Towards Assessing True Worth of Intellectual Capital

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Abstract

With the advent of knowledge economy, intellectual capital has been taken as the primary resource of an organisation. Now a day’s organisations are immensely investing huge funds on the acquisition, generating and development of intellectual. With this paper an attempt has been made by the authors to critically evaluate whether the huge investment made by organisation’s on intellectual capital have worth or not or justifiable with regard to capital maintenance which was initially known as deferred maintenance. This papers explores that capital maintenance objective cannot be attained unless proper attention is not paid to the valuation of intellectual capital on the basis of which real worth is calculated.

Keywords: Intellectual Capital, Capital Maintenance, Knowledge Economy, Financial Reporting.

Introduction

For realising true/full worth due vigilance must be paid to the unprejudiced accounting treatment to both acquired as well as internally generated intangibles.

“Disparity in accounting treatment between acquired and internally developed intangible assets is the lack of an objective, consensus value (such as that which would come from the secondary market) to determine what internally developed intangibles are worth.....”

Intellectual Asset Management Magazine, 2006

More than hundreds of papers have been written on Intellectual Capital Measurement and Management aspect. It has been realised earlier that intellectual capital has a significant role in enhancing value of business firm but due attention has not been fully to intangibles up to some extent. In today’s era of cut throat competition in business world each and every business organisation is striving to acquire highest market share in the market and those who have
acquired this wants to maintain it for long. With the advent of new and advance technology day by day it has became more complicated task to maintain a key position. And organisations are making huge capital expenditure to keep the pace with the changing trend in the market. Because of transition of industrial age to information or knowledge age more consideration has been provided to soft capital of an organisation. So, in today’s business world intellectual capital is the pre- eminent resource of enhancing business value. Soft capital includes all kind of intangible things which an organisation has to enhance its business value. But there are some problem with the capital expenditure on intangibles that all the capital expenditure doesn’t give return as per the capital invested on it and basically this case with R & D (Research and Development). Sometimes all the capital expenditure converted into sunk cost. Another problem with intangibles pertaining to its valuation as per Accounting Standards (Indian GAAP and IFRS) that both doesn’t include internally generated goodwill or intangibles while calculating value of intangibles, they includes only acquired intangibles. As the economy becomes more knowledge based in nature, there is an urgent need for organisations of all kinds to manage knowledge more effectively, thereby enhancing organisational value (Burstein et al., 2002). For proper management of intangibles due diligence must be given to the measurement aspect of it. Now days no one can deny the noteworthy role of intangibles in accelerating business value. Before exploring this problem, let’s discuss some basic concepts pertaining to it.

KNOWLEDGE ECONOMY

With the transition in the business world from manufacturing sector to service sector, the more attention is paid to knowledge management because new economy which is based on knowledge or the soft capital is called knowledge economy. The arrival of the knowledge economy has decrease the significance of physical and financial asset, and demanded a paradigm shift to relying on intangibles. The knowledge capital of an organization is often referred to as its Intellectual Capital or intellectual assets. It can be identified in its workforce (human capital), its customers’ demands and preferences (customer capital), and its systems, products, processes, and capabilities (structural capital) (Edvinson & Malone, 1997: 47). Knowledge-based sector or services sector is having overwhelming success story in Indian Economy, but role of intangibles or intellectual capital is often underplayed because of lack of recognition as the value drivers in an organisation.

INTELLECTUAL CAPITAL

In layman language intellectual capital means anything which is intangible and has utility to enhance business value. Initially intellectual capital means human capital and goodwill of an organisation. But after lots of research in this area the intellectual capital meaning becomes more clear and complete. It includes both implicit as well explicit intangibles resources of an organisation. In other words, intellectual capital is combination of human capital, structural capital (organisation capital), relational capital and innovation capital.

In accounting terms, it is defined as:

\[ \text{Intellectual Capital} = \text{Book Value} - \text{Market Value of share} \]
(IAM, 2006) explains “Intangible book value as per US GAAP and represents the aggregate unamortised value of all intangible assets held by component companies of the S&P 500® Index. Intangible book value includes, but is not limited to: intellectual property such as patents, trademarks, copyrights, as well as research and development, sales and marketing information, design costs, distribution rights and agreements, franchise fees, licences, assembled work force and management, operating rights, and subscription lists”.

According to OECD (2010), “Intangible assets are assets that do not have a physical or financial embodiment”. In previous work conducted by OECD intangible assets have also been called as knowledge assets or intellectual capital. More consideration on intangibles has been given to R&D, key personnel and software. But the gamut of intangible assets is larger in which is consist of: computerised information (such as software and databases); innovative property (such as scientific and non-scientific R&D, copyrights, designs, trademarks); and economic competencies (including brand equity, firm-specific human capital, networks joining people and institutions, organisational know-how that increases enterprise efficiency, and aspects of advertising and marketing).

According to Indian GAAP , “An intangible asset is defined as an identifiable nonmonetary asset, without physical substance, held for use in the production or supply of goods or services, for rental to others, or for administrative purposes” whereas IFRS 38 defines an intangible assets “as an identifiable non-monetary asset without physical substance”.

Under both the standards, brand names; mastheads and publishing titles; computer software; licences and franchises; copyrights, patents and other industrial property rights, service and operating rights; recipes, formulae, models, designs and prototypes; and intangible assets under development are the examples of intangibles and more interestingly all these are final outcome of skill, experience, efforts, knowledge, wisdom and consciousness of an human capital. When an organisation as per Financial Reporting Standards does not include human capital in the intangible asset identification, recognition and valuation then, how it can be possible true value of intangible asset. In both the standards human capital is not identified as intangible asset.

**RELEVANCE OF INTELLECTUAL CAPITAL/ SOFT CAPITAL**

(IAM, 2006) stated that many investors strong belief that intangible assets have a significant impact on the value of high technology sectors.

In 1975, intangible value made up 73% of the value of the healthcare sector and 63% of the value of the information technology sector IC and its components have been found to explain variations in market value for manufacturing (Tseng and Goo, 2005) and also IT companies (Wang and Chang, 2005). Stock return volatility of knowledge-based companies has been associated with intrafirm as well as interfirm knowledge spillovers. Additionally, R&D intensity – associated with the structural capital – has been found to explain the risk of equity capital (Ho et al., 2004). Furthermore, beyond the risk-return tradeoff, there has been evidence that R&D intensity can explain the cross section of stock returns (Al-Horani et al., 2003). In the context of the stock market performance of IT companies, IC has also been shown to affect the IPO survivorship rate for high technolog companies (Bejar, 2008).With the emergence of knowledge
economy there is faster growth in investment in intangible assets than in tangibles (OECD, 2010). The battle for acceptance of Intellectual capital as an important concept for looking at modern organisation has largely been won (Andriessen, 2001). There is increasing evidence that the drivers of value creation in modern competitive environments lie in a firm’s intellectual capital rather than its physical and financial, (Petty et al., 2001). An organization’s most valuable intangible asset is the knowledge contained in its processes, which is used to produce the organization’s final output – the product or service which it sells (Kanevsky and Housel, 2008).

Although the importance of Intellectual capital has been accepted widely in the last two decades (Serenko and Bontis, 2004), many organizations are still struggling with the application of Intellectual approach due to measurement difficulties (Dzinkowski, 2000, Nazari and Herremans, 2007). Intangibles, although not always recognized, have always been a driver of corporate performance (Low, 2000). As said by (Pavlou et al., 2005), Intangible assets for the modern day organization are viewed as the engine of its productive and profitable operations.

There is very much need of management of intellectual capital in an organisation. But for effective management of intellectual capital its measurement or identification is necessary. “Sustained successful performance of an enterprise depends on its continuing ability to produce and deliver customer-valued outcomes in a competitively superior manner. A firm’s customer-value proposition defines its attractiveness to customers. The firm’s ability to create and deliver competitively superior value to its customers, in turn, depends on the collaborative efforts of its highly motivated, skilled, capable, creative, and knowledgeable people. Such people constitute the firm’s appreciating HC. Collaboration and motivation of people stem from the firm’s social capital (SC). The latter comprises the shared values, vision, and sense of destiny of people; and an organisational ethos of trust and care” (Rastogi, 2000a, b). IC is here conceptualised as the holistic and super ordinate capability of an enterprise to create value through a creative orchestration of its knowledge resources, under conditions of constant change. It is the result of the dense dynamic nexus of a firm’s social capital (SC), human capital (HC), and KM. It is manifested in the form of a firm’s sustained profitable growth. It, thus, also represents a firm’s overarching capability to meet challenges and exploit opportunities in its continual efforts to generate wealth (Rastogi, 2003). (Petty and Guthrie, 2000) states that, specifically, the importance of IC is emphasised in:

- the revolution in information technology and the information society;
- the rising importance of knowledge and the knowledge-based economy;
- the changing patterns of interpersonal activities and the network society; and
- the emergence of innovation as the principal determinant of competitiveness.

The technological advances of the last two decades have determined that highly valued knowledge is that which can be applied systematically and objectively. In this way, the current “organization of knowledge” is one whose key resources are knowledge, both explicit and tacit,
providing clearly observable competitive advantages that, in a general way, are truly valued in the organizations (Nonaka and Takeuchi, 1995: 45).

INVESTMENT AND CAPITAL MAINTENANCE ASPECT IN RELATION TO INTELLECTUAL CAPITAL

Investment or capital expenditure on intellectual capital has been keeping pace with the emergence of knowledge economy. In knowledge economy where the main input is intangible in the form of human capital, structural capital and relational capital it is has become more significant to pay all the due attention to the development and maintenance of the soft capital or intangibles. And for the development and maintenance of intangibles an organisation has to invest huge amount of funds on to this. The proportion of capital expenditure on intellectual capital shows a drastic change, in 70’s and 80’s when there were very little small development of service sector the proportion of capital expenditure on intangibles was very low but with the advent of knowledge economy or the service sector which totally work on the virtue of intangibles shows a great increase in the proportion of capital expenditure on intellectual capital. As said by (Duam, 2002) “since the beginning of the 1980s, the proportion of intangible assets has increased from c. 40% of the market value of an enterprise to more than 80% at the end of the 1990s. Investments in innovations and related intangible assets are increasingly dominating economic activities in all developed countries”. An investment in a machine provides the firm with a capability to produce future goods. So too does an investment in knowledge. A visitor to a plant that has recently invested in a new machine can see the machine. But he is less likely to see the asset that results from investments in assets whose major benefit is an increase in knowledge, unless that knowledge has been embodied in an asset like a patent, and not all innovations are patented (Baldwin and Hanel 2003).

As said by (Albonico et al, 2011) Maintenance is procyclical and comoves almost always with output. Investment-specific shocks are the only disturbances that induce a negative correlation between output and maintenance.

In relation to capital maintenance (Prescott, 1986) emphasized that “a sizeable part of the investment component of output [like a firm’s major maintenance expenditures] is hard to measure and therefore [...] not included in GNP. [...]In good times, namely when output is above trend, firms may be more likely to undertake major repairs of a not fully depreciated asset [...] and hence] these types of unmeasured investments fluctuate in percentage terms more than output. [...] A careful study is needed to determine whether the correction for currently unmeasured investment is small or large.”

TRADE OFF BETWEEN CAPITAL EXPENDITURE ON INTELLECTUAL CAPITAL AND RETURN THEREOF/ MAINTENANCE OF CAPITAL IN RELATION TO INTELLECTUAL CAPITAL

Intangibles are always taken as value drivers or business value enhancers but along with enhancing business value it costs very much to the organisation in terms of sunk cost. The contribution of intangibles cannot be ignored in any case but the cost which a business organisation incur to develop and maintain intangibles should also be taken into account in order
to calculate the real or actual worth from intangibles. Accounting Standards try to calculate the value of intangibles but there are lots of deficiency these standards, that is why accurate accounting of intangibles is not possible for e.g. in both Indian GAAP as well IFRS doesn’t take into account the value of self-generated of internally generated intellectual capital, besides this they both split it into research and development expenses, All expenses incurred during research phase are transfer to P and L a/c and all expenses incurred during development phase will be capitalised, if some conditions are fulfilled like, Technical feasibility has been established, Intension to produce such intangible asset exist, Availability of resources exists, Market for such produce (which is an Intangible Asset) exists means there will future economic benefit from such asset. Research here means planned investigation with the objective of gaining knowledge and development means application of gained knowledge.

Capital expenditure on intangibles in the form of:

- Research and Development
- Building relations with customers
- Building image
- Acquisition of technology
- Training and development of human capital
- Computer softwares or other e-resources
- Building relationship with partners, alliances, suppliers, government and other regulatory body/ies.

There is important aspect pertaining to investment on intangibles that the amount of sunk cost very high in it. Accounting Standards still not treat investment on intangibles as investment but it takes it as an expense. There is also no transparency in terms of external reporting pertaining to intangibles. As stated by (Edquist, 2011) Most intangibles are not capitalized in the National Accounts which means that they are identified as intermediate expenses rather than as investment and are therefore not included in GDP figures.

**CONCLUDING REMARKS**

At last it can be concluded that new economy works on the virtue of knowledge or intangibles. Proper management and maintenance of intangibles or intellectual capital is very vital part on business organisation as there is no trade-off between capital invested on intellectual capital and return incurred from that because there is problem in assessing true value intellectual capital to calculate true worth. When it comes external financial reporting pertaining to intellectual capital, this is the area in which organisation’s are lacking because of non-availability of appropriate method for calculating value of intellectual capital. And as it said management of intellectual cannot be possible without measurement of the same. So efforts should be made on ascertaining
true value of intellectual capital which includes not only acquired intangibles but also internally generated intangibles. And more importantly investment on intangibles should not be treated as expense; it should be treated as investment and due attention should be paid to the proper maintenance of intellectual capital.

REFERENCES