaska, 2012). It is four stages of knowledge creation conceptualize the actualization of knowledge within social organizations through a series of a self-inspiring process (Nonaka & Konno, 1998). An effective cycle of knowledge management process including acquisition, creation, and sharing of knowledge in the organization according to this model depends on the interpersonal relations, effective group interactions and people's unified interests, common goals and understanding of the problems to be solved (Gierszewaska, 2012).

2.4 Factors that influence KM and Knowledge sharing

KM is focusing on increasing the organizational culture, structure, process, and tools that facilitate the flow of knowledge between individuals (Saretsalo, 2015), various factors influence the ideal implementation of KM in the organization. This section discusses those factors and the main components that play a significant role in enhancing organizations' KM activities.

In the 21st century, knowledge becomes a significant organizational resource (Alavi & Leidner, 2001). The resource-based view (RBV) treats knowledge as a common resource that can integrate with other resources in the organization to provide a competitive advantage; this perspective believes that knowledge is expressed in skills. Besides the organization's performance is the result of specific resource and abilities (Al-Khouri, 2014).

A Knowledge-Based View (KBV), seen as an extension of the resource-based perspective. It assumes that organization is a group of several entities filled with knowledge that develop the knowledge-based assets which can create the core competencies needed by any organization (Al-Khouri, 2014) to produce a long-term sustainable competitive advantage (Alavi & Leidner, 2001). According to Alavi and Leidner (2001), KBV is mix components or entities that include culture, identity, systems, policies, documents and individuals all these components integrate to clarify the know-how function in the organization by combined and applied resources.(Alavi & Leidner, 2001). According to the knowledge management theories, four main pillars built the KM system: people, process knowledge and technology (Al-Khouri, 2014). Therefore, managing knowledge is viewed as a strategic target to achieve sustainability and enhance the organization performance (Al-Khouri, 2014).

In fact, what really helps the organization to success is not the massive amount of explicit knowledge that the entity has rather the capturing and utilizing of the implicit knowledge which is the intellectual capital and the power of people (Al-Khoury, 2014).

As long as organizations are looking for sustainable competitive advantages, technology-based become impermanent and those organizations have to focus on their employees by having an excellent capacity to maintain, improve, organize and utilize their employee's competencies (Omotayo, 2015). To attain the success of the knowledge management, it is important to realize that technologies and processes are not enough to drive the organization. But people are required (Omotayo, 2015), and it is important to balance between the human-oriented knowledge management and the technology-oriented knowledge management (Al-khoury, 2014).

Consequently, to have effective knowledge management, the organization must consider the four components and work into connecting knowledge, people, process, and technology to leverage and share the knowledge. (Omotayo, 2015). Knowledge is the fundamental of any knowledge management system (Omotayo, 2015) and is referred to a set of authenticated information. It is a reasonable belief that increases an organization's capacity for effective decision (Alavi, 2001), which means that information is inserted in different forms that create both explicit and implicit knowledge. Knowledge could be formed as theories, producers, processors, and systems or could be formed as opinions, skills, ideas, and analysis (Omotayo, 2015).

According to Alavi and Leidner (2001), it is difficult to distinguish between information and knowledge based on the content, structure, accuracy or the usage of the information or knowledge without the power of people as information process in individual's mind (Alavi & Leidner, 2001). Knowledge is the practice of know-how that people hold together (Omotayo, 2015).

The second component of knowledge management is people, the valuable source of knowledge. The creator and consumer of knowledge (Omotayo, 2015). Drucker (1999) recognized that people are the competitors and source of long-term success in the organization with this intention they have to be trained and monitored (Al-Khouri, 2014). They need to be empowered to seek out knowledge, learn from it, utilize and share it with others (Omotayo, 2015). Having the capability and invest in them is a key factor of effective attainment where the organization should offer their employees opportunities to ensure that they reflect positively on the organization's motivation, morale and retention rates (Al-Khouri, 2014).

Investing in the people requires a good work environment where culture is supportive and encouraging the knowledge management activities. It is essential to shape the culture of sharing knowledge as employee's interaction in building relationships is a key enabler in the whole process (Gold, Malhotra & Segars, 2001).

The process, another component of KM is logical and automated objects that govern and guide how work is conducted and performed in the organization that developed and executed by people, technologies or a combination of both. The role of KM is to understand the work process and how to connect and map them to increase the efficiency and effectiveness of the organization (Omotayo, 2015).

The drive of KM is to leverage and maintain the organization's assets and resources by developing a process that influences the knowledge sharing environment (Al-Khouri, 2014). According to the organizational knowledge management system, knowledge management framework consists of four sets of dynamic and continuous processes called "Knowledge processes": 1) Knowledge creation, 2) Knowledge storage, 3) Knowledge transfer, 4) Knowledge utilization/ application. These practices are embedded in individuals, groups and physical structure and represent both cognitive and social nature (collective practices and culture) (Alavi & Leidner, 2001).

Technology is a critical component of knowledge management system (Omotayo, 2015), and key enabler that links together both communication and information systems to protect the social capital in the organization. For any organization to execute an effective KM system, comprehensive infrastructure and environment should be applied to support different types of knowledge and communications (Gold, Malhotra & Segars, 2001) through enhancing the KM scope, time and overall processes (Alavi & Leidner, 2001). This strong infrastructure is used to facilitate the KM through providing technological solutions (Omotayo, 2015).

Although technology is a critical enabler for KM, without a strong contribution and integration between technology and people, who own this knowledge, the knowledge sharing activity will not succeed in the organization (Omotayo, 2015). For knowledge transfer, the innovative use of technology is to increase the utilization of the intelligent software by making knowledge accessible and extend the individual's exchange network (Alavi & Leidner, 2001). This must also take into account the socio-cultural factors like trust, time, conflict and the concerns of losing power which prevent people's willingness to share knowledge (Omotayo, 2015).

The success of KM in any organization depends on specific critical factors. Omotayo (2015) discussed four key categories of critical success factors of KM as illustrated in Figure 2.3, which are: 1- Human-oriented including leadership, people, and culture; 2- organization-oriented containing process and structures; 3- management process- oriented including organization's strategy, objectives and measurement and; 4- technology-oriented which involves both infrastructure and applications (Omotayo, 2015). Also, Biygautane & Al Yahya (2011) identified four factors that influence KM in any organization: leadership, technology, organizational culture, and financial aspects. They argue that the absence of effective engagement and support from the leadership negatively affect the KM initiatives (Biygautane & Al Yahya, 2011).

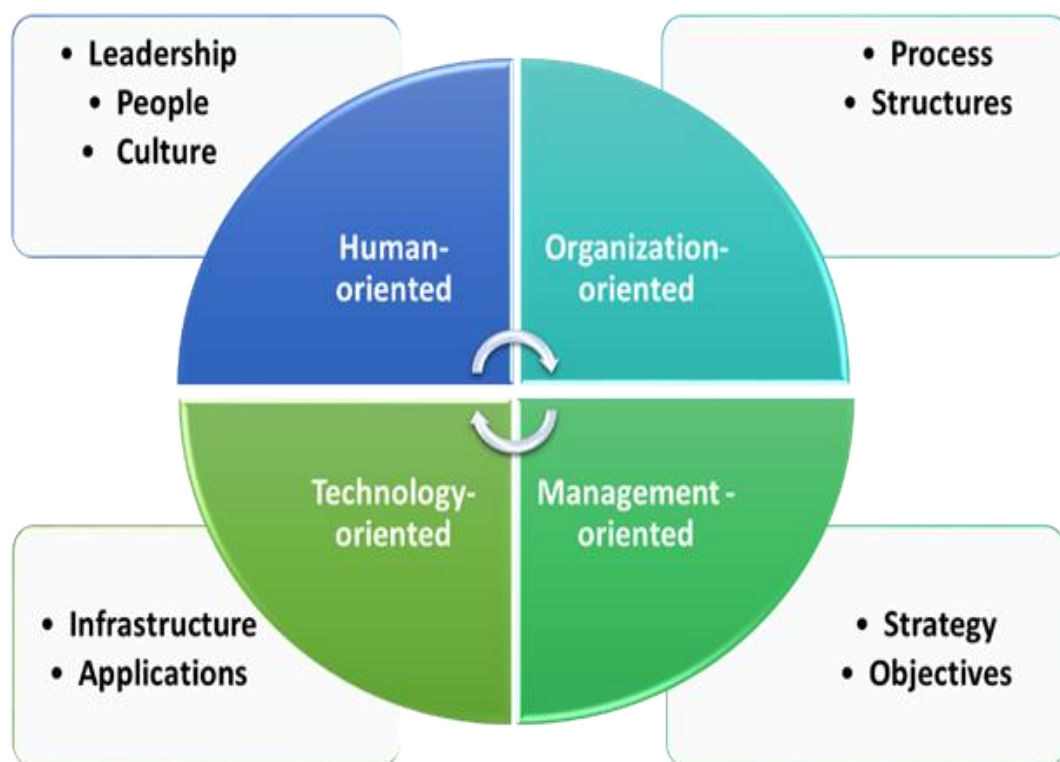


Figure 2.3: Factors that influence KM and Knowledge sharing (Omotayo, 2015)

Holsapple and Joshi (2002) also emphasize the role of the leadership and classify all factors that determine the outcome of KM project directly and indirectly, into three main categories:

- Managerial influences (Leadership and coordination)
- Resource influences (Financial Trust, Technology, and Human)
- Environment influences (Social and Economics, Governmental and Organizational culture).

Amayah (2013), argues that the model of three constructs (motivators, enablers, and barriers) are the factors that affect knowledge sharing in public sectors.

- Motivators (personal benefits, normative consideration, and community-related considerations)
- Enablers (trust, social capital, and organizational culture)
- Barriers (organization structure and organizational climate)

Amayah (2013) found that the community-related considerations are the strongest predictor to knowledge sharing in the organization whereas managers in public sectors have to give attention to programs and initiatives that develop and improve the community across employees. Also, she argues that motivational and attitudinal factors influence knowledge transfer as well as gaining new knowledge where the organization can improve knowledge transfer process by its culture and incentive and award systems (Amayah, 2013). Omotayo (2015), however, emphasizes the importance of the inherent aspect in the form of creates right incentives for people may encourage them in sharing and applying knowledge.

Nonetheless, workers' attitude towards power and status may restrict the knowledge sharing process in an organization. For example, people who see knowledge as power may hoard knowledge and use it for their own benefit without sharing it with others (Saretsalo, 2015). Knowledge management is important and is a key driver for any organization. Capturing and maintaining the tacit knowledge have been seen as valuable strategic resources leading to sustainability and increasing efficiency in organizations (Zaim, Gurcan, Tarim, Zaim & Alpkhan, 2015). In conclusion, having effective knowledge management with success factors required government intervention to promote and activate this new concept. The next section introduces the importance of knowledge governance model and how it maximizes the efficiency of implementing an ideal KM.

2.5 Knowledge Governance Framework and its Benefits

Knowledge governance it is an intersection of knowledge management, strategic management, and theories of the firm. It considers the influences of the deployment of governance mechanisms in the knowledge processes (Foss & Mahoney, 2010), this section explores the concept of knowledge governance framework, its mechanisms, functions, and benefits.

Knowledge governance is an organizational mechanism that defines how the organization manages the knowledge process activities formally and informally (Cao & Xiang, 2012). It considers the interplay between the organizational process and knowledge process and how these knowledge processes, i.e., knowledge creation, retention, use, and share are influenced through the arrangement of the governance (Foss & Mahoney, 2010).

Buuren (2009) argues that different ways of knowing (WOKs) increase the conflict and predict collective action as this WOK contains different knowledge elements such as bodies of actual knowledge, methods, frames, normative perceptions, interpretations and uses various sources and organizational capacity. Thus, understanding what establishes a WOK and organizing the inclusion of these different components of knowledge can ensure a successful collaborative knowledge governance process. Present era of governance is where the role of most governmental organizations has changed from independent control and strategic planning towards meta-governance that is seen as the application of a system that comprises both process-oriented norms and thoughtful management strategies to facilitate interaction between the actors (Buuren, 2009).

According to Foss (2007), thus, knowledge governance approach is considered as a distinctive and developing approach that aligns with other fields of knowledge management, human resources, organizational development, and strategies. It is important because knowledge governance mechanisms influence knowledge process (creating, retaining and sharing). (Foss, 2007). According to Foss et al. (2010) knowledge governance is the organizational actions that influence the knowledge management process to produce value (Discussed in Huang, Chiu and Lu, 2013). It is linked with the adoption of governance mechanisms for knowledge management activities of creating, storing, sharing and utilizing knowledge in the organization (Huang, Chiu and Lu, 2013). In many organizations, critical resources are embodied in individual's knowledge especially if it is personal, tacit and advanced. Further, it is difficult to be communicated what knowledge sharing plays a big role in making knowledge available for others, and Knowledge governance mechanisms can promote or discourage the transfer process (Huang, Chiu and Lu, 2013).

Huang, Chiu, and Lu (2013) argue the successful knowledge transfer depends on three factors which are ability, motivation, and opportunity. The formal knowledge governance mechanisms such as performance evaluations, reward systems, promotions, incentives, and training have a positive impact on knowledge sharing motivations. It can also facilitate the knowledge sharing opportunities by promoting team building using great communication, conducting internal conferences and forums, and building a collaborative platform that creates structured group discussion to enhance knowledge transfer channels (Huang, Chiu and Lu, 2013). Also, Huang, Chiu and Lu (2013) argue that informal knowledge governance mechanisms such as social norms, teamwork and trust help the organization in developing the willingness and ability of employees to share knowledge and make good impressions about each other. And as long as the relationships among individuals are strong, they will have the willingness to share knowledge (Huang, Chiu and Lu, 2013).

In addition, informal knowledge governance mechanisms can have a positive impact and increase the opportunities for sharing knowledge among the employees (Huang, Chiu and Lu, 2013). As having lounge areas, team lunch, and communities consider as a socialization efforts that are designed to enhance the individual's networks and connect people together for the purpose of increasing the frequency of interactions among employees (Huang, Chiu and Lu, 2013). Knowledge governance approaches recognize and treat the motivation and cognition on individuals level by building a micro-foundation based on the individual actions to support the interaction on the organizational level (Foss, 2007). According to Cao and Xiang (2012), knowledge governance adopts those governance mechanisms that can direct and influence knowledge management processes (Cao & Xiang, 2012).

Foss and Mahoney (2010) argue that knowledge governance have to concentrate on choosing governance structure (e.g., hybrids, networks, markets). Also in determining the governance mechanism tools (e.g., reward, contracts, directives, incentives, organizational culture) to maximize the benefits of KM process activities. This because defines the motivations and organize the actions of organization members in knowledge processes cycle (Foss & Mahoney, 2010). According to Zyngier and Burstein (2012), Governance is an ongoing mechanism in the organization to support, moderate and improves practice for realizing strategic benefits (Zyngier and Burstein, 2012). Knowledge governance implemented by developing KM policies and aligning the KM with the organization's strategy, further knowledge governance provide access to the organizational knowledge to support and enhance decision-making processes, quality and maintenance procedures and resolving KM obstacles (Zyngier and Burstein, 2012).

2.6 Knowledge Governance Organizational Innovation, and Performance

This section discusses the concept of organizational innovation and performance and how the deployment of effective knowledge governance model lead to enhance the innovation among employees and improve the overall performance of the organization.

Many approaches exist to define innovation. According to Barnett (1953) and Damanpour (1991), innovation is anything new. It could be an idea, method, approach, attitude, behavior, culture, technology, and capability, qualities or attributes of which enhance or improve over the existing.

Innovation in government and public services is a change in the relationships between service providers and users as (process, impacts, and outcomes). This change should be new, large, general and durable enough to affect the operations of the organization significantly. Innovation could contain reinvention or adaption to an alternative location, time or context and may help in disseminating the good practices between organizations to achieve the common improvement in governance and services performance and efficiencies to enhance the public value (Hartley, 2005)

There are different typologies of innovation which distinguish between different categories such as products, service, process, strategy, and governance. Governance innovation refers to the new forms of citizen engagement and democratic institutions. Hartley (2005) argues that it is important to understand the innovation process in the organization through both tops- down and bottom-up innovation for the adoption of good practices and adoption from organization staff's activities (Hartley, 2005). Governance also related to knowledge and its management. Knowledge management practices refer to a set of organization's management activities that are conducted to enable the organization to deliver value and improve the efficiency and effectiveness of organizational knowledge resources (Inkinen, Kianto & Vanhala, 2015). Knowledge management processes and systems should be designed to leverage employee's competencies and increase the collaboration between people in knowledge creating and sharing activities based on the organizational needs (Nowacki & Bachnik, 2016). Nowacki and Bachnik (2016) argue that having smart processes and systems may result in some potential benefits such as identify upcoming trends, reduce uncertainty, expect possible scenario, gain new skills, and reorganize daily operations which will increase the willingness of organizations to experiment new approaches to knowledge management (Nowacki & Bachnik, 2016).

According to Nowacki and Bachnik (2016), innovation in knowledge management depends on the organization's willingness to present innovative knowledge management processes, and the capability to implement this strategy (Nowacki & Bachnik, 2016). Therefore, Farazmand (2004), argues that innovation may exist in the knowledge that is used in a new process, and in the ways of controlling and managing networks and communities.

Nowacki and Bachnik (2016), identified three broad categories of innovation in KM process which are: socialization and the ability of people to manage the knowledge, effective organizational structure, and technological innovation. Thus, the social innovations refer to professional development, building organizational culture, knowledge sharing among employees, and motivating teamwork while organizational structure innovations contain units, teams, and positions. Technological innovations deal with technical infrastructure including the information systems (Nowacki & Bachnik, 2016). According to an original study on a knowledge-based view, knowledge resources and the organizational capability in utilizing this asset play a big role in differentiating between organizations performances as those organizations who utilized their knowledge are more likely to achieve their high performance. Many experimental studies examined the impact of different aspects of knowledge-based resources and knowledge management on innovation performance. One argument has exposed that general knowledge processes contain knowledge creation, storage, sharing, and acquisition have a positive impact on the organization's innovation performance (Inkinen, Kianto & Vanhala, 2015).

Another stream according to Wang and Chen (2013) found that organizational capital and interaction based knowledge among people and their networks facilitate the connection between human resource management practices and innovative capability. Therefore, Castro et al. (2013) argue that highly creative, skilled, and experienced employees with well-structured networks of the organization's customers are the key element in improving innovation performance (Discussed in Inkinen, Kianto & Vanhala, 2015).

Thus, organizational culture is an important enabler of knowledge-related behavior at work environment, and innovation performance can be facilitated by the supporting of leadership behavior, knowledge strategy, and information technology (Inkinen, Kianto & Vanhala, 2015). According to Nagesh (2016), organization culture refers to the shared values, norms, beliefs symbols and assumptions that define how the organization conducts its business. Many studies proved that corporate culture plays a dynamic role in the success of knowledge sharing and exchanges in the organization and culture help in achieving the organizational objectives making an impact on knowledge management. (Nagesh, 2016). Accordingly, knowledge management practices are focused on processes and tools for detecting and sharing knowledge, and if these processes are effectively utilized then, the improvement in the organization's performance may occur (Nagesh, 2016). Thus, benefit from knowledge management in enhancing the organization growth and sustainability requires identifying, collecting, reporting and participating in the coordination of the several knowledge elements through using measurable targets that monitor the organization's investment in their knowledge assets such as people, information, and technologies (Turner & Minonne, 2010).

Nagesh (2016) argues that knowledge management need to be integrated and linked with innovation culture to improve organization's performance. He believes this link significantly increases and help organizations to learn and overcome the challenges of managing intellectual capital for greater benefits (Nagesh, 2016).

2.7 Conclusion

Implicit knowledge is a strategic factor in knowledge management and, managing this knowledge effectively and efficiently is a significant success factor for the organization (Zaim et al., 2015). Implicit knowledge is, however, hidden inside people's mind, embodied in their experiences and skills and reflected in their daily activities in an organization. Capturing and benefiting from this knowledge is a big challenge for most organizations because sharing this knowledge among employees depends on individual willingness which is influenced by organization's culture and mechanisms that encourage this sharing. Knowledge is inherently personal (Chatti, 2012), and developing and promoting personal network to ensure the connectivity inside the organization is a robust approach which facilitates the knowledge sharing among individuals (Chaudhry, 2014).

In fact, having a governance mechanism that support and encourage employees to share knowledge. These mechanisms influence the knowledge management process (create, acquire, store, share and use) to produce value for the organization (Discussed in Huang, Chiu and Lu, 2013). In conclusion, developing this governance model, identifying the correct mechanisms and building an encouraging environment will enhance the organization's capabilities and sustainability.

Chapter 3: Research Methodology

3.1 Introduction

Chapter 2 details the theoretical foundation of this research. This chapter specifies and details the method of data collection and analyses used in the research. The objective of this research is to develop and recommend a knowledge governance model for capturing implicit knowledge in Abu Dhabi government departments or agencies. A detailed explanation is documented on the research objectives alongside the appropriate methodology to realize those objectives.

The research methodology uses qualitative analysis of relevant literature and qualitative and quantitative analyses of empirical evidence. Data analysis was done using framework analysis involving transcription, familiarization with the interview, coding and thematic framing, charting, and mapping and interpretation (details of the ‘framework analysis’ is added at the beginning of Chapter 5).

The chapter is divided into three major sections. The following section details methods of collecting information and data for the preparation of the KM governance model for AD government entities. It is divided into three parts dealing, respectively, with the collection of Secondary Sources of Information; Empirical Study: Direct Observation; Empirical Study: Unstructured Interviews. The discussion ends by defining the purposes and protocols of the unstructured interviews of 25 individuals in five different departments of Abu Dhabi government, and the process of selecting the organizations and respondents of the research. The following major section explains the process used to examine applicability of the proposed model. The data collection method is summarized in Figure 3.1.

The last major section deals with the Methods of Analyzing the Collected Information and Data. It highlights the five steps of ‘framework analysis’ used in the work: Transcription, Familiarization with the Interview, Coding and identifying thematic frame, Charting, and Mapping and Interpretation. The Chapter ends with a summary of the main points.

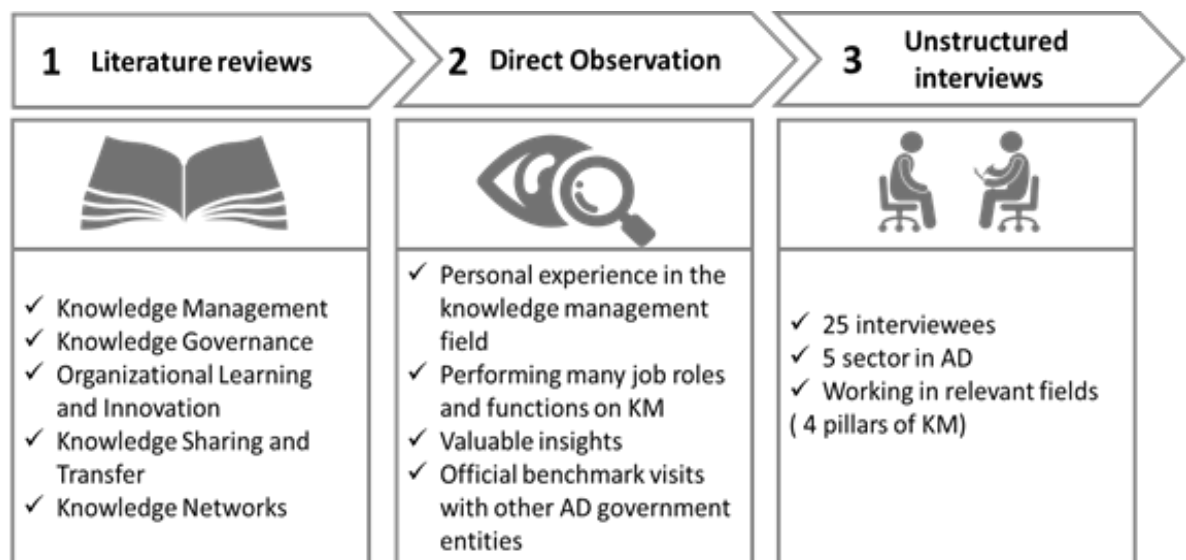


Figure 3.1: Methods of Collecting Data

3.2 Qualitative Approach

The study used the qualitative approach in order to develop a model for implicit knowledge in AD government organizations building on a knowledge network approach with the use of following methods.

3.2.1 Secondary Sources of Information

A comprehensive review of literature on scientific research on knowledge management, knowledge governance and organizational learning, knowledge sharing and transfer, and knowledge networks published in journals and books and recorded

in information databases like the ProQuest Central in the UAE University database was undertaken.

The main purpose of this stage was to link and analyze the outputs and finding of previous studies from literature reviews to highlight the importance and requirements of a Personal Knowledge Network (PKN) in implicit knowledge governance. The resulting literature on PKN and KM helped the researcher gain desired theoretical foundations to guide direct observation procedures in the subsequent phase of the present study, as well as preparing an interview protocol and methods for studying applicability of the proposed model.

3.2.2 Empirical Study: Direct Observation

During direct observation, the researcher focused on ascertaining personal experience and understanding of key individuals on KM in AD government entities. The resulting knowledge an asset to develop a knowledge governance model for AD government entities. As suggested by Smart, Peggs, & Burrige (2013) that the best timing for direct observation is the official working hours, the direct observation commenced with establishing a direct observation timing and strategy. Most importantly, the researcher has worked on KM fields performing many job roles and functions, so direct observation and note taking was easy. The responsibilities and duties associated with KM fields presented valuable insights on how government entities nurture and practice KM.

During official working hours the researcher devolved into comprehending the application of KM and actual knowledge sharing experiences at the AD government entities. Additionally, the researcher used resulting job and function related networks

to gain more understanding on how professionals perceived the KM practices in AD government entities.

Similarly, the researcher's direct observation entailed the researcher's official benchmark visits with other AD government entities for first-hand KM experience. These, direct observation experiences and outcomes assumed an ethnographic approach whereby the researcher took part as a volunteer in the selected AD government agencies to record personal experience rather than imposing own social reality. Days and weeks of personal experience contributed to the theoretical context of the study. Validation was completed through comparative analysis of facts on KM using multiple observations to identify possible inconsistencies or inaccuracies. Finally, the specific parameters and conditions adhered to during the observation experience includes resisting impulsiveness, resisting getting connected to specific individuals or factions, and being tolerant to unpleasant circumstances. These were possible because, the researcher following Kothari (2013) understood the above beforehand and remained honest and sincere in taking notes. Upon compiling the results of personal experiences from direct observations, the researcher undertook the subsequent phase of empirical study using unstructured interviews based on theoretical foundation of thesis as understood from literature and elaborated in Chapter 2.

3.2.3 Empirical Study: Unstructured Interviews

The empirical study for the research includes un-structured discussions with selected key players in the field of knowledge management and other relevant fields in certain public sector organizations in the Emirate of Abu Dhabi. The main purpose of the interview is to ascertain the need of a governance model for KM to capture and

retain implicit knowledge; illustrate the proposed PKN model, its structure, components, functioning, and benefits.

The interviews also were to examine the acceptance of the model, testing its validity, and identify possible positive (and negative, if any) implications of its application. The responses were based on the individual's perception and experience in working in AD government organizations. The target population for this study was key personnel involved in some forms of knowledge management. At the end 25 people from five government entities in Abu Dhabi, were interviewed. The researcher conducted the unstructured interviews by following specific protocols as enumerated below (See Figure 3.2).

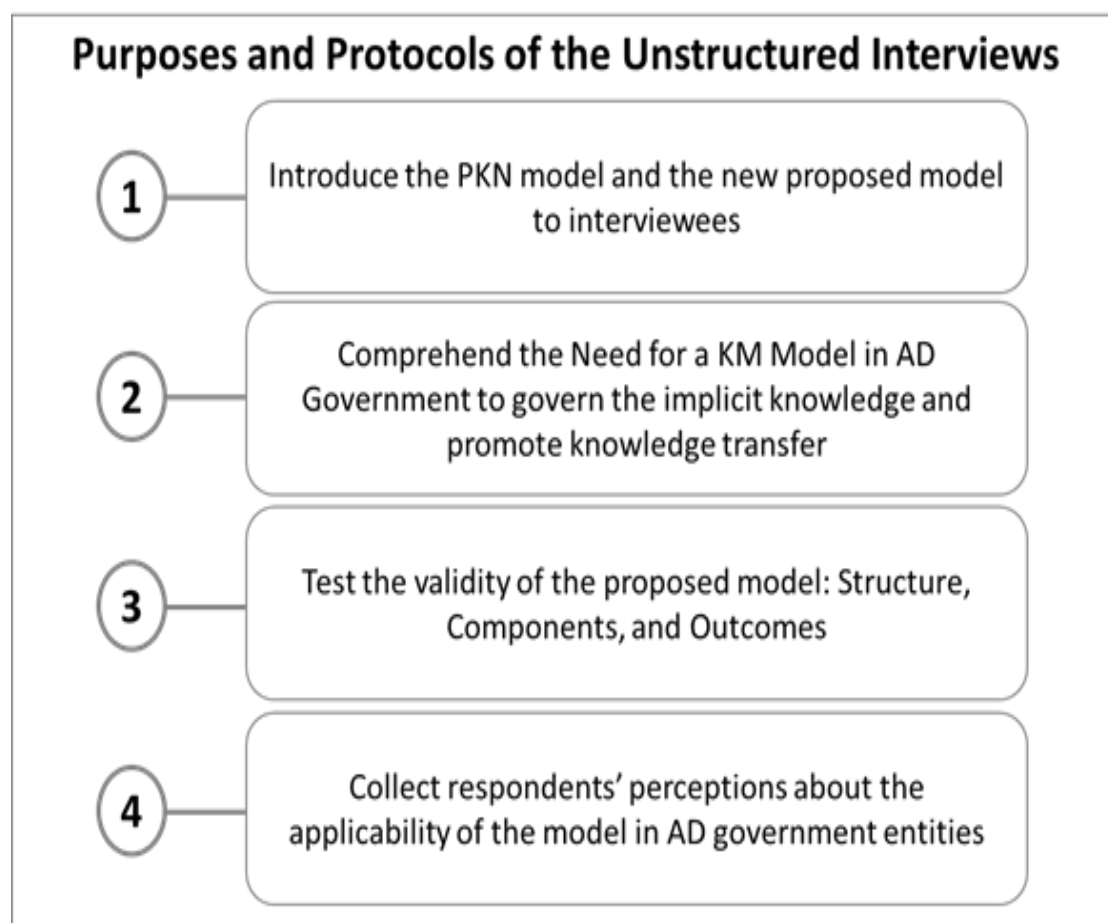


Figure 3.2: Purposes of the Unstructured Interviews

3.2.3.1 Purposes and Protocols of the Unstructured Interviews

‘Interview’ is an appropriate method for this study where little is known about the advantages of KM in the public sector and comprehensive insights are needed from the respondents. It is also an important approach for exploring sensitive research topics, such as the current one, where participants may be unwilling to communicate issues in a group setting. The main objective of the interviews was to assess the current situation and introduce the PKN model and the new proposed model to interviewees. So the interviews begun by explaining the following points.

- What is PKN and how does it work?
- Why the PKN was chosen as fundamental for the proposed model?
- What are the objective, architecture, and outcomes of the proposed model and how it works?

As depicted in Figure 3.2 purposes of the unstructured interviews were varied, and achieved by using different protocols. For example, the main protocol (the interview guide) was divided into three parts. The first part was to comprehend the Need for a KM Model in AD Government by analyzing the current status of KM in the respondent’s organization. It was done using ten questions (Appendix A: Box 3.1). The second purpose was to understand the interviewee’s perception about the validity of the proposed model, especially its Structure, Components, and Outcomes. Nine more questions were used for this purpose (Appendix A: Box 3.2). At the end, the interview focused on, using ten guiding questions, the interviewees’ perceptions about the model’s applicability and possible benefits, if applied in AD government organizations.

3.2.3.2 Selection of Organizations and Respondents

After articulating purposes and protocols of the unstructured interviews, this part details the method used to select the government organizations and respondents. As the purpose of this research is to serve the AD government by developing a knowledge governance model for capturing and sharing the implicit knowledge embodied in their employees, it is important to align the suggested model with all sectors of Abu Dhabi government. Thus, understanding the current status of knowledge management and testing the applicability of a universal model in the selected entities of Emirate of Abu Dhabi is important.

Since there are five main sectors in Abu Dhabi government, the interviewees were selected from each sector. Thus, and per different literature reviews, knowledge management depends and builds upon four main components which are people, process, and technology and knowledge itself (Al-Khoury, 2014), the research focused on all four. In order to obtain the desired results and understand the nature of knowledge management in several entities, the interviews focus on the relevant departments and sections in the selected organizations that have a strong relation and role on the four components to determine their relevance and the role they play in supporting the knowledge management. The interviews were undertaken with employees in the departments of human resources and professional development, knowledge management, information technology, strategic planning and performance management, policies, strategic communication and organization development, and excellence.

The 25 interviewees were selected based on the researcher networks with different entities and the availability of people during the interviews period. The researcher contacted those people through different channels earlier through direct conversation, emails or phone calling to ensure their willingness to participate in this research. Interview and interviewee details including selected entities, their respective sector, and number of interviewees in each organization are highlighted in Table 3.1.

Table 3.1: Sectors, Organizations, Respondents, Sample size, and Duration of the Discussions

Sectors, Organizations, Respondents, Sample size, and Duration of the Discussions				
Sector	Organization Name	Division/ Section	Number of participants	Duration of each interview
Social Development	Department of Education and Knowledge	Knowledge management division, strategic planning and special project, quality and excellence, human resource (Professional Development)	5	60 min
Security, Justice, and Safety	Abu Dhabi Farmer Services Center	Strategic and planning, studies and research, organization development, business development	3	60 min
	Abu Dhabi Quality and Conformity Council	Information and Engagement Services Division	2	60 min
Infrastructure and Environment	Abu Dhabi Airport Company	Human resource, Information Technology, Strategic and Planning	3	60 min
	Abu Dhabi Housing Authority	Knowledge Management, Strategic communication	2	60 min
Economic Development	Department of Transportation	Organization Development, Professional Development, IT	2	60 min
	Abu Dhabi Food Control Authority	Organizational development and excellence, corporate systems and quality,	3	60 min
Government Affairs	Abu Dhabi Human Resource Authority (HRA)	Knowledge Systems Department, Human Resources, Organizational Development	5	60 min

The researcher adhered to specific ethical considerations. Firstly, no participants and the selected organizations were coerced to give the desired study information or data. The selected organizations and interviewees were requested to complete a participation consent form, to register their informed consent and willingness to participate. Secondly, as per an ethical requirement of the UAE University, the confidentiality of the collected data was guaranteed with promises of not sharing private data with a third-party (Comstock, 2013). The UAE University's procedures were followed to ensure private data was secured. Thirdly, the researcher did not engage unethical practices outside the study parameters or created undue human interaction for personal gains or involved minors. All interviewing procedures were purely professional; adhering to integrity, etiquette, courtesy, and maintaining a professional demeanor (Iphofen, 2017).

3.3 Examining the Proposed Model's Applicability

A result matrix developed by the author is used to summarize the applicability of the proposed model, as perceived by the interviewees (Table 3.2). The matrix, following the theoretical frame defined in Chapter 2, shows the integrated relations between the outcomes and the key success factors of KM which are: Human-oriented including (Leadership, People, and Culture), Organization-oriented including (Process a Structure), Management-oriented including (Strategy and Objectives and Technology-oriented including (Infrastructure and Applications). This matrix is used to examine the current status of the organization linking with the above factors, and then its possible future status and impacts of applying the proposed model.

The research uses the framework analysis method (as defined in 3.3) to assess the interview findings for the questions asked to the key people (the interviewees) working in government entities within AD. The framework analysis is applied during the process of analyzing research findings because the researcher had to collect the interviewee answers and perceptions before conducting data analyses. In the analysis stage, the collected data are examined, recorded, and organized according to the main issues and themes of study including need for KM model in AD government entities, its validity, and applicability. To lead to the final finding, framework analysis uses five stages including familiarization, identification of thematic model, indexing, recording, and mapping and interpretation.

Table 3.2: Model Applicability Matrix

Applicability Matrix			
Factors of successful KM		Current Status	Possible Future status (after applying the model)
Human-Oriented	Leadership	Do leadership in your organization support KS by? 3.1 Funding and securing budget 3.2 Contributing to the KS initiatives	How is the application of the proposed model in your organization likely to? 3.3 Influence the leadership's commitment to knowledge sharing? 3.4 Impact the leadership's support to KM from the financial and operational perspective?
	People	3.5 Do employees your organizations differentiate between implicit and explicit knowledge? 3.6 Do employees in your organization receive support and recognition for sharing knowledge?	How is the application of the proposed model in your organization likely to? 3.7 Influence employees in creating PKNs. 3.8 Impact employees' in knowledge sharing and organization's performance?
	Culture	3.9 Does your organization's culture support KS? 3.10 Do you have any initiative that prompts PKNs?	3.11 How is the application of the proposed model in your organization likely to impact the culture of KS?

Table 3.2: Model Applicability Matrix (Continued)

Applicability Matrix			
Factors of successful KM		Factors of successful KM	Factors of successful KM
Organization-Oriented	Process	3.12 Do you have clearly defined process for KM and KT? 3.13 Do your employees know about this process?	3.14 How is the application of the proposed model in your organization likely to influence redefinition and efficiency of the KM process?
	Structure	3.15 Do you have a specialized KM team in your org (division, section, or committee)?	3.16 How is the application of the proposed model in your organization likely to influence the structure of KM team, KS, and organizational performance?
Management-Oriented	Strategy	3.17 Does the organization developed a KM strategy	3.18 How is the application of the proposed model in your organization likely to influence overall performance? 3.19 How is the application of the proposed model in your organization likely to: influence employees to transfer knowledge?
	Objectives	3.20 Do you have defined objectives for KT and KS?	3.21 How is the application of the proposed model in your organization likely to influence KM objectives for becoming a KS organization?
Technology-Oriented	Infrastructure	3.22 Do you have a single knowledge bank database for all information and knowledge in your organization? 3.23 Do you have a KS platform?	3.24 How is the application of the proposed model in your organization likely to: influence the employees' understanding of the requirements of needed technologies and platforms for KM?
	Applications	3.25 Does your organization have any application for KS and KT? 3.26 Do you have any application that prompts PKN internally and externally in the organization?	3.27 How is the application of the proposed model in your organization likely to: influence the development of applications for KS, KT, and PKNs?

In summary, the matrix above breaks down the applicability of the proposed model into four categories including human oriented, organization oriented, management oriented, and technology oriented. Primarily, the matrix helps understand the applicability of the proposed model in various departments of government entities.

3.4 Methods of Analyzing the Collected Information and Data

This stage started immediately after the completion of the interviews to summarize the different responses and recommendations. The researcher used interviews to explore the opinions, perceptions, beliefs, and motivations of employees working in different sectors in AD government. The data were recorded on MS Excel for analysis using the framework method. This thesis follows a framework analysis approach as a qualitative technique to guide data flowing, sorting and charting in reference to key themes and issues. The framework analysis is applied in consistent with the commissioned research brief, objectives and aims and the structured top guides for purposes of identifying patterns or themes within the data (Smith & Firth, 2011).

The framework approach used would help identify themes and patterns as cast from the interview data and direct observation regarding the processes, methods and structure of acquiring and transferring implicit knowledge via activation of the PKN among employees in the Abu Dhabi government organizations. The framework analysis method offers precise steps to follow and provides highly structured outputs of summarized data (Gale et al., 2013). The approach provides a holistic and descriptive overview of the whole research findings. This section documents the framework analysis approach used to make a sense of the collected data on KM Model and PKN practices in AD government entities. As identified below, the approach requires and used five key steps, including transcription, familiarization with the interview, coding and identifying thematic frame, charting, and mapping and interpretation (Srivastava & Thomson, 2009).

3.4.1 Transcription

The transcription step involved the verbatim transcription of the unstructured interviews conducted on the 25 key stakeholders in knowledge management in Abu Dhabi government. The researcher transcribed the interview responses word for word without including any dialogue conventions such as pauses, as the content was not of any practical benefit to the context. Important contents from the interviews were transcribed from the audio recordings, as well. An individual transcript per each respondent was prepared. During the transcription, sufficient line spacing was used for making notes and offering space for later coding activity. The margins were used to expand on the respondents' understanding on meaning, application and benefits of knowledge management (KM) in government organizations in Abu Dhabi. Nonetheless, the activity was tedious, resource intensive, and time consuming because transcribing relevant content from verbatim responses of the interviewees was a big challenge.

3.4.2 Familiarization with the Interview

As found in the literature (e.g. Srivastava & Thomson, 2009), familiarization with the interview is the second phase of framework analysis. The researcher familiarized with the entire interview using both the transcript and the audio recording or any reflective or contextual notes taken during the unstructured interviews. In this phase, the researcher combined field notes and the actual interview materials such as recordings, transcribed notes and observation reports. The margin/contextual notes are utilized for analytical impressions.

During the familiarization with the interview activity, the researcher originated relevant thematic framework based on: (a) a priori main issues on KM in government entities as informed by research models or theories, and (b) emerging issues based on the researcher's open-mindedness to respondent's views and current status in regard KM in government entities in AD. As suggested by Srivastava & Thomson (2009), the researcher allowed the respondents' data to shape the main themes, issues or concepts that the interviewees may have expressed. In this context, the researcher familiarized with the main concepts, including knowledge management, knowledge governance and organizational performance, and how the performance by government entities is affected by KM and knowledge governance practices. As the researcher became more familiar with the themes or key issues as derived from the respondent's data and a priori concepts, the next step was to classify or group and filter the related data. At this stage the researcher became familiar with the relationship between ideas or concepts, as well as relevance of the main issues. Overall, the thematic framework set the grounds for comprehending the respondents' ideas (Gale et al., 2013) on the need for knowledge management model in the Abu Dhabi government agencies.

3.4.3 Coding and identifying thematic frame

The coding was made on the transcript line-by-line using a label or code by considering each paragraph or phrase in an attempt to summarize the respondents' opinion on KM in AD Government. Most importantly, line-by-line coding practice was used to be watchful for considering ideas or concepts that may be challenging to identify or classify, as well as for reconciling and elaborating any possible anomalies on the data. All key phrases are summarized using the respondents own words – the in-vivo codes (or labelling the response with a short phrase).

As this coding enables the content to remain true to the actual data (Ritchie & Lewis, 2003). During the coding procedure, all relevant ideas, concepts or opinions and behavioral observations were coded. This approach was more of an inductive review of ideas from the different perspectives as noted during the familiarization and the respondents' impression (Gibbs, 2007). (See Appendix B)

3.4.4 Charting

From the developed codes, the specific data elements or pieces were arranged as index themes under specific classification which includes success factors (SFs) of KM in government agencies, current status, and the possible future status; as envisaged in the Model Applicability Matrix (MAM). Since it is ideal, a framework matrix as designed by charting the classified respondent's data in the MAM was developed considering the 'cardinal rule' that although the specified data pieces are drawn from their context, it is vital to caption the direct case associated with each data by ordering them under each chart (Srivastava & Thomson, 2009).

3.4.5 Mapping and Interpretation

During the coding process, the researcher has to record relevant ideas or impressions from the field notes. It is important to indicate in the current study the emerging themes were noted down and charting was done using the Model Applicability Matrix (MAM). In this context, following Gale et al. (2013), relevant ideas as noted from the MAM and field notes were identified for similarities or differences, and mapped. Relevant theoretical concepts such as leadership, management strategy, people concept, and organizational structure and culture were interrogated in exploring their relationship with KM.

Finally, interpretation efforts involved making meanings as well as generalization from the mapped concepts (follows Smith & Firth, 2011). The researcher used comparative attributes from the charts to create the desired schematic diagram of the observable facts, such as success factors for KM in different government entities, structure, components and ways to apply the KM model in Abu Dhabi government agencies or departments.

3.5 Chapter Summary

This chapter has detailed the methods for collecting and analyzing data for the current study. This primarily a qualitative work information and data collection from secondary sources of information, and from the field. The empirical evidence for the research was drawn through direct observation by the researcher and unstructured and unstructured interviews of 25 senior level officials involved in knowledge management in five departments of Abu Dhabi government. The most important part of the research is to analyze the collected information and data. The data were recorded on MS Excel following the framework. The framework analysis approach as a qualitative technique to guide data shifting, sorting and charting in reference to key themes and issues. The framework approach helped to identify themes and patterns as cast from the interview data and direct observation regarding the processes, methods and structure of acquiring and transferring implicit knowledge via activation of the PKN model of KM among employees in the Abu Dhabi government organizations. The framework analysis approach and the resultant thematic ideas and information formed the foundation for examining the proposed KM model's applicability which is analyzed in Chapter 5. Thus, the next chapter defines the current status of knowledge management in AD government.

Chapter 4: A Knowledge Management Model for AD: Structure, Process, and Features

4.1 Introduction

According to the literature reviews findings in chapter two, knowledge is categorized into two types implicit and explicit. Further, either implicit or explicit has been perceived differently by different scholars, knowledge is defined as object, process or network. Knowledge as an 'object' can be seen as a 'thing' that can be captured, acquired, shared and utilized. Thus, in this sense, knowledge management (KM) presents as a repository of knowledge. When knowledge is seen as a 'process,' it depends on the people's interaction and knowledge conversion and becomes an enabler of the KM cycle. The third perception, seeing knowledge as a network, includes different objects or nodes that are connected by various relationships to execute and activate the KM cycle and achieve the desired outcomes (Chatti, 2012).

The knowledge management model proposed in this chapter combines these three perceptions. It depends on the knowledge network as the driver of the other two viewpoints. Implicit knowledge defined as the foundation of the whole KM process. It is acquired, created, shared and used by people who are the engine that push and drive knowledge to execute and adopt in each phase of the KM cycle. Thus, it is essential to focus on people and provide a proper condition and suitable environment for them to enhance personal knowledge network which will enable knowledge transfer in the organization. The proposed model built based on the results of the previous academic studies and direct observation across Abu Dhabi Emirate. The structure and components of the model selected based on the most factors that are affecting the transferring of implicit knowledge and the tools used to support the whole process.

As for outcomes, it reflects the positive, realistic impact of implementing the knowledge governance model in the organization according to various previous studies. If an organization wants to be ideal, knowledge sharing must be considered by connecting people with the process and systems and ensuring that the goals are understood, and people are motivated to achieve the goals. KM is thus related to governance in any organization.

This chapter summarized the relevant finding from the previous literature discussed in chapter two and had been used to build the new model which focus on exchanging and sharing implicit knowledge through efficient personal knowledge network PKN. This chapter divided into two main sections, the first section discusses the main challenges of dealing with tacit knowledge and the need of governance model. The second section illustrates the proposed model in detail by explaining the full structure and the role of each component.

4.2 Knowledge Governance Model: It's Need in Abu Dhabi

UAE is one of the developing countries. Therefore, Abu Dhabi government entities influence the quality of life through making policies and delivering services. These entities have accumulated the amount of knowledge, skill, and experiences gained among years but unfortunately, this knowledge is not retained in a way to be shared and built. This section discusses the need for a unified model to govern and operate the knowledge in the government especially the implicit one. The concept of KM is limited in the UAE, especially in government entities.

In the recent years, the UAE has been on the forefronts in promoting knowledge and KS among its citizens. Primarily, this is due to its strong belief in the relevance of knowledge management in making a positive change that supports society growth and development. The government entities in AD have noticed that economic growth in the modern era can only be attained with the implementation of the idea of knowledge management, which provides innovative and unique products and services (Barhem, Younies, & Smith, 2011). Furthermore, in the UAE, especially in AD it has allocated several indicators that promote high focus to the implementation of KM programs, such as KM sharing and effective organizational structure (Barhem, Younies, & Smith, 2011). Equally, the country focuses on enhancing its section of “knowledge field workers’ out of the total number of employees in the country (Barhem, Younies, & Smith, 2011).

Another approach that the AD government entities should use to promote KM is knowledge sharing as knowledge is spread among several employees in a firm. Knowledge sharing has achieved substantial attention in the western world. It is important for an organization to attain success. Primarily, the latter is attributed to the fact that knowledge sharing has the ability to improve decision-making capacity and to develop learning organizational culture. In the process, it motivates cultural modification and innovation. General performance in an organization enhances when people share and transfers knowledge.

According to the word bank handbook in knowledge sharing, Janus (2016) describes and defines the ideal organization. He argues that the ideal organization is a complex structure of people who have a shared goal and they work together using process and systems to reach their goal efficiency.

Knowledge sharing in the ideal organization take part in each component in the previous definition where for any organization either it is small or large in the size for sure it has challenges that overcome and manage by specific roles and functions. A successful organization ensures that “how-to” knowledge is always shared among their employees in different layers of the organizations which help them to learn, understand and build on to achieve the organization desired goals (Chatti, 2012).

Further, people are the assets of the organization and ideal organization have to be aware of their employees and ensure their stability. People in the perfect organization have the willingness to share the “how-to” knowledge because they have a clear goal to achieve it which improves organization’s performance so as a successful organization it has to provide an environment that increases their employee's motivations and fill all their needs. The motivation can happen by improving the communication channels, encouraging team works and problem solving and get employees excited about goals and tasks (Janus, 2016). Additionally, successful organizations have processes that facilitate the actions and connect people also they develop systems and tools to support these processes. They ensure that works are executed in best ways where knowledge sharing takes place this way by depending on their methods and systems to capture knowledge and lessons learned, share experiences and avoid repetition of mistakes (Janus, 2016).

Janus (2016), referring to the World Bank’s works, describes and defines an ideal organization, arguing that a perfect organization is a complex structure of people who have a shared goal and work together using process and systems to reach their goal efficiently.

Knowledge sharing in an ideal organization, irrespective of its size, occurs involving the object, method, and network to face many challenges to overcome and roles to manage. A successful organization ensures that “how-to” knowledge is always shared among their employees in different layers of the organizations which help them to learn, understand and build on to achieve the organization desired goals (Janus, 2016).

Further, people are the assets of the organization and ideal organization have to be aware of their employees and ensure their stability. People in the ideal organization have the willingness to share the “how-to” knowledge because they have a clear goal to achieve it which improves organization’s performance so as a successful organization it has to provide an environment that increases their employees’ motivations and fill all their needs. Thus, this can be achieved by improving the communication channels, encouraging team works and problem solving and get employees excited about goals and tasks (Janus, 2016).

Besides, successful organizations have processes that facilitate the works and connecting people also they develop systems and tools to support these processes. They ensure that the jobs are executed in best ways where knowledge sharing takes place this way by depending on their methods and systems to capture knowledge and lessons learned, share experiences and avoid repetition of mistakes (Janus, 2016). Many government entities in Abu Dhabi influence the residents’ quality of life by making policies and delivering services. These entities have accumulated a vast quantity of ‘implicit’ knowledge, skills and experiences over the years, which unfortunately have not been retained to be shared and built upon.

Chatti (2102) argues that addressing the implicit knowledge is the significant challenges and requires to be embedded in a KM model that emphasizes the human side of knowledge by shifting the importance from know-what to know-how and know-who (Chatti, 2012) knowledge can be shared for increased organizational efficiency.

Most often the implicit knowledge in any organization is not captured, retained or shared among the employees because the sharing depends on the individual's willingness (King, 2008). Thus, the organization loses essential knowledge and experiences when its employees leave the job. Non-recorded knowledge leads to duplication of the efforts and deprives the organization benefits of the previous encounters (Janus, 2016).

Based on the Word Bank handbook on knowledge sharing, Janus (2016) defines three common knowledge related problems, knowledge sharing goals of an organization (Figure 4.1). Responding to these, Janus (2016) recommends three ways that may help the organization to solve the issues related to knowledge sharing. First one is developing knowledge to share culture and enhancing collaboration among the parties. Second building organizational knowledge bank that retains the knowledge from individuals and third way is creating a method of building on the successes and avoiding the mistakes (Janus, 2016). All this needs an explicit governance model that works on enhancing the employees' willingness and involvement to allow knowledge transfer and experience knowledge sharing.



Figure 4.1: Three Typical Knowledge- Related Problems and Knowledge-Sharing Goals for Organizations (Janus, 2016)

The following section provides a full picture of a new knowledge governance model developed, as the ‘Personal Knowledge Network (PKN)’ and illustrate its different components, and how are they likely to help achieve the desired goals of knowledge governance.

4.3 The Knowledge Governance Model: Governance for Personal Knowledge Network (G4PKN)

Primarily, this section explains how the model developed, what are the elements considered and how all components integrate to reach the desired outcomes. First of all, it illustrates the whole structure of the model then it explains in details the three main elements of the model which are PKNs, KM process and the governance mechanisms. This model built upon the PKN model developed by Chatti (2012) where the knowledge sharing depends on the personal networks.

The same concept is followed here in addition to that this model is adding a governance framework to support and encourage building these networks and

considerate the SECI model by Nonaka and Takeuchi as an outcome. The model consists of four main components: Governance mechanisms as enablers/input, KM process (activates), personal network (relations) and results. The model focuses on the integration between governance mechanisms, process and systems and how each component is support and support by others to achieve desired outcomes (Figure 4.2).

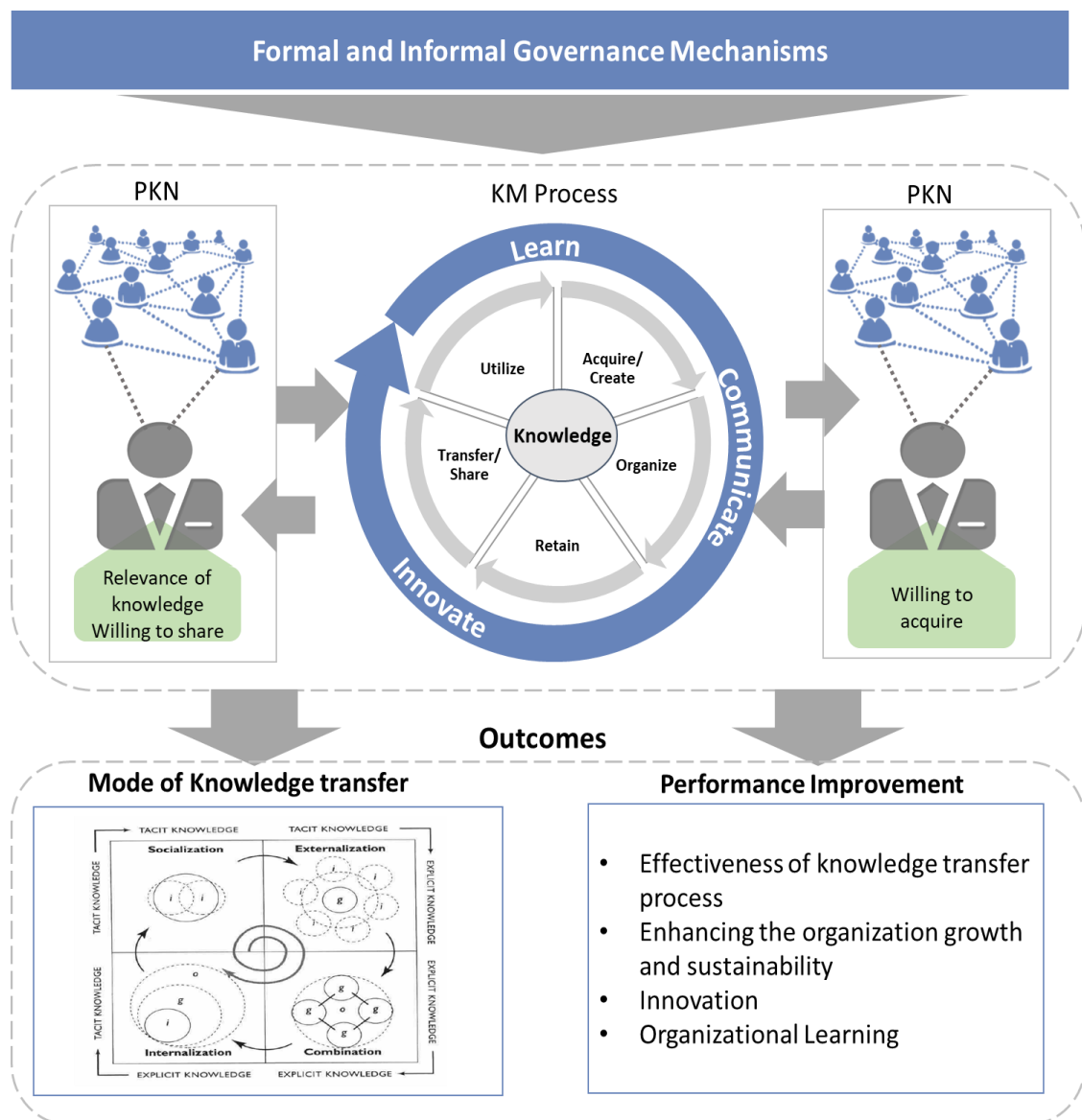


Figure 4.2: Governance for Personal Knowledge Network (G4PKN) (Chatti, 2012)

4.3.1 Personal Knowledge Network (PKN)

Personal Knowledge Network (PKN) is the first element in the model whereas the model built based on the concept of supporting and encouraging PKNs. The below discussion illustrates the idea and the approach of PKN. Notably, the PKN model identifies the personal and network dimensions of knowledge. It starts with the individual who carried the knowledge and views KM as the continuous creation of a Personal Knowledge Network (PKN) (Chatti, 2012).

According to Chatti (2012), PKN identifies the individual knowledge worker. For each individual, a PKN is a unique adaptive selection that consists of external level: implicit and explicit knowledge nodes (people and information) and internal level: theories-in-use (Norms, values, strategies, and assumptions). Each PKN is an extension of another external network with new nodes and a reframing of one's theories-in-use (Figure 4.3), (Chatti, 2012).

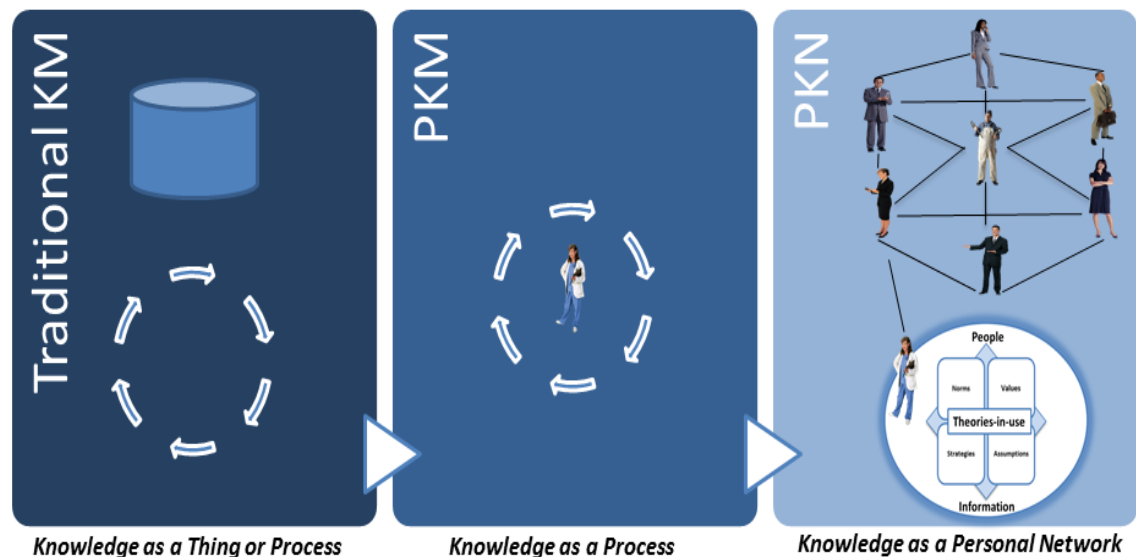


Figure 4.3: From PKM to PKN (Chatti, 2012)

The proposed model shows knowledge as a network; this network contains four elements: people as (Objects) and often they carry the implicit knowledge, the social relationship between those objects and how knowledge is moved and flowed between different objects, the structure, and outline of these relationships.

Argyris and Schon (1978), introduce the theories-in-use to present their views in organizational learning as the process of detecting and correcting errors (discussed in Chatti, 2012). PKN is the first component of the model, and it consists of a number of personal relationships that works as a channel to transfer the knowledge to others and run the KM process cycle. Once the individuals have a willingness to share the knowledge, the process cycle will operate, and the other person will receive and capture the new knowledge. By following this approach, the level of knowledge distribution will expand from the internal level of one's PKN to external level of another PKN. According to King (2008), KM process is quite people- intensive and thus social method in the KM system is necessary this includes building the communities of practice such as self-organizing groups with common interest and expert networks where people greater expertise can help those with less.

As a result, the organizational learning will occur because of this expansion of knowledge sharing which help individual to experience problem (error detection) and work on solving it (error correction). This can be done through inquire, test, compare and adjust the personal theory-in-use to reflect the organizational theory-in-use and reach the effectiveness of the organization (Chatti, 2012).

4.3.2 KM Process

The second element of the proposed model is the KM process, and it is the core operational process to ensure the movement of knowledge from one phase to another, below is the detailed illustration of KM process and the way that it works to run the whole model.

Knowledge is all the information that is talked about, and knowledge process is the hub of the knowledge. Actually, it is created by individuals and then engaged through the full KM cycle that focuses on capturing, using and sharing the knowledge. The knowledge process involves knowledge acquisition/creation, refinement, storage, transfer/sharing, and utilization. The KM function is to operate this activates, develop tools and methods to support, motivate and encourage people to participate in improving the organizational behaviors and performance as well as better decisions (King, 2008).

King (2008), define each phase of the knowledge process cycle where it starts from creating or acquiring the knowledge and in this phase, individuals are developing new knowledge or replacing the existing knowledge with new content. The knowledge creation operates by referring to SECI model developed by Nonaka and Takeuchi called “four modes of knowledge creation.” The four modes are socialization (converting implicit knowledge to new tacit knowledge by shared experiences and social relations), externalization (converting implicit knowledge to explicit knowledge through documentation, reports, and manuals). Internalization (creating new implicit knowledge from explicit) and Combination (creating new explicit knowledge by categorizing, margining and synthesizing existing explicit knowledge).

On the other hand, knowledge acquisition includes the search for, recognition of, and integration of valuable knowledge, regularly from outside the organization. Three main activities illustrate the knowledge acquisition: searching from external sources, sourcing to select the source to use and grafting by adding an individual who owns and retains preferred knowledge to the organization (King, 2008).

After the new knowledge is created or acquired by individuals, the KM mechanisms prepare it to be moved from one phase to another in the KM process. Before entered and stored the knowledge in the organization's memory, this knowledge should be prepared in a way that maximizes its impact and utilization. The refinement refers to a set of activities that used to filter, select and optimize the knowledge to be retained in the storage media. This activities and mechanisms work to explicate the knowledge, organize and codified it into proper formatting that fit with the organization's storage capabilities (King, 2008).

In fact, the organizational memory includes knowledge in people minds, stored in electronic repositories, relationships, services and knowledge embedded in the organization's process. For the organization to maximize the impact and meet the desired objectives, this knowledge must be shared or transferred to others (King, 2008) using formal and informal governance mechanisms.

According to King (2008), there is a difference between knowledge sharing and knowledge transfer. However, both may have the same conceptualization of exchanging knowledge between two parties. Knowledge transfer refers to a focused and purposeful communication from the sender to a known receiver while knowledge

sharing is less focused domination and the knowledge may share through repository to unknown people (King, 2008).

Once the other individuals received this knowledge, this knowledge will be utilized through elaboration (development of different understanding), infusion (the identification of underlying issues) and thoroughness (development of several beliefs by different individuals or groups). The usage of this knowledge will facilitate innovation, individual and collective learning, knowledge re-use and collaborative problem solving (King, 2008). Consequently, new knowledge will be created and again it will go through the whole cycle to be transferred and shared within another individual's network and so on. Further and according to the KM model developed by King (2008) in Figure 4.4, knowledge have a potential impact on organizational performance through creating the knowledge-intensive organizational capabilities (King, 2008).

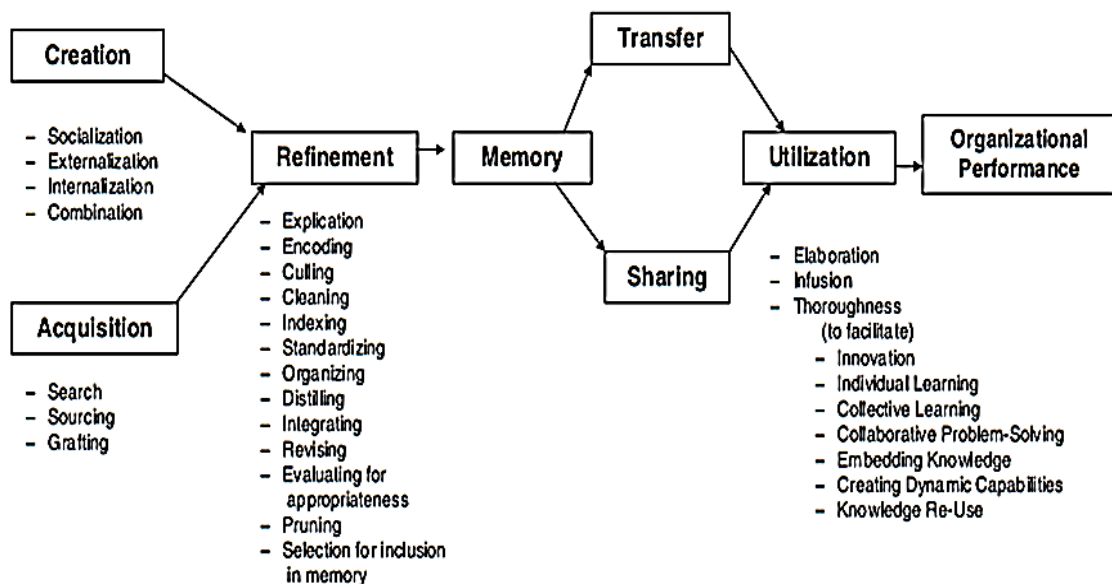


Figure 4.4: KM Process Model (King, 2008)

4.3.3 Governance as an Entail Input

The third and most primary element is the governance mechanisms which supports the function of the model and govern the organizational knowledge exchange. The following discussion explains the importance of having governance model, the difference between formal and informal mechanisms and best practices of some examples for both mechanisms. Janus (2016) argues that “knowledge sharing organizations are not born they are made” and becoming a knowledge sharing organization requires a developing of organization features that enabling the environments to support and facilitate the knowledge activities of capturing and sharing. To achieve these three factors are needed: leadership support, governance structure, and budget.

Janus (2016) clarified the difference between the governance definition in the traditional organization and knowledge sharing organization. The traditional organization did not define the role, and responsibilities for knowledge sharing and only a few people consider it as a business need while in the knowledge sharing organization strong governance with clear roles and responsibilities have been embedded within the organization tasks and functions and all employees are involved in the whole knowledge management system. For knowledge and learning to succeed and grow organizations then need to develop two balancing strategies: (1) structure a team of knowledge and learning experts and (2) embedding knowledge and learning responsibilities in job descriptions to become all employees business (Janus, 2016).

According to Hansen (1999), there are two definitions of KM strategies that are either codification or personalization (Discussed in King, 2008). Codification strategy refers to the implementation of KM in the form of electronic document systems to reuse it again through formal channels. This includes sub-strategies of systems (creating and filtering repositories), process (developing and using repeatable process), commercial (managing the intellectual property, e.g., patents) and strategic (developing knowledge capabilities). On the other hand, the personalization strategy focuses on facilitating the knowledge transfer and sharing within individuals by the focus on improving networks. Personalization strategy consists of cartographic strategy that works in connecting people through creating knowledge directories, maps, and networks. The organizational strategy which provides the IT infrastructure to facilitate communities of practice and finally the social strategy by providing physical environment to allows and encourages the knowledge creation and exchange (King, 2008).

Janus (2016), argue that individuals will need to realize a real value in any knowledge-sharing system. The effectiveness of right knowledge systems relies on the integration and interaction between people, organizational processes, and the technology that supports both. Good governance of knowledge sharing supports the balanced distribution of the effort between Knowledge management components (Janus, 2016). In addition to this on the basis of the analysis of the provided information, it can also be stated that the governance of the knowledge management is an essential element as without having the proper information of the roles and responsibilities the management is not possible. In this regard, this is essential that the approaches and strategies to be applied require being described in detail concerning the duties and responsibilities of the people (Ortolani et al., 2016).

When the employees have the authority as well as they are known about their duties, then they have a clear focus on their goals and objectives that they have to achieve and work accordingly. Further details of the analysis provided the understanding of the concept of governance, and it has been analyzed that the term governance means that governance means the authority and the balance of the power (Serenko & Bontis, 2017). Governance refers that the power or the authority is transparent and equally divided in the responsible people; who are not having the power to do anything that they want but have the liability for all the actions and activities and are questionable for any fault or error (Pelikan & Waser, 2016). In this regard, the governance of the knowledge management is all about the process of knowledge management. By providing who will share what and how the knowledge will share etc. The liability for the regulation of the management and the decision making for the knowledge sharing and management is primarily the governance of the knowledge management (Ortolani et al., 2016). Whereas the approaches which developed for the knowledge management, as well as their implication along with the development of the plans, is also the part that comes under the head of governance. It is essential that the governance of the knowledge management is clear and transparent (Prabhakar, Yadav & Atchamamba, 2017).

According to Tounkar (n.d), two factors drive the knowledge transfer in the organization: 1) communication process and 2) information flows. The knowledge transfer channels can be formal or informal, personal or impersonal. Informal communication channels referred to socialization (e.g., informal discussion, coffee break conversation) or formal (e.g., training session, incentives, and intranet), which ensure greater distribution of knowledge in the organization but not always encouraging creativity among employees (Tounkar, n.d).

Also, the knowledge transfer channels could be personal channels that may be more effective to distribute extremely contextual knowledge (e.g., training) while impersonal (e.g., repositories and databases) is more efficient for codified knowledge and generalized to other contexts. For all types of communication channels information technology play a significant role in supporting the transactions of knowledge within the different channels and between employees (Tounkar, n.d).

The Figure 4.5 summarizes the relationship between formal and informal mechanisms and promoting the knowledge sharing in the organizations.

Knowledge Governance Mechanisms:

1. Formal Mechanisms

Network is based on the formal governance where knowledge are formally shared and governed. The details are explicit and there is no ambiguity in the data and knowledge shared

Organizational Structure

Developing the knowledge sharing strategy, supervising the knowledge sharing process and ensuring the implementation of the knowledge sharing and transfer

Strategy

A guideline of designing the knowledge sharing initiatives and culture, and facilitating the different dimension of the strategy among the organization

Incentives and motivations

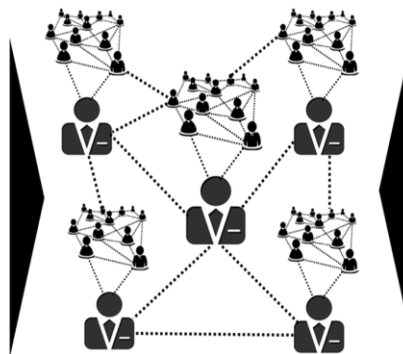
Rewarding structure: Tangible & Intangible

Technology Tools

Intranet and Extranet, Expertise Locator, Knowledge Base, Knowledge Assets

Examples

Promoting Personal Knowledge Network



2. Informal Mechanisms

Informal communication channels referred to socialization (Personal contacts and hence to the implicit dimension of knowledge transfer)

Leadership and Culture

Supporting governance structure, providing required funding, enabling environment

Peer Assist

A tool based on dialogue used to share and transfer knowledge and experience among two teams

On-the-Job Training

A mechanism used to transfer knowledge From Experienced employee to a new person by teaching them how to perform job tasks

Social Media Networks

Internet-based networks and a new way to manage employees and customer relationships.

Examples

Figure 4.5: KM Governance, Formal and Informal Mechanisms

4.3.3.1 Formal Mechanisms

Presently, formal mechanisms of knowledge governance are widely applied by government organizations. The formal governance mechanisms of the knowledge management are all about managing the overall knowledge using the formal governance (Serenko & Bontis, 2017).

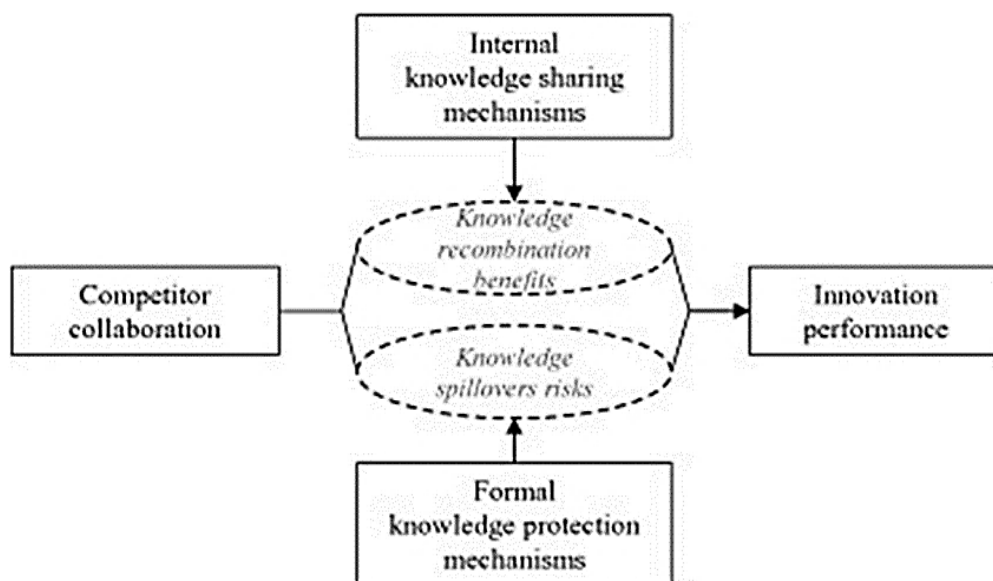


Figure 4.6: Formal Governance Models (Estrada, Faems & de Faria, 2016)

In this regard, the model that is provided in this thesis is explaining that there are two different participants in the knowledge network among which one is ready to acquire, and the other is ready to deliver the knowledge. The formal knowledge network is based on the formal governance where the details are formally shared and governed. The details are explicit, and there is no ambiguity in the data and knowledge shared (Ortolani et al., 2016). Further, the formal mechanism model illustrated in Figure 4.6 by Estrada, Faems & de Faria (2016) provides the details of the formal governance of the knowledge management in which it is provided that there are four major elements for that in which the competitor collaboration and innovation of the performance are important.

When the competitor collaboration influences the process, then the innovation in the performance is observed whereas the other two factors affecting our internal mechanism and formal mechanism. The knowledge benefits and risks are centered in this process (Estrada, Faems & de Faria, 2016).

This model further can be described that it has different parts and important elements of the governance and being implemented for the management of the knowledge. Whereas if the knowledge management is being described using the example for these governance model, then this can be provided that mainly the formal governance model is focused primarily on the benefits and risks (Serenko & Bontis, 2017). That means the whole process is dependent on the benefits of knowledge recombination as this is the center of the model whereas the other part or the other most important element is that the risks of the knowledge spillover. The knowledge spillover means when the knowledge has been increased then the need of the knowledge whereas the recombination benefit is that when there are some benefits of the using a combination of information (Estrada, Faems & de Faria, 2016). In this regard, there can be different examples of formal mechanisms that can be executed to achieve the desired goals which discussed in the following sub sections.

4.3.3.1.1 Organization Structure

Organizational structure involves the interrelationships of the component sections and positions of an entity. The configuration of organizational elements has the ability to incorporate KM governance. According to (Janus, 2016) Knowledge sharing is a new function, an organization chart may not reflect the knowledge sharing role as the function of knowledge sharing and transfer must be embedded in most positions.

The ideal knowledge sharing organization needs to create and establish a robust and flexible operational structure to improve their internal capabilities. Janus (2016) argues that there are several knowledge-sharing models are applied, and no single structure ensures success. Each organization can use the model that fit with their capacity. However, it is necessary and more useful to develop a governance structure that contains two levels: (1) supervision by a steering committee chaired by a member of senior management and representing the entire organization. This committee is responsible for developing the knowledge sharing strategy, supervising the knowledge sharing process and ensuring the implementation of the knowledge sharing and transfer. (2) Execution by knowledge management coordination team and learning specialists. Implementation level in some organizations includes building learning and training center that include experts who have willingness and skills to transfer the knowledge to other employees by organizing and conducting knowledge sharing events and sessions. Also having communities of practice (expert networks) is one implementation level that can be part of governance structure where this community consists of manager who ensures the affectivity of the functions and facilitators who provide daily assistance and support to members (Janus, 2016).

Managing knowledge sharing by establishing communities of practice requires an advanced level of organizational maturity and strong incentives for employees to participate in the knowledge sharing networks and process (Janus, 2016).

4.3.3.1.2 Strategy

The knowledge sharing strategy relies on the habit and willingness of the knowledge employee to seek and be receptive to knowledge sources. Therefore, the correct culture and incentives must be present (Janus, 2016).

For any organization, it is essential to have a clear knowledge sharing strategy that steers the organization toward a desired and shared vision. This strategy must define the role of knowledge sharing as one of the strategic objectives of the organization, to be a guideline of designing the knowledge sharing initiatives and culture and facilitating the different dimension of the strategy among the organization. A good strategy provides a clear and transmissible plan about the organization status, future targets and how to achieve it, create a leadership commitment, increase awareness and understanding in the organization and encourage employees to share the knowledge and participate in achieving organization goals (Janus, 2016).

The Figure 4.7 shows the structure as an example roadmap developed by World Bank for the change management process to achieve the knowledge-sharing goal in the organization. This roadmap is a meaningful way to guide the organization strategy in-depth action plan. The action plan specifies the activities required meeting the milestones, and it assigns defined roles and responsibilities (Janus, 2016).

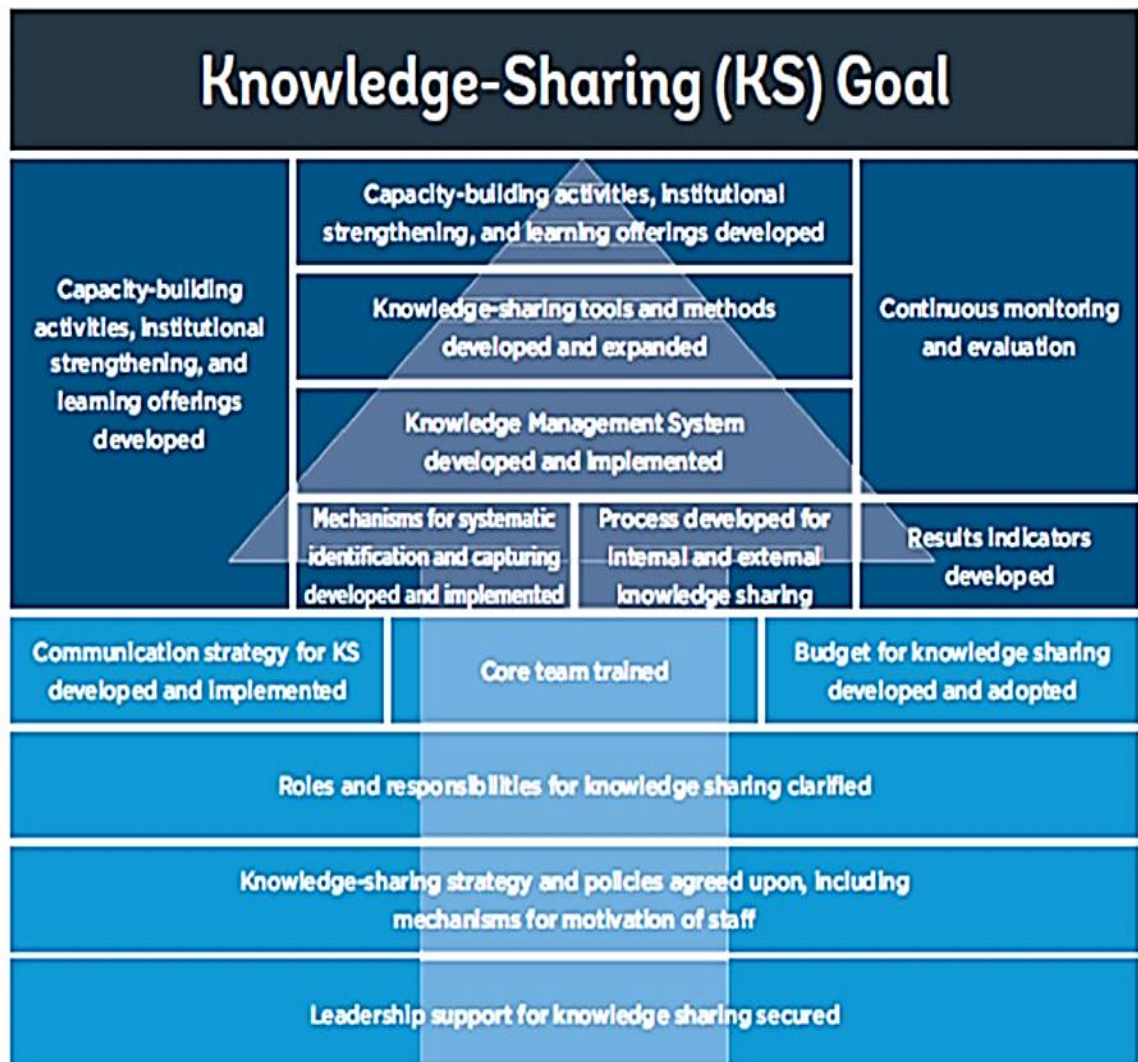


Figure 4.7: Road Map for the Change- Management Process in KM (Janus, 2016)

4.3.3.1.3 Incentives and Motivations

Motivation is a spirited behavior to achieve the efficient utilization and sharing of knowledge in the organization where it is considered as a key success factor to encourage employees to acquire, create, share and utilize the knowledge and become more knowledgeable (Nesan, 2005). According to Janus (2016), he argues that successful organizations understand the importance of collaboration in achieving desired objectives. Thus, they support and encourage the proactive knowledge transfer and sharing among both functional and organizational boundaries (Janus, 2016).

According to Nesan (2005), developing an efficient incentives system and rewarding structure is required to motivate individuals and export their internal capabilities and knowledge. Therefore, this rewarding system and incentives process must define and communicate clearly with employees to ensure the relatively and equally treated for all of them. This can be through making straightforward appraisals, and rewarding according to employee's performance, participation in sharing knowledge, skill level and chosen behavior of the employees in share and transfer knowledge with colleagues (Nesan, 2005).

According to Janus (2016) as shown in Figure 4.8, there is two type of incentives: 1) Extrinsic and refer to the "tendency to perform activities for known external rewards, whether they be tangible (e.g., money) or psychological (e.g., praise) in nature" (Discussed in Janus, 2016). This type of rewards can include bonuses, salary increase, career development, and honors. And 2) Intrinsic rewards and refer to behavior based on intangible reward. This can consist of positive feedback, sense of accomplishment, training, and delegation of authority (Janus, 2016).

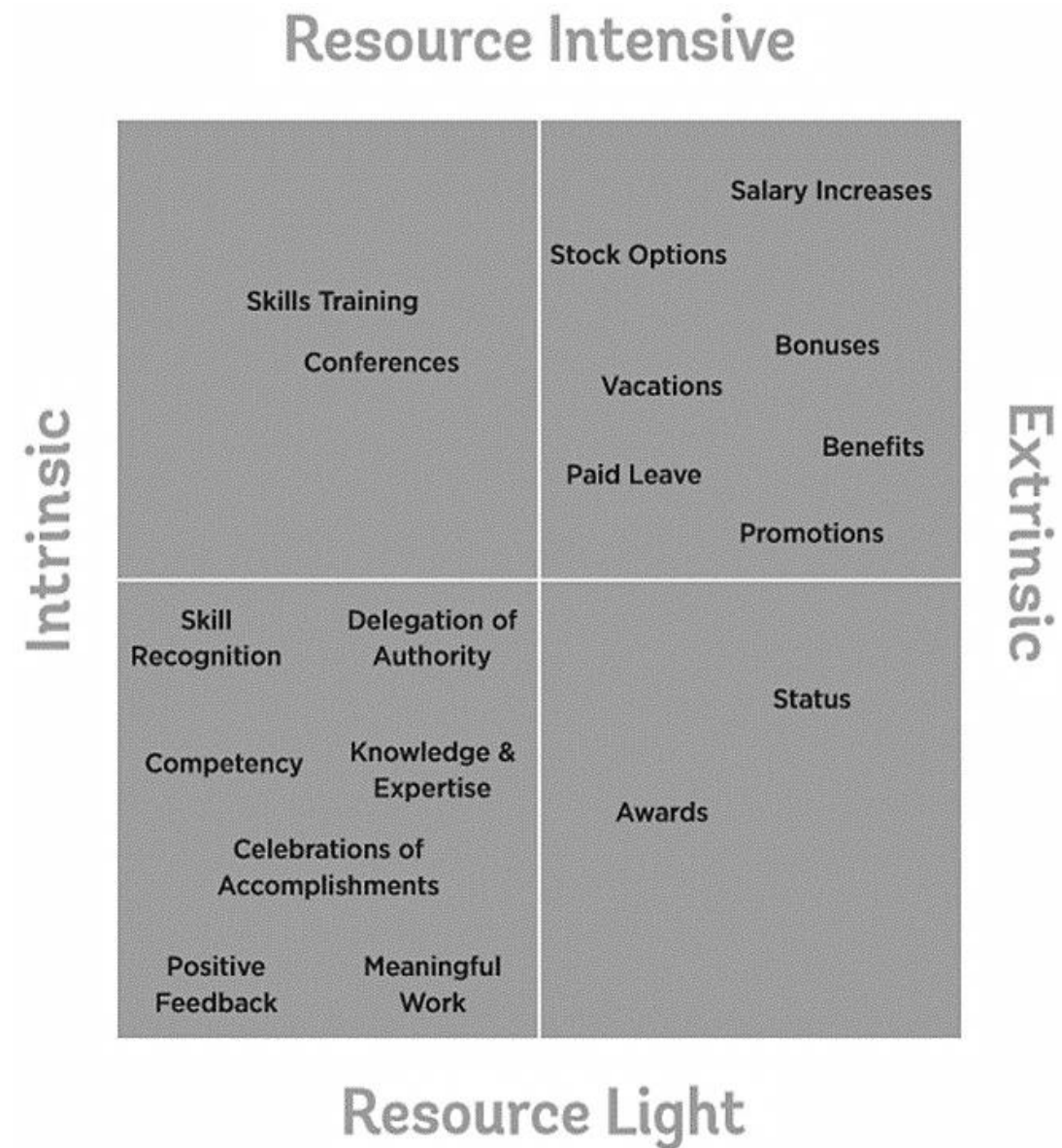


Figure 4.8: Incentives by Type and Resource Intensity (Janus, 2016)

4.3.3.1.4 Technology Tools

According to Omotayo (2015), Technology-oriented is one of the four factors of successful KM. Knowledge is one of the important assets that must be managed in the organization (Perkins & Bennett, 2012) and the key challenge of knowledge-based technology transfer is how to convert tacit knowledge to or from explicit knowledge (Nesan, 2005). According to that KM systems and technology must be designed and added to the knowledge base to facilitate the knowledge management in the

organization (Perkins & Bennett, 2012) by enhancing fast delivery of information (Nesan, 2005). According to Omotayo (2015), Information Technology (IT) considers as an enabler of KM and provides the whole infrastructure and tools to support KM within an organization.

Further, implicit knowledge is primarily about the sharing of experiences over the process of socialization (Nesan, 2005). According to Janus (2016), organizations use different types of IT platforms and systems to provide guidance and improve know-how, such as intranets, extranets, and e-discussion systems, knowledge base and knowledge assets systems. The most important point in maximizing the advantage of knowledge assets and IT platforms and evaluating the knowledge sharing capabilities in the organization is by ensuring the accessibility and the usage of these tools by employees and improve them continuously (Janus, 2016).

The broad options and availability of easy-to-access and low-cost IT tools can significantly support important and large-scale knowledge sharing. These tools enable individuals to build collaborations relationships and extended tern networks. Further, IT systems and platforms should be customized to organization needs and organizational context and aligned with knowledge sharing process in the organization (Janus, 2016). Janus (2016), argues that the effectiveness of such systems depends on the interaction between people, core work processes, and the technology that supports both. Good governance of knowledge sharing helps in building the balance between these components and making IT investments more probable to have a valuable impact.

The wide variety of IT tools and platforms and the stable access to the Internet provide opportunities for knowledge sharing. Here there are some examples of IT solutions that can efficiently enhance the knowledge sharing in the organization by connecting and inspiring employees.

a) Intranet and extranet

The intranet is a web-based information network used to serve the organization internally; it is customized to meet the organization needs and provide information to employees according to their authorization level and job function. In contrast, extranet has the same idea of the intranet with the extension of the scope where the network involves people outside the organization such as suppliers, partners, and customers. Both intranet and extranet are working in increasing the effectiveness of organizational information retrieval (Janus, 2016).

b) Knowledgebase

A knowledge base is a computer database tools used to administer, store, access and systematically retrieve information. It usually includes a search engine and a web-based user interface (Janus, 2016).

c) Expertise Locator

An expertise locator is a tool that identifies and provides appropriate access to experts on a given subject in the organization. The idea of this tool is to create a profile page for each expert and employees can find the right expert using the search engine that allows quick identification of experts. Expertise locators offer a powerful way to connect people who are willing to share knowledge and help others easily with other employees (Janus, 2016).

d) Knowledge assets

Knowledge asset is an electronic document or media that contain knowledge about a specific challenge or issue in work. It presents a key lesson learned from best practices and operational experiences with a decision-making support.

The document should have a standardized format that contains tracing the problem, actions, results, lessons, and recommendations. Further, the knowledge assets should be validated through the review process and formatted with metadata to allow the easy searching and finding within a more extensive knowledge repository (Janus, 2016).

4.3.3.2 Informal Mechanisms

On the other hand, the details that is provided in the model of governance for the knowledge management provided that the aspects of the process are informal when they are not governed.

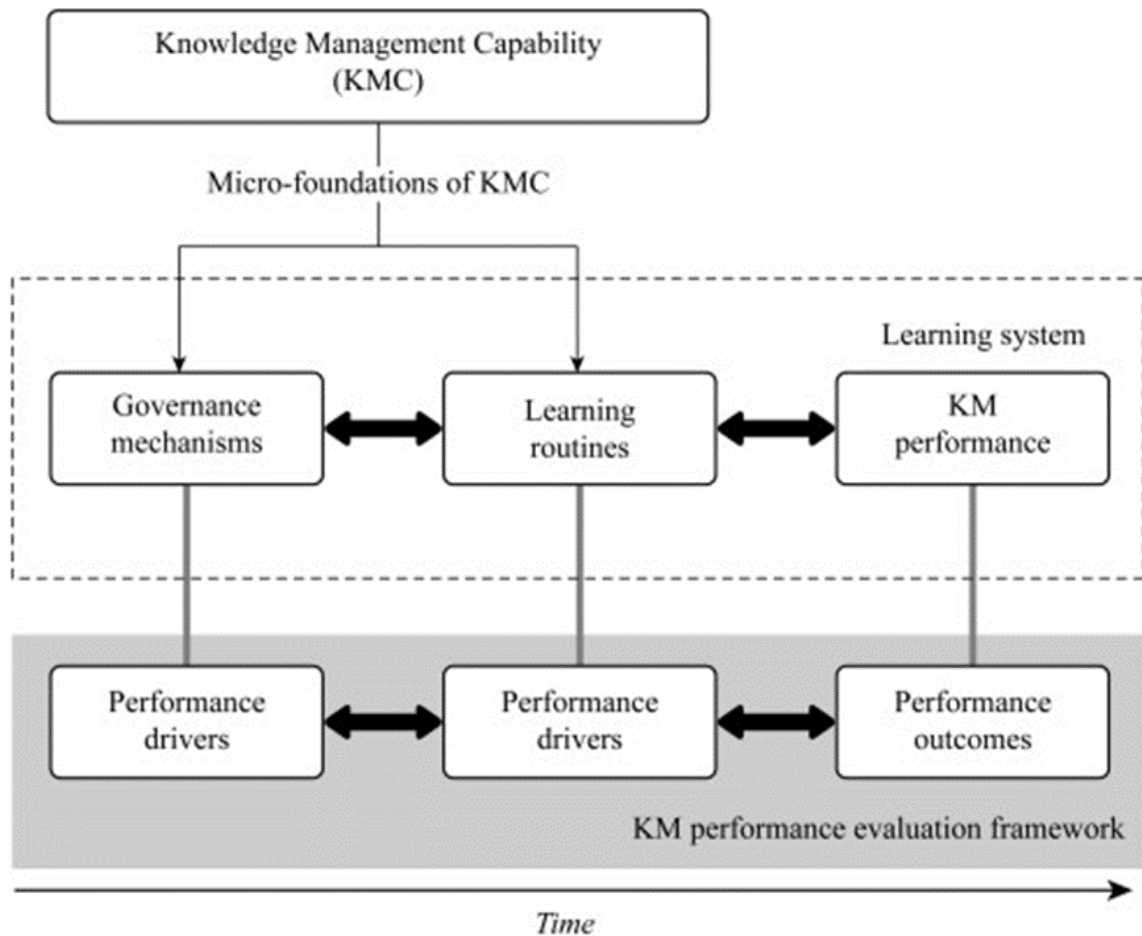


Figure 4.9: Models (Chen & Fong, 2015)

Chen and Fong (2015) developed a model that provides that the informal governance of the knowledge management (Figure 4.9). The model is ensuring that different performance drivers resulted in the final performance outcome after the informal governance whereas the main head is the KMC whereas the learning and overall KM performances are inter-connected with the governance mechanism (Chen & Fong, 2015). While describing the model for the informal governance, it can also be added that the KM performance evaluation framework is an essential element for the informal governance as this is one of the elements that provide the details that what is the current condition of the knowledge management (Prabhakar, Yadav & Atchamamba, 2017). While at the other dimension of the knowledge management and

its formal governance mechanism is being mentioned in the first part of the governance so here these three different dimensions of the informal governance are also being focused. On the other hand, the distribution of authority can be referred to the resource user association and customer tenure, etc. Moreover, for the social sanction, social movement, media, community enforcement, civil society advocacy and many other such elements and material can be added to the examples of informal governance of knowledge management (Serenko & Bontis, 2017).

Below some examples of informal mechanisms and factors that play a significant role in knowledge sharing.

4.3.3.2.1 Leadership and Culture

According to Janus (2016), knowledge-sharing organization are not born, they are made. This requires leadership which encourages the change in the culture and provides a supportive governance structure and required funding.

According to Janus (2016), leadership must work in providing the enabling environment where the organization can develop the disciplined practice of knowledge learning, capture and technical skills needed for effective knowledge sharing. The positive knowledge-sharing environment builds on strong leadership by senior management with the aim of treating knowledge and learning as part of daily operations and includes attractive recognition tools that reward staff.

4.3.3.2.2 Storytelling

A tool used to create of imagined examples or telling real stories to explain concept or idea and effectively transfer knowledge, mostly it is done informally or as a part of more structured presentations (Perkins & Bennett, 2012).

4.3.3.2.3 Peer Assist

A tool based on dialogue used to share and transfer knowledge and experience among two teams, usually used by a work team that starts up a new task or project that required another team experience in the respective field of activity (Perkins & Bennett, 2012).

4.3.3.2.4 On-the-Job Training

A mechanism used to transfer knowledge from experienced employee to a new person by teaching them how to perform job tasks, either in an informal, unstructured manner or more formally with schedules training materials, and records of the training (Perkins & Bennett, 2012).

4.3.3.2.5 Social Media Networks

Social networks consider as a powerful knowledge sharing mechanism. It is an internet-based network and a new way to manage employees and customers relationships. A well-targeted network by the organization can offer their employees and members with access to highly relevant knowledge, connections, and information (Janus, 2016).

4.3.4 Integration Among the Components

Here the integrated review of all the three components is provided in which it is analyzed that PKN, governance mechanisms and knowledge management process are also interconnected with each other and thus have the impact on the overall performance (Grover & Froese, 2016). There is a diagram provided above which is providing the view that KM and the PKN are similar to each other whereas it is also provided that both are interrelated to each other. In addition to this, it is also provided

that when the knowledge management process implemented then, the PKN is required to be applied where that will give the overall connectivity for the KM (Pelikan & Waser, 2016). The knowledge is considered as a process itself whereas the PKN is basically the combination of the people and information with the theories applied. It can be provided that these two elements are integrated in a way that the process required to maintain the strong PKN is the knowledge which connects the people with the information (Grover & Froese, 2016). On the other hand, the third element is being imposed over these two as to manage the PKN the governance is required as that will regulate the actual flow of the knowledge. So, they are integrated in a way that the PKN is based on the process that is knowledge whereas the governance guides the flow of the knowledge to sustain the strong connection (King, 2008).

4.3.5 Outcomes

The goal of Knowledge management is to ensure that organization's knowledge- related assets are improved and employed effectively by planning, organizing, motivating, and monitoring of people, processes, and systems in the organization to attain better knowledge practices and decision and improve organizational behaviors and performance (King, 2009). This section discusses the significant outcomes that can be achieved when the organization applying the proposed model. Two main outcomes can be a result of applying the proposed model of governance and enhancing the PKNs in the organization. First one is that the mode of knowledge transfer where socialization, externalization, combination, and initialization of the knowledge can be increased between employees and the channels to transfer knowledge from one mode to another may improve. The second outcome is that the performance improvement in which organizational processes can be

improved and lead to better organization learning, innovation, effective knowledge transfer process, and organizational sustainability (King, 2009).

4.3.5.1 Mode of Knowledge Transfer (SECI and its Connection to Network)

According to SECI model by Nonaka and Takeuchi, both socialization and externalization depend on the PKN and individual's effort to capture and transfer knowledge. As an organization, the knowledge governance model must focus on these two areas to increase the networks and exchange the implicit knowledge to explicit toward reaching the other two phases (combination and internalization) (Ortolani et al., 2016).

By focusing on the first phase, exchanging of implicit knowledge between individuals, this means that whatever individuals have (information, skills, experiences. etc.) can be transferred to another individual and this will never happen if there is no relationship between both. The role of organization here is to increase this type of relationship as much as it can between employees to ensure the sustainability of the knowledge inside the entity. Once this knowledge is transferring to the second individual: she or he can transfer it to others in his or her network and so on. Moreover, in the externalization phase where the knowledge is transfer from implicit to explicit, organization intervention is required. This will provide a set of guidelines and policies of how this knowledge must be transferred. Further, in this phase, each individual will convert the implicit knowledge to intelligible forms that can be shared with others among the organization (Ortolani et al., 2016).

This model is also being included above in the PKN and it is analyzed that the model is thus connected to the overall mode of transfer of the knowledge. While it can

be provided that the overall process of knowledge sharing, and transferring resulted in the different elements (Chung, Lin & Tian, 2016). The socialization and externalization are the two core elements of the model whereas the other two are combination and internalization in which it is analyzed that when it is about the combination, then the knowledge is transferred from explicit to explicit whereas on the other hand when it is internalization the knowledge is transferred from explicit to tacit. On the other hand, the outcome of the socialization is the transfer from tacit to tacit while for the externalization the knowledge transfer is from tacit to explicit (Pelikan & Waser, 2016).

4.3.5.2 Performance

The overall performance improvement due to the implementation of the process and PKN can be assessed here. It is provided that the KM processes provide the chance of creation, acquisition, refinement, storage, transfer as well as sharing and reuse of the knowledge. On the other hand, this provides the chance of better performance as these all elements support the organizational processes which get improved by the better KM. The KM process here is providing that the overall management of the knowledge in the AD will be enhanced by the innovation and collaborative decision-making. In addition to this, there are two different kinds of learning in this manner. Further, these are supporting the intermediate outcome, which ultimately resulted in the improved organizational performance for the AD (Pelikan & Waser, 2016).

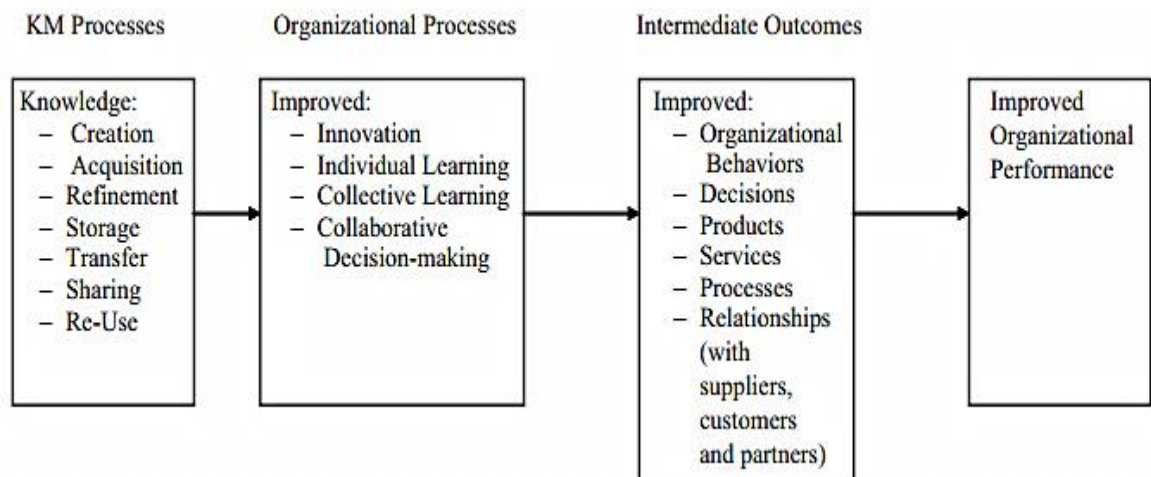


Figure 4.10: Relationship between KM Process and Organizational Performance (King, 2008)

According to King (2009), there are many ways to conceptualize the relationship between knowledge management and organizational learning (OL). One way considers KM to focus on the content that is acquired, create and use an OL to focus on the process itself. Another way is to view OL as a goal of KM to be achieved; this works by supporting and encouraging the knowledge to be embedded into the organizational process to ensure the continuous improvement in its behavior and practices.

The Figure 4.10 shows that KM processes have direct influence that improves the organizational processes, such as innovation, collective and individual learning and collaborative decision-making. As a result of this improvement in the organizational processes better outcomes are produced (e.g., behavior, services, decisions, and relationships) (King, 2009).

Cerdan and Nicolas (2011) argue that strategic KM that related to processes and infrastructures support in the process of acquiring, create, share and use the knowledge which results in formulating strategies and making decisions.

A strategic KM in the organization have a consequence effect in improving both organizational performance and innovation, with implementing a KM strategy organization can be more innovative, develop the human resources capabilities achieve better financial results and improve the internal and external process (Cerdan & Nicolas, 2011)

4.4 Conclusion

In this chapter, KM model is proposed as approach for knowledge governance in government entities within AD. Implicit knowledge defined as the foundation of the whole KM process.

It is acquired, created, shared and used by people who are the engine that push and drive knowledge to execute and adopt in each phase of the KM cycle. Thus, it is essential to focus on people and provide a proper condition and suitable environment for them to enhance personal knowledge network which will enable knowledge transfer in the organization. KM governance is an important construct for the assessment of the organization and functional behavior in the public sector. Drawing a synthesis of information sciences and government organizational literature, the researcher has presented the KM governance model that gives a theoretical and real-world framework to support the understanding of public sector practices in delivering quality services and maintaining a competitive edge in the market. Due to the fact that any effort to enhance KM and knowledge exchange in government entities must be based on concrete and influential theoretical information, it is definite that the work presented in this chapter can be used as reference and motivation for enhancing quality in the management of the public sector. Further, KM offers important insights into understanding effective public sector practice improvement. As a result, KM

governance model has the ability to positively influence the general performance of government organizations.

The KM framework tries to provide an intensive overview of the KM process. The three wide categories of the model, including knowledge sharing, knowledge creation, and knowledge organizing, overlap and relate with one another. The primary focus of the KM is managerial initiatives. The model demonstrates which of the three categories are highly people-based and which are more technology-concentrated. Based on scientific information discussed in this chapter, knowledge sharing is supposed to be highly leadership and people-based. However, this issue has triggered many arguments and should be addressed in future studies.

Chapter 5: Examining the Proposed Model: its Need, Validity and Applicability

5.1 Introduction

The previous chapter proposes a KM governance model and provides an analysis of its components. Since the primary purpose of the thesis is to develop a model to capture the implicit knowledge in AD government organizations, Chapter 4 discusses different ways that can help the public sector in AD to promote knowledge sharing and analyze the factors affecting knowledge sharing in the organization. Following up, the current chapter analyzes the interview results to prove the need for KM governance in government entities within AD and examines the validity of the proposed model's structure and applicability based on the interviewees' perceptions.

This chapter uses a framework analysis method and is divided into two major sections. The first section outlines the frames of the analyses. Theoretical foundations and essential components of the 'framework analysis' are discussed in Chapter 3. This section provides additional information and the process undertaken in this research to create the 'frames' of analyses. The section breaks down the framework analysis models to provide a roadmap for the chapter and research in general. This will help the researcher focus on each point separately, and makes it easier for the reader to follow the analyses. It also utilizes available literature from previous studies that focus on the significance of knowledge management model in the public sector to explain the orientation and methods of the framework. The second section analyses the interview outcomes of the need for a KM model, and the validity and applicability of the proposed model.

The analyses are divided into three parts as illustrated in Figure 5.1: need for a KM mode, identifying the model structure and checking validity, and observing the applicability of the model based on respondents' perceptions. The need of the KM model is exhibited with situational analysis, implicit knowledge, challenges, and significant factors for consideration. The structure and validity of the model is developed with different components of the model (mechanisms, PKN, and KM process), model retention, and integration of components. Final step of applicability is carried out through examining enablers (importance of KM strategy, and importance of KM process model), influential factors (leadership and government, and people, process, and technology), and outcomes (cultural implications). These three themes were coded with the factors mention in the model of applicability matrix (Table 3.2) to examine interviews focusing on successful application of KM with respect to human-oriented, organizational-oriented, management-oriented and technology-oriented (these were discussed previously in Chapter 3 – Table 3.2, the applicability matrix). The three themes and sub-themes illustrated in Figure 5.1 are coded to questions that were formulated based on the factors highlighted in the Table 3.2. The details are shown in Appendix B – Applicability.

5.2 Framework Analysis

'Framework analysis' is a qualitative approach that is suitable for governance and public policy research because it offers an exceptional tool to evaluate policies and processes from the real people the policy may affect (Gale et al., 2013). The framework method is better adapted to this research as it has specific questions, a limited timeframe, a pre-designed sample, and a priori analyses, especially in the preparation of a knowledge governance model.

In the analysis, the data collected from the interviews are examined, recorded, and organized in accordance to the defined framework. The approach applies five key steps, including transcription, familiarization with interviews, coding and identifying the thematic frame, charting and mapping and interpretation (as discussed in Chapter 3). The main points in these five steps are highlighted in this section to justify the analyses in the next section. This discussion helps break down the framework analysis method to provide a roadmap of the interview analyses from the start, to the end.

This part of the study involves explanation of theories and predictions used analyze information and data collected for the research. Framework is an important part of the research as it explains how the results were reached at including how the data was collected and what methods were used to analyze the data to reach at the findings. In addition, the framework helps in challenging the already existing knowledge by identifying necessary information and methods used to identify existing gaps as well as justification for results (Smith & Firth, 2011).

5.2.1 Transcription

Transcription can be defined as the process by which a document is produced in one particular genre, usually in the form of videos and audios, from a different genre specifically from a written document (Cogito, 2018). The purpose of doing a transcription is to provide a simplified and understandable form of collected data or gathered information to give a meaningful result to the audience (Ardup, 2018). In this study, transcription involves reproducing the information collected during research interview to provide meaningful information that can easily be used in the findings and discussion area of the research and to help in reaching at the conclusion of examining the interviews.

There are three common forms of transcription e.g. literal (reproducing in a written document every sound in the original genre), natural (reproducing in a written document only the meaningful information in the original genre), and phonetic (transcribe sounds into symbols transcribe sounds into symbols) (Ardup, 2018; Bailey, 2008; Cogito, 2018). The natural transcription method was considered to be the most appropriate for this study. This method of transcription is important when the exercise is meant to give clear information for the purpose of reading and understanding, though the transcriber does not change any phrases or meanings in the original genre (Cogito, 2018). Hence, the natural transcription method was used to analyze the results for this study.

The ‘natural transcription’ method must follow some conditions. Usually it is challenging to conduct an interview and at the same time take notes that can be understood by the audience because these simultaneous activities may disrupt the interviewee or important information may be missed. To avoid this scenario, to record information from the interview in real time and then analyze it later according to the objectives of the research (Bailey, 2008). This can be done in two different ways: digital (loading the information for electronic transcription), and the traditional or manual (replaying recorded audio to transcribe manually). In this study, the traditional method was used where the researchers collected all the data from the interviewees then simplified them according to different categories and transcribed them using natural transcription remaining careful not to change the original information from the interviewees.

The interview questions were systematically organized and broken down to three main contexts to ensure a logical flow and effective transcription of the interviews. These contexts are:

- 1) The need of a knowledge Management model
- 2) Structure and Validity of the model
- 3) The applicability of the model

Also, a final interview questionnaire template was produced and used to write down and record all answers, discussions and comments from interviewees in addition to the audio records. To avoid errors on the transcript a second round of checking was done by listening back to the audio recording and reading the transcripts concurrently (An example of transcription is available in Appendix A).

5.2.2 Familiarization

In a simple language, ‘familiarization’ in ‘framework analysis’ is to detailed knowledge of the research, data, and its purpose i.e. what data were to be and have been collected and how to translate through an appropriate method of transcription and analysis (LeCompte & Schensul, 2010). Having a systematic data context in the interviews, doing the transcriptions by the researcher and listening to the audios recorded help the researcher a lot in being familiarized with the content and data set. In addition, this facilitate the efforts of coding and indexing data (LeCompte & Schensul, 2010). As Abu Dhabi Vision 2030 is focused on the increasing the efficiency of knowledge management, General Secretariat of its Executive Council (GSEC) formed a knowledge management steering committee for government department. The newly

formed Knowledge Management Unit (KMU) is serving for promoting knowledge management practices in Abu Dhabi government entities (Noruzy et al., 2013).

Further, with association of Department of Economic Development, Abu Dhabi vision is enhanced to Knowledge-Based Economy (Al-Dhaheeri, 2013). All these points lead the research direction towards evaluation of government sector. Hence, research familiarization required the researcher to conduct a detailed study on the field of public sector and systems to have an understanding of what needs to be collected, then go through the interviewee responses to become aware of the key themes and recurring ideas and consequently make note of them.

For this study, research familiarization involved integration of all data collected through transcriptions, recording and observations notes to understand the collected data and be familiar with the respondent's results. This helps in determining the gaps that needed to be addressed by the study and shaping the thematic frame.

5.2.3 Coding and Identifying Thematic Frame

When conducting a research and making decision on data collection, it is important to develop a coding which will help in easy analysis of the results. Thematic coding involves designing a classification in which to record the information collected in the data collection stage based on the research questions to avoid presenting the information haphazardly because that would create significant challenge during analysis and interpretation. The process of coding entails categorizing data collected into common themes and starts from designing of interview questions (Gibbs, 2007).

After the ‘familiarization’ phase of all data and transcriptions, data were entered in a Microsoft Excel for coding. The Excel file contained three sheets representing the three parts of the interview questions:

The need of KM model; Structure and Validity of the model; and the Applicability of the proposed model. Each sheet/theme contained a list of questions with 25 answers. Accordingly, each group of questions was merged to present a concept/theme of analysis and finding besides color coding was applied to the data.

The first part, proving the need of a KM model in AD government entities, was divided into four themes, which are: Situational Analysis, Implicit Knowledge Drainage, challenges and Factors to be considered.

(i) Situational analysis

Before conducting a research, it is crucial to carry out situational analysis of the target location and population. This process involves assessing the target organization based on research topic to understand both internal and external factors that could be considered in determining the data to be collected for analysis (Lake, 2017). The first theme was to assess the employees’ understanding and perception about the existence of KM in AD government entity they belong to.

(ii) Implicit knowledge drainage

Nine questions in the Questionnaire (see Figure 5.1) were used to understand how AD government employees share or make use of implicit knowledge in enhancing the efficiency of the public sector. From the responses, the nature of knowledge sharing (KS) in AD government organizations, and the existence of any effort to

promote and enhance KS was identified. This discussion helped to formulate the theme on drainage of implicit knowledge in AD government entities.

(iii) Challenges to KS

This step was to conduct an assessment of gaps identified in KS, mainly the implicit knowledge. The analysis involves reviewing the challenges in the system that restrict proper information management in the AD government institutions as revealed by the interviewees in three questions (See Figure 5.1). The discussion leads a possible KM model as a solution.

(iv) Factors to be considered in a KM Model

This part mainly focuses on external factors and in this case identifies factors influence KS and how KM model can be used to improve knowledge sharing and transfer. In summary, the needs section seeks to identify the gap in knowledge management, and how KM model can be applied to fill this gap.

In the section on ‘structure and validity of the model’, the researcher wants to identify the cogency of KM model when well-implemented in government entities within AD.

Initially, the questions were formulated and then they were assessed based on the sub-theme’s terminologies and observing the keywords in those questions. The basis of coding is highlighted in Appendix B with color coding. For example, in the need of KM model theme and Implicit Knowledge Drainage sub-theme, the question 1.1 listed is: How would you define implicit knowledge in your organization? This question has direct relationship with collecting information of implicit knowledge, hence 1.1 is considered under this sub-theme. In the same manner, all the questions

are coded to respective themes and sub-themes. Applicability of the model with success is theoretically consisting of integrated relations between the outcomes and the key success factors of KM which are:

Human-oriented including (Leadership, People, and Culture), Organization-oriented including (Process a Structure), Management-oriented including (Strategy and Objectives and Technology-oriented including (Infrastructure and Applications). This is mentioned in the matrix (Table 3.2) that is used to examine the current status of the organization linking with the above factors, and then its possible future status and impacts of applying the proposed model. Therefore, the applicability of the model is examined with questions formulated based on the model applicability matrix (Table 3.2) and coded under the three subthemes of Applicability theme (Figure 5.1). It clarifies the use of analysis framework for applicability studying the enablers, influential factors, and outcomes. Further, it is important to note that questions formulated are connected and related as such may move across more than one themes. So, the thematic framework is coded with appropriate questions under each theme or sub-theme.

The Thematic frame include three main themes

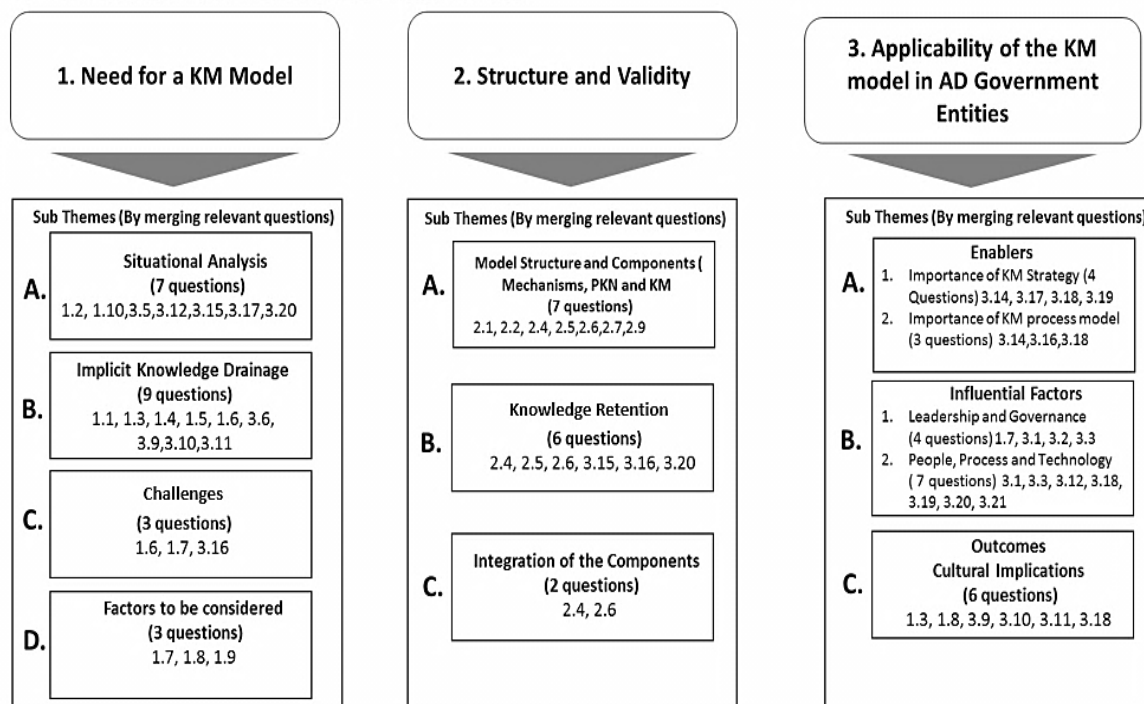


Figure 5.1: The Analysis Framework

5.2.4 Charting

Charting is basically classification of the information provided by the respondents with respect to the analysis framework (Figure 5.1). As the questions were formulated from model applicability matrix (Table 3.2), the elements of the information provided by the respondents were also in the same context. After developing the codes, the data elements were organized with respect to the themes and sub-themes of the analysis framework which takes into consideration of the current status, and possible future status. Charting provides data organization which crucially adds to next steps of mapping and interpretation (Srivastava & Thomson, 2009).

Charting is provided through Table 5.1, 5.2 and 5.3 for three main themes of the analysis framework: Need for KM Model, Structure and Validity, and Applicability of the KM Model in AD Government Entities respectively.

The responses are signified to respective sub-themes of each theme with percentages based on the frequency of responses for each possible answer.

5.2.5 Mapping and Interpretation

Mapping usually concentrates on the linkages and not the results of a study and may be defined as organization of the visual tools such as graphs and charts which are used to interpret the data collected in a research (Cooper, 2016). The definition of mapping can therefore depend on how it has been used in a study. For instance, in this study, mapping has been used in on the linking the collected data and for representation into visual diagrams for interpretation. Interpretation on the other hand, can be defined as the process giving meaning or simplifying information that is acquired through mapping (Cooper, 2016).

In the case of this research, mapping involved familiarizing with the research objectives in order to understand how to do the coding of the data collected. The other component of mapping included categorizing questions and answers from the respondents according to the themes that would make it easier to discuss the findings. After classifying the questions, the last step is to present the information from the data in diagrams (e.g. Figures 5.2 and 5.3 above). It is the final stage on the analysis approach where all data were transcribed, coded and charted. At this stage, themes generated in the charting matrix (Tables 5.1 and 5.2) were reviewed and linking of participants and categories was done to reach the final findings. The following section discusses and integrates the findings under each factor and theme based on the framework analysis defined this section.

5.3 Results Analysis

The analysis of this work is based on data collected from 25 interviewees working in five government sectors in Abu Dhabi. Each interview lasted about an hour or more i.e. 25 hours were spent in the field to collect information for the work. Also, from the information gained by the direct observation by the researcher through official benchmark visits with other AD government entities for KM experience. This section in three sub-sections analyses the outcomes of these interviews. The first sub-section deals with the proving of the need for a Knowledge Management model; the second examines the interviewees' opinion on the structure and validity of the proposed knowledge management model; and third, analyses the applicability of the proposed model using the interviewees' perspective.

Table 5.1: Need of KM Model: Charting the Themes with the Responses

Sub-theme 1: Situational Analysis	Interviewee Answers (% of respondents)
Existence of framework or model to capture implicit knowledge in the organization [Q 1.2]	No = 68%
	Yes, with limited function = 8%
	Under Process = 24%
Availability of KPIs for knowledge sharing [Q 1.10]	No = 32%
	Yes, but limited and not comprehensive = 48%
	Under Process = 20%
Ability to differentiate between implicit and explicit in the organization [Q 3.5]	No = 64%
	Yes, partially = 36%
Having a clearly defined process for KM and KT [Q 3.12]	No = 80%
	Yes, in progress = 20%
Existing of KM specialized team [Q 3.15]	No = 52%
	Yes, with clear function = 32%
	Yes, not clear and focus on explicit = 16%
KM strategy is developed in the organization [Q 3.17]	No = 60%
	Yes = 40%
Having defined objectives for KM and KS [Q 3.20]	No = 64%
	Yes = 20%
	Limited = 16%
Sub-theme 2: Implicit Knowledge Drainage	Interviewees Answers (%)
Definition of implicit knowledge (How people define the nature of knowledge in the organization) [Q 1.1]	Intangible (skills, experiences, interpretation, undocumented) = 36%
	Not matured and defined well = 24%
	Not captured = 40%
Knowledge sharing is promoted in the organization. [Q 1.3]	No = 28%
	Yes, with limited function = 52%
	Under process = 20%

Table 5.1: Need of KM Model: Charting the Themes with the Responses (Continued)

Sub-theme 2: Implicit Knowledge Drainage	Interviewees Answers (%)
Organization encourages building networks for sharing 'implicit knowledge'. [Q 1.4]	No = 44%
	Yes, with partial involvement = 56%
Channels used for sharing 'implicit knowledge' [Q 1.5]	Formal internet/ intranet means (emails and workshops) = 68%
	Informal means (meetings and events) = 24%
	Other means of communication = 8%
Challenges faced by organization in dealing with 'implicit knowledge' [Q 1.6]	Lack of leadership support = 24%
	Resistance of employees = 16%
	Lack of supportive culture = 16%
	Absence of process and framework = 44%
Employees in the organization receive support and recognition for sharing knowledge [Q 3.6]	No = 68%
	Yes, but limited support = 32%
Organizational culture supports KS [Q 3.9]	No = 48%
	Yes, but limited support = 52%
Promoting KS and PKN [Q 3.10]	No = 52%
	Yes, but limited = 36%
	Yes, with informal events and workshops = 12%
Application of the proposed model in the organization likely to impact the culture of KS [Q 3.11]	No and limited = 44%
	Positive and improves organization culture for KS = 36%
	Clear guidelines and process = 20%
Sub-theme 3: Challenges	Interviewees Answers (%)
Challenges faced by organization in dealing with 'implicit knowledge' [Q 1.6]	Lack of leadership support = 24%
	Resistance of employees = 16%
	Lack of supportive culture = 16%
	Absence of process and framework = 44%

Table 5.1: Need of KM Model: Charting the Themes with the Responses (Continued)

Sub-theme 3: Challenges	Interviewees Answers (%)
The main factors (leadership, people, culture, or technology) influencing the knowledge capturing, storing and sharing in the organization. [Q 1.7]	Leadership = 36%
	People = 32%
	Culture = 0%
	Technology = 0%
	More than one = 32%
Application of the proposed model in the organization is likely to influence: the structure of KM team, KS, and organizational performance [Q 3.16]	Positive with establishing teams, increasing KS and performance = 72%
	Defines clear role and responsibilities = 28%
Sub-theme 4: Factors to be considered	Interviewees Answers (%)
The main factors (leadership, people, culture, or technology) influencing the knowledge capturing, storing and sharing in the organization [Q 1.7]	Leadership = 36%
	People = 32%
	Culture = 0%
	Technology = 0%
	More than one = 32%
Impacts of 'sharing knowledge' on 'employee innovation' in the organization [Q 1.8]	Better decision = 20%
	New opportunities = 8%
	Improve efficiency reducing duplications = 12%
	Positive, better performance saving time and efforts = 32%
	Innovation = 36%
Impacts of 'sharing knowledge' on the organization's performance [Q 1.9]	Positive and increase in performance = 72%
	Better leadership decisions, planning, and opportunities = 20%
	No difference = 8%

Source: Prepared based on the interview responses and following the analysis framework (Figure 5.1)

Table 5.2: Validity of the Model: Charting the Themes with the Responses

Sub-theme 1: Model's structure and component	Interviewees Answers (% of Respondents)
Validity of the components [Q 2.1]	Yes = 82% Yes, but add evaluation process/ performance matrix can be added = 18%
Most effective mechanisms [Q 2.2]	Formal = 52%
	Informal = 20%
	Both = 28%
Proposed model's components (PKN, KM process and governance mechanisms) likely to integrate to maximize the organization's performance. [Q 2.4]	Help government entities attain goal of KM with improving KM activity = 97%
Positive effects of applying the proposed model on personal level and organizational level [Q 2.5] and [Q 2.6]	Improves employee performance, organizational performance, business continuity, and innovation = 100%
	Information and content governance = 16%
	Enhancing behavioral changes = 72%
	Increases explicit knowledge = 76%
	Create Specified team = 80%
	Resource access = 28%
Most influencing activity in the KM process cycle [Q 2.7]	Create = 4%
	Transfer/Share = 56%
	Use = 32%
	more than one = 8%
Impact of PKN on innovation in the organization (from the structure and components) [Q 2.9]	Increase Innovation = 40%
	Enhance KS = 28%
	Better result and engagement = 32%
Sub-theme 2: Knowledge retention	Interviewees Answers (%)
Proposed model's components (PKN, KM process and governance mechanisms) likely to integrate together to maximize the organization's performance. [Q 2.4]	Help government entities attain goal of KM with improving KM activity = 97%

Table 5.2: Validity of the Model: Charting the Themes with the Responses
(Continued)

Sub-theme 2: Knowledge retention	Interviewees Answers (%)
Positive effects of the proposed model on the personal level and organization level [Q 2.5] and [Q 2.6]	Improves employee performance, organizational performance, business continuity, and innovation = 100%
	Information and content governance = 16%
	Enhancing behavioral changes = 72%
	Increases explicit knowledge = 76%
	Create Specified team = 80%
	Resource access = 28%
Existing of KM specialized team [Q 3.15]	No = 52%
	Yes, with clear function = 32%
	Yes, not clear and focus on explicit = 16%
Application of the proposed model in the organization is likely to influence: the structure of KM team, KS, and organizational performance [Q 3.16]	Positive with establishing teams, increasing KS and performance = 72%
	Defines clear role and responsibilities = 28%
Having defined objectives for KT and KS [Q 3.20]	No = 64%
	Yes = 20%
	Limited = 16%
Sub-theme 3: Importance of components integration	Interviewees Answers (%)
Proposed model's components (PKN, KM process and governance mechanisms) likely to integrate together to maximize the organization's performance. [Q 2.4]	Help government entities attain goal of KM with improving KM activity = 97%
Positive effects of applying the proposed model on the organizational level [Q 2.6]	Improves employee performance, organizational performance, business continuity, and innovation = 56%
	Information and content governance = 12%
	Resource access = 32%

Source: Prepared based on the interview responses and following the analysis framework (Figure 5.1)

Table 5.3: Applicability of the KM Model in AD Government Entities: Charting the Themes with the Responses

Sub-theme 1: Enablers	Interviewee Answers (% of Respondents)
<p>Importance of KM Strategy Application of the proposed model in the organization likely to: influence redefinition and efficiency of the KM process [Q 3.14]</p>	No = 4%
	Positive with clear process defining the roles of KM teams = 80%
	Develop knowledge management = 16%
<p>Importance of KM Strategy KM strategy is developed in the organization [Q 3.17]</p>	No = 60%
	Yes = 40%
<p>Importance of KM Strategy Application of the proposed model in the organization is likely to: influence overall performance [Q 3.18]</p>	Positive with organizational innovation and other benefits = 92%
	Improves KM strategy, projects, and process compliance = 8%
<p>Importance of KM Strategy Application of the proposed model in the organization likely to: influence employees to transfer knowledge [Q 3.19]</p>	Positive encouraging employees for knowledge transfer = 96%
	Affect the organizational culture positively = 4%
<p>Importance of KM Process Model Application of the proposed model in the organization likely to: influence redefinition and efficiency of the KM process [Q 3.14]</p>	No = 32%
	Yes, but limited and not comprehensive = 48%
	Under Process = 20%

Table 5.3: Applicability of the KM Model in AD Government Entities: Charting the Themes with the Responses (Continued)

Sub-theme 1: Enablers	Interviewee Answers (%)
<p>Importance of KM Process Model Application of the proposed model in the organization is likely to influence: the structure of KM team, KS, and organizational performance. [Q 3.16]</p>	<p>Positive with establishing teams, increasing KS and performance = 72%</p> <p>Defines clear role and responsibilities = 28%</p>
<p>Importance of KM Process Model Application of the proposed model in the organization is likely to: influence overall performance [Q 3.18]</p>	<p>Positive with organizational innovation and other benefits = 92%</p> <p>Improves KM strategy, projects, and process compliance = 8%</p>
Sub-theme 2: Influential Factors	Interviewees Answers (%)
<p>Leadership and Governance The main factors (leadership, people, culture, or technology) influencing the knowledge capturing, storing and sharing in the organization. [Q 1.7]</p>	<p>Leadership = 36%</p> <p>People = 32%</p> <p>Culture = 0%</p> <p>Technology = 0%</p> <p>More than one = 32%</p>
<p>Leadership and Governance Leadership in the organization support KS by: (a) Funding and securing budget [Q 3.1]</p>	<p>No = 60%</p> <p>Yes, but limited = 40%</p>
<p>Leadership and Governance Leadership in the organization support KS by: (b) Contributing to the KS initiatives [Q 3.2]</p>	<p>No = 16%</p> <p>Yes, but limited = 84%</p>
<p>Leadership and Governance Application of the proposed model in the organization likely to: a) Influence the leadership's commitment to knowledge sharing [Q 3.3]</p>	<p>Positive and improving leadership commitment = 60%</p> <p>Clarify objectives and expectations = 28%</p> <p>Improve knowledge transfer = 12%</p>

Table 5.3: Applicability of the KM Model in AD Government Entities: Charting the Themes with the Responses (Continued)

Sub-theme 2: Influential Factors	Interviewees Answers (%)
<p>People, Process, and Technology Leadership in the organization support KS by: (a) Funding and securing budget [Q 3.1]</p>	No = 60%
	Yes, but limited = 40%
<p>People, Process, and Technology Application of the proposed model in the organization likely to: a) Influence the leadership's commitment to knowledge sharing [Q 3.3]</p>	Positive and improving leadership commitment = 60%
	Clarify objectives and expectations = 28%
	Improve knowledge transfer = 12%
<p>People, Process, and Technology Having a clearly defined process for KM and KT [Q 3.12]</p>	No = 80%
	Yes, in progress = 20%
<p>People, Process, and Technology Application of the proposed model in the organization is likely to: influence overall performance [Q 3.18]</p>	Positive with organizational innovation and other benefits = 92%
	Improves KM strategy, projects, and process compliance = 8%
<p>People, Process, and Technology Application of the proposed model in the organization likely to: influence employees to transfer knowledge [Q 3.19]</p>	Positive encouraging employees for knowledge transfer = 96%
	Affect the organizational culture positively = 4%
	Yes = 20%
	Limited = 16%
<p>People, Process, and Technology Application of the proposed model in the organization likely to: influence KM objectives for becoming a KS organization [Q 3.21]</p>	No = 4%
	Positive with focus more on KS function = 56%
	Clear KM framework, objectives, definition, and expectations = 40%

Table 5.3: Applicability of the KM Model in AD Government Entities: Charting the Themes with the Responses (Continued)

Sub-theme 3: Outcomes: Cultural Implications	Interviewees Answers (%)
Knowledge sharing is promoted in the organization [Q 1.3]	No = 28%
	Yes, with limited function = 52%
	Under process = 20%
Impacts of ‘sharing knowledge’ on ‘employee innovation’ in the organization [Q 1.8]	Better decision = 20%
	New opportunities = 8%
	Improve efficiency reducing duplications = 12%
	Positive, better performance saving time and efforts = 32%
	Innovation = 36%
Organizational culture supports KS [Q 3.9]	No = 48%
	Yes, but limited support = 52%
Promoting KS and PKN [Q 3.10]	No = 52%
	Yes, but limited = 36%
	Yes, with informal events and workshops = 12%
Application of the proposed model in the organization likely to impact the culture of KS [Q 3.11]	No and limited = 44%
	Positive and improves organization culture for KS = 36%
	Clear guidelines and process = 20%
Application of the proposed model in the organization is likely to: influence overall performance [Q 3.18]	Positive with organizational innovation and other benefits = 92%
	Improves KM strategy, projects, and process compliance = 8%

Source: Prepared based on the interview responses and following the analysis framework (Figure 5.1)

5.3.1 The Needs of Applying a Knowledge Management (KM) Governance Model

Primarily, this part discusses and proves the need of KM in AD government entities by analyzing the current situation of KM in government organizations. The discussion proceeds under four themes: Situational analysis; implicit knowledge drainage and the approaches used to capture the implicit knowledge; challenges in dealing with implicit knowledge; and Factors to be considered to enhance the implicit knowledge sharing.

5.3.1.1 Situational Analysis

This theme analyzes the current situation of knowledge management and knowledge sharing in AD government its terms of formal mechanisms such as availability of a KM framework, KPIs for knowledge sharing, and clear role and responsibilities of the personnel.

These findings are based on questions (1.2 and 1.10) related to KM model in the respondents' organization in the government of AD, and relevant question used to analyze applicability of the model. The applicability framework matrix is divided to two main categories: current status and the possible future outcomes of applying the proposed model. 'Current status' was added to the 'applicability matrix' simplifying the four KM success factors and help the interviewees understand the difference of each stage. Four questions (3.12, 3.15, 3.17, and 3.20) from the 'applicability' analysis are used in this discussion. However, the findings are built on Question 1.2 where the interviewees were asked to identify whether his/her organization has a framework or model to capture implicit knowledge.

Sixteen out of 25 respondents revealed that their organizations do not have a framework for KM; while five (Interviewee 3, 8, 17, 21 and 22) stated that it exists in a limited and informal way i.e. informal sharing of implicit knowledge occurs when people work in teams, participate in workshops, and basic induction and handover process. Four interviewees represent three entities out of eight (Interviewee 18, 19, 20, and 25) mentioned that a KM framework is under process in their departments and they are working in developing and enhancing it to cover all KM aspects.

The lack of a formal model of KM, as revealed above, indicates that no specific indicator to measure the effectiveness of KM may be available. The interviewees identified possible reasons for lack of a formal KM model e.g. a lack of a unified KM model, lack of specific indicators to measure implicit knowledge sharing, limited understanding by the leadership, existence of informal initiatives, and non-availability of a specialized knowledge management department and position.

The respondents also indicated that some of the challenges of knowledge management in AD government include lack of leadership support, resistance from employees, lack of budget, inadequate incentives and fear of sharing knowledge due to overturn liability. The interview outcomes reveal that the limited availability of a framework and incentives has led to employee unwillingness to participate in knowledge sharing and transfer. The study results based on interview questions 1.10 and 3.20, reveal that the government entities in AD have no specific KPIs for Knowledge Management or Knowledge sharing where 18 responds out of 25 confirmed that does not exist. The interviewees indicated that there are limited efforts in encouraging information sharing and where the efforts exist, the mechanisms used are informal.

However, the respondents indicated the need for promoting knowledge sharing for effective performance of public institutions. Therefore, from the responses, it can be concluded that sharing of implicit knowledge is limited in government entities within AD.

The research outcomes reveal that the government entities within AD are not fully aware of the knowledge management model and practice. The finding is based on the results of question 3.5 where interviewees had been asked if employees in their organization differentiate between implicit and explicit knowledge, 15 out of 25 or 60% respondents answered that they do not know. While another nine or 36% revealed that few people in their organization have the capability to differentiate. In fact, across the AD, few government entities have designated a separate position and department for KM with titles. In question 3.15, when the interviewees were asked whether their organization has a KM team, eight out of 25 said that they have KM team with clear functions.

Four interviewees (7, 11, 17 and 19) agreed that their entities have KM personnel, though no clear role and mandate was defined for KM and KS and the personnel focus more on explicit information and data, rather than implicit obviously resulting knowledge drainage. In addition to explicit knowledge, knowledge management model should include implicit knowledge which is important for the management of any organization. Thus, understanding the drainage of implicit knowledge was important, and is discussed below.

5.3.1.2 Implicit Knowledge Drainage

This subsection analyzes the interviewees' understanding of implicit knowledge and the actions and systems existent in their organizations to promote sharing of implicit knowledge. The findings of this subsection are from the interviewee's responses according to question 1.1 when they were asked to define the implicit knowledge in their organization. The results showed that nine out of 25 interviewees defined implicit knowledge as a collection of experience acquired from practice, skills; and undocumented information that are intangible and remains in people's heads. Whereas, to six respondents' implicit knowledge is in the initial stage of development without a clear definition, and ten interviewees opined that implicit knowledge in their organization is the collective experiences the employees that is hard to be captured because it is scattered within the organization.

Questions 1.3, 1.4 and 1.5 asked to identify the channels used by the organizations to share and promote "implicit knowledge". According to the interview results, 16 out of 25 said that knowledge sharing is promoted using basic formal mechanisms such as, internal communications, emails, workshops and meetings.

Though, the type of knowledge shared are more explicit, very generic, and not comprehensive and does not help in identifying the internal capabilities or enhance the employees' socialization. Six interviewees claimed that knowledge sharing is facilitated through informal mechanisms such as one-to-one meeting, discussions, and social gathering. According to question 1.4 the interview results show that 15 out of 25 that their organization does not have the fertile environment to encourage building networks and enhance the activity of knowledge sharing. In conclusion, most of the respondents agreed their entities supported knowledge sharing but it was very weak.

According to question 3.6 when the interviewees asked if their organization support, recognize or reward employees for their efforts in the knowledge sharing process, 19 out of 25 answered 'no' while only six interviewees (1, 2, 13, 14, 23 and 25) mentioned that their managers recognize them but informally.

Moreover, the interview outcomes, based on Question 1.6, revealed that organization knowledge and intellectual capital are drained further when the employees move from one entity to another without efficiently recording and transmitting their experiences and knowledge. The interview sessions identified that a high percentage of the temporary staff in the public sector consists of expatriates (Not only consultants, but fulltime employees). For instance, three of the interviewees for this research are nationals of other countries. Their responses are expected to be according to their current place of work. However, they would have more insight about knowledge sharing and its concepts. Such individuals are important in offering rented knowledge. However, when they leave without effectively detailing their experiences, government entities lose very costly knowledge and important resources invested in the consultants. This is one of the challenges of implicit knowledge management, other challenges are discussed below.

5.3.1.3 Challenges

This subsection examines the inhabiting factors or challenges related to management and sharing of implicit knowledge in the organization. According to question 1.6, the main challenges faced by respondents in their organizations in dealing with implicit knowledge had different perspectives. Four interviewees (1, 4, 8, and 9) said that it is due to lack of leadership, while interviewees 2 and 6 said it is due to the resistance from the employees.

Six interviewees (4, 5, 7, 12, 20 and 24) stated that it is due to poor organizational culture where the employees are used to follow a specific way of doing things without any willingness to change and adequate resources. Also 11 interviewees considered the absence of a clear framework and process as a big challenge for knowledge sharing. Overall, the interviewees claimed that dealing with implicit knowledge include lack of leadership support, poor culture, and lack of willingness, inadequate incentives, losing information and the absence of a framework.

According to the interview outcomes on the question 1.6, 7 out of 25 interviewees believe that it is hard to articulate tacit knowledge due to its context without leadership support. When dealing with tacit knowledge, government entities encounter a challenge of adapting cultural complexity. Question 1.6 highlights the issue of the government institutions to accommodate changes with knowledge management. According to question 1.6 responses, it is clear that culture is considered as the main obstacle to efficient knowledge distribution. Eight interviewees claimed that the work culture and people values have instilled a notion that limits knowledge sharing.

The interviewees agreed that lack of leadership and employee willingness is the primary challenges, lack of formal governance framework is another potential challenge faced in dealing with implicit knowledge. Another challenge is multiple sources of information cause a duplication of works. It is one of the most significant problems in dealing with implicit knowledge and KM. According to question 1.6, challenges faced in dealing with tacit knowledge include lack of management support, poor planning, design, organization, and assessment.

Moreover, 12 out of 25 claimed that lack of key performance indicators and measurable benefits, and limited skill of knowledge among managers and employees are obstacles to dealing with implicit knowledge. To conclude, 36% of the respondents believe that leadership support and 32% believe that employee's willingness are the primary strategies to manage the challenge faced when dealing with implicit knowledge.

5.3.1.4 Factors Influencing Knowledge Sharing

This subsection, based on the interviews results, captures the main factors that influence the knowledge sharing in AD government. All interviewees confirmed that implicit knowledge is acquired through individual practice and experience, but various factors affect its sharing. In answering Question 1.7 (what among the Leadership, People, Culture, or Technology influence knowledge capturing, storing, and sharing the most), nine interviewees noted that implicit knowledge sharing is influenced the most by the leadership support; while eight said the employees' willingness. Four interviewees (5, 8, 11 and 14) claimed that both leadership and people influence the knowledge sharing.

Twenty-three out of 25 of the interviewees believe that there has been slow transformation for the management of the public sector due to the lack of leadership support and employee unwillingness. They also thought that a lack of a proper chain of command within government entities harms effectiveness of KM. Five of the respondents (interviewees 7,8,11, 12 and 22) said that culture is most essential tool for developing confidence and trust, and necessary to promote KM practice within a government.

In this regard, these five interviewees claimed that establishing an organizational culture focused on KM and innovation should be the concern of management. Moreover, three respondents (8, 21 and 23) claimed that time is another factor that affects knowledge sharing within the government entities because adoption of implicit knowledge requires an extended period for sharing because of the personal and structural character of information. Lastly, interviewees (1, 9, 17, and 20) responding to Question 1.7 that leadership affects in the knowledge sharing. Interviewee (1) explained the reason that other factors such as technology is available for access, culture is open to KS, however leadership plays a major role in developing connections to other factors. Hence, many other interviewees (4, 5, 7, 10, 11, 14 and 23) mentioned leadership with technology or culture or people. On other hand, remaining interviewees (2, 3, 5, 13, 15, 22 and 25) responded that it is all from people and initiatives taken by people for KS.

Based on the responses to questions 1.8 (“the impacts of ‘sharing knowledge’ on employee innovation”) and 1.9 (“the impacts of ‘sharing knowledge’ on the organization’s performance”), it is found out that implicit knowledge has not been regarded as valuable in the respondents’ organizations.

In most cases, value is related to some form of quantification, and organizational performance primarily concentrates on assessing the indicators of KM performance and exploring the cause of the issue. It is revealed from these responses that applying an efficient KM helps in increasing individual performance, but increases’ their creativity and innovation. (1, 5, 6, 16, and 22). Moreover, five interviewees (4, 17, 18, 10 and 25) claimed that knowledge sharing leads to better planning and better decisions with clear directions.

Three interviewees (6, 22 and 24) thought that a good KM system of knowledge sharing is likely to increase the organization's efficiency by saving time, efforts and utilizing the internal capabilities with less cost; while two (7 and 15) responded that it may create new and big opportunities for both individuals and organization. Some interviewees (5, 21 and 22), mentioned that KM facilitates the works and sharing knowledge will help in identifying project and assigning right people. In brief, the main factors that are to be considered in a KM model for implicit knowledge sharing are leadership, and combinations of leadership with employees. Respondents supported that leadership affects in knowledge sharing significantly as other factors are influenced from leadership.

To sum up, the result analysis has provided an overview of the needs of applying a knowledge management governance model through situational analysis, observing implicit knowledge drainage, challenges, and factors influencing knowledge sharing. Situation analysis provided information that majority of the interviewee's organizations do not have a framework for knowledge management, however the few having the framework is limited and implemented in an informal manner. Examining interviewees about implicit knowledge sharing provided information that implicit knowledge is acquired through skills and experiences that is intangible in the people's mind. Further, it was observed that knowledge sharing is promoted in formal manner through emails and internal communications. However, it was observed that majority of them had no appreciation environment or recognition in their organization and knowledge sharing was facilitated through informal meetings and discussion. The challenges observed were lack of leadership, poor organizational culture to support, and lack of willingness. In same manner, the information on factors influencing knowledge sharing showed that leadership influenced the most.

5.4 Structure and Validity of the Model

The second purpose of the field study was to understand the interviewee's perception about the validity of the proposed model, especially its Structure, Components, and Outcomes (see 3.2.3). This section summarizes the interviewees' perception about the structure and validity of the proposed model. The interviewee responses or perceptions are analyzed in three subsections: 1) The model's structure and components, 2) Knowledge Retention (that may be achieved by the Model), and 3) Importance of integration of the components in the Model.

5.4.1 The Model's Structure and Components

The KM model is developed on the basis of theoretical framework discussed in Chapter 2 and the analyses of KM models in Chapter 4, and incorporates tools, strategies, and techniques required for organizational operation. It is likely to develop healthy relationships among information, practice, and events, such as interaction with other people. Thus, the proposed KM governance framework is a sociotechnical system that may help government entities in AD to generate high values from intellectual capital.

The section seeks to analyze if the proposed KM model is likely to help improve the current situation in government entities within AD where there is limited knowledge governance. It analyzes, from the interviews, validity of the KM model's structure, most effective mechanisms for knowledge sharing, knowledge sharing activity that is likely to be influenced the most by the model, and possible impacts of the model on the employees as well as the organizations.

5.4.1.1 Structure and Components

When asked in question 2.1 whether the KM model consists of the right components required for KM governance model, 21 respondents, who happen to be key people in KM in five government entities in AD, agreed. Four interviewees (2, 4, 11 and 13), however, responded to the latter part of the question (“If not, what is missing?”) suggested that the model can be enhanced by adding a process to evaluate the tools for knowledge sharing for further refining of the model. Thus, this proves the validity of the model for KM in the government organizations in AD. The latter part of this discussion deals with mechanisms of the model, PKN, and KM process.

5.4.1.2 Formal and Informal Mechanisms

When asked in Question 2.2 (Which type of mechanism, Formal or Informal, is likely to have more impact on ‘knowledge sharing’, KS), seven out of 25 respondents opined formal and informal approaches to have to work together, while 13 interviewees said that organizations have to set the bases of KM by applying the formal mechanisms and after it became mature enough in knowledge and information sharing informal mechanisms can work to maintain the culture. Five respondents (6, 7, 12, 14 and 24) thought that informal observation is required to share implicit knowledge that cannot be recorded. Based on the respondents, answers to question 2.5 (“effects of applying the proposed model on a personal level”) and 2.6 (“effects of applying the proposed model on an organization level”), all respondent thought that knowledge sharing is to effect innovation, organizational learning, new skill nurturing, high productivity, and competitive edges.

Thus, the interviewees support the notion that knowledge sharing has to receive substantial attention. The other good effects of the application of the proposed model, as understood by the interviewees, are discussed under ‘knowledge retention’ below.

Seventeen respondents supported and claimed that knowledge sharing should be given more consideration than other knowledge procedures, such as knowledge documentation and acquisition. The interviewees agree that knowledge sharing through both formal and informal mechanisms is essential as it provides an understanding of an entity. In support of their views, the interview participants highlighted that communication performs a critical role in knowledge sharing and transfer. It is certain that a substantial amount is acquired through formal and informal mechanisms, such as brainstorming, guidelines, and meetings (see table 5.2).

5.4.1.3 Personal Knowledge Network (PKN)

The interview participants were asked how a wide range of PKNs in the organization is likely to impact on innovation in the organization (Question 2.9), and responded differently. The inclusion of PKN in an organization’s context means that the organization needs to place the knowledge experts at the central position of the organization. The interviewees believed that PKN is likely to support the learning process in their entities, merging personal and organizational knowledge management. Fourteen interviewees asserted that PKN promotes broad range of self-directed knowledge and learning skills inside and outside the institutional borders and across various contexts. Moreover, five interviewees (4, 10, 11, 12 and 16) claimed that PKN may function as an agile knowledge-networking system assisting the knowledge employees to improve their knowledge sharing abilities in an effective and efficient manner.

It also may offer a free method and emergent setting favorable to interacting and inquiry. Based on the interviewee responses, it seems that the PKN is likely to offer a better workplace environment in which knowledge experts can create stable relationships and establish an effective KM process.

5.4.1.4 KM Process

When asked (in Question 2.7), which activity in the KM process cycle (Create, Transfer, and Use) is likely to be influenced more by the application of the KM model in the organization, the interviewees gave various responses. Fourteen out of 25 claimed that applying the proposed model will have a big impact on knowledge sharing and transfer as it focuses more on building networks and identifying the internal capabilities. According to seven interviewees (4, 7, 9, 11, 14, 15 and 17), the main focus of KM in the public sector is to make easier the capturing and utilization of the available resources and abilities for acquiring relevant organizational benefit. They claimed that KM process can help the government organizations to capture or identify knowledge. The results show that the process is critical as can help government organizations develop and nurture a culture of effective KM.

According to question 2.4 which looks into KM process governance mechanism to integrate and maximize organizational performance, interviewees (17 and 19) responded that it leads to better use of resources and increase productivity. Moreover, interviewee (8) responded that the knowledge sharing process will become sustainable through motivating culture among the employees.

5.4.2 Knowledge Retention

This subsection analyzes most important outcomes of the model, as perceived by the respondents while discussing positive effects of the proposed model on personal and organization levels. The analysis is based on the questions 2.5 (“effects of applying the proposed model on a personal level”) and 2.6 (“effects of applying the proposed model on an organization level”).

All the respondents (as evident in Appendix C) said that the proposed KM model is likely to improve employee performance, organizational performance, business continuity, and innovation by promoting knowledge sharing. The responses of four interviewees (8, 10, 12 and 13) indicated that the KM model can enhance information and improve governance because its focus is on organizational performance and the knowledge required in meeting stipulated outcomes. As a consequent, the respondents believe that the government organizations using the KM model may end the content "mass," which involves data growing quicker than it can be handled leading to disorganized, detached, and inefficient application of knowledge. Moreover, in responding to the above two questions (2.5, 2.6), and 2.4 (if the proposed model’s components likely to integrate together to maximize the organization’s performance) all the respondents thought that the KM model is likely to improve the employee behavior at the place of work as they can easily interact and share information freely with one another. To support their views, 18 out of 25 interviewees said that the KM framework may concentrate on enhancing behavioral changes within the government entities, which may offer a wide range of opportunities to improve the employees’ teamwork. Similarly, it improves employee relationships with work-related documents and information.

In responding to question 2.6, nineteen out of 25 interviewees said that the KM governance model is likely to increase explicit knowledge within the government entities. For a long time, much knowledge within the organizations has been implicit, which entails what people understand instead of what is searchable. It seems that most respondents believed that with successful implementation of the KM model, the government entities are likely to be well-placed to capture critical project, team, and departmental knowledge via highly explicit channels. The shift from implicit to explicit instruction eventually may make primary data resources with an organization more discoverable and recyclable. In fact, 22 interviewees (responding to question 2.6), claimed that well-implemented KM programs can improve knowledge storage, retrieval, and distribution. Additionally, in responding to 3.16 (likely influence of the model on the KM team, KS, and organizational performance), 20 respondents said that a changes of the specified team role is another potential outcome of the KM model.

Typically, the efforts of KM promote more specific forms of roles for primary teams. In the end, this serves to improve KM in the public sector. When the employees know their responsibilities in an organization, and its knowledge management approach, they can profoundly concentrate on their roles and tasks accessing quickly to relevant information they require to be competent. From the results of the interviews, it seems the KM governance model is not only to promote top-down support, but may make knowledge management framework function better. Through the top-down support system, the management team may lead by example at all levels, engage in different KM programs, and work hard to keep teams well-organized in a manner that suits ideal business results.

From the research findings, it is clear that government organizations may enjoy several positive results if they adopt the KM framework that supports knowledge sharing and development, and ultimately knowledge retention.

5.4.2.1 Integration of the Components

Essentially, this subsection combines all the three primary components of KM model and the analysis is based on the responses to questions 2.4 (if the proposed model's components likely to integrate together to maximize the organization's performance). The outcomes of the interview give an insight that effective KM is an intrinsically social cycle that allows employees to develop learning from each other's professionalism. Primarily, KM model is defined by three components, including formal and informal mechanism, PKN, and KM process.

Majority, 97% of the respondents proved that an integration of these components is likely and to help government entities attain goal of KM development and sustenance (see table 5.2). An integration of these components is likely to assist the public sector employees to create, grasp, share, and use knowledge, chiefly through human association. Further, 88% claimed that the integration may assist the government organizations to nurture a setting that supports knowledge sharing and application of KM systems. Through the integration of the three primary components, employees are able to acquire, use, and exchange knowledge. Through this integration, success and competitiveness may emerge. Therefore, where the three components are integrated, they can improve the overall performance of government organizations and guarantee a competitive advantage.

5.5 Applicability of the KM model in AD Government Entities

5.5.1 Introduction

The findings of this section are based on the various questions asked under the applicability of KM model. The discussion on applicability of the KM model in AD Government Entities is framed based on the analysis framework highlighted in the Figure 5.1. Therefore, this section is divided into three: enablers, influential factors, and outcomes. The enablers (importance of KM strategy, and importance of KM process model), influential factors (leadership and government, and people, process, and technology), and outcomes (cultural implications). This framework will comprehensively look into the current the situation in the organization with respect to governance and leadership, the employees, the processes, and role of technology.

Hence, the main analysis will deal with observing the possible future outcomes on application of the proposed KM model through primary qualitative research (interviews). Taking the interviewees will help in examining the application of model in government organization. Hence, this section discusses about the enablers, influential factors, and outcomes as an analysis.

5.5.2 Applicability of the KM Model: Main Enablers

An enabler is a factor that positively supports the process or operation in practice. According to Chatti (2012), in knowledge management practice, the enablers are the factors which support in knowledge sharing and link to the outcomes of knowledge sharing. Enablers in the knowledge sharing process are trust, social capital, organizational culture as discussed previously in Chapter 2.

According to Inkinen, Kianto & Vanhala, (2015) and Nagesh (2016), organizational culture is a crucial enabler for knowledge-based behavior of employees at work given that they have support from leadership. This section is providing overview of the interview results about the enablers when observing the applicability of the KM model.

As a result of responses to four questions (3.14, 3.17, 3.18, and 3.19), seven interviewees working in two organizations revealed the existence of a KM vision and strategy are aligned with their organization's strategic priorities. Having a strategy assists all individuals in the organizations share the understanding of why the entity requires KM and the strategic nature of the initiatives. The respondents agreed that the primary focus of the KM in the government entity is to facilitate adequate flow of knowledge from its source to the target, i.e. the place where it is applied or utilized to attain organizational objectives.

Responding to question 3.14, twenty respondents said that the KM model offers a strategy for attaining a wide and detailed knowledge management vision. Remaining responses pointed out that application of KM model can gather sufficient information in efficient manner in a government entity. According to results of question 3.18 as mentioned in Table 5.3, majority of the interviewees (92%) responded that overall performance is enhanced positively due to the organization innovations and other benefits. This provides a clear evidence that organizational culture is a main enabler with respect to KM strategy in implementation of the proposed KM model. This highlights the enabler 'organization culture' and confirm the findings of Inkinen, Kianto & Vanhala, (2015) and Nagesh (2016) from literature.

On the other hand, a discussion on ‘enablers’ of the KM model may also be understood by analyzing the importance of the KM process in the proposed model. The analysis of the importance of the KM process is based on the basis on interviewees’ responses to three question: 3.14 (likely influence of the KM model on “redefinition and efficiency of the KM process”, 3.16 (“the structure of KM team, KS, and organizational performance”) and 3.18 (“overall performance” of the organization). Based on the research finding, it seems that KM is likely to creates a holistic impact on organizational innovation (OI) because, OI is identified as the activities in the organization that lead to the creation of an environment of active management (Gilaninia, Askari, and Dastour, 2013). According to the interview findings, OI offers an appropriate work setting that assists in the elimination of obstacles to concept development and its application. Through OI, redundant learning is reduced, and the efficiency and responsiveness are improved (Alavi and Leidner, 2001).

From the research findings of question 3.16 (Table 5.3), it was found from 72% of respondents that the application of the proposed KM model will be positive through establishing KM teams and increasing KS and performance. Whereas, remaining 28% of responded that it will clearly define the roles and responsibility. Appropriate KM influence, addressing organizational issues, may promote innovation of goods or operations to enable the attainment KM vision, thus, facilitating growth. KM practices perform a critical intermediary role towards OI (Alavi and Leidner, 2001). Therefore, by improving the potential to retrieve and utilize knowledge, OI is likely to play a crucial role in advancing organizational decision making in government entities in AD.

5.5.3 Applicability of the KM Model: Influential Factors

The influential factors are those factors which control or impact on the process or operation in the organization. In knowledge management, influencing factors for knowledge sharing are leadership governance (according to Holsapple and Joshi (2002)), and people, process, and technology (according to Al-Khouri (2014)) as discussed in Chapter 2 (section 2.4). Hence, this section is sub-divided into two: leadership and governance, and other section includes people, process, and technology.

5.5.3.1 Leadership and Governance

The interview results on the questions 1.7, 3.1, 3.2, and 3.3 related to the mechanisms for and role of the leadership in knowledge management in the respondent's entity reveal that leadership plays an essential role in strategic KM process by offering the vision and guidance. The KM governance body involves cross-functional leadership in government organizations (Omotayo, 2015; Biygautane & Al Yahya, 2011).

Finding out the main influential factor, respondents answered question 1.7 and results showed that leadership is influencing confirmed from 36% of them, people influencing is confirmed from 32% of them, and more than two factors affecting together is confirmed by 32%. However, culture and technology were not found at all as influencing factors in knowledge capturing, storing and sharing. According to question 3.1 to answer if the leadership in the organization supporting KS with funding and securing budget, 60% of the respondents confirmed it is not provided and 40% confirmed it is provided but limited (Table 5.3).

Answering to the influence of leadership's commitment with knowledge sharing for application of proposed model, 60% of the respondent considered it as positive and improving with leadership commitment, 28% mentioned that it will clarify objectives and expectations, and 12% confirmed that it will improve knowledge transfer. Improve knowledge transfer (Table 5.3). These findings deduce that leadership is one of the main influential factors and confirmed from literature as Holsapple and Joshi (2002).

5.5.3.2 People, Process, and Technology

From the respondents' perspective and according to questions 3.1, 3.3, 3.12, 3.18, 3.19, 3.20, and 3.21 the role of top management is critical to ensure that KM is allied with the strategic organizational priorities. According to question 3.12, 80% of the respondents confirmed that there is no clearly defined process for KM and KT in their organization, whereas 20% confirmed that it is defined but in process. Through this and according to question 3.19, when asked about the effect of the model on the KS between employees (people). The results showed that employees across an entity can be involved in knowledge sharing and imitation because 96% of interviewees confirmed that the model will be positively encouraging employees.

This encouragement is associating with knowledge transfer and remaining responded that it will affect the organizational culture positively. When KM becomes an organized mass movement, the culture of effective knowledge sharing will be established and spread across the government organizations. Incidentally, there is a specific process that a strategic KM program needs (Al-Khour, 2014).

5.5.4 Cultural Implications Outcome

According to questions 1.3, 1.8, 3.9, 3.10, 3.11, and 3.18 when asked if culture supports knowledge sharing, interviews offered different responses. From questions 1.8, it is portrayed that the impact of knowledge management has various positive outcomes that support OI, eight out of 25 agreed that KM exploiting available resources, to successfully positioning the government in order to deliver value-added services, which eventually support a transparent culture that enhances proper governance as a whole.

Questions 3.10 and 3.11 outcomes reveal that improving the image of the government entities can be an attainable task, and this would increase the motivation of public servants, resulting in a culture of consistent enhancement. The interview responses represent that knowledge exchange is a KM contributor that can improve innovation performance and decrease redundant learning practices. The employee readiness to give and gather knowledge enables government entities to enhance innovation ability.

According to question 1.8, nine interviewees confirmed that KM can influence innovation when the government firms are willing to share and encourage interaction in a manner that they both impact organizational performance towards increased competitive advantage. Question 3.18 findings depict that all responses that KM can improve the performances of various public offices that participate in inter-organizational innovation programs.

5.6 Conclusion

This chapter analyzed the interview results to prove the need for KM governance in government entities within AD; it further examines the validity of the proposed model's structure, and examines the applicability of the models. To delve deeper, the chapter explores the position and the need to apply the KM governance framework from different viewpoints in Abu Dhabi government organizations. In the process, this chapter discusses the challenges faced by government entities when dealing with implicit knowledge.

The data collected indicated that knowledge management among government institutions in Abu Dhabi is very limited or inexistent. According to the respondents, most of the employees do not share information hence their implicit knowledge does not help the rest of the staff. Though knowledge management (KM) might exist in some institutions, majority of the respondents indicated that the mechanisms are informal and that the organizations lack a department or position to specifically focus to KM. It is also worth noting that most of the respondents indicated that they cannot differentiate between implicit and explicit knowledge which means they lack have no idea on the basics of information management. The conclusion of the interviewee responses is that there is a vital need for encouraging information management in AD government for the purpose of effective performance and efficient delivery of services

The data collected was useful in identifying the challenges to knowledge sharing in the institutions and they include lack of support for the leaders and also unwillingness by the staff to support change. This unwillingness is caused by bad organizational culture where workers are accustomed to doing things in a certain way and are not willing to try new ideas even if it could work.

In other words, this study looked into many aspects of developing a knowledge management model from the need to validity, and then to applicability. The qualitative data was collected the interviewees were asked the questions that were prepared for analyzing the model. From the interview outcomes, it is established that there is a need for KM in AD as it will help improve competitive advantage and promote knowledge sharing. Nonetheless, the research shows that the proposed KM model is valid and is likely to be applicable in government entities in AD, but only through leadership support and employee willingness to share knowledge. The following Chapter 6 will discuss the results further to signify the challenges with proposed model, and briefly conclude. In addition, it will include the expected future work in this topic.

Chapter 6: Discussions and Conclusions

6.1 Introduction

The main purpose of this research is to develop a knowledge governance system of capturing, documenting, retaining and disseminating the knowledge in government organizations in Abu Dhabi, an Emirate of the UAE. As such, a knowledge management (KM) model has been prepared. From the interview outcomes, it is evident that the AD government has invested little efforts in promoting KM and knowledge sharing among workers in the public sector. The primary purpose of the KM model is to improve Organizational Innovation (OI) in Abu Dhabi through modeling in the implicit knowledge. This Chapter highlights the major challenges related to knowledge management in government organizations that demand a KM model. Next, the factors essentials of the proposed KM model are discussed. The chapter then summarizes the main findings of the research related to validation and implementability of the proposed model. The strengths and limitations of the research and the model are also highlighted. The chapter at the end suggests some possible future research into KM in government organizations in AD.

6.2 Challenges of Knowledge Management and Need for a KM Model

The research finding revealed that government entities lack an organizational culture that nurtures KM. Consequently, employees in the public sector have inadequate information about KM as a tool that can help initiate positive change that supports economic growth and knowledge sharing.

Based on the research findings from different entities, the respondents claimed that it is necessary for government organizations to be aware that economic growth in the contemporary world highly depends on KM. From the interviews undertaken for the research, it was established that a lack of leadership and unwillingness by the employees are the primary factors affecting knowledge management and sharing in AD. This finding re-establishes the claim by Al-Roubaie and Al Ameen (2015) that due to limited KM governance in AD and lack of readiness, there is a knowledge gap among the employees working in the government organizations. Due to myriad leadership problems and limited knowledge sharing by the employees, understanding of the principle and relevance of KM has been very low. Other challenges faced by the government entities in AD, as found from the interviews, include lack of clear process to transfer knowledge, multiple sources of information, duplication of works etc. Further, fear of sharing knowledge, no incentive for sharing, and lack of budget are potential challenges faced by the employees when dealing with implicit knowledge. For the above reasons, the interviews were of the opinion that a KM model as proposed in this research is essential.

The interviewees thought that an efficient application of the KM model will improve the level of achievement in the AD government entities. Furthermore, the research outcomes reveal that the interviewees also believe that a properly implemented KM model would help solve most of the problems in the government entities, and help improve the decision-making in the public sector due to easy access to information and leadership practices. Based on the investigation results, KM model can help organizations in AD to increase efficiency and productivity, thus, promoting OI through broader and limitless cooperation.

Implementation of the KM model is a right approach that government organizations in AD can utilize to tap explicit and implicit knowledge. A high percentage of the respondents agreed that KM could improve quality and the ability to collaborate by standardizing working approaches and enabling conversations with top experts. KM governance is still new in the GCC region as it has been initiated and transmitted by experts and professionals from western countries (Biyygautane & Al-Yahya, 2011). Nonetheless, the governments in the Region are investing funds and efforts to ensure complete implementation of KM in the public sector. The positive effect of a good KM model is to be depicted in the organizational innovation (OI) as an indicator (Andreeva & Kianto, 2011).

6.3 The Proposed Model: Appreciation and Validation

The respondents of the research agreed that knowledge management (KM) could help the public sector improve its products and services. Indeed, KM is a vital tool that is likely to promote organizational and employee performance in the government. But the interview results depicted that various organizations within AD government do not have a department or unit that deals with KM. Similarly, the public sector has a shortage of KM experts such as KM officers; thus, it has been difficult for the organizations to develop a culture that promotes knowledge sharing and transfer. However, among the organizations of the interviewees, 80% of them supported that there was no clear process of KM and KT.

It was also found from the research that, though important for promoting KM, different entities in the AD public sector lack employees' training programs. Similarly, the AD government has limited programs to support KM in the public sector.

For instance, most of the respondents stated that the local government provides inadequate funds to support KM programs. Furthermore, lack of clear KM framework leads to unsupportive leadership as leaders doubt its potential outcomes. Thus, it was established, from the interviews, that a KM model that includes Personal Knowledge Network (PKN), formal and informal mechanisms, and KM process, is likely to trigger implicit knowledge sharing.

The international trends portray an opportunity for government entities in AD to utilize knowledge management as the primary driver towards improving productivity and creating a more user-centric public sector similar to according to Zaim, Gurcan, Tarim, Zaim & Alpkhan (2015). Opportunities are seen to be varied for the AD government to improve process, promote effective communication, and establish an environment of trust, openness, and honesty in decision-making. KM model can be used to maximize efficiencies across all public organizations by linking massive information across various levels of government and overseas.

Through KM model, it is possible for government entities to develop new or combine old systems to enhance the general performance and exploit a more comprehensive, highly integrated, and easily accessible knowledge base. In accordance to responses collected from interviews (Table 5.1), for organizations that have implemented KM governance model within AD, it has helped them enhance liability and reduce risk by arriving at well-informed decisions and solving problems quickly. KM model has helped the public sector have access to integrated and accurate information.

KM can be used by government organizations within AD to deliver quality and inexpensive constituent services, such as improving partnership with and responsiveness to the public as previously mentioned by Hartley (2005). Successful KM is a contributor to OI and the establishment of fresh abilities according to Inkinen, Kianto & Vanhala (2015). According to interview responses (as mentioned previously in 5.5.3) successful implementation of KM model in the public sector can impact positively in supporting organization innovations and can help government entities in delivering value-added services that will eventually lead to enhance transparent culture in the government entities.

According to results of interviews analyzed in Table 5.2, all respondent supported that the proposed KM model consists of the right components that integrate well and are likely to help effect OI and achieve desired outcomes both at the individual and organizational level. The most effective mechanism for KT was to be formal mechanism and most influencing activity in KM process cycle was found to be transfer or share. Further, respondents have provided a feedback that KM model offers a strategy for attaining a wide and detailed KM vision. All of above signify the applicability of the KM model. However, some interviewees recommended that to add an evaluation process within the model to measure the effectiveness of the tools and improve the overall outcomes. According to interview resulted in Table 5.2, 52% of the interviewees responded that there are no specialized team for KM and 64% of the interviewees responded that there are no defined objectives for KT and KS. The validation is done from support of the literature. Interviewees recommended to add an evaluation process with model measures to improve outcome for which the following suggestions are noted:

- The organization must have a clearly defined objectives for KT and KS. According to Nagesh (2016), the objectives of the organization play an important role in successful knowledge sharing and strengthening knowledge management.
- The organization must have a clear process and set of strategies for KM. According to Gierszewaska (2012), clearly defined KM process with effective cycle can provide better knowledge acquisition, creation, and sharing. In addition, the organization must have valuable strategic resources because it will increase efficiency (Zaim, Gurcan, Tarim, Zaim & Alpkan, 2015). Including KM as a part of strategic management in the organization can deploy the governance and knowledge sharing (Foss & Mahoney, 2010).
- There must be a designated team for KT and KS for effective KM model applicability. According to Phelps, Heidl, and Wadhwa (2012), support provided by collective team that work for knowledge repository can build a strong social relation in the organization. This will improve the inter-organizational relations and provide cooperation for knowledge sharing.

6.4 Implementation of KM Model and Benefits

Major possible benefits of implementing the KM model, as perceived by the interviewees are:

- Overall performance of the organization is likely to positively affect innovation in the organizations. Knowledge management may also improve inter-organizational innovation programs.
- The KM model may increase knowledge sharing and encourage formation of KM teams.

- Leadership plays an important role in comparison to other influential factors such as culture, people, and technology. Thus commitment and clear objectives and expectations from the organization's leadership are requirements and likely to enhance knowledge sharing.

In addition, the interviewees believed that the proposed KM model could help improve OI as it prevents workers from consistently reinventing the same thing and make information accessible so that the employees have opportunities to innovate and solve problems. The respondents agreed that KM as an OI enabler could help organizations to safeguard their intellectual capital and concentrate on their most important asset, which is human capital. They thought that it offers a foundation for progress quantification and minimizes the burden of expert erosion.

Through successful implementation of KM framework, the public sector can efficiently manage massive volumes of information to assist its personnel serve citizens better and quicker. Additionally, the KM model can help the public sector in AD re-orient its culture by focusing on an optimal knowledge sharing approach. Some of the interviewees approved that KM framework can connect employees in government organizations by creating a collaborative work environment. So, the research finding revealed, that if properly implemented, KM could become a crucial tool that government organizations in AD can use to transform visual thinking into reality, and to have positive outcomes in government entities within AD.

There are five key steps (identify the objectives, define process, identify technology needs, evaluating present state and continuously evaluating, and KM team builds a roadmap for others) can be used to implement KM model in the public sector. Firstly, it is important to identify KM program objectives. Moreover, government entities can prepare for change and define high-level process. Afterwards, it is vital to identify and prioritize the technology needs for KM. The management team can evaluate the present state and deduce any weaknesses in order to set pace for continuous improvements. The KM team can also build a KM implementation roadmap. Again, the public sector can implement, measure, and enhance KM programs (Amayah, 2013).

Based on the interview results and interviewee opinions, the proposed KM model is likely to trigger a new period of cooperation and knowledge sharing. Presently, merger opportunities, employee turnover, and international expansion demand people to operate differently. It is essential for employees to cooperate with their colleagues, exchange knowledge, follow up on global issues, and quickly respond to demands of the public. The study found that the influence of technology performs a vital role in KM as it can help government organizations within AD to collaborate, relate, and find quick access to professionals and relevant significant information. Further, incorporating technology into KM process can permit employees to cooperate, act human, and communicate effectively in the modern electronic environment. KM can help the public sector to develop a strong foundation of trust and confidence among employees. It can help promote an organizational culture that encourages knowledge sharing and transfer.

6.5 Future Research

The work, at the end, studied the perception of respondents in some government entities in Abu Dhabi about the applicability of the proposed model. A major future research should involve an actual implementation of the KM model and observing or measuring of the outcomes in knowledge management in government entities in Abu Dhabi. Hence, a large sample of government entities may be needed to be evaluated to observe the effects of the KM model. In further research, possible application of the concept and practice of knowledge management and knowledge governance in organizations in the private sector may be undertaken. Examining how diversity and differences within and among organizations may influence knowledge management may also be a good possible work.

Future KM research can continue on various platforms. One consideration is to extensively explore the KM components discussed in this study with larger samples. If possible, future researchers can apply probability samples. Another future investigation may undertake an analytical and causal research designs to connect between knowledge management efforts, innovation, and other performance results. A systematic research may also be structured to intensively evaluate the comparative influence of KM programs, technological advancements, modernization, and other new expansion to a knowledge-based economy. Markedly, these areas are highly encouraged as development goals for GCC nations and the rest of the world. The findings of this research offer a basis for creating analytical research studies in future.

6.6 Conclusion

Overall, the research findings revealed that successful government organizations have KM processes that facilitate improved operations. KM also helps in connecting people and developing systems and tools to support operations. Through KM, organizations may ensure that the works are executed in the best ways possible with cooperative knowledge sharing. A KM strategy, however, is to depend on the methods and systems to capture knowledge and lessons learned, share experiences, and avoid repetition of mistakes. The Abu Dhabi government entities over the years have accumulated significant volume of knowledge, skills, and experiences. Unfortunately, this knowledge is not retained for sharing and future improvement. In most cases, the implicit knowledge in any organization is not captured, retained or shared among the employees because of individual unwillingness and a lack of incentive. Thus, the organizations lose valuable knowledge and experiences when key employees resign or leave the organization. In addition, a lot of knowledge in the organization is not documented leading to duplication of efforts and loss of benefit from the previous experiences. Therefore, the need for implicit knowledge research is increasing in the face of declining budgets and government's pursuit of sustainable resources.

The Implicit KM governance as a discipline and a tool to improve competitiveness is still in its infancy, especially in government entities. No work has been done on the topic in Abu Dhabi. This preliminary research has demonstrated the primary idea of knowledge governance and a KM model that may have improve organizational innovation and performance.

It seems, as vetted by all respondent in this research, a knowledge governance model for capturing implicit knowledge based on a knowledge network with a pivotal role for Personal Knowledge Network (PKN) may be a good way for overcoming the challenges in managing and sharing knowledge. In addition, it can add as an effective method of organizational innovation (OI) in the public sector in Abu Dhabi.

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Appendices

Appendix – A

Box 3.1: Interview Protocol, Part 1

Comprehend the Need for a KM Model in AD Government to govern the implicit knowledge and promote knowledge transfer with answers to questions like:

- 1.1 How would you define the implicit knowledge in your organization?
- 1.2 Does your organization have a framework or model to capture implicit knowledge? If yes, what are the main components of this model?
- 1.3 Does your organization promote knowledge sharing in the organization? If yes, how?
- 1.4 Does your organization encourage building networks for sharing ‘implicit knowledge’? If yes, what mechanisms are used for that?
- 1.5 What channels are used in your organization to share ‘implicit knowledge’?
- 1.6 What main challenges does your organization face in dealing with ‘implicit knowledge’?
- 1.7 Which of the main factors (Leadership, People, Culture, or Technology) influence knowledge capturing, storing, and sharing in your organization the most?
- 1.8 What are the impacts of ‘sharing knowledge’ on ‘employee innovation’ in your organization?

1.9 What are the impacts of ‘sharing knowledge’ on your organization’s performance?

1.10 Does your organization have a KPI for sharing ‘implicit knowledge’?

Box 3.2: Interview Protocol, Part 2

Test the validity of the proposed model: Structure, Components, and Outcomes by answering the below questions:

2.1 Does the proposed model consist of the right components required for KM governance model? If not what is missing?

2.2 Which type of mechanism (between Formal and Informal) is likely to have more impact on ‘knowledge transfer’?

2.3 How technology and tools, and their application can facilitate the PKN in the organization?

2.4 Are the proposed model’s components (PKN, KM process and governance mechanisms) likely to integrate together to maximize the organization’s performance? Please explain your answer.

2.5 What could be the effects of applying the proposed model on a personal level?

2.6 What could be the effects of applying the proposed model on organization level?

2.7 Which activity in the KM process cycle (Create, Transfer, and Use) is likely to be influenced more by the application of the proposed model in the organization? Please explain your answer.

2.8 Which of the four categories (Socialization, Externalization, Combination or Internalization) of transforming implicit knowledge to explicit knowledge is likely to be affected more by the application of the proposed model in the organization?

Please explain your answer.

2.9 How is a wide range of PKNs in the organization likely to impact on innovation in the organization? Please explain your answer.

Sample of the email sent to the interviewees

Dear Mr/Mrs....

I trust this email find you well,

Kindly this e-mail has been sent to you after our phone conversation to request your support in my master thesis (Organizational innovation in AD: Modeling in “Implicit” in Knowledge Governance) by agreeing to hold an interview and answer the required questions

Objective of the Research:

With the absence of having a unified governance model in KM among AD government entities and lack of the employees’ willingness to share and transfer knowledge among the colleagues. The main purpose of this thesis is to develop a knowledge governance model of capturing, documenting, retaining and disseminating the implicit knowledge in AD government organizations using the Personal Knowledge Network (PKN).

The empirical study for the research will include un-structured discussions with selected key players who are relevance to knowledge management functions and objectives in certain public sector organizations in the Emirate of Abu Dhabi. The main purposes of the interview are:

- Examine the importance and the needs of applying a governance model,
- Test the validity of the proposed model
- Collect respondents’ perceptions about the applicability of the model in AD government entities

Below are the details of the interview and an invitation calendar will be send to you shortly.

Interview Details for the					
Sector	Organization Name	Division/ Section	Name of participants	Date	Time
Security, Justice and Safety	Abu Dhabi Farmer Services Center	Organization development	7/3/2018	10-12

Attached both model summary and interview questions, where I will explain to them the model and then we will go through the questions to be answered.

Best regards

Fatema Almenhali

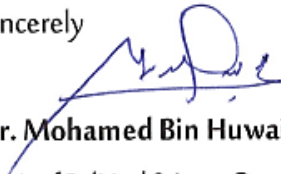
Appendix – B

December 18, 2017

To Whom It May Concern

This is to inform you that Ms. Fatema Ali Omar Al Menhali (200600473) is enrolled in the Master Program in Governance and Public Policy (MGPP) at the United Arab Emirates University. She is currently working on her Master Degree Thesis on "Organizational Innovation in Abu Dhabi: Modeling-in the 'Implicit' in Knowledge Governance"". Therefore, you are kindly asked to provide her with the possible help that she may need to achieve this work. This letter has been issued as per her request.

Sincerely



Dr. Mohamed Bin Huwaidin

Chair of Political Science Department

And Associate Professor of International Relations

College of Humanities and Social Sciences (CHSS)

Mohd.hwaiden@uaeu.ac.ae

03-713-5017

03-713-6498



Appendix – C

Interviewee Name: XXXX

Interviewee Title: XXXX

Interviewee Organization: ADEK

Questions:

1. Need for a KM Model in AD Government

Answering the below question will support the study in proving the need of governance model to govern the implicit knowledge and promote knowledge transfer.

1.1 How would you define implicit knowledge in your organization?

A: All Kind of knowledge which is intangible; skills, experiences, interpretation, etc.

1.2 Does your organization have a framework or model to capture implicit knowledge? If yes, what are the main components of this model?

A: Limited and informal through people working in teams and sharing knowledge, workshops, basic handover and inductions.

1.3 Does your organization promote knowledge sharing in the organization? If yes, how?

A: Yes, the organization has setup a KM department which focus more on implicit knowledge

1.4 Does your organization encourage building networks for sharing ‘implicit knowledge’? If yes, what mechanisms are used for that?

A: Limited through brainstorming for a special project or through committees.

1.5 What channels are used in your organization to share ‘implicit knowledge’?

A: Workshops, meeting, on-job knowledge sharing, social gathering

1.6 What main challenges do your organization face in dealing with ‘implicit knowledge’?

A: Lack of formal governance framework, Lack of ownership, Lack of culture

1.7 Which of the main factors (Leadership, People, Culture, or Technology) influence knowledge capturing, storing, and sharing in your organization the most?

A: Leadership and technology

1.8 What are the impacts of ‘sharing knowledge’ on ‘employee innovation’ in your organization?

A: With new knowledge sharing initiatives, people started to provide solutions to problems not directly related to their job

1.9 What are the impacts of ‘sharing knowledge’ on your organization’s performance?

A: Most decisions by leadership are made on facts and data

1.10 Does your organization have a KPI for sharing ‘implicit knowledge’?

A: NO

2. Validity of the Proposed KM Model

Test the validity of the proposed model: Structure, Components and Outcomes by answering the below questions:

2.1 Does the proposed model consist of the right components required for KM governance model? If not what is missing?

A: Yes, however to complete the model at later stage, performance matrix to be added

2.2 Which type of mechanism (between Formal and Informal) is likely to have more impact on ‘knowledge transfer’?

A: Formal to set the grounds, once the organization become mature enough in knowledge and information sharing informal mechanisms them maintain the culture

2.3 How technology and tools, and their application can facilitate the PKN in the organization?

A: They are essential. Organizations are very dynamic in the way they operate. Tools and knowledge provide ease of access and flexibility to access knowledge

2.4 Are the proposed model’s components (PKN, KM process and governance mechanisms) likely to integrate together to maximize the organization’s performance? Please explain your answer.

A: Yes the three components have to be integrated and they cannot work independently for the maximum performance.

2.5 What could be the effects of applying the proposed model on personal level?

A: Will make benefits from sharing knowledge through the networks for their own functions and activities, for example a person from finance background in a network with someone ICT skills can share their business need and IT person can suggest efficient way to solve it

2.6 What could be the effects of applying the proposed model on organization level?

A: Personal development will lead to organizational development. It will enable the culture of capturing and sharing knowledge which can in turn connect to organizational assets.

2.7 Which activity in the KM process cycle (Create, Transfer, and Use) is likely to be influenced more by the application of the proposed model in the organization? Please explain your answer.

A: All will be influenced but in my view "Use" is going to be more implemented because everyone in the network would like to benefits from use of knowledge

2.8 Which of the four categories (Socialization, Externalization, Combination or Internalization) of transforming implicit knowledge to explicit knowledge is likely to be affected more by the application

of the proposed model in the organization? Please explain your answer.

A: Socialization is the easily stage of implementation as it will be use complicated to implement

2.9 How is a wide range of PKNs in the organization likely to impact on innovation in the organization? Please explain your answer.

A: A lot. People with new ideas can be connected through the networks so others can give feedback to improve

3. Perceptions of the model applicability in AD government organizations

Benefits in knowledge governance likely to be achieved by the application of the proposed model: Please explain your answer, as appropriate.

Factors of successful KM		Current Status	Possible Future outcomes (after applying the model)
Human-Oriented	Leadership	Do leadership in your organization support KS by: 3.1: Funding and securing budget A: Yes recently the KM strategy was approved and a budget for a required initiatives was approved 3.2: Contributing to the KS initiatives A: Yes but the current initiatives are limited	How is the application of the proposed model in your organization likely to: 3.3: a) Influence the leadership's commitment to knowledge sharing? A: Positive 3.4: b) Impact the leadership's support to KM from the financial and operational perspective? A: Approve budget
	People	3.5: Do employees your organization differentiate between implicit and explicit knowledge? A: Not fully 3.6: o employees in your organization receive support and recognition for sharing knowledge? A: Not enough	How is the application of the proposed model in your organization likely to: 3.7: a) Influence employees in creating PKNs. A: Positive 3.8: b) Impact employees' in knowledge sharing and organization's performance? A: When the model is developed and implemented through KPIs, projects and results this will influence employees to use it
	Culture	3.9: Does your organization's culture support KS? A: Yes, Innovation corner	3.11: How is the application of the proposed model in your organization likely to impact the culture of KS? A: Clear guideline and process

Factors of successful KM		Current Status	Possible Future outcomes (after applying the model)
		<p>3.10: Do you have any initiative that prompts PKNs? A: Yes know the knowledge initiatives</p>	
Organization-Oriented	Process	<p>3.12: Do you have a clearly defined process for KM and KT? A: Partially</p> <p>3.13: Do your employees know about this process? A: it is communicated through ODE process design</p>	<p>3.14: How is the application of the proposed model in your organization likely to: influence redefinition and efficiency of the KM process? A: with formal mechanisms , a formal process can be established</p>
	Structure	<p>3.15: Do you have a specialized KM team in your org (division, section, or committee)? A: Yes KM division</p>	<p>3.16: How is the application of the proposed model in your organization likely to: influence the structure of KM team, KS, and organizational performance? A: Already existing, however redefining a formal process will improve the KM functions</p>
Management-Oriented	Strategy	<p>3.17: Does the organization developed a KM strategy? A: Yes</p>	<p>3.18: How is the application of the proposed model in your organization likely to: influence overall performance? A: Through projects and process Compliance</p> <p>3.19: How is the application of the proposed model in your organization likely to: influence employees to transfer knowledge? A: Positive</p>
	Objectives	<p>3.20: Do you have defined objectives for KT and KS? A: Yes under the KM strategy</p>	<p>3.21: How is the application of the proposed model in your organization likely to: influence KM objectives for becoming a KS organization? A: By implementing the KM strategy ad framework and</p>

Factors of successful KM		Current Status	Possible Future outcomes (after applying the model)
			adopting excellence framework
Technology-Oriented	Infrastructure	<p>3.22: Do you have a single knowledge bank database for all information and knowledge in your organization? A: Partially, data and information is scattered across multiple systems</p> <p>3.23 Do you have a KS platform? A: NO</p>	<p>3.24: How is the application of the proposed model in your organization likely to influence the employees' understanding about the requirements of needed technologies and platforms for KM? A: the KM strategy has identified the gaps and proposed initiatives to develop tools and technologies</p>
	Applications	<p>3.25: Do your organization have any application for KS and KT? A: Partially through functions by each sector</p> <p>3.26: Do you have any application that prompt PKN internally and externally in the organization? A: Having a comprehensive model will trigger a need to develop an interface system across all layers in the organizations</p>	<p>3.27: How is the application of the proposed model in your organization likely to influence the development of applications for KS, KT and PKNs? A: Positive</p>

Need of KM Model

Transcription Summary and coding

		Coding colors:
		Situational Analysis
		Implicit Knowledge Drainage
		Inhibiting Factors
		Factors to be considered
#		Questions
1.1	<input checked="" type="radio"/>	How would you define implicit knowledge in your organization?
1.2	<input type="radio"/>	Does your organization have a framework or model to capture implicit knowledge? If yes, what are the main components of this model?
1.3	<input type="radio"/>	Does your organization promote knowledge sharing in the organization? If yes, how?
1.4	<input type="radio"/>	Does your organization encourage building networks for sharing 'implicit knowledge'? If yes, what mechanisms are used for that?
1.5	<input type="radio"/>	What channels are used in your organization to share 'implicit knowledge'?
1.6	<input type="radio"/>	What main challenges do your organization face in dealing with 'implicit knowledge'?
1.7	<input type="radio"/>	Which of the main factors (Leadership, People, Culture, or Technology) influence knowledge capturing, storing, and sharing in your organization the most?
1.8	<input checked="" type="radio"/>	What are the impacts of 'sharing knowledge' on 'employee innovation' in your organization?
1.9	<input type="radio"/>	What are the impacts of 'sharing knowledge' on your organization's performance?
1.10	<input type="radio"/>	Does your organization have a KPI for sharing 'implicit knowledge'?

Validity

Transcription Summary and coding

	Coding colors:
	Model structure and component
	Knowledge retention
	Importance of components integration
#	Questions
2.1	Does the proposed model consist of the right components required for KM governance model? If not what is missing?
2.2	Which type of mechanism (between Formal and Informal) is likely to have more impact on 'knowledge transfer'?
2.3	How technology and tools, and their application can facilitate the PKN in the organization?
2.4	Are the proposed model's components (PKN, KM process and governance mechanisms) likely to integrate together to maximize the organization's performance? Please explain your answer.
2.5	What could be the effects of applying the proposed model on personal level?
2.6	What could be the effects of applying the proposed model on organization level?
2.7	Which activity in the KM process cycle (Create, Transfer, and Use) is likely to be influenced more by the application of the proposed model in the organization? Please explain your answer.
2.8	Which of the four categories (Socialization, Externalization, Combination or Internalization) of transforming implicit knowledge to explicit knowledge is likely to be affected more by the application of the proposed model in the organization? Please explain your answer.
2.9	How is a wide range of PKNs in the organization likely to impact on innovation in the organization? Please explain your answer.

Applicability

Coding colors:

Importance of Knowledge Management Strategy

Importance of KM Process Model in Abu Dhabi

Influential Factors - Leadership

People, Process, and Technology

Cultural Implications Outcomes

Factor	sub-Factor	Status	Questions	
Human-Oriented	Leadership	Current Status	3.1	Do leadership in your organization support KS by: a) Funding and securing budget
			3.2	b) Contributing to the KS initiatives
		Future Status	3.3	How is the application of the proposed model in your organization likely to: a) Influence the leadership's commitment to knowledge sharing?
			3.4	b) Impact the leadership's support to KM from the financial and operational perspective?
	People	Current Status	3.5	a) Do employees in your organization differentiate between implicit and explicit knowledge?
			3.6	b) Do employees in your organization receive support and recognition for sharing knowledge?
		Future Status	3.7	How is the application of the proposed model in your organization likely to: a) Influence employees in creating PKNs.
			3.8	b) Impact employees' in knowledge sharing and organization's performance?
	Culture	Current Status	3.9	a) Does your organization's culture support KS?
			3.10	b) Do you have any initiative that prompts PKNs?
		Future Status	3.11	a) How is the application of the proposed model in your organization likely to impact the culture of KS?
Organization-Oriented	Process	Current Status	3.12	a) Do you have a clearly defined process for KM and KT?
		3.13	b) Do your employees know about this process?	
	Future Status	3.14	a) How is the application of the proposed model in your organization likely to: influence redefinition and efficiency of the KM process?	
		3.15	a) Do you have a specialized KM team in your org (division, section, or committee)?	
Structure	Current Status	3.16	b) How the application of the proposed model in your organization is likely to: influence the structure of KM team, KS, and organizational performance?	
	Future Status	3.16	b) How the application of the proposed model in your organization is likely to: influence the structure of KM team, KS, and organizational performance?	
Management-Oriented	Strategy	Current Status	3.17	a) Does the organization developed a KM strategy
		Future Status	3.18	a) How the application of the proposed model in your organization is likely to: influence overall performance?
	Objectives	Current Status	3.19	b) How is the application of the proposed model in your organization likely to: influence employees to transfer knowledge?
		Future Status	3.20	a) Do you have defined objectives for KT and KS?
Technology-Oriented	Infrastructure	Current Status	3.21	a) How is the application of the proposed model in your organization likely to: influence KM objectives for becoming a KS organization?
			3.22	a) Do you have a single knowledge bank database for all information and knowledge in your organization?
		Future Status	3.23	b) Do you have a KS platform?
	Applications	Current Status	3.24	a) How the application of the proposed model in your organization is likely to: influence the employees' understanding about the requirements of needed technologies and platforms for KM?
		Current Status	3.25	a) Do your organization have any application for KS and KT?
			3.26	b) Do you have any application that prompt PKN internally and externally in the organization?
		Future Status	3.27	How the application of the proposed model in your organization is likely to: influence the development of applications for KS, KT and PKNs?

1. Need for a KM Model in AD Government (Interviewees 1-10)

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
1.1	How would you define implicit knowledge in your organization?	Skills, experiences, information in people heads specially if they are outsources	Not matured and very weak	not defined in proper way, and its remaining in people minds	All Kind of knowledge which is intangible; skills, experiences, interpretation, etc.	experiences, skills undocumented information, it's not captured and not identified	information people have on their minds and mostly based on 1-1 interactions	it is not capture, retain on the people minds and there is no mechanism to share it	Implicit knowledge is the collective experiences and know-how of employees of the organization. It is often hard to transfer without a proper mechanism.	Not define and not capture	Not define, not capture and most employees can't differentiate
1.2	Does your organization have a framework or model to capture implicit knowledge? If yes, what are the main components of this model?	No, but the organization have basic handover process that not include a quality check.	No, we have developed some initiatives in term of KM however it is not tackle Knowledge sharing	no, some initiatives	Limited and informal through people working in teams and sharing knowledge, workshops, basic handover and inductions.	No, however for explicit we have	No	No	Currently, the organization does not have a formal framework or model of capturing implicit knowledge. However, through informal discussions among colleagues, there is some degree of transfer happening.	No	Not define, not capture and most employees can't differentiate
1.3	Does your organization promote knowledge sharing in the	Yes, but limited for example: if employee who attend training	Yes however not on proper mechanisms, we focus only on trainings	very weak	Yes, the organization has setup a KM department	yes, example innovation corner where employees participate to	overall no, the effort are very shallow	No	Yes, to some extent. The leadership supports open channels of	No	Not define, not capture and most employees can't differentiate

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
	organization? If yes, how?	have a chance to re- train others.			but it focus more on explicit knowledge	present their ideas			communication, and cross-sector collaboration. While not officially formalized, efforts are being made to share knowledge and innovative ideas across the organization, such as through the Innovation Corner.		
1.4	Does your organization encourage building networks for sharing 'implicit knowledge'? If yes, what mechanisms are used for that?	NO	No, not embedded and not in formal	no	Limited through brainstorming for a special project or through committees.	partially through informal discussion, meetings, retreat	No	Yes, through teams , taskforces, committees	Currently, the organization does not have any formal networks for sharing implicit knowledge	Yes, family retreat, some events to gather employees	yes but not formal by social discussion, employees gathering, social events
1.5	What channels are used in your organization to share 'implicit knowledge'?	Emails to share general information about the organization	intranet, internal communications, emails, workshops and social media	meetings and emails	Workshops, meeting, on-job knowledge sharing, social gathering	informal tools, meetings, events	committees, 1-1 meetings, taskforces	limited, we have suggestion schema	Through informal discussions among colleagues, some "implicit knowledge" transfer is taking place.	Emails only and for generic information	informal discussions
1.6	What main challenges do	Lack of leadership	Resistance of employees,	poor culture , lack of	Lack of formal	lack of clear process to	losing information	high overturn, fear of sharing	Knowledge sharing is not	lack of management,	losing information, no clear process,

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
	your organization face in dealing with 'implicit knowledge'?	support Duplication if works Losing important information when employees resigned No clear directions for knowledge and information sources (no directory available)	No define mechanism, difficulty in transferring Knowledge	willingness, no incentives, losing information	governance framework, Lack of ownership , Lack of culture	transfer knowledge, multiple sources of info, duplication of works, depending on outsources capabilities	because people left the org, some explicit info are not shared	knowledge, no incentives, lack of budget	mandated by leadership. However, it is encouraged. There is no model, or framework to guide knowledge sharing. There are limited tools or platforms for sharing implicit knowledge.	lack of communication, lack of leadership engagements	lack of leadership engagement, poor communication
1.7	Which of the main factors (Leadership, People, Culture, or Technology) influence knowledge capturing, storing, and sharing in your organization the most?	Leadership, Because technology and infrastructure are available and culture is open as organization support KS but the need of leadership support will enable the culture and utilize the technology better.	People	people	Leadership and technology	leadership and people	people	leadership and culture	All of the above influence knowledge capturing, storing and sharing to some extent. People are not motivated to share implicit knowledge. The Culture is not conducive to sharing implicit knowledge, and there are few tools to facilitate knowledge sharing.	leadership	leadership and culture
1.8	What are the impacts of 'sharing knowledge' on	Employees become more creative and innovative	Increase employee innovation, develop the	positive as this will lead to create good environment	With new knowledge sharing initiatives,	sharing knowledge help in reducing the duplication of	positive, collaboration lead to new	direct correlation, high impact	There is no record of such impact in the organization.	lack of share knowledge lead to high turnover	positive, once knowledge is available employees can solve problems

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
	'employee innovation' in your organization?	Facilitate the works Reduce time and effort so employee have time to perform better	culture and beliefs	where people believe on giving and sharing skills	people started to provide solutions to problems not directly related to their job	works and people will focus more and perform better	insights and ideas				and come with new ideas
1.9	What are the impacts of 'sharing knowledge' on your organization's performance?	Increase organization performance	Positive, sharing knowledge drive to excellence	performance will increase	Most decisions by leadership are made on facts and data	performance will improve as sharing knowledge help in identify projects and assign right people	positive, measured by outputs , org efficiency	lot of problems will be solve, big opportunities	Currently, there are no measures for measuring the impact on the organization.	not exist	Positive, better planning, better decisions
1.10	Does your organization have a KPI for sharing 'implicit knowledge'?	NO	NO, however we developed survey that measure the percentage of distribution of institutional culture	No	NO	No	No	No	No, it does not. However, some employees have it as part of their individual performance plans.	No	No

1. Need for a KM Model in AD Government (Interviewees 11-20)

#	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19
1.1	How would you define implicit knowledge in your organization?	knowledge in people mind such as skills, experience, information from 1 to 1 meetings, informal discussion	Knowledge in people minds	Hidden and not documented, remain in people heads	skills and experience gained through years and remain in people heads	not shared	it is scattered in the entity	not captured in a way that is shared in the right ways	not defined and not captured within the employee	within certain people
1.2	Does your organization have a framework or model to capture implicit knowledge? If yes, what are the main components of this model?	No, however some initiatives developed informally to capture some	no, but there are some limited initiatives	no	no	no only through handover	no we are lacking the official framework into transferring the information	it is not captured in a way that can be share right	no but we are try to improve	still working in the process
1.3	Does your organization promote knowledge sharing in the organization? If yes, how?	Yes but limited through internal initiatives such as brainstorming and informal meetings	Very limited and informally	no	yes but not documented (informal)	yes but no efficient	no still working on it	not trying the right ways of promoting	we are in the process	still working on the right way but yes
1.4	Does your organization encourage building networks for sharing 'implicit knowledge'? If yes, what mechanisms are used for that?	No	limited by conducting social events	not in direct ways	somehow	no	still	only through discussion	partially working on it	No
1.5	What channels are used in your organization to	informal discussion	workshops, meetings,	emails and portal but it is more on explicit knowledge	informal meetings , workshops	informal meeting	emails workshops	meeting	brainstorming	limited in emails

#	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19
	share 'implicit knowledge'?		informal discussion							
1.6	What main challenges do your organization face in dealing with 'implicit knowledge'?	losing business continuity, high turnover, high number of outsource employees	un efficient use of internal capabilities	Resistance from employees	lack of clear process which result on duplication of works	poor	Lack of formal governance framework	lack of communication	high turnover	multiple sources of info
1.7	Which of the main factors (Leadership, People, Culture, or Technology) influence knowledge capturing, storing, and sharing in your organization the most?	leadership and people will build the culture	Culture and people	People	Leadership and People	people	human capital	leadership	authority	management
1.8	What are the impacts of 'sharing knowledge' on 'employee innovation' in your organization?	positive	positive it will increase the innovation inside the organization	positive	people will have enough information and knowledge to solve problems and come with new ideas	Facilitate the works	accurate work process	clear work	collaboration lead to new insights and ideas	high impact
1.9	What are the impacts of 'sharing knowledge' on your organization's performance?	positive	positive	increase	lead to better performance	big opportunities	Increase organization performance	better decisions	better planning	sharing knowledge drive to excellence
1.10	Does your organization have a KPI for sharing 'implicit knowledge'?	No	No	there are some KPIs for KM in general not focusing on knowledge sharing	No	no	not clear	not shared in the right way	not all employees know them	working on them yet

1. Need for a KM Model in AD Government (Interviewees 20-25)

#	Questions	Interviewee 20	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
1.1	How would you define implicit knowledge in your organization?	hard to collect since it is based on the experience of certain people	no clear process into sharing it correctly	experience and skills with no interaction	informal sharing of information and experience	hard to collect	not being to mature professionally yet
1.2	Does your organization have a framework or model to capture implicit knowledge? If yes, what are the main components of this model?	currently working on the idea of transferring	very limited	narrow down to few people	no still	No while the functions of KM implement on project based if required	in the process
1.3	Does your organization promote knowledge sharing in the organization? If yes, how?	not all the entity is working in the right way of promoting it	very difficult since the idea is not clear to every one	yes trying our best	yes in benchmarking with other entities	yes but there is no clear set up	we are cross-referencing it with others
1.4	Does your organization encourage building networks for sharing 'implicit knowledge'? If yes, what mechanisms are used for that?	not all the company	through team members only	no formal networks are being activated yet	not yet	very limit	challenging into finding the right way
1.5	What channels are used in your organization to share 'implicit knowledge'?	only through meeting	workshops some time	communication emails	general information shared through communication	emails and general meetings	workshops and sometimes emails
1.6	What main challenges do your organization face in dealing with 'implicit knowledge'?	losing information	No define mechanism	high number of outsource employees	some explicit info are not shared	poor culture	poor communication
1.7	Which of the main factors (Leadership, People, Culture, or Technology) influence knowledge capturing, storing, and sharing in your organization the most?	influence of leaders	control management	initiative of people	direction of leaders and time given to people to share	direction of management in the right way	people
1.8	What are the impacts of 'sharing knowledge' on 'employee innovation' in your organization?	sharing knowledge help in reducing the duplications	Reduce time and effort so employee have time to perform better	right way into performing better	the right way of working	the better communication between employees	positive

#	Questions	Interviewee 20	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
1.9	What are the impacts of 'sharing knowledge' on your organization's performance?	less challenges	better work	efficient work process	better sharing of info,	org efficiency	clear and direct
1.10	Does your organization have a KPI for sharing 'implicit knowledge'?	not clear	we need time to define them	no	not yet	still working in them	no

2. Validity of the Proposed KM Model (Interviewees 1-10)

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
2.1	Does the proposed model consist of the right components required for KM governance model? If not what is missing?	Yes	Right components, better to add evaluation process to evaluate the tools and improve it	Yes	Yes, however to complete the model at later stage , performance metrics to be added	Yes	Yes,	Yes, government support	Yes.	Yes	Yes
2.2	Which type of mechanism (between Formal and Informal) is likely to have more impact on 'knowledge transfer'?	Both as they are linked to each other	Formal	Formal	Formal to set the grounds, once the organization become mature enough in knowledge and information sharing informal mechanisms them maintain the culture	Formal is it's the enabler for informal	Informal	Informal, people feel more socialize and relax=x to share knowledge	Formal is necessary to mandate knowledge sharing. While informal is more impactful because "tacit knowledge" sharing is ultimately an act of people coming together and sharing their knowledge, expertise and experiences through conversations, and informal discussions.	both	Formal
2.3	How technology and tools, and their	Knowledge transfer more faster, Building	Easy access to knowledge,	it will enable building networks and	They are essential. Organizations	resources access, connect	will lead to have structure implicit	Transforming from traditional to	A simple application of a tool would be to	informal	communicate with employees easier, allow

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
	application can facilitate the PKN in the organization?	new relations ,Identifying organization experts and used them	less time and effort	connect people is easy and faster manner	are very dynamic in the way they operate. Tools and knowledge provide ease of access and flexibility to access knowledge	people, open channels all time	knowledge and as org. it will help to define the needs, allows to capture lesson learn and failure	knowledge base economy, everything is digitalize and saving time	expand the functionality of LYNC to include more information about what each employee is working on and their expertise. This would greatly enhance the sharing of tacit knowledge		people to discuss and chat, easy to exchange info
2.4	Are the proposed model's components (PKN, KM process and governance mechanisms) likely to integrate together to maximize the organization's performance? Please explain your answer.	Yes, the model define knowledge as a combination of relations and process governed by tools to achieve the right target.	Yes, it will	yes	Yes the three components have to be integrated and they cannot work independently for the maximum performance.	yes they depends in each other	change the way that they work, see value, be motivated	yes, whole model will help to integrate employees and came with mew solutions	Yes. The proposed model includes People Knowledge Network and the Knowledge Sharing process, as well as Governance. It will impact the performance of the organization through making the process of knowledge sharing more sustainable and organic, where there is a culture that motivates employees to share and create new knowledge.	make process easier	Yes

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
2.5	What could be the effects of applying the proposed model on personal level?	Increase and promote innovation, Encourage creativity, Better performance	Increase the willing of giving	improve employees performance, more social, benefits from each other	will make benefits from sharing knowledge through the networks for their own functions and activities, for example a person from finance background in a network with someone ICT skills can share their business need and IT person can suggest efficient way to solve it	improve socialization, more innovative, high performance		good social interactions	At the personal level, the proposed model would encourage employees to be more proactive in seeking and sharing knowledge with their colleagues.	yes	improve performance, creativity, increase socialization
2.6	What could be the effects of applying the proposed model on organization level?	Increase the chance to participate and win in different government excellence awards ,Better culture, Become a role model in knowledge transfer where other use it as benchmark	Cost effective, Reducing outsource employees	high performance and better environment	Personal development will lead to organizational development. It will enable the culture of capturing and sharing knowledge which can in turn connect to organizational assets.	positive, it will identify expectations and targets, improve organization excellence	positive but org. have to invest on that by more Awareness and incentives	improve performance, reduce fear, availability of resources	At the organizational level, the proposed model would increase the knowledge stock of the organization by way of making its employees equipped with more knowledge. Through this, the model will enhance organizational	employees will have more opportunities to gain knowledge, high performance	positive, clear strategy and process, better knowledge exchange

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
									growth and sustainability, as well as encourage innovation. It will also provide a formal process of knowledge sharing and transfer in the organization.		
2.7	Which activity in the KM process cycle (Create, Transfer, and Use) is likely to be influenced more by the application of the proposed model in the organization? Please explain your answer.	All are linked and lead to each other	Force sharing of knowledge (Transfer)	transfer	all will be influenced but in my view "Use" is going to be more implemented because everyone in the network would like to benefits from use of knowledge	transfer	Transfer	use	The proposed model will influence all activities of the KM process, but it will significantly impact the creating and transfer of knowledge. Because of employees' willingness to share and willingness to acquire knowledge in the model, the organization will create and transfer knowledge.	transfer	Transfer
2.8	Which of the four categories (Socialization, Externalization,	Externalization as all information and knowledge will	Externalization	externalization	socialization is the easily stage of implementation	socialization and externalization	externalization	socialization	All four categories will be influenced. In the proposed	externalization	externalization and socialization

#	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
	Combination or Internalization) of transforming implicit knowledge to explicit knowledge is likely to be affected more by the application of the proposed model in the organization? Please explain your answer.	be documented and formal			as it will be use complicated to implement				model, when employees come together to share new knowledge, they are essentially participation in an act of “Socialization” and “Externalization” of knowledge. Once the tacit knowledge is externalized, and shared with another group of people, they enhance it with their understanding and knowledge, and “Internalize” it as well, thus completing the full cycle.		
2.9	How is a wide range of PKNs in the organization likely to impact on innovation in the organization? Please explain your answer.	More knowledge to be transfer, More clear directions	Positive, better result and engagement	positive	a lot. People with new ideas can be connected through the networks so others can give feedback to improve	positive, people will connect easily together and more channels will be opened	Positive	highly, it will increase the ideas	There are no PKNs in the organization currently.	increase	facilitate knowledge exchange so people can have access to organization assets and use it in their planning and proper implementation

1. Validity of the Proposed KM Model (Interviewees 11-20)

#	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
2.1	Does the proposed model consist of the right components required for KM governance model? If not what is missing?	Yes, however adding a process to measure it will improve the overall outcomes	Yes	Yes, however it is better to add an outcomes measurement process	Yes	yes ,	yes	yes	yes	Yes	yes
2.2	Which type of mechanism (between Formal and Informal) is likely to have more impact on 'knowledge transfer'?	Formal	Informal	both have impact	informal	formally	formal	through formal channels	both	formal	formal
2.3	How technology and tools, and their application can facilitate the PKN in the organization?	Provide easy channel to connect people, easy access to knowledge	increase Automation processes	by supporting the employees	provide the right infrastructure and required platforms	Easy access to knowledge,	everything is digitalize and saving time	Organizations are very dynamic in the way they operate.	Provide easy channel to connect people,	They are essential.	important
2.4	Are the proposed model's components (PKN, KM process and governance mechanisms) likely to integrate together to maximize the organization's	Yes, as governance lead to increase exchange knowledge and this will lead to increase org. performance	Yes as it cover all main factors	yes	yes as all reflect the main pillar of KM and you can't misses any of them	yes	yes , it will assist	yes, it will increase the productivity	yes, it will be clear	yes, will lead to a better resources	Yes, it will encourage the entities to share the information. Right

#	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
	performance? Please explain your answer.										
2.5	What could be the effects of applying the proposed model on personal level?	High performance, more innovative ideas	increase personal performance, more focus , more social relations	enhance social relations, new ideas , easy access to information	improve overall performance as it will help each individual to identify his or her skills and knowledge and utilize it in the right way	more innovative ideas	High performance	creativity,	increase socialization	more proactive in seeking and sharing knowledge	improve employees performance
2.6	What could be the effects of applying the proposed model on organization level?	High performance, resource access, becoming KS organization	ensure business continuity	lead to organizational innovation and continuous learning	utilize internal capabilities, invest in time and money	resource access	high performance	gain knowledge	more opportunities	positive	becoming KS organization
2.7	Which activity in the KM process cycle (Create, Transfer, and Use) is likely to be influenced more by the application of the proposed model in the organization? Please explain your answer.	Transfer	all are connected	All	Transfer	transfer	transfer	will influence all activities of the KM process	Share	Force sharing	yes via transfer
2.8	Which of the four categories (Socialization, Externalization, Combination or Internalization) of transforming implicit	Socialization	externalization	externalization	Both socialization and Externalization	externalization	socialization	externalization	socialization	socialization	externalization

#	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
	knowledge to explicit knowledge is likely to be affected more by the application of the proposed model in the organization? Please explain your answer.										
2.9	How is a wide range of PKNs in the organization likely to impact on innovation in the organization? Please explain your answer.	more knowledge to be share	facilitate ideas exchange, more opportunities to innovate	identifying the internal capabilities in the organization, easy access to knowledge and information	more ideas and solutions	positive	share knowledge	positive	yes a lot	increase the ideas	better result

1. Validity of the Proposed KM Model (Interviewees 21-25)

#	Questions	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
2.1	Does the proposed model consist of the right components required for KM governance model? If not what is missing?	yes	yes	yes	yes	yes
2.2	Which type of mechanism (between Formal and Informal) is likely to have more impact on 'knowledge transfer'?	formal	both	formal	informal	formal

#	Questions	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
2.3	How technology and tools, and their application can facilitate the PKN in the organization?	having easy channels	easy access to knowledge	allow people to discuss and chat,	having the opportunities to search and access information	by sharing and exchange info,
2.4	Are the proposed model's components (PKN, KM process and governance mechanisms) likely to integrate together to maximize the organization's performance? Please explain your answer.	yes, will have procedures	yes, it will provide a clear work environments	yes	yes, it will be shared right	yes
2.5	What could be the effects of applying the proposed model on personal level?	innovative,	better performance	creativity	better socializing	better performance
2.6	What could be the effects of applying the proposed model on organization level?	personal development	high performance	better environment	positive	becoming KS organization
2.7	Which activity in the KM process cycle (Create, Transfer, and Use) is likely to be influenced more by the application of the proposed model in the organization? Please explain your answer.	creation of new knowledge	use and share	Use	will influence all activities of the KM process	all activities will be influenced
2.8	Which of the four categories (Socialization, Externalization, Combination or Internalization) of transforming implicit knowledge to explicit knowledge is likely to be affected more by the application of the proposed model in the organization? Please explain your answer.	socialization	socialization	Externalization and socialization	Externalization and socialization	socialization

#	Questions	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
2.9	How is a wide range of PKNs in the organization likely to impact on innovation in the organization? Please explain your answer.	better engagement	better engagement	yes a lot	increase the ideas	positive

3. Perceptions of the model applicability in AD government organizations (Interviewees 1-10)

	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
3.1	Do leadership in your organization support KS by: a)Funding and securing budget	No	No	No	Yes recently the KM strategy was approved and a budget for a required initiatives was approved	somehow	No	No	No	No	No
3.2	b)Contributing to the KS initiatives	Yes but the initiatives are limited	Yes	Yes but in informal way	Yes but the current initiatives are limited	yes, mostly informal	somehow	No	In a limited manner	No	No
3.3	How is the application of the proposed model in your organization likely to: a) Influence the leadership's commitment to knowledge sharing?	Become more responsible and commitment	Positive	positive	Positive	positive	if the value is clear they will invest	they will understand the whole model and belief on it	The leadership will be encouraged to formally support KS and KT as the model clearly shows how an organization can benefit from it.	will effect , become more commitment	positive
3.4	b) Impact the leadership's support to KM from the financial and operational perspective?	yes by securing budget	Positive will secure budget	support and contribute	approve budget	positive by securing budget	become initiatives not strategy and budget will be located	limited	Likely to be positive as well.	securing budget	funding more
3.5	a) Do employees in your organization differentiate between implicit and explicit knowledge?	No	No	no	Not fully	partially	No	yes, but without clear mechanism	no	No	No

	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
3.6	b) Do employees in your organization receive support and recognition for sharing knowledge?	yes but limited, no clear process	limited, e.g. training	no	Not enough	No	No	No	No in formal ways, however, knowledge sharing sessions are encouraged by some functions.	No	No
3.7	How is the application of the proposed model in your organization likely to: a) Influence employees in creating PKNs.	become must and employees will respond more, increase competitive between employees	Positive	positive	Positive	positive	positive	increase	Employees will be encouraged to reach out to colleagues through their willingness to share and acquire new knowledge.	Yes	Positive
3.8	b) Impact employees' in knowledge sharing and organization's performance?	both KS and Performance will increase	Improve org business continuity	people will be encouraged to share and this will lead to high performance	when the model is developed and implemented through KPIs, projects and results this will influence employees to use it	positive	positive	high performance and less fear	Employees will be encouraged to share knowledge and it will have a positive impact on the organization.	Yes	increase
3.9	a) Does your organization's culture support KS?	No	Yes but not on individual level	limited	yes, Innovation corner	Yes but very limited through some initiatives	No	No	Not fully, but efforts are being made to change that.	Limited	No
3.10	b) Do you have any initiative that prompts PKNs?	No	No	limited and not formal	yes know the knowledge initiatives	limited	limited	No	No	change the culture	yes but limited

	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
3.11	a) How is the application of the proposed model in your organization likely to impact the culture of KS?	will increase	improve organization maturity	positive	clear guideline and process	clear process	will change but need time	will build the culture	It will impact the culture positively.	No	positive
3.12	a) Do you have a clearly defined process for KM and KT?	No	No	no	partially	yes but under development	No	No	No	No	No
3.13	b) Do your employees know about this process?	No	No	no	it is communicated through ODE process design	no	No	No	No	Positive	No
3.14	a) How is the application of the proposed model in your organization likely to: influence redefinition and efficiency of the KM process?	organization will develop clear process	Help in developing the correct model	this will help in defined the role of KM teams and develop clear process	with formal mechanisms , a formal process can be established	clear role and process	clear approach	new and clear process	Knowledge management would be mandated through the process.	No	clear strategy and process
3.15	a) Do you have a specialized KM team in your org (division, section, or committee)?	No	No	no	yes KM division	yes	yes	yes, focus on explicit data more	Yes	No	No
3.16	b) How the application of the proposed model in your organization is likely to: influence the structure of KM team, KS, and organizational performance?	establish team , increase KS and performance	define clear role and responsibilities	positive	already existing, however redefining a formal process will improve the KM functions	positive	positive	employees more happy, resource available, high performance	Organizational performance would be enhanced because of better knowledge management and innovation.	positive	define clear role

	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
3.17	a) Does the organization developed a KM strategy	No	No	no	yes	yes	Yes	yes	yes	No	No
3.18	a) How the application of the proposed model in your organization is likely to: influence overall performance?	help in developing KM strategy	Positive	positive	through projects and process Compliance	positive	increase	high	Positively. It would result in organizational innovation among other benefits.	positive	Positive
3.19	b) How is the application of the proposed model in your organization likely to: influence employees to transfer knowledge?	positive	will increase	positive	Positive	encourage employees more	positive as long as there are incentives	increase	It would encourage employees to transfer knowledge.	positive	Positive
3.20	a) Do you have defined objectives for KT and KS?	NO	No	no	yes under the KM strategy	yes through KM strategy	No	No but its embedded in the new strategy	These would be defined in the KM Strategy	No	No
3.21	a) How is the application of the proposed model in your organization likely to: influence KM objectives for becoming a KS organization?	define clear objectives	clear definition and expectation	define clear objective by understanding the right role of KM	by implementing the KM strategy ad framework and adopting excellence framework	will help in focus more on knowledge sharing function	yes knowledge will transfer from implicit to explicit	new objectives to connect people, increase socialization, new objectives to capture knowledge	No	define clear objectives and expectations	Positive
3.22	a) Do you have a single knowledge bank database for all information and knowledge in your organization?	Under development	No	no	partially, data and information is scattered across multiple systems	No	No	No	No. There are several systems that store data, but have limited	No	No

	Questions	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8	Interviewee 9	Interviewee 10
									or no interface.		
3.23	b) Do you have a KS platform?	No	No	no	No	no	No	No	No	No, general info	No
3.24	a) How the application of the proposed model in your organization is likely to: influence the employees' understanding about the requirements of needed technologies and platforms for KM?	define the right requirement	believe on the need and define the right requirement	define the right requirement	the KM strategy has identified the gaps and proposed initiatives to develop tools and technologies	positive	clear guideline and process	positive	Platforms and knowledge sharing technologies would be necessary to transfer knowledge.	define the requirements	define right requirements
3.25	a) Do your organization have any application for KS and KT?	No	Yes, intranet and internal communication emails	yes but very basic and not promoted	partially through functions by each sector	no	No	No	No	No	basic, by emails
3.26	b) Do you have any application that prompt PKN internally and externally in the organization?	No	No	no	having a comprehensive model will trigger a need to develop an interface system across all layers in the organizations		No	No	No	No	No
3.27	How the application of the proposed model in your organization is likely to: influence the development of applications for KS, KT and PKNs?	develop new application	positive especially with partners	more application as the objective and requirements t will be defined clearly	yes		once you have culture, policies and team you will develop applications	positive	It would encourage the need for applications where knowledge is stored and easily accessible.	positive	increase

3. Perceptions of the model applicability in AD government organizations (Interviewees 11-20)

	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
3.1	Do leadership in your organization support KS by: a)Funding and securing budget	limited	Yes but limited	No	Depends on the initiatives	No	No	limited	No	limited	No
3.2	b)Contributing to the KS initiatives	yes	Yes but limited	limited	Yes but not in regular base	yes	no	yes	limited	yes but not all the time	yes but sometime informally
3.3	How is the application of the proposed model in your organization likely to: a) Influence the leadership's commitment to knowledge sharing?	commitment will increase as clear framework and outcomes will be developed	Positive	it will help in designing the roadmap for the leadership so their commitment will be positive	the proposed model will design a clear objectives that will help in increasing the level of commitment	clear objectives	yes	knowledge will transfer	positive	clear expectation	clear definition

	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
3.4	b) Impact the leadership's support to KM from the financial and operational perspective?	support	Positive	Positive	allocate specific budget for KM initiatives	support	budget	secure budget	support financially	support leadership	budget
3.5	a) Do employees in your organization differentiate between implicit and explicit knowledge?	somehow, very few	no	no	limited	no	Not fully	partially	No	No	No
3.6	b) Do employees in your organization receive support and recognition for sharing knowledge?	No	in informal ways	very few and informally	NO	partially	No	No	No	no	No
3.7	How is the application of the proposed model in your organization likely to: a) Influence employees in creating PKNs.	people will motivate more to create networks as long as they belief on the outcomes and there are recognitions	Positive, it will help a lot in increasing the social relations	Positive	Will increase the socialization between employees	positively	yes	increase	yes	positive	clear expectation

	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
3.8	b) Impact employees' in knowledge sharing and organization's performance?	positive	positive	positive	positive	clear definition	yes	knowledge will transfer	define clear objectives and expectations	more developing in the organization	positive
3.9	a) Does your organization's culture support KS?	No	Yes such as organization's events	very limited	limited	No	No	No	No	limited	No
3.10	b) Do you have any initiative that prompts PKNs?	No	Yes, events, workshops	Yes	Yes but informally	No	No	limited	No	No	No
3.11	a) How is the application of the proposed model in your organization likely to impact the culture of KS?	positive	it will promote socialization	more KS between employees	better culture of KS	No	No	limited	No	not all the time	limited
3.12	a) Do you have a clearly defined process for KM and KT?	not exist	No	No	NO	No	No	No	limited	No	not exist
3.13	b) Do your employees know about this process?	not exist	No	not exist	not exist	not all the time	limited	No	not exist	No	not all the time

	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
3.14	a) How is the application of the proposed model in your organization likely to: influence redefinition and efficiency of the KM process?	the process will be more efficient	clear process with clear role	Positive	clear objective and process	positive	clear expectation	clear definition	yes	knowledge will transfer	define clear objectives and expectations
3.15	a) Do you have a specialized KM team in your org (division, section, or committee)?	yes but not with clear and right roles, they focus more on information and data management	No	No	No, however the role is distribute between several departments	yes	no	limited	yes	not clear	No
3.16	b) How the application of the proposed model in your organization is likely to: influence the structure of KM team, KS, and organizational performance?	positive	positive	will help in develop KM team with clear mandates	Clear structure and roles	knowledge will transfer	define clear objectives and expectations	yes	positive	yes	clear expectation
3.17	a) Does the organization developed a KM strategy	no	yes but does not cover all aspects of KM	No	No	yes	no	yes	no	yes	yes

	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
3.18	a) How the application of the proposed model in your organization is likely to: influence overall performance?	positive	positive	positive	positive	high	very positive	yes	increasing	yes	yes
3.19	b) How is the application of the proposed model in your organization likely to: influence employees to transfer knowledge?	positive	it will increase the willingness to share knowledge	positive	people will have willingness to share and it will affect the organization culture	yes	positive	very positive	yes	increasing	yes
3.20	a) Do you have defined objectives for KT and KS?	no but there are some initiatives	no	no	yes but not comprehensive	limited	No	No	No	No	partially
3.21	a) How is the application of the proposed model in your organization likely to: influence KM objectives for becoming a KS organization?	positive	it will help a lot in defining the right objectives and determine realistic targets	Positive	Positive	positive	clear expectation	clear definition	yes	knowledge will transfer	define clear objectives and expectations

	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
3.22	a) Do you have a single knowledge bank database for all information and knowledge in your organization?	no	no still information saved in multi sources	still several sources	several sources and only focus on explicit	no	limited	No	No	No+X25:X26	No
3.23	b) Do you have a KS platform?	no	no	yes but not used in efficiently	no	partially	No	limited	No	No	No
3.24	a) How the application of the proposed model in your organization is likely to influence the employees' understanding about the requirements of needed technologies and platforms for KM?	will defined the need and right infrastructure to capture implicit knowledge and create networks		help in define the right requirements	will help in assets the current technology and looking forward to enhance them	No	No	No	No	No	partially
3.25	a) Do your organization have any application for KS and KT?	no	Yes, internal portal	yes but limited and does not cover all KM activities	no	No	limited	No	No	No	No
3.26	b) Do you have any application that prompt	no	No	we have but not focus in PKN	yes but limited		No	No	limited	No	No

	Questions	Interviewee 11	Interviewee 12	Interviewee 13	Interviewee 14	Interviewee 15	Interviewee 16	Interviewee 17	Interviewee 18	Interviewee 19	Interviewee 20
	PKN internally and externally in the organization?										
3.27	How the application of the proposed model in your organization is likely to influence the development of applications for KS, KT and PKNs?	positive	The proposed model will help in defining the right infrastructure of KM	Positive, more application will be developed to support KS	Positive		increase	yes	positive	of course	yes clearly

3. Perceptions of the model applicability in AD government organizations (Interviewees 21-25)

	Questions	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
3.1	Do leadership in your organization support KS by: a)Funding and securing budget	limited	No	No	limited	No
3.2	b)Contributing to the KS initiatives	yes	yes	limited	not formally	yes
3.3	How is the application of the proposed model in your organization likely to: a) Influence the leadership's commitment to knowledge sharing?	yes	knowledge will transfer	knowledge will transfer	positive	clear expectation

	Questions	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
3.4	b) Impact the leadership's support to KM from the financial and operational perspective?	approving the budget	support financially	support managements	budget	secure budget
3.5	a) Do employees in your organization differentiate between implicit and explicit knowledge?	no	No	partially	No	limited
3.6	b) Do employees in your organization receive support and recognition for sharing knowledge?	no	No	partially	No	Not fully
3.7	How is the application of the proposed model in your organization likely to: a) Influence employees in creating PKNs.	clear definition	yes	knowledge will transfer	yes	of course
3.8	b) Impact employees' in knowledge sharing and organization's performance?	high performance and less fear	knowledge will transfer	define clear objectives and expectations	Improve org business continuity	yes
3.9	a) Does your organization's culture support KS?	No	not all the time	limited	No	No
3.10	b) Do you have any initiative that prompts PKNs?	No	No	No	not all the time	limited
3.11	a) How is the application of the proposed model in your organization likely to impact the culture of KS?	No	No	No	limited	No
3.12	a) Do you have a clearly defined process for KM and KT?	No	not all the time	limited	limited	No
3.13	b) Do your employees know about this process?	limited	limited	No	No	No
3.14	a) How is the application of the proposed model in your organization likely to: influence redefinition and efficiency of the KM process?	more developing in	will lead toward excellence	clearly	clear expectation	clear expectation

	Questions	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
		the organization				
3.15	a) Do you have a specialized KM team in your org (division, section, or committee)?	yes	no	yes via km	yes	no
3.16	b) How the application of the proposed model in your organization is likely to: influence the structure of KM team, KS, and organizational performance?	clear definition	clear work	yes	positive	yes
3.17	a) Does the organization developed a KM strategy	no	no	no	no	no
3.18	a) How the application of the proposed model in your organization is likely to: influence overall performance?	positive	Positive	positive	yes	increase
3.19	b) How is the application of the proposed model in your organization likely to: influence employees to transfer knowledge?	increase	yes	yes	yes	increase
3.20	a) Do you have defined objectives for KT and KS?	No	limited	No	No	No
3.21	a) How is the application of the proposed model in your organization likely to: influence KM objectives for becoming a KS organization?	yes	clear objectives	yes	knowledge will transfer	define clear objectives and expectations
3.22	a) Do you have a single knowledge bank database for all information and knowledge in your organization?	No	No	limited	No	No
3.23	b) Do you have a KS platform?	No	No	No	No	limited

	Questions	Interviewee 21	Interviewee 22	Interviewee 23	Interviewee 24	Interviewee 25
3.24	a) How the application of the proposed model in your organization is likely to influence the employees' understanding about the requirements of needed technologies and platforms for KM?	No	limited	No	No	No
3.25	a) Do your organization have any application for KS and KT?	limited	No	No	not all the time	No
3.26	b) Do you have any application that prompt PKN internally and externally in the organization?	No	No	limited	No	No
3.27	How the application of the proposed model in your organization is likely to influence the development of applications for KS, KT and PKNs?	yes	yes	it will clear the work	increase	positive