

UNIVERSITY OF LJUBLJANA
FACULTY OF ECONOMICS

MASTER'S THESIS

**SUCCESS FACTORS OF KNOWLEDGE MANAGEMENT
IMPLEMENTATION IN SMALL AND MEDIUM ENTERPRISES IN
UNITED ARAB EMIRATES, QATAR AND PAKISTAN**

Ljubljana, October 2018

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AUTHORSHIP STATEMENT

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
AI	Artificial Intelligence
B2B	Business to Business
CMS	Content Management System
CSF	Critical Success Factors
DMS	Document Management System
F2F	Face to Face
HRM	Human Resource Management
IT	Information Technology
KSF	Key Success Factors
KM	Knowledge Management
LO	Learning Organizations
NGO	Non-Governmental Organization
OCED	Organization for Economic Co-operation and Development
OL	Organizational Learning
PBS	Pakistan Bureau of Statistics

INTRODUCTION

The research field of the master's thesis is in Knowledge Management (hereinafter: KM). During the last few years, KM becomes one of the essential factors for the successful business and companies are becoming more knowledge-based, and they are focusing more on the people's 'minds' rather than their 'hands' to fulfil the need to knowledge (Wong, 2005). The main focus of this study is in success factors of KM having in consideration that Small and Medium Enterprises (hereinafter: SMEs) have fewer resources and opportunities, both human and financial (Farvaque & Voss, 2009). This research is about the main factors of KM that plays a successful role in SMEs in the United Arab Emirates (hereinafter: UAE), Qatar & Pakistan. SMEs in the manufacturing and services sector have taken under study to evaluate the success factors of KM implementation. To implement the KM in the organization can be hard for those who are not ready to accept the change in the organizational structure but with the implementation of KM they can survive, grow and maintain the sustainable competitive advantage (Antonicic & Omerzel, 2008). The research itself is focused on information and manufacturing SMEs sector keeping in mind that it's a service industry, e.g., where both, computer and human resources interaction are visible, and the industry has involved with many stakeholders.

The purpose of this research is to explore the success elements, importance, implementation, advantages, processes, strategies, challenges of KM which are being faced by SMEs in Pakistan, United Arab Emirates and Qatar. Moreover, the benefits that affect and inspire the implementation of knowledge management in SMEs will be analyzed. A comparison of SMEs based on the UAE, Qatar and Pakistani market will also be made to learn the similarities and differences. This study will help SMEs to grow in their field of business to explore the current situation of awareness level and to get the advantages of uninterrupted learning within the SMEs in the UAE, Qatar, and Pakistan. It is important to explore the reason of SMEs failure, which represents as a baseline for recommend and suggest about how we can enhance and improve the SMEs by implementing the Knowledge Management System (hereinafter: KMS). Due to not enough information and knowledge about the concept of KM as enterprise actions and activities that enhance and also increases skills of business strategies to process within companies (Dreyfus, 1998). I selected the specific organizations like Tagit RFID Solutions JLT, Fortes holding, Al Faisal holding and End to End Solutions Provider because they were interested in this research study and they wanted to check their current KM status and required KM level in their organizations. These companies deal in RFID, information gathering, software programming, digital marketing, customer services, third-party contracting, search engine optimization (hereinafter: SEO), user data collection and analysis, to check their knowledge sharing system and how they can improve also for the other service sector SMEs in UAE, Qatar, and Pakistan. Defining the complications on

more broad and abstract, more critical question then can be raised that how who we can present the outcomes of a helpful and productive knowledge-based system to all the stakeholders in the SMEs in UAE, Qatar, and Pakistan to achieve the SME's business goals and to provide them benefits. The KM success factors were investigated from different perspectives. Organizational culture is a key to develop the KM as it helps people to share their idea, information, and knowledge (Von-Krogh & Roos, 1995). KM strategies, infrastructure, anthologies, repositories, tools, and incentives are used to increase the knowledge sharing, and supportive culture Development of KM competencies and leadership are also challenging. Therefore the proper implementation of KM in organizations can get a prominent position in their surroundings and can help the organizations to perform better in the complex situation (Iftikhar, Steven, & Ahmed, 2010). Implementation of KM in a company considerably is not easy but its the success criterion for the company (Shepard & Steven, 2002). KM is not only important only for large-scale enterprises but also equally important for SMEs. One of the success reason for KM is to manage the organization's knowledge. For KM implementation in SMEs, there are specific factors that are fundamentals knows as Key Success Factors (hereinafter: KSF) (Wong, 2005). KM help in increasing productivity, effectiveness and efficiency of the organizational operations (Iftikhar, Steven, & Ahmed, 2010). The results of this research will promote the need for KM implementation in SMEs among stakeholders in service-oriented industries in UAE, Qatar, and Pakistan based on KM's success factors. SMEs play a vital role in the growth of the economy in any country.

To improve the organizational operations and financial results in SMEs should consider the implementation of KM (Wong & Aspinwall, 2005). The research design is of scientific quantitative and qualitative methods; the first phase focuses on qualitative research which will base on interviews with relevant stakeholders. The interview questions will be both closed and open-ended. Interviews will be taken online via video and audio conferencing, emails and recording. Interviews with managers and employees of knowledge management will conduct a better understanding of KM success factors that can encourage KM implementation in SMEs as well as ongoing and newly proposed elements in the knowledge-based organization. The research will be on an individual level. After getting interviews, SWOT analysis was performed to understand in the implementations of KM in SMEs. The second phase focuses on quantitative research among the SMEs in the manufacturing and services sector. During this phase quantitative exploration of the sample areas of UAE, Qatar and Pakistan will use for statistical analysis purpose. The planned region of Dubai, Doha, and Lahore will take into consideration, to perform and compare the same statistical unit in the manufacturing and services sector. The most important research questions are answered after the quantitative and qualitative analysis of this research in the selected sectors of UAE, Qatar, and Pakistan. The structural definition of this master's thesis divided into five different sections. In Section I, I am describing the KM characterization,

definition, and types. Then I am giving a brief overview of KM Models, Processes, and Strategy. In the second section am explaining the SMEs and KM. The third Section is the main part of the thesis, where I briefly explain the KM in SMEs, implementation, and SWOT analysis also to get the similarities and differences between these countries. The fourth section is Research Methodology to find answers to the research questions through quantitative, qualitative research and case study analysis and at the end, I describe the obtained results. And the last section is the conclusions and recommendation of success factors that are important for an organization to implement knowledge management.

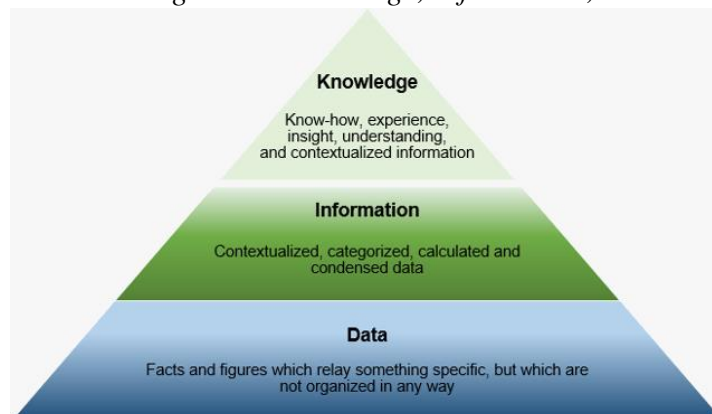
1 KNOWLEDGE MANAGEMENT

In this section, first is to discuss and understand the actual meaning of knowledge and KM, KM characterization and to make KM easy to implement and accessible in SMEs. Knowledge is a combination of information, experience, understanding, and awareness that facilitate the structure of analyzing and implementing your practices, understanding, and information. In the companies, knowledge is enclosed not only in repository or documents but it also includes organizational culture, norms, routines, practices and process (Davenport & Prusak, 1998).

1.1 Knowledge, Information, and Data

Before explaining the KM, KM user must understand the difference and definition of knowledge, information, and data (figure 1). Also, it is fundamental to understand what are the values that define the knowledge and what comes under the category of data and information. (Thierauf, 1999) Defined the three components level as data is at the lowest level component; it contains an unstructured collection of figures and facts. The information comes at the next level of data, and it contains structured data, and at the end, it comes knowledge, and it can be defined as " required/desired information about the information".

Figure 1: Knowledge, Information, Data



Source: Thierauf, (1999).

Data: Figures and facts contain something, but these facts, figures are not managed by the proper structure, and they cannot give any information or clue about their context, pattern, etc. Unstructured figures and facts that have the minimum impact on the manager (Thierauf, 1999).

Information: To convert data into information it must be categorized, contextualized and enriched (Davenport & Prusak, 1998). Information is the broader picture of data (Rajeev & Wickramasinghe, 2009).

Knowledge: Closely associated with doing and implies the experience, understanding, and skills. Each person knows a specific product of his experience and understanding, and by understanding, he can evaluate new inputs from his surrounding environments (Davenport & Prusak, 1988).

1.2 Knowledge Management Characterization

KM has gained a lot of attention in the recent past (Mortern, Nohria, & Thomas, 1999). KM is a young field and has a closely related to different fields like information science, business administration and management, economics, philosophy, etc. It is popular with consultants, practitioners, and academics but still, KM is at a developmental level and continues to explain the core and important concepts, boundaries, and terminologies (Jashapara, 2006). KM is defined as the systematic, renewal, explicit, and to maximize the knowledge of an enterprise related to effectiveness to achieve from the tacit knowledge assets (Wong, 2005). KM is an interdisciplinary approach which can be defined as by (Jashapara, 2006): "the adequate learning is the process to link with analyzing and take advantages of sharing the knowledge of both tacit and explicit that use cultural environment and technology to increase the organization level and its performance". KM is one of the terms which is very basic and important part of an organization. What is the meaning of knowledge and what is management, how I can understand to manage something that's not static, it dynamic and developing (Davenport & Prusak, 1998). If we think of knowledge as what we have in your heads and what we can write down from it (Denning, 2005). We can visualize the knowledge that is in our minds but we need is to start managing it (Davenport & Prusak, 1988).

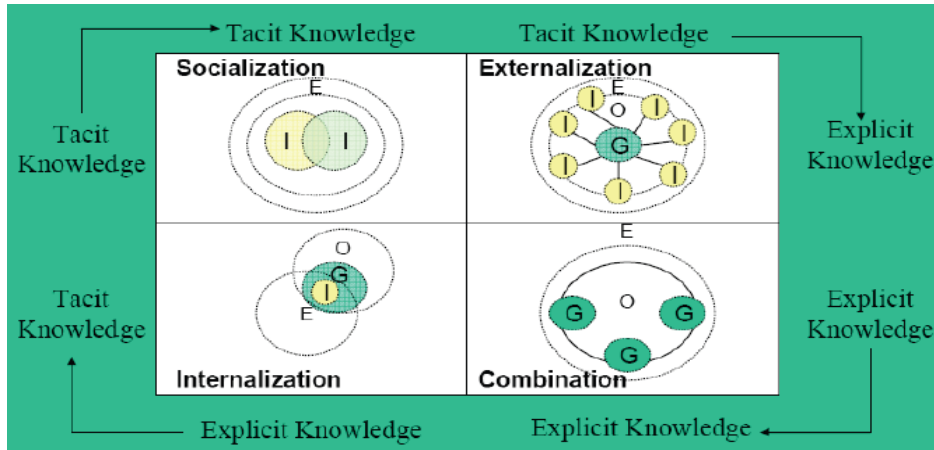
To get successful KM results SMEs need a way to combine all types of knowledge, I will focus on KM practices design to help both, individual and organizational (Eisenhart, 2001). KM is processed to get knowledge gathering from the right people, time, and knowledge. To ensure that the company can learn from the available knowledge and it will be available to use the organizational knowledge assets in the system, as the organization needs. It the cooperation and analysis of organizational knowledge resources to create the competitive advantages of KM and to get benefits from it (Peter, 1999). KM

involves internal and external organizational information and turning it into prospective knowledge through the technological platform (Susan & Norman, 1997). A new set of organizational design, structure, technologies operational rules and processes that supports and helps knowledge workers to increase their innovative skills and capability to deliver business goals (Gurteen, 1998). One of the main purposes of KM is to drive values for the organization by providing them with the stream of information to the right person and time. KM is not just only using processes and technology platforms to get the explicit knowledge, but KM provides the ability to share the tacit knowledge that resides in the minds of people (Papows, 1998). Despite the advantages of KM to transform knowledge from explicit to tacit, the less implementation of KM in SMEs shows that these SMEs are not currently getting benefits from the advantages and outcomes of adopting KM strategy, models and processes for business growth and innovation purposes. Acquisition of knowledge in SMEs is interesting when knowledge can be easily gathered, analyzed and will get positive results in an increase of efficiency, profit, and competitive advantages in an organization. For an organization in implementing KM, the advantages of KM must be clear and easily obtainable (Kerste & Muizer, 2002).

1.3 Knowledge Management Types

The concept of KM is introduced and developed by Nonaka in the 1990's. There are two types of knowledge, tacit and explicit (Nonaka, 1991). According to different researchers, tacit and explicit are the major types of KM (Kanti & Koenig, 2000; Nonaka & Konno, 1998; Cavusgil & Calantone, 2003). Tacit knowledge and explicit knowledge, both should see a wide range despite definitive points (Botha, Kourie, & Snyman, 2008). That's why in KM practices, whole knowledge system is a mix of explicit and tacit instead of each other. It is important to fully understand the meaning of knowledge. Some researchers took a step further and defined the third type of knowledge as, embedded knowledge. (Horvath, 2000), defined embedded as the differences between knowledge located in the people's mind and the knowledge embedded in the company's cultures, processes, routines, etc. (Paul & Blackwell, 2001) used a scale to represent embodied-embedded-knowledge, where the first two results closely match the explicit-tacit knowledge (figure 2).

Figure 2: SECI model of knowledge creation.



Source: Nonaka & Takeuchi, (1995).

Knowledge starts with the individuals and making it available to others at the main point of the process (table 1). A framework with four different dimensions was built to better explain the creation of Knowledge within an organization (Nonaka & Toyama, 1995).

Table 1: The Knowledge Creation Model

Socialization	Externalization
The share of Tacit knowledge directly with another; Socialized: a limited form of knowledge creation; Share experience (can be individual or team meetings)	Codification and documentation (e.g., documenting a brainstorming session)
Internalization	Combination
Translates into explicit knowledge; Standardizes this knowledge into a manual; <i>Individualization of experiences</i> , e.g., learn from a report and deduce new ideas	Information synthesis; <i>Expansion of knowledge</i> , e.g., create a website from some form of explicit knowledge.

Source: Adapted from Nonaka & Toyama (1995).

1.3.1 Tacit Knowledge

In 1966, Originally Polanyi describes this type of knowledge. It is also referred to as the experience, skill, and understanding (John & Duguid, 1998) and this type of knowledge based on large experience and hard to define. Because it is hard to define, therefore we can say that tacit knowledge is personal knowledge and context dependent. It is also difficult to communicate and mainly depends on actions, involvement, and commitment

(Nonaka, 1994). Tacit knowledge is the most important and valuable source of knowledge, and this type of knowledge lead the organization of breakthrough (Jerry, 2009). Lack of focus on tacit knowledge can be the direct impact of decrease the organization's capability for sustainable competitiveness and innovation (Paul & Blackwell, 2001).

The Knowledge of that resides in the people's minds including values mental model, cultural beliefs, attributes, etc. also contains skills, experience and capabilities (Botha, Kourie, & Snyman, 2008). Three dimensions of tacit knowledge can describe as, depth, width, and tacit-ness (Nooteboom, 1999). According to (Chanminda, Dilangti, & Richard, 2007), tacit knowledge divided into two dimensions, technical and cognitive. The cognitive dimension consists of mental models and technical dimension deal with the information and expertise about know-how that includes experience, skills, etc. Tacit knowledge embodied in cognitive skills, which makes the tacit knowledge hard to extract (Leonard & Sensiper, 1998).

1.3.2 Explicit Knowledge

This specific type of knowledge can be stored and documented as compare to tacit knowledge (Lee & Choi, 2003). This type of knowledge stored in codification and formal reports, often it is also known as know-what (John & Duguid, 1998). According to (Jerry, 2009), this type is mostly controlled and managed by KMS. Therefore it is much easier to identify, retrieve and store also it is very effective in facilitating to do modifications, storage, retrieval of texts and documents. This knowledge is found in repositories including documents, databases, memos, notes, etc. (Botha, et al., 2008).

Many researchers explained that explicit knowledge is less important than tacit knowledge. It is considered as similar and does not include the rich experience based on know-how to produces a competitive organizational advantage for a firm (Brown & Duguid, 1991; Cook & Brown, 1999; Bukowitz & Williams, 1999). (Nonaka & Toyama, 1995) describes as *'knowledge is a spiral and has four patterns or modes of interactions between explicit and tacit knowledge, these four modes are socialization, externalization, combination, and internalization (hereinafter: SECI).'*

1.4 Knowledge Management Framework and Models

1.4.1 Knowledge Management Framework

A successful model can be combined with the different components and can show relationships too easily understand (Alan, 2014).

According to (Alan, 2014), at the basic level of KM, it consists of the following steps:

- Requirement Identifications,
- Knowledge Resource Identifications,
- Create, modify eliminate knowledge resource, processes or factors,
- Retrieve and share knowledge,
- Knowledge of storage.

All KM processes, components, factors, are dependent, and all of them are affected by different factors. Because of this reason KM frameworks are usually very different and can implement in a different way for each organization. Since KM is related on each discipline (strategy, management, information, project management, HR, etc.) and has a broad range of KM systems, processes and factors, so a KM model can become very complex. Therefore, KM does not have fully detailed or fully integrated framework (Alan, 2014). Also (Alan, 2014) described the **three important questions** that the KM framework could answer:

- **What/How:** The actual process of KM,
- **Why:** Indication of reasons behind use one KM model or the other,
- **When:** Timing of using one or another KM model.

1.4.2 Knowledge Management Models

The followings are the major Knowledge Management Models:

1. The KM Process Framework
2. The KM Matrix
3. The KM Process Model

1.4.2.1 The KM Process Framework

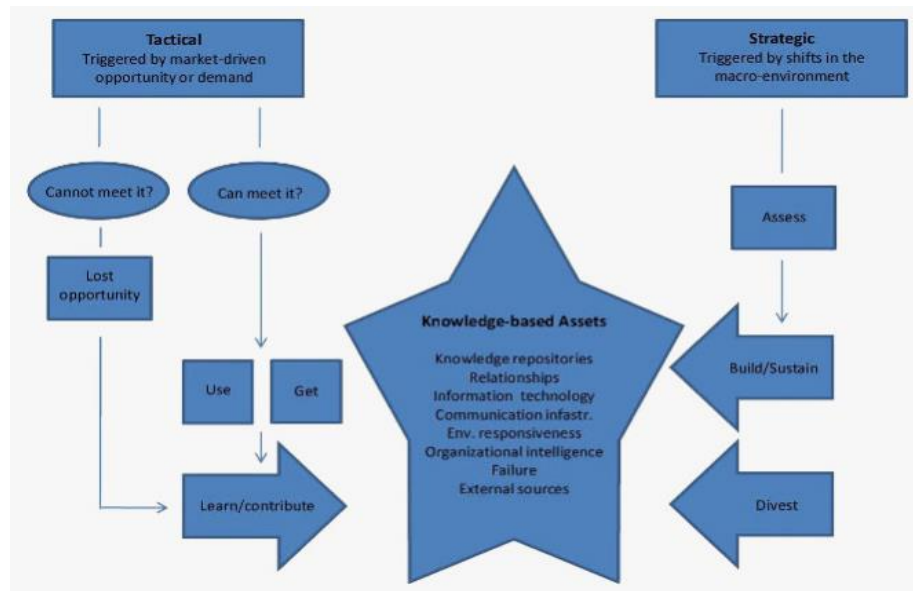
This framework is introduced by (Bukowitz & Williams, 1999), it emphasizes the “why” and “when” factors of KM framework (figure 3). It represents the KM process to define and enhance the organizational strategy to create and enhance the knowledge repository assets of an organization.

Strengths: This model mainly focuses on strategy, which gives the ability to convert the KM actions into context.

Weaknesses: This KM model does not include any deeper insight where activities are suitable for each instance.

Results: In response to knowledge-based assets the result of tactical and strategic changes and organizational needs. The model provides an abstract overview of the strategy using KM.

Figure 3: The KM Process Framework



Source: Bukowitz & Williams, (1999).

1.4.2.2 The KM Matrix

According to (Paul & Blackwell, 2001), “This KM model represents an overall theoretical KM framework and some specific guidelines for the implementation of the KM (table 2). In this model, KM processes divided into four steps. First organization management must find the sources of the knowledge. The second step is that the organization must arrange the found knowledge sources, this knowledge is helping the organization to get the strengths, weaknesses, and to determine its reusability and relevance. The third step is to follow the socialization, to use different techniques to disseminate, help and share this with whoever requires it in the organization. And at the end, the knowledge is adopted by its use. Like in all sequential models, the steps are different, but this KM model provides the overview of the role and responsibilities of KM managers (Alan, 2014).

Limitations:

This KM model has one limitation in its focus. First, the overall strategy role defined by (Bukowitz & Williams, 1999) are not part of this model. Second, the role of KM in this model is limited to knowledge creation, analysis, ignoring and sharing the knowledge process. This model is a perfect approach to implement KM, where most of the focus is on the sharing the knowledge and getting the existing knowledge, but still, it does not covers the entire scope of the KM definition.

Table 2: The KM Matrix

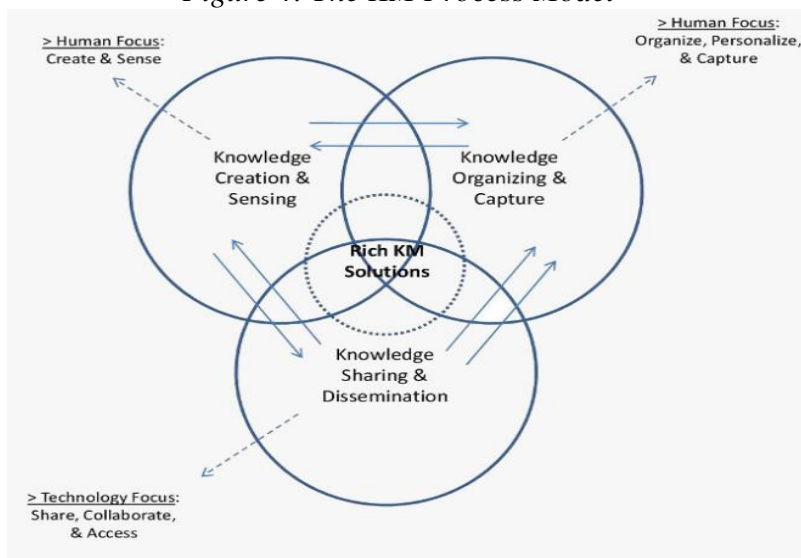
Approach \ Type	Embodied	Represented	Embedded
Sense	Observe	Gather	Hypothesize
Organize	Contextualize	Categorize	Map
Socialize	Share	Disseminate	Simulate
Internalize	Apply, Decide, Act		

Source: Gamble & Blackwell, (2001)

1.4.2.3 The KM Process Model

According to (Botha, Kourie, & Snyman, 2008), This KM model defines more representative in term of an overall view of the KM processes. In this model, there are three categories joined and interrelate with each other (figure 4). The approach of this KM model is like **The KM Matrix** that defined by (Paul & Blackwell, 2001), it focuses on managerial enterprises, based on strategic focus which can answer of "when" "why" and "what." This process model includes the creation of new knowledge as a focused KM step. This model also explains the different categories which are more people and technology focused. Most of the organizations are largely focused on technology. However, this is how organizations want to solve the issues by using technology instead of an organizational and social challenge.

Figure 4: The KM Process Model



Source: Botha, Kourie, & Snyman, (2008).

1.5 Knowledge Management Processes

According to (Alan, 2014), KM processes can divide into **six sections** as:

- Knowledge Creation,
- Knowledge Detection & Discovery,
- Knowledge Assessment & Organization,
- Knowledge Sharing,
- Knowledge Acquisition,
- Knowledge Reuse.

These different sections are the backbone of KM processes. And these are involved in the implementation of KM.

1.5.1 Knowledge Creation

The capability of new knowledge creation starts with the organization's competitive advantages. From time to time this issue of competitive advantages for the organization is not considered as part KM because of these issues are borders and overlapping with the innovation management within the organization. (Jerry, 2009). According to the (Nonaka & Toyama, 1995), New knowledge creation model of SECI model explores the ideas of consistent socialization, combination, and convert the different branches of knowledge as the knowledge users activities, actions, practice, learning, and interaction. (Cook & Brown, 1999) Differentiate between knowing about things and knowledge, and they recommend that the creation of a knowledge system is an interaction between knowledge and knowing. The shift in understanding and knowledge comes from actions, practices, and interaction; these are the main factors of new knowledge creation.

1.5.2 Knowledge Detection and Discovery

After the knowledge creation, it resides within the organization. Thus it is important to properly categorize and recognized the knowledge before sharing and reusing (Alan, 2014).

Explicit Knowledge of Knowledge discovery and detection:

It's a large process of knowledge sorting through documents and other organizational records, knowledge discovery within the existing knowledge data and repositories. Also, it used to extract the hidden / not explored knowledge by its relationships and pattern within data in the text. Tools for this business intelligence gathering are data mining (used

for finding patterns of information and data), and text mining (used for text analysis for knowledge) (Alan, 2014). According to (Rajeev & Wickramasinghe, 2009) “Intelligence gathering is closely related to the expert systems where the KM processes try to capture the knowledge of an expert user.” Although the ability to perform this task and are they competent to do this is questionable (Botha, et al., 2008).

Tacit Knowledge in Knowledge discovery and detection:

Tacit knowledge is more complex as compared to the Explicit Knowledge of Knowledge discovery and detection. It’s up to the organization’s management to get an understanding of what their employees exactly know. The most important type is tacit knowledge, to sustain the competitive advantages of the organization. It involves awareness and observation. Different quantitative and qualitative tools can use in KM processes like questionnaires, surveys, interviews, observation, and analysis (Alan, 2014).

1.5.3 Knowledge Assessment and Organization

Knowledge organization and assessment is not new. (Horvath, 2000; Bukowitz & Williams, 1999). To determine the available resources that are important for the organizational strength and weakness of management must access and organize their knowledge into controllable hands. Knowledge-based organizations include the practices like knowledge classification, indexing, and categorization for knowledge storage and retrieving (Botha, et al., 2008). (Markus, 2001) Defined and assigned the role of knowledge management is to prepare, sanitizing and organizing the knowledge to a knowledge repository, knowledge manager may also call actual knowledge producer. To share or reuse the knowledge it must be arranged in a way that the knowledge user can identify, understood and retrieved the desired knowledge from the knowledge repository.

Explicit Knowledge of Knowledge Organization:

Information Technology (hereinafter: IT) is an important part of an organization and to encourage the means of knowledge retrieving and organizing (Paul & Blackwell, 2001). IT organization use different topologies to store and organize information and knowledge (Rajeev & Wickramasinghe, 2009). These categorizations method of IT organizations create a hierarchical, logical knowledge flow that enables knowledge user to search/go through by category and these topologies are costly to create (Botha, Kourie, & Snyman, 2008). Explicit not measured as important as tacit knowledge, due to its method, processes, factors, volume, classification and retrieval (Paul & Blackwell, 2001).

Tacit Knowledge of Knowledge Organization:

Tacit knowledge uses in groups, individuals, experts, Social Network Analysis (hereinafter: SNA) and coordination of knowledge (Paul & Blackwell, 2001). The main role of tacit knowledge in a knowledge organization is to understand which context created. Such as yellow pages, SNA, maps can use for location and categorization of the important expertise of tacit knowledge resources. (Liebowitz, 1999).

1.5.4 Knowledge Sharing

To create the right knowledge to reuse and share, KM is important to acquire the right knowledge or resource (including people) available. Perhaps sharing that knowledge is one of the main roles of the KM process because most of the KM initiatives depend upon sharing. It can describe as either pull or push. Knowledge sharing depends on the practice and disposition of the knowledge worker to pursue out and be receptive to these knowledge sources. The right incentive, culture, and so on must, therefore, be present (Alan, 2014).

Explicit Knowledge and Knowledge Sharing:

According to (Bukowitz & Williams, 1999), the determination of successful explicit knowledge defined by the following criteria:

- **Articulation:** The exact requirement of a user to ask, what he needs.
- **Awareness:** Knowledge awareness ability, that encourages the user to make maps, directions, yellow pages, etc.
- **Access:** Knowledge Access.
- **Guideline:** Knowledge Managers play an important role in building a knowledge sharing system (Paul & Blackwell, 2001; Davenport & Prusak, 1998). KMs must define the expert areas of each member of the organization, guide, and responsible for publications and other material to avoid knowledge and information overload within the organization.
- **Completeness:** To access the self-published knowledge and centrally managed knowledge within the organization.

Tacit Knowledge and Knowledge Sharing:

Socialization is required to share the tacit knowledge. Knowledge sharing can be in different forms (Davenport & Prusak, 1998) defined some factors:

- **Informal network activities:** For day to day interaction with different departments, employees within the organization and these activities are considered very important for the organization.
- **Functions and hierarchical structure:** Unlike the formal structure of the organization, the activities flow in a combination of function/groups and step-by-step also they are hard to monitor and identify.
- **Management Support:** Organizational management must support these network activities by providing them with the communicational resources. A specific location is helpful for the people of the organization to meet but it's not mandatory. Management support also can occur in cafeterias etc. It is the responsibility of organizational management to facilitate the means for their employees for casual network activities and tacit knowledge of the organization.
- **Value of Chaos:** It is very important for the management to understand the value of mismanagement. It is unstructured activities in the organization the encourage social interaction and experimentation. The importance of less structural working environment within the organization is also known in innovation management. In tacit knowledge, the codification is difficult and sometimes nearly impossible to do so, and in the result of this problem knowledge loss occurs (Bukowitz & Williams, 1999; Prusak, 2000).

1.5.5 Knowledge Acquisition

According to (Paul & Blackwell, 2001), the organization tries to obtain the knowledge from the external sources and these external sources are important, and one must, therefore, take a comprehensive overview of the value chain. These sources are customers, suppliers, partners, and competitors.

Customers: Customer-based knowledge comes in different forms. (Gebert & Riempp, 2002) identify the three different types of customer knowledge:

- **Knowledge of the customer:** The knowledge which customer can gain to satisfy their knowledge need. It includes market, product and supplier's knowledge. It can source from internal and external knowledge sources like other competitors and customers (Zanjani & Roshanak, 2008).
- **Knowledge about customers:** This knowledge provides the better overview of a customer approach and to understand the customer's motivation and how to address them better for the organizational strategy.

- **Knowledge of a customer:** This knowledge deals with suppliers, products, and markets and can be used to improve the company's services and products.

These three knowledge categories apply to get actual knowledge acquisition also to information and data, which the organization can process and use to create the knowledge (Zanjani & Roshanak, 2008). Thus, knowledge sharing is very important although it has different forms depending on the business area. KM is important for a business to business (hereinafter: B2B) relationships. Where the customers are more visible, and the products are more customized to fulfil the customer's requirements (Gebert & Riempp, 2002).

Suppliers: (Joseph, 2009) Defined the classification of supplier knowledge based on the idea and concepts of customer knowledge, defined by (Gebert & Riempp, 2002). He identifies the different types of supplier knowledge as:

- **Knowledge of supplier:** The knowledge that suppliers require and include production, inventory, forecast, customers, and market.
- **Knowledge of suppliers:** The knowledge used to understand how a supplier can meet the customer requirements, provide customer insight on delivery, quality, defects, financial risk, etc.
- **Knowledge from the supplier:** This type of knowledge refers to the suppliers who have gathered the knowledge from their dealing with other organizations.

(Paul & Blackwell, 2001) Define key factors for sustained, long-term and productive relationship with the organizations as culture alignment, compatible goal, and organizational leadership commitment.

Competitors: This knowledge involves collecting, arranging, presenting the knowledge, data, and information, that the organization has gathered in such a way that employees can search, analyze and retrieve. Some of the knowledge comes in the wide scope of information management (hereinafter: IM), but the process of using these components to make new knowledge and to take better decision.

Partners: Partners meant to increase knowledge as a valuable resource, and they must properly manage. KSF includes trust, learning from the other partner, effective management of knowledge creation is important to all partners. Knowledge transfer can do through mutual projects, personal ideas exchanging, regular interaction, technology, etc. (Paul & Blackwell, 2001). (Joseph, 2009) again presented the formulation for supplier knowledge based on the idea and concepts defined by (Gebert & Riempp, 2002) regarding partner knowledge:

- **Knowledge of partners:** Knowledge that satisfies the needs, including products, suppliers, and the market.
- **Knowledge about the partner:** Knowledge gathering focus on understanding the the capacity of the partners to perform their role in the relationship that included products, services, channels, distribution, etc. (Joseph, 2009).
- **Knowledge of partners:** The form of Knowledge that partners collected from the company.

1.5.6 Knowledge Reuse

The Role of Knowledge Reuse: (Markus, 2001) Identifies the following roles:

- **Knowledge Producer:** The original producer of knowledge.
- **Knowledge Intermediary:** The responsible person who prepared the knowledge to share, store, and retrieve. It can include categorization, indexing, publishing, etc.
- **Knowledge Consumer:** The person who use and receive the knowledge based on the question.

Also, (Markus, 2001) explained the function that may involve different people or by one person, e.g., knowledge can be reused from a single person who is getting the research report (explicit knowledge). Or who is in a different part or department of the organization required that the producer created the document by him, or someone else prepared the documents so that they can be retrieved and used.

Knowledge Reuse Types and Situations

(Fruchter & Demian, 2002) Identifies the general and main type of knowledge reuse as for internal and external knowledge reuse.

- **Internal knowledge resues:** Within the organization where the knowledge producer uses his own created knowledge.
- **External knowledge reuse:** The knowledge user, uses someone else's knowledge.

The higher failure rate within the organizations because of the lose of contextual knowledge, data and information, the main reason of failure is not properly capturing the knowledge from information and data due to the high cost (Fruchter & Demian, 2002). (Markus, 2001) defined a more detailed framework to who identify **four knowledge reuse situations**, they share work practices, producers, expertize-seeking novices, and miners secondary knowledge. (Timbrell & Jewels, 2002) also supported this study of four

knowledge reuse situations.

- **Shared Work Producers**

People produce knowledge for own use and also for the team. These people have a well understanding of the system and what, where, and how to find including both experts and documents. For cross-functional teams knowledge, reuse will be harder to use (Alan, 2014). (Markus, 2001) also warned that the reasons for the making some decisions are mostly forgotten or changed they need knowledge about what, how and why it did and what enhancements they can make.

- **Shared Work Practitioners**

People who do the same kind of work in different projects like similar responsibilities but at different locations. Produce knowledge for someone other's use. Depending on the need for knowledge is not as complex as the knowledge resides the right expert systems within the network. The basic idea is, practitioners need to know how they can do and why something work.

- **Expertise-Seeking Novices**

Everybody search for knowledge, which normally they with does not work. They are far from knowledge-distance. The main problem of those people is to define a question, judging, and locating the quality of knowledge and their sources, and apply that knowledge to the expertise (Timbrell & Jewels, 2002).

- **Miners Secondary Knowledge:**

Everyone tries to look for the knowledge which produced a different type of knowledge contexts. These knowledge and different contexts of the user questions may be different to the knowledge producer. The essential problem for the user is to define the question to get the required knowledge. It often requires search algorithms, and these algorithms are hard to code.

1.6 Knowledge Management Strategy

In the previous subsection of KM process, I defined the general overview of how organizations can manage knowledge in this subsection implementation of KM allows long-term KM strategies and it will allow the knowledge-based organization to enhance the business processes. Strategy investment represents the company's options to enable and increase the KM processes (Alan, 2014).

1.6.1 Organizational Structure

Organizational structure based on how the organization is organized and the way relationship between the employees with each other.

According to (Steven, 2005), there are **two types** of organizational structure formal and informal. Both, formal and informal are dependent, and the formal structure influences both positively and negatively.

Formal: The official structure of an organization, with an organizational chart and which refers to a hierarchical relationship structure between the members of the organization. The formal organizational structure, especially in the big enterprises with different departments, will impact knowledge flow. Specifically, no structure is the best, advantages and disadvantages depend on the business type, size of the organization, etc. However, the study shows that decentralized structures are much effective for KM (Choi & Lee, 2000; Claver & Pertusa, 2007; Chen & Huang, 2007).

Informal: Unofficial structures that are the one created through informal network activities work within the organization. They represent the actual result of the way of people. (Brown & Duguid, 1991) Defines look at a company as a community of communities, the value of these informal structures is understood, the knowledge managers must learn how to support and identify the informal structures in informal network activities. This process is relatively close to KM because knowledge flows and knowledge repositories are dependent on the structure.

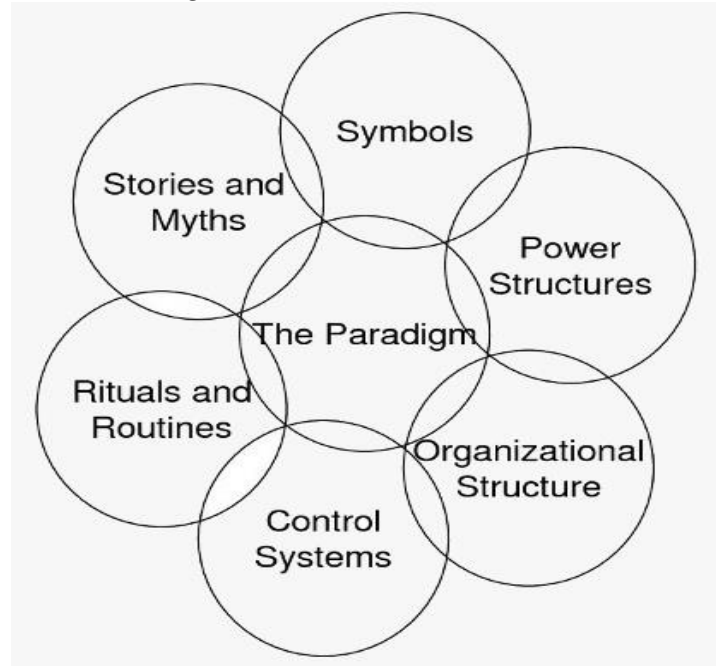
1.6.2 Organizational Culture Change

The process did in an organization surrounded to have values, attitudes, and beliefs that generate an interactive framework (Johnson, 2001).

Organizational Culture Mapping

(Johnson, 2001) Designed a model known as the cultural web, he outlined the different components of organizational culture (figure 5).

Figure 5: Cultural web model



Source: Johnson, (2001).

The paradigm: Collection of shared assumptions and the organization consider those assumptions.

Rituals and Routines: “The way we do in the organization,” including behaviours and important values and consider those behaviours value for the organization.

Stories and myths: The organizations get wisdom from the past events, try to implement in the organization for the newcomers.

Symbols: The symbolic elements of the organization, including organizational dress code and titles.

Control Systems: System designed for the focused activities and to reward the employees for correct performance and behaviour.

Organizational Structures: Usually cultural environment has an influence on organizational formal structure.

Power structures: The powerful groups expected to be involved in determining the paradigm. Those who hold power are also the main changeable targets (Rajeev & Wickramasinghe, 2009). (Johnson, 2001) Supporters culture mapping to measure the culture and can determine its efficiency and compatibility with strategy.

1.6.3 Knowledge Retention

It includes knowledge capturing within the organization you users can use it later. (James & Gerardo, 1991) Defined five knowledge repositories for knowledge retention as a culture, individuals, structure (formal and informal systems), external activities, transformations (formalized and procedural systems). In those knowledge repositories knowledge exit or retained in an organization. According to (Liebowitz, 2011), some people miss understanding knowledge retention as losing the important employee and use techniques like exist interviews to capture the applicant's knowledge. Knowledge retention is the system to integrate the organizational process and start before the key employees are about to depart. This task considerably crucial to the long-term organizational success, only a few firms have the formal knowledge retention strategy. By knowledge retention, organizations keep their knowledge inside the organization for long-term success.

1.6.4 KM Core Competencies

This term was first defined by (Prahalad & Hamel, 1990) as " The collective organizational intelligence, focused on how different skills and integrate streams of technology". Then, this basic concept redefined in different ways, but KM core competencies subjects to the primary organizational expertise, are sources of sustainable competitive advantage for the organization. KM core competencies have large knowledge component; integrated with each other. And they work as corporate strategy product, with innovation management and KM. KM transforms the dynamic knowledge, innovation management into core products and profit. To understand the how KM, convert its core competencies into core products and profit. (Prahalad & Hamel, 1990) defined the overview, how core competencies manage with Knowledge:

1. Identifying core competencies: An Organization defines its fundamental skills, link with the specific core products. Then, the assessment must take place, what the customer has and what they need to have to estimate the organizational strategy and competitive advantages.

2. Sustaining core competencies: All the core competencies like knowledge assets can improve. On the other hand, lack of use of any core competency will lead lose it.

3. Building new core competencies: Creating new KM core competencies is an interaction between practice, knowledge, refinement, and coordination. Assets must build, integrated, and improved in an organizational environment that supports testing and enhancement. Making new core competencies is not easy since a sustainable

competitive advantage in the result of knowledge assets are hard to reproduce (Dierickx, & Cool, 1989).

4. Unlearning core competencies: Some organization has problems to repeat the same business process again and again for the long term. When some key skill of an organization no longer uses the organizational processes, it unlearns core competency.

1.6.5 Knowledge Management Systems

Any Information Technology System (hereinafter: ITS) that saves and retrieves knowledge, to improve collaboration, integration, captures and reuse knowledge, locate knowledge source, or in another form to improve the KM processes. (Robertson, 2007) Argues that the companies should not think in-terms of KMS, though enhanced by technology, it is not a technology discipline, and thinking in-terms of KMS leads to expectations of an organization. Therefore, the focus should be determining the functionality and the efficiency of the ITS that needed for the specific tasks, activities and initiatives within the firm.

(Rajeev & Wickramasinghe, 2009) defined the general category of KMS as :

- Groupware & KM 2.0,
- Extranet and Intranet,
- Data warehousing and mining,
- Decision Support System (hereinafter: DSS),
- Content Management System (hereinafter: CMS),
- Document Management System (hereinafter: DMS),
- Artificial Intelligence (hereinafter: AI),
- Simulation tools.

These categories by (Rajeev & Wickramasinghe, 2009) can cover most of the systems that normally associated with a KMS.

1.6.6 Knowledge Management Best Practices

According (Botha, Kourie, & Snyman, 2008) the KM best practices are:

Culture: The supportive environment of KM, and the processes it involves particularly the knowledge sharing process.

- **Infrastructure:** Teams, supporting system, collaborations.
- **Measures:** Creating and design a process for change management inside the company.

- **Technology:** KM offers huge advantages in a few fields. If you use technology for bad purposes it can destroy the process.

Best Practices in Tacit Knowledge Management

Knowledge Sharing: It's the essential process or task in KM because KM based on sharing. It performs a critical role in both, creation and reuses. The tacit and explicit knowledge factors summarize the considerations except cultural issues are as follows:

- **Tacit Knowledge:** It depends on socialization within informal network activities. Particularly tacit knowledge is important in an informal network environment, based on codification without losing the data values (Paul & Blackwell, 2001).
- **Explicit Knowledge:** It is about the clarity of needs, access, understanding, and guidance of knowledge, sharing the process, and source completeness (Bukowitz & Williams, 1999).

Knowledge Reuse: According to (Markus, 2001), contains three main roles, knowledge creator, intermediary, and consumer, these roles are used in knowledge making, sorting, and reusing. Cost and culture are two important elements of knowledge reuse; normally they are related to tacit knowledge.

In 2001, (Markus, 2001) described the **four knowledge reuse situations:**

- Shared work producers,
- Shared work practitioners,
- Expert seeking novices,
- Miners of secondary knowledge.

Knowledge Creation: The creation of new knowledge depends on sharing, access, and group involvement, to the required data and other information. (Cook & Brown, 1999) suggested that it is an interaction between what you know and what knowledge you have.

Knowledge Acquisition: According to (Paul & Blackwell, 2001), the organization tries to obtain the knowledge from the external sources and these external sources are essential, therefore, you must take a comprehensive overview of the value chain. These sources are customers, suppliers, partners, and competitors.

2 SMALL AND MEDIUM ENTERPRISES AND ORGANIZATION LEARNING

Recent research indicates that the SMEs need a new innovative knowledge and learning (OCED, 2010) (Appendix 2). In this section, I explained and discussed the relationship between SME and KM. The first part of this study is to explore the SMEs, their ongoing/current status, systematic approach to KM. In the further section to explain the OL in the knowledge-based system and how it works within the organizational structure and some practices which the organization is performing in the inter-organizational processes and at the end to overview some of the inter-organizational models.

2.1 Small and Medium Enterprises (SMEs)

In a company, positive norms and values are essential and important in achieving the organizational beliefs and values to create, share knowledge and use created knowledge for decision making (Alavi & Leidner, 2001). Quantitatively is defined that the independent business who managed by their owners or semi-owners have a small market share, but it is more important the SMEs are contributing in the economy and their competitive advantages to growing and success of a country (Bolton, 1971). According to the Organization for Economic Co-operation and Development (hereinafter: OCED), Paris SMEs growth productivity fueled by its competitive processes (OECD, 2002).

The question is which is the best KM adoption approach in the organization, and for this question (Moffett, McAdam, & Parkinson, 2002) described that many organizations are not sure about the right KM adoption approach, there are few fundamental factors are very fundamental for the successful implementation and adoption of KM in any company. Another question comes, how to choose the key KM adoption factors that lead the organization to its success level and according to (Wong & Aspinwall, 2005), those factors which are fundamental to the organizational success called critical success factors (hereinafter: CSF) these CSFs address the importance of KM in SMEs. One of the early studies of CSF in the implementation of KM is carried out by (Skyrme & Amidon, 1997), they studied experiences and practices in leading companies using KM and identified seven key success factors. (Davenport & Beers, 1998) explored 24 organization and 31 different KM projects and identified eight success factors.

11 fundamental factors that can be basics for the implementation of KM in SMEe are Culture, IT, support & leadership, purpose and strategy, process & activities, organizational infrastructure, measurement, motivation, training & education, resources, and human resource management (hereinafter: HRM) (Wong, 2005). In 2005 (Wong & Aspinwall, 2005), conduction a survey focusing on SMEs and presented the quantifiable results. Their survey was in three sections, first was on the specification of SMEs, i.e.,

type of firm, size, and the to check KM practising level if they are using KM. The second part was of responses; the important was they gave the seven success factors to each organization. And the last part was to determine why some organizations and did not implement KM practices the actual reasons to not adopt the KMS.

11 important CSFs in the implementation of KM, defined as (Wong, 2005):

1. IT: KM depends on IT, it connects both, human and information. Effective database technology, information storage, workflows, access, document management, all are essential parts of IT.

2. Management Support and leadership: Management must support the implementation of KM in the organization, they must share knowledge and its sources also the management introduce/start the knowledge sharing trends so the employee can follow them and introduce knowledge sharing culture where people are more knowledgeable and informed.

3. Culture: Cultures is also an essential factor for successful KM implementation and adoption. It contains values and norms that are practised in a company. A positive cultural environment encourages the knowledge creation and sharing for KM adoption for the organization to collaborate and invent.

4. Purpose and Strategy: A well defined and clear strategy is very important to for the implementation of KM. Available recourses must show in the formation of an organizational strategy, and all employees must support and collaborate the vision.

5. Process and Activities: Important organizational processes should include the knowledge creation, storage, retrieval, application, and share. KM processes should be structured.

6. Organizational Infrastructure: Need to assign specific people to the role and responsibilities of KM implementation.

7. Measurement: All the activities in the organization must be measurable, and to measure there must be a took to check the success of KM implementation, benefits, and effectiveness.

8. Motivation: Employees should be motivated to learn and create knowledge.

9. Training and Education: Employees must know how to use the knowledge also they should provide some training about the use of knowledge so that the other employees in

the company can perform and understand better.

10. Resources: Successful implementation of KM depends on reliable resources including financial and human resources.

11. Human Resource Management: You cannot ignore the importance of HRM, all the value that KM implementation can get from only the existing HRM. All the employees must carefully select the right jobs, their knowledge and skill level should take into consideration. HRM needs to provide opportunities for the employees to grow and enhance their skills.

2.2 Systematic Approach to Learning

As an individual, the person can achieve his goals and improve skills and abilities through learning so that the organization can do the same. According to (Senge, 1990), the Organization Learning (hereinafter: OL) offers unlimited opportunities to create interactions and to use an advantage to improve the firm. Keeping in mind that to conclude the basis of a process in the organization is the ability to structurally organize and lead the OL process to organizational added values (James, 1991).

Why an organization needs a systematic approach:

To learn practices in the organization from the adopted unstructured learning among employees to organize all the OL processes. Planning department of a firm must consider the interaction created for sharing and re-use to enhance the organization and to get benefits from the firm. In an organization, many individuals are from different educational and experience backgrounds, needs, and interests so those individuals the systematic organizational approach can solve many big problems. Well functioned organizations are aware of the collective intelligence of its employees is more than the individual intelligence. Among the other factors, there is one main to get the successful organization is that each employee's gained knowledge; it leads the organization to improve performance and get all the benefits and advantages that the organization can achieve. By implementing this approach, the organization can achieve very crucial objects of success, personal interest, and performance (Guinn, 2017). The interaction creation between the employees within the organization can achieve differently by using different OL approaches with systematic actions to create off the winning situation for the organization and the for that employee who is part of it. Introduce learning process in the organizations to achieve the goals and objectives through a systematic learning approach. The idea of long-term learning comes as a base for the process to start; it is not just an idea to enhance business performance but a philosophy. Defined as support to educate processes, more participation and for economic growth (Field & Leicester, 2003).

2.3 Organizational Learning

In 1990 (Brown & Duguid, 1991) defined OL as "a path between innovation and work", he also defined two type as:

- Technical Organization Learning,
- Social-Organizational Learning,

Technical Organizational Learning

Technical view of the OL is explicit in interpretation, processing, and the response or feedback to the information. **In 1978** (Argyris & Schön, 1978), defined the concept of this type of an OL. According to them, there are single-loop learning and double-loop learning processes in an organization. Single-loop OL, recognize and correct the errors in a way to introduce change in an organization. Double loop OL is the higher level of single loop OL; it involves the action to perform for the specific variables and also fundamental changes. **In 1996** (Argyris & Schön, 1996) also analyzed the OL in tacit sources of impact.

Social-Organizational Learning

The social approach of the OL explores the explicit or tacit behaviours of people within the organization with their experiences and skills. Lave and Wenger are renowned researchers who provided few inputs on a concept called *communities of practice*, (Lave & Wenger, 1991) defined that the organizations are an example of communities of practice and the organization works as a team of people who worked on the same roles in different organizations. People from different organization and with different skills and experiences share information and experiences to learn from each other they improve there personal and professional skills. (Kolb, 1984) used the concept of active learning and feedback and he also gives some inputs in the social approach of OL.

Previous Research and the theory of OL stated that OL process must analyze the organizational strategy, goal, objectives, structure, or adoption. (Cyert & March, 1963) Defined that the OL is a complete function of better organizational communication and makes easy to adopt OL time within the firm. The Recent research took one step further to set a new foundational definition of OL. (Škerlavaj & Dimovski, 2007) Defined OL from a network perspective to conclude that it builds on many social network concept and theories to give an overview of learning processes in the organization on organization levels including group, individual and intra-organization. This network perspective suggests and recommends the combination of acquisition of knowledge and skills. Practising systematic learning approach in organizations brings the fresh knowledge for

internal knowledge sharing and reuse (Williams, 2002). Employees develop their skills and get more not only by solving problems but also understanding the risk and they work together to take quick and positive actions (Kotter, 1996).

2.3.1 Organizational Learning Processes

(Senge, 1990) defined the *five* OL process components as:

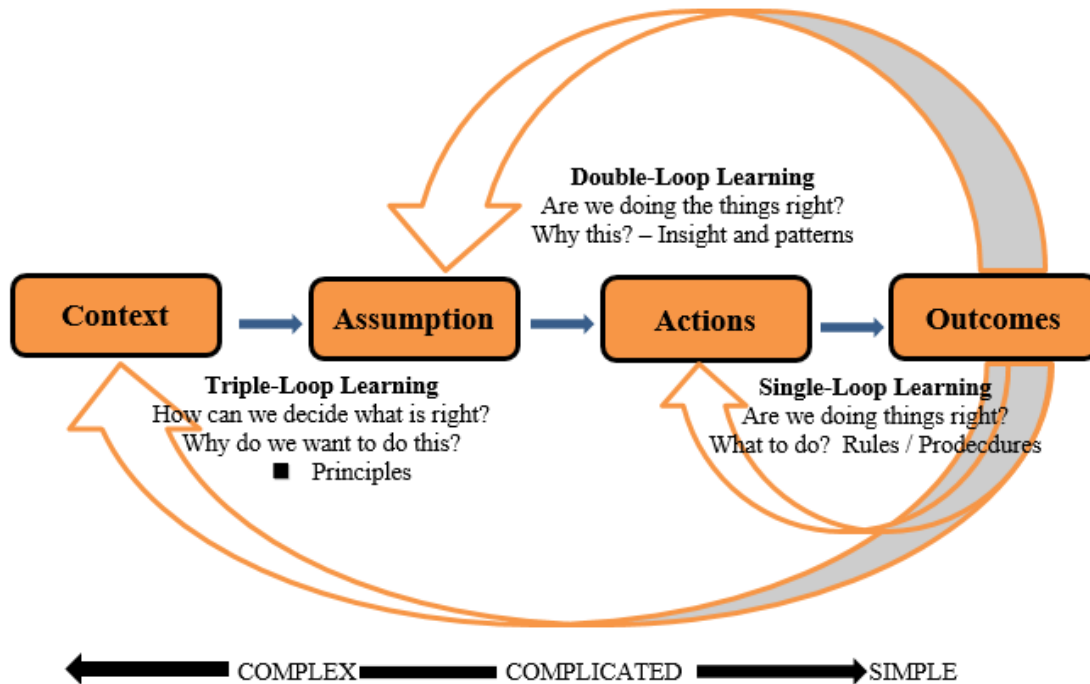
- **Personal Mastery:** It is the component of the organization, individuals must understand their own career goals with knowledge, and how they can overcome the difference between the current skills, knowledge, to achieve set goals.
- **Mental Models:** The employee's ability to perform as per their skills and strength to control upcoming decisions and actions, the main purpose is to teach employees that how to escape from the unproductive models for an individual or organization.
- **Shared Vision:** Joint group perception, shared by all the workers in the company who have shared purposes.
- **Team Lead:** Take information from all the team players to combine and share the improvement of the group as one unit and to the company.
- **Joint Thinking:** It the highest level of the OL process. It produces the opportunity for the employees to think about the outcomes of their joint work and how they can perform better and effectively. Each has an important part of OL processes, and they are mandatory to complete to achieve the advance organizational changes (Senge, Roberts, & Kleiner, 1999).

2.3.2 Organizational Learning Theory

The OL theory can see the organizational process defined by (Argyris & Schön, 1996) about the single and double-loop learning. **In 1978** (Argyris & Schön, 1978), redefined OL processes as single, double, and triple-loop OL. They explained single-loop as OL of error and its correction process. Double-loop as the identification and process improvement through a change in values, norms, and objectives. Triple-loop (figure 6). All the employees have specific behaviour and patterns at the start of a process before handling a certain situation. Some employees may try to hide something and act defensively, like to hide their incompetence. When this happens, they give up, withdraw, and refuse to adopt new learning to solve some specific situations (Argyris & Schön, 1978). (Argyris, 1991) Introduced OL process to get employees from single-loop learning to double-loop learning. In double-loop, processes support different perspective on the

exploration of leadership training and situation. Triple-loop OL process defines how employees can learn. It's the most complex form of learning; it involves the proactive thinking of the previous sharing and actions to the running situation (Argyris & Schön, 1974).

Figure 6: Single, Double, and Triple-Loop Learning



Source: Argyris & Schön, (1978).

The results of the implementation of KM in SMEs shows that OL has a very influential part in organizational processes improvement to achieve competitive advantages. OL takes place to transform tacit knowledge into explicit (Lloyd-Reason & Sear, 2007; Pedler, 2011; Gold, Thorpe & Mumford, 2010). In an interview (Karash, 1995) described that *'the eventual objective of the organization is to provide the achieved knowledge in practice that tacit knowledge can be transferred to a person or group, who reproduce and share it with practice'*.

Learning Organizations

(Peter, 1990) Described learning organizations (hereinafter: LO) as the platform where employees work to improve their skills, capacity to get the desired results that came from the continuous practice of new ways to thinking and collective intelligence to fulfil the shared vision of the organization and the employee. (Škerlavaj & Dimovski, 2007) Defined LO as an organization that introduces learning and innovation faster than other elements of the organization processes. They also added that the LO are those that appreciate and promote the learning process of the employees in the organization. It is the

firm that takes a risk and requests the employees to learn from there risks that they experienced and skills that they shared. The LO construct their success by introducing and practising all available OL models, processes, and changing as per the innovations of its employees at all levels to achieve desired goals, organizational objectives and results. The definition of LO mainly focused on the smarter and intelligently use the potential skills of employees in an organization (Senge, 1990).

(Senge, 1990) also explained the term '*generative learning*'. It means improvement should not focus only on adoption to retain and grow but on obtaining the set results. Typical companies changed due to external influence, such as the reaction of events or the external competitions. The LO encourage employees to create, gather, and share knowledge inside the organization to achieve the ultimate goals of LO the firm must implement and introduce effective and competent knowledge transfer. Knowledge transformation is an easy process to perform by the written communication channel. The meaning of *transfer* must understand fully because knowledge transfer is not perfect. Knowledge transfer can be and from an employee, database management system, group, or other sources. Formal and informal, both knowledge transfer contains Face to Face (hereinafter: F2F), and Practical Communities have the objectives to achieve results in much larger groups (Lave & Wenger, 1991).

Social network tools such as Skype, Facebook, Whatsapp have groups messaging and video calling as a popular means of informal knowledge transfer. Formal knowledge transfer includes official documents, letters, and intranet. The growth of some informal tools for knowledge transfer increased the loss of creative capital and had driven firms to explore different ways to acquire and hold learning, practising tacit knowledge proactively and systematically (Krogh & Nonaka, 2000). KM consists of different processes from knowledge acquisition to knowledge sharing. The most important sub-processes are acquisition and conversation. The acquisition is the creation of existing or new knowledge by skills and experience then it converted from tacit to explicit to share (Wenger, 1998).

2.4 Intra-Organizational Processes

2.4.1 Socialization

Socialization is one of the ultimate OL processes; it provides the foundation for a successful company. Socialization can analyze from the different point of views, i.e., initial entry or the other process performance of the organization. Since organization, politics changes constantly, for new employees it is important to be aware of the organizational environment and their role in the company. Individuals can learn more about the organizational values, income, procedures, and processes. (Chao & O'Leary-

Kelly, 1994). (David, 2006) Defined socialization as the platform for employees to adopt and learn the organizational values, norms and their roles to achieve the organizational goals and stability. Socialization strategies contribute to the employee's job satisfaction, loyalty, and increasing abilities.

2.4.2 Organizational Culture and Knowledge Sharing

Organizational culture observes cultural value, norms, and beliefs, are part of what one selects to see and understand (Davenport & Prusak, 1998). According to (Schein, 2010), organizational culture includes observing behavioural regulation of people interaction, values, group norms, philosophies, climate, rules, skills, thinking ability, models or integrated symbols. There is no good or bad culture, but some cultures support and promote the shared organizational organization. (Mitchell, 2009) described that the organizational culture plays a very important role, especially in small enterprises. (Cameron & Quinn, 2011) Defined four types of organization culture: *Create, Collaborate, Control and Compete*, with cultures exist in the culture. Each type requires conditions to continue their processes. Cultures are complex, but it is possible to get sustainable cultural solutions to implement with organizational cultures and can propose measurements. Knowledge sharing culture works as a facilitator to create and transfers of new knowledge (Bukowitz & Williams, 1999; Davenport & Prusak, 1998; Paul & Blackwell, 2001).

2.4.3 Organization of Social Network

The social network can design at different levels within the organization. The first level is among the employees while the others being among the organizations. Organizational network activities are especially important for SMEs to share and shore the knowledge. Intra-organizational networks based on individual relationships and references of specific people with the different organizations. These relations can be used for co-operation, sharing information, to compare product prices and other processes (Granovetter, 1973). Social network analysis and theory based on the interaction between nodes and edges (Barnes, 1954).

2.4.4 Organizational Commitment

Organizational commitment can be achieved through the dedication of employees to fulfil the organizational goals and objectives. It can also achieve social network, socialization, and culture. This phase has the maximum job satisfaction level (Maslow, 1993).

2.4.5 Job Satisfaction

(Maslow, 1993) Suggested that the people in the company must have safety, physical

desires and to think about attraction and belonging. After the basic requirements, a further step to grow and self-respect. (Herzberg & Snyderman, 1959) Analyzed on what are the motivational factors that satisfy people at their companies, he got into conclusion that basic level that needs to be satisfied in inter-personal relations. Well established socialization in an organization helps new employees to easily and quickly adapt and acquire the new knowledge and organizational culture (Ballard & Blessing, 2006).

3 KNOWLEDGE MANAGEMENT AND ORGANIZATIONAL LEARNING ENVIRONMENT IN SMALL AND MEDIUM ENTERPRISES IN UAE, QATAR, AND PAKISTAN

In this chapter, I discuss the overview of the UAE, Qatar and Pakistan in SMEs environment in KM and OL from the literature review and survey analysis. Also explained the similarities and differences between UAE, Qatar and Pakistan, the challenges and limitations of KM implementation in SMEs and SWOT analysis.

3.1 Background of UAE, Qatar, and Pakistan

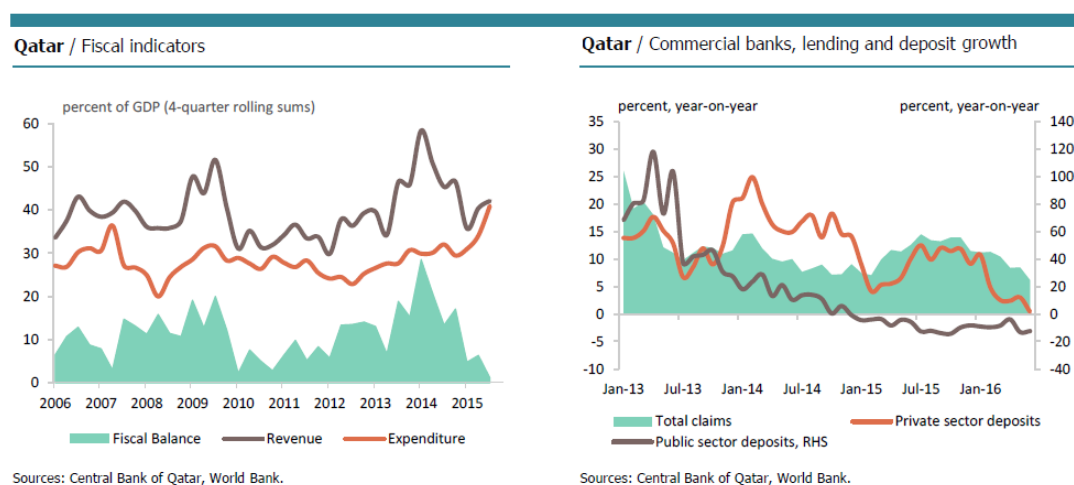
UAE, Qatar and Pakistan are a unique mix of ancient and modern history and architecture, offering such a rich multicultural experience to everyone. All of these countries were under the British rule and share so many common things with each other. (For more general economic data see Appendix 3). UAE and Qatar are the members of the Gulf Cooperation Council (hereinafter: GCC) while Pakistan is the permanent member of the South Asian Association for Regional Cooperation (hereinafter: SAARC). According to (World-Bank, 2017), in term of income, Pakistan is at lower-middle income level but In past three years Pakistan has made vital and significant progress in regaining macroeconomic stability, the country also achieved the macroeconomic stability in the last three years in terms of the fiscal deficit, it came down to below 5% from 8%, international reserves have been increased more than three times over \$18b, and the growth rate also has been higher by 4.7%.

According to (World Bank, 2016) Qatar growth slowed and will be slow in future. Both fiscal and current account balances are estimated are projected to have deficits from 2016 because of the risky medium-term situation for the gas and energy companies for this decade and before, also the advancement of the non-hydrocarbon field is not an easy task. Qatar is growing at a moderate pace it also hosts FIFA 2022 and in the second year, they spend the US \$200 billion to build infrastructure and upgrade an existing system, which supports activity in services, transport and other business with the growth of GDP at estimated 3.7% in 2018. Current account and fiscal values are improving, as gas production will increase and oil prices recover (figure 7).

According to (World Bank, 2016) the growth of UAE is forecasting to gradually recover,

went as high as 3% in 2018. Oil production is rising due to investment in the oil and gas industry. Non-oil development is also rebounding (i) increment in the prices of oil are as per planning and good effects on confidence and financial conditions overcome the impacts of fiscal recovery; (ii) new big-budget projects are ramping ahead of Dubai’s hosting of Expo 2020 and (iii) Increase of trade, as the uplifting of sanctions on Iran. Debt both internal and external are expected to recover by the medium-term; with huge fiscal deficit recovery in the current account will cross GDP growth as high as 3.2% by 2018. Improvement in economic change. The UAE imposed a GCC-wide value added tax (hereinafter: VAT) from January 2018 and is also planning on increasing the excise taxes by introducing the corporate tax.

Figure 7: Fiscal Indicators, Lending and deposit growth of Qatar



Source: Qatar, (2015).

3.2 Aspects of Knowledge Management in Small and Medium Enterprises in UAE, Qatar and Pakistan

The different aspects of KM in organizations can be divided into cultural, psychological and theoretical (Kanu, 2005).

3.2.1 Cultural

Organizational culture has a huge impact to implement and adopt KMS. Researchers consider the cultural aspect the main area of KM and research is conducted by (Fakhar & Mazhar, 2011) from various cities including both private and public of 200 employees in SMEs in Pakistan to measure the impact and importance of KM. Similarly, (Ahmad & Hasan, 2010) explained the importance of cultural values in organizations and in the contribution to OL process in SMEs. (Kalyar & Rafi, 2011) conducted their study of 227 manufacturing companies across Pakistan and conclude the culture and self-leadership

are playing as one of the fundamental roles in a successful SME. (Kanu, 2005) discussed issues in knowledge sharing in the South Asian region particularly in Pakistan. (Waheed & Arshad, 2011) also explored the need for the improvement of culture in firms and the other factors which are related to inter-department to enhance the cultural trust and acceptance among decision makers. (Ahmad & Kausar, 2007) introduced the idea of social democratization and better social communication structure for e-learning in a multi-cultural environment and KM.

3.2.2 Psychological

Different researchers explained human psychology is one of the critical part of KM in term of their behaviour and how they act in the company. (Mahmood & Qureshi, 2011) focused on tacit knowledge sharing patterns. They conducted the study with 209 IT experts from 70 IT companies in five major cities of Pakistan. Another research conducted by (Tayyab & Finegan, 2004) to explore how people manage their tacit knowledge and what are the limitation and biasedness of a human mind, this research was based on cognitive psychology. Similarly, (Ajmal & Helo, 2011) listed some critical factors for KM that has a high influence on participation across the organizations.

3.2.3 Theoretical

Some researcher discussed the theoretical approach of KM. In their study (Mikulecky & Saeed, 2009) debated the importance of KM for different sectors including an academic sector of Pakistan. (Iftikhar & Steven, 2011) measured seven (7) KM effectiveness and capabilities in two hundred and fifty (250) SMEs of Pakistan, they indicate on the application of KM effectiveness in SMEs. (Ahmad & Hasan, 2010) enlisted five (5) different dimensions of OL environment as methodology, culture, resources, learning styles, and the environment they also explained the globalization hazards that have an impact on knowledge particularly on students.

3.3 Ongoing Knowledge Management status and Challenges

3.3.1 Ongoing Knowledge Management Status

(David & Amidon, 1997) explained that many types of research have been conducted in KM particularly in large-scale organizations and found that KM has a high impact on the large-scale organizations also on different software i.e. portals, CMS is enterprise-wide systems that cost a huge amount of money. And for the SMEs, it doesn't mean that KM is suitable for them as KM practices, but SMEs KM is not practising as in large-scale firms. Since the last two decades especially from 1999, a lot of research is published in KM for SMEs. As per him, the most highlighted study is conducted by the West Midlands KM Centre in England, they developed the system to identify and to solve the issues

related to SMEs and to develop their KMS and practices. The CEO of West Midlands KM Centre describes different KM point of views that can enable SMEs into more effective and efficient organizations as (i) Individual and shared appreciation (ii) Effective KMS (iii) Combined Actions (iv) Efficient OL Process.

Individual and shared appreciation

It reflects '*an emphasis on management upon management through knowing and correctly understanding the meaning and the interpretations*'. The manager's roles and his model have an effect to deal with the outside knowledge. i.e. those business owners who do not act to bring the new and latest technologies like KM until there is a strong reason or difficulty.

Effective KMS

Usually SMEs has more potential and eagerness to implement and adopt the new technologies when they are quite good in IT department and for those companies usually, they have strong benefits to enhance effectiveness and efficiency, information to create the need of realization to have a small ITS.

Combined Actions

Knowledge-based projects in SMEs are formulated and implemented within the organization that manage the impact of knowledge-based projects in operations, strategy and management terms. Small organization are more strategic and active in actions also they are more focused on fundamental elements to capture and use the knowledge to have successful projects.

Efficient Organizational Learning Process

Typically, small companies are socially more active than the medium and large-scale organizations because of culture, more F2F dealings, and even the owners and managers keep track of everything about the on-going and upcoming projects and to enhance their core skills to survive their company's competitiveness and, they re-plan and redevelop knowledge in different approaches to enhance their organizational competitiveness.

3.3.2 Knowledge Management Challenges

Research on SMEs in Pakistan, UAE and Qatar is at the beginning level and the condition of SMEs is at high risk. Particularly in political instability, less intellectual capital, environment, and energy crises are the general and the biggest issues and threats for

Pakistani SMEs. On the other side, (Memon & Rohra, 2010) contradicted that SMEs in Pakistan must understand the right concept of performance management system (hereinafter: PMS) and KMS, because of this reason SMEs are less competitive and effective in Pakistan also SMEs are not implementing the HR policies in hiring new skill people. (Akhtar & Salaria, 2011) pointed out the Pakistani SMEs has bigger challenges of entering the international market and fear to perform and compete in the international market due to the lack of competences and abilities. Also, SMEs are not able to compete even on the national market.

Therefore, SMEs have huge challenges for their survival in a competitive environment and to achieve their goals. (Khalique & Jamal, 2011) studied knowledge-based economy focusing on intellectual capital for SMEs in Pakistan and (Ajmal & Kekale, 2010) conducted an empirical study, to highlight the different issues and how to fix those to implement KM activities. (Abuzar & Asim, 2009) explored the KM strategy, model, process and challenges in SMEs in Pakistan. (Zainab & Akram, 2011) explained the financial problem are being faced by the companies to implement KMS. (Ahmad & Paul, 2007) focused on different challenges in the cross-cultural overview to create, change and get the knowledge from the KMS. (Fehmida & Ali, 2004) explored the strategy and activities of KMS in the health sector in Pakistan. KM as a study course is new in the universities of Pakistan.

Effect of usage of IT

(Ramzan, 2004) conduction a survey of two hundred and twenty-four (224) working librarians across Pakistan and defined the relationship between knowledge and librarian's and their behaviour to IT usage. (Abuzar & Asim, 2009) discussed the different issues and trends of IT and its impact on people. Issues related to IT that are that including in KM where discussed by (Zainab & Akram, 2011).

3.4 Effective Innovation Management

The innovative capability is the skill to continuously convert the knowledge into new products to get benefits from it for the company and stakeholders. So, the innovation capability can be defined as the combination of resources to execute and to manage innovation (Lawson & Samson, 2001). Innovation management defined by (Gaynor, 2002) as the efficient way of outstanding skills, opportunity, calculating and to use the suitable organizational strategy.

3.4.1 SWOT Analysis of SMEs in Pakistan

Pakistan is one of the highest developing potential countries in economic growth and the living standards of people. Even though one of the main problems is slowing down of SME growth. Since the late 90s, the government did not properly look after SMEs because their primary focus was on the corporate sector in the large manufacturing companies. (Khawaja, 2006) unleashed in his article that *“according to the regulatory and policy environment of Pakistan is not very conducive to the growth of SMEs sector and overall government effort remains to concentrate for the development of large firms”*.

It has been since long that SMEs do not get adequate access to resources and the focus concentrated on the large industrial scale. The strength and success of SMEs based on new creation, unique skills, strong relationship, fast communication, fewer politics, close external and internal contacts, market trends and flow. Lack of physical and financial resources are critical for SMEs progress whereas intangible resources when utilize properly are significant for the growth. Getting financial resources or sponsors is one of the main challenges, and a large part of SMEs do not have the security needed for collateral sanction of a loan from banks and lending institutes appears very difficult.

According to the State Bank of Pakistan (hereinafter: SBP) report, there was an overall decline in SME financing that fall 20% to Rs.348 billion in 2009, from Rs.437 billion in 2007. Following the SBP quarterly report, 2015 identified that SME financing has dwindled to 5.8% of the total financing as compared to 6.3% in the previous quarters (Ahmed, 2018). Gallup Pakistan 2006 also revealed top ten problems emerging out of which lack of finance is the first problem, it also shows that 89% of the loan by SMEs was for the working capital requirement. That reflected Pakistani banks were reluctant for supplying long-term budgeting and financing for initial SMEs setups. Table 2 shows light on the major strength, weakness, opportunities and threats of Pakistani SMEs. SWOT analysis was extracted from the reports of (SBP, 2010); (SMEDA., 2010); (SMEDA, 2011), from the questionnaire analysis in SMEs in Pakistan, interviews and from the literature review (table 3).

Table 3: SWOT Analysis of SMEs in Pakistan

STRENGTH	WEAKNESS
<ul style="list-style-type: none"> • Strong family connection and support. • The high rate of profitability. • Local distribution channels (supply chain). • Experience in business. • High motivation in business development. • Friendly Environment inside the firm. • Access to effective advertising tools. • Unique position, experience and skills. 	<ul style="list-style-type: none"> • Financial constraints. • Access to strong financial resources. • High labour cost. • Lack of skilled human resource. • Lack of managerial education. • Entrepreneurial mindset. • Poor marketing management. • Lack of ability to adopt innovation and create new technology.
OPPORTUNITY	THREATS
<ul style="list-style-type: none"> • Innovation and intellectual property rights (SMEs in Pakistan are exporting sports equipment, surgical, and textile products). • The opportunity for the franchise and Joint venture with other organizations. • Government is building special industry zones to help the business grow. • SMEs can build a reputation by getting quality certifications. 	<ul style="list-style-type: none"> • Customer demand shifts away from the firm products or services (because of price). • Entry of multinational and high competitor. • Infrastructure constraints, lack of proper infrastructure is a major issue for SMEs (Power supply, Roads, Poor communication System). • Lack of standardization, International Quality Certificates to certify the quality of services. • Bad trade situation with India and Afganistan due to not good relationships.

Source: Adapted from SMEDA, (2010).

3.4.2 SWOT Analysis of SMEs in UAE and Qatar

SMEs must design and introduce an innovative business strategy, process control, comply, and manage the interactions with their customers to achieve their organizational milestones. By managing the knowledge assets within the organization by putting more effective in system and structure to capture the more and new knowledge rather than adopting the current ad-hoc approach to technology and information transfer, then the organization can achieve continuous improvement (Nada, 2012) (table 4) shows light on

the major strength, weakness, opportunities and threats of the SEMs in the UAE and Qatar. These SWOT analyses were analysed through questionnaire analysis, interviews, literature review and reports from (Dubai, 2009); (Qatar, 2015).

Table 4: SWOT Analysis of SMEs in UAE and Qatar

STRENGTH	WEAKNESS
<ul style="list-style-type: none"> • The positive element of employee SMEs • Plays important role in the solution of the unemployment problem. • Increasing awareness of the adaption of modern production techniques. • Regional contribution. • Development in political commitment for the design and implementation of SME policies. • Increase in motivation for creativity and entrepreneurship. • The high proprietary interest rate, which makes enterprises less vulnerable to financial crises. • Flexible in adopting changes and ideas. 	<ul style="list-style-type: none"> • Both, public and private spend less expenditure on research. • Not proper use of modern marketing and business techniques force. i.e. Social media. • Deficiency in quality and branding as well as a qualified labour force. • Insufficient level of institutionalization and specialization. • Inadequate continuous monitoring and evaluation system for SME policy measures. • SMS management and employees are not at the required education level. • Collaboration and productivity are low.
OPPORTUNITY	THREATS
<ul style="list-style-type: none"> • It has been aware of the importance of SMEs in the economy. • Discussion of SME and related policies on many platforms. • GCC membership process offers new opportunities for SMEs. • Strategy and action approach towards SMEs is accepted by the government. • GCC markets will offer new opportunities for SMEs. • Intellectual and industrial property rights legislation and technical infrastructure were developed for SMEs. • Improvements in macroeconomic indicators of Long-term benefits. 	<ul style="list-style-type: none"> • Oil-based market economy. • Economic uncertainty has a negative impact on SMEs. • Lack of coordination between agencies which are providing services and support to SMEs. • International sectorial-based presentation is inadequate. • Implementations of policy and strategy documents of SMEs are inadequate. • Issues regarding communications information and trust could not yet be overcome in some area. • International political and economic uncertainty and instability.

Source: Adapted from Dubai, (2009); Qatar, (2015).

3.5 Similarities and Differences in KM in SMEs Between UAE, Qatar and Pakistan

3.5.1 Competitive Advantages

For long-term and continuous achievement of an organizational competitive advantages and goals, it is very important for the companies to introduce knowledge and learning processes, since it's not hard to have more products and processes but the clear

understanding of knowledge, use and good relationship with employees in the organization within the business strategy should be the main concerns for the company (Garvin & Edmonson, 2008). Also according to (Garvin & Edmonson, 2008)'s study, by using knowledge and OL in the companies enables the organizations to create new, acquire, capture, store, retrieve, re-create knowledge. The critical issue for SMEs is to achieve economic scale, important to achieve competitive advantages of the organizations. One of the most positive steps for SMEs in UAE and Qatar is to increase efforts to fulfil all the pre-requisite requirements to achieve business goals by economic scale as an alternative way.

3.5.2 Change and Innovation

In **2014**, UAE's Prime Minister and Ruler of Dubai announced the global plans for new legislation, investment global research partnership and incentives to be '*among the most innovative nations in the world, within 7 years*' (Business, 2014). The UAE's development and progress from the first foundations to the country that it is today, as well as the vision it holds for the future, is masterfully shaped by the Government's determination to the innovation agenda coupled with the passion and active participation of the private sector in the UAE. The considerations of the innovation drivers, achievements, major milestones, accomplishments of this relatively young yet highly achieving country and provide insights others can gain from. Also, the considerations for the countries in the Middle East region to reflect on in terms of 1) Quick response to keep up with the speed of required for innovation and creativity, 2) being extensible, adapting to learn and change from failure, 3) being open for the wisdom of the people as well as associations and participation, 4) getting on and follow through the implementation of the innovation. (Hana, 2017).

Changes Needed: Measures like the soon-to-be-implemented UAE bankruptcy law are likely to lead to a more expedite and mature financial environment for SMEs. Slower than expected reforms in regulation and legislation, and a lack of emphasis on modernising the GCC education sector are major challenges that also include a tough business environment to produce the talent needed to create knowledge workers, the report stated. However, some GCC countries seem to be keen on creating an effective SME ecosystem.

In **August 2016**, The UAE government adopted The Federal Law on Bankruptcy that assures to lower risks for those businessmen who want to run businesses in the country as it allows entrepreneurs to skip a jail term if their firms default on debt payment. Currently, companies operating in the country find it difficult to restructure or close operations due to a lack of comprehensive bankruptcy regulations. As per the existing law, businessmen are to land in jail if they fail to pay back debts or cheque issued by them bounce. This has deterred many entrepreneurs from starting ventures and stalled small

firms' efforts to scale up as several executives have fled the country to escape the law, leaving behind bad debts. The new law provides a comprehensive legal framework to help distressed firms avoid bankruptcy and liquidation. In **2014**, the UAE established Federal Law No. 2 of 2014 to categories SMEs, establish a dedicated council and determine incentives to be offered to SMEs owners.

3.5.3 Learning & Training

Due to lack of enhancements in SMEs ecosystem in GCC countries, especially in UAE and Qatar. Exports suffered the \$275 billion shortfall due to the plunge in oil prices. While, SMEs are facing business, financial, technological challenges, they are also suffering from a lack of credit lines with different GCC banks not approving to lend the money to SMEs, the finance rejection rate is as high as 75%. Only 2% of SMEs are getting money from GCC banks, so far bankruptcy law either does not exist or it's hashed (Puthuparampil, 2018). Mr Iyad Abu Hweiji, President and co-founder of (Bloovo.com, 2016) said in an interview *'SMEs are facing funding challenges, it's hard to raise ordinary debt-based finance due to risk on the part of lenders. There is also no way to fail safely because of financial laws,'*

4 METHODOLOGY

In this chapter, I describe the methodological approaches which I have chosen to implement in this study, also research approaches, data collection and research question.

4.1 Research Methods

The research study consisted of both, quantitative and qualitative. The first section is of qualitative research including personal interviews with the stakeholders in SMEs and a case study of *Collective Intelligence Genome* by (Thomas, Robert, & Chrysanthos, 2010) from MIT Salon Management Review to design Collective Intelligence for SMEs, that how SMEs can quickly enhance their strategies with low or zero investment. By identifying the correct 'genes', the organizational framework can be created called 'genome', which leads to success. The second section is of qualitative study among the SMEs in the services sector including manufacturing and IT.

The nature of research is exploratory, to search the critical factors of KM adoption and implementation in SMEs in UAE, Qatar, and Pakistan. The qualitative research respondents are senior experts in the field of SMEs especially in manufacturing and telecom section in UAE, Qatar, and Pakistan including project managers in telecom, KM consultants, university assistant professors, and young researchers from national in multi-national organizations, NGOs and associations, etc. This quantitative study is also

exploratory in nature, on the bases of sample areas of comparison. For statistical analysis purpose, the planned region of Lahore District, Pakistan. Lahore is one of the biggest districts in Pakistan, Dubai is one of the main emirates in UAE, and Doha is the capital of Qatar. Doha and Dubai have gone through the same circumstances in the past, having almost similar geographical context and similar future development plans.

4.2 Research Questions

The fundamental purpose of this research is to get the solutions to the followings:

- What are the basic characteristics of the KM environment in the services sector SMEs of UAE, Qatar, and Pakistan?
- What is the existing practising level and importance of knowledge sharing in examined organizations?
- How could SMEs gain more by adopting KM, and what benefits they are getting?

These fundamental questions are starting to had an open discussion and talk with the interviewees, To stakeholder, I explained the interviews in details. Also, these questions are the basis for the survey among the employees in the SMEs in UAE, Qatar, and Pakistan to know about KM adoption, important factors to implement the knowledge-based system in the organizations.

4.3 Qualitative Research Design

Keeping in mind the circumstances and storage of data availability particularly in this field from UAE, Qatar, and Pakistan, a qualitative study is essential to do a qualitative data analysis. The study provides a foundation to create a suitable questionnaire for a qualitative study among the service sector SMEs. Therefore the validity and recommendations of the research study and high. Without any doubt, the integration of different research methods has led the projects to the greater relevance. The achieved results from the qualitative study significantly improve the quantitative research method to a sequential study. The first phase of qualitative research is exploratory based on using the semi-structured interview (Creswell, 2003). The main object and purpose of this quantitative study were to understand better from the KM implementation from the stakeholder's perspectives of involvement.

This type of study is in effect of the current situation of SMEs in Manufacturing and IT sector in UAE, Qatar, and Pakistan, because the interviews provided the specific and detailed information about the culture, value, norms, behaviours, and social environment. This study was managed in semi-structured interviews and the qualitative data were collected through personal meeting and interpretation. The interviews were asked a quite wide range of questions, about their opinion, views and

approach to this topic based on their experiences and skills. The stakeholders were selected based on their educational background, organizations, experiences, and skills. Those selected stakeholders are senior professors, KM consultants, young researchers, involved in national and international groups. They were done by e-mail and mobile phone to request for participation in this study and they responded positively to participate in the study and gave their ideas, inputs and point of view of their understanding and perspective. The interviews took place in the month of March 2018 in different locations of Dubai, Doha, and Lahore (including different districts of each city/emirate). Each interview planned for about 30 minutes (Interview questions Appendix 4).

4.3.1 Qualitative Data Gathering Respondents

The number of respondents was 2 out of 3 in each country. The three respondents were not ready to give any response to the interview because they had not felt topic under the current situation for this particular topic since the topic was very focused and specific. A short introduction is given before starting the interview. Table 5 shows the experts.

Table 5: Overview of Respondents from UAE, Qatar, and Pakistan

The United Arab Emirates	
Respondent 1	Country Head IT, Abu Dhabi UAE
Respondent 2	Senior IT Manager
Respondent 3	IT Services Management Consultant
Qatar	
Respondent 4	IT Manager
Respondent 5	Knowledge Management Consultant
Respondent 6	IT Procurement Manager
Pakistan	
Respondent 7	Assistant Deputy Punjab IT Board, Lahore
Respondent 8	Professor, National University of Science and Technology
Respondent 9	Senior Data Manager (IT)

Source: own work.

4.3.2 Qualitative Data Analysis

The qualitative research data were analysed within a complex process. Quantitative data analysis was of two steps. The first step was recording the interviews with the respondents. The interview recording was saved and played later to interpret in the original language, i.e. the mother tongue of the respondents was Arabic and Urdu. The

next step was the translation of the written interviews into the English language while few answers were a mix of Arabic-English and Urdu-English. The interview responses and recommendations were later used as a guide for adaptation of KM and OL Questionnaires (Rowden, 2002), to observe the current situation of SMEs in KM adoption, implementation and to be in a better position to answer to the research questions.

4.4 Quantitative Research Design

Based on the research questions and to conclude, improvements and recommend the fundamental and important factors in the utilization and adoption of KM in SMEs and to compare the similarities and differences in UAE, Qatar, and Pakistan the adoption and KM practices in SMEs, I conducted qualitative research, through a customized questionnaire. The qualitative section of the research phase serves a bottom-up approach. The main insight to perform the survey was to check their workplace / OL and knowledge sharing practices in SMEs. By questionnaire, I performed the survey as a bottom-up approach, i.e. visit organizations in UAE, Qatar, and Pakistan to have the respondents point of view. For the qualitative purpose, I used (Rowden, 2002) Workplace Learning Questionnaire (hereinafter: WLQ). On the survey cover page, I mentioned the purpose and objective of the questionnaire (Rowden, 2002; Rowden & Ahmad, 2000). The questionnaire consists of different categories/groups (Appendix 7) on a six-point Likert scale (Likert, 1932) (1 = Strongly Disagree to 6 = Strongly Agree).

The questionnaire was divided into five different groups of questions asked by the employees as an individual, group, management, knowledge sharing elements, and OL environment (Detailed Questionnaire in Appendix 6). Another Questionnaire (Appendix F) used for Tagit RFID Solutions JLT, Fortes holding, Al Faisal holding and End to End Solutions in Dubai, Doha, and Lahore respectively to check and measure their current KM practices and the importance of each KM element, this questionnaire is specially designed for those mentioned companies in UAE, Qatar, and Pakistan to check their KM adoption level and to recommend some improvement in fundamental and critical success factors which are important for SMEs like them to throw and gain more better and faster.

This questionnaire consists of 15 questions to see existing KM practices and how much they are important of the organization (Detailed Questionnaire in Appendix 5) using a six-point Likert scale (Likert, 1932) (1 = low to 5 = High). Another questionnaire of 20 variables to check the importance, adoption and implementation of KM in SMEs in the UAE, Qatar and Pakistan (Appendix 6) using a six-point Likert scale (Likert, 1932) (1 = Disagree very strongly to 6 = Agree very Strongly). There were questions regarding age, education level/degree, role in the company, experience at the end of the questionnaire. Five different group of twenty (20) questions as a category of an organization,

management, group/teams, and individuals were asked (Detailed Questionnaire in Appendix 7):

- The organizational learning scale (eight questions) including job-related courses, financial support informal education, training, encouragement in learning and sharing within the organization.
- The managerial learning scale (five questions) including help in learning and performance, dealt with existing KM problems, KM and OL improvement plan, relationship with employees.
- The group learning scale (three questions) including sharing knowledge, helping other team members and new skills to improve.
- The individual learning scale (four questions) including attending professional training, enhancing skills.

There were questions regarding age, education level/degree, role in the company, experience at the end of the questionnaire. The questions were supporting statements referring to the previously mentioned group of topics, given in the form that to appear in an OL environment.

4.4.1 Quantitative Sample Gathering

The qualitative respondents were selected on the base of the above-defined areas, especially for qualitative study the focus was on main SME locations in UAE, Qatar, and Pakistan. The respondent's division of areas is detailed in table 6 & 7.

Table 6: Locations Coverage of Respondents in Dubai, Doha, and Lahore

Dubai		Doha		Lahore	
Marina	5.0	Abu-Hamour	11.0	Shahdara Town	2.0
Al Qusais	7.0	Al-Dafna	11.0	New Muslim Town	5.0
Burjman	7.0	Madinat Khalifa	12.0	Shadman Town	7.0
Jumeirah	7.0	Al-Gharafa	13.0	Muslim Town	10.0
Al Nahda	8.0	Al-Duhail	15.0	Hall Road	12.0
Al Rigga	9.0	The Pearl-Qatar	18.0	Shahalmi Town	15.0
Bur Dubai	12.0			Gulberg Town	17.0
Deira Dubai	15.0			Anarkali	20.0
Total	70.0	Total	80.0	Total	88.0

Source: own work

Table7: Qualitative Respondents for Tagit RFID Solutions JLT, Fortes holding, Al Faisal holding and End to End Solutions.

Tagit RFID Solutions JLT, Dubai		Fortes Holding, Dubai		Al Faisal Holding, Doha		End to End Solutions, Lahore	
Senior Managers	3.0	Senior Managers	2.0	Senior Managers	2.0	Senior Managers	2.0
Middle-Level Management	2.0	Middle-Level Management	2.0	Middle-Level Management	2.0	Middle-Level Management	2.0
Skilled Workers	5.0	Skilled Workers	6.0	Skilled Workers	5.0	Skilled Workers	4.0
Total	9.0	Total	10.0	Total	9.0	Total	8.0

Source: own work

The respondents from each country were contacted at their respective offices during their office hours. No one was previously informed or received any information about the survey. The basic information about the study was provided to all the respondents, in a letter with the explanation and the purpose of this research together with the questionnaire. From Dubai, UAE 65 people responded out of 70 with a response rate of 92.8%, from Doha, Qatar 70 out of 80 with a response rate of 87.5% while from Lahore, Pakistan the responses were 71 out of 88 with a response rate of 85.2%.

4.4.2 Quantitative Data Analysis

The gathered quantitative data by the questionnaire was analysed with SPSS software. The first step was to enter the data into the software as recommended by (Field, 2005). Next step was a mean analysis by each country to find the similarities and differences. The estimation was done by using the comparison of the mean value and independent T-test analysis for each country. Then to analyse exploratory factor analysis all the data were checked to find if there is a load on some specific group/category of each country and to get the important factors that have a strong impact on implementing and adopting in KM in SMEs in the UAE, Qatar and Pakistan. Since the analysis was exploratory, I checked the reliability of the measurements (Pahor, 2011).

4.5 Reliability and Validity

For this study, four basic approaches used to monitor the quality of the work. Reliability and validity contain internal, external, and construct validity. Validity is to understand the truth-ness of research design (Silverman, 2002).

Reliability: To measure the quality of research by doing the similar research as some researcher might have done already. The main idea is to check the existing empirical findings and results to generate new research in the similar research work (Myers & Avison, 2004; Yin, 2003). This research is basically for analytical measurement to explore and overcome the deviation in creating new research from the previously done study and the specific research topic of KM and the fundamental factors which influence in the implementation of the knowledge-based system in SMEs. The literature is gathered from the famous organizations and well-known researchers in the KM and KMS implementations to establish the validity and reliability of this study. More important, data integrity measures the language used in interviews in an easy way to understand better.

Internal Validity: Internal validity used an alternate method to check the level of truthfulness, integrity, and facts of the designed study (Yin, 1984). To measure the relationship and the differences the point of view covered in the designed study and to minimize the mandatory conflicts and hold of the alternative reviews that may bound and cofounded to the relationship of study (Churchill, 1999). In this research design, there are numbers of relationship checked and tracked for KM and sharing both, within and outside the organization. Since this study is about how KM can be implemented by introducing success factors for the implementation of KMS and to adapt and acquire new knowledge and awareness in SMEs also the aim of this study is to explore the importance, explore the critical factors of KM in SMEs at the individual, group, and organization level.

External Validity: It's about the generalization of the research and facts to see the level of generalization analytics and statistical analysis (Hart, 2005). For this research I considered various case study in UAE, Qatar, and Pakistan to find out the general results, these studies helped me to compare and conclude the success factor elements of those countries.

Construct Validity: It used to monitor the real significance of the concept that is implemented in the research design (Churchill, 1999). Its functionality is to connect the operational measurement of what been observed and monitored already (Myers & Avison, 2004). The main target of this study is on the importance of KM in SMEs because of their limited resources and how can they implement KM in their organisations to be stable and to grow and gain more profit.

5 RESULTS

The results of this research study were processed as mentioned in the methodology, the summarized statements are presented below. The first section is based on qualitative and second is in the quantitative research.

5.1 Expert's view about Knowledge Management and Organizational Learning in United Arab Emirates, Qatar and Pakistan

The qualitative research summary (table 8) explains the expert options for each country. The experts shared recommendation from UAE, Qatar and Pakistan is that stakeholders in each country must direct all of their efforts to the membership in the SMEs associations or clusters. The KM and OL awareness in Pakistan is very low, but in UAE and Qatar, it is relatively progressing to the higher level of KM and OL. In Pakistan trends towards implementing KM and OL is relatively new and progress is very slow but the progress of learning computer languages, computer software for manufacturing and services, online order etc has increased in last years.

The main reason slowly implementing KM and OL is due to national culture on people's educational level, attitude and behaviour. UAE and Qatar are progressing with high speed, so the awareness level in SMEs in Dubai and Doha is relatively faster than Pakistan. *'Only a good educational and healthy environment and produce healthy minds to adopt the KM and OL approaches, its all about the culture and behaviour of the population'* (Person 2).

'KM environment is the leading platform to grow faster with the collection of tacit knowledge and use that tacit as explicit. To implement the KM in SMEs you need good management and leadership in your organization, that tracks all the KM process to make sure that everything is working fine or as planned and if they notice some problems they call meetings with the related employees and stakeholders to resolve the issues as soon as possible to continue achieving organizational goals' (Person 1).

National culture is more powerful and persuasive for adopting and implementing learning processes. The national culture is the mentality of such people who only focus on the formal educational process and for their education, it is hard for them to go for informal educational processes. *'Older is not ready to adopt any changes in the national culture rather than a younger generation because younger are more flexible in learning and implementing, older generations are more diverse in the industry with strong national cultural influence'* (Person 3).

Other experts stated the difference in knowledge learning, implementing and opportunities between rural and urban areas. *'There is a clear difference in learning and implementing changes in rural and urban areas in each city of each country. In an urban area, there is more chances and potential'* (Person 4).

Existing KM level and importance of knowledge sharing in the organizations is very slow. *'One of the main reasons to not implement KM in SMEs particularly in Pakistan that these technologies are costly and mostly small enterprises cannot afford that cost, they tend to use*

KMS in Dubai and Doha is higher because Dubai and Doha is global business hubs in SMEs and also in large enterprises' (Person 5).

To achieve the business goals in an organization, the relationship of the employees is curtailed, it should be positive and encouraging to achieve the competitive advantages. *'In UAE, Qatar and Pakistan SMEs introduced the organizational resources, procedures and policies which promote technical and personal development with user training, both personal and professional development opportunities for all employees to grow faster' (Person 6).*

Employees must be satisfied with the growth, knowledge and training. *'If the employees in a company are satisfied, they learn and when they learn, they create a lot of knowledge which other employees in the company can reuse and especially in today's era, only those organizations will survive who learn and organize the knowledge and by doing this, they will become more competitive' (Person 7).*

Managers in SMEs can play the game changer role in an organization by introducing KM system in their companies to raise the knowledge, awareness and support of new learning and sharing. Many SMEs in UAE, Qatar and Pakistan have introduced the system of raising awareness among managers in manufacturing and services sectors by training and to be innovative and creative in their work, but it is an ongoing process and will take some time.

Managers in SMEs try to follow some trends by planned training and knowledge sharing within the organization. Some managers have lack of knowledge and they are not familiar with the concept of KM, knowledge sharing, process, store and reuse yet many managers aware the need of implementing KM and KM system in their organizations to achieve the organizational goals. Yet a large number of managers pays only attention to the profit and will only offer higher salaries to show satisfaction towards employees rather than introducing training and learning sessions. It was confirmed that in UAE, Qatar and Pakistan, they have positive KM implementing and learning environment in SMEs to motivate the employee to create and share knowledge, communication and exchanges of ideas to a large extent to their personal improvement.

Table 8: Qualitative Research Summary

	UAE	Qatar	Pakistan
General KM Awareness Level	High	Medium	Low (But Increasing)
Managers awareness of KM	Medium	Medium	Low
Tend to implement KM in SMEs	High	High	High
National culture influence	High	High	High
Demand for Employee training	High	High	Very High
Top Down Communication	Medium	Medium	Low
Employee training	Present	Present	Present (but very few)
Employee Knowledge Store and Share System (Wiki)	Medium	Medium	Very Low
Employees turnover	High	High	Very High
Less opportunity due to small company size	Present	Present	Present
Urban and Rural opportunities difference	Low	Low	Very High
Outstanding capability awards	Low	Low	Very Low

Source: own work

5.1.1 Expert's recommendations for UAE

Experts in Dubai, UAE have proposed few recommendations that they believe are achievable for SMEs. For example, Person 4 has proposed that SMEs should conduct training sessions for all of their employees to encourage them and to enhance their knowledge in latest technologies, provide more employee friendly environment in the organization, so that the employees can perform their tasks in a better and healthy way by this organizations can achieve their goals before their time. Management makes sure that the relationship between all the employees is positive and professional this will help the organization to create, capture, store and reuse employee skills and knowledge. If possible organizations send employees to their international offices, that will create a positive competitive environment for the employees in the organizations. Other experts from the UAE have stated that the top and middle management should become the leaders in a creative approach to adopt and implement KM in SMEs so that companies can get benefits from it. Since existing KM approaches are not sharing much knowledge and do not follow the trends in KMS they must work on the continuous improvements within the organizations in order to have the opportunity to organize the learning processes in a more systematic way.

5.1.2 Expert's recommendation for Qatar

Experts in Doha, Qatar recommended to improve the awareness to implement KM in SMEs especially to managers to conduct training on different IT tools for the easy use to that particular tools for IT department to work more effective and efficiently that will help SMEs to create new knowledge and obtain their business goals for long-term also it's the responsibility of managers to conduct various learning activities in the organization, the existing associations must interact better with the other departments to improve their work in manufacturing and services sectors. The main recommendation is direct action towards the training of managers and CEOs because they must play a leadership and good management role to appreciate the skilled and experienced employees and to support them in learning and knowledge sharing environment in SMEs. Some other experts stated that the national culture and strategies play an essential and important role in quality improvement in SMEs work and measures for the management department and employee training. There have been so such changes in the country because of globalization and Doha as one of the global hubs in the world, such a right of employees are getting better and better and employees contracts as some of the positive contribution for SMEs and also for the large-scale organization in Qatar and all across GCC.

5.1.3 Expert's recommendation for Pakistan

Experts in Lahore, Pakistan recommended the improvement in hiring the right person for the right job, employee training, allow the employees to use his all skills and experiences, reduce political influence in organizations and awareness for managers to adopt the KM and OL processes and proper implementation of them. It is the responsibility of the managers and the CEO to provide all the technological infrastructure of their employees especially for IT department since all the knowledge storing and knowledge processing will be done by IT teams. Managers have to stop using their influence on the employees, allow them to work in a free environment that will be very helpful for the organization to grow. Managers must conduct the employee training and encourage the knowledge capturing and sharing approaches in their organizations. The employee should deliver their 100% for their job and responsibility in the company.

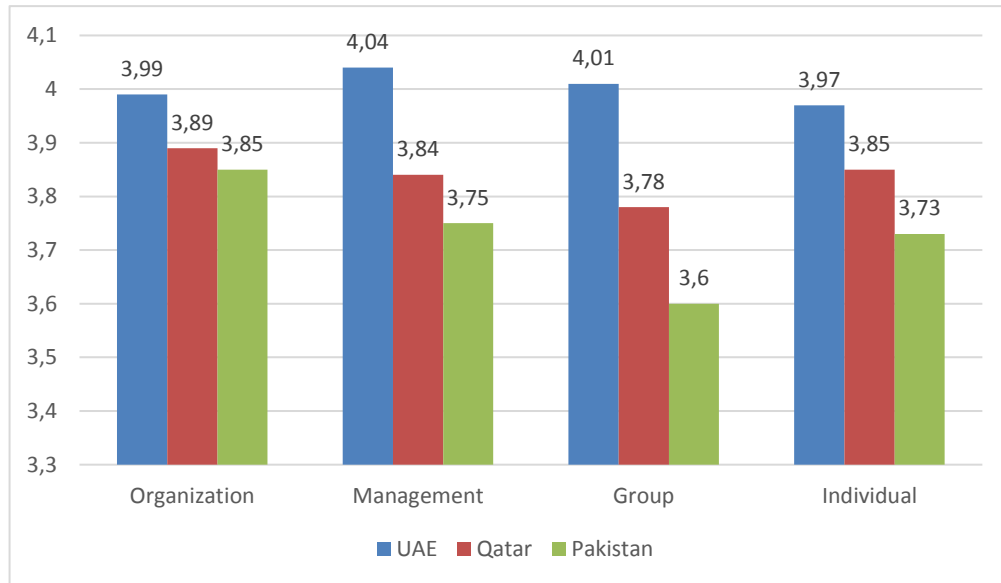
5.2 The content of Knowledge Management and Organizational Learning in Manufacturing SMEs in UAE, Qatar and Pakistan

The variables of UAE, Qatar and Pakistan been analysed by their means. First I analysed the variables of each country separately and then compared to each other individually. The variable can divide into four groups: Organization, management, groups and individual. These groups of variables were formed through the process of making a questionnaire and for the purpose of better understanding of the results and to explain the overview of each group.

5.2.1 Statistical comparison of KM and OL in UAE, Qatar and Pakistan

The variables of all the three countries were analysed by their mean (Appendix 8). First I analysed variables for each country separately, one-by-one and then combined. The variables can be divided into four groups: organization, management, group /team and individual. The variable groups are formed during the process of making a questionnaire for the purpose of a better summary of the result and for a better overview of each individual group (figure 8).

Figure 8: Overview of the Group Variables for UAE, Qatar and Pakistan with Mean Value



Source: own work

Mainly organizational policies in UAE are defined by the owners, and the response range was from 3.77 to 4.20, in Qatar the response range was from 3.67 to 4.15. While in Pakistan the range was from 3.56 to 4.23. In UAE, the organization encourage to do work related certifications, provides financial support and pay all or partial cost for all job-related training and courses ranged from 3.83 to 4.16. In Qatar, it ranged from 3.74 to 4.14 while in Pakistan the response range was from 3.56 to 4.23. In UAE and Qatar, the organizations to encourage their employees to do work related certifications with the response rate 3.83 and 3.84 respectively while the response rate in Pakistan was 3.70. Regarding the management behaviours in UAE, the organizations specify the combined work, safety, and feedback. Respondents ranging rank was from 3.74 to 4.17.

The Qatari management received the results ranging from 3.59 to 4.09. While the SMEs Management in Pakistan received 3.52 to 3.91. In UAE, if KM crash or some KM processes does not work well, top management call for a meeting, discuss the current KM situations and consider the improvement advises was from the range of 4.03 - 4.19. In Qatar, it response range was 3.88 - 3.90 while in Pakistan the response range was 3.52 -

3.70. As a team/group, the employees in UAE, the knowledge sharing in the group was in the range from 3.89 to 4.19, share useful knowledge and tips in the group projects was rate 4.19. And from the joining period of a new employee, the colleagues help each other to understand the work follow and learn new skills from each other was in the range from 3.89 to 3.94. While in Qatar and Pakistan, the knowledge sharing in the group was 3.89 and 3.72, and colleagues help and support to understand and learn new skills was ranged in between 3.61 - 3.68 and 3.52 - 3.59 respectively.

As Individual, the employee from UAE rate their awareness of their requirements for information, learning, training and workshop to enhance their performance, skills and abilities between 3.95 and 4.02, but when it comes to attending professional KMS training and company help to enhance skills it's between 3.92 and 3.97. The similar situation exists in Qatar, where the employees responded with their needs and requirements of awareness and KM understanding between 3.70 and 3.99 while in Pakistan it is between 3.44 and 3.76. And KMS training and company support range in Qatar and Pakistan was from 3.82 to 3.86 and from 3.80 to 3.91 respectively (Appendix 8).

5.2.2 Statistical comparison of KM and OL in UAE and Qatar

The statistical comparison of the quantitative analysis performed through SPSS comparison of mean by independent sample T-test, to get the significant similarities and difference in UAE and Qatar normality test and independent sample t-test was conducted (table 9-11).

Table 9: Normality Test of Mean for Organizational Policy in SMEs in UAE and Qatar

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
UAE	Company pay all or partial cost for Job-related courses	.157	65	.000	.917	65	.000
	Company provides financial support for formal education	.177	65	.000	.914	65	.000
Qatar	Company pay all or partial cost for Job-related courses	.142	65	.002	.936	65	.002
	Company provides financial support for formal education	.160	65	.000	.918	65	.000

Source: own work

Table 10: Mean Values (from Normality Test) for Organizational Policy in SMEs in UAE and Qatar

		N	Mean	Std. Deviation	Std. Error Mean
UAE	Company pay all or partial cost for Job-related courses	65	4.03	1.39	0.17
	Company provides financial support for formal education	65	4.16	1.37	0.17
Qatar	Company pay all or partial cost for Job-related courses	69	3.74	1.38	0.17
	Company provides financial support for formal education	70	4.14	1.40	0.17

Source: own work

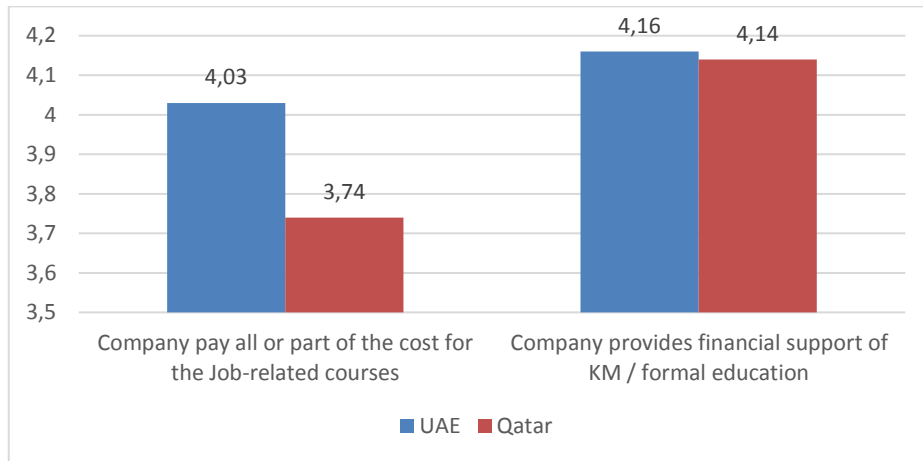
Table 11: Independent Sample T-test in SMEs in UAE and Qatar

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Company pay all or part of the costs for Job-related courses.	Equal variances	.023	.879	1.218	132	.225	.29164	.23942	-.18195	.76523
	Not Equal variances			1.218	131.369	.225	.29164	.23948	-.18210	.76538
The Company provides financial support for formal education	Equal variances	.004	.949	.046	133	.963	.01099	.23852	-.46080	.48278
	Not Equal variances			.046	132.571	.963	.01099	.23837	-.46051	.48248

Source: own work

At first, the main difference in result to be singled out in organizational policies for two variables regarding the cost and financial support to attend job-related courses and KM formal education (figure 9).

Figure 9: Comparison of Mean for Organizational Policy in UAE and Qatar



Source: Own work

The respondents in UAE have almost the same answers for both of the questions related to organizational behaviour while the Qatari did not have the same. Overall the respondents from Qatar have given the different responses for the same/similar questions. The following sections explain the statistically different variables for both UAE and Qatar (table 12 and figure 9).

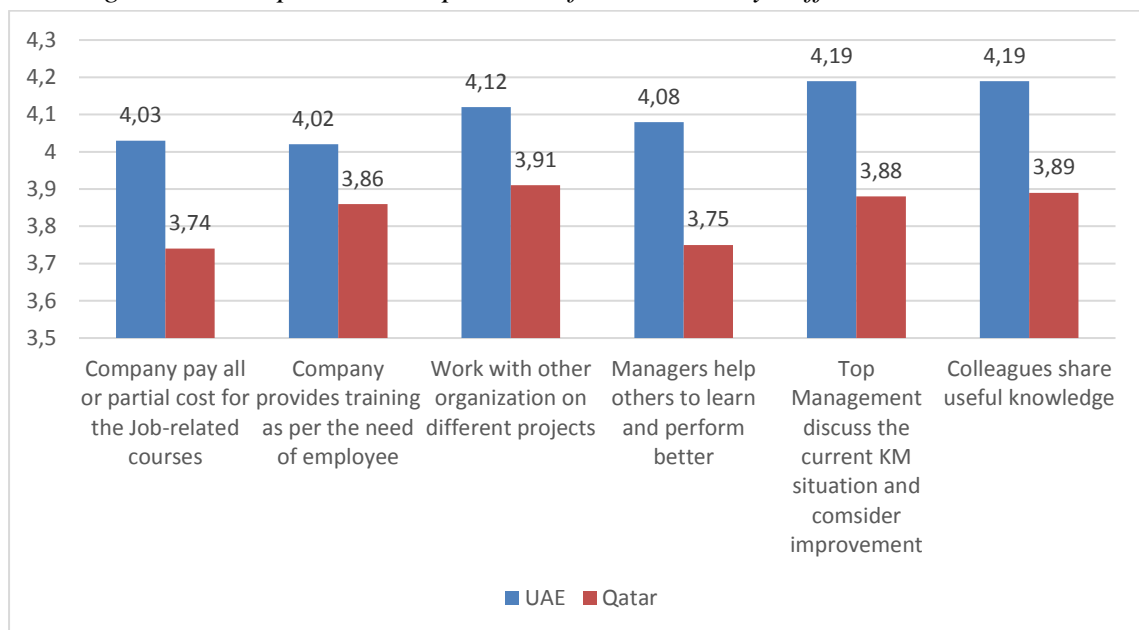
Table 12: Normality Test for Statistically Difference in Variables

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Company pay all or partial cost for Job-related courses.	.154	56	.002	.910	56	
Company provides financial support for formal education.	.145	56	.005	.897	56	.000
My company works with the other organizations on different big projects.	.169	56	.000	.900	56	.000
UAE Managers help others to learn and perform better.	.162	56	.001	.916	56	.001
Top management discuss the current KM situation and consider improvements.	.179	56	.000	.878	56	.000
My colleagues shared useful and knowledge and tips in the group projects.	.159	56	.001	.882	56	.000
Company pay all or partial cost for Job-related courses	.153	65	.001	.934	65	.002

Qatar	Statistic	df	Sig.	Statistic	df	Sig.
Company pay all or partial cost for Job-related courses.	.159	65	.000	.884	65	.000
Company provides financial support for formal education.	.161	65	.000	.893	65	.000
My company works with the other organizations on different big projects.	.142	65	.002	.933	65	.002
Managers help others to learn and perform better.	.164	65	.000	.901	65	.000
Top management discuss the current KM situation and consider improvements.	.155	65	.000	.897	65	.000

Source: Own work

Figure 10: Independent Sample T-test for Statistically Difference in Variables



Source: Own work

The independent sample T-test results (Appendix 10) shows the statistically significant difference between UAE and Qatar in covering the cost of organizational learning and work-related courses (table 13). This shows the mean value comparison which represents the organizations in UAE covers the job-related costs as compared to the Qatari organizations. The next difference between UAE and Qatari SMEs in that organization in UAE provides better training facilities as per the need of their employees as compared to SMEs in Qatar. SMEs in UAE are more active with work with other organizations on

different projects as Qatari SMEs. Managers in UAE help other employees in the company to learn and perform better to achieve organizational goals and objects as compared to SMEs in Qatar. It shows reflects from the response that the top management takes things more serious as Qatari, they discuss the current KM situation in ask for advice to improve the KM system, also a colleague in UAE are more helpful than in Qatar.

Table 13: Independent Sample T-test for Statistically Difference in Variables in UAE and Qatar

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Company pay all or part of the costs for Job-related courses.	Equal variances assumed	.023	.879	1.218	132	.225	.29164	.23942	-.18195	.76523
	Equal variances not assumed			1.218	131.369	.225	.29164	.23948	-.18210	.76538
The company provides training as per the need of the employee.	Equal variances assumed	.058	.810	.669	130	.505	.16080	.24046	-.31492	.63652
	Equal variances not assumed			.669	129.110	.505	.16080	.24036	-.31476	.63636
My company works with the other organizations on different or big projects.	Equal variances assumed	.026	.871	.859	128	.392	.20238	.23566	-.26392	.66868
	Equal variances not assumed			.861	126.086	.391	.20238	.23507	-.26282	.66758
	Equal variances not assumed			.148	125.763	.883	.03515	.23743	-.43473	.50502
	Equal variances not assumed			.417	126.900	.677	.09896	.23721	-.37044	.56836
	Equal variances not assumed			.359	127.334	.720	.07761	.21619	-.35018	.50539
Manager helps others to learn and perform better responsibility.	Equal variances assumed	.071	.790	1.329	132	.186	.32330	.24325	-.15788	.80448
	Equal variances not assumed			1.329	131.540	.186	.32330	.24325	-.15788	.80448
	Equal variances not assumed			.375	129.370	.708	.08492	.22653	-.36327	.53310

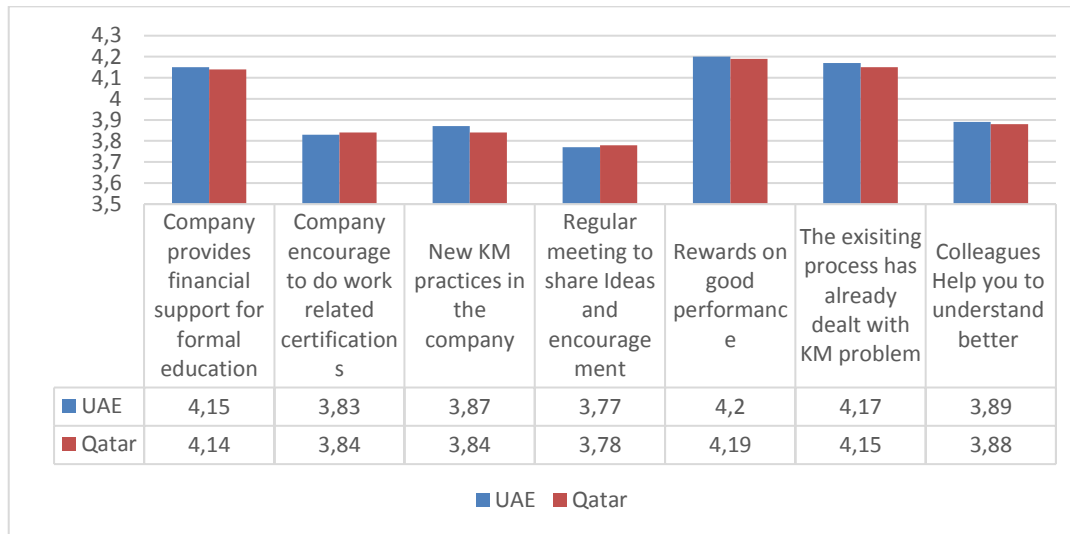
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Top management discusses the current KM situation and considers improving advice.	Equal variances assumed	.680	.411	1.287	130	.200	.30642	.23814	-.16471	.77755
	Equal variances not assumed			1.282	126.225	.202	.30642	.23903	-.16661	.77945
	Equal variances not assumed			.545	131.756	.587	.13222	.24257	-.34762	.61205
	Equal variances not assumed			.604	127.069	.547	.15622	.25862	-.35555	.66799
My colleagues shared useful knowledge and tips in the group projects.	Equal variances assumed	.292	.590	1.221	131	.224	.30344	.24860	-.18836	.79524
	Equal variances not assumed			1.219	129.462	.225	.30344	.24892	-.18903	.79591
	Equal variances not assumed			.129	130.826	.898	.02967	.23088	-.42706	.48640
	Equal variances not assumed			1.093	132.158	.276	.25385	.23218	-.20543	.71312

Source: Own work

The following statistical similarities between SMEs in UAE and Qatar are related to the introduction of a KM system and training as per the need for employees to achieve organizational objectives (figure 11). In term of similarities in SMEs in UAE and Qatar, companies in both of the countries provide financial support for their employees to fo have formal education and training as per the need of the employees also they encourage their employees to do job-related certification and to have more and more knowledge and skills.

Companies in UAE and Qatar conduct training on KM system and practices for their employees and they conduct regular meetings to share and encourage the employee's ideas and opinions. SMEs give rewards for the best employees, who perform their task in a better way. Also when new people join the company, the colleagues help the new employee to understand the work follow.

Figure 11: Similarities in SMEs in UAE and Qatar



Source: Own work.

5.2.3 Statistical comparison of KM and OL in Qatar and Pakistan

The statistical comparison of the quantitative analysis performed through SPSS comparison of mean T-test, to get the significant similarities and difference in Qatar and Pakistan (table 14 and 14A).

Table 14: Normality Test of Mean for Organizational Policy in SMEs in Qatar and Pakistan

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Qatar	Company pay all or partial cost for Job-related courses	.147	68	.001	.933	68	.001
	Company provides financial support for formal education	.160	68	.000	.912	68	.000
	Company provide training as per the need of the employee	.149	68	.001	.886	68	.000
Pakistan	Company pay all or partial cost for Job-related courses	.158	69	.000	.919	69	.000
	Company provides financial support for formal education	.160	69	.000	.905	69	.000
	Company provide training as per the need of the employee	.173	69	.000	.885	69	.000

a. Lilliefors Significance Correction

Source: own work.

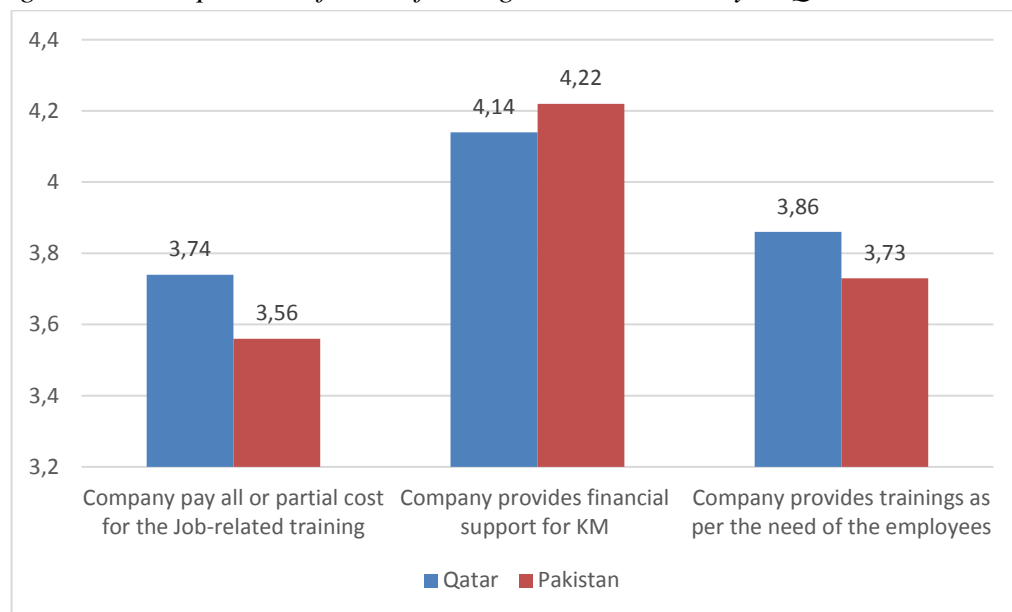
Table 14A: Mean Values (from Normality Test) for Organizational Policy in SMEs in Qatar and Pakistan

		N	Mean	Std. Deviation	Std. Error Mean
Qatar	Company pay all or partial cost for Job-related course	68	3.72	1.38	0.17
	Company provides financial support for formal education	68	4.13	1.39	0.17
	The company provide training as per the need of the employee	68	3.85	1.40	0.17
Pakistan	Company pay all or partial cost for the Job-related course	68	3.72	1.38	0.17
	Company provides financial support for formal education	68	4.13	1.39	0.17
	The company provide training as per the need of the employee	68	3.85	1.40	0.17

Source: own work.

At first, the main difference in result to be singled out in organizational policies for three variables regarding the cost and financial support to attend job-related courses and KM formal education (figure 12). The employees in Qatar answered largely synchronized in all the three questions while Pakistani did not, i.e. the respondents from Pakistan generally gave the different answers to the similar questions.

Figure 12: Comparison of Mean for Organizational Policy in Qatar and Pakistan



Source: Own work.

The following figure represents the statistical difference variable in Qatar and Pakistan. The independent sample T-test results (Appendix 11) shows the statistically significant difference between Qatar and Pakistan in covering the cost of organizational learning and work-related courses and encouragement to do work related certifications. This shows the

mean value comparison which represents the organizations in Qatar covers the job-related costs as compared to the organizations in Pakistan. The next difference between Qatar and Pakistani SMEs in that organization in Qatar provides better KM practices and provides training to their employees as compared to SMEs in Pakistan (table 15).

SMEs in Pakistan are more active in conducting meetings to share and encourage the employees to have a new and innovative idea to share as compare to SMEs in Qatar. Managers in Pakistan also helps other employees in the company to learn and perform better to achieve organizational goals and objects as compared to SMEs in Qatar. SMEs in Qatar have already dealt more with existing KM problem as to SMEs in Pakistan. It shows, from the response that the top management takes things more serious in Qatar as Pakistan, they discuss the current KM situation in ask for advice to improve the KM system (figure 13).

Table 15: Independent Samples Test Difference in Variables in SMEs in Qatar and Pakistan

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Company encourage to do work related certifications.	Equal variances assumed	.000	.986	.621	134	.535	.14017	.22559	-.30600	.58634
	Equal variances not assumed			.621	133.586	.536	.14017	.22567	-.30619	.58653
After introducing new KM practices does the company provides training and practices.	Equal variances assumed	.011	.915	.490	134	.625	.11118	.22712	-.33802	.56039
	Equal variances not assumed			.489	133.763	.625	.11118	.22716	-.33811	.56048
We do regular meetings to share and encourage our ideas and opinions.	Equal variances assumed	.044	.835	-.685	138	.494	-.15023	.21916	-.58359	.28312
	Equal variances not assumed			-.686	137.942	.494	-.15023	.21914	-.58354	.28307
	Equal variances not assumed			-.543	136.693	.588	-.10941	.20139	-.50765	.28883

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Manager helps others to learn and perform better responsibility.	Equal variances assumed	1.258	.264	-.696	136	.488	-.15942	.22911	-.61250	.29366
	Equal variances not assumed			-.696	134.790	.488	-.15942	.22911	-.61254	.29370
The existing process has already dealt with KM problems.	Equal variances assumed	.227	.635	1.089	137	.278	.22981	.21105	-.18753	.64716
	Equal variances not assumed			1.088	136.270	.278	.22981	.21114	-.18773	.64735
Top management discusses the current KM situation and considers improving advice.	Equal variances assumed	.377	.540	.879	136	.381	.18841	.21440	-.23559	.61240
	Equal variances not assumed			.879	135.011	.381	.18841	.21440	-.23561	.61242
	Equal variances not assumed			1.225	136.894	.223	.26338	.21502	-.16181	.68857

Source: Own work.

Figure 13: Independent Sample T-test for Statistically Difference in Variables



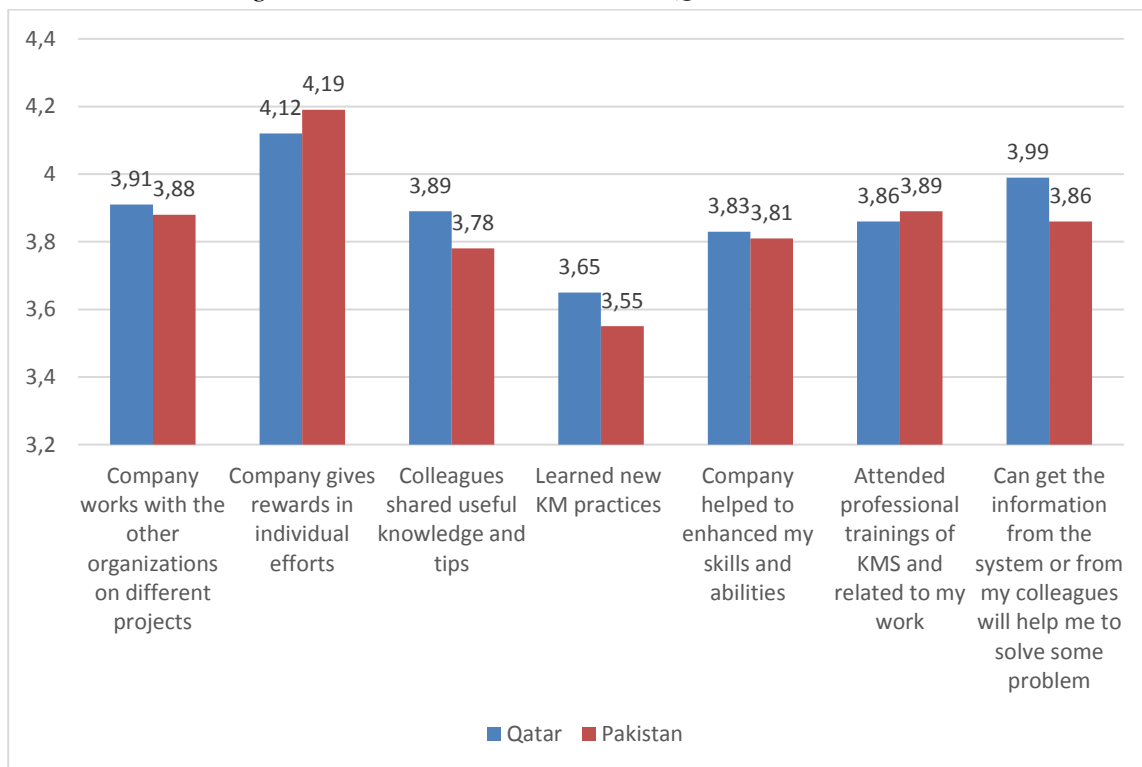
Source: Own work.

The following statistical similarities between SMEs in Qatar and Pakistan that are related to the introduction of a KM system and training as per the need for employees to achieve

organizational objectives (figure 14). In term of similarities in SMEs in Qatar and Pakistan, companies in both of the countries provide financial support for their employees to fo have formal education and training as per the need of the employees also they encourage their employees to do job-related certification and to have more and more knowledge and skills.

Companies in Pakistan gives rewards to their employees who perform well. Organizations in Qatar provides better OL environment for their employees to practice KM process and colleagues help each other more than in SMEs in Pakistan. While employees in Pakistan attend more training than employees in Qatar. Employees in Qatar can get more information from the KM system and practices for their group member or other colleagues to perform better.

Figure 14: Similarities in SMEs in Qatar and Pakistan



Source: Own work.

5.2.4 Statistical comparison of KM and OL in Pakistan and UAE

The statistical comparison of the quantitative analysis performed through SPSS comparison of mean T-test, to get the significant similarities and difference in Pakistan and UAE. The following figure represents the comparison of organizational policies in Pakistan and UAE. At first, the main difference in result to be analysed in organizational policies for two variables regarding the cost and KM training as per the need of the

employee (figure 15). The employees in Qatar answered largely synchronized in all the three questions while Pakistani did not, i.e. the respondents from Pakistan generally gave the different answers to the similar questions (table 16 & 16A).

Table 16: Normality Test of Mean for Organizational Policy in SMEs in Pakistan and UAE

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pakis tan	Company pay all or partial cost for Job-related courses	.158	69	.000	.919	69	.000
	Company provides financial support for formal education	.173	69	.000	.885	69	.000
UAE	Company pay all or partial cost for Job-related courses	.157	65	.000	.917	65	.000
	Company provides financial support for formal education	.177	65	.000	.914	65	.000

a. Lilliefors Significance Correction

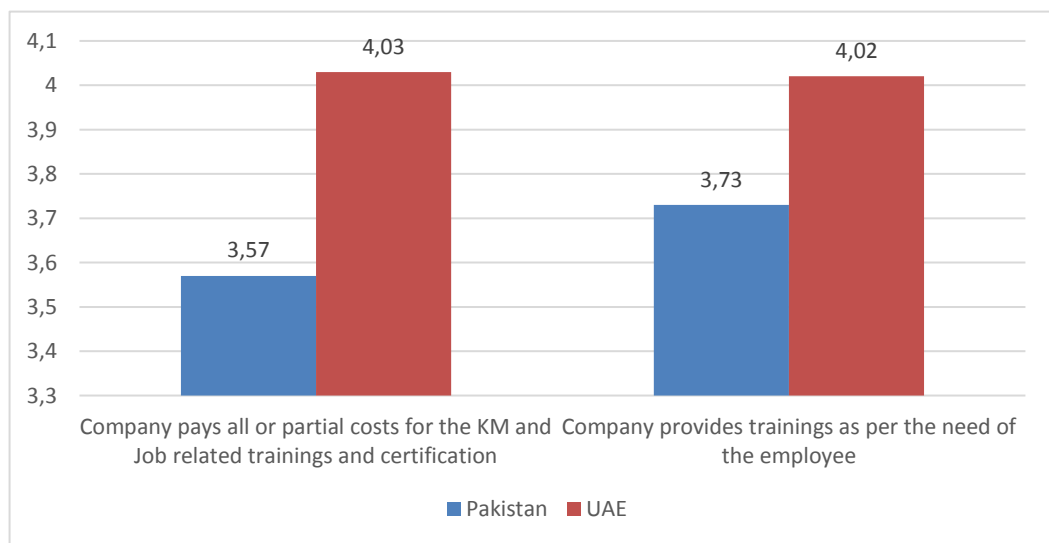
Source: Own work.

Table 16A: Mean Values (from Normality Test) for Organizational Policy in SMEs in Pakistan and UAE

		N	Mean	Std.	Std. Error
				Deviation	Mean
Pakistan	Company pay all or partial cost for Job-related courses	69	3.54	1.39	0.17
	Company provides financial support for formal education	69	3.73	1.36	0.16
UAE	Company pay all or partial cost for Job-related courses	65	4.03	1.39	0.17
	Company provides financial support for formal education	65	4.16	1.37	0.17

Source: Own work

Figure 15: Comparison of Mean for Organizational Policy in Pakistan and UAE

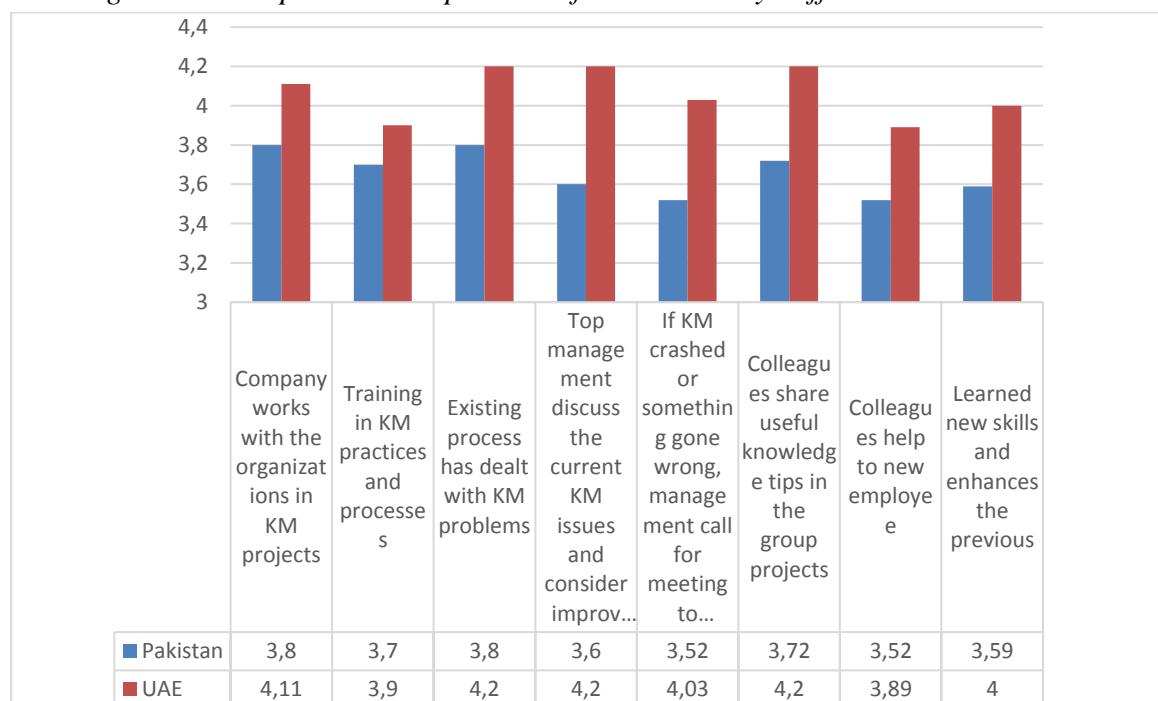


Source: Own work.

The following figure represents the statistical difference variable in Pakistan and UAE. The independent sample T-test results (Appendix 12) shows the statistically significant difference between Pakistan and UAE in paying the cost of organizational learning and work-related courses and provide training as per the need of the employee. This shows the mean value comparison more than the SMEs in UAE (table 17).

Organizations in UAE conduct more training sessions for their employees, top management discuss current KM situation and considers improving advice, colleagues create and share more knowledge within the organization, colleagues helps newly joined employee to better understand the work follow, and employees in SMEs in UAE learn new skills, work on new tool and enhance their skills and abilities as compared to employees in SMEs in Pakistan (figure 16).

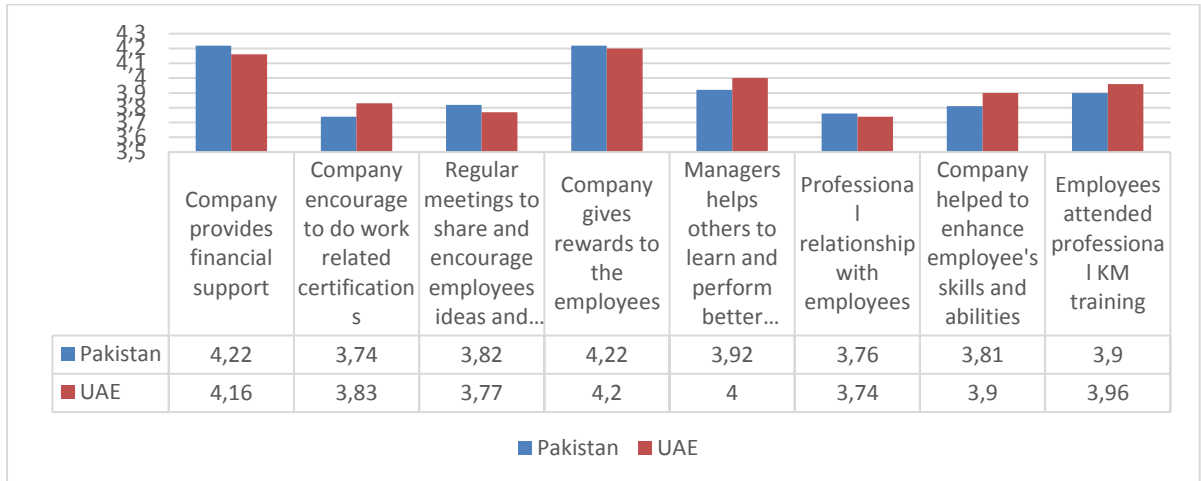
Figure 16: Independent Sample T-test for Statistically Difference in Variables



Source: Own work.

The following statistical similarities between SMEs in Pakistan and UAE that are related to the introduction of a KM system and training as per the need for employees to achieve organizational objectives (figure 17). In term of similarities in SMEs in Pakistan and UAE, companies Pakistan provide little bit more financial support for their employees to their employees to have formal education and training as per the need of the employees than in UAE. But SEMs in UAE encourage more to their employees to perform better, managers help other to understand better, organizations help employees to enhance their skills and abilities by attending different professional and KM training as compared to employees in SMEs in Pakistan.

Figure 17: Similarities in SMEs in Pakistan and UAE



Source: Own work.

Table 17: Independent Samples Test Difference in Variables in SMEs in Pakistan and UAE

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
The Company provides financial support for formal education	Equal variances assumed	.483	.488	.315	134	.754	.07151	.22726	-.37798	.52100
	Equal variances not assumed			.314	130.687	.754	.07151	.22798	-.37950	.52251
Company encourage to do work related certifications.	Equal variances assumed	.000	.991	-.598	132	.551	-.13512	.22605	-.58226	.31202
	Not Equal variances assumed			-.597	131.260	.551	-.13512	.22615	-.58248	.31225
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper

Manager helps others to learn and perform better responsibility.	Equal variances assumed	.639	.426	-.706	132	.481	-.16388	.23214	-.62308	.29532
	Not Equal variances assumed			-.704	128.958	.483	-.16388	.23280	-.62448	.29672
The existing process has already dealt with KM problems.	Equal variances assumed	1.075	.302	-1.437	132	.153	-.31473	.21901	-.74796	.11849
	Not Equal variances assumed			-1.431	127.639	.155	-.31473	.21995	-.74996	.12049
Top management discusses the current KM situation and considers improving advice.	Equal variances assumed	2.122	.148	-2.162	130	.032	-.49482	.22891	-.94769	-.04196
	Not Equal variances assumed			-2.145	121.983	.034	-.49482	.23065	-.95143	-.03822
Relationships with employees are professional.	Equal variances assumed	3.371	.069	.048	129	.962	.01169	.24199	-.46709	.49046
	Not Equal variances assumed			.048	119.804	.962	.01169	.24422	-.47187	.49524
My colleagues shared useful knowledge and tips in the group projects.	Equal variances assumed	1.875	.173	-1.951	130	.053	-.46691	.23930	-.94034	.00652
	Not Equal variances assumed			-1.944	125.880	.054	-.46691	.24018	-.94223	.00841
I attended professional training of KMS and related to my job.	Equal variances assumed	1.490	.224	-.325	134	.746	-.06782	.20880	-.48080	.34515
	Not Equal variances assumed			-.323	127.747	.747	-.06782	.21004	-.48343	.34779

Source: Own work.

6 Discussion

This section covers the discussion on the success factors in SMEs in UAE, Qatar and Pakistan, based on the research results. It contains the findings and contributions to the

research of current situation of the SMEs in UAE, Qatar and Pakistan also the limitations of the research into the consideration.

6.1 Findings and Contributions

This research study suggests that SMEs can get benefits from implementing KM processes and activities. Also found in the research study that SMEs can get organizational success, as growth in sales with fewer losses, enhanced productivity and improvement in the business process as a consequence of the enterprises. KM activities help in skill development of employees e.g. skill enhancing, staff retention, learning etc. Improve customer satisfaction e.g. customer loyalty, reputation, etc. KM activities also help in enhancing creativity, innovation and knowledge creation and also to improve the external relationship with the other organizations. The role of business strategy fits in between KM practices and HRM policies as per organizational performance.

The national culture of UAE, Qatar and Pakistan has high impact in OL and improvements in learning. The culture of Pakistan has slightly more impact in OL as compared to UAE and Qatar due to the behaviour of the population and adopting changes in the SMEs. It also reflects on the behaviour of the managers in the organizations, that how they work with the employees to achieve the goals and advantages. Most managers are the responsible for promoting and learning system within the company.

Mostly team spirit created by informal networks within the organizations independent of the management and the best source of knowledge and informal learning. Learning in groups showed the high scores. Research confirmed that one of the best ways to learn is in groups. Usually, help from the colleagues is highly appreciated with high grades. Thus the recommendation for further actions for an increase in learning approach could be by enhancing the awareness in the managers in SMEs in UAE, Qatar and Pakistan.

The main difference which I found in this study is that SMEs in Pakistan are not following the latest IT tools, a lot of culture problem, problem of gender inequality, managers do not encourage the employee, work pressure, economic usability long working hours, no incentives for extra work, people are not ready to accept change management, referral employment system won't give many chances to the right person for right job, less education level. Skilled workers moved from Pakistan to other developed countries. While SMEs in the UAE and Qatar have a good organizational environment, employees are much more cooperative, helping, using latest IT tool to capture and store knowledge in the systems, salaries are competitive, good lifestyle.

The similarities between SMEs in UAE, Qatar and Pakistan is that employee in confident to achieve their tasks in the available time or even before the deadline. Some SMEs have

almost the same organizational learning and KMS. They share a lot of data of the other employee to get benefits from it.

6.2 Recommendations

Based on the quantitative survey (Appendix 5) and analysis there are some respondent recommendations to be taken into consideration that would probably help for boost KM implementation in SMEs in UAE, Qatar and Pakistan. The proposed recommendations of KM improvement and implementation in SMEs in UAE, Qatar and Pakistan is as follows with the proposed KM implementation model (figure 18), the proposed model clearly knows the knowledge creating, sharing, storing, and retrieving in the organization, this recommendation is for all KM practices SMEs and also for those SMEs who would like to have KMS in their organizations:

Effective Leadership and Management: Leadership can play a very important role in the effective management and leadership within the organization to achieving competitive advantages and organizational goals. To modelled the KM practising values and behaviour by the workers (especially in understudy companies), I found that the current practices towards leadership and management are not compelling as it should be, provide adequate guidance to model to behave properly and make the organization familiar and aware of KM benefits. Mostly the problem in the organization concerned with management does not support the employees. Therefore good leadership is very crucial and organizations need to provide it in order to meet the organizational goals to achieve organizational competitive advantages in short and long-term as well.

Good Organizational Culture Required: Good and positive culture plays very important role in any organization and an important factor for KM as I found in the current practice of organization was good but not enough for growth and to achieve competitive advantage but they need to be focused to maintain this by creating new ideas, it's sharing with others and practice.

Knowledge Enhancement Tasks Required: The establishment of roles and teams to improve their knowledge is essential to set KM related task. As I found in a survey the current practice is low, groups and teams are not performing their tasks such as strategy and policies directions are not delivering well, ongoing management of groups and teams efforts are deficient, the involvement of managers were not supportive to encourage the teams and groups to manage individuals performance throughout the work to ensure that the approaches are sound and workable.

Establishing Activities and Processes: Process and activities should be settled systematically and combined with KM, as I found the KM processes and activities in

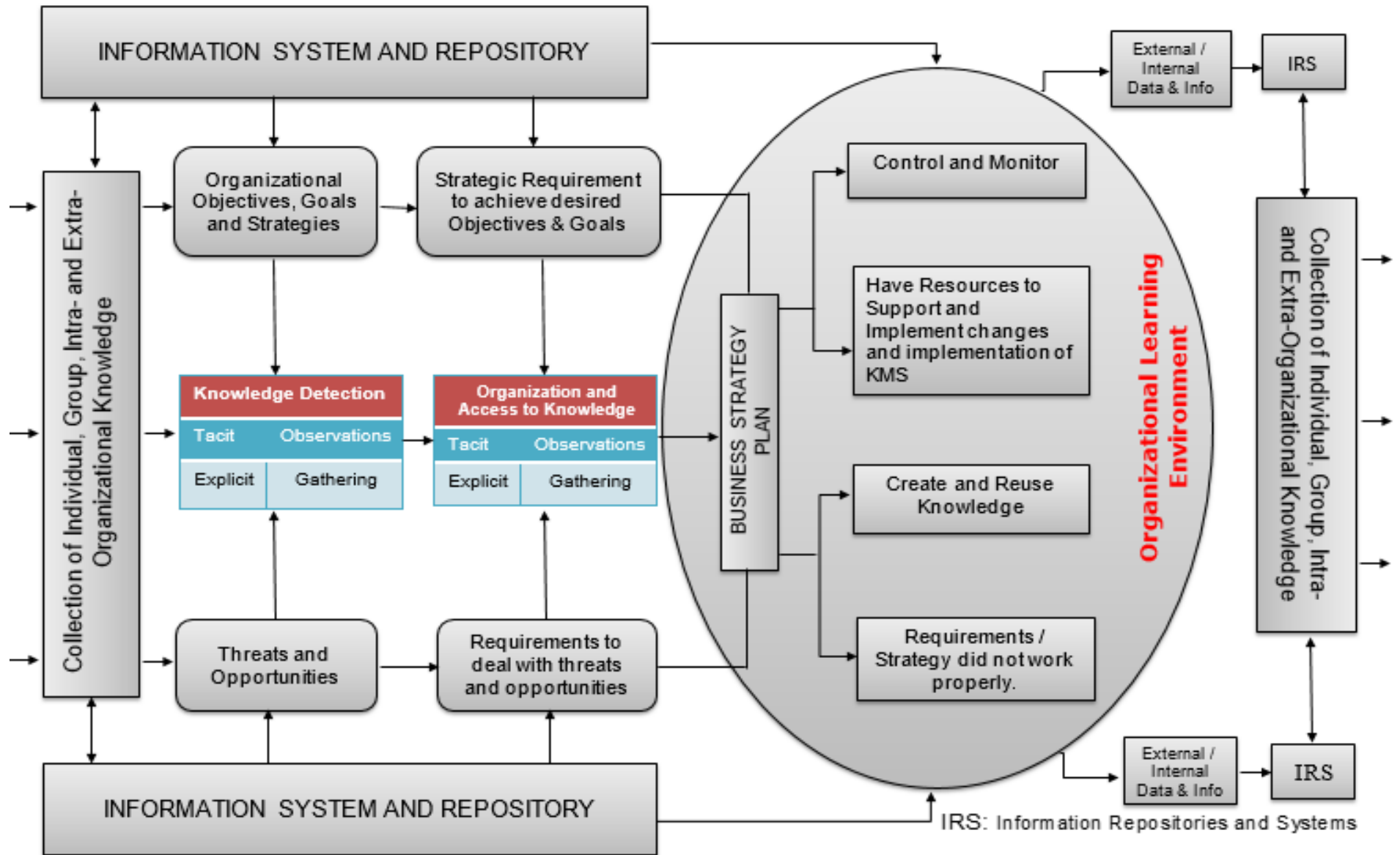
SMEs was practised at a low level. Therefore it will be hard for SMEs to adopt and implement KM.

Right Person for the Right Job: The hiring of talented individuals is critical because of the importance of knowledge sharing. SMEs must hire the right person for the right job to get the benefits to form the implementation of KM.

Motivation: As I found that the reward and motivational activities are not very common in SMEs in UAE, Qatar and Pakistan. It will be very difficult for the organizations to implement KM without any motivational activities. It will encourage the employees to perform better in their roles and responsibilities.

Training and Certifications: HR development is an important element for promoting KM adoption in organizations. In SMEs it was not developed very well as result the employees were not able to meet the organizational goals. Therefore, training and education are required to be provided for both, employees and management.

Figure 18: Proposed Hybrid Knowledge Management Model



Source: Own work.

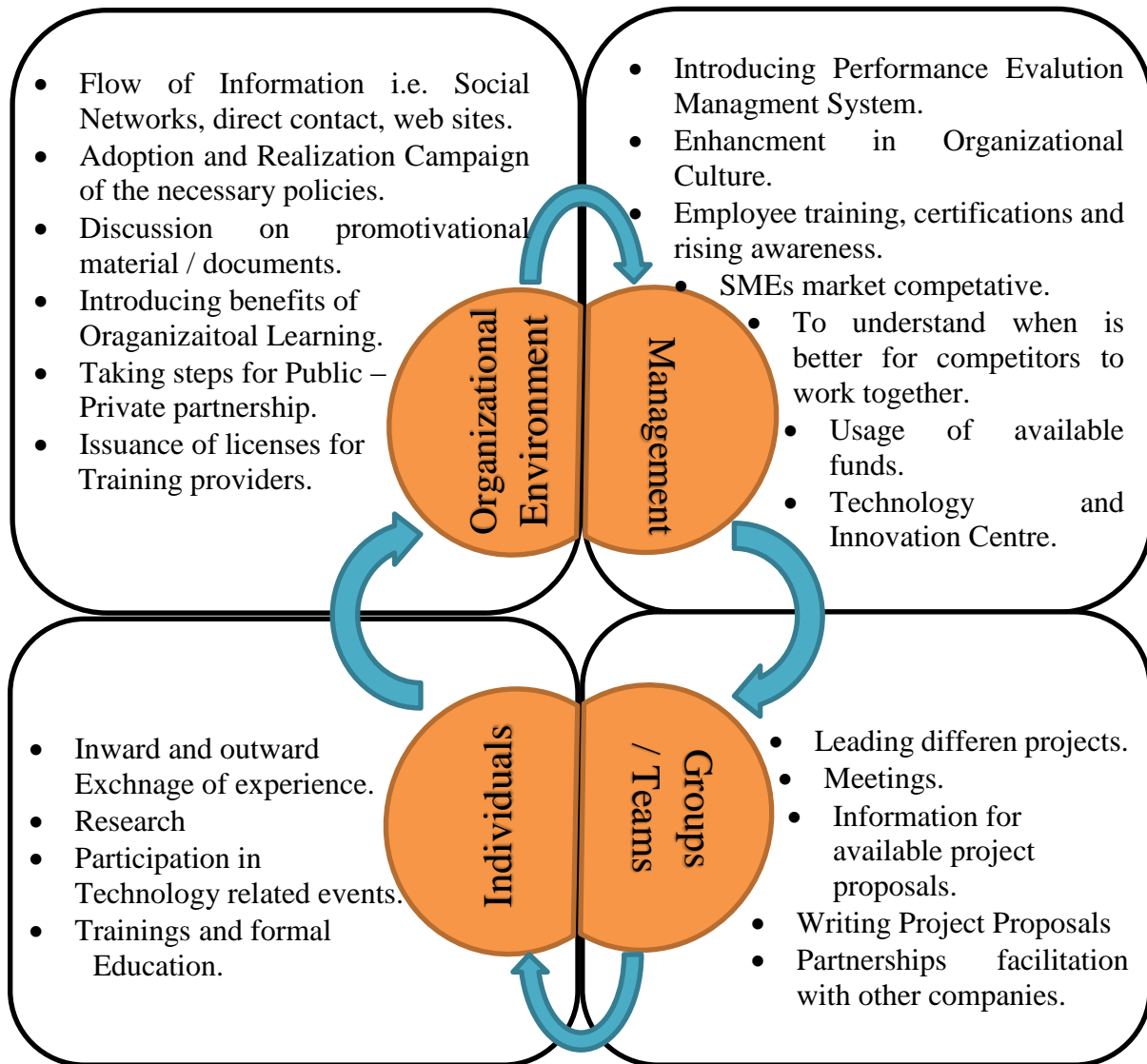
Based on the results of the survey and analysis of (Appendix 6 & 7), I proposed some measures for manufacturing and services SMEs in UAE, Qatar and Pakistan that would enhance the current situation. The formulation of positive OL among the SMEs in UAE, Qatar and Pakistan contains the following recommendations:

- To estimate the requirements and needs of employees and managers in the SMEs.
- Awareness campaign among public, private and other stakeholders.
- Introducing SMEs supporting laws.
- Direct access for SMEs to use available funds both national and regionals.
- Enhanced SMEs performance management system.

The SMEs in UAE, Qatar and Pakistan should introduce HR as a strategic department rather than just only human resources. Based on the shared recommendation of respondents, the management department has the power to enhance and improve the current situation in the company through the establishment of an association. The following OL model (figure 19) has the managers in the core as the change influencer's on the fours identified aspects of OL in SMEs.

The proposed OL model shows the importance of managers in the different process to enable a learning organization because when the lower level employees follow the good and positive practices from managers they will automatically develop both professional and personal enhancements, that will be very helpful to achieve the organizational competitive advantages. This approach will also indicate the required actions that would be expected from all the stakeholders in the particular process, as each group fulfils its responsibilities within own learning context, the overall learning process will be enhanced and efficient.

Figure 19: Proposed Organizational Learning (OL) Model



Source: Own work.

6.3 Limitations

The respondents in the qualitative research have made suggestions to understand the top-down approach to the situation in the SMEs and to improve in UAE, Qatar and Pakistan. Their personal opinion has influenced the formulation of the questions in the questionnaire and of the results.

Few things appeared as a challenge in the quantitative study:

- Timing might be not ideal due to the spring season since a lot of new items were in the product line for manufacturing SMEs.
- Respondents may not share their demographic data, because of a loss of anonymity and

in this way lack of valuable data for the planned research results.

- Respondents in especially in Qatar and UAE may not fully honest when answering due to several reasons. Because the owners were standing near or next to the respondent while answering and danger of consequences if they see the answers. The actual reason is, they would like to show their organization as better than it is.
- The attitude towards the researchers in Pakistan was the most friendlier than UAE and Qatar.

These factors have been taking into consideration while performing through analysis to avoid any unrealistic conclusions.

Future Research

The future study refers to more focus and specific organizations in order to achieve a better impact in the adoption of KM in SMEs and to check the success factors of KM in SMEs and to achieve the impact in OL environment in SMEs. One direction for future research is in the other industries, keeping in mind the preconditions for adoption and development of OL environment in different industries, for which new models could be proposed.

Conclusion

This research study concludes the empirical findings from a qualitative and quantitative research to explore the find the critical factors that are fundamental to adopt and implement KM practices in SMEs in UAE, Qatar and Pakistan also it covers the challenges to adopt and implement KM in SMEs that can cause the survival and growth of an organization in the industry that impact the SME in future. SMEs have to give more focus to the implementation of KM practices because as compared to the large-scale organizations, SMEs have limited resources to achieve their business goals and competitive advantages. Also, the main purpose of the study was to better understand what the organizations know about the KM and how they can get benefits from it. This understanding of KM is critical and said relevance of KM activities on the organizational performance and competitiveness.

Based on the empirical studies I recommended seven critical success factor that plays an essential role in the implementation of KM in SMEs in UAE, Qatar and Pakistan. SMEs have to give more focus on KM and knowledge sharing. I investigated that SMEs are facing problems in knowledge loss due to unawareness of top and middle-level management and inexperienced employees. The respondents also realized that these factors are very important to be considered to empower the management team. It is not enough to know about the critical success factors but to implement and adapt. For improvement of knowledge and skills in SMEs management should play effective and leadership role, there should be an effective organizational infrastructure, employee and user training, motivation,

effective use of available resources and good IT team that could make sure the organizational growth and to achieve competitive advantages in SMEs in short and long-term respectively. Also, this study focused on the importance of OL in learning and supportive environment in SMEs in UAE, Qatar and Pakistan. KM and OL are considered as one of the main steps that can help organizations to achieve their goals. In this thesis, I tried to provide an overview of the current state of KM and OL in SMEs in UAE, Qatar and Pakistan. In this, I identified the current challenges and impacts of good KM systems OL practices that can be applied in SMEs. The abilities and weaknesses of an organization can be identified from their learning systems. By evaluating the UAE, Qatar and Pakistani SMEs in Manufacturing and Services sector, I conclude that awareness in the adoption of KM and OL is low regarding OL processes at management level, employees and stakeholders. The employees in Pakistan showed a slightly lower level of awareness as compared to UAE and Qatar. Through a statistical overview of the quantitative and qualitative study, it leads to the few recommendations presented through the comparative method of the three countries. The main recommendations follow in the form of the proposed hybrid KM model and proposed OL model, based on shared recommendations and proposals from the quantitative and qualitative research in UAE, Qatar and Pakistan.

The proposed hybrid KM model offers mixed features and unique opportunities to handle, create, capture, store and reuse the knowledge in the organization. At first, you collect the knowledge and data from the individual, groups, inter-department and external department and stores all the existing knowledge in the information repository system. At second step, you filter the organizational goals, objectives, strengths, business strategy, capture tacit knowledge and design how the organization will detect and organize the knowledge and how they will convert the tacit into explicit with the organizational threats and opportunities and what are the requirements to deal with the strength, weaknesses and opportunities.

At the third step, this is the main process in this proposed hybrid KM model where the organization can design their business strategy plan within the OL environment to support their tasks like controlling and monitoring different organizational processes. Can locate and use the available and required resources to implement changes in the organization, create and reuse the knowledge and also their redesign the business processes if some activities or practices do not work as planned. The fourth and last step of this proposed model, organisations can expect all the knowledge from the OL environment and save them as external and internal data and information extracted from tacit to explicit and save these data and information in information repositories and system for later and long-term use. This process works as a loop, an organization can get latest and cleaned knowledge at each cycle of processes.

The proposed OL model provides the unique opportunities to handle the challenges of SMEs in UAE, Qatar and Pakistan from an individual to the management level. The proposed

model is also designed on the recommendations and proposed solutions by respondents to achieve better results and competitive advantages in SMEs by introducing OL learning and supportive environment. The main focus was on the managers and how they manage all activities in the organization to enhance the employee skills and get the best output from them.

This proposed model will help to enhance the awareness of implementing OL practices in SMEs in UAE, Qatar and Pakistan. Since the main focus in OL was on managers, so this model sets the managers in centre of the processes in OL. This approach can check the current need to improvement in managers in SMEs in UAE, Qatar and Pakistan to be the leader for the organizations and to support all the proposed activities that are the modules of this proposed model. Other employees in the organization will also follow their managers to improve the enterprise and achieve the business objectives and goals. This approach also shows the performed actions and the expected output from the all the stakeholders in the process, based on each individual and group. This model forecast the intra and inter-organizational relation to enable the constant flow of know-how and it opens the market to different local, regional and international experts for the better implementation of learning.

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APPENDIXES

Appendix 1: Summary of the thesis in Slovenian Language

Raziskovalno področje magistrskega dela se nanaša na Knowledge Management (KM) oziroma upravljanje z znanjem. V zadnjih nekaj letih je KM postal eden bistvenih dejavnikov uspešnega poslovanja, podjetja pa vedno bolj temeljijo na znanju in se osredotočajo bolj na ljudske "umove" kot pa na njihove "roke", da bi izpolnili potrebo po znanju. Glavni poudarek te študije je v dejavnikih uspešnosti KM, saj imajo mala in srednja podjetja (MSP) manj virov in priložnosti, tako človeške kot finančne. Ta raziskava govori o glavnih dejavnikih KM, ki igrajo uspešno poslovanje v MSP v ZAE, Katarju in Pakistanu. MSP v proizvodnem in storitvenem sektorju so se ukvarjala s preučevanjem dejavnikov uspeha pri izvajanju KM. Izvajanje KM v organizaciji je težko za tiste, ki niso pripravljeni sprejeti spremembe v organizacijski strukturi, vendar z izvajanjem KM lahko preživijo, rastejo in ohranijo trajnostno konkurenčno prednost. Sama raziskava je osredotočena na informacijsko in proizvodni sektor MSP, pri čemer je treba upoštevati, da gre za storitveno industrijo, na primer, kjer je vidna interakcija med računalništvom in človeškimi viri, industrija pa je sodelovala z mnogimi zainteresiranimi stranmi.

Namen te raziskave je raziskati elemente uspeha, pomen, izvajanje, prednosti, procese, strategije in izzive KM, s katerimi se soočajo MSP v Pakistanu, ZAE in Katarju. Poleg tega se bodo analizirale koristi, ki vplivajo in spodbujajo izvajanje upravljanja znanja v MSP. Primerjava malih in srednjih podjetij, ki temelji na trgih ZAE, Katar in Pakistana, bodo prav tako izvedena, da bi se seznanili s podobnostmi in razlikami. Ta študija bo pomagala MSP, da rastejo na svojem področju poslovanja, da bi raziskali trenutno stanje ravni ozaveščenosti in pridobili prednosti neprekinjenega učenja v MSP v ZAE, Katarju in Pakistanu. Pomembno je raziskati razlog za neuspeh MSP, ki predstavljajo osnovo za priporočanje in predlaganje, kako lahko izboljšamo MSP z uvedbo sistema Know Management Management (KMS). Zaradi pomanjkanja informacij in znanja o konceptu KM kot dejavnosti podjetja in dejavnosti, ki povečujejo in povečujejo veščine poslovnih strategij za procesiranje v podjetjih.

Izbral sem posebne organizacije, kot so Tagit RFID Solutions JLT, Fortes Holding, Al Faisal Holding in End to End Solutions Provider, ker so bili zainteresirani za to raziskavo in želeli so preveriti trenutni status KM in zahtevano raven KM v svojih organizacijah. Te družbe se ukvarjajo z RFID, zbiranjem informacij, programskim programiranjem, digitalnim

trženjem, storitvami za stranke, z naročanjem tretjih strank, optimizacijo iskalnikov, zbiranjem in analizo podatkov uporabnikov, da preverijo svoj sistem izmenjave znanja in kako se lahko izboljšajo tudi za MSP drugih storitvenega sektorja v ZAE, Katarju in Pakistanu. Opredelitev zapletov na širšem in abstraktnem, bolj kritičnem vprašanju je mogoče postaviti, kako lahko predstavimo izide koristnega in produktivnega sistema, ki temelji na znanju, vsem zainteresiranim stranem v malih in srednje velikih podjetjih v ZAE, Katarju in Pakistanu, da bi dosegli poslovni cilji MSP, ki jim prinaša koristi. Faktor uspešnosti KM je bil raziskan z različnimi perspektivami. Organizacijska kultura je ključna za razvoj KM, saj pomaga ljudem, da delijo svojo idejo, informacije in znanje. Strategije KM, infrastruktura, antologije, skladišča, orodja in spodbude se uporabljajo za povečanje izmenjave znanja in podporne kulture. Razvoj kompetenc in vodenja KM je tudi izziv. Zato lahko pravilno izvajanje KM v organizacijah postane vidno mesto v njihovem okolju in lahko organizacijam pomaga pri boljšem delovanju v zapletenem položaju. Izvajanje KM v podjetju ni enostavno, vendar je njegov uspeh merilo za podjetje. KM ni pomemben le za velika podjetja, temveč tudi enako pomembno za MSP. Eden od razlogov za uspeh KM je upravljanje znanja organizacije. Za izvedbo KM v MSP obstajajo specifični dejavniki, ki so znani kot ključni dejavniki uspeha. KM pomaga pri povečevanju produktivnosti, učinkovitosti in zadostnosti organizacijskih operacij.

Rezultati te raziskave bodo spodbujali potrebo po izvajanju KM v MSP med zainteresiranimi stranmi v storitvenih dejavnostih v ZAE, Katarju in Pakistanu, ki temeljijo na dejavniki uspešnosti KM. Mala in srednja podjetja igrajo ključno vlogo pri gospodarskem razvoju v kateri koli državi. Za izboljšanje organizacijskih operacij in finančnih rezultatov v MSP bi bilo treba razmisliti o izvajanju KM (Wong, Aspinwall, 2005). Raziskovalna zasnova je znanstvenih kvantitativnih in kvalitativnih metod; prva faza se osredotoča na kvalitativne raziskave, ki bodo temeljile na pogovorih z ustreznimi zainteresiranimi stranmi. Vprašanja za intervjuje bodo zaprtega in odprtega tipa. Intervjuje se na spletu prek video in avdio konference, e-pošte in snemanja. Intervjuji z menedžerji in zaposlenimi pri upravljanju znanja bodo bolje razložili faktorje uspešnosti KM, ki lahko spodbujajo izvajanje KM v MSP ter tekoče in na novo predlagane elemente v organizaciji, ki temeljijo na znanju. Raziskave bodo na individualni ravni. Po opravljenih razgovorih se bo pri izvajanju KM v MSP uporabila ena študija primera za izvajanje SWOT analize.

Druga faza se osredotoča na kvantitativne raziskave med MSP iz proizvodnega in storitvenega sektorja. V tej fazi bo za statistično analizo uporabljeno kvantitativno raziskovanje vzorčnih območij ZAE, Katar in Pakistan. Pri načrtovanih območja Dubaja, Dohe in Lahorja se bo upoštevalo, da se izvaja in primerja isto statistično enoto v predelovalnih in storitvenih dejavnostih. Najpomembnejša raziskovalna vprašanja so odgovorjena po kvantitativni in kvalitativni analizi te raziskave v izbranih sektorjih ZAE, Katarja in Pakistana. Strukturna opredelitev te magistrske naloge je razdeljena na pet različnih delov. V oddelku I opisujem značilnosti, definicije in vrste KM. Nato podajam kratek pregled KM modelov, procesov in strategije. V drugem poglavju pojasnujem MSP in KM. Tretji oddelek je glavni del teze, kjer kratko pojasnim KM v MSP, izvedbo in SWOT analizo, da bi dobili podobnosti in razlike med temi državami. Četrty razdelek je metodologija raziskovanja, ki omogoča iskanje odgovorov na raziskovalna vprašanja s kvantitativno, kvalitativno raziskavo in analizo študije primera, na koncu pa opisujem pridobljene rezultate. Zadnji del pa je sklepanje in priporočilo dejavnikov uspeha, ki so pomembni za organizacijo za izvajanje upravljanja znanja.

Appendix 2: Definitions of SMEs in UAE, Qatar, and Pakistan

Definition of SMEs in Pakistan

Institutions in Pakistan	Criterion Number of Employees	Medium Scale	Small Scale
Small and Medium Enterprise Development authority (SMEDA)	< 250	Between 36-99	Between 10-35
	Productive Assets	20-40 million PKR	2-20 million PKR
SME Bank Federal Bureau of Statistics	Total Assets	Over 100 million PKR.	Less than 100 million.
	No. of Employees	N/A	Less than 10 employees
State Bank of Pakistan	Nature of Business (Manufacturing Trade/Services)	Less than 250 employees and less than 100 million PKR assets for manufacturing.	Less than 250 employees and less than 100 million PKR assets for manufacturing.
	No. of Employees	Less than 50 employees	Less than 50 employees
	Capital Trade	less than 50 million PKR for trade/services. Net sales less	less than 50 million PKR for trade/services. Net sales less
	Net sale value	Net sales less than 300 million PKR	Net sales less than 300 million PKR
Securities and Exchange Commission of Pakistan	The company which has annual gross revenue grant income. Subsidies, donations) Including Other income/revenue less than Rs.200 million.	A non-listed company which not: a) Public Interest Company; or b) Large sized Company c) Small Sized Company	Other than a non-listed public company: a) Paid up capital not exceeding PKR 25 million, and b) Turnover not exceeding PKR.100 million.

Source: Adapted from SMEDA,(2010); SME Definitions, (2010); SMEDA, (2011); SME Definitions, (2011); SBP, (2010); SBP,(2010)

Definition of SMEs for Dubai, UAE

	TRADING		MANUFACTURING		SERVICES	
	Employees	Turnover	Employees	Turnover	Employees	Turnover
Micro	<=9	& <=AED 9mn	<=20	& <=AED 10mn	<=20	& <=AED 10mn
Small	<=35	& <=AED 50mn	<=100	& <=AED 100mn	<=100	& <=AED 100mn
Medium	<=75	& <=AED 250mn	<=250	& <=AED 250mn	<=250	& <=AED 250mn

Source: Adapted from Dubai, (2009)

Definition of SMEs for Doha, Qatar (in million Qatari Riyals)

Sector	Criteria	Micro	Small	Medium
Agriculture	No. of Employees	1 - 5	6 - 30	31 - 250
	Annual Turnover	Less than 1	1 - Less than 20	20 - 100
Manufacturing	No. of Employees	1 - 5	6 - 50	51 - 250
	Annual Turnover	Less than 3	3 - Less than 20	20 - 100
Creative Industries	No. of Employees	1 - 5	6 - 30	31 - 100
	Annual Turnover	Less than 1	1 - Less than 20	20 - 100
Construction	No. of Employees	1 - 10	11 - 50	51 - 250
	Annual Turnover	Less than 3	3 - Less than 20	20 - 100
Trade	No. of Employees	1 - 5	6 - 50	51 - 250
	Annual Turnover	Less than 3	3 - Less than 20	20 - 100
Other Services	No. of Employees	1 - 5	6 - 50	51 - 250
	Annual Turnover	Less than 3	3 - Less than 20	20 - 100

Source: Adapted from Qatar, (2015)

Appendix 3: General Economic Data of UAE, Qatar, and Pakistan

	UAE	QATAR	PAKISTAN
Area (Sq. Kilometer)	83,600	11,571	796,096
GDP (USD billion)	348.7 (2016)	152.5 (2016)	283.7 (2016)
GDP - PPP (USD - 2016)	37,622.21	59,330.86	1468.19
Annual GDP Growth	3.0% (2016)	3.5% (2016)	5.5.% (2016)
Total Population (in millions)	9.27	2.57	193.20
Literacy Rate	95%	94.72%	58%
Government Syetm	Presidential, Federal and Despotic Monarchy	Constitutional Monarchy	Federal Parliamentary Republic
GCC	Member	Member	No

Source: Adapted from Economic Survey of Pakistan, (2016-2017); UNESCO, (2018); Overall Report 2016 Pakistan Beuro of Statistics, Goverovernemnt of Pakistan, (2018); Unicef, (2018).

Appendix 4: Interview Questions

The study based on the following main questions:

1. What do you think about the basic characteristics of the KM environment in SMEs of UAE, Qatar, and Pakistan?
2. What are the existing level and importance of knowledge sharing in the examined organizations?
3. What are the fundamental success factors of KM for an organization?

These questions are a collection of guiding areas for an open discussion with the interviewees: they will explain in details of the interview with the stakeholders and afterwards when the answers and suggestions are processed. The qualitative research will be conducted with semi-structured interviews. The qualitative data will be gathered through personal meetings, emails, audio recordings, notes, and e-mails. There will be one list of research questions for stakeholders in Services (manufacturing) and Telecom SMEs. The interviewees will be asked a range of open questions, through which their attitudes and views towards the research questions and topics will be explored, based on their skills and organizational experiences. Interviewees also are asked, to make suggestions for improvement or to make their judgment to increase performance. Their point of view will provide the overall objective top-down approach to the situation with KM implementation and OL processes in services SMEs in UAE, Qatar, and Pakistan. The expected number of interviewees is up to 3-4 per country; the interviewees will also deliver a short biography to prove their relevant experience regarding their topic. The interviews will be conducted in March 2018 at a previously agreed location and the average time is up to 30 minutes. The first 5 minutes will be for a general introduction.

The interviewees will be asked the following questions:

1. How often you communicate with other colleagues?
2. Are you using KMS? If Yes, Have you changed or improve your business process to improve existing implementation of KM?
3. How often the company arrange training for new or senior employees? And do the Employees have the permission to create their knowledge and experiences, to create more knowledge and content?
4. How is your relationship with other employees?
5. The organizational resources, procedures and policies which promote technical and personal development introduced?
6. Were enough training, both personal and professional development opportunities for all employees? And does the management support cross-training opportunities for employees to improve the organizational knowledge sharing and learning environment?

Appendix 5: Questionnaire for Under-Study Companies

Adapted from (Wong & Aspinwall, 2005; Wong, 2005)

QUESTIONNAIRE

Please circle the number with the statement to which you agree most.

(Very Low = 1 Low = 2 Average = 3 High = 4 Very High = 5)

No.	Factors with Short Description Questions	Existing KM Practising Elements					Importance of KM Elements for Organization					Critical Success Factors of KM implementation in SMEs
	Questions & Answers	1	2	3	4	5	1	2	3	4	5	
1	Knowledge Management What do you think about the adoption and implementation of KM in SMEs and at which level your organization is practising?											
2	Management and Leadership What do you think about the practising system for management and for leadership to support and facilitate the sharing of organizational values and behaviour in your company?											
3	Organizational Culture To what level your organizational culture is important and also practising in your organization that can support high values, innovation, encourages, knowledge creation, sharing and tools?											
4	Information Technology Did your company implement the IT system that can provide continuous access to create, store, share and retrieval of data and information?											
5	Strategy and Purpose At what level your company using its capabilities, effectiveness, efficiency and resources to meet or achieve its knowledge management goals?											
6	Measurement Did your company measure the organizational activities to improved and to check the progress of employees towards the milestones and to determine the benefits											
7	Organizational Infrastructure The existing process that has already deal with known problems, or is there any change management is introduced to develop an existing KM?											

8	KM Process and Actions Any KM process practised in your organization that can divide the KM discipline which is associated with knowledge create, store, retrieve, transfer and application for knowledge to handle?												
9	Motivation Your organization encourage you and other employees? And do they give any reward to the employees?												
10	Resources Planning in your organization that is in practice to manage financial and HR to develop KM activities among the employees, such as knowledge sharing?												
11	Training The company providing training and certifications to improve the employee's skills, abilities to learn new ideas, create new knowledge for the improvement of the company?												
12	Human Resource Management (HRM) Any HR strategy in practice in your organization to deal with the difficult situation when an employee leaves?												
13	Employees Relationship Professional relationship with employs and how often meeting between employees and management in a week?												
14	Communication Communication process of exchanging information, data and ideas. Can get a chance to share your ideas and information?												
15	New Technologies: It is important to introduce new technologies to compete with the business competitors. Can you introduce new technologies in your organization?												

In UAE, Qatar and Pakistan

General Information

Age: _____

Gender: _____

Number of employees: _____

Role: _____

Years in company: _____

Education: _____

Appendix 6: Questionnaire for SMEs in UAE, Qatar and Pakistan

QUESTIONNAIRE

These questions are driven by the literature (chapter two) of organization learning and organizational structure in SMEs.

Knowledge Management and Organizational Learning in SMEs in UAE, Qatar, and Pakistan

Please circle the number associated with the statement to which you agree most

No.	Question	Disagree very Strongly	Disagree Strongly	Disagree	Agree	Agree Strongly	Agree very Strongly
1	Company pay all or part of the costs for Job-related courses.	1	2	3	4	5	6
2	Company provides financial support for formal education	1	2	3	4	5	6
3	The company provides training as per the need of employees.	1	2	3	4	5	6
4	Company encourage to do work realedted certifications.	1	2	3	4	5	6
5	My company works with other organizations on different or big projects.	1	2	3	4	5	6
6	After introducing a new KM practices company provides training and practices.	1	2	3	4	5	6
7	We do regular meetings to share and encourage our ideas, opinion	1	2	3	4	5	6
8	On the basis of my individual efforts company gives me a reward.	1	2	3	4	5	6
9	Manager helps others to learn and perform better responsibility.	1	2	3	4	5	6
10	The existing process has already dealt with KM problems.	1	2	3	4	5	6

11	Top management discusses the current KM situation and consider advises improving.	1	2	3	4	5	6
12	If KM system crashed or some KM process does not work properly, supervisors / top management call for a meeting to discuss the issues.	1	2	3	4	5	6
13	Relationship with employees is professional.	1	2	3	4	5	6
14	My colleagues shared useful knowledge and tips in the group projects.	1	2	3	4	5	6
15	When I joined the organization my colleagues helped me to understand the work follow.	1	2	3	4	5	6
16	I learned different new skills and improved from my colleagues.	1	2	3	4	5	6
17	The company helped to enhance my skills and abilities.	1	2	3	4	5	6
18	I attend professional training of KMS and related to my job.	1	2	3	4	5	6
19	If I need, I can get the information from the system, or my colleagues help me to solve some problems.	1	2	3	4	5	6
20	I know which extra training and workshops I need to perform better and enchasing my skills and abilities.	1	2	3	4	5	6

General Information

Age: _____

Role: _____

Gender: _____

Years in company: _____

Number of employees: _____

Education: _____

Appendix 7: Category / Groups

Organization	
1	The company pay all or part of the costs for Job-related courses.
2	The company provides financial support for formal education
3	The company provides training as per the need of employees.
4	The company encourage to do work related certifications.
5	The company works with other organizations on different or big projects.
6	After introducing a new KM practices company provides training and practices.
7	We do regular meetings to share and encourage our ideas, opinion.
8	On the basis of my individual efforts company gives me a reward.
Management	
9	Manager helps others to learn and perform better responsibility.
10	The existing process has already dealt with KM problems.
11	Top management discusses the current KM situation and consider advises improving.
12	If KM system crashed or some KM process does not work properly, supervisors / top management call for a meeting to discuss the issues.
13	Relationship with employees is professional.
Teams / Groups	
14	My colleagues shared useful knowledge and tips in the group projects.
15	When I joined the organization my colleagues helped me to understand the work follow.
16	I learned different new skills and improved from my colleagues.
Individual	
17	I attend professional training of KMS and related to my job
18	The company helped to enhance my skills and abilities.
19	If I need, I can get the information from the system, or my colleagues help me to solve some problems.
20	I know which extra training and workshops I need to perform better and enhance my skills and abilities.

Appendix 8: Individual Question Analysis of SMEs in UAE, Qatar and Pakistan

#	Question	United Arab Emirates			Qatar			Pakistan		
		Mean	Standard Deviation	Standard Error Mean	Mean	Standard Deviation	Standard Error Mean	Mean	Standard Deviation	Standard Error Mean
Organization										
1	Company pay all or part of the costs for Job-related courses.	4.0308	1.39160	.17261	3.7391	1.37896	.16601	3.5634	1.40135	.16631
2	Company provides financial support for formal education	4.1538	1.37194	.17017	4.1429	1.39654	.16692	4.2254	1.27836	.15171
3	The company provides training as per the need of employees.	4.0159	1.37362	.17306	3.8551	1.38559	.16681	3.7246	1.35997	.16372
4	Company encourage to do work related certifications.	3.8308	1.31778	.16345	3.8358	1.33254	.16280	3.6957	1.29824	.15629
5	My company works with other organizations on different or big projects.	4.1167	1.31602	.16990	3.9143	1.35927	.16246	3.8676	1.29182	.15666
6	After introducing new KM practices company provides training and practices.	3.8710	1.36086	.17283	3.8358	1.33254	.16280	3.7246	1.31601	.15843
7	We do regular meetings to share and encourage our ideas, opinion	3.7656	1.43363	.17920	3.6667	1.29099	.15542	3.8169	1.30176	.15449

8	On the basis of my individual efforts company gives me a reward.	4.1935	1.23923	.15738	4.1159	1.23117	.14822	4.2254	1.14888	.13635
Management										
9	Manager helps others to learn and perform better responsibility.	4.0769	1.40654	.17446	3.7536	1.40802	.16951	3.9130	1.28039	.15414
10	The existing process has already dealt with KM problems.	4.1719	1.32802	.16600	4.0870	1.28039	.15414	3.8571	1.20729	.14430
11	Top management discusses the current KM situation and consider advises improving.	4.1905	1.42396	.17940	3.8841	1.31212	.15796	3.6957	1.20421	.14497
12	If KM system crashed or some KM process does not work properly, supervisors / top management call for a meeting to discuss the issues.	4.0308	1.39160	.17261	3.8986	1.41572	.17043	3.5211	1.26332	.14993
13	Relationships with employees are professional.	3.7419	1.50339	.19093	3.5857	1.45953	.17445	3.7536	1.26498	.15229
Peers / Teams / Groups										
14	My colleagues shared useful knowledge and	4.1875	1.45706	.18213	3.8841	1.40938	.16967	3.7206	1.29114	.15657

	tips in the group projects.									
15	When I joined the organization my colleagues helped me to understand the work follow.	3.8906	1.27388	.15923	3.6812	1.14395	.13771	3.5211	1.09361	.12979
16	I learned different new skills and improved from my colleagues.	3.9365	1.22965	.15492	3.6087	1.14040	.13729	3.5942	1.12875	.13589
Individual										
17	The company helped to enhance my skills and abilities.	3.9180	1.45253	.18598	3.8235	1.33764	.16221	3.8028	3.8028	1.2606
18	I attend professional training of KMS and related to my job	3.9692	1.29867	.16108	3.8571	1.17073	.13993	3.9014	3.9014	1.1358
19	If I need, I can get the information from the system, or my colleagues help me to solve some problems.	4.0154	1.37491	.17054	3.9857	1.30209	.15563	3.7606	3.7606	1.2243
20	I know which extra training and workshops I need to perform better and enchasing my skills and abilities.	3.9538	1.35128	.16761	3.7000	1.34434	.16068	3.4366	3.4366	1.2039

Appendix 9: Groups Statistics of UAE, Qatar and Pakistan

	Question	Country	N	Mean	Std. Deviation	Std. Error Mean
1	Company pay all or part of the costs for Job-related courses.	UAE	65	4.0308	1.39160	.17261
		Qatar	69	3.7391	1.37896	.16601
		Pakistan	71	3.5634	1.40135	.16631
2	The company provides financial support for formal education	UAE	65	4.1538	1.37194	.17017
		Qatar	70	4.1429	1.39654	.16692
		Pakistan	71	4.2254	1.27836	.15171
3	The company provides training as per the need of employees.	UAE	63	4.0159	1.37362	.17306
		Qatar	69	3.8551	1.38559	.16681
		Pakistan	69	3.7246	1.35997	.16372
4	Company encourage to do work related certifications.	UAE	65	3.8308	1.31778	.16345
		Qatar	67	3.8358	1.33254	.16280
		Pakistan	69	3.6957	1.29824	.15629
5	My company works with other organizations on different or big projects.	UAE	60	4.1167	1.31602	.16990
		Qatar	70	3.9143	1.35927	.16246
		Pakistan	68	3.8676	1.29182	.15666
6	After introducing a new KM practices company provides training and practices	UAE	62	3.8710	1.36086	.17283
		Qatar	67	3.8358	1.33254	.16280
		Pakistan	69	3.7246	1.31601	.15843
7	We do regular meetings to share and encourage our ideas, opinion.	UAE	64	3.7656	1.43363	.17920
		Qatar	69	3.6667	1.29099	.15542
		Pakistan	71	3.8169	1.30176	.15449
8	On the basis of my individual efforts company gives me a reward.	UAE	62	4.1935	1.23923	.15738
		Qatar	69	4.1159	1.23117	.14822
		Pakistan	71	4.2254	1.14888	.13635
9	Manager helps others to learn and perform better responsibility.	UAE	65	4.0769	1.40654	.17446
		Qatar	69	3.7536	1.40802	.16951
		Pakistan	69	3.9130	1.28039	.15414
10	The existing process has already dealt with KM problems.	UAE	64	4.1719	1.32802	.16600
		Qatar	69	4.0870	1.28039	.15414

		Pakistan	70	3.8571	1.20729	.14430
11	Top management discusses the current KM situation and consider advises improving.	UAE	63	4.1905	1.42396	.17940
		Qatar	69	3.8841	1.31212	.15796
		Pakistan	69	3.6957	1.20421	.14497
12	If KM system crashed or some KM process does not work properly, supervisors / top management call for a meeting to discuss the issues.	UAE	65	4.0308	1.39160	.17261
		Qatar	69	3.8986	1.41572	.17043
		Pakistan	71	3.5211	1.26332	.14993
13	Relationships with employees are professional.	UAE	62	3.7419	1.50339	.19093
		Qatar	70	3.5857	1.45953	.17445
		Pakistan	69	3.7536	1.26498	.15229
14	My colleagues shared useful knowledge and tips in the group projects.	UAE	64	4.1875	1.45706	.18213
		Qatar	69	3.8841	1.40938	.16967
		Pakistan	68	3.7206	1.29114	.15657
15	When I joined the organization my colleagues helped you to understand the work follow.	UAE	64	3.8906	1.27388	.15923
		Qatar	69	3.6812	1.14395	.13771
		Pakistan	71	3.5211	1.09361	.12979
16	I learned different new skills and improved from my colleagues.	UAE	63	3.9365	1.22965	.15492
		Qatar	69	3.6087	1.14040	.13729
		Pakistan	69	3.5942	1.12875	.13589
17	The company helped to enhance my skills and abilities.	UAE	61	3.9180	1.45253	.18598
		Qatar	68	3.8235	1.33764	.16221
		Pakistan	71	3.8028	1.26061	.14961
18	I attend professional training of KMS and related to my job	UAE	65	3.9692	1.29867	.16108
		Qatar	70	3.8571	1.17073	.13993
		Pakistan	71	3.9014	1.13584	.13480
19	If I need, I can get the information from the system, or my colleagues help me to solve some problems.	UAE	65	4.0154	1.37491	.17054
		Qatar	70	3.9857	1.30209	.15563
		Pakistan	71	3.7606	1.22433	.14530
20	I know which extra training and workshops I need to perform better and enchasing my skills and abilities.	UAE	65	3.9538	1.35128	.16761
		Qatar	70	3.7000	1.34434	.16068
		Pakistan	71	3.4366	1.20395	.14288

Appendix 10: Independent Sample T-test Between UAE and Qatar

Group Statistics

	Country	N	Mean	Std. Deviation	Std. Error Mean
Company pay all or part of the costs for Job-related courses.	UAE	65	4.0308	1.39160	.17261
	Qatar	69	3.7391	1.37896	.16601
The Company provides financial support for formal education	UAE	65	4.1538	1.37194	.17017
	Qatar	70	4.1429	1.39654	.16692
The company provides training as per the need of the employee.	UAE	63	4.0159	1.37362	.17306
	Qatar	69	3.8551	1.38559	.16681
Company encourage to do work related certifications.	UAE	65	3.8308	1.31778	.16345
	Qatar	67	3.8358	1.33254	.16280
My company works with the other organizations on different or big projects.	UAE	60	4.1167	1.31602	.16990
	Qatar	70	3.9143	1.35927	.16246
After introducing new KM practices does the company provides training and practices.	UAE	62	3.8710	1.36086	.17283
	Qatar	67	3.8358	1.33254	.16280
We do regular meetings to share and encourage our ideas and opinions.	UAE	64	3.7656	1.43363	.17920
	Qatar	69	3.6667	1.29099	.15542
On the basis of my individual efforts company gives me a reward.	UAE	62	4.1935	1.23923	.15738
	Qatar	69	4.1159	1.23117	.14822
Manager helps others to learn and perform better responsibility.	UAE	65	4.0769	1.40654	.17446
	Qatar	69	3.7536	1.40802	.16951
The existing process has already dealt with KM problems.	UAE	64	4.1719	1.32802	.16600
	Qatar	69	4.0870	1.28039	.15414
Top management discusses the current KM situation and considers improving advice.	UAE	63	4.1905	1.42396	.17940
	Qatar	69	3.8841	1.31212	.15796
If KM system crashed or some KM processes do not work properly, supervisors / top management call for a meeting to discuss the issues.	UAE	65	4.0308	1.39160	.17261
	Qatar	69	3.8986	1.41572	.17043
Relationships with employees are professional.	UAE	62	3.7419	1.50339	.19093
	Qatar	70	3.5857	1.45953	.17445
My colleagues shared useful knowledge and tips in the group projects.	UAE	64	4.1875	1.45706	.18213
	Qatar	69	3.8841	1.40938	.16967
When I joined the organization my colleagues helped you to understand the work follow.	UAE	64	3.8906	1.27388	.15923
	Qatar	69	3.6812	1.14395	.13771
I learned different new skills and improved the	UAE	63	3.9365	1.22965	.15492

olds, from my colleagues.	Qatar	69	3.6087	1.14040	.13729
The company helped to enhance my skills and abilities.	UAE	61	3.9180	1.45253	.18598
	Qatar	68	3.8235	1.33764	.16221
I attended professional training of KMS and related to my job.	UAE	65	3.9692	1.29867	.16108
	Qatar	70	3.8571	1.17073	.13993
If I need, I can get the information from the system, or my colleagues help me to solve the problems.	UAE	65	4.0154	1.37491	.17054
	Qatar	70	3.9857	1.30209	.15563
I know which extra training and workshops I need to perform better and enhance my skills and abilities.	UAE	65	3.9538	1.35128	.16761
	Qatar	70	3.7000	1.34434	.16068

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Company pay all or part of the costs for Job-related courses.	Equal variances assumed	.023	.879	1.218	132	.225	.29164	.23942	-.18195	.76523
	Equal variances not assumed			1.218	131.369	.225	.29164	.23948	-.18210	.76538
The Company provides financial support for formal education	Equal variances assumed	.004	.949	.046	133	.963	.01099	.23852	-.46080	.48278
	Equal variances not assumed			.046	132.571	.963	.01099	.23837	-.46051	.48248
The company provides training as per the need of the employee.	Equal variances assumed	.058	.810	.669	130	.505	.16080	.24046	-.31492	.63652
	Equal variances not assumed			.669	129.110	.505	.16080	.24036	-.31476	.63636
Company encourage to	Equal variances assumed	.001	.978	-.022	130	.983	-.00505	.23073	-.46152	.45142

do work related certifications.	Equal variances not assumed			-.022	129.951	.983	-.00505	.23069	-.46145	.45135
My company works with the other organizations on different or big projects.	Equal variances assumed	.026	.871	.859	128	.392	.20238	.23566	-.26392	.66868
	Equal variances not assumed			.861	126.086	.391	.20238	.23507	-.26282	.66758
After introducing new KM practices does the company provides training and practices.	Equal variances assumed	.000	.984	.148	127	.882	.03515	.23723	-.43430	.50459
	Equal variances not assumed			.148	125.763	.883	.03515	.23743	-.43473	.50502
We do regular meetings to share and encourage our ideas and opinions.	Equal variances assumed	.883	.349	.419	131	.676	.09896	.23627	-.36845	.56636
	Equal variances not assumed			.417	126.900	.677	.09896	.23721	-.37044	.56836
On the basis of my individual efforts company gives me a reward.	Equal variances assumed	.022	.882	.359	129	.720	.07761	.21611	-.34998	.50519
	Equal variances not assumed			.359	127.334	.720	.07761	.21619	-.35018	.50539
Manager helps others to learn and perform better responsibility.	Equal variances assumed	.071	.790	1.329	132	.186	.32330	.24325	-.15788	.80448
	Equal variances not assumed			1.329	131.540	.186	.32330	.24325	-.15788	.80448
The existing process has already dealt with KM problems.	Equal variances assumed	.298	.586	.375	131	.708	.08492	.22622	-.36259	.53243
	Equal variances not assumed			.375	129.370	.708	.08492	.22653	-.36327	.53310
Top management	Equal variances assumed	.680	.411	1.287	130	.200	.30642	.23814	-.16471	.77755

discusses the current KM situation and considers improving advice.	Equal variances not assumed			1.282	126.225	.202	.30642	.23903	-.16661	.77945
If KM system crashed or some KM processes do not work properly, supervisors / top management call for a meeting to discuss the issues.	Equal variances assumed	.024	.876	.545	132	.587	.13222	.24270	-.34786	.61229
	Equal variances not assumed			.545	131.756	.587	.13222	.24257	-.34762	.61205
Relationships with employees are professional.	Equal variances assumed	.082	.775	.605	130	.546	.15622	.25816	-.35451	.66695
	Equal variances not assumed			.604	127.069	.547	.15622	.25862	-.35555	.66799
My colleagues shared useful knowledge and tips in the group projects.	Equal variances assumed	.292	.590	1.221	131	.224	.30344	.24860	-.18836	.79524
	Equal variances not assumed			1.219	129.462	.225	.30344	.24892	-.18903	.79591
When I joined the organization my colleagues helped you to understand the work follow.	Equal variances assumed	.130	.719	.999	131	.320	.20947	.20967	-.20532	.62425
	Equal variances not assumed			.995	126.778	.322	.20947	.21053	-.20713	.62607
I learned different new	Equal variances assumed	.000	.992	1.589	130	.114	.32781	.20629	-.08030	.73593

skills and improved the olds, from my colleagues.	Equal variances not assumed			1.584	126.490	.116	.32781	.20700	-.08182	.73744
The company helped to enhance my skills and abilities.	Equal variances assumed	.515	.474	.385	127	.701	.09450	.24567	-.39164	.58065
	Equal variances not assumed			.383	122.517	.702	.09450	.24678	-.39400	.58301
I attended professional training of KMS and related to my job.	Equal variances assumed	.578	.448	.527	133	.599	.11209	.21255	-.30833	.53250
	Equal variances not assumed			.525	128.935	.600	.11209	.21337	-.31007	.53425
If I need, I can get the information from the system, or my colleagues help me to solve the problems.	Equal variances assumed	.316	.575	.129	133	.898	.02967	.23041	-.42607	.48541
	Equal variances not assumed			.129	130.826	.898	.02967	.23088	-.42706	.48640
I know which extra training and workshops I need to perform better and enhance my skills and abilities.	Equal variances assumed	.079	.779	1.094	133	.276	.25385	.23214	-.20532	.71301
	Equal variances not assumed			1.093	132.158	.276	.25385	.23218	-.20543	.71312

Appendix 11: Independent Sample T-test Between Qatar and Pakistan Group Statistics

	Country	N	Mean	Std. Deviation	Std. Error Mean
Company pay all or part of the costs for Job-related courses.	Qatar	69	3.7391	1.37896	.16601
	Pakistan	71	3.5634	1.40135	.16631
The Company provides financial support for formal education	Qatar	70	4.1429	1.39654	.16692
	Pakistan	71	4.2254	1.27836	.15171
The company provides training as per the need of the employee.	Qatar	69	3.8551	1.38559	.16681
	Pakistan	69	3.7246	1.35997	.16372
Company encourage to do work related certifications.	Qatar	67	3.8358	1.33254	.16280
	Pakistan	69	3.6957	1.29824	.15629
My company works with the other organizations on different or big projects.	Qatar	70	3.9143	1.35927	.16246
	Pakistan	68	3.8676	1.29182	.15666
After introducing new KM practices does the company provides training and practices.	Qatar	67	3.8358	1.33254	.16280
	Pakistan	69	3.7246	1.31601	.15843
We do regular meetings to share and encourage our ideas and opinions.	Qatar	69	3.6667	1.29099	.15542
	Pakistan	71	3.8169	1.30176	.15449
On the basis of my individual efforts company gives me a reward.	Qatar	69	4.1159	1.23117	.14822
	Pakistan	71	4.2254	1.14888	.13635
Manager helps others to learn and perform better responsibility.	Qatar	69	3.7536	1.40802	.16951
	Pakistan	69	3.9130	1.28039	.15414
The existing process has already dealt with KM problems.	Qatar	69	4.0870	1.28039	.15414
	Pakistan	70	3.8571	1.20729	.14430
Top management discusses the current KM situation and considers improving advice.	Qatar	69	3.8841	1.31212	.15796
	Pakistan	69	3.6957	1.20421	.14497
If KM system crashed or some KM processes do not work properly, supervisors / top management call for a meeting to discuss the issues.	Qatar	69	3.8986	1.41572	.17043
	Pakistan	71	3.5211	1.26332	.14993
Relationships with employees are professional.	Qatar	70	3.5857	1.45953	.17445
	Pakistan	69	3.7536	1.26498	.15229
My colleagues shared useful knowledge and tips in the group projects.	Qatar	69	3.8841	1.40938	.16967
	Pakistan	68	3.7206	1.29114	.15657
When I joined the organization my colleagues helped you to understand the work follow.	Qatar	69	3.6812	1.14395	.13771
	Pakistan	71	3.5211	1.09361	.12979
I learned different new skills and improved the olds, from my colleagues.	Qatar	69	3.6087	1.14040	.13729
	Pakistan	69	3.5942	1.12875	.13589
The company helped to enhance my skills and abilities.	Qatar	68	3.8235	1.33764	.16221
	Pakistan	71	3.8028	1.26061	.14961

I attended professional training of KMS and related to my job.	Qatar	70	3.8571	1.17073	.13993
	Pakistan	71	3.9014	1.13584	.13480
If I need, I can get the information from the system, or my colleagues help me to solve the problems.	Qatar	70	3.9857	1.30209	.15563
	Pakistan	71	3.7606	1.22433	.14530
I know which extra training and workshops I need to perform better and enhance my skills and abilities.	Qatar	70	3.7000	1.34434	.16068
	Pakistan	71	3.4366	1.20395	.14288

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Company pay all or part of the costs for Job-related courses.	Equal variances assumed	.214	.644	.748	138	.456	.17575	.23504	-.28899	.64049
	Equal variances not assumed			.748	137.978	.456	.17575	.23498	-.28888	.64039
The Company provides financial support for formal education	Equal variances assumed	.575	.450	-.366	139	.715	-.08249	.22542	-.52819	.36320
	Equal variances not assumed			-.366	137.557	.715	-.08249	.22556	-.52851	.36352
The company provides training as per the need of the employee.	Equal variances assumed	.045	.832	.558	136	.578	.13043	.23373	-.33178	.59265
	Equal variances not assumed			.558	135.953	.578	.13043	.23373	-.33178	.59265
Company encourage to do work related certifications.	Equal variances assumed	.000	.986	.621	134	.535	.14017	.22559	-.30600	.58634
	Equal variances not assumed			.621	133.586	.536	.14017	.22567	-.30619	.58653
My company works with the other organizations on different or big projects.	Equal variances assumed	.077	.782	.206	136	.837	.04664	.22586	-.40001	.49328
	Equal variances not assumed			.207	135.936	.837	.04664	.22569	-.39968	.49295
After introducing new KM practices	Equal variances assumed	.011	.915	.490	134	.625	.11118	.22712	-.33802	.56039

does the company provides training and practices.	Equal variances not assumed			.489	133.763	.625	.11118	.22716	-.33811	.56048
We do regular meetings to share and encourage our ideas and opinions.	Equal variances assumed	.044	.835	-.685	138	.494	-.15023	.21916	-.58359	.28312
	Equal variances not assumed			-.686	137.942	.494	-.15023	.21914	-.58354	.28307
On the basis of my individual efforts company gives me a reward.	Equal variances assumed	.286	.594	-.544	138	.587	-.10941	.20119	-.50722	.28840
	Equal variances not assumed			-.543	136.693	.588	-.10941	.20139	-.50765	.28883
Manager helps others to learn and perform better responsibility.	Equal variances assumed	1.258	.264	-.696	136	.488	-.15942	.22911	-.61250	.29366
	Equal variances not assumed			-.696	134.790	.488	-.15942	.22911	-.61254	.29370
The existing process has already dealt with KM problems.	Equal variances assumed	.227	.635	1.089	137	.278	.22981	.21105	-.18753	.64716
	Equal variances not assumed			1.088	136.270	.278	.22981	.21114	-.18773	.64735
Top management discusses the current KM situation and considers improving advice.	Equal variances assumed	.377	.540	.879	136	.381	.18841	.21440	-.23559	.61240
	Equal variances not assumed			.879	135.011	.381	.18841	.21440	-.23561	.61242
If KM system crashed or some KM processes do not work properly, supervisors / top management call for a meeting to discuss the issues.	Equal variances assumed	.361	.549	1.665	138	.098	.37742	.22662	-.07068	.82553
	Equal variances not assumed			1.663	135.273	.099	.37742	.22699	-.07149	.82634
Relationships with employees	Equal variances assumed	2.581	.110	-.724	137	.470	-.16791	.23180	-.62629	.29047

are professional.	Equal variances not assumed			-.725	134.800	.470	-.16791	.23157	-.62588	.29006
My colleagues shared useful knowledge and tips in the group projects.	Equal variances assumed	.653	.421	.708	135	.480	.16347	.23102	-.29342	.62036
	Equal variances not assumed			.708	134.289	.480	.16347	.23087	-.29315	.62009
When I joined the organization my colleagues helped you to understand the work follow.	Equal variances assumed	.229	.633	.846	138	.399	.16003	.18911	-.21390	.53397
	Equal variances not assumed			.846	137.254	.399	.16003	.18924	-.21416	.53423
I learned different new skills and improved the olds, from my colleagues.	Equal variances assumed	.006	.936	.075	136	.940	.01449	.19317	-.36750	.39649
	Equal variances not assumed			.075	135.986	.940	.01449	.19317	-.36750	.39649
The company helped to enhance my skills and abilities.	Equal variances assumed	.768	.382	.094	137	.925	.02071	.22039	-.41509	.45651
	Equal variances not assumed			.094	135.572	.925	.02071	.22067	-.41569	.45711
I attended professional training of KMS and related to my job.	Equal variances assumed	.253	.616	-.228	139	.820	-.04427	.19425	-.42834	.33981
	Equal variances not assumed			-.228	138.725	.820	-.04427	.19430	-.42843	.33990
If I need, I can get the information from the system, or my colleagues help me to solve the problems.	Equal variances assumed	.058	.810	1.058	139	.292	.22515	.21282	-.19564	.64594
	Equal variances not assumed			1.057	138.207	.292	.22515	.21292	-.19584	.64614
I know which extra training and workshops I need to perform better and enhance my skills and abilities.	Equal variances assumed	.975	.325	1.226	139	.222	.26338	.21485	-.16142	.68818
	Equal variances not assumed			1.225	136.894	.223	.26338	.21502	-.16181	.68857

Appendix 12: Independent Sample T-test Between Pakistan and UAE

Group Statistics

	Country	N	Mean	Std. Deviation	Std. Error Mean
Company pay all or part of the costs for Job-related courses.	Pakistan	71	3.5634	1.40135	.16631
	UAE	65	4.0308	1.39160	.17261
The Company provides financial support for formal education	Pakistan	71	4.2254	1.27836	.15171
	UAE	65	4.1538	1.37194	.17017
The company provides training as per the need of the employee.	Pakistan	69	3.7246	1.35997	.16372
	UAE	63	4.0159	1.37362	.17306
Company encourage to do work related certifications.	Pakistan	69	3.6957	1.29824	.15629
	UAE	65	3.8308	1.31778	.16345
My company works with the other organizations on different or big projects.	Pakistan	68	3.8676	1.29182	.15666
	UAE	60	4.1167	1.31602	.16990
After introducing new KM practices does the company provides training and practices.	Pakistan	69	3.7246	1.31601	.15843
	UAE	62	3.8710	1.36086	.17283
We do regular meetings to share and encourage our ideas and opinions.	Pakistan	71	3.8169	1.30176	.15449
	UAE	64	3.7656	1.43363	.17920
On the basis of my individual efforts company gives me a reward.	Pakistan	71	4.2254	1.14888	.13635
	UAE	62	4.1935	1.23923	.15738
Manager helps others to learn and perform better responsibility.	Pakistan	69	3.9130	1.28039	.15414
	UAE	65	4.0769	1.40654	.17446
The existing process has already dealt with KM problems.	Pakistan	70	3.8571	1.20729	.14430
	UAE	64	4.1719	1.32802	.16600
Top management discusses the current KM situation and considers improving advice.	Pakistan	69	3.6957	1.20421	.14497
	UAE	63	4.1905	1.42396	.17940
If KM system crashed or some KM processes do not work properly, supervisors / top management call for a meeting to discuss the issues.	Pakistan	71	3.5211	1.26332	.14993
	UAE	65	4.0308	1.39160	.17261
Relationships with employees are professional.	Pakistan	69	3.7536	1.26498	.15229
	UAE	62	3.7419	1.50339	.19093
My colleagues shared useful knowledge and tips in the group projects.	Pakistan	68	3.7206	1.29114	.15657
	UAE	64	4.1875	1.45706	.18213
When I joined the organization my colleagues helped you to understand the work follow.	Pakistan	71	3.5211	1.09361	.12979
	UAE	64	3.8906	1.27388	.15923
I learned different new skills and improved the olds, from my colleagues.	Pakistan	69	3.5942	1.12875	.13589
	UAE	63	3.9365	1.22965	.15492
The company helped to enhance my skills and abilities.	Pakistan	71	3.8028	1.26061	.14961

	UAE	61	3.9180	1.45253	.18598
I attended professional training of KMS and related to my job.	Pakistan	71	3.9014	1.13584	.13480
	UAE	65	3.9692	1.29867	.16108
If I need, I can get the information from the system, or my colleagues help me to solve the problems.	Pakistan	71	3.7606	1.22433	.14530
	UAE	65	4.0154	1.37491	.17054
I know which extra training and workshops I need to perform better and enhance my skills and abilities.	Pakistan	71	3.4366	1.20395	.14288
	UAE	65	3.9538	1.35128	.16761

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Company pay all or part of the costs for Job-related courses.	Equal variances assumed	.358	.551	-1.949	134	.053	-.46739	.23977	-.94160	.00683
	Equal variances not assumed			-1.950	133.105	.053	-.46739	.23969	-.94149	.00671
The Company provides financial support for formal education	Equal variances assumed	.483	.488	.315	134	.754	.07151	.22726	-.37798	.52100
	Equal variances not assumed			.314	130.687	.754	.07151	.22798	-.37950	.52251
The company provides training as per the need of the employee.	Equal variances assumed	.211	.647	-1.223	130	.224	-.29124	.23812	-.76233	.17986
	Equal variances not assumed			-1.222	128.670	.224	-.29124	.23823	-.76260	.18012
Company encourage to do work related	Equal variances assumed	.000	.991	-.598	132	.551	-.13512	.22605	-.58226	.31202

certifications.	Equal variances not assumed			-1.079	126	.283	-.24902	.23083	-.70582	.20778
My company works with the other organizations on different or big projects.	Equal variances assumed	.011	.916	-1.079	126	.283	-.24902	.23083	-.70582	.20778
	Equal variances not assumed			-1.078	123.4 14	.283	-.24902	.23110	-.70645	.20841
After introducing new KM practices does the company provides training and practices.	Equal variances assumed	.015	.903	-.625	129	.533	-.14633	.23403	-.60937	.31671
	Equal variances not assumed			-.624	126.4 77	.534	-.14633	.23446	-.61029	.31763
We do regular meetings to share and encourage our ideas and opinions.	Equal variances assumed	1.217	.272	.218	133	.828	.05128	.23542	-.41437	.51692
	Equal variances not assumed			.217	127.8 73	.829	.05128	.23660	-.41689	.51944
On the basis of my individual efforts company gives me a reward.	Equal variances assumed	.463	.497	.154	131	.878	.03180	.20716	-.37801	.44162
	Equal variances not assumed			.153	125.3 81	.879	.03180	.20823	-.38030	.44390
Manager helps others to learn and perform better responsibility.	Equal variances assumed	.639	.426	-.706	132	.481	-.16388	.23214	-.62308	.29532
	Equal variances not assumed			-.704	128.9 58	.483	-.16388	.23280	-.62448	.29672
The existing process has already dealt with	Equal variances assumed	1.075	.302	-1.437	132	.153	-.31473	.21901	-.74796	.11849

KM problems.	Equal variances not assumed			-1.431	127.639	.155	-.31473	.21995	-.74996	.12049
Top management discusses the current KM situation and considers improving advice.	Equal variances assumed	2.122	.148	-2.162	130	.032	-.49482	.22891	-.94769	-.04196
	Equal variances not assumed			-2.145	121.983	.034	-.49482	.23065	-.95143	-.03822
If KM system crashed or some KM processes do not work properly, supervisors / top management call for a meeting to discuss the issues.	Equal variances assumed	.180	.672	-2.239	134	.027	-.50964	.22765	-.95990	-.05939
	Equal variances not assumed			-2.229	129.571	.028	-.50964	.22863	-.96197	-.05731
Relationships with employees are professional.	Equal variances assumed	3.371	.069	.048	129	.962	.01169	.24199	-.46709	.49046
	Equal variances not assumed			.048	119.804	.962	.01169	.24422	-.47187	.49524
My colleagues shared useful knowledge and tips in the group projects.	Equal variances assumed	1.875	.173	-1.951	130	.053	-.46691	.23930	-.94034	.00652
	Equal variances not assumed			-1.944	125.880	.054	-.46691	.24018	-.94223	.00841
When I joined the organization my colleagues helped you to understand the work follow.	Equal variances assumed	.604	.438	-1.813	133	.072	-.36950	.20381	-.77262	.03363
	Equal variances not assumed			-1.799	124.900	.074	-.36950	.20543	-.77607	.03707

I learned different new skills and improved the olds, from my colleagues.	Equal variances assumed	.006	.937	-1.668	130	.098	-.34231	.20527	-.74840	.06379
	Equal variances not assumed			-1.661	126.064	.099	-.34231	.20607	-.75011	.06550
The company helped to enhance my skills and abilities.	Equal variances assumed	2.347	.128	-.488	130	.626	-.11522	.23613	-.58237	.35194
	Equal variances not assumed			-.483	119.785	.630	-.11522	.23868	-.58780	.35737
I attended professional training of KMS and related to my job.	Equal variances assumed	1.490	.224	-.325	134	.746	-.06782	.20880	-.48080	.34515
	Equal variances not assumed			-.323	127.747	.747	-.06782	.21004	-.48343	.34779
If I need, I can get the information from the system, or my colleagues help me to solve the problems.	Equal variances assumed	.692	.407	-1.143	134	.255	-.25482	.22290	-.69567	.18603
	Equal variances not assumed			-1.137	128.658	.257	-.25482	.22404	-.69811	.18847
I know which extra training and workshops I need to perform better and enhance my skills and abilities.	Equal variances assumed	.390	.534	-2.360	134	.020	-.51723	.21912	-.95061	-.08384
	Equal variances not assumed			-2.348	128.685	.020	-.51723	.22024	-.95299	-.08146