

THE RELATIONSHIP BETWEEN THE APPLICATION  
OF KNOWLEDGE MANAGEMENT PROCESSES AND  
THE IMPROVEMENT DELIVERY OF INFORMATION  
SERVICES AMONG YEMENI UNIVERSITY  
LIBRARIANS BY USING STRUCTURAL EQUATION  
MODELING (SEM)

BY

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## **ABSTRACT**

This study investigates the knowledge management perception of the Yemeni academic libraries by librarians and the factors that contribute to improve the delivery of information services. As the scope of the knowledge management is wide, this study was confined only to the knowledge creation and sharing processes of knowledge management. Data were collected from 289 librarians of twenty-nine libraries in the Yemeni universities using self-administered questionnaires and were analyzed using the Social Sciences Statistical Package (SPSS) and Structural Equation Modeling (SEM). The study found that the positive effective of knowledge sharing on the improvement in the delivery of information services indicates a good atmosphere of confidence and mutual relationship. Also, the results showed that the positive effect between knowledge creation process and knowledge sharing process on librarians' attitude indicates their concern of their status and image. Furthermore, the study found that the high level of confidence of librarians that their expertise will only be used properly and for the benefit of each other. It also indicates that they can depend on each other when they are looking for new knowledge or need help. In terms of the theoretical contribution, the study integrates both knowledge management processes and organizational climate perspectives to develop a theoretical model that explain the concept of the improvement in the delivery of information services. From the practical contribution perspective, fills the gab in literature on knowledge management process particularly in academic institution in Yemen.

## خلاصة البحث

تهدف هذه الدراسة إلى معرفة آراء موظفي المكتبات الجامعية في اليمن و العوامل التي تساهم في تحسين تقديم خدمات المعلومات. نظراً لأن نطاق ادارة المعرفة واسع، فقد أقتصرت هذه الدراسة على عمليات انشاء المعرفة و تبادلها. تم استخدام الاستبانة كأداة رئيسية لجمع المعلومات حيث تمثل عينة الدراسة موظفي المكتبات الجامعية في اليمن من تسعة و عشرين مكتبة و عددهم 289 موظف وذلك بالاستعانة بالبرامج الاحصائية SEM و SPSS. توصلت الدراسة الى أن التأثير الأيجابي لمشاركة المعرفة في تحسين تقديم خدمات المعلومات يشير الى وجود جو مناسب من الثقة. كما أظهرت النتائج أن التأثير الأيجابي بين عملية انشاء المعرفة و تبادلها على موقف الموظفين يدل على اهتمامهم بوضعهم في المؤسسة التي يعملون بها. علاوة على ذلك، وجدت الدراسة أن المستوى المرتفع من ثقة الموظفين في أن خبراتهم تستخدم بالشكل المطلوب، كما تشير الى ان يمكنهم الاعتماد على بعضهم البعض أو تعلم شئ جديد. أما من حيث المساهمة النظرية، تدمج الدراسة كلاً من عمليات ادارة المعرفة و المناخ التنظيمي وذلك لتطوير نموذج يشرح مفهوم تحسين تقديم خدمات المعلومات، خاصة في المؤسسات الاكاديمية في اليمن.

## **APPROVAL PAGE**

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## DECLARATION

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*My deepest appreciation goes to my beloved FATHER for his continuous love, faith, prayers and for the support and care you have given me to overcome all the difficulties I have faced. I express my sincere gratitude for his time, patience and support throughout this challenging journey. May Allah bless and reward you in this life and the hereafter. Thank you for no reason, thank you for every reason. Actually, I do not know how to express my love for you. I am just writing by remembering your contribution to my life. Thanks for make my life more amazing as well as protected from everything. Blessed are the ones who have a father and fortunate are the ones who have a father like you. I have no words to thank you for being the most loving and most affectionate father*

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## LIST OF ABBREVIATIONS

AMOS	Analysis of Moment Structures Statistical Program
AVE	Average Variance Extracted
B.A	Bachelor of Arts
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Composite Reliability
DDC	Dewey Decimal Classification
DF	Degrees of Freedom
DLIS	Department of Library and Information Science
DV	Dependent Variable
EFA	Exploratory Factor Analysis
F	Factor
GFI	Goodness-of-Fit Index
GOFI	Goodness of Fit Indices
H	Hypothesis
ICT	Information and Communication Technology
IDIS	Improvement in the Delivery of Information Services
IFI	Incremental Fit Index
IV	Independent Variable
KC	Knowledge Creation
KCC	Knowledge Creation- Combination
KCE	Knowledge Creation- Externalization
KCI	Knowledge Creation -Internalization
KCS	Knowledge Creation -Socialization
KM	Knowledge Management
KSA	Kingdom of Saudi Arabia
KS	Knowledge Sharing
KSE	Knowledge Sharing –Explicit
KSP	Knowledge Sharing- practice
KST	Knowledge Sharing- Tacit
LCSH	Library of Congress Subject Headings
LIS	Library and Information science
LS	Librarians Skill's
M.A	Master of Arts
MIS	Management Information System
MV	Mediating Variable
N	Number of respondents
NFI	Normed Fit Index
OC	Organizational Climate
Ph.D	Doctor of Philosophy Degree
RH	Research Hypothesis
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
RO	Research Objective
RQ	Research Question

SECI	Socialization, Externalization, Combination, Internalization
SD	Standard Deviation
SEM	Structural Equation Modeling
SRMR	Standardized Root Mean Residual
SPSS	Statistical Package for Social Sciences
TE	Trust Employees
TLI	Tucker-Lewis Index
TMO	Top Management Support
TPB	Theory of Planned Behavior
TQM	Total Quality Management
TRA	Theory of Reasoned Action
UAE	United Arab Emirates
UK	United Kingdom
USA	United States of America
VIF	Variance Inflation Factor
YAR	Yemen Arab Republic

# CHAPTER ONE

## INTRODUCTION

### 1.1 BACKGROUND OF THE STUDY

The emergence of various sources of knowledge, such as print and digital media, can be anticipated to create knowledge that is readily available and shared (Dewi et al. 2019). Knowledge is an important part of the organization as it allows for the development of competitive environments and the utilization of individual and organizational assets (Marouf, 2017). It is very important for today's organizations to use technology, such as knowledge repositories, to strengthen librarians for competitiveness and survival. Therefore, libraries are looking for different ways to capture the knowledge and expertise of their librarians by providing incentives to encourage them to share their knowledge (Abdullah, 2016; Al-Sabagh, 2014).

The practice of knowledge management involves the use of appropriate activities and tools (Zehi and Jajantighi, 2015; Koizumi, 2016; Lee and Hong, 2014; Nguyen and Mohamad, 2011; Lampel and Bhalla, 2007; Perrin, 2011; Jackson, 2007) this facilitates the exchange, transfer and use of knowledge. Organizations that have accomplished knowledge management processes are not the only ones that have adopted technology, but the ones that have developed a knowledge management culture (Zakaria, 2013; Kebeda, 2010; Piri, Jasemia and Abdi, 2013; Pawlowski and Bick, 2012). In addition to applying knowledge management practices and strategies, the use of technology can create a knowledge management culture to foster organizational development (Al-Shammari, 2018; De Bem, Coelho and Dandolini, 2016; Elbeshausen, 2007; Ugwu and Ezema, 2010). The number of knowledge management researchers and practitioners defined the practices to be used in

organizations (Ramachandran, Chog and Wong, 2013; Koloniari, 2015; Kumar and Pradeep, 2013). Such activities include team meetings, discussions, training programs, workshops, conferences, brainstorming sessions, focus groups, presentations, decision-making processes, lectures, and online communication channels such as emails, internet, and intranet (Andreava and Kanto, 2012; Bojigen, 2015).

There are several benefits of knowledge management at organizational levels. The benefits are facilitating knowledge creation, achieving continuous organizational growth, survival, and development, meeting organizational goals and objectives, solving business problems, enhancing performance, maintaining competitiveness and profitability (Mavodza and Ngulube, 2011; Nazim and Mukherjee, 2011; Cherusli, 2012; Kim and Abbs, 2010).

Moreover, establishing partnerships, improving understanding of customer needs, and identifying new business opportunities, developing process efficiency in organizations, creating an organizational knowledge database, and enhancing information and knowledge base for decision-making and more balanced policy decisions (Myllarniem, 2012; Tashkandi, 2015; Al-Mamary, Shamsuddin and Aziati, 2015; Chawla and Joshi, 2010; Zanaouri and Francois, 2013; Gharakhani and Mousakhani, 2012).

Furthermore, recognizing the importance of these benefits helps organizations develop a knowledge-based environment by emphasizing the creation and sharing of knowledge leading to improving processes, developing technology, and enhancing librarians' skills and competencies (Singh and Sharma, 2011; Jain and Jeppesen, 2013; Wai and Hase, 2007; Laksham, 2009) to maintain the competitiveness, profitability, and long-term success.

Hence, knowledge sharing helps a library in benchmarking with other libraries (Abu-Yassin, Al-Nsour and Al-Kloub, 2011; Abdullah and Jirjees, 2014). The practice of knowledge management results in improved organizational efficiency, such as creating new knowledge, innovating, improving performance (Cardoso, Merieles and Peralta, 2011; Agarwal and Islam, 2015), achieving long term sustainability and successful innovation (Niu,2010), and enhancing individuals' learning (Celep and Cetin, 2005; Al-Aama, 2014; Dewi, et al. 2019) through encouraging knowledge exchange and collaboration. Regardless of the type of business and organization in which it operates, the type of services or products it provides, effective knowledge management is the key to all successful organizations aiming to achieve their objectives and goals and strengthen their competitive position (Laksham, 2010; Al-Harrasi, Abdullah and Al-Hanaie, 2016; Ying, et al. 2019).

### **1.1.1 Brief Background about Yemen**

This study is conducted in Yemen, a country in the Middle East. Yemen is situated in the south-western region of the Arabian Peninsula (Arabia). It is considered the second largest country of the Arabian Peninsula after Saudi Arabia, and it has the longest coastal line in the region, about 2000 km. The country shares boundaries with Saudi Arabia in the north, Sultanate of Oman in the east, the Arabian Sea, and the Gulf of Aden in the south as well as the Red Sea in the west. This includes the Socotra Island and its attached isles which are in the southeast at the entrance of the Gulf of Aden (Al-Hadad, 2004). The Republic of Yemen is a union between the Yemen Arab Republic and the People's Democratic Republic of Yemen that was formed on May 22th, 1990. The country has 20 provinces (*Mouhafaza*), and each province is divided into sub-provinces, and each sub-province is divided into districts (*Nahiya*), each

district is divided into sub-district (*Ozla*) and each sub-district is divided into villages (*Qarya*) and each village is divided into Hamlets (*Mahala*). Provincial centers are the main cities in Yemen (Al-Dabsh, 2013).



Source: [www.worldatlas.com](http://www.worldatlas.com) (2016)

Figure 1.1 Map of Yemen

## 1.2 KNOWLEDGE MANAGEMENT IN THE ARAB WORLD

In the Arab world, the concept and/or practice of knowledge management is relatively a new phenomenon (Al-Saifi, 2015; Al-Sabri, 2007). However, the importance and the processes of the knowledge management activities are beginning to attract attention in Arab countries, including Yemen (Al-Sanoy, 2015; Al-Rawi, 2008). Nevertheless, only information professionals, researchers, and managers were familiar with the practice of knowledge management and the importance of its sharing. In fact, people use the term knowledge management interchangeably with information management believing that it connotes the same concept (Pangil and Chan Joon Moi, 2014; Al-Rawi, 2008).

Al-Zamil (2013) and Al-Sabagh (2014) discussed the important role knowledge management can play in building an information society in the Arab world. They explained the benefits of knowledge management, and how managers can build a knowledge sharing culture using the sources of knowledge in the organizations to create, exchange, and utilize knowledge. As a result, organizations can achieve success and sustainability, which would eventually lead to knowledge-based society.

Biygautane and Biygautane and Al-Yahya (2011) examined the implementation of knowledge management practices in government's organizations in Dubai, and they identified that employees were not fully aware of the knowledge management practice, and the critical role it plays in the development and sustainability of organizations which are considered barriers. The study also found that organizational culture and lack of trust were equally barriers to effective knowledge management.

Al-Rawi (2008) investigated knowledge management resources for employees in an organization United Arab Emirates that involve the utilization of technology to their best advantage. He concluded that knowledge management practices might be introduced and/or embraced by the organizational structures. He believes that building the KMS for employees will greatly enhance their capacity to contribute to it, and/or share their knowledge.

With regards to the benefits of knowledge management for organizations, Al-Athari and Zairi (2010) examined the availability of knowledge management systems in Kuwaiti organizations and the methods of improving them to achieve organizational objectives. They found that knowledge management is a key ingredient for the development of an organization, and that both human resources and organizational-based knowledge were the main sources of ideas for knowledge