

## INTELLECTUAL CAPITAL AND INNOVATION ON ORGANIZATIONAL PERFORMANCE

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### ABSTRACT

Intellectual capital is recognized as a key asset for organizational performance. It is also the key driver of competitive advantage in today's knowledge based economy. However, intellectual capital can only create value to organizations when knowledge embedded in it is exploited. Many researchers have stated that management of intellectual capital is about managing and leveraging knowledge embedded in the assets. Proper management of intellectual capital is critical in enhancing organizational performance because it creates value. Today, innovation is considered as a necessity for every organization due to the terminating competition in market, globalization and rapid development. Many researchers stated that intellectual capital and innovation is a vital asset that helps organizations to create value in present economic syndrome and enables the organizations to be innovative. The purpose of this paper is to research the impact between intellectual capital and innovation on organizational performance. The main contribution of this study is to investigate the impact of intellectual capital and innovation on organizational performance of universities in Malaysia.

**Keywords:** Intellectual Capital, Innovation, Organizational Performance.

### INTRODUCTION

Malaysia has been successful in efforts towards the democratization of higher education and production of graduates to meet the manpower requirements for economic growth over the last three decades. As a storehouse of knowledge, universities provides a significant contribution to the socioeconomic development of the country and the development of human capital. At present, the university has grown rapidly with the increasing number of students and programs. Along with the development of globalization, universities should have competitiveness and resilience to be in a group of the world's best universities. Thus, efforts to improve the universities' ability to continue to perform their duties more efficiently, transparently and effectively towards establishing an excellent higher education system are crucial.

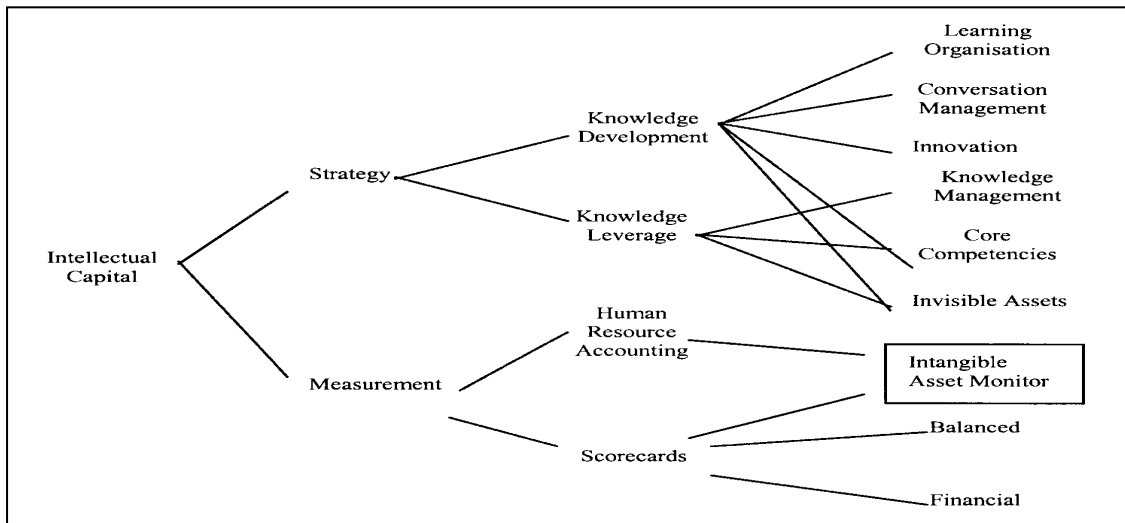
To realize the goal of the country as a center of excellence of higher education and the proliferation of knowledge in the region by 2020, efforts and actions have been carried out. With the establishment of Universiti Malaya (UM), the era of knowledge development in Malaysia has begun. Among the universities that pioneered the establishment of the university is Universiti Malaya (1961), followed by Universiti Sains Malaysia (1969) and Universiti Kebangsaan Malaysia (1970). Today, numbers of universities are rapidly expanding. Rapid growth of the universities exhibits that the contemporary economy requires highly educated community to meet the needs of knowledgeable and highly skilled labour. In fact, the economy is now driven by economy based productivity. A lot of studies on IC and innovation have been conducted in the business organizations and very few on universities. Therefore, this paper will focus on IC and innovation applied in the universities.

## DEFINITION AND COMPONENTS OF IC

Intellectual capital (IC) was first discussed in 1969 by an economist, John Kenneth Galbraith. IC became popular in mid 1990s (Koenig, 1998). At the beginning of twenty first century many academicians, researchers and practitioners are attempting to explore the concept and application in depth (Muhammad *et al.*, 2012). The first usage of the term IC was a few decades ago, but it was in 1990s that it gained a momentum.

IC can also be defined in various ways. According to Andrew (2007), IC is defined as an intellectual material that has been formalized, captured and leveraged to produce a higher valued asset. In addition, Neysi *et al.*, (2012) stated that all nonmonetary and nonphysical resources that contribute to the organization's value creation and are fully or partly controlled by the organization are also defined as IC. Casey (2010) reported that IC is a collective knowledge individually or collectively in an organization or society that can be used to produce wealth, multiply output of physical assets, gain competitive advantage and enhance values of other types of capital. IC was also defined by Abdulai *et al.*, (2012) as a holistic or meta-level capability of an enterprise to co-ordinate, orchestrate and deploy its knowledge resources to create value towards achieving its future vision. Referring to Ute (2008) in Sayed *et al.*, (2012), IC is defined as knowledge, experience, expertise and associated soft assets rather than hard physical and financial capital.

In brief, IC is a knowledge-based equity of organizations. Knowledge is a critical factor which has more impact on an organization's ability to remain competitive in the new global market (Bollinger and Smith, 2001). This is because when knowledge is built strategically, organizations can develop strategies that generate competition in product innovation and development of new technologies to deal with competitors. Combination of IC and knowledgeable workers can provide a permanent advantage against competitors and offer an alternative to the target market (Carneiro 2000). Moreover, combined knowledge embedded in IC forms the core assets or resources in knowledge-based organizations (Rosmah et al., 2008). In general, IC itself consists of different capitals that are rooted in employees, organizational routines, intellectual property and relationship with customers, suppliers, distributors and partners (Choo and Bontis, 2002). In summary, the working definition of IC is all intangible assets, knowledge and capabilities available to every employee and all levels of the organization. Figure 1.1 shows that IC has been distributed according to its own strategy and measurement.



**Figure 1.1:** Conceptual Roots of Intellectual Capital (Source: Roos *et al.*, 1997)

In literature, there are several frameworks to identify and classify the IC concepts. Bontis (1998) broke down IC into human, structural and customer capital. Similarly, well known researchers in this area such as Broking (1996), Sveiby (1997), Edvinson and Malone (1997) and Roos *et al.* (1997) also divided IC into three components. They identified that IC is based on various intangible resources, such as knowledge, skill, education, employees' competence customers relationship, brand name and organizational structure (which are also human, structural and relational capital). Therefore, in this paper IC comprises four components which are human capital, structural capital, relational capital and spiritual capital as the new added capital to be studied.

Human capital refers to the skills of an employee that helps accomplish tasks (Bontis, 2001). Human capital is important because it is a source of innovation and strategic renewal. It is also a primary component of IC since it is the critical source of intangible value (O'Donnel *et al.*, 2003). Organizations that focus on human capital will usually sustain in the competition compared to those who focus on information technology (Salina and Wan Fadzilah, 2011). This is due to the fact that information technology is readily available to everyone and information technology can easily be copied by the competitors unlike human capital competencies that are developed through the sharing and acquisition of knowledge and that are much more difficult to imitate.

As for structural capital, Boisot (2002) defined it as a supportive infrastructure that enables human capital to function. This includes hardware, software, databases, organizational structure, process manuals, strategies, routines and anything that is valuable to the organization. Besides that, it also includes the systems, networks, policies, culture, distribution channels and other organizational capabilities developed to meet market requirements as well as intellectual property. While referring to Petr and Elena (2011), structural capital includes the mechanism and processes in promoting efficiency and innovation, information and communication system, patents, inventions and trademarks. It also includes the existing know how captured in the form of organizational, procedural arrangements and problem solving skills. The organizations experience is then preserved and used in normal operation and development of the organization.

Relational capital is the cumulative trust, experience and knowledge that form the core of the relationship between businesses and their customers. Relational capital keeps customers from abandoning a commercial relationship. According to Petr and Alena (2011), relational capital includes the connections that people outside the organization have with their loyalty, the market share, the level of back orders and similar issues. While referring to Salina and Wan Fadzilah (2011), relational capital is defined as the combined value of the relationship with the customers, suppliers, industry association and markets and represents the potential an organization has due to ex-organization intangibles.

Spiritual capital is about intangible knowledge, faith, belief and emotion embedded in the minds and hearts of individuals and in the hearts of organizations, which includes the vision and direction, principles, values and culture (Ismail, 2005). It also includes motivation, self-esteem,

courage, strength, commitment, teamwork, determination, desire, enthusiasm and team spirit. While Zohar and Marshall (2004), defined spiritual capital as an asset that can help strengthen the future of mankind and also maintain the human spirit. It is used in such a way a community or an organization believes. Thus makes them exist, aspired and be responsible. On the other hand, individuals who have a high spiritual capital better understand the purpose of their lives. This spiritual capital is the backbone of an organization (Zohar and Marshall, 2004).

Today, IC is recognized as a key asset for organizational performance and its management is critical for the competitiveness of organizations (Bernard et al., 2003). Researchers have argued that managing IC is about managing, leveraging and harnessing knowledge embedded in those assets. IC can only create value to organizations when knowledge embedded in the intellectual capital is exploited. Volpel (2002) suggests that there are three critical elements in managing intellectual capital, the sharing of meaning emerging from IC and the transforming of identifying through assimilation of the IC. However, combination of knowledge, skill, innovation and ability of the organization's individuals are essential for an effective organization performance.

## **INNOVATION**

Every organization needs something unique to ensure the organization can remain unchanged in this globalized world. One way is to produce something innovative. The power to produce innovative organizations have the strong influence market for long-term operation. According to Rozihan (2002), many chief executive officers, consultants and the academicians agree that innovation is the key to competitiveness.

Innovation can be defined as the application of new ideas to the products, processes, or other aspects of the activities of a firm that lead to increased value. This value is referred in a broad way to include higher value added to the firm and also benefits to consumers or other firms. Based on Oslo Manual (2005), innovation is the implementation of a new or significantly improved product or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. While, White and Bruton (2007), stated that innovation is the process of renewing and increasing the products, processes, materials and services is developed and transferred to the appropriate market. Innovation activities are all scientific, technological, organizational, financial and commercial steps which, actually, or are intended to, lead to the implementation of innovations. Innovation activities also include research and development (R&D) that is not directly related to the development of a specific innovation.

Generally, there are four main types of innovation which are product, process, marketing and organizational innovation. Product innovation is the introduction to newly or significantly improved goods which includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. Implementation of a new or significantly improved production or delivery method is the process of innovation. This includes significant changes in techniques, equipment and/or software. Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products. A marketing innovation is the employment of a new marketing method involving significant changes in product design or

packaging, product placement, product promotion or pricing. While, organizational innovation is known as the implementation of a new organizational method in the firm's business practices, workplace organization or external relations (Tiwari, 2008). Organizational innovations can be intended to increase a firm's performance by reducing administrative costs or transaction costs, improving workplace satisfaction (and thus labor productivity), gaining access to non-tradable assets (such as non-codified external knowledge) or reducing costs of supplies.

## **ORGANIZATIONAL PERFORMANCE**

Organization is defined by Oxford dictionary as an organized group of people with a particular purpose. While, performance is defined as the action or process of performing a task or function in term of how successfully it is performed. Performance can also refer to the degree of achievement of the mission at work place that builds up an employee job (Cascio, 2006). Different researchers have different thoughts about performance. Mostly researcher's used the term performance to express the range of measurements of transactional input and output efficiency (Stannack, 1996). Performance is also known as a continuous process to controversial issue between organizational researchers (Barney 1991).

According to Shahzad *et al.* (2012), organizational performance is an analysis of a company's performance as compared to goals and objectives. Richard *et al.*, (2009) reported that organization performance is among the most important criterion in evaluating organizations, their actions and environments. It encompasses three specific areas of firm outcomes which are financial performance (profits, return on assets, return on investment), product market performance (sales, market share) and shareholder return (total shareholder return, economic value added). Daft (2000) said that organizational performance is the organization's capability to accomplish its goals effectively and efficiently using resources. As similar to Daft (2000), Richardo (2001) reported that achieving organizational goals and objectives is known as organizational performance. Richardo (2001) suggested that organizations success shows high return on equity and this become possible due to establishment of good employees performance management system.

The term performance shows and evaluation of result or a comparison between the expected value and actual value. The comparison can help managers to measure how the organization uses resources to attain the organizational goal by many different factors. The ultimate goal of a business activity is to increase profits by minimizing the cost. For instance when an organization has marketing activity for specific time, it should consider non financial performance (Lee *et al.*, 2011). One of the major debates on strategic management is firm performance. Houthoodfd *et al.* (2009) found that there are many factors that affect organizational performance. These include business classification, size of company, evaluation method, structure and characteristic of organizational. However, organizational performance does not only mean to define problem but it also for solution of problem (Hefferman and Flood 2000).

Hence, Kaplan and Norton (1996a) suggested that excessive attention on the traditional performance measurement such as net earnings or return on investment is caused by the lack of attention on non-financial factors such as efficiency and productivity, customer satisfaction, product and quality market share and employee satisfaction. The authors also argued that the use

of non financial measures can increase manageress' power to determine and evaluate all changes which happened in the business environment. These result showed that the impact of business definition on performance could be underestimated. Therefore, all organizations should carefully monitor manage, measure and report their performance based on their business area that is based directly on the level of firm performance.

## CONCLUSION

This paper has revealed the impact of IC and innovation on organizational performance. The conceptual framework explained the important components of IC human, structural, relational and spiritual capital. While innovation includes product, process, marketing and organizational innovation. Organizations can improve their competitive advantage by realizing and understanding the importance of IC and innovation. As the conclusion, the management of the organization should sustain, protect, develop and manage IC and innovation to increase the high organizational performance. In the light of the above dissuccion, it is suggested that:

1. There is a positive significant relationship between IC and organizational performance.
2. There is a positive significant relationship between innovation and organizational performance.

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