

Accounting for Knowledge Capital in the Emerging Economy of India: Concepts and Issues

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Knowledge is one of the key determinants of growth not only of an organization but of nations as well. Described as wealth in the Vedas and as power in the common parlance, knowledge has always remained and will always remain the single most important factor contributing to every type of development in the human society as it is this capital which enables man to use every other type of capital and resources for his benefit. The focus on knowledge capital and its productivity is of perfectly understandable and of paramount importance in the emerging knowledge-intensive economy of India. In spite of the importance of knowledge capital, the country is still in the search for a new paradigm in accounting for knowledge capital. Most of the efforts done even at the global level so far are of theoretical and conceptual in nature and in India it is yet to make a take of although the country has a strength in terms of knowledge capital. An attempt has been made in this paper to identify the meaning and significance of knowledge capital along with the study of prevalent models. The importance of measurement of knowledge capital in Indian scenario is also highlighted.

Field of Research: Knowledge Capital Accounting, Developing economies

Introduction

Knowledge is one of the key determinants of growth not only of an organization but of nations as well. Described as wealth in the Vedas and as power in the common parlance, knowledge has always remained and will always remain the single most important factor contributing to every type of development in the human society as it is this capital which enables man to use every other type of capital and resources for his benefit. “The raft of knowledge ferries the worst sinners to safety”, says Lord Krishna in the Bhagavat Gita to highlight the value of knowledge in human life. The adage can be used in the economic sphere with equal relevance and with a minor alteration we can say that the raft of knowledge can ferry even the poorest to prosperity. It is for the quest of knowledge that Gautam Buddha, the proponent of Buddhism, left all material comforts.

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Guru Nanak, the first Sikh Guru, quoted knowledge as the only means, which can take us from darkness to light. Socrates had a point when he asserted about 2,400 years ago when he said that the wisest are those who know their ignorance. Peter F. Drucker says that human knowledge is the source of all wealth. Knowledge applied to tasks that we know how to do is called productivity and applied to tasks that are novel and different, it is called innovation. Thus, the focus on knowledge capital and its productivity is of perfectly understandable and of paramount importance in the emerging knowledge-intensive economy of India.

Concept of Knowledge Capital

The concept of knowledge capital gained popularity in the 1990s with the rapid emergence of information and communication technologies. Soon it began to be considered more important for the success of an organization than physical capital. Consequently, both public and private sector organisations started attributing their business value to intangible, knowledge-based assets. On the other hand, traditional measurement systems of accounting were not sophisticated enough to value these intangible assets. Thus, the past about one and a half decade realized the importance of intangible assets in the operation and valuation of organizations resulting in new ways of management and evaluation of performance. As a result of this development, human resources are treated as assets to be invested in, deployed, and developed carefully, and not as costs on profit and loss statement.

Knowledge Capital signifies that information is an important factor of production along with land, labour, capital and energy. It is the prime source of organisation that needs to be sustained, nurtured and accounted for. Human capital comprises individual talents and knowledge that is acquired through education, training, experience and cognition. Ganesh Natrajan has beautifully observed, "Knowledge capital is the documented knowledge that is available in such forms as research papers, reports, books, articles, manuscripts, patents and software. Knowledge capital consists of artifacts of the human mind that are stored outside the minds of their authors and are therefore available to who ever seeks them". According to Paul Strassmann, an exponent of the concept, "Knowledge capital is the net difference between the market value of a corporation and its tangible assets."

The essence of knowledge capital is not in its creation or codification; it is in its use and realization of goals and aspirations. Knowledge created and codified is worthless until after it is put to use and people benefit from its use. Developing a new process is useless until after the process leads to a realization of cost containment or improved quality. Intellectual property is of no value if it remains in the vaults of the intellectual property office. Knowledge capital for it to be of some value and worth must lead to realization. The full cycle of knowledge capital must commence from inception or creation to realization. Realization is important if we are to focus on wealth creation. Knowledge capital that does not contribute to wealth creation is really doing work for nothing, or simply the

epitome of gross inefficiency (Victor L. Magdaraog). It can be concluded that the collective knowledge capital of an organization is represented by the skill and experience of its employees as also by its corporate information repositories. It is a very reliable indicator of the future earning potentialities or net worth of a company.

Need & Significance of Knowledge Capital

Knowledge capital as a concept started supplementing other resources of the organisation for updating and upgrading the competitive edge of business in the fast changing business scenario. Older forms of capital like land, labour and financial capital no longer seemed to explicate and prophesy the success of organizations or nations. On the other hand, traits like intelligence, flexibility and innovativeness of people, organizations and nations began to be considered the sources of growth and success. Michael Fairbanks, an internationally renowned consultant says, "Human capital is the only investment with the possibility of infinite return. It is knowledge capital with legs: it is skills and capabilities. But knowledge capital is international patents. How good a country is at accruing international patents is a clear sign of its ability to innovate and thus grow economically."

It is a recorded fact that 70 per cent of the employment and 70 per cent of GDP created in advanced economies is attributable to the services sector. In India too, the percentage of people employed in service sector has crossed 50 percent and the share in GDP is also moving in the same direction. However, the models and methodologies used to measure and manage this sector are not yet ready to monitor investment in these assets. The problem of valuing this difference lies as much in the general misunderstanding of the term 'intangible' as in the outdated accounting tools used in operational management and investment. It is worth mentioning here that there are two types of intangibles: hard intangibles and soft intangibles. Hard intangibles include intangibles like trademarks or goodwill where as soft intangibles include intangibles like knowledge assets, relationship assets, emotional assets, motivation levels and time assets. Normally, people emphasize only hard intangibles and tend to ignore soft intangibles inspite of the fact that most of intangibles are soft intangibles.

Constituents of Knowledge Capital

Broadly speaking, knowledge capital consists of two components which are not only interrelated but are interactive also. These are: human capital and information. Of these, human capital is the collective human competence comprising intelligence, education, skills, experience, intuition and imagination as influenced by emotional and motivational attributes. Obviously, this kind of knowledge is difficult to be documented, communicated and transmitted. On the other side, information constitutes those achievements and experiences of man which can be documented, communicated and transferred. These include books, papers, studies, reports, software, databases, CDs, and patents etc. This

information becomes independent of its creators once it is documented and communicated. It can be tested objectively for its reliability and validity and can also altered, improved and used simultaneously by any number of people at the same time. Thus, knowledge capital exists within the minds of the people as well as formal information which is outside the minds.

Exponents of Knowledge Capital:

The evolution of knowledge capital management as a discipline can be traced to the long past though no visible pattern was discernible then. Knowledge capital management movement is believed to have taken of from three distinctly different origins. The first was the pioneer work of Hiroyuki Itarni of Japan who studied the impact of *invisible assets* on the management of Japanese corporations. The second was the work of economists like Penrose, Rumelt, Wemerfelt and others on technology commercialization. Finally, there was the work of Karl-Erik Sveiby in Sweden which addressed the human capital dimension of kknowledge capital. The brief description of some of the important contributions of the early exponents of the subject is as under:

Karl-Erik Sveiby's Model

Karl-Erik Sveiby, a Professor at Macquarie Graduate School of Management in Sydney, is regarded as the founding father of knowledge management and intellectual capital movement in Sweden. In his very first book which he published in 1986, Sveiby gave a logical explanation about the management of the organizations that had only knowledge and creativity of their employees but no traditional production. He was the first to identify the need to measure human capital, and he developed an accounting model for this intangible capital, testing it in his own company. He proposed a theory for measuring knowledge capital by dividing it into three categories: *customer capital, individual capital, and structural capital* in his book *The Invisible Balance Sheet* which he published in 1989 and which carried the results of the Konard working group. A large number of Swedish companies adopted Sveiby's approach and in 1993, the Swedish Council of Service Industries also adopted it as their standard recommendation for corporate reporting.

Skandia's Model for Measuring Intellectual Capital

As per Skandia's model, intellectual capital signifies intangible assets which include human capital; customer/market capital; process capital; and renewal and development capital. According to him, the potential financial returns that are attributable to these intangible or non-financial assets represent the value of intellectual capital.

His model provides a comprehensive and integrated view of financial as well as intellectual capital. Generally, it is the hard quantitative data that is used as

indicators for scrutinizing the internal and external processes taking place in a country. However, this model declared that such indicators failed to provide full and accurate assessment of the country's assets and its potential for future growth. Thus he described intellectual capital as a complement of financial capital. It is a point to be noted as an outcome of his model that while financial capital highlights the history and achievements of the *past* of a country; the intellectual capital reflects its hidden national potential for *future* growth.

Paul A. Strassmann's Model

Paul A. Strassmann laid emphasis on the value of corporate knowledge. According to him, knowledge capital is nothing but creative energy which springs forth from something that is intangible, as if it were an artistic conception. It ultimately leads to management value addition. It is because of this value addition that market value of a company is different than its book value. Apparently, management value-added depends, to a large extent, on the level of knowledge capital. This accumulated knowledge increases work efficiency which ultimately increases the total value of products or services of a company.

Kaplan, R.S. & Norton, D.P.' s Model

Kaplan and Norton rejected the traditional financial reporting calling it too narrow in its outlook. They averred that it ignored the future and focused only on present and past. They suggested that the companies should use a 'balanced score card' that included besides the traditional financial measures, other things such as customers satisfaction and turnover, comparative product quality as these things were better indicators of current performance and likely future performance. They opined that intellectual capital must be a part of the balanced scorecard.

Baruch Lev's Model

Baruch Lev, who started his research in the early 1990s on the valuation of intangibles, focused on quantifying the value of intangibles and correlating the values so obtained with financial measures adopted in the capital markets. He opines that the traditional accounting model which recognizes only tangibles assets and focuses only on legal transactions while ignoring other value-changing events was not appropriate to deal with the new economic environment. He asserts that it no longer meets the needs of the managers and investors of the present times. He presented an improved GAAP; double-entry system based on the economic definition of an asset as Financial-Economic Capital and an information system aimed at capturing the links between resources and outcomes as Non financial-Path Matrices. These three orbital systems are integrated into a coherent information structure through control links.

India and Knowledge Capital

The world is fast changing from an industrial to a knowledge economy. The economic growth engine in UK was textiles, in USA it was the industrial revolution led by the railways, timber and timber products led to Sweden's take off and in Denmark the same was done by milk and dairy products. India had struggled to find its leading sector over the last fifty years and now it has found it in the knowledge sector of economy. Now the educated people in India are taking the plunge and beginning to burn midnight oil. Large number of Indians working successfully in the Silicon Valley is an evidence to it. Many Indians are skeptical about India's ability to succeed in the knowledge economy when it has failed in the industrial economy. Its one answer is that knowledge industries operate in the service economy and are typically employment intensive compared to manufacturing sector. Indian knowledge workers have a clear cost advantage also. Companies like NIIT, ZEE and Bharti Telecom are creating lots of new jobs in services.

In recent years, India is being seen as the emerging Laboratory of the World and, no doubt, today, it is a country where high-tech companies from all over the world have set up their research and development centres and the process is continuing. They are recruiting young graduates directly from the universities and institutes. India is turning to be a global centre for the back-office operations of several multinational companies because of its cheap English speaking workforce, foreign banks, call centres of airlines and telecom companies for processing information. Today the software industry in India exports software and services to nearly 95 countries around the world and more than two third of fortune 500 companies outsource their software requirements to India. If cost is what brought companies to India, quality is what is making them to stay and expand. It is not an exaggeration to say that India is on the threshold of becoming a knowledge superpower because one of its strongest assets as a nation is the inventiveness and creativity of its people.

Now the question arises what kind of valuation system does India have for this most important resource of the country? The answer comes to be simply NONE. Seeing the growing importance of the concept, the government of India has constituted National Knowledge Commission under the chairmanship of Sam Pitroda. It is expected that the recommendations of the commission will ultimately facilitate far-reaching changes in the field of governance, education and research. To quote the chairman of the commission, "We are planting the seeds that will produce results within 20 years."

As far as the measurement and valuation system is concerned, nothing concrete has been done so far. Not to talk of knowledge capital, it could not even develop any accepted and recognised model to implement human resource accounting which is the first step in the direction of measurement of knowledge capital. It is also to be noted that the efforts at the global level are also more of theoretical and conceptual nature and are not sufficient to replace or amend the old established system of double entry system of accounting. We must remember

that people are clearly the key factor of the future. It is not capital, land or equipment any longer; it is people and knowledge/information; it is all the soft stuff; it is the driver. If we have got that in place, people will pick the right kind of hard assets that they need to manage. It has now begun to be understood that the source of success is the intelligence, flexibility and innovativeness of people, enterprises and nations. India is in search of a new paradigm in accounting, which would enable it to record its new journey from financial capital to knowledge capital. The following suggestions may be of some relevance in this connection:

- Companies must create a culture that emphasizes the importance of knowledge capital in achieving business advantage.
- The knowledge should be treated as a key source of production of wealth and a theory that puts knowledge into the center of wealth producing process need to be implemented.
- The accounting bodies at the global level should join heads to develop an internationally accepted valuation system of knowledge capital in order to give it concrete shape and meaning.
- Institute of Chartered Accountants of India should be more concerned because of the knowledge intensive economy of India and suggest the ways and means of showing knowledge capital as an asset in the balance sheet instead of cost in Profit and Loss Account.
- India always blames its over population for the ills of the nation and terms it as a liability. Can't it turn it into an asset because all these human resources are the reservoirs of knowledge? It is possible only if it develops a precise method of measuring this hitherto ignored asset of knowledge capital.
- Last but not least; India has been a centre of knowledge for centuries . The need of the hour is that it should recognize its potential for the development of economy by providing it a concrete valuation system. This is the only capital which it can boast of and which can transform its developing economy into a developed economy.

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