International Journal of Advanced Research and Development
ISSN: 2455-4030
Impact Factor: RJIF 5.24
www.advancedjournal.com
Volume 3; Issue 2; March 2018; Page No. 08-11

Intellectual capital: The challenge ahead

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Abstract
The concept of intellectual capital was coined by economist named John Kenneth Galbrais (1969). The other view on intellectual capital was stated by Drucker (1992) as the only major source of capital that can create productivity and contribute towards profits for corporations. The problem statement refers to lack of recognition about this significant contribution of intellectual capital towards corporate performance. Intellectual capital can be defined as the 'economic value' of four categories of intangible assets of a company-that includes human capital, structural capital, capital employed and innovation capital collectively. It is the knowledge that is to be leveraged and utilized by an organization to help conduct its business in order to achieve its long term competitiveness. Sustained advantage can occur only in situations in which this capital varies across the firms and where some firms may be unable to obtain necessary resources that are benefiting other firms. Intellectual capital is viewed as a sub-set of intangible capital, where the term intangible relates to assets without physical existence and capital refers to assets retained by the organization to contribute to future profits. Intangible resources are more likely to produce a competitive advantage because they often are rare and socially complex there by making them difficult to imitate. A company's intangible assets are increasingly crucial and positively related to organizational performance in today's knowledge economy. The purpose of this research is to conduct a detailed literature review of the various intellectual capital models and to critically evaluate the value added intellectual capital model and to test the adequacy of the variables used in this model. The results of this research will enhance knowledge and recognition of intellectual capital value as another source of productivity and a contributor towards corporate performance and profitability, thereby enhancing the value of the firm.

Keywords: intellectual capital, economic value

Introduction
In the words of Frich Kohlar Kohlar "Performance is a general term applied to a part or to all the conducts of activities of an organization over a period of time often with reference to past or projected cost efficiency, management responsibility or accountability or the like. Thus, not just the presentation, but the quality of results achieved refers to the performance. Performance is used to indicate firm's success, conditions, and compliance." But the term has a different connotation when it concerns financial performance. Here it refers to the way in which financial objectives are accomplished. Measuring financial performance is a challenge but the most challenging aspect is to measure the firm's overall condition over a given time and the various indicators that help in achieving the stated financial performance. Firms across industry differ in size, structure, capital and resources because of which there are variations in the financial results. But the problem here is not about the input and the output, the real problem lies in the fact that with the same level of input there are variations in the output level. It does not vary only with reference to the financial performance but it varies in terms of the value creation. The market capitalization of firms across industry is very different though the effort, time and the capital are the same.

Enterprise value and Intellectual Capital
Enterprise value is based on a metric which captures all aspect of a business. There are various methods for determining this value. The fundamental method is finding out the accounting net worth or book value. This measure is complicated because there are several accounting distortions which differ from the generally accepted principles and the conservatism with which these traditional methods are drawn from can lead to results which move in a different direction from the actual and the reasonable.

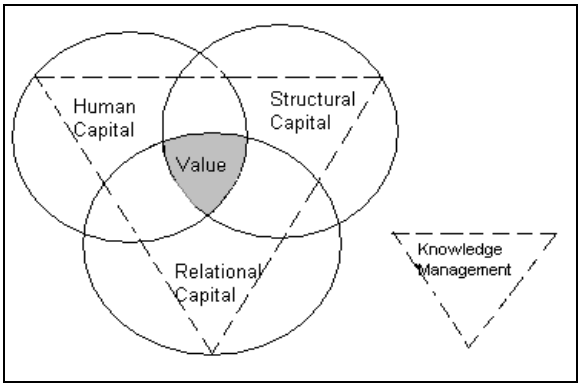
In the last three decades, the search for a common platform to determine the value of a firm is significant; research in the area of identifying a method to measure value has led to the invention of many models which determine value of an enterprise. There are several methods such as direct intellectual capital methods (DICM), Market capitalization methods (MCM), Return on assets methods (ROA) Scorecard methods (SC). The drivers of value arrived from an elaborate literature survey confirms with a single theory that there are many drivers that enhances value and not a single one. The concept of intellectual capital is based on knowledge; the success of a firm depends on its intellectual capital and the components which serve as efficiency indicators. Today in this fast paced world where knowledge is the ultimatum and

the economy is struggling to protect its intellect. Corporations are striving to make the best use of these intellects to create and enhance value. There is going to be a significant difference in the way in which capital is viewed at. Capital in the real sense of the term refers to tangible and gone are the days where intangible capital did not form a part of the big decision making process. Firm's across the globe have realized that intellectual capital such as human, relational, innovative and technological capital has to be given their due respect and treatment in order to climb their value lines. Intellectual capital is the difference between the firm's market value and the cost of replacing its assets.

The value concept has an age old history it all started in the year 1950 when Tobin James introduced the TobinQ model which states that changes in 'q' provide a proxy for measuring effective performance of a firm's intellectual capital. Sveiby (ed. 1989) states that the difference between the stock market value of a firm and its net book value is explained by three interrelated "families" of capital; Human Capital, Organizational Capital and Customer Capital. The three categories first published in this book in Swedish have become a de facto standard. Ahonen (1998) [2] introduced a management application of Human Resource Cost and Accounts widespread in Finland. The HR profit and loss account divides personnel related costs into three classes for the human resource costs: renewal costs, development costs, and exhaustion costs. 150 listed Finnish companies prepared an HR statement in 1999.1988 Human Resource Costing & Accounting, Johansson (1996) [4] calculates the hidden impact of HR related costs which reduce a firm's profits. In the year 1994, Skandia Navigator™, Edvinsson and Malone (1997 had measured Intellectual capital through the analysis of up to 164 metric measures (91 intellectually based and 73 traditional metrics) that cover five components: (1) financial; (2) customer; (3) process; (4) renewal and development; and (5) human. In the year 1992, Balanced Score Card by Kaplan and Norton (1992) states that "A company's performance is measured by indicators covering four major focus perspectives: (1) financial perspective; (2) customer perspective; (3) internal process perspective; and (4) learning perspective." The indicators are based on the strategic objectives of the firm. 2007 Dynamic monetary model Milost (2007) [9] the evaluation of employees is done with analogy from to the evaluation of tangible fixed assets. The value of an employee is the sum of the employee's purchase value and the value of investments in an employee, less the value adjustment of an employee.

Some of the recent research on intellectual capital by (Ahangar, 2010) [10] the article shows the impact of IC and organizational success and financial performance as a whole. For this research Value Added Intellectual Coefficient (VAICTM) method has been used for measuring the value based performance of the company. (Branch, 2013)The research paper examines the effect of the aggregate measure of intellectual capital and its components such as human capital efficiency, structural capital efficiency and capital employed efficiency on firm performance that includes market valuation, profitability, productivity from the Technology, Trading and Services, Consumer Products and Hotel sectors listed in the main board of Bursa Malaysia. (Biserka komnenic, 2011) [11]. The purpose of this paper was to investigate empirically if intellectual capital (IC) as a strategic asset has an impact on the organizational performance as well as to identify the IC components that are the traditional indicators of a business success. (Phusavat, 2011) [12]. The aim of this paper is to raise an awareness of intangible assets among large manufacturing firms in Thailand. As a result, the research is to examine empirically the effects of intellectual capital (IC), and its key components such as human capital, structural capital, and innovation capital on a manufacturing firm's industrial operations and performance.(Choudhury, 2010) [13]. Intellectual capital can be defined as the 'economic value' of three categories of intangible assets of a company-that includes human capital, organizational capital and social capital collectively.(Lipunga, 2014) [14]. The purpose of the study was to measure the intellectual capital efficiency of the commercial banking sector of Malawi.

Intellectual Capital measures three major components, which are capital employed by firms, human capacity of a firm and the structure, process and system of a firm. In the era of the rising significance of knowledge and capability as key resources for value creation and when firms considered firm performance as an indicator of success, research concludes in several forums that value creation is more than mere financial performance and the author used VAIC as a method for measuring performance. This method is an output oriented one and it attempts to measure the amount of intellectual capital from a much defined amount of input. It is built on the grounds that value creation is the result of both physical capital resources (tangible) and the intellectual capital resources (intangible).



Source: Compiled by author based on Literature.

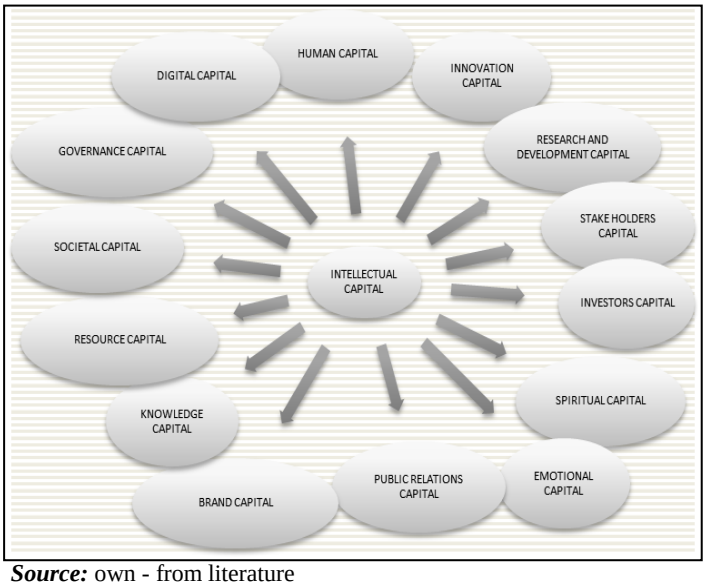
Fig 1: Figure showing predominant variables defining intellectual capital

Ante Pulic's value added intellectual coefficient (VAIC^{TM}) is designed to assess the efficiency of key resources in business organizations (Pulic, 2000); his theory was adding value and creating wealth through employing physical capital, human capital and structural capital. The key assumption is that human capital is an investment, not a cost.

- Value-added = Output – Input
- Value-added intellectual coefficient defined through its components:
  1. human capital coefficient,
  2. structural capital coefficient,
  3. physical capital employed coefficient

VAIC is an accepted, consistent and standardized method (Ante, 2001) to measure and compare the IC performance of the firm; the VAIC method enables the firm to measure its value creation efficiency (Ante, 2001, 2002); VAIC has been used across sectors and countries, which enables comparison of results.

In the Indian context, since the measurement and management of IC has not yet reached a mature stage, the data collection through primary research is really a difficult proposition. VAIC then becomes the best method that could be adopted since it relies completely on the annual audited financial reports that are published by firms. Therefore the subjectivity held by other measures is reduced to a large extent by this method (Ante, 2002; Bontis *et al.*, 1999; Edvinsson, 1997) [5]. As observed in the literature survey, this method is being widely used across countries for evaluating the impact of IC on financial performance of firms; therefore, the present study also uses the VAIC methodology, so that the results can be analyzed in the comparative scenario.



Source: own - from literature

Fig 2: Suggested variables

Limiting the value creation drivers to only three variables such as human, structural and capital employed does not provide adequate justification to the fact that there are several other value drivers which enhances the market capitalization of a firm. A few identified value drivers are Human capital, innovative capital, research and development capital, public relation capital, stakeholder's capital, spiritual capital, emotional capital, governance capital, knowledge capital, brand capital, societal capital, resource capital and digital capital. Each of these identified variables has to be enhanced in order to impact the overall value of a firm. Researchers need to ponder over these value drivers and arrive at a single all inclusive model which can drive value of a firm.

The study intended to analyze the literature available on the concept of Intellectual capital and identify if the factors influencing the value of a firm is in congruence to the VAIC model. VAIC had covered the three important variables such as human, structure and capital employed, however one cannot conclude that this model is fool proof in the era of digital and online markets. Where the entire facet of business and business models has taken a paradigm shift, focus and emphasis is more on innovation and society. Value drivers need to be modified. New value drivers such as governance, policy, taxation, digital innovation, ecommerce have taken the first step. Firms increase value of their products and their services by enhancing the perception of the business and essentially providing a competitive advantage. These value drivers can come in many forms such as cutting-edge technology, brand recognition or satisfied customers.

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