The Influence of Knowledge Management on the Competitiveness of Government Organisations

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Abstract

Due to increasing instability in modern economies Government organizations need to become competitive. In relation to this Knowledge Management (KM) has been rapidly growing recently as a source of influence on organisational development practices. During the past decade research has largely failed to show the importance of KM initiatives in creating synergy with other initiatives that lead towards organizational competitiveness. This investigation addresses whether KM holistically influences organisational excellence, specifically in the context of the government sector.

In order to determine the relationships between KM and organisational excellence identified in the literature, and increasingly used in practice, a quantitative survey approach was undertaken using a series of researcher-developed scales. Building on the literature review Organisational Competitiveness (OC) was identified as important in relation to KM. The conceptual framework that was designed tested the concept of the holistic influence of KM on organisational excellence.

Some six hundred and twenty five valid responses were collected from top and middle management from fifty four government organizations in the Kingdom of Bahrain. Following this a model was statistically tested according to the research hypothesis by regression analysis then Structural Equation Modelling (SEM).

The results revealed strong and significant correlations amongst organisational development practices. Although the holistic influence of the model could not be confirmed, findings show positive KM influence on organisational development practices, thus KM is an essential factor for government organisations. This concept of a holistic model needs to be further subjected to empirical investigation to explore its viability.

Keywords: Knowledge; Management; Government; Organisations; Competitiveness

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1. Introduction

Significant progress has been made in understanding the KM concept and its implementation; however, a careful review of the relevant literature indicates a lack in the body of knowledge about the type of influence that KM would generate on organisation development practices and specifically in the context of governmental organizations (Salleh and Ahmed, 2008). Even though benchmarking KM was raised by different researchers, KM practices benchmarking publications are still rare in literature and definitely in lack in government sector (Al-Hasan et al., 2004; Al-Athari and Zairi, 2001). Benchmarking is particularly of importance for governmental organisations in developing countries where such organisations mostly lack systematic, organised, structured and validated interventions or initiatives (Al-Alawi et al., 2007). Therefore, effectiveness of initiatives as KM programs are seen as one of the main government challenges for creating sustainable cultural change that can underpin sustained and evolving organisational competitiveness (Aranda and Fernandez, 2002). To date, most research on organisational development tends to focus on measuring performance indicators rather than identifying the practices that would enable the development of sustainable and competitive services (Rhodes et al., 2008).

The literature addresses specific aspects of KM with different organisational development practices, however none of the reviewed work explicitly investigates the connections that integrates them together (Mohamed et al., 2009; Salleh and Ahmad, 2008; Leonard-Barton, 1995). Nevertheless, holistic approaches that lead to integration of many fragmented relations are found to be relevant to enhancing the planning and decision making process (Diakoulakis et al., 2004). This is specifically essential for government organizations where the need for improved decision making would help the transformation efforts and management of its internal resources within the context of an unstable global economy. Therefore, there is a need for initiatives that create an influence that changes the behaviour of the government organisations and its people, rather than just an initiative that create impact that would lead to a specific result. Taking all the previous points into the consideration, the research problem addressed in this paper is in the field of knowledge management (KM) and draws on the need for investigating the holistic influence of KM on organisational development practices that can widely be used to improve organisation competitiveness in the context of governmental organizations.

This research approach is in contrast to previous studies in the field of KM that have examined the relevant concepts of organisational development practices individually and in isolation (Zheng et al., 2010; Castilla and Ruiz, 2008; Rhodes et al., 2008). The wider treatment of KM in the literature, as a consequence of the current economy, can help organisations to embrace changes of knowledge management practices relevant to enhancing performance and competitive advantage (Rhodes et al., 2008; Chinowsky and Carrillo, 2007). Leonard-Barton (1995) emphasised the importance of sustaining organisation’s ability and competitiveness that realise economic value through collection of knowledge assets. This emphasises the utilisation of KM as a valuable internal resource and a tool for raising organisational potentials (Raadschelders, 2005; Dimitriades, 2005). Tackling aforementioned gap in the context of the governmental organisation should help turn KM initiatives in the government organisations to be an effective driver towards meeting customer service delivery obligations (Wiig, 2002). However, due to the paucity of adequate literature on the subject in the government organisation context, more clarity on the relevance of KM performance frameworks to the different organisational development practices is needed so that such
organisations can move towards being more competitive (Grimaldi and Rippa, 2011; Sotirakou and Zeppou, 2004; Gooijer, 2000). Furthermore, the limited work that holistically exist on KM influence makes many organisations reluctant to take solid decisions about having KM as their vehicle towards better organisational competitiveness (Salleh and Ahmed, 2008; Nam-Joon, 2007).

The literature supports the proposition that KM frameworks in the public sector would be more valuable if directed more purposefully towards improving its organisational development and relevant practices (Waddel and Stewart, 2008; Riege and Lindsay, 2006). Besides, practitioners have highlighted the importance of examining the relationship between KM intervention or influence and organisation development practices in support of rising community expectations (Boumarafi and Jabnoun, 2008; Waddell and Stewart, 2008; Al-Alawi et al., 2007). Introducing organisational development initiatives within the governmental organisations might be effective or useful moreover if top and middle management decision makers have a clear non-doubted appreciation on KM’s role towards organisational competitiveness (Magnier-Watanabe and Dai 2008).

Findings reported in this paper are based on the rationale that current frameworks do not provide clear, holistic, integrated guidance between KM and the prevalent organisational development practice of organisation excellence (Liao and Wu, 2009). Recent investigations on the influence of KM and its relations do not utilise the benefits of integrating organisational development initiatives towards better organisational competitiveness (Morales et al., 2007). It is not clear which business parameters, in relevance to practices, are affected by KM’s presence and to what extent such practice influence the other development practices that government organizations need.

The aim of the study is an understanding of the utilization of government initiatives and specifically KM programmes, achieved by investigating the perceived links between the major enablers of KM practices and the major prevalent practice of organisational competitiveness. Consequently there is a need to study the effect of KM as an independent variable in GOs on the specific dependent variables. In accordance with this aim, the following constitutes the key objectives of the research paper:

Objective 1 - The development of an initial conceptual model for examining the holistic influence between knowledge management practices and organisational competitiveness based on examination of the literature gaps in the body of knowledge.

Objective 2 - To empirically text the relationship between KM and OC in the government organisation context.

Objective 3 - Investigation to provide an understanding of how KM practices may contribute holistically to the organisation development practices that comprise the dimensions of organisational competitiveness in the context of governmental organisations.

2. Literature Review

The literature review findings are organised around the research objectives, where the critical review focuses on KM influence and organisational competitiveness in the context of governmental organisations and how they combine together to address the two objectives of the research.
2.1 Knowledge Management Influence on Organisational Development Practices

To substantiate KM as a concept which influences the different organisational development practices, proper understanding of organisation internal and external knowledge related factors need to be considered. Key organisational internal factors such as culture; training, processes, leadership, human capital policies and networks are examples that trigger the presence of knowledge (Rhodes et al., 2008; De Souza, 2006; Wong, 2005; Marr et al., 2004). While Gold et al. (2001) have argued that the sources of organisation external knowledge are easily duplicated by competitors, others believe that if organisation integrate their own knowledge, with the external knowledge it would deliver organizational development practices as innovation (Chen and Huang, 2009). The exploiting of external knowledge such as that held by customers and competitors is shown to be crucial in driving innovation, performance and organisational values (Phusavat et al., 2010). Therefore, the researchers found that unless a clear understanding of how the components of KM influence the different organisational development practices, influence of subcomponents of KM would be vague Heng (2000).

In practice, KM has been implemented as international standard that is monitored on countries level since 2006. The OECD (Organization for Economic Co-operation and Development) was one of the earliest international organizations to use the term "knowledge economy" (KE) to draw attention to importance of management of knowledge in all economic activities in governments and non-government services or products. Since then the OECD developed measures for KE and KM on the government level. Moreover, KE measure was also followed also by the International Monetary Fund (IMF) and Economic Forum, which helped develop KM influence. This pushed organizations within countries and certainly GO’s to benchmark their development on different factors such as KM awareness, KM strategy and open communication channels (Storey and Kahn, 2010). Some of the KM influence indexes focused on knowledge processes that start from knowledge identification, elicitation, dissemination, and utilization. However, most practical KM influence frameworks came from APQC (2001) developing a KM Assessment Tool (KMAT) that help examine four areas, namely: leadership, technology, culture, and measurement. However, Salleh and Ahmed (2008) opinion was that all available standards failed to address the extent of KM influence on practices such as teamwork, decision-making, improved efficiency, productivity, improved products or services, responsiveness to customers, innovation or creativity and quick response to other organisations’ needs.

Effective KM initiatives are found to start their driving force by targeting the ability to develop rare and valuable knowledge throughout the organisation (Cong and Pandya, 2003; Nonaka, 1994). Goh (2002) considers that this type of rare knowledge is a key factor in facilitating the success of knowledge integration initiatives with other practices towards better organisational competitiveness. Nevertheless, the level of literature available demands the search for a better understanding of what ensures the success of KM initiatives (Seba and Rowley, 2010; Khalifa and Liu, 2003). A detailed study of the influence of KM dynamics has been prepared leading to better organisational ability in developing, implementing and maintaining appropriate practices that would enable the organisation to find, select, organise, disseminate and transfer important information and expertise thus leading to better performance (Yeh et al., 2006). The more the organisation understand how to deal with its information and expertise the more such understanding would lead to better problem solving, dynamic learning, strategic planning and

decision abilities (Grover and Davenport, 2001; Alavi and Leidner, 2001). Lundvall and Nielsen (2007) went further, to suggest if an organisation focus during initiatives on the tacit knowledge itself, it would develop better abilities towards building scarcer ‘know-how’ with better ways of approaching problems and dealing with organisational routines.

Over the past 10 years, the literature has been enriched with work that has tried to find the different influence between the organisation development practices in pursuit for a sustained knowledge economy (Phusavat et al., 2010). The process of building, capturing and transferring knowledge targets to address the challenges for a better competitiveness, through development of better organisational learning and innovative capabilities (Rhodes et al., 2008; Chan and Liebowitz, 2006). Even recent literature further address the gap in total synergistic relations influence towards taking the organisation to competitiveness level thus achieving development and adding value through its sustained effectiveness (Zheng et al., 2010). Certain authors proposed that the presence of value happens only if knowledge is managed properly (Adams and Lamont, 2003; Bloedgood and Salisbury, 2001). KM influence, if systematic and organised, is believed to support different organisational development efforts, where KM practices help push the organisation to a cycle of knowledge sharing and capturing, that in turn would lead the organisation to a better competitive position (Zack, 1999; Lin, 2007). The literature support the preposition that KM frameworks can be as a source of a rewarding to the organisational climate that value and encourage cooperation, trust, learning and innovation in order to improve the services provided (Lucas, 2010; Njuguna, 2009; Al-Busaidi and Olfman, 2005).

2.2 Knowledge Management Influence on Organisational Competitiveness

In an economy with high uncertainty, many organizations should strive to remain competitive. Competitiveness is no longer rooted in physical assets and financial capital, but in effective channelling of successful growth and longevity in business where human capital pushes organisations towards higher capacity to learn (Phusavat et al., 2010; Halawi et al., 2005). To be competitive means that organizations must have unique and sustainable set of values that deliver both tangible and intangible assets that reflect onto management skills, organizational processes and routines that in turn become valuable, rare and very difficult to imitate (Barney, 1991). This resource-based view of competitiveness has been re-emphasised later by Drucker (2002) whom realised that competitive organisations must have the ability to shift from tangible to value based measures meaning that organisational performance capabilities would be based more on the organisational internal resources. Yeh et al. (2006) believe that a key component in organisational competitiveness is the organization ability to realize the full potential of its intellectual assets in strategic and tactical decision making. Thus Organisational Competitiveness (OC) is thought to occur due to accumulation of values that comes from organisational internal developments when utilised and sustained, brings in practices as knowledge creation and sharing which bring in learning and innovation activities that are based on internal resources (Lin, 2007; Halawi et al., 2005).

Discipline scholars see a strong link between the capability of creating and utilizing knowledge and what makes organizations competitive (Grant, 1996; Nonaka, 1994). Thus, KM is seen more and more as the management intention that would improve the wisdom of the organisation which lead to better decision-making, increase innovation, better performance that eventually leads to
sustainable competitive outcomes (Rhodes et al., 2008). KM enhances organisations ability to even produce new knowledge and help boost knowledge transfer which enhances the government organisation competitiveness through sustained changing processes (Bogner and Bansal, 2007; Raadschelders, 2005). Empirical work by Zheng et al. (2010) and Hsu (2008) have shown that the success in KM implementation and using knowledge sharing can have a high potential of enhancing organization competitiveness. Carneiro (2000) proposed that KM initiatives can be as a source for higher human value that would lead to higher level of organisational competencies. Following a different perspective; Zaim et al. (2007) argues that KM influence can come from infrastructure and not practices only. However, the latest work by Mills and Smith (2011) for example, shows that now more and more authors believe that the only source of KM influence related to organizational competitiveness comes from direct knowledge applications and practices. Prominent KM scholars Davenport and Prusak (2000), actually emphasis that KM practices need to fit the organizational context in order to create a competitive edge. Rhodes et al (2008) believes that such practices of KM can be examined through a more balanced approach of assessing organizational non-financial performance indicators that can be leveraged to develop key organizational capabilities which are difficult for competitors to imitate. However it is believed that unless this KM is kept and maintained at superiority through specific practices as in learning; organizations would find themselves at a competitive disadvantage in the future (Zack, 1999).

The competition of today requires more than just organisation capabilities; it is about speed of reacting to need. The faster GO’s plan and implement a response, the more likely they will succeed over their competitors in delivering value to the customer. In addition, the more a response is based on knowledge of the business environment as opposed to internal politics, and the faster a response is planned and implemented, the more likely that greater value will be delivered relative to competitors’ differentiation, (Fugate et al., 2009). However despite extensive review, the literature appears to have failed to address the type of competitive practices that could occur through KM.

3. Research Methodology

The study of the research objectives was undertaken with reference to existing related frameworks and hence the development of a conceptual framework that defines and justifies the expected links between the prevalent organisational development concepts, in the context of governmental organizations using Dooley’s (2000) methods as a guide.

In order to undertake the research systematically, a research methodology was planned with reference to both the research objectives and questions. The hypothesis in this study was examined through both the screening and main survey following a data collection plan. The scale developed for the main survey followed the previous work to measure the influence of KM on other specified organisational development variables (Rhodes et al., 2008; Yang, 2008; Boumarafi and Jabnoun, 2008; Al-Alawi et al., 2007; Migdadi, 2005; Al-Busaidi and Olfman, 2005; Syed-Ikhsan and Rowland, 2004). The research design highlighted that clear measurement scale of organisational development practices concepts (i.e. KM and OC) needed to be used in relevance to the context of governmental organisations.
With regard to cultural influence on KM Al-Alawi et al. (2007) report that it is quite significant; however it is quite common across all GOs, and the researchers consider a uniformity of culture acceptance. A target sample was drawn from among the upper middle and the top management in all fifty-four government and semi-government organisations in the Kingdom of Bahrain (Creswell, 2003). The research instrument measures decision makers’ perception on KM influences and specifically in the context of government organizations. With the second objective a regression model was developed, followed by Confirmatory Factor Analysis (CFA) with an in-depth rigorous hypotheses testing and model fit testing to see how all relations together would lead KM towards influencing the organization to being more competitive.

Organisational Competitiveness (OC), according to Senge (1990), is sustainable advantage that results in organizations existing when people learn faster than their competitors. Drucker (1993) notes that without knowledge, and the organisation having the ability to continuously create it, disseminate it, and embed it again in the organisation, it would not be able to compete. Even the latest research shows that without knowledge acquisition, conversion, application and protection organizations cannot perform well (Lee et al., 2012). Thornhill (2006) and Chua and Goh (2008) proposed for GOs this type of relation needs to be empirically tested as it fulfils the need for better productivity through enabled service differentiation. Therefore, this research hypothesizes the following:

H: Knowledge management is positively associated with Organisational Competitiveness (OC).

Besides the first objective this hypothesis addresses both the framework testing and development. To bring the necessary research components into a generalised model, consideration of knowledge outcomes from literature projections and the impact of relationships was established. Figure 1 (conceptual framework) takes the research towards connecting the relationships between different concepts that would establish evidence to support the need for the research question ‘What is the holistic relationship between KM and OC?’, and needs to be addressed through a model to be tested (Figure 2). The conceptual framework was evaluated for completeness and unity for being comprehensive in reflecting the dependent and independent variables. The framework proposed shows linkages and influence flow of KM over the identified organisation developments reflecting the established relations in a comprehensive process. A following step is to fully operationalise the conceptual framework.

**Fig. 1.** Proposed path relations between KM and OC for the conceptual framework
Fig. 2. Relation between KM and OC reflecting the influence that is made from Organisational Development OD variable towards OC to present a holistic model.

To obtain an understanding of the recursive ability of the KM influence on development practice (OC); the hypothesis is set to derive the main components of the framework thus addressing the possibility of the positive relation with KM. Due to the primary research focus being on the holistic relation between KM practices and organisational competitiveness development practices, the significance of this relation needs to be studied. The framework considered in Figure (1) is established to enable KM influence on different parameters in the constructs for OC. Links in the framework projected and predictions are made on the relationship’s influence on expected outcomes. Through the conceptual framework in Figure (1), the study was set to understand the different constructs that need to be investigated. The framework proposed and synthesised data outcomes are reviewed to further develop a test to confirm the relationships between the constructs set in the proposed framework. The constructs propose possible practical initiatives that GOs might launch separately or in integration with each other.

OC as a variable was measured by testing GOs’ ability to identify new services opportunities, ability to adopt quickly to unanticipated changes, ability to create a good profitable income for GOs and ability to react to customer demands. The competitiveness of the organisation was also measured by its ability to streamline the processes, ability to ensure sustainability of services, ability to form analytical capabilities that lead to learning from mistakes and ability to adopt a unique way in dealing with customers in intimacy. The study used scales as the ability to establish unique values with its employees that are difficult to copy and the ability to have established high quality services or products with low cost and high speed of delivery to again cover the OC scales.

4. Analysis

4.1 Introduction

The quantitative data was analysed in stages in order to analyse, review and discuss (Dooley, 2000). Study stages were synchronised with the two defined objectives and cross checked for the ability to answer the research question, and analysis stages were conducted to cover each of the research objectives:
1) Preparatory statistics were established through Missing Values Analysis (MVA) and various psychometrics approaches and procedures were applied in the study.
2) Descriptive statistics were used to describe the main features of the collected data quantitatively and to investigate the specific role of KM in creating OC.
3) Inferential statistics using T-test and One Way ANOVA was used to examine and infer statistical significance for independent samples and the difference between three or more groups,
respectively. The inferential test was used to help understand the interactional effects between OC and KM.

4) Pearson’s r statistical index was used to describe the degree of strength and the direction of relationship to understand or confirm on which aspects of KM are most influential.

5) Multiple Regression Analysis, Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) were used for testing and estimating causal relations using a combination of statistical data. This was supported with qualitative causal assumptions to help understand how KM contributes to a holistic approach of organisational development practices that comprises OC.

4.2 Preparatory stage - Cleaning and organizing the data

Collected data was checked before, during and after logging for study integrity and reliability of results, hence data accuracy was double checked for proper data entry. To prevent distortion of the final results, missing data imputation was conducted. Missing values for KM and OE for N=625 are shown in Table 1.

Table 1 Category of missing values per measured variable, N=625

<table>
<thead>
<tr>
<th>Category</th>
<th>Missing Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>KM</td>
<td>2</td>
<td>0.3</td>
</tr>
</tbody>
</table>

In Table 1 overall missing values are negligible (Lee et al., 2011).

4.3 Descriptive Statistics

To reveal the basic features of the data in the study descriptive statistics were used, to provide simple summaries about the sample and the instrument measures. Descriptive statistics were distinguished from the inferential statistics since the latter is used to reach conclusions that extend beyond the immediate data alone based on the inference about what the population might be thinking; while the use of descriptive statistics is simply to describe what’s going on in the research data in terms of percentages, frequencies and distribution. Univariate analysis techniques were used across the cases of one variable at a time, where there are three major characteristics for each single variable intended to be looked at: the distribution, the central tendency, and the dispersion characteristics.

Several variables were combined to define the study demographic profile and to generate enough information about the typical organizations, the participants’ age, position and how they perceive the organisational competitiveness development practices in their GO (Table 2). The analysis and tables reflect how each particular group of participants perceive the influence of KM on the specific organisational competitiveness development practices.
Table 2 Demographic table for participants

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-Category</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>350</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>266</td>
<td>43</td>
</tr>
<tr>
<td>Age</td>
<td>Less than 25</td>
<td>3</td>
<td>.5</td>
</tr>
<tr>
<td></td>
<td>Between 25-34</td>
<td>177</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>35-45</td>
<td>163</td>
<td>26.1</td>
</tr>
<tr>
<td></td>
<td>46-50</td>
<td>139</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>50+</td>
<td>134</td>
<td>21.4</td>
</tr>
<tr>
<td>Position</td>
<td>US</td>
<td>17</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Manager/Director</td>
<td>140</td>
<td>22.4</td>
</tr>
<tr>
<td></td>
<td>Department Head</td>
<td>203</td>
<td>32.5</td>
</tr>
<tr>
<td></td>
<td>Specialist</td>
<td>121</td>
<td>19.4</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>117</td>
<td>18.7</td>
</tr>
</tbody>
</table>

4.4 Central Tendency Statistics

Central tendency analysis was carried out as an important part of the descriptive analysis to estimate the centre of values distribution. The mean was selected, as compared to the median and the mode; since the mean is found to be the most commonly used method of describing the estimates of the central tendency in the region. Dispersion was identified to represent the spread of the values around the central tendency through both the range and the standard deviation of the former shows the result of the highest value minus the lowest value and the set of scores in relation to the mean; respectively.

The majority of results in Table 3 show the central tendency for the mean and standard deviation to be within (3.5 +/- 0.5); which means that most of the participants perceive their Empirical Research Analysis organisation developments and practices to be high. It is worth noting that some representatives of certain GOs choose an average range of 4 out of 5, meaning they perceive the concepts and practices to be fulfilled. The results propose that (37.4%) of the participants believe that KM (as an internal resource) is not well utilised. This may be explained by the fact that such managers are not used to seeing areas of improvements. The mean and standard deviation shown in Table 3 are very high for OC.

Table 3 Mean and Standard Deviation for KM and OC organisation development practices

<table>
<thead>
<tr>
<th>Organisational Development</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Std. Error</td>
</tr>
<tr>
<td>Knowledge Management</td>
<td>3.31</td>
<td>0.03</td>
</tr>
<tr>
<td>Org Competitiveness</td>
<td>3.48</td>
<td>0.03</td>
</tr>
</tbody>
</table>

4.5 Inferential Statistics stage
An inferential statistics procedure was used to draw inferences about the population from the sample used to estimate a parameter and a confidence interval about the constructed estimate. Inferential statistics was used to detect changes between and within groups; in this research two inferential procedures were used that are the independent samples t-test and the one-way ANOVA.

Through the t-test in Table 4 it was revealed that an examination of organisational competitiveness development practices according to gender was not statistically significant at 0.05. Interestingly to report males’ portions were slightly higher than females’ portions with 350 for men and approximately 250 for women.

### Table 4 t-test by gender

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Management</td>
<td>Male</td>
<td>349</td>
<td>3.2906</td>
<td>.72135</td>
<td>.03861</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>265</td>
<td>3.3203</td>
<td>.71513</td>
<td>.04393</td>
</tr>
<tr>
<td>Org Competitiveness</td>
<td>Male</td>
<td>350</td>
<td>3.4992</td>
<td>.63905</td>
<td>.03416</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>266</td>
<td>3.4490</td>
<td>.62816</td>
<td>.03852</td>
</tr>
</tbody>
</table>

The size of differences between the age groups for organisation competitiveness development practices are examined in Table 5. Procedure one-way ANOVA was performed on the age data set. The results show that statistical significant difference was obtained for organisational competitiveness development practices. The ANOVA test shows in conclusion that groups do not differ from each other between and within the test variable according to age group variances.

### Table 5 ANOVA differences between Age groups

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Management</td>
<td>Between Groups</td>
<td>10.659</td>
<td>4</td>
<td>2.665</td>
<td>5.262</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>308.435</td>
<td>609</td>
<td>.506</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>319.094</td>
<td>613</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Org Competitiveness</td>
<td>Between Groups</td>
<td>4.912</td>
<td>4</td>
<td>1.228</td>
<td>3.094</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>242.475</td>
<td>611</td>
<td>.387</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>227.386</td>
<td>615</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 6 ANOVA differences (or similarities) between Position groups

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Management</td>
<td>Between Groups</td>
<td>2.344</td>
<td>4</td>
<td>.586</td>
<td>1.138</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>304.296</td>
<td>591</td>
<td>.515</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>306.640</td>
<td>595</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Org Competitiveness</td>
<td>Between Groups</td>
<td>2.908</td>
<td>4</td>
<td>.727</td>
<td>1.864</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>233.598</td>
<td>593</td>
<td>.394</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>236.506</td>
<td>597</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Size of differences between the position groups for organisation competitiveness development practices are examined in Table 6. A procedure one-way ANOVA was performed on the data set. Results show that KM statistically varies according to position groups. The ANOVA test shows that OE does not statistically vary between and within groups according to position.

4.6 Correlation Analysis

The correlation coefficient results indicate that participants from top and middle management of GO were consistent in their answers regarding the importance ranking scores of the KM and OC relation. The sub-sections that follow focus specifically on the correlations of the two main pillars of the study, KM and OC.

4.7 Organisational Competitiveness Correlations

With regard to the second and third objectives of the study the researchers wanted to determine the relation between KM and Organisational Competitiveness (OC).

4.7.1 The relation between KM and Organisational Competitiveness (OC)

The overall correlation of KM-OC, the theme of this study, shows an overall positive correlation strength of (0.766) at the 0.00 level (p<0.05). Furthermore, at the same level of significance with (p<0.05) a correlation strength of (0.561) on the statement of effective management of knowledge assets would generate new ideas (q29) was found to be highly significantly correlated with the practice of having analytical capabilities and learning from mistakes (q17). The lowest correlated coefficient (0.049) in this categorical dimension was found between (q23) that reflect the practice of implementing KM policies to improve its service delivery and (q13) stating GO would create a good profitable income for government with return on investment, which also seem logical as KM policies can only indirectly affect profitable income of the organisation. This supports previous work (Wiig, 2002; Keating and Weller, 2001; Migdadi, 2005; OECD, 2001).

4.7.2 KM Correlation with Organisational Competitiveness

Having a clear process of capturing the collective expertise and intelligence (q201) is found to be the strongest indicator that correlates with OC. This indicates that KM can be the first point before reaching OC and this supports the hypothesis.

4.8 Regression Analysis and Hypothesis Testing

The hypothesis was tested through the regression analysis, and went through rigorous tests to see whether the hypothesised relationships can be confirmed or not. The hypothesis proposed a positive association between KM and Organisational Competitiveness (OC). This hypothesis has been investigated with correlation analysis and a linear regression model. Results derived from the multiple regression analysis concluded that there is a significant finding and a higher t-value for the analytical capabilities of the organisation that leads to learning from mistakes (q17) than other indicators in the same (OC) dimension. All the indicators determining OC were found to have positive coefficients, except (q13) creating a good profitable income for government with return on
investment. All indicators in the multiple regression models were significant except (q13) creating a good profitable income for government with return on investment, (q14) organization has the ability to react to customer demands and (q18) organization has a unique way in dealing with customers with intimacy. Furthermore, a simple regression model examining the influence of KM on organizational competitiveness was developed. The results of this simple regression analysis confirm the hypothesised relationship between KM and OC at the 0.05 level.

5. Discussion of Findings

This section addresses part of the first research objective in understanding KM contribution towards the development of organisational competitiveness (OC) practices in the context of the governmental organisations. The aspects of organisational competitiveness were grouped into internal and external indicators. The external factors of the GO’s competitiveness in the framework were driven by the fact that more than half of the total organisations have future plans towards sustainability of services and obtaining analytical capabilities which integrates with other recent research (Mohamed et al., 2009). The GO’s competitiveness as per the survey results require to be further refined as results show that decision makers do not appear to fully understand the deep meaning of competitiveness. For example, from the survey, up to 50% of the GOs were found to have established better ways of handling clients even though they still agree that they had not established high quality products and/or services in terms of cost and speed of delivery. Thus overall, the results show that even though the GOs had started certain OC practices, yet the theme of competitiveness is not fully reached (Adams and Lamont, 2003; Carneiro, 2000).

The relationship established in Figure 3 is based on the correlation results which reflect the influence of KM practices on OC. From these relations it is clear that GOs need to effectively manage knowledge assets to generate new ideas, as observed in Figure 3. Through effective management of knowledge assets the organisation can both ensure lean services (at best quality, best cost and best delivery) and ensure enhancement of OC practices relevant to analytical capabilities. While managing to have knowledge capturing practices, starting from utilising expertise, would both manage to establish proper programmes that close skill gaps and be able to establish learning programmes that create value in relevance to OC. It is therefore concluded in Figure 3 that practices in management of knowledge assets and knowledge capturing need to be established in KM government initiatives.

**KM influence towards OC**

![Diagram]

**Fig. 3.** Specific Variable relation that shows Knowledge Management Influence on Organisational Competitiveness

To meet the first objective an initial conceptual model has been developed to examine the relationships between all the organisational development practices and KM. The following model was introduced and tested:
OC = f(KM, OE, OI, OL), R² = 0.650
[OE – Organisational Excellence, OI – Organisational Innovation, OL – Organisational Learning]

The model captures the proposed holistic framework depicting progression from KM to OE, and expresses OC = f (KM, OE, OI, OL) with R² = 0.650. R² represents the amount of variation in the dependent variable which is explained by the model. The holistic model explains 65% of the variation in the dependent suggesting that there might be an area of improvement worth investigating to account for the 35% unexplained variation which could be due to missing variables or interaction among the variables which was not explored.

6. Conclusions and Future Research

This study presents findings that contribute to a coherent understanding of KM’s influence towards GOs’ competitiveness. Knowledge assets can be easily duplicated unless external knowledge is integrated with internal knowledge which delivers organizational development practices that lead to the probability of competitiveness in performance and organisational values (Phusavat et al., 2010). This is shown in the framework by the values of organisational excellence, learning, innovation and competitiveness. The framework proposed helps to close the gap reflected in the literature to determine whether KM adoption can glue and influence organisational excellence and move organizations towards greater competitiveness.

Research results from this study suggest that government organisations recognise KM holistic initiatives as a vehicle for success in creating better organisational development practices through better value. The proposed KM holistic model generates better quantitative results and exhibits significant relations between KM and the organisational internal resources with Organisational Competitiveness. The research provides the academic community with a new study in KM holistic influence in creating competitive government organisations in the knowledge economy.

Through continuation in this field of study would help to address GOs’ development and success factors such as organisational competitiveness to differentiate such an industry from other sectors (Weerawardena et al., 2006). Such work supports previous recommendations on the influence of knowledge transfer or KM practices that need to be quantified in order to measure its impact on creating greater citizen satisfaction among GOs (Goh, 2002). Support can be given to other research since it illustrates knowledge sharing in GOs enhancing organisation competitiveness and thus can make the GOs’ initiatives more customised to specific development practice outcome (Lundvall and Nielsen, 2007; Lin, 2007).

An important methodological limitation is the decision to use a quantitative method through a designed questionnaire. Although this method brought considerable advantages, it also created a drawback in having no normative data available for comparison due to the lack of an empirically validated questionnaire with questions of a similar nature. A further methodological limitation is that this research could have produced a more enlightened result by observing the effects of KM implementation on the GOs over a period of time using longitudinal research. This can be an area for future research (De Vaus, 2002). Due to limited scope there are also general limitations that most research of this nature and size has. Dissimilar sizes and variety of the fifty four speciality
government organisations in one country limited the possibility of generalisation, unless there is empirical testing in other countries and regions (Neuman, 2003). Further possibilities for future research have been created by this study and there are a number of research directions that would be useful for not only academic researchers, but similarly government practitioners. It is suggested by Nonaka (1998) not to look at organizations as machines, but living organisms, which requires a continuation for a holistic approach towards using and managing knowledge. This research recommends continuing investigating other salient variables and/or relations that complement the model proposed in this study between KM and OC, especially during turbulent economic times where there is a need for a holistic approach between the practices of a knowledge economy, which is still rare in government organisations. One important area that can be investigated by researchers in future studies is the establishment of the path flow from KM to OC involving other prevalent organisational development practices. With regard to the concept of KM it would be worthwhile integrating this research with newly emerging intellectual capital concepts to see how this leads to more or less effectiveness towards organisational competitiveness (Hsu, 2008). These research outcomes can help identify studies relevant to other organisational development as OC.

References


APQC (2001). The Knowledge Management Assessment Tool (KMAT) that was developed by APQC and Arthur Andersen. http://www.apqc.org/km, accessed on 20/7/2009.


http://dx.doi.org/10.1177/014920639101700108


Fugate, B., Stank, T., & Mentzer, J. (2009). Linking improved knowledge management to operational and
http://dx.doi.org/10.1016/j.jom.2008.09.003

http://dx.doi.org/10.1108/13673270210417664


http://dx.doi.org/10.1108/13673270010379858


http://dx.doi.org/10.1002/kpm.365


Heng, T. M. (2000). The Development of Singapore as a Knowledge Based Economy: Size of KBE and Its Economic Impact. Faculty of Business Administration, National University of Singapore.

http://dx.doi.org/10.1016/j.eswa.2007.08.012


http://dx.doi.org/10.1108/136732712121118807


http://dx.doi.org/10.1108/01437720710755272

http://dx.doi.org/10.5539/ijbm.v4n4p64

http://dx.doi.org/10.1108/13673271011032346

http://dx.doi.org/10.1108/01437720710755218


http://dx.doi.org/10.1108/13673270810852368


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