International Journal of Psychosocial Rehabilitation, Vol. 23, Issue 06,
2019 ISSN: 1475-7192

Review on Intellectual Capital Management

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Abstract: *Managing intellectual capital has gained popularity among both academic and industrial settings due to the efforts by multiple businesses to obtain a profitable competitive edge. To improve the potential of financial statements to provide an accurate description of the financial situation of the company, A wide range of intangible determinants, such as information, invention and intellectual property, which are seen as critical determinants of the performance of businesses, will need to be identified. The literature provides a set of models of intellectual capital management that explain the different facets that a company needs to consider when handling intellectual capital. Instead, at different stages of knowledge growth, the portion of elements of intellectual capital is also established, described and addressed to fit better with the theory. The intellectual capital elements of the company can only be successfully exploited when intellectual capital management is available. While intellectual capital management is known as fostering sustainable competitive advantage, intellectual capital management in Asian countries like Malaysia is not as comprehensive as the countries in the West. The aim of this paper is therefore to explore the CICM model for Malaysian firms which will improve the existing models.*

Keywords: *Capability Management, Intellectual Capital, Intellectual Capital Management, Sustainable Competitive Advantage*

I. INTRODUCTION

Today companies have defined two types of assets that need to be measured: tangible and intangible assets. Intangible assets are not reported in the financial statements but reflect a large portion of the organization's market value. The concept of intellectual capital[1] is one which is close to intangible assets. Tremendous efforts have been made to quantify intellectual capital, but a lot of them are not universal. In other words, the devices are specialized in calculating intellectual capital. The purpose of this study is to present a comprehensive review of intellectual capital concepts, components and their indicators. Intellectual capital is divided into three components to this end, and each component is separately defined.

Managing IC plays a crucial role in the long-term success of the company. Earlier studies have shown that IC is vital to the survival and growth of companies, as there is a substantial correlation between IC and firm results. It is claimed that when IC is effectively utilized, applied and managed, organizational worthiness and success can be created and improved. However, top management faces challenges in managing IC, as many still remain unclear about what resource types are valuable and which strategies lead to long-term value creation. It was found that

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Received: 22 Sep 2019 | Revised: 13 Oct 2019 | Accepted: 15 Nov 2019

top management does not fully understand the nature and value of IC, how it creates, extracts and optimizes value and wealth through ICM.

ICM is the deployment and management of IC resources and their transformation (into other IC resources or to traditional economic resources) is aimed at maximizing the present value of the value creation of the organization in the eyes of its stakeholders[2]. It provides some guidance to organizations on making appropriate investments and operational decisions to achieve competitive advantage. Companies with good ICM are able to aim for a more competitive advantage by increasing the efficiency of value creation from human creativity, the organizational structure of the companies and the partnership between client and supplier. To build distinct ICM to take advantage of their IC. Only when ICM is present, the IC components of the organization can be tapped effectively.

Information has become one of the most important strategic tools and one of the key economic resources and the dominant and perhaps even the only source of competitive advantage since businesses reached the 1990s. In an information society intellectual capital is said to be especially important Organizations should consider that the first step towards transforming from a traditional company into a knowledge-based company is to be aware of the organizational knowledge, also known as intellectual capital (IC). As organizations entered into the knowledge era, organizations understood that they should use their three kinds of capital (physical (tangible), financial and intellectual capital) to gain advantages over their competitors. Both types of companies, both in creating new intellectual capital and in leveraging what they already have, will need to become even smarter.

IC serves as the most significant contributor to explain the difference in value between market value and book value of many companies. An organization's intellectual capital was stated to be three to four times that of its book value. An increase of one dollar in the amount of computer capital (tangible asset base) installed by a company has been found to be associated with an increase of up to ten dollars in the firm's valuation of the financial markets[3]. Knowing the true value of all properties offers a more accurate reflection of a company's interest, and helps owners, potential investors and market analysts with the organizational priorities of accountability.

II. INTELLECTUAL CAPITAL

Researchers paid a great deal of attention to the issue of intangible assets; also referred to as intellectual capital in the early 1990s. They discussed its value for all kinds of companies such as Apple, Astra, Rentokil and Oracle. Edvinsson and Malone advised the Swedish financial company to have intellectual capital, Skandia, as a tool used to measure the intangible assets[4] of the company. Across five main areas, they established a value assessment index; economy, individual, consumer, operation, and renewal. They highlight people's role across organizations and the value of maximizing human potential[5].

The hidden factors of human and structural capital[6], when added together, comprise intellectual capital according to Skandia's model. The importance and content of intellectual capital has been conferred upon many other studies. Intellectual capital has become vital for maintaining competitive advantage, corporate growth,

creativity, superior operational efficiency, central differentiator operator, increasing new performance in product development, maximizing shareholder value, create a framework to explain all available resources and how they communicate with each other in order to create meaning, operational efficiency, etc. Nevertheless, many still do not know the concept of intellectual capital, because it is difficult to measure directly. Or put it another way, there is no consensus on a specific IC definition.

III. COMPONENTS & MODELS

Several contributions provided various frameworks for classifying the various components of intellectual capital. Despite the lack of a common definition of intellectual capital, many researchers accept that the intellectual capital has three major categories: human capital, structural (or organizational) capital and relational (or customer) capital). However, there are other categories include: process capital, innovation, research, and development capital end customer-relationship capital and non-end-customer-relationship capital, Business capital, Social capital strategy capital etc. Fig. 1 represents Skandia's value scheme.

ICM is more broadly based than just knowledge management[7], addressing strategies for value creation. In relation to this, these strategies are often presented within frameworks or management models. Therefore, a consistent definition of the main components of intellectual capital is required in order to examine the relationships between any particular kind of intellectual capital and competitive advantage.

There are a large number of articles that address ICM from a strategic point of view, that is, how IC components are managed to achieve business performance improvements through the strategic competitive advantage. ICM is more broadly focused than just information management, presenting methods for value creation. In relation to this, these strategies are often presented within frameworks or management models.

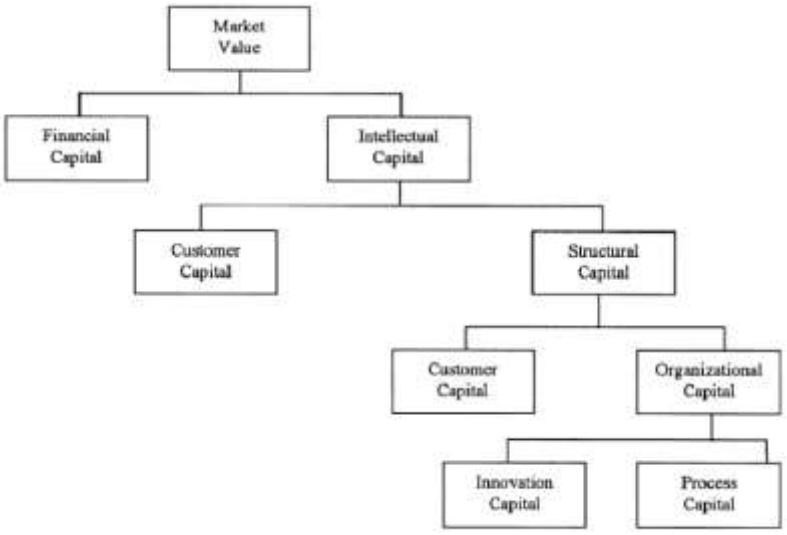

Fig.1: Skandia's Value Scheme

ICM is a term that can be used to refer to an organization's various activities. It emerged in the early 1990's as an area of growing concern about how to thrive in a knowledge economy, Where organizational learning plays a vital role: ICM as a strategic practice[8] focusing on the creation, production and use of intangible resources in industry. ICM focuses on building and controlling intellectual assets from strategic and corporate governance backgrounds with some strategies in mind.

The concepts presented above indicate that ICM would be a sort of independent management activity or discipline undertaken by a specific role or process in the organization. It is enough to claim that ICM is the art and science of IC management in a way that achieves full value extraction for employee brain power management, Aside from inventions, patents, trademarks, copyrights and other intellectual property rights, ideas, knowledge, innovation and practices. The need for new business management styles and models to accommodate the unique aspects of managing IC for value maximization has given rise to a number of theories, practices and tools that aim to recognize, develop and leverage the IC of an organization.

As per the above discussion, it seems difficult to provide a precise definition for ICM because IC encompasses so many things that can be handled in various ways at multiple organizational levels. Regardless of the conceptual issues, it seems that the recognition and management of the key aspects of a company's IC are important tasks for managers and there are theoretically many methods available in the literature to conduct IC-related management activities. Academics and practitioners have dealt with several research topics and case studies about IC's complexity and looked at ICM's investigation to pursue straightforward and effective approaches. Therefore, in this report, ICM is used to refer to a managerial activity that takes into account strategically important intangible resources as a whole in order to promote business value and to achieve sustainable competitive advantage. In addition, ICM also includes IC as a whole (i.e. resources included in individual, social, and institutional capital).

It should be remembered that the definition of ICM had been discussed by many academics. Numerous structures, rules, techniques and approaches were explored and liberated in the literature in the attempts to handle IC. Some of these models focused on measurement only, while others focused on both measurement and power. They included tracking the Intangible Assets. Some of these structures, such as the Meritum Guidelines, offer ICM full management guidance (from identification to measurement, development and reporting) whereas others focus on the management aspects. Skandia Navigator, for example, is a measurement system but also provides a basis for an external IC statement. The framework consists of five perspective dimensions, representing different components of IC and financial capital.

Besides the models specially designed for ICM, other general management methods often cover IC-factors and may be suitable for IC management. The Balance Scorecard, for example, seems appropriate for IC assessment and management.Many models which capture several IC components and therefore may be more suitable for IC management. Some such models include the EFQM Performance Model and the Value Chain Toolkit. Although

there are a wide variety of models supporting different managerial tasks, there is not much evidence in the IC literature on the organizations that have actually applied the models. These models, in other words, are mostly of a theoretical nature.

The growing characteristics of current ICM models are restricted to one diagram or picture which is insufficient as in fact, companies are complex and can only be portrayed in multiple diagrams. Most of these models also included standardized business models, such as the Skandia Navigator and Balance scorecard. The above models show only the elements of the IC and some of them show the relationships between the elements but do not reveal the mechanism. Hence, the Maturity Model of Capability Management was developed to address the processes of an organization. A matured model should be based on the selection of elements that highlight the organization's maturity aspects. Consequently, the Intellectual Capital Management Capability was later extended to include elements to promote the continuous processes of development of the firms. Therefore, an ICM model that consists of three layers, namely the central layer, the expansion layer and the strategic layer. The core layer manages IC expansion. The second layer centers on the IC's value enhancement. The Strategy layer is on the IC's interest evaluation.

IV. SUSTAINABLE COMPETITIVE ADVANTAGE IN RELATION TO ICM

The concept of a sustainable competitive advantage originated in 1984, when Day suggested types of tactics that could help ' sustain the competitive advantage. 'In 1985 the actual term ' sustainable competitive advantage ' emerged As Porter addressed the basic types of strategic strategies that an organization should employ (low cost or differentiation) in order to achieve a sustainable competitive advantage over the long term. Ironically, Porter didn't present any formal philosophical interpretation in his discourse. A formal description by providing the following:' A company is said to have a sustainable competitive advantage when it introduces a value-creating strategy not being implemented concurrently by any actual or potential competitors and when those other companies are unable to replicate the benefits of this strategy.

In the literature on strategic management[9] the imperative for organizations to develop and maintain competitive advantage is well known. The use of expertise was a topic of interest for the literature on strategic management; some scholars suggest it is linked to the creation and preservation of competitive advantage. So one form of knowledge conceptualization[10] is through IC study. Previous studies stated that physical assets and financial capital are no longer the primary resources that promote an information-based industry's competitive advantage; knowledge becomes the only means of competitive advantage. Awareness is a product of the interaction between people and groups, which ultimately gives rise to new organizational awareness within the network. Therefore, the correct implementation of IC in all organizations can provide access to multiple market opportunities.

Received: 22 Sep 2019 | Revised: 13 Oct 2019 | Accepted: 15 Nov 2019

V. CONCLUSION

There was strong recognition of the value of controlling intellectual capital. Nonetheless, sustainability among large economic entities has become increasingly important. Controlling their intangible resources such as expertise is crucial for organizations, Resources for innovation and intellectual property to achieve a sustainable competitive advantage. It should therefore be stressed that due to the importance of ICM as an enabler of future performance each company should develop its own ICM model. Nonetheless, in order to gain competitive advantage, the application of this systematic conceptual framework of the CICM methodology in the private sector may be a way forward to investigate ICM in other entities such as government agencies or voluntary organizations.

The research should also show how an organization's information tools are used to create value for the future in achieving competitive advantage and sustainability in business practice. The study also expected to provide some empirical evidence regarding the importance of ICM in managing IC components for the sustainable competitive advantage of their business performance to the top and senior management of Public Listed Companies in India. It should illustrate which main IC tools to prioritize and improve further, and which IC stage to concentrate on creating long-term value. Another Research Contribution is to check and verify the ICM model.

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Received: 22 Sep 2019 | Revised: 13 Oct 2019 | Accepted: 15 Nov 2019