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Value-Based Higher Education Innovation Model: A Theoretical Foundation

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Abstract: Innovation plays an important role in the development of any organization including Higher Education Institutions (HEIs) that forced many to embark this issue. HEIs should be the role model in the practice of innovation so as to encourage and empower innovation for the survival of research institution. Therefore, this study expounded the critical factors that are crucial for achieving innovation excellence in an organization based on the theories integrated (resource-based view, total quality management and stakeholder theory). Five factors namely objectives and strategies, change management, resource management, best practices and innovation have been identified as an enabling factor in organizational innovation excellence. In addition, the intangibles criteria of those critical factors, i.e., the core values that support each factor are also discussed. The proposed Malaysian higher education innovation model that integrates all five critical factors is also introduced. Through the proposed model, it could be the basis for HEIs especially in Malaysia to accelerate their innovative capability by garnering all the efforts and endeavor for achieving excellence and be recognized institutions worldwide.

Key words: Innovation, critical factor, core values, higher education institutions, research institution

INTRODUCTION

In today's world, innovation is regarded as an important element for organization to succeed and progress further. It is said to be the key driver in the economic development in future (Abdullah *et al*., 2003, 2011). There was a close link between product innovation performances with the overall success of anorganization thus the innovation process should be well managed and successful (Cormican and Sullivan, 2004; Eshlaghy and Maatofi, 2011). Therefore, it is of great important to study the factors or values that facilitate the innovation process towards achieving the organizational excellence. In pursuit of this, the innovation values have to be internalized in the university environment to realize this endeavor.

Universities play as important role in driving innovation through research activities. The government is very concerned on the research activities that are carried out in the Malaysian universities. Several public universities have been recognized as research universities such as University of Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Sains Malaysia (USM), Universiti Putra Malaysia (UPM) and Universiti Teknologi Malaysia (UTM) (Saari *et al*., 2013) for realizing the government's effort. However, the commercialization of research findings by HEIs are still at low stage because the Intellectual Properties (IP) produced do not meet the requirement of the industry and most of Research and Development (R&D) projects are based on offers.

In the relation to this issue, this study proposed a model based on core values as a measurement indicator for gauging the innovation excellence in the universities. This paper is organized as follows. In the following section, the theoretical foundation for innovation excellence model is discussed.

MATERIALS AND METHODS

Theoratical foundation for innovation excellence model: In this study, the critical factors are the dimensions that support toward innovation excellence which are identified as objectives and strategies, resource management, change management, best practices and innovation. The idea of these dimensions has been outlined from Hamid *et al*. (2015) in their research on developing the conceptual model of Innovation Excellence Framework (IEF) in HEIs. This study is providing the expanded version model of IEF.

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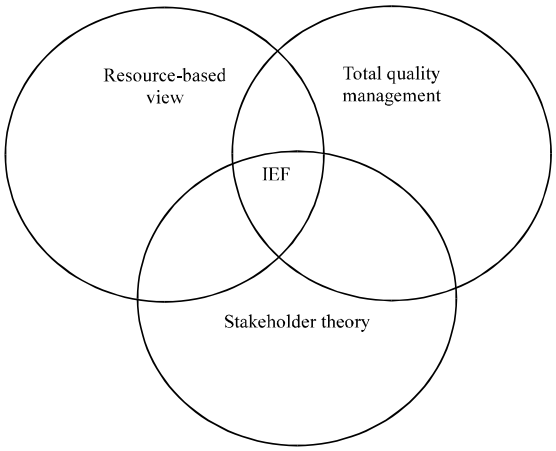

Fig. 1: The integrated theories in the innovation excellence framework

The dimensions in the IEF were originally from Organizational Capability (OC) model (Abdullah *et al*., 2011) which derived from Total Performance Excellence Model (TPEM) that constructed of 7 factors which are leadership, objectives and strategies, culture, change management, resources management, best practices and innovation embedded with the core values respectively (Abdullah *et al*., 2011; Husain *et al*., 2001). Only five critical factors were chosen in this study to bind together in order to measure the innovation performance level.

Thus, there are three relevant theoretical streams that contribute to the factors involvement in the IEF model as shown in Fig. 1 such as Resource-Based View (RBV), stakeholder theory and Total Quality Management (TQM) as discussed in TPEM model (Idris, 2004, 2011; Idris *et al*., 2003).

RESULTS AND DISCUSSION

Dimension of innovation excellence model

Objectives and strategies: Objectives refer as aims or goals (Leiponen and Helfat, 2009) of an organization while strategies refer to the action that should be taken in order to achieve the objectives. Objectives and strategies are important element in pioneering the capability (Idris, 2004) and performance (Bouquin, 1997) of an organization. When an organization set out the new objectives all processes must be upgraded and improved. Thus, change is needed if their progress does not meet or reach the goals. They also need to seek out the solutions or manage to change if the preceding objectives are not competitive with the rivals. As the solution, the best practices should be determined and performed but at the same time, it should be synchronized with the objectives predetermined. Furthermore, objectives are also the decisive medium in moving the innovativeness activities. If the elements in the objectives are to prioritize or giving focus on the matters of innovation, then all the behavioural activities of the organization would be towards the innovativeness achievement.

Therefore, objectives and strategies are regarded as a big role in an organization and could be the determinants of many aspects including resource management process, best practices implementation, change management and innovation development.

Resource management: The management of resources need a compatible allocation planning that give chances to the innovation development of an organization. All the utilization of resources should be managed well for preventing the excessive of loss. Hence, the innovativeness of resource management is important for the development processes. Furthermore in order to face with the changes of future based from Mahoney (1995), the accumulation of resources is important for change demanded new mental models in order to cope with unprecedented diversification. The top management or stakeholders are responsible in determining and performing the best practices for resources allocation that has been prescribed.

Change management: Change management would force the amendment in the process or system of organization. Then, it will influence organization to find and create new practices in order to maintain their performance. Change management require the development of best practices framework as emphasized by Clarke and Garside (1997). They have stated that identifying best practices in change management could help organizations to prevent mistakes made from being repeated.

Best practices: Best practices are important element that will enhance the innovation development. It is a gateway of conducting process in creating or transform new product or service. Best practices need to be measured or assessed to maintain the development of innovation. Best practices are the key element that will foster the innovation development. According to Cormican and Sullivan (2004) auditing best practices will determine the effectiveness product innovation management. Besides that, the implementation of product development best practices can be best viewed as a journey which is to

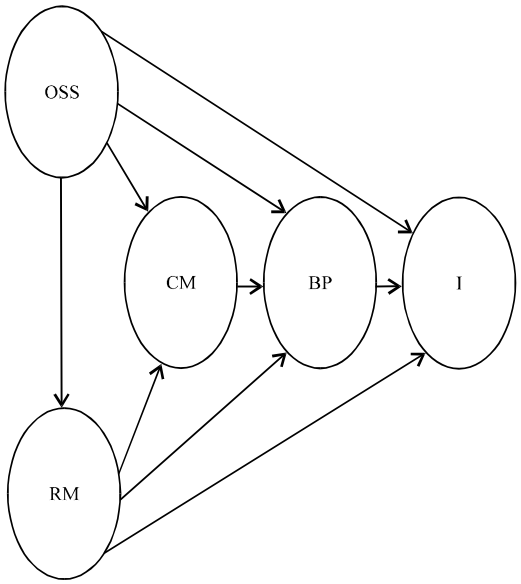

Fig. 2: Proposed Malaysian higher education innovation model

make sure the improvement process is continuous. Furthermore, based from Clausen *et al.* (2013) the mostefficient strategy for organizations to increase their performance and ability in developing the new innovation product is by enhancing and refining current routines and their practices.

Innovation: Innovation is the essential component that could enhance the capability (Lawson and Samson, 2001; Lee *et al.*, 2000) competitiveness (Tan and Nasurdin, 2011; Dervitsiotis, 2010) and performance (Zaied *et al.*, 2015; Mairesse and Mohnen, 2003) of an organization. By supporting the association of integrated critical factors, the proposed Malaysian higher education innovation model is developed as in Fig. 2.

Core values of proposed dimensions: The amount of 30 core values have been specified for innovation excellence framework. Each critical factor consists of 6 core values. All these core values obtained from Value-based Total Performance Excellence Model (VBTPEM) (Abdullah *et al.*, 2011). Figure 3 shows the core values for each dimension in innovation excellence framework for HEIs in Malaysia.

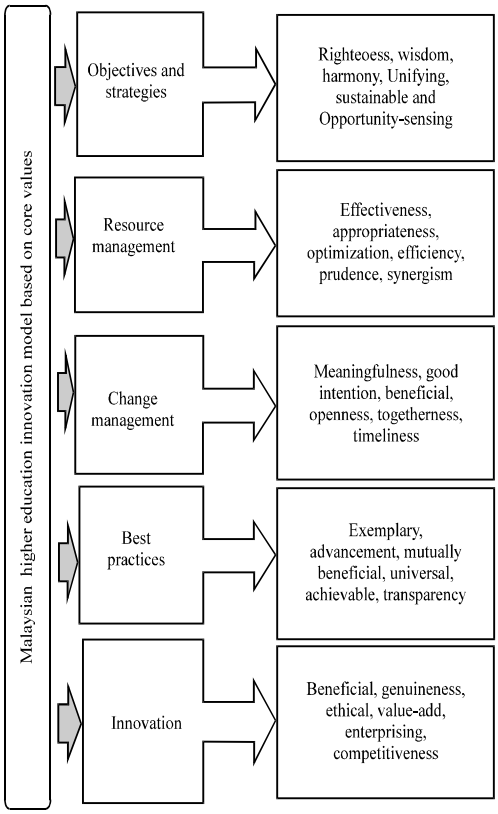

Fig. 3: Core values of Malaysian higher education innovation model

CONCLUSION

Malaysian higher education innovation model is the model improvement of IEF model that proposed by Hamid *et al.* (2015). The findings of this study would develop knowledge about the measurement system in many ways especially in organizations such as universities in Malaysia which involves intangible aspects. Moreover, the model also reveal all those five critical factors in supporting the innovation excellence of HEIs which are related to each other that should be given due attention. Universities can contribute to the improvement of competitiveness through Malaysian higher education innovation model that are proposed.

Overall, this study is important to develop and provide improvement of innovation model and practically important to be taken due attention by stakeholders in order to accelerate the innovation excellence performance on par with the universities worldwide.

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