The Relationship of Knowledge Management Practices, Competencies and the Organizational Performance of Government Departments in Malaysia

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Abstract— This paper attempts to highlight the significant role of knowledge management practices (KMP) and competencies in improving the performance and efficiency of public sector organizations. It appears that public sector organizations in developing countries have not received much attention in the research literature of knowledge management and competencies. Therefore, this paper seeks to explore the role of KMP and competencies in achieving superior performance among public sector organizations in Malaysia in the broader perspective. Survey questionnaires were distributed to all Administrative and Diplomatic Officers (ADS) from 28 ministries located in Putrajaya, Malaysia. This paper also examines preliminary empirical results on the relationship between support for knowledge management practices, competencies, and orientation in Malaysia's public organizations. This paper supports the notion that the practices of knowledge management at the organizational level are a prerequisite for successful organizational performance. In conclusion, the results not only have the potential to contribute theoretically to both management strategy and knowledge management field literature but also to the area of organizational performance.

Keywords—knowledge, knowledge management practices, competencies, organizational performance

I. INTRODUCTION

ATTENTION to practices of knowledge management is no longer exclusive to the private sector; it is also very important for the public service sector. In Malaysia, the Government realized that performance, efficiency and effectiveness in the public service sector can be improved through the implementation of appropriate knowledge management practices in line with the private sector. Knowledge management practices appear to be a very important element for every organization to be competitive and to ensure its survival.

The Malaysian government's effort to improve the performance and efficiency in the public services sector began from a report submitted by *Esman Montgomery* in the 1970s. The Malaysian Government realizes that the performance and efficiency in the public service sector should be improved in parallel with the goals of national development and as a vital approach to ensure that *Vision 2020* is achieved. In line with the government's vision and policy, the civil service must strive to improve and review ways of doing things.

On 1st November 2002, the government of Malaysia started to implement the Malaysia Remunerative System (MRS) which emphasized on knowledge as the key element to improve the performance and efficiency of the government agencies. All civil servants have to attend mandatory courses every year to enhance their competency and efficiency. The courses, to equip the civil servants with the right attitude, skills and knowledge, are also meant to inculcate the lifelong learning culture among government employees. Parallel with the direction and policy of the government of Malaysia as above, the need for the civil service to embark seriously on the implementation of knowledge management practices is accurate and timely. In light of this scenario, the government department as the role model to the public should become competent enough not only to execute the agenda given on the MRS and *Vision 2020* but also to perform steadily in the real world [20, 27].

With the right mechanism or tools undertaken, Malaysians, particularly in public agencies as the base, are capable of becoming a competent workforce by giving high prioritization to the knowledge required to carry out the operation of the governance [31]. In this aspect, it has been observed that a knowledge management system is an enabling mechanism for transferring the knowledge required [22]. Indeed, [22] further explained that the system acts as an agent to support the creation, organization, and dissemination of business knowledge to employees and managers throughout a company. Therefore, government departments can obtain information more quickly and accurately, be better informed and make more timely decisions [3, 4, 17]. In fact, they must explicitly link the strategy of competencies, knowledge management, and performance, in order to increase the probability of adding value thus, becoming capable of becoming a competent workforce [27].

Thus, the right practices of knowledge management should be acquired [8]. Whether this discipline is properly disseminated throughout the services of a government department, being the principle driving force with the right personal competencies, a public agency is believed to be able to improve performance and productivity of the organization [27].

Nowadays, knowledge management has been illustrated as a significant discipline in leading to positive performance in the organization [32]. Without synchronization of knowledge management and core competencies, the organization would not succeed in long-term survival and remain in competitive advantage [16, 31]. As an organization brings together these two interdisciplinary areas, its performance will be better, especially in a changing and unpredictable environment [28]. Conversely, if an

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organization fails to incorporate the skills necessary, the performance will deteriorate [16]. As such, there is a need to conduct a study that will identify the right practices of knowledge and core competencies and see how their practices affect the performance of the organization, particularly, the public agency.

There has been a great deal of research explaining what makes knowledge management and core competencies the critical practices for performance [16, 31], but little research has been done on the association of knowledge management practices and core competencies to the performance of the government departments in Malaysia. In bringing this gap, this study attempts to discover the relationship between knowledge management practices, core competencies and the organizational performance of government departments in Malaysia.

II. RESEARCH OBJECTIVES

The general objective of this study is to determine the relationship of knowledge management practices, and competencies, to the organizational performance of government departments in Malaysia. The specific objectives are to:
1. determine the levels of knowledge management practices, competencies, and the organizational performance of government departments in Malaysia;
2. determine how much variance in organizational performance can be explained by scores on knowledge management practices and competencies;
3. determine the best predictor of organizational performance: knowledge management practices or competencies;

III. LITERATURE REVIEW

A. Resource-Based View of the Firm (RBV)

In 1993, [1] split-up RBV into resources and capabilities. In this respect, resources are tradable and non-specific to the firm, for instance organizational processes. On the other hand, capabilities are firm-specific and used to utilize the resources within the firm, such as implicit processes to transfer knowledge within the firm.

The resource-based view holds that firms should focus explicitly on knowledge as the ultimate resource [19]. All these resources must enable an organization to gain a value-creating strategy, by either outperforming its competitors or reducing its own weaknesses [1, 4].

It is difficult to design a system without taking into account some of the human factors that influence knowledge management system, such as getting people to share their knowledge [12]. Knowledge management implementation involves not only an analysis of business strategy and integration with information communication technology but also the human capital development inside it [27].

B. Knowledge-Based View of the Firm (KBV)

There are a lot of definitions on knowledge management. In general, knowledge management (KM) as defined by [26] involves managing the organization's intellectual capital, human resources, and strategic relationships. This is further consistent with [37] who define knowledge management (KM) as the process of creating or capturing knowledge (knowledge acquisition), storing and protecting it, updating and maintaining it (knowledge dissemination), and using it whenever necessary (the use or responsiveness to knowledge). In a similar fashion, the increasing amount of technological integration used in designing operating systems and procedures is responsible for the evolution of what is known today as KM [26].

[13] further credit knowledge management with the technological considerations to increase efficiency level among public sectors, which is supported by [25] who says that KM is a discipline that systematically leverages content and expertise to provide innovation, responsiveness, competency and efficiency. Nevertheless, [15] describes knowledge management as nothing more than managing information flow, i. e. getting the right information to the people who need it so they can act quickly.

[19] in his study suggests that the concept of knowledge management is divided into three instances; development; utilization and capitalization. As [24] implies, the knowledge of an organization is based upon his or her skills and experiences and ability to absorb new knowledge. Therefore, while knowledge is a resource in its own right, the way in which knowledge is managed and used will affect the quality of services that can be leveraged from each resource owned by the firm [9]. Thus, she further explains that knowledge management is placed in an important supporting role within the firm [9].

Knowledge management behaviors and practices are conceptualized as organizational routines [21]; firms with better developed knowledge management routines are said to have a distinctive capability in knowledge management. Knowledge can come from a variety of different sources and relate to a broad spectrum of issues facing a firm [8].

The above discussion of knowledge management orientated research indicates a strong focus on knowledge where in many of the discussed approaches, there is evidently an assumption that there are few obstacles to the use or capitalization of knowledge [19]. However, there appears to be a difference between managing knowledge in order to improve it and in order to utilize it [19]. Expanding knowledge in depth or in breadth by experience or learning, transferring it, codifying it, and explicating it does not necessarily mean routines or results are improved [19]

Mostly, knowledge of course is about information, skills, and understanding that people have gained either from learning or experience. It is observed that knowledge management plays a very significant role in the government department; indeed, high societal knowledge can help a government agency to strengthen public service effectiveness and enhance their performance [32, 40]. [40] further explains that KM involves long-term responsibilities and accountabilities to foster the development of a competitive workforce that can struggle in regional and global economies.

Enterprises that pursue comprehensive knowledge management pursue sub-practices that in combination contribute to the overall success [40]. They focus vigilantly on making knowledge work effectively as chief enabler of enterprise performance [40]. The intention is not to create a checklist for designing a Knowledge Management department in an organization, but to analyze the interaction between knowledge workers and the technology designed to help them create, retrieve, and disseminate knowledge [12]. The presence of computer and information technologies in today's organizations has expanded dramatically [38]. According to [38] yet for technologies to improve productivity, they must be accepted and used by employees in organizations.

Knowledge and other Intellectual Capital (IC) is the principal enabler of performance [40]. They provide means to establish the proper course, content, and quality of actions [40]. Responsibilities extend to govern and facilitate other knowledge-related affected areas, particularly preparing effective policy partners, building and leveraging societal intellectual capital, and building and maintaining a capable and competitive work force [40].

Knowledge management is thus a process of facilitating knowledge-related activities, such as creation, capture, transformation, and use of knowledge [5]. The management process includes a range of activities ranging from learning, collaboration, and experimentation to integration of diverse sets of tasks and implementation of powerful information systems, such as the

Internet, intranets, and extranets [5]. Organizations learn and acquire knowledge through their routines and repertoire, which are embedded in specific organizational histories [5]. According to [11], the knowledge generation process includes all activities by which new knowledge is generated within an organization, namely acquiring mode where the knowledge is acquired from external sources.

However, there has been little focus on invisible work, particularly on how workers think and utilize knowledge when performing tasks [40]. How professionals process and share knowledge becomes an expression of their personal expertise, experiences, and creativity [5]. Derived from their expertise and experience, knowledge professionals decide with whom to interact, how to interact, and what knowledge to seek [5]. In order to enhance disseminations of knowledge through interactions between employees, an organization can use a wide-variety of divergent perspectives, including brainstorming, dialectical thinking and continuous experimentation [5].

Disseminating knowledge through sharing is critical for those organizations which are large and geographically scattered in different locations [5]. By sharing knowledge across different geographical locations, organizational members are likely to increase their knowledge and also bring forth a collective sense of realities, leading to the creation of organizational knowledge [5].

C. Competency-Based View of the Firm (CBV)

Competencies are defined as behavioral skills combined with technical knowledge and skills that will serve as indicators of success in a position [41]. A competency is an underlying characteristic of an individual that is causally related to a criterion-referenced effective and/or superior performance in a job situation [41]. Developing a competent work force requires decades [40].

Performance management systems are typically based on personal competencies that distinguish high from average performance for successful managers [7]. These personal competencies are derived from values and core competencies of the organization [33]. [31] further refines competency-based variables as those which involve achievement orientation, customer service orientation, analytical and learning capability, and teamwork and cooperation. Furthermore, she elaborates that competencies can also be considered as a yardstick for monitoring and evaluating individual/organizational performance and improving their competitiveness [31].

Firms utilize competence to reach set goals, regardless of whether it is reduced costs or competitive advantage [19]. Additionally, the results of [31] study are in line with [14], which emphasizes the need to have the map for all achievement received that could enhance both the employees and organizational performance. Furthermore, [7] report that organizations use core competency based systems are referred to as visionary or high performance organizations.

[20] argue that the main focus of the knowledge system is customer relationship management (CRM) which can also be used for new product development, quality monitoring, and improvement. [39] definition of competency in working with others (internally and externally) both in supervisory and non-supervisory role includes possession of strong interpersonal skills, ability to understand feelings, motivations, and behaviors of customers and employees. [31] further adds that by providing the service to the user, the organization uses knowledge of user needs together with a comprehensive understanding of information and technical resources to deliver high-quality, flexible and responsive service.

The core of the competence-based perspective lies in its approach to the nature of knowledge and of its discussion of learning processes [19]. For instance, the difference between data, information, knowledge and interpretive frameworks is highlighted, as is the difference between learning and sense-making [19]. In order to

survive, and what is more challenging, to enhance competitive advantage, firms must possess a knowledge base and capabilities which add value to the firm [23].

Hence, a key feature is the transformation of knowledge into competencies, which is made through learning cycles, encompassing individual, group, and organizational learning [19]. Indeed, Behavioral Dimensions of Competencies analysis concerns identifying problems, securing relevant information, relating data from different sources, and identifying possible causes of problems.

According to [31], planning and organization involve the ability to effectively prioritize activities and approach tasks in a structured and organized manner. She further adds that competency through research and analytical skills involves the use of knowledge resources and analytical skills to deliver in timely, high quality, and focused results to both the consulting community and clients [31].

Furthermore, according to [33] sensitivity to others' viewpoints involve listening to others' viewpoints, ideas and perspectives. This includes taking account of others' needs, showing empathy in oral and written communications and being aware of others' expectations. In addition, teamwork and cooperation enhance the activity of sharing knowledge, information, and learning. Consequently, individuals and groups willing to take ownership reflect a good competency which would lead the team to success.

D. Organizational Performance (OP)

This study aims to measure the performance of government agency on two levels: organizational level and individual level of performance from dimensions or variables discussed below [41]. In the same way, [16] and [40] state that the roles of knowledge and understanding for organizational performance have become clearer, that is, that it must be organization result-driven. Performance must be integrated with systematic and systematized learning to sustain competitive advantage and knowledge management can be a vehicle for achieving this desired result [16].

The broad field of knowledge management (KM) introduces new options, capabilities, and practices to assist public administration to a great advantage [40]. It becomes a new responsibility to manage knowledge to strengthen public service effectiveness and improve the society it serves [40]. Knowledge management goals are to improve the effectiveness and sustained viability of any enterprise – be it a commercial corporation, a part of society, a country, or a single individual [40]. In an interesting twist of causality, [2] suggest that knowledge transfer can be measured by measuring changes in performance. So obviously, there are studies focusing on the performance results of knowledge management [19]. The underlying assumption one might assume is that all new knowledge is good knowledge that automatically brings improved performance [19]. The performance of organizations can be measured objectively or subjectively [28]. However, performance expectancy variables will be used to measure organizational performance in this study [38]. A performance expectancy model is defined as the degree to which an individual believes that using the system will help him to attain gains in job performance [38]. The five variables from the different models that pertain to performance expectancy are perceived usefulness, extrinsic and intrinsic motivation, job-fit, relative advantage, and outcome expectations. The performance expectancy variable within each individual model is the strongest predictor of intention and remains significant at all points of measurement in both voluntary and mandatory settings [38].

IV. THEORETICAL FRAMEWORK AND RESEARCH DESIGN

The current research focused on the relationship of three important elements; namely: knowledge management practices, organizational performance and competencies. The theoretical framework is shown in Figure 1. The research design is a correlational study. The questionnaire comprised of four main sections. It firstly seeks respondents to provide information on the background of the company in which they are working. Secondly, a set of questions seek respondents to provide the levels of knowledge management practices undertaken by the organization. This section revealed the overall process of acquiring, disseminating and responding to knowledge made available to the organization. In measuring organization's knowledge management orientation, the research adopted a scale developed by [8]. Thirdly, the respondents were asked to provide information on the management perception's of competencies. The researchers adopted a measure from [31] covering core competencies. Lastly, the organizational performance scale was adopted from [38]. Section C measures the performance of government departments adapted from [38]. Subjective rather than objective measures of organizational performance will be used in this study. This is due to the fact that objectives measures are difficult to obtain [28].
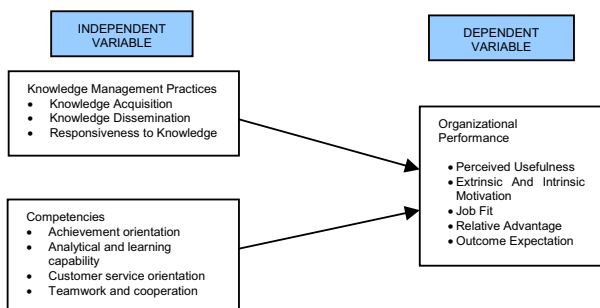

Fig. 1 The theoretical framework

V. PROFILE OF THE SAMPLES

In order to test the research framework, questionnaires were personally distributed and mailed to all ADS officers who work in 28 ministries located in the Federal Territory of Kuala Lumpur and Putrajaya. The name list of ADS officers is by order of seniority. These likely respondents know all the important activities of their organization. Systematic sampling is simple random sampling with a short-cut for random selection.

The first step is to number each element in the sampling frame. The researcher calculates the sampling interval and the interval for this systematic sampling is 9. The sampling interval tells the researcher how to select elements in the frame before selecting one for the sample. Simple random selection was done among the sampling interval (1 to 9) and the number 3 was selected. The sample was chosen by taking the third unit of analysis and every ninth unit after that until the sample of 500 is selected.

A total of 435 fully answered questionnaires were received from the respondents. Follow up efforts by the researcher was stopped once the return rate achieved 87 percent. According to [10], at least a minimum 60 percent of return rate is required in a survey. These government departments have been selected due to their highly engagement in the knowledge-based activities.

VI. MEASUREMENT DEVELOPMENT

In order to ensure measurement reliability in the operationalization of the constructs, all of the items were adapted from previous studies which have been modified and extended by the researchers after synthesizing several studies from the field of KMP, OP, and competencies perspectives [8, 38, 27]. Prior to formal data collection, the list of questions which contain relevant issues from the KMP, OP, and competencies from literature review as well as previous measure was then presented to a selected panel of experts which consists of academic experts and knowledge management practitioners for the purpose of establishing content validity of the instrument. Once approved by the panel, the researcher sent via mail a cover letter, together with the instrument to a pilot sample of 30 government departments which appeared to be the mirror population that the researcher was studying.

The instrument was categorized into three sections and the alpha coefficient was calculated for these sections and for the questionnaire in its entirety. The level of significance for items was established at .05. The alpha score obtained for all three sections were above .80 and this was generally accepted for field research [18]. Additionally, according to [36] the value of alpha level of more than 0.6 shows the research instrument is reliable for the purpose of the study. The data is therefore suggest that the questionnaire is a reliable instrument to consistently measure the level of KMP and OP pursued in these organization. All the questions items were measured on the 7-point Likert scale from strongly disagree to strongly agree.

VII. DATA ANALYSIS AND RESULT

A. Research Question 1

What are the levels of knowledge management practices, competencies, and the organizational performance of government departments in Malaysia?

Responsiveness to knowledge (KMP), analytical and learning capability (competencies), extrinsic and intrinsic motivation (organizational level of OP) and perceived usefulness (individual level of OP) are perceived as the highest mean in this study, thus leading to the highest level in all variables involved in this study.

To explore research objective 2 and 3 in determining relationship between OP, KMP, and competencies, and identify the best predictor of OP, multiple linear regression was used to analyze the data. A number of assumptions were checked before running the output to ensure the result not violated the assumption of multicollinearity, normality, linearity, and homoscedasticity.

B. Research Question 2

How much variance in organizational performance can be explained by scores on knowledge management practices and competencies?
H1   There is a positive, linear, and significant relationship between variance of organizational performance and the factors: (a) knowledge management practices and (b) competencies.

In the case of answering Research Question 2, the model of independent variables (KMP and competencies) explained 38 percent of the variance in the organizational performance. Furthermore, the model in this study reaches statistical significance (*p*=0.000). Thus, hypothesis one was supported with positive, linear, and significant relationship between these variables.

C. Research Question 3

Which is the best predictor of organizational performance: knowledge management practices or competencies?
H2 There is a positive, linear, and significant relationship between each of the predictor variables towards the variance of organizational performance.

In answering Research Question 3, knowledge management practices and competencies were compared in terms of the contribution of each independent variable by using the beta value. Competencies were found to contribute as the largest beta coefficients as compared with KMP with unique and statistically significant contribution to the prediction of OP. Hence, hypothesis two was supported with positive, linear, and significant relationship between these variables.

VIII. IMPLICATIONS TO THE THEORY OF AND BODY OF KNOWLEDGE

The following discussion outlines the contribution this study can make in the area of three interdisciplinary areas of knowledge management, competencies, as well as organizational performance. The researcher believes that this study may provide a refined view of how determinants of organizational performance, knowledge management practices, and competencies. Besides, the model presents empirical evidence on the relationship of the knowledge management practices, competencies, and organizational performance concepts from a Malaysian perspective involving a public agency. From a theoretical perspective, the new model provides a refined view of how the determinants of OP, KMP, and competencies evolve over time especially in a public agency, particularly in Malaysia.

A. Implications for Policy and Practice

This study presents empirical evidence on the relationship of knowledge management practices, competencies, and organizational performance concepts from the context of Malaysian perspectives focusing on public organizations in Malaysia. In accordance with the result of this study, consequently, the following suggestions are made by the researcher:
Public agency

Government departments can use this study to better understand the practices of knowledge management in organizations, and ways to apply it, the skills acquired or existing in the individuals working in the organization, and the level of organizational performance of government departments, particularly in Putrajaya, Malaysia. The government departments, as policy-makers, require a balanced work-life as well as an improvement in their productivities. The management of the government has an early exposure as intellectual capital represents significant value to their bottom line. Thus, this study will contribute to this body of knowledge, i.e. the government as the main platform of the country's competitiveness with good governance.

In this study, organizational performance was evaluated through a system used in the organization to find out whether by using the current system, the individuals in the organizations are capable of performing better compared with traditional tools to conduct the knowledge activities in the organization. Thus, the current system should be monitored, maintained, and evaluated continuously from time to time in line with competitive borderless globalization.

Based on the findings in the study, there is a lack in job fit, where government servants do not realize that the effectiveness of a system could enhance the quality of output, thus assisting the job and decreasing the time needed for important job accountability. Awareness by the government agencies also not only improves their job performance but also the productivity of organization.

Knowledge management practices and core competencies provide a set of tools and practices integral to change management initiatives among their employees. Hence, government departments should further improve the policies through reengineering or change management with a hope that this could encourage employees to be more serious during performing their job.

Government servants should not be in comfort zone and should have intention to further improve individually and organizationally. Through the Ninth Malaysia Plan, it is hoped that employees will be more aware on the significance of adding value through knowledge management practices and core competencies towards organizational performance. Overall, it is essential to take a more systematic approach in order to clarify the nature of links between knowledge management practices, competencies, and organizational performance.

B. Curriculum development

This study is also relevant to academicians as the basis for knowledge management starts from the educational sector. The findings can help academicians to be more aware on this matter and give more emphasis on knowledge management practices and encourage students to improve personal competencies.

Limitations Of Study

The current findings of this survey are the evidence of the obstacles organizations have to encounter through creating knowledge-based organizations. In particular, the researcher argues that the practices of knowledge management may be expected to enhance organizational performance. Prior to discussing the implications of this study, it is necessary to recognize some of its limitations, thus the researcher recommends an option based on these limitations given in Chapter One previously. Among the limitations concerned are the uses of longitudinal data for more stability. Besides, generalization to different levels of management and organizations ought to be cautious and further studied. Other than that, future research should examine alternative measures of OP, KMP, and competencies through other theories or perspectives in the discipline given. Another limitation observed is underlying influential mechanisms or controlling factors that would affect the relationship of the variables. Last but not least, the instrument could be further enhanced to include other techniques such as observations and interviews for better quality output in the future.

IX. CONCLUSION

The results of this study add to our understanding of the relationship between KMP, COMP and OP and their significant implications towards the performance of the organization, both at the organizational and individual level. The data suggests the presence of the concept of KMP towards OP and the findings is consistent with the earlier organization literature. Nevertheless, towards the knowledge and innovation era, organization should fully utilize the practices of KMP and core competency. Thus, the results not only have the potential to contribute theoretically to both management strategy and knowledge management fields literature but also to the organizational performance.

The results of this paper show that the levels of KMP, COMP and OP IN the organization are among the important criteria for determining and improving the performance of public service managers and subsequently improving the government delivery system.

Public service managers have many roles and responsibilities in the work place, such as managing learning. Strategic organizational initiatives aimed at improving workplace and professional development need to have top-level support, therefore top management need to have specific competencies knowledge, and ability to create and enhance the learning atmosphere in the organization. Top management need to understand and identify what factors or elements contribute to the effectiveness of organizational performance and what factors hinder such processes among the public service managers.

These findings suggest that greater attention and resources are needed to influence knowledge management practices and related competencies issues in organizations. Top management need to promote the creation of intelligent organizations where people develop personally and professionally.

It is believed that this paper has contributed to the body of knowledge in this field. It is hoped that, this paper will instigate more researchers to conduct studies in this area especially in the public service sectors.

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