MODELLING THE PREDICTORS FOR ORGANIZATIONAL INNOVATIVENESS OF HIGHER EDUCATION INSTITUTIONS

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Abstract

The global and local trends in higher education as well as the changing external and internal environment present many challenges for the academicians and administrator in higher education institutions. Apart from that, the development of the corporate culture and innovation in higher education institutions also changed. Therefore, this study investigates the relationship between organizational culture, and organizational innovativeness of administrator in higher education institution in Malaysia. The concept of organizational innovativeness has received relatively little attention in the higher education literature. The study also proposed the mediating effect of organizational learning on the above mentioned relationship through which higher education institution's administration would enhance their performance. A scientific research gap has been searched, through an intensive assessment of a previous study, in the literature on the relationship between organizational culture, organizational learning and organizational innovativeness. Subsequently, based on the dynamic capabilities theory, this study attempts to fill gap between constructs for competitive advantage. A conceptual framework has been proposed in this research study, as well as a contribution towards the enhancement of the related literature.

Keywords: O*rganizational Culture, Organizational Innovativeness, Dynamic Capabilities, Organizational Learning*

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Introduction

There is a universal call for the globalization of the education system in the education system. This is because a nation's education system needs to meet the demands for knowledgeable and skillful workforce to steer the nation to compete in the increasingly competitive global economy. In this light, Higher Education Institutions (HEIs) have been affected by various variables such as international political conflicts, global communication systems and the volatile nature of international economies and HEIs need to tackle these issues so that they can fulfill the social, political and economic demands.

Higher education systems in different countries may be distinct to each other, however, according to some administrators and educationist, many share the common strands of challenges. These strands include diversification, marketization, internationalization, and massification of higher education. These issues are the results of the world's social, political and economic changes brought upon the global economic crisis and globalization. Consequently, such issues had led to various challenges for the higher education providers, such as the need for higher education for a wider socio-economic segment, the need for affordable and accessible tertiary education , the concerns of quality over the increasing number of university students, the increasing number and categories of tertiary education, the concerns on HEIs roles as providers and importers of higher learning in transnational education, the increasing number of HEIs providing distance and open learning, the upsurge in international academic activities involving lecturers, students and departments, entrepreneurship, marketing of HEIs, course improvement to suit professional needs as well as the advent of new skills, contents and knowledge.

Higher Education Institution and Innovation

Consequently, the HEIs in Malaysia strive to promote innovation. This is because innovation is deemed as central in driving education and economic development. The ministry education is trying to develop an innovation ecosystem of particular strategic area that critically contribute to growth of economy and education. This ecosystem is able to facilite a large amount of research steps to support the model-oriented and model-driven demands for commercialization, development and research. Therefore, HEIs need to improve their roles to provide solutions for stakeholders, as well as their roles in nurturing research talents.

In the Malaysian context, the HEIs have a progressively complex responsibility to fulfill the government recommendation as stated in the higher education section of the Education Development Plan 2015-2025 (higher education). The development plan urges HEIs to create an ecosystem supportive of innovation as innovation is a crucial driving force in the growth of economy. Thus, even though HEIs administrators are not directly responsible in the development and implementation of institutional level innovation policy, they have a crucial role to ensure researchers in the university have the necessary skills in aspects like writing and managing of research grants, leadership of research teams, research supervision, ethics, and publication writing. According to the Malaysian Educational Blueprint (2013), the improvement of these skills can ensure highly detailed and qualified research management

that ensure the development of an effective training program, which in return, will create an innovation ecosystem.

In this light, HEIs administrators need to face the challenges in facilitating the development of skills and expertise among research and innovation managers as well the efficient management of scarce research and innovation resources. As recommended by the Malaysian Education Blueprint (2015-2025), this research will identify elements of innovation competitiveness and creativity in HEIs in Malaysia and aims to ascertains the extents of these three aspects- organizational innovativeness, organizational learning and organizational culture, among administrators of HEIs. Furthermore, this study tries to determine the crucial role played by organizational learning is as the intermediaries between factors affecting organizational innovativeness.

Past studies found that research provides an effective path that can help the improvement of performance through culture, innovation and learning. Thus, organization learning is deemed as a vital aspect that improves innovativeness. According to Baker and Sinkula (2002), learning is considered as important for the success of a company as it accelerate the development of new processes and products. Here, it is assumed that compared to their competitors, companies that constantly update their knowledge would have a better chance of making sense of the changes in the environment and responding to these changes. (Sinkula, 1994; Slater and Narver, 1994; Tippins and Sohi, 2003).

As there is an apparent link between innovation, organization learning and the crucial role of innovation in providing competitive advantage (Stata, 1989; Dodgson, 1993; Garvin, 1993), past studies have tried to investigate and discuss the determinants of organizational learning, such as organizational culture. These studies posited that culture is an integral element in the process of organization learning (Argote et al., 2003; Davenport and Prusak, 1998; Lee and Chen, 2005; Perez et. al. 2004). This is due to strong influence of organization culture on employees' behavior. On the other hand, based on the value it transmits, organizational culture can either encourage learning or become a barrier for learning.

In the meantime, even though past studies had widely accepted these issues, up until now, the relation between learning, organizational culture and innovation has been rarely investigated together in literature, especially from the empirical point of view. In this regards, some studies had shown that innovation is linked to organizational learning (Forrester, 2000; Darroch and McNaugton, 2002; Scarbrough, 2003). However, only a limited amount of studies had focused on how learning is affected by organizational culture, (Chin-Loy, 2003, 2011; Lee and Chen, 2005; Chang and Lee, 2007), while a handful focused on innovation (Obenchain, 2002; Lau and Ngo, 2004; Obenchain and Johnson, 2004).

Therefore, this paper aims to close this gap. This paper presents a literature review on the relationship between each variables under studied. Then, an empirical examination of the relationships between the variables organizational learning, organizational innovativeness and organizational cultural among HEIs administrators is presented Finally, this study will present the implication of its findings and recommendation for future researches.

Organizational Culture and Organizational Learning

According to past studies, organizational culture plays an integral role in the process of organizational learning. (De Long and Fahey, 2000; Argote et al., 2003). Here, organizational culture reflects the values, beliefs and hidden assumptions that organizational members share (Deshpande and Webster, 1989, 1993, 2004; Cameron and Quinn, 1999; Miron et al., 2004). These values, beliefs and assumptions can influence behavior, which in return, act as the core of the learning process. Consequently, behaviour can either foster learning and hinder learning (Davenport and Prusak, 1998; De Long and Fahey, 2000). Furthermore, De Long and Fahey (2000) motioned that organizational culture can influence organizational learning in four ways. First, it shapes the employees' perception of the importance of knowledge and what knowledge that they need to learn. Next, it enables the transformation of individual knowledge into organizational knowledge as individual knowledge can contribute to the learning development in an organization. Next, it determines how new knowledge is created, verified, and disseminated, and finally, it constructs the social interaction context that will inherently ascertain an organization's efficiency in producing, decimating and adopting knowledge. As a result, each organizational culture will have different impact on organizational learning. (Lee and Chen, 2005).

Organizational culture can be divided into different typologies (Wallach, 1983; Reigle, 2001). In this light, the Competing Values Framework is perhaps one of the most commonly known and used framework for empirical studies on organizational culture (Obenchain, 2002; Obenchain and Johnson, 2004; Lau and Ngo, 2004; Raj. R, 2013).

Furthermore, past studies had established the significant role of organizational culture in encouraging organizational learning (Cook and Yanow, 1993; Popper and Lipshitz, 1998; Schein, 1993, 1996). For instance, Hurley and Hult (1998) stipulated that the increase in a firm's capacity for innovation that cultivate competitive gains is linked to the higher levels of innovativeness in the firm's culture. hence, culture is a critical aspect that drives changes in support of organizational learning. In this regard, Daft (2001) argued that in most competitive environments, robust adaptive culture is needed by an organization to boost cooperation and mutual learning among its members (Daft, 2001).

Organizational culture supports the knowledge acquisition process and comprehension through senses, experience and thoughts. Kululanga et al (2001) claimed that this improves the efficacy of organizational learning and behaviour, while Lemon and Sahota (2004) mentioned that organizational learning plays a crucial role in ensuring the constant update of knowledge so that efficient responses to changes can be made. Brian and Pattarawan (2003) in their work observed that there is a positive relationship between organizational culture and organizational learning. Similar findings are reported by other works, including Czerniewicz and Brown (2009, 2011) and Liao, (2012) on the other hand, Susana et al. (2004) study on the effect of organizational learning on organizational culture and found that performance is not directly influenced by organizational culture; instead, organizational culture affects organizational learning behaviour which in return, accelerate the organization's business performance. In this light, one can easily recognize the impact organizational culture on organizational learning, however, there is limited number of researches focusing on how organizational learning is impacted by different types of organizational culture.

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Relationship Organizational Culture and Organizational Innovativeness

Values is predominantly influence human actions and decisions (Breu, 2001), hence, in this regards, organizational culture has a strong influence on aspect like self-confidence, commitment, organizational performance, productivity and ethical behaviour. (Ritchie 2000). Past researches, like Deshpande and Webster 1989, Naranjo et .al (2010), Büschgens et. Al, (2013) observed the strong link between innovativeness and organizational culture. Furthermore, Boulding (1981,1998) argued that corporate culture can act as an agent of transformation that can warrant an organization's system survival. Thus, as mentioned by Weick (1979), the failure to adopt the accepted cultural norms could hinder the transformation and evolution of a system, making it hard for the organization to fit into the external environment.

Past studies also discussed the importance of organizational culture in an organization's innovativeness (Ke and Wei, 2008), and it is widely agreed that that organizational culture is a critical in influencing change initiative. On the other hand, the studies show conflicting findings on the type of organizational culture that can support innovativeness and business transformation (Skerlavaj et al., 2010, 2012), where some studies have examined some of the aforementioned aspects (Martins and Terblanche, 2003; Merx-Chermin and Nijhof, 2005; Sarros et al., 2008). In this light, Prajogo and McDermott (2005) posited that organizations often implement changes in their own unique way and harmoniously adopt opposite organizational culture. However, the limited amount of empirical research in this field has call for the increasing needs to test what form of organizational culture support innovativeness.

Meanwhile, cooperation and teamwork establish a cross functional boundary that enables knowledge acquisition. (Subramaniam and Youndt, 2005). When knowledge of different fields are merged together, innovation can be increased and new knowledge can be progressively created (Grant, 1996). Furthermore, Dobin (2008) mentioned that organizations that support knowledge creation would involve its individuals in ensuring teamwork and independence, increasing attention to value, risk taking, using the solution-oriented approach and embarking participative and communicative decision making. Moreover, studies like Jassawalla and Sashittal (2003) and Raj. R. (2012) claimed that knowledge oriented organizations often discourage practices and behaviors that could hinder innovation, such as control, rigidity, predictability and stability.

Relationship of Organizational Learning and Organizational Innovativeness

Past studies on organizational learning and innovation, including Stata, 1989; Cohen and Levinthal, 1990; Nonaka, 1991; Kogut and Zander, 1992; Leonard-Barton, 1995; Nonaka et al., 1995). In this light some works suggested organizational learning is the main process that develops technical innovation (Stata, 1989; Fichman and Kemerer, 1997).

Literature states that innovation happens as extant knowledge are acquired and shared among individuals within an organization, while knowledge acquisition is influenced by the knowledge base of an organization, (Salavou et al., 2003, 2007) along with the acquisition of knowledge from external sources (Chang and Cho, 2008). In this light, external knowledge

acquisition is determined by the firm's capacity to acquire new ideas, which reflects the firm's capability in understanding, assimilating and applying new external knowledge for its commercial gain (Cohen and Levinthal, 1990).

Innovation also requires one to transform and exploit extant knowledge, including the knowledge and information shared by the employees. As Nonaka suggested (1994), sharing of knowledge encourages innovation as novel knowledge generate novel shared understanding. Consequently, organizational learning enables new knowledge to be developed, acquired, transformed and exploited to increase innovation. However, despite some literature that had supported the relation between innovation and organization learning, there is still a lack of empirical evidences that support how innovation is influenced by organizational learning. (Darroch and McNaugton, 2002). Furthermore, there are some studies that discussed how the process of organizational learning can foster process innovation (Scarbrough, 2003) and product innovation (Forrester, 2000). Besides that, quantitative studies, such as by Darroch (2005) have proven the positive relationship between product innovation and the process of organizational learning as a whole while Alegre and Chiva (2008) demonstrated the link between product innovation and the firm's capacity for organizational learning, and Liao et al (2010; 2012) and Murat and Baki (2011) that found the significant, positive impact of process innovation on organizational learning capability.

On the other hand, there are studies that focused on a single phase of the organizational learning process and its influence on either process or product innovation; Yli-Renko et al. (2001) demonstrated a strong link between product innovation and knowledge acquisition, and Weerawardena et al. (2006) showed the influence of three types of learning on innovation intensity. Finally, Chang and Choo (2008) observed motivation can be enhanced through the use of formal procedures, memory sharing and the use of external information. On the other hand, while the aforementioned works have focused on different perspectives on the link between innovation and organizational learning, most of these studies have shown positive link between these two aspects.

Theoretical Framework

The literature review stipulated that one cannot discuss aspects such as organizational culture, organizational learning and organizational innovativeness separately (Goh, 2005; Liao and Wu, 2010, Liao et.al, 2011). In this regards, Hurley and Hult (1998) argued that a higher degree of innovativeness in a firm's culture is related to enhancing the firm's innovation capability so that they can obtain competitive gain. Furthermore, a culture that inspires changes is a vital aspect in supporting organizational learning. Daft (2001) argued that this is particularly evident in competitive environments as firms require robust, adaptive culture that will incite cooperation and mutual learning among its members.

The study by Weiling and Wei (2006) claimed that mutual trust and a culture of openness influence effective learning, and innovativeness is a portion of organization learning that leads to innovation. Moreover, according to Lynn (1999), learning and organization's capacities are influenced by culture, inciting innovation and change. Therefore, a collaborative culture encourages the transformation of organizational learning, which at the same time, provides a significant impact on business performance (Lopez et al., 2004). Meanwhile, an empirical study by Sanz-Valle et al. (2011) probed on the pivotal role of

organizational culture in enabling organizational learning, as well how technical innovation has been impacted by organizational learning. In this regard, hierarchy and adhocracy organizational cultures shown indirect influence and facilitates the link between organizational learning and technical innovation.

In the meantime, the study by Liao et al. (2012) probed on the relationship between organizational learning, organizational culture, organizational innovativeness, and knowledge acquisition in Taiwan's banking and insurance industries. The study has shown that organizational learning plays the role of fractional facilitator of organizational culture and organizational innovativeness. Moreover, the study found that innovation and organizational learning is influenced by organizational culture through knowledge acquisition, and organizational innovation fully mediates organizational learning and knowledge acquisition Therefore, the theoretical framework has guided the development of the following hypotheses, as well as the design and testing of the conceptual model, as shown in Figure 1. This model takes accounted different types of organizational culture as the independent variables, while organizational learning is the mediating variable, and lastly the outcome variable is in the form of outcome variable.

Hypothesis 1$_1$: *There is a positive relationship between organizational culture and organizational learning*

Hypothesis 1$_2$: *There is a positive relationship between organizational learning and organizational innovativeness*

Hypothesis 1$_3$: *There is a positive relationship between organizational culture and organizational innovativeness*

Hypothesis 1$_4$: *There is a positive relationship between organizational culture and organizational innovativeness mediated by organizational learning*

Based on the literature reviewed the theoretical framework shown in figure 1 is proposed
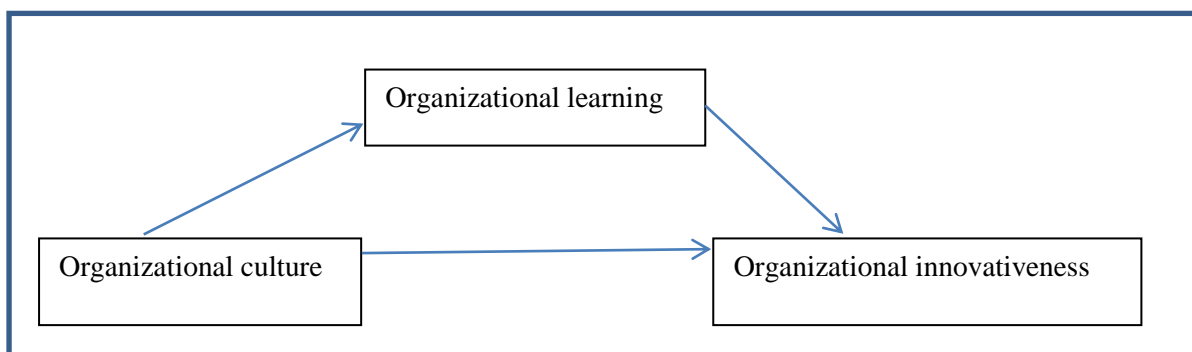

Figure 1: Proposed conceptual framework for predicting relationship between organizational culture, organizational learning and organizational innovativeness.

Conclusion

This study has revealed the importance of organizational culture, organizational learning and organizational innovativeness. Thus, this study led to the previous studies through provided the conceptual framework provided, which founded on dynamic capabilities based theory. The conceptual framework explains the direct relationship between organizational culture, organizational learning and organizational innovativeness. The conceptual framework in this field is nevertheless confined to, the results obtained from a literature review and thus not practically proven. So, the future is wide open for further empirical research in this field. Furthermore, this study as a stepping stone for further research on finding importance factors towards enhanced innovation and competitive advantage.

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