Factors Affecting the Knowledge Management in Civil Aviation Authority of Cambodia (State Secretariat of Civil Aviation – SSCA), Phnom Penh, Cambodia

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Received : June 20, 2020; **Revised :** July 11, 2020; **Accepted :** July 15, 2020

Abstract

This research delves into factors affecting knowledge management at civil aviation authority of Cambodia, publicly known as State Secretariat of Civil Aviation (SSCA). It has two main objectives which are to study the level of knowledge management at SSCA, and to study the factors affecting knowledge management at SSCA. In this quantitative study, questionnaire was distributed to sample of 236 employees at SSCA located in Phnom Penh, Cambodia, adopting a simple random sampling to select participants from each departments in SSCA. Data were analyzed using descriptive statistics and multiple regression. The result shows that knowledge management is at high level at the civil aviation authority. In addition, the analysis reveals that top management support and information technology infrastructure affect knowledge management at SSCA. Organizational culture and motivation aids do not significantly affect yet have correlation with knowledge management practice at SSCA.

Keywords : Knowledge Management, Top Management Support, Organizational Culture

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Introduction

The world economy has been largely transformed, moving from an economy that is highly dependent on tangible resources towards a new base that finds valuableness in knowledge assets. Knowledge management refers to process and strategies employed for identifying and leveraging the collective knowledge of an organization for enhanced knowledge capability. In today age of knowledge, knowledge management is highly relevant since it could help organizations improve working process that lead to organizational improvement and effectiveness. In organizations, knowledge assets dwell in the minds of its employees. Beyond that, organization must also need to seek for and employ ideal process and/or strategies to leverage their knowledge assets. With that rationale, it gives knowledge management the rising importance. Given that knowledge management practices are context-specific and could influence effectiveness and excellence of organization (Zheng et al., 2010; Alavi & Leidner, 2001), the researcher would like to seek after knowledge management in Cambodian workplaces. In Cambodia, where the culture of doing research is still quite not ubiquitous, organizations exist and operate as normal, yet not so many are aware of the current in-trend management concepts and principles–such as knowledge management–that are of importance and capable of transforming their organizations if sought after and implemented properly. Likewise, it is not different for the case of the civil aviation authority of Cambodia, which is known as State Secretariat of Civil Aviation (SSCA). Though knowledge management has been around and proven to be able to improve organization performance and effectiveness, it is negligent and less talked of at SSCA. Therefore, this present research can be a bridging gap, applying knowledge management into Cambodian workplace, especially to SSCA, which is a government agency whose daily works involves highly the circulation of knowledge. Specifically, the present research seeks to study the level of knowledge management and investigate factors that affect

knowledge management at civil aviation authority of Cambodia known as State Secretariat of Civil Aviation (SSCA) located in Phnom Penh, Cambodia.

Research Objectives

1. To study the level of knowledge management at SSCA.
2. To study factors that affects knowledge management at SSCA.

Research Methods

Population and sample

The population of this study are 456 employees of SSCA that are based at its Phnom Penh headquarter. Applying Taro Yamane formula (Yamane, 1973), the derived sample is 213.

Based on the understanding that the more number of the sample would create strong relationship for better certainty degree amongst the variables, give better representation, and lead to better and clearer understanding on the topic, the researchers added up the number of sample size to 250 SSCA employees.

Research tool

Questionnaire was used in this quantitative study. The validity of the questionnaire was ensured with Rovinelli and Hambleton (1977)'s method of index of item-objective congruence (IOC). The calculated Cronbach's coefficient alpha for reliability is 0.972. Out of the 250 distributed, 236 questionnaires (94.4%) were returned and were valid for analysis.

Data analysis

Data from the returned 236 questionnaire was inputted for analysis. To study of the level of knowledge management at SSCA, the researchers statistically analyzed the data, using frequency, percentage, Mean, and Standard Deviation. For the study on the factors affecting knowledge management at SSCA, multiple regression analysis, at the significant level of 0.05, was used.

Hypothesis of the Research

It is hypothesized that top management support, organizational culture, information technology infrastructure, and motivation aids affect knowledge management at SSCA.

Research Results

1. The analysis shows that knowledge management at SSCA is at high level, with an average Mean score of 3.50 and Standard Deviation of 0.44.

2. In the study of the factors affecting knowledge management at SSCA, there were four independent variables namely top management supports, organizational culture, information technology infrastructure, an motivation aids; and one dependent variable which is knowledge management. According to the conducted multiple regression analysis, two factors significantly affect knowledge management at SSCA. Top management support has the greatest effects on knowledge management with value of 0.311. Information technology infrastructure has the second most significant effect on knowledge management at SSCA, value of 0.250. Organizational culture and motivation aids do not significantly affect yet have correlation with knowledge management practice at SSCA.

Research Discussion

1. To study the level of knowledge management at SSCA. The analysis shows that knowledge management at SSCA is at high level. As for individual knowledge management activities (Alavi & Leidner, 2001), the knowledge creation and knowledge application are also at high level in SSCA; while knowledge storage/retrieval and knowledge transfer exist as average level. This result indicates that, collectively, knowledge management at SSCA is in good practice. Taking that as good news, though, there are quite number of things that SSCA need to do and focus more for better and more effective knowledge management activities that can smooth its daily activities and improve work effectiveness for both its staffs and

organization as a whole. For example, the socialization process (tacit knowledge to tacit knowledge) in knowledge creation seems to be needing the improvement, as indicated by the low Mean score of the item that measures this construct (KC6 – My organization has internal café, food court, relax zone, etc. for staffs to gather, talk, and exchange knowledge and experiences). This means that such things as internal café, food court, relax zone, etc. do not exist at SSCA, indicating that SSCA Officials/staffs are not having enough other spaces, besides their respective working office space, to gather, talk, and exchange knowledge and experiences that are related to their work, industry, and other things. On knowledge storage/retrieval, there should be improvement on the sophisticated systems such as electronic database, expert systems, etc. for storing organizational knowledge, especially codified tacit knowledge, documented procedures, etc. For knowledge transfer, it is not yet in perfect operation, meaning there shall be more effective communication process and information flow that enhance informal, formal, personal and impersonal knowledge transferring at SSCA.

2. To study the factors affecting knowledge management at SSCA.

Hypothesis 1: Multiple regression analysis supports this hypothesis that top management support affect knowledge management at SSCA. This result is in consistency with the findings by various researchers such as Davenport et al. (1998), Alazmi and Zairi (2003), Mas-Machuca and Martínez Costa (2012), Wong (2005), Sharp (2003), Sedighi and Zand (2012), Liebowitz (1999), Choi (2000), Ruggles (1998), Gupta et al. (2000), Yeh et al. (2006), Mårtensson (2000), Lee (2017), Chong and Choi (2005), and Holsapple and Joshi (2000) – whose research found that top management support was a significant factor influencing knowledge management in organizations. It can be said that organization leaders are the backbone of knowledge management, as they are the creators and facilitators of necessary conditions favorable for smooth and effective knowledge management (Holsapple & Joshi, 2000; Wong, 2005; Davenport et al., 1998; Yeh et al., 2006; Mas-Machuca & Martínez Costa, 2012; Sharp, 2003; Ruggles, 1998; Sedighi & Zand, 2012; Lee, 2017, Chong & Choi, 2005;

Mårtensson, 2000; Liebowitz, 1999; Gupta et al., 2000; and, Alazmi & Zairi, 2003). They are the role models to staffs for promoting knowledge management, showing them the desired behaviors for knowledge management, and steering change efforts to engage in knowledge management (Wong, 2005; Liebowitz, 1999; Davenport et al., 1998). Moreover, management teams can set examples for all staffs in organizations by willingly sharing their knowledge with their subordinates, proving that they are continuously seeking new knowledge, and engaging in lifelong learning. Besides, organizational leaders are also the one to set up and promotes work cultures that favorably encourages learning and knowledge sharing (Davenport et al., 1998; Gupta et al., 2000; Choi, 2000; Mårtensson, 2000). Plus, they are the one who provide and support resources including human and financial that are needed to engage in knowledge management activities (Davenport et al., 1998; Liebowitz, 1999; Wong, 2005; Chong & Choi, 2005).

Hypothesis 2: The multiple regression analysis gives an opposite result that organizational culture does not have significant effect on knowledge management at SSCA. This finding differs from that of various authors including Wong (2005), De Long and Fahey (2000), Gold et al. (2001), Yeh et al. (2006), Mas-Machuca and Martinez Costa (2012), Sharp (2003), Bhatti et al. (2011), Ruggles (1998), Sedighi and Zand (2012), Lee (2017), Chong and Choi (2005), Martensson (2000); Liebowitz (1999), Gupta et al. (2000), Davenport et al. (1998), Alazmi and Zairi, (2003), Pobkeeree et al. (2009), Pimchangthong and Tinprapa (2012), Tasmin and Yap (2010), Ajmal et al. (2009), and Zheng, Yang, and McLean (2010). The finding, however, goes in harmony with that of Boondao (2013) from Thailand and Choi (2000) whose research respectively did not detect any effects of organizational culture on knowledge management. However, according to the derived Pearson correlation coefficient of 0.675, organizational culture demonstrates correlation with knowledge management. In that regards, we say that organizational culture have relationship with but not effects on knowledge management at SSCA.

Hypothesis 3: the resultant multiple regression analysis supports the hypothesis – information technology infrastructure significantly affects knowledge management. This finding solidifies the results from plethora of reports which discussed and proved that information technology infrastructure was one crucially significant factor in the knowledge management quest and implementation, including that of Bhatt (2001), Alavi and Leidner (1999 & 2001), Yaghoubi et al. (2011), Wong (2005), McAdam and McCreedy (1999), Kulkarni et al. (2006), Gupta et al. (2000), Kankanhalli (2003), Ahn, Park, and Jung (2009), Liebowitz (1999), Ruggles (1998), Alazmi and Zairi (2003), Tasmin and Yap (2010), Sharp (2003), Pimchangthong and Tinprapa (2012), Davenport et al. (1998), Lee (2017), Pobkeeree et al. (2009), Yeh et al. (2006), Chong and Choi (2005), Ajmal et al. (2010), Mas-Machuca and Martinez Costa (2012), Gold et al. (2001), Lee and Choi (2003), Choi (2000), Al-Mabrouk (2006), and Sedighi and Zand (2012). Information technology infrastructure would assist and ease the communication within and across organizations, facilitating knowledge sharing, transfer, and distribution. In that essence, information technology infrastructure enhance more rapid search, access, and retrieval to stored information, organizational knowledge and experiences – which helps save more times, facilitates information flows, support collaboration, reduce communication barriers, and enhances communication between organizational members, and within and across organization (Alavi & Leidner, 1999 & 2001; Kankanhalli et al., 2003; Yaghoubi et al., 2011, Wong, 2005; Lee & Choi, 2003; Ruggles, 1998; Gold et al., 2001; and, Davenport et al., 1998)

Hypothesis 4: the multiple regression analysis gives contrasting result that motivation aids/practice does not significantly affect knowledge management at SSCA. This finding is contradictory to findings from numerous researchers including Davenport et al. (1998), Liebowitz (1999), Wong (2005), Al-Mabrouk (2006), Mas-Machuca and Martinez Costa (2012), Yeh et al. (2006), Sedighi and Zand (2012), Martensson (2000), Ajmal et al. (2010), Sharp (2003), Hauschild et al., (2001), and Hansen et al. (1999). Despite this, as per the calculated Pearson correlation coefficient

of 0.631, it is shown that motivation aids/practice is correlated with knowledge management. Based on this, a following conclusion is reached: that motivation aids/practice has correlation with knowledge management at SSCA, but it has no significant effects on knowledge management at SSCA.

From the results, while top management support and information technology infrastructure significantly affect knowledge management at SSCA, organizational culture and motivation aids/practice do not significantly affect knowledge management at SSCA in spite of the conclusion that both variables exhibit correlation with knowledge management. Possible reason that organizational culture and motivation aids/practice do not significantly affect knowledge management can be due to the differences in opinions and understandings of respondents who hold different positions and have different conditions, which makes them give different answers to the indicating items of each variable. It is understood, from the viewpoint of the researchers, that those staffs whose get 'good' benefits in terms of work opportunities and remunerations would see those indicating items as satisfied to their conditions, thus giving 'good' answer. In contrast, those staffs who believe that their work opportunities and remunerations are 'not so good' and 'fair' would accordingly give answer that fit their self-belief conditions. Moreover, it was observed that a considerate number of respondents would not dare to freely give answer that they think are right and/or reflect the reality of their department and organization due to fear of political circumstances and/or biasedness. This combined would lead them to give different opinions, making the data differently distributed; which then would make it difficult for the variable to find its 'significance' spot.

Research Suggestions

Base on the results of the study, there are three recommendations as following:

1. Policy Recommendation

In this study, top management support ranks the first factor having the greatest effect and information technology infrastructure the second factor with most significant effect on knowledge management at SSCA. Policies and strategies that enhance these two areas in relation to knowledge management shall be pursued for implementation at SSCA. For example, SSCA leadership team should invest more resources to enhance its human resource and information technology infrastructure capabilities so that there are more tools and systems such as knowledge management systems, email systems, intranet, electronic bulletin board, online knowledge databases and repositories, online expert system, etc., for facilitating knowledge activities within and across SSCA.

2. Academic Recommendation for future research

2.1. Conducted in Cambodian context at State Secretariat of Civil Aviation, which is a Cambodian government agency, this research employs sample of 236 employees currently working at SSCA. Future research could use a bigger sample within SSCA so that the analysis would give more enhanced representation, better interpretation, and clearer understanding on factors affecting knowledge management at SSCA. Also, future investigation on the same topic could extend to other government agencies, or even other branches of regulatory, public, or state organizations (such as Assembly and/or Senates) in Cambodia.

2.2. Investigation using samples of private organizations and/or business in Cambodia could also be an option for consideration. This would then give comparative understanding on factors affecting knowledge management from perspectives of both private and government organizations.

2.3. For deeper understanding and enriched details on the topic, investigation using qualitative and/or mix methods can also be embarked by future

researchers so as to comprehend unexpressed perceptions, values, and understanding.

2.4 Beyond the factors affecting knowledge management, future study could look into strategies for successful knowledge management in the organization. For example, what ideal policies and methods that can be adopted so that staffs are engaged and contribute to knowledge management in the organization?

2.5 Next research topic in relation to knowledge management could also focus on knowledge management system and how to design and implement them right for increased benefits for the organization.

2.6 Next researchers can also look at and identify favorable organizational settings, work atmosphere, organizational culture, and practices/strategies that could engage and motivate staffs to create knowledge and share knowledge with one another and across organization.

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