

**THE EFFECT OF INFORMATION SYSTEM
EFFECTIVENESS ON ORGANIZATION
PERFORMANCE IN PUBLIC SECTOR AT KOTA
KINABALU: THE MODERATING EFFECT OF IT
KNOWLEDGE.**

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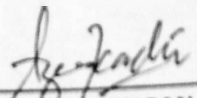
JUDUL KAJIAN: THE EFFECT OF INFORMATION SYSTEM EFFECTIVENESS ON ORGANIZATION
PERFORMANCE IN PUBLIC SECTOR AT KOTA KINABALU : THE MODERATING
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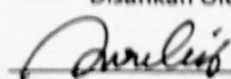
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ABSTRACT

Nowadays Malaysia is seen as an able country that can create its own new technologies. The implementation of information system in organizations definitely can improve the organizations' performance. Aspects of system efficiency, system integration and system quality are among the variables that must be looked upon closely to make sure the organizations' performance can be improved. This study investigates the benefits of information system usage in improving organizations' performance in public sector. Targeted respondents of this study are the employees who are working in Information Technology department and also the managerial-level workers in specific organizations chosen. The research design used for this study is survey of which a questionnaire is prepared in order to collect the data needed. This research is using Partial Least Square (PLS) analysis by performed using smartPLS software. The findings show that, the information system effectiveness has significant relation towards organization performance but it only for the system integration and system efficiency.

ABSTRAK

The Effect of Information System Effectiveness on Organization Performance in Public Sector at Kota Kinabalu: The Moderating Effect of IT Knowledge.

Pada masa kini Malaysia dilihat sebagai sebuah negara yang mampu yang boleh mencipta teknologi baru sendiri. Pelaksanaan sistem maklumat dalam organisasi pasti dapat meningkatkan prestasi organisasi. Aspek kecekapan sistem, integrasi system dan kualiti sistem adalah Antara pembolehubah yang perlu dilihat dengan teliti bagi memastikan prestasi organisasi-organisasi itu boleh diperbaiki. Kajian ini menyiasat manfaat penggunaan system maklumat dalam meningkatkan prestasi organisasi di sektor awam. Sasaran responden kajian ini adalah pekerja yang berkerja di Jabatan Teknologi Maklumat dan juga pekerja-pekerja pengurusan peringkat atasasn dalam organisasi-organisasi tetetentu yang dipilih. Reka bentuk kajian yang digunakan untuk kajian ini adalah kajian soal selidik yang disediakan untuk mengumpulkan data. Kajian ini menggunakan Partial Least Square (PLS) analisis dengan menggunakan perisian smartPLS. Dapatan kajian menunjukkan bahawa keberkesanan sistem infomasi mempunyai kesan yang ketara terhadap prestasi organisasi tetapi hanya untuk kecekapan sistem dan kualiti sistem.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

In this chapter is introducing about general explanation and overview about this study. This study is focusing about information system where it comes from technology perception. There have several effects towards the information system effectiveness in public sector there are system efficiency, system integration, and system quality toward organization performance. This chapter is discuss about background of study, problem statement, research question, research objective, significant of study and definition of term on every independent variable and dependent variable also in moderating variable.

1.1 Background of study

In Malaysia, technology is some of the important part in their people life. From day to day technology is being upgrade in order to get the great technology. Technology is a tool that people can use in order to make their life easier such as pay their bills, do transaction money, and search for the information and so on. There have research from the past stated that not only the technology can make organization produce a more productivity but the productivity are depend on how the technology can integrated into the organization (Gagnon and Dragon, 1998). Information technology is play important role in almost every organization and the consideration of budgeting that the organization spent on information technology are needed in order to gain the competitive advantages (Belkhamza & Syed Azizi Syed Wafa, 2012)

Other researcher stated that information technology is a tool that produces information that can refer as product, method, invention, and standards. Tools that the researcher refers are hardware, software and data components. (Shehadeh et al. 2013). Nowadays, information technology has received a great deal of attention, not only focus on academic field it also focusing in on business world (Gargallo-Castel A. et. al)

Information system can be defined as integration of information technology there are integration of tool, hardware, software and data component which can be interrelated with element or component that be collect, store, process, and report data and information that can used in order to enhance the process of decision making (al-adaileh,2008). Information system are widely used by many organization in order to used automatically the existing operation and want to improve the organization performance in term of the activities. Most the researcher shows that the information system adoption can be increase the organizational performance and the operational efficiency.

Business now on, usually depend on information system to offer service with greater satisfaction to employee, to access a wider range of information, to handle business changes at a greater speed and to increase the productivity of worker. The information system important to every organization because of through the information system the employee can receive the information easily without used the manual approach to get the information (Belkhamza et al., 2012)

In Sabah the technology usage in this state are quite innovative because of the public organization in the Sabah there is focusing in Kota Kinabalu are using their own system in organization and rare of the organization using the manual or traditional method. It not only the public sector implement the technology in their organization but the organization from private also are using the technology in order to make their employee productivity more increase (Belkhamza et al., 2012)

1.2 Problem statement

The purpose on this study is to evaluate whether the information system usage has an effect on organization performance of the public sector in Kota Kinabalu. One of the issues in organization performance is the productivity of the employee in term of the usage of information system. According to jacks et al. (2011) the productivity meaning include both there are improvement and process improvement.

Many organization try to refuse to using information system, the reason organization refuse to used information system in one organization is costly and budgeting. According to Al-adaileh (2008) stated that information system initiative is the costly investment in organization. The information system in organization is costly because of the poorly calculate investments on information system development in an organization could cost the organization to pay more (Gunasekaran et al., 2001)

Organizations refuse to use information usually because of the several problems that occur in their organization. According to Bharadwaj et al. (1999) the organization usually thinking in term of financial and the significant problem that organization usually facing are they only reflect the past information and not looking forwards (system failure), and organization are not adjusted for risk.

Information system is important in organization because based on information system or system that organization provides it can be run the operational activities in organization smoothly. Kamel et al. (2012) mentioned that information system play important key role in organization and the design of information system can give impact on the design of the organization, individual behaviour and the management in organization process. According to Stanton & kathryn (2003) mention that information system nowadays, play important role in order to monitoring and surveillance of worker behaviour in organization. The organization performance usually will be looking into productivity of worker in order to given the organization impact in organization.

Nowadays, the information technology is very needed in organization to make the employee task going efficiency and effectiveness. Therefore, the efficiency of the system usage is important toward organization performance. According to Keszthelyi (2010) stated that the efficiency is the capabilities to cope with the system. The capability is determined by several different factors there are the hardware environment, the software environment and the quality of the system. It means the efficiency towards usage of the system in organization. In order to use the system, it must look into three factors of the capability to improve the organization performance.

The organizational performance (productivity) is not depend only to technology itself but it depend on how the technology integrated into the organization (Gagnon and Dragon, 1998). The integration must be aligning between the system strategy and the business strategy. When the system strategy and business strategy are aligning therefore, the organization of the performance will be improved. According to Litan et al. 2011 stated that there have challenges in order to the company integrate their information system. The challenges that same time is the cost that will be the organization used in order to make the system in the organization integrated with one another.

The system quality is the one of the way of the organization to separate their information towards their employee. If the organization used the quality system it mean the information can easily can distributed to the organization. According to Bernroider (2008) mention that in order to measuring the system quality it can affect intention to use, user satisfaction and the net benefit. Quality in system is important because the quality in one system it usually can give impact to net benefit there is in term of individual effect and organization impact.

1.3 Research questions

This study is focusing in the effect information system efficiency towards organizational performance and the research question follow as:

- a) What is the effect of system efficiency to organization performance?
- b) Why the organization performance can be influenced by integration of the system?
- c) Does the organization performance can be influenced by system quality?
- d) What the effect of IT knowledge towards system efficiency and organizational performance?
- e) What the effect of IT knowledge towards system integration and organization performance?
- f) What the effect of IT knowledge towards system quality and organizational performance?

1.4 Research objectives

1.4.1 General objective

On this study, the general objective is to examine the possible factor that can influence the system in one organization among the selected employees such as the employees in IT department and the managerial level in public sector in Kota Kinabalu, Sabah. The objectives of this research also are to analyse the moderating effect of IT knowledge of the employees on their organization performance.

1.4.2 Specific objectives

This study was conducted because of want to know the specific effect of information system towards organizational performance. The following objectives were proposed:

- a) To examine the effect of system efficiency towards organizational performance.
- b) To examine the effect on system integration of system towards organization performance.
- c) To examine the effect of system quality towards organization performance.
- d) To analyse the influence of IT knowledge on system efficiency and organizational performance.
- e) To analyse the influence of IT knowledge on system integration and organizational performance.
- f) To analyse the influence of IT knowledge on system quality and organizational performance.

1.5 Significant of study

This study is conducted to ensure that the all employee in public sector especially at kota kinabalu know that the information system can be affected in order to improve their organizational performance. Furthermore, the result of this study can be used for the future researcher in order to investigate among the related topic.

In addition, this result also can be used in another state in Malaysia in order to improve their organization performance through usage of technology. This study can provide appropriate data and information in order to help manager or administrators to take the right decision and looking toward their productivity and service quality in order to improve their organizational performance in term of information system.

Furthermore, this research is measuring the usage of the technology in one organization. This research also can be looked into the productivity that the employees produce toward their service or product. The productivity of employees in the one organization can be effect toward individual performance also to organization performance. Through the technology, it can give the employees more productive in the organization.

Last but not lease, this study can be used in the public sector in order to increase their efficiency and their effectiveness to system in an organization. The system are looking towards their system efficiency, system integration and system quality in order to make their system run smoothly and make the organization easily doing their daily task and it automatically can improve their organizational performance and productivity.

1.6 Definition of terms

1.6.1 Organizational performance

Organization performance is the result that the employee produces to compare with actual goal to desire goal of organisation. According to Gupta (2013) organization information system can outlook as federation of information system it means one of the information systems for every one of major organization function.

1.6.2 System Efficiency

Efficiency is used the resources accordingly. Not waste one single of the resources. Not only efficient to resources but it also related with time and monetary. According to Abugabah et al. (2000) mention that to examine efficiency in the information system can be measure by the awareness that can be improve the performance efficiency associating that linking to the actual benefit of information system towards performance.

1.6.3 System Integration

Integration is the combination of the system or technology with each other to perform the better performance. According to Spilka et al. (2009) System Integration can be defined as the connection of the processes, procedures and practices of the working of applied at the organization in the goal of its politics implementation which can be more effective in achieving goals resulting from the politics than the approach through separate systems.

1.6.4 System Quality

System quality is the one of the integrated with the data and user in organization. System quality is measure the reliability and predictability of the system. System quality is referring to the measurement of the process of the system itself by Kurian (2000). It means the quality of the system towards the end user.

1.6.5 IT knowledge of employee

Person who has knowledge there is the belief of the one thing in term of technology. The knowledge usually gains from experience or the education. According to Abdel Nasser H. Zaid et al. (2012) stated that the IT knowledge is the skill and experience inherent in their systems and structure as well as tacit knowledge belonging to the employee of the organization and it is important in order to organization manage it.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter provide the relevant literature from the past researcher or the past study in order to support the independent variable and dependent variable in this study. From this chapter, theory that related in this framework of the research is theory DeLone and McLean Model. this chapter also focussing on the exploration of past researcher that relate with independent variable, dependent variable and moderating variable in this study. The independent variable of this study are system efficiency, system integration and system quality, the dependent variable of this study are organizational performance while the moderating effect on this study are IT knowledge.

2.1 Overview

Technology can be defined as the important in organization because the technology is a tool that usually organization used in order to communicate with employee or customers. Information system can defined in to two parts, firstly is process of the activity that the organizational face in day to day operational and the second part is element of information system (Kamel et al., 2012)

According to Kamel et al. (2012) Firstly the process or activities of information system include four elements there are acquiring information, information processing, storage information and circulation and dissemination of information. The meaning for the acquiring information is the collection of information that can be result as a voluntary, involuntary, repetitive information, and not repetitive. It mean data that be received not have information or the data

is raw data. The second elements of the information activities are the information processing, it mean the data will be transform to the information it mean the data has the meaning and information to interpret. Next elements are storage information, this element is to store the information or data and if there have wrong data, should be correct it and update for the new data or information. The last elements are circulation and dissemination the information it mean the data or information was be transmitted to various form such as report, message, lists and etc. and the information will be disseminated by network like internet, intranet, telephone and so on.

For the second part is element of information system is the set of the people, procedures and resources to acquire, process or transform, store and communicate information in order to gather information and this process will be distribute within an organization. There have three component of element information system there are men, material and procedures. Men mean people who are control the tool (information technology). A man is a user, end-user or manager. The men or user are play important role in order to manage the system that implement in organization. For the next component is material, it mean data or information that be used by people in order to processing the information from their acquisition to their dissemination and use. The material also includes by machine such as computers, media such as tapes and program such as the software. The last component is procedure. In this component it more to how the user divided, shared and performed the task and information processing. The procedures is more about rules, management practices and cultural of the business (kamel et al., 2012)

Communication is the way of transferring the information to one resource to another. The communication is important because when the communication is lacking therefore, the information cannot be receive to other parties. When the communications are good the employee will present the task very well. The main modes of the communication within the organization are through phone and fax, face to face and used of e-mail for communicates with customers and suppliers.

According to Olugbode, Elbeltagi, Simmons and Biss (2008) a lot of the previous study that investigate in this area said that the clear of the communication channel in organization and between organization and their customers have the positive effect on organizational performance.

2.2 Theory

This study used McLean and DeLone Model. According to wang et al. (2008) mentioned that there have six dimension of the theory of the McLean and DeLone there are information quality, system quality, service quality, use, user satisfaction and perceived net benefit.

According to Peter et al. (2009) mentioned that DeLone and McLeon categories the system success by mapping an aspect of IS success to each of Mason's effectiveness level, regarding into this analysis there have six variable of the IS success there are system quality, information quality, use, user satisfaction, individual impact and organizational impact. For the system quality it was equivalent technical level of communication, while information quality was equivalent to the semantic level of communication, and the other four variables there are use, user satisfaction, individual impact and organizational impact is the influences of the information on the system.

According to Seddon et al. (1999) critiqued the model of DeLone and McLeon and also raised the model related issues, they (Seddon et al, 1994 and 1997) suggested that the model of DeLone and McLeon should use 'usefulness' rather than 'system use' as the indicator of the information system success that may lead the use satisfaction. But according to DeLone and McLeon (2003) 'systems use' is the appropriate measure of information system success rather than system 'usefulness' that suggest by Seddon.