



**INVESTIGATING THE EFFECTIVENESS AND
BENEFITS OF KNOWLEDGE MANAGEMENT TOOLS
IN MANAGING CUSTOMER KNOWLEDGE**

BY

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**A dissertation submitted in fulfilment of the requirement for
the degree of Masters of Information Technology**

**Kulliyyah of Information and Communications Technology
International Islamic University Malaysia**

APRIL 2014

ABSTRACT

Competitive challenges among companies have compelled them to focus on innovation, customer satisfaction, knowledge management and how they can exploit customer knowledge through the use of knowledge management tools to remain competitive and maximize their profit. Science of Communications Berhad (SCICOM) is one of the largest Business Process Outsourcing Companies in Malaysia that has invested a lot in the area knowledge management and adopted this strategy of efficient exploitation of customer knowledge through the use of knowledge management tools to support the business processes of Large companies like Singapore Telecommunications Company (SingTel), Air Asia, Nokai, McDonald, Asro, e.t.c Although Science of Communication (SCICOM) employees have been using knowledge management tools, it is not yet known empirically how the employees perceived the tools and the level of effectiveness and benefits accruing from the use of the tools. Although, few studies have been carried out, none of them focused on these dimensions in the organization. Therefore, the study examined the perception of SCICOM staff on the effectiveness and benefits of using knowledge Management tools in managing customer knowledge. Stratified random sampling technique was used and a total of 169 questionnaires was distributed to the staff. The employees involved were from the technical help desk, Fiber general enquiry, Learning and development and Air Asia departments of SCICOM. The results showed that perceived ease of use (PEOU), perceived usefulness (PU), and attitude (ATT) have significant and positive influence on behavioral Intention (BI) towards knowledge management tools usage. In addition, perceived ease of use (PEOU) and perceived usefulness (PU) also have significant and positive influence on attitude (ATT). Furthermore, behavioral Intention (BI) and attitude (ATT) were found to show positive influence on system use and lastly, system use also indicated positive influence on benefit derived from knowledge management tools.

ملخص البحث

التحدي والتنافس الفعال في بيئة العمل بين الشركات أجبرت العديد من الشركات على التركيز على الابتكار، ورضا العملاء، وإدارة المعرفة، وكيف يمكن استغلال معرفة الزبون من خلال استخدام أدوات إدارة المعرفة لتظل قادرة على المنافسة وتزيد من أرباحها. علم الاتصالات بيرهاد (سايكيم) هي واحدة من أكبر شركات في صناعة التعميد التجارية في ماليزيا التي استثمرت كثيرا في مجال إدارة المعرفة واعتمدت هذه الاستراتيجية على الإستغلال الفعال للمعرفة الزبون من خلال استخدام أدوات إدارة المعرفة لدعم العمليات التجارية للشركات الكبيرة مثل شركة الاتصالات السنغافورة و طيران آسيا، ونوكيا، وماكدونالد... الخ وعلى الرغم من أن الموظفين في سايكيم قد استخدموا أدوات إدارة المعرفة ولكن ليس هناك دراية و معروفة التام حتى الآن لكيفة التي ينظر لها الموظفين لأدوات المعرفة، ومستوى الفعالية و الفائدة من استخدام الأدوات المعرفة. على الرغم من أن هناك دراسات قليلة قد أجريت، فإن أيا منها لم ركز على هذه الأبعاد في المنظمة. لذلك، هذا البحث يركز على دراسة التصور فيما يتعلق علي أدوات إدارة المعرفة وفعاليتها و الفوائد المترتبة على استخدامها بين موظفين شركة سايكيم لأرضاء الزبون. تم استخدام الاستبان في أخذ عينات عشوائية من موظفين الشركة وقد تم توزيع 169 استبيان. تم التركيز على موظفين المعنيين في الاستبيان من مكتب دعم الفني و التقنية، وقسم الإستفسارات العامه في الالياف، والتعلم و التطوير وإدارة طيران آسيا في سايكيم. أظهرت النتائج البحث أن نظرة الي سهولة الاستخدام، ونظرة الي الفائدة، و السلوك لديها تأثير كبير وإيجابي على النية السلوكية للموظف نحو أدوات إدارة المعرفة وإستخدامها. بالإضافة إلى ذلك، نظر إلى سهولة الاستخدام ونظر إلى فائدة أيضا لها تأثير كبير وإيجابي على السلوك. وعلاوة على ذلك، تم العثور على النية السلوكية و السلوك لها تأثير إيجابي على استخدام النظام و أخيرا، استخدام النظام أيضا له تأثير إيجابي على المنفعة المستمدة من أدوات إدارة المعرفة.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Information Technology

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DECLARATION

I hereby declare that this dissertation is the result of my own investigation, except where otherwise stated. I also declare that it has not been previously or currently submitted as a whole for any other degrees at IIUM or other institutions.

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Signature.....

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This work is dedicated to the Almighty Allah, the giver of all true knowledge

ACKNOWLEDGEMENTS

All thanks are to Almighty Allah for giving me the ability to accomplish this program successfully despite the challenges I encountered in the process.

I would like to thank my supervisor Assistant Professor (Dr.) Ishaq Oyebisi Oyefolahan for his diligent efforts in supervising my work and guiding me towards making this research work a success. In fact, there is no amount of words that can convey my appreciation to this great gentleman.

Moreover, I would like to also thank my lovely parents, brothers and sisters for their support towards this great achievement.

Finally, I am grateful to all those who have in one way or the other contributed to my success not only educationally but in all other life endeavors.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Businesses are in a perpetual race to augment their profit, retain their current customers and gain new ones and competing with one another in a globalized market like never before Jens (2010). One of the main set of tools aiming at gaining competitive advantage, providing customer satisfaction and having close interaction with customers is by obtaining and managing customer knowledge (CK). The new trend in recent times is how to convert customers from passive knowledge consumers to becoming active knowledge producers Gibbert (2002).

Customer-centric companies spent much money on knowledge management tools like company email, call centers, website and various knowledge management solutions that can aid in capturing and management of customer knowledge, this is because they realize that management of customer knowledge allows companies to remain innovative and gain competitive advantage over their counterparts Science of Communication (SCICOM) has invested immensely in setting up a call center that supports business process of companies like Singapore Telecommunications Company (SingTel), Air Asia, Nokia, Tesco, McDonald. Through its daily interaction with customers, the company is rich in customer knowledge and through the use of knowledge management tools for acquiring customer knowledge like email, websites, meeting, brainstorming, knowledge transfer tools like fax, email, post mail, websites, meeting, and customer knowledge application tools like VERINT, it has been able to excel in managing customer knowledge and improving its leadership in the industry. In terms of its business process also, its quality and efficiency has improved greatly.

Through the knowledge they gained from analyzing customer knowledge, they are able to offer new value added features to their clients.

Although this company is obviously excelling in its business, as indicated by its financial income of RM14, 978, 437 for the year 2012 (SCICOM annual Report, 2012), no empirical study has been conducted so far to investigate the effectiveness and benefits of knowledge management tools in managing customer knowledge in the company in particular and only few studies focus on customer knowledge in knowledge management literature at addressing this gap.

1.2 STATEMENT OF THE PROBLEM

Several studies have examined the adoption of technology using various models that comprise of technology acceptance model, Task technology fit model, theory of reason actions etc in assessing the adoption in various organizational settings and in particular IT related organizations. Most of IT or its related organizations normally carry out studies prior to adoption of technology and sometime after adoption in order to assess the critical success factors of adoption.

SCICOM is one of the organizations that adopt technology of outsourcing service that support business processes of organization such as SingTel, Air Asia, Nokia, Tesco, McDonald etc. In meeting the needs of their client, SCICOM adopts technology solution which focuses on three areas Technology Consulting, Technology Systems and Solutions, and Infrastructure, Networks and Communications Development. The technology solution provides capability that clients always have direct access to their team of consultant and are provided with effective and cheaper alternatives for premium customer care to their respective end-customer.

The technology solution enables daily interaction with customers thereby allowing SCICOM to have adequate customer knowledge through application of knowledge management (KM) tools that comprise of email, websites, meeting, brainstorming, knowledge transfer tools like fax, email, post mail, websites, meeting etc. Although SCICOM employees have been using the aforementioned knowledge management tools, their perception about these knowledge management tools remains unknown. In addition, the level of effectiveness, efficiency and benefits accruing from the use of the knowledge management tools is blurred and this consequently calls for empirical investigation. Therefore, the study aimed at investigating the effectiveness and benefits of knowledge management tools in managing customer knowledge.

1.3 RESEARCH OBJECTIVES

1. To assess perception and acceptance of knowledge management tools among SCICOM staff
2. To determine significant predictors of knowledge management tools adoption among SCICOM staff.
3. To assess the influence of SCICOM employees' system use on benefits.

1.4 RESEARCH QUESTIONS

1. Does perceive ease of use (PEOU) of knowledge management tools influences SCICOM employees' behavioral intention and attitude towards use of system?
2. Does SCICOM employees' perceived usefulness of knowledge management tools relates to behavioral intention and attitude towards use of system?

3. Does SCICOM employees' attitude towards the use of system influence behavioral intention and system use?
4. To what extent does SCICOM employees' behavioral intention affects system use?
5. Does system use for customer knowledge management leads to benefits?

1.5 SCOPE AND LIMITATION OF THE STUDY

The study is limited to employees of SCICOM who are using knowledge management tools for managing customer Knowledge. It considers employees in only four departments comprising of Technical Help desk, Fiber General Enquiries, Learning and development and Air Asia.

1.6 SIGNIFICANCE OF THE STUDY

The study will employ Technology acceptance model (TAM). Therefore, the significance of the study theoretically is that it will further evaluate the components of this theory such as perceived ease of use, perceived usefulness, attitude, behavioural intention etc in outsourcing organization, demonstrating that this theory is very much relevant when assessing technology adoption and acceptance in outsourcing industries and alike.

The study is going to also reveal the flexibility and adoptability of these theoretical components. The findings of the study therefore will add value to the theory by assessing the extent of perceived ease of use, perceived usefulness, behavioural intention, attitude contribution towards the KM tools, systems use as well as benefit of the knowledge management tools.

Practically, the study is useful to SCICOM as it explores the ease of use, usability, behavioural intention, attitude, system use and benefits of customer knowledge management tools among employees of the company. Moreover, the study has succeeded in finding out the variables that contribute tangibly to the benefits of knowledge management tools so that SCICOM can utilize the information to improve employees' performance, quality of service and service delivery towards organizational objectives.

In terms of policy formulation, the outputs of the study would help SCICOM in making improved policies that can help the organization and its employees to accomplish their expectations and demands. In addition, the findings can help the organization to improve the quality and efficiency of the systems for better productivity of employees. Moreover, the findings will provide a ground for the organization to improve the effectiveness and benefits of customer knowledge for companies preparing to be customer centric. Finally, will be an important reference for organizations, educators, students, researchers and employees.

1.7 DEFINITION OF TERMS USED

Perceived Ease of Use (PEOU)

The perceived ease of use of Knowledge Management tools may be defined operationally as the extent at which employees of SCICOM believe that using Knowledge Management tools requires no efforts.

Perceived Usefulness/Usability

Perceive usefulness is operationalised as the employee's perception that using knowledge management tools improves their job performance.

Behavioural intention

Behavioral intention is operationalised as the measure of the strength of the staff's intention to use knowledge management tools.

Attitude

Attitude is operationalised to mean the positive or negative feelings of the employees of SCICOM or their evaluative effect about their use of Knowledge management tools for managing customer Knowledge.

System use

System use operationally refers to how often the employees make use of the knowledge management tools.

Benefits

Operationally is defined as receiving the right information at the appropriate time to make the right decision while utilizing the knowledge management tools.

Customer Knowledge

Customer knowledge refers to the knowledge that customers of SCICOM possess about the products and services of the clients of SCICOM like SingTel, Air Asia, McDonalds, Astro or the knowledge that can be harnessed through the interaction of the employees with the customers using knowledge management tools like their call center, website, email or fax.

Knowledge Management Tools

Knowledge management tools in the context of this research refers to the different tools that SCICOM uses for acquiring customer knowledge like call center, company emails, website and knowledge application tools like VERINT (software application that helps to capture, evaluate calls and learn from customer interactions by recording calls) and Interactive contact Management system which is used by the employees for interacting with customers and recording every conversation they had.

1.8 ORGANIZATION OF THE DISSERTATION

The research will consist of six chapters:

CHAPTER 1: This chapter is the introductory chapter and will consist of the background of the study, statement of the problem, objectives of the study, research questions, Scope and limitations of the Study, Significance of the Study and definition of terms used in the research.

CHAPTER 2: This chapter focuses on literature review and discusses an organized review of related and relevant literature on the topic of discussion.

CHAPTER 3: This chapter focuses on explaining the theoretical background of the research and highlight on the hypothesized model for the research.

CHAPTER 4: This chapter focuses on the research methodology that would be undertaken to address the hypothesis or the research questions raised. Data collection and analysis techniques will be discussed

CHAPTER 5: This chapter focuses on testing the hypothesis and explaining and the findings of the research.

CHAPTER 6: This chapter will be the final chapter and will focus on discussion, conclusion and recommendations for further study and for policy formulation for SCICOM.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The objective of this chapter is to review related literature on the subject of investigation. The chapter will be discussing the concepts of knowledge management, knowledge management tools, and finally, summary of the chapter.

2.2 AN OVERVIEW OF THE STUDY AREA

SCICOM is one of the largest contact centre outsourcing service providers in Malaysia, the company is a global CRM Consulting, Technology services, Education and Outsourcing Company. With domain experience, and comprehensive capabilities across all industries and business functions, it is a Business Process Outsourcing (BPO) company responsible for performing a process or a part of a process of a client's business which involves handling telephone calls and customer complaints coming in over a telephone on behalf of their clients. SCICOM currently manages customer interactions in 40 languages, covering over 89 countries and delivering "Total Customer Delight" to over 40 million customers worldwide.

The company focuses on finding innovative ways to leverage on customer interaction to enhance brand value in the areas of:

- 1) Attending to customer enquiries consistently
- 2) Service request and feedback
- 3) Explaining products and services
- 4) Promptly identifying customers' needs and concerns

SCICOM Outsourcing comprises of Business Process Outsourcing (BPO), Knowledge Process Outsourcing (KPO) and Human Resource Outsourcing (HRO). This is the main thrust and cornerstone of SCICOM's business, employing the major part of the Group's human capital.

The SCICOM offers core Business Process Outsourcing (BPO), in areas of social media support and care, technical supportive help desk, multifaceted multi-lingual, and multi-channel customer, associated fulfillment services, and counseling and consultative sales. They provide specialist Knowledge Process Outsourcing (KPO) services to some organizations that include the Education, Telecommunications industries, Airline, and Healthcare. The SCICOM's HRO offerings encompass a wide range of services catering for employers across all industry verticals. These services range from recruitment and payroll services to the implementation of their proprietary consulting, analytics and performance management.

SCICOM specializes in an integrated approach that strategically uses the best combination of CRM activities, tools and methodologies across every customer touch point and every channel. Among the Services the SCICOM offers ranges from E-Commerce Applications and Support Services, Customer Loyalty Management, Database Profiling, Customer Relationship Management (CRM), Marketing, Management and Segmentation, Brand Communication Services, to Web Analytic. The SCICOM roll out the commercial aspect its offers in term of E-Loyalty platforms andvE-Commerce that enable it to provide support to companies who need the services of outsourcing in a full package of all the needed complimentary services, like design, strategic, business consulting, development, consulting, customer support, implementation, and operations. In addition, the SCICOM offers certification for its

branches and contact centers within the regional area on Support Centre Practices (SCP). The certification (SCP) is one of the top benchmarking standard around the world for contact centers services.

2.3 CONCEPT OF KNOWLEDGE MANAGEMENT

Knowledge management deals with individuals and organizational expertise as well as application of expertise to obtain maximum benefits and return from the knowledge resources. Knowledge management enables the right people at the appropriate time to get access to the right knowledge with a view to making right decision (www.trainmor-knowmore.eu). In addition knowledge management also involves identifying and analyzing available knowledge demanded as well as planning and control of actions with a view to forming knowledge resources in order to meet the objective of the organization.

Davenport & Marchand (2001) contend that nowadays, having knowledge and utilizing it in organizations has become a procedure which can lead to gaining competitive advantage. Availability of knowledge in organizations is such a valuable asset that empowers them in various complicated situations. According to Metaxiotis (2009), a lot of researches have been carried out on knowledge management in the last two decades. Base on previous studies, Knowledge management has been given various interpretations. Hibbard (1997), defines KM as ‘the process of capturing the collective expertise of the organization from different sources (i.e., databases, paper and people) and utilizing that knowledgebase to leverage the organization; Davenport & Prusak (1998), view ‘Knowledge management as issue that is concerned with the exploitation and development of the knowledge assets of an organization with a view of furthering the organization's objectives'. Similarly, Kamara et al. (2002) also