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Intellectual Capital: A Review from the Literature

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Abstract

Purpose – The purpose of this paper is to get a clear concept about intellectual capital and reports on intellectual capital in different entities based on the literature review.

Research design, data, and methodology - This study was mainly written in a way of descriptive research. The current studies deal with the theoretical and reporting aspects on intellectual capital. Thus, this research is developed on the basis of previous descriptive and empirical research papers.

Results - This study finds that intellectual capital is the combination of human capital, structural capital and relational capital but there is no unique measurement system or process to define intellectual capital. The findings also indicates that the measurement for intellectual capital varies based on the measurement process, time period, firms, industries and country to country perspectives. It can be also observed that firms have the tendency not to disclose the intellectual capital information.

Conclusions – This study recommends that intellectual capital should be presented in a fixed format and human, relational and structural capital should be included as intellectual capital. Additionally, it suggests that mandatory requirement of legislation, effective corporate governance mechanism and stock exchange listing requirement might increase the quality of intellectual reporting.

Keywords: Intellectual Capital, Human Capital, Relational Capital, Structural Capital.

JEL Classifications: E24, J24, O15, O34.

1. Introduction

In academic research, Intellectual capital is an emerging issue. Intellectual capital is one form of intangible asset. Every firm has to measure tangible and intangible assets. Intangible asset, especially intellectual capital, has market value but it is not recorded in the financial statements. The measurement for intellectual capital is also different. Moreover, the reporting on intellectual capital has both internal and external effects. Kaplan and Norton (1992) and Sveiby (1997) study stated that internal intellectual capital

reporting facilitate to take proper management decisions. The external reporting of intellectual capital helps the management to influence the instruments of market (Unnerman et al., 2007). Thus, intellectual capital reporting is a kind of internal and external reporting to meet the demand of interested users. Interested users keep close eyes on intellectual assets due to its role of wealth creation.

The prime objective of this study is to get a clear concept about intellectual capital and reporting on intellectual capital in different entities based on the literature review. The specific objectives are as the following: what is intellectual capital; what are the indicators of intellectual capital? What is intellectual capital statement and its objectives? What are the methods to report intellectual capital in developing and developed countries?

This study will contribute to the literature in several ways: First, it gives a clear idea about what intellectual capital is and what items should be included as intellectual capital. Second, this study shows how to measure or what are the

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indicators of intellectual capital are. Third, this study also discusses intellectual capital statements and what the purpose of intellectual capital statement is. Fourth, this study deals with the reporting of intellectual capital in both Australia and Bangladesh. Finally, the findings from this study will improve the quality for the reporting of intellectual capital in the annual report and interested users will be benefited from this study.

2. Research Methodology

This research is mainly a descriptive research. This study deals with the theoretical and reporting aspect of the intellectual capital. In a theoretical aspect, this study includes the definition of intellectual capital, indicators of intellectual capital, intellectual capital statements and its objectives. From the reporting aspect, this study shows how to report intellectual capital in Australian Universities and financial and non financial firms in Bangladesh. This study is developed by the basis of the previous descriptive and empirical research papers such as Belal et al. (2013), Habersam et al. (2013), Meritum (2002), Mouritsen et al. (2004), Nurunnab et al. (2011), Neil (1988), and Robinson et al. (1996) etc.

3. What is Intellectual Capital

The definition for intellectual is not clear to many researchers due to the difficulty in measurement. Intellectual capital is a broader concept which includes human capital, relational capital and structural capital. Intellectual capital differs from intangibles, intangible assets or intellectual property. There is no unique definition for intellectual capital (Montequen et al., 2006; Kim et al., 2010; Manzari et al., 2012). There is no common agreed definition for the intangibles and the word is often used as a noun to mean broadly the same as intellectual capital following the guideline of Meritum (2002). Kim and Kumar (2009) study stated that intellectual capital can be explained through different basis, individual and firm wise analysis, current and future value and input and output basis. Intangible assets are financial standards that would be recognized as assets and be allowed in balance sheets. Intellectual property is defined as intangible assets, such as patents, trademarks and copyrights, which can be included in traditional financial statements.

Danish Guideline (2003) and Meritum (2002) defined intellectual capital framework as the combination of relational resources (include customers, suppliers and network partners, and exchange of knowledge between them); human resources (include employees' skills, competences, commitment, motivation and loyalty) and organizational/

structural resources (include intellectual property, routines, and documented information). Intellectual capital is the combination of the three categories such as human capital, structural capital and relational capital (Wall, 2005; Torres, 2006; Beattie & Thomson, 2007; Rudez & Mihalic, 2007; Tai & Chen, 2009). Chu et al. (2006) study stated that intellectual capital and combination of knowledge assets create the value of the firm. Bukh et al. (2001) study stated that intellectual capital consists of firm's capital, human capital and customer capital. Peng et al. (2007) study stated that intellectual capital is the combination of hidden assets of the firm and it is not presented in the balance sheet but it is significant for sustainable competitive advantages of the firm.

4. How to Measure Firm's Intellectual Capital/ Indicators of Intellectual Capital

Robinson and Kleiner (2009) study shows the measurement and valuation techniques of intellectual capital. The measurement techniques or indicators from the study are summarized and described below:

Intellectual capital includes tangible items like patents and licenses and intangible items such as knowledge, skill, information and organizational structure. Without proper measurement in intellectual capital, it is difficult for the firm to set the strategy and determine the value of the firm. Intellectual capital is defined as structural and human categories. Structural intellectual capital includes patents, license, trademarks and trade secrets and human categories includes know how, problem solving, decision making and learning. Previously, intellectual capital is measured from the basis of the number of patents, good ideas or published articles and productivity or efficiency is measured through the various ratios of employee output.

To measure the patent and license, both of the intellectual capitals must have the market value in present time or market time frame. The market value of patent and license will be changed based on the market conditions and measurement of intellectual capital is always subject to change. Though intellectual property like licenses are presented in the balance sheet like R&D expenses but appropriate accounting method are yet to set up to value intellectual property. Nail (1988) study recommended use of discounted cash flow method to measure the intellectual property instead of accrued profit.

Human intellectual capital includes knowing how, problem solving, decision making and learning and the firm having these skills to create more market value. If these skills are not directly measurable, indicator of these skills should be used. Intellectual capital can be also measured by accumulating performance of all persons over the years. If technology development activity creates value to the market, then this technology development activity will be treated as

a form of intellectual capital. Firms having the process development know how problem solving skills and innovation ability can create higher value creation. There are some other techniques that can be used to measure the intellectual capital such as (1) by measuring the know-how, merger and acquisition specialists put the market value or evaluate the personnel salary scales and identify the higher performers and reward systems. (2) to measure the best decision making, benchmarking, and cross functional teams, post audit can be used. Moreover, know-how, problem solving and accountability of all employees can also be measured on the basis of potential capability, actual impact, job description, smart and effective members of the firm. Individual know-how can be also measured on the basis of the amount of training per employee. Ability of people can be measured on the basis of the ability to adopt the changing market environment mental models that decision makers have built. Identifying traits of the company might give the competitive advantage in the market and traits of the firm can be indicators of the intellectual capital.

5. Intellectual Capital Statement and Its Objectives

Mouritsen et al. (2004) study stated that intellectual capital statement is known as an internal management tool and external communication device. It delves into the strategy reports on knowledge management through texts, illustrations, and measurement information on the current knowledge management activities and reviews the firm's objectives, performance and results to apply and develop knowledge resources. They added that intellectual capital statement helps the institution to develop the knowledge resources how its services are correlated with each other. According to the guideline by Mouritsen et al. (2004) study, it also states that intellectual capital statement is the relationship among four elements which help the institution about how to develop their activities and use the knowledge for the services and those elements, such as:

Intellectual capital is a knowledge narrative – This describes that knowledge is to accomplish for the firm and explain how knowledge makes a difference to the firm's activities and users.

Intellectual capital is a set of management challenges – This identifies the durable problems facing the management of the firm in order to develop the usefulness of knowledge.

Intellectual capital is a set of actions – This point out how knowledge is to be managed concretely as a set of activities.

Intellectual capital is a series of indicators – This monitor whether actions are implemented.

6. Intellectual Capital Reporting- Evidence from Australia and Bangladesh

6.1. Intellectual Capital Reporting – Knowledge Balance sheets in Australian Universities

Habersam et al. (2013) study finds that knowledge balance sheets is embedded in a broader framework of governance and accountability regarding public universities and inter-links in the different reporting formats such as KBS itself; Performance report and Financial statement of accounts. They stated that report of Australian public universities is treated as a bundle of management tools. They also find that KBS should include 13 items in narrative section according to the ministry's decree of 2010. Those items are as following: the sphere of action, strategic aims, creation of a profile; organization; quality assurance and quality management; human resource development and supportive actions for younger scientists/members of the organization; research and development including development of the arts; study program and advanced training; goals concerning society at large; internationalization and mobility; cooperation; libraries and specific institutions of the university; facilities; awards; resumes and outlooks.

Moreover, they stated that KBS must be presented in a fixed format and include intellectual capital i. e., human capital, relational capital and structural capital; core processes, output and the impact of core processes. The broad categories of indicators must be specified such as Human capital (personnel, number of postdoctoral lecture qualifications issued number of visiting/called professors; women's quota; wage difference between women and men); Relationship capital (number of the scientific/artistic staff working at least 5 days in abroad ; number of the foreign scientific/artistic staff coming from aboard as visitors for at least five days) and Structural capital (number of the active cooperation partners; third party income by projects)

6.2. Intellectual Capital Reporting – Evidence from Non financial Firms of Bangladesh

Nurunnabi et al. (2011) study examined the intellectual capital (IC) reporting practices and the determinants of IC reporting on the listed non financial companies in Bangladesh during 2008 and 2009. They developed a comprehensive disclosure index of 63 items considering internal capital (structural) for 11 items, external capital (relational) for 19 items and human capital (employee) for 33 items.

They stated that globalization, increased information technology, recent announcement of digital Bangladesh and consistent growth of capital market leads Bangladesh to be knowledge based on economy but the empirical result

reveals that firms with greater size disclose more intellectual information in the annual reports rather than other corporate attributes (age, profitability, leverage, liquidity risk, audit committee, non family ownership and market capitalization). They also find that industry is a major attribute to explaining intellectual capital reporting disclosure. They find that firms fail to disclose intellectual property information such as trade mark, copyright and patent and firms have the tendency not to disclose intellectual capital particularly in the IT sector. They explained that poor disclosure may be due to absence of clear set of legislative guideline, copyright guideline and stock exchange listing requirement and weak corporate governance mechanism.

6.3. Intellectual Capital Reporting – Evidence from Banking and Financial Institutions of Bangladesh

Belal and Ali (2011) examined the disclosure pattern of intellectual capital in Islamic Bank Bangladesh for (IBBL) during the period of 1983 to 2010. They used content analysis and considered the five items of internal capital, five items of external capital and eighteen items of human capital as intellectual capital disclosure items. Internal capital includes systems, processes, philosophy & culture, intellectual property (IP), financial relationships; external capital includes brands, customer satisfaction, quality standards, business collaboration, and licensing agreements/ favorable contracts. Human capital includes educational/ vocational qualifications, career development, training programs, race, gender, disability, health and safety, employee relations, employees thanked, employees featured, employee S&O scheme and compensation (executives and employees). In addition, other employee benefits, expert seniority, employee numbers, professional experience, age, and value added statements were also included.

They find that the volume of the intellectual capital disclosure increased over the period particularly since 2006 due to the growing disclosure of external capital. They also stated that external capital is the most popular category in

previous studies but this study reports that internal capital is the most dominant category of intellectual capital disclosure due to unique knowledge base (Sharia) and effective corporate governance regime in IBBL.

7. Conclusion

Intellectual capital plays a significant role in value creation of the firm. In addition, intellectual capital also has a significant effect on market value of each firm. But there is no unique measure of intellectual capital. The measurement of intellectual capital is not equal to each firm. It is very important to consider the proper instrument to measure the intellectual capital. In short, this research study explained the research method for intellectual capital assessment and the analysis of reporting of intellectual capital in Australia and Bangladesh. This research provides the measurement in intellectual capital with detailed explanations. This study finds that intellectual capital should be presented in a fixed format and human, relational and structural capital should be included in intellectual capital as well. This study also finds that firms have a tendency not to disclose intellectual capital information. It is recommended that mandatory requirement of legislation, effective corporate governance mechanism and stock exchange listing requirement might increase the quality of intellectual reporting. The limitation of this study is that there is no unique measurement system for intellectual capital around the world and this research covers only intellectual capital reports in Australia and Bangladesh. Intellectual capital reporting of other developed countries may vary with the findings of the study. Moreover, intellectual capital reporting varies based on measurement, time period, firms, industries, and country perspectives. The researcher can consider manufacturing firms, banks and financial institutions and make a cross country analysis for different economies including developed and developing countries for future research.

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