



INTELLECTUAL CAPITAL MANAGEMENT: Expanding Horizons in KNOWLEDGE BASED economy



Abstract

With the rapid transition of Economy towards knowledge, organizations worldwide have shifted focus towards the intangible assets of the organization. As evidenced from the literature review, the new drivers of the economy seem to be the human resource-people and their knowledge. Indian corporate sector, now, is in search of a new paradigm in accounting, which would enable it to record its new journey from financial capital to intellectual capital. Since knowledge assets are at the crux of sustainable competitive advantage, this study attempts to provide an insight into the meaning and significance of intellectual capital and to evaluate the prevailing practices of management of intellectual capital by global companies, with a special reference to the initiatives taken by Indian organizations in this regard. The objective of this study is to highlight aspects such as Human Capital, Structural Capital and Customer Capital as important variables of Intellectual Capital Management Programme, its influence on business performance and the various functional models established by companies for Intellectual Capital Management.

Keywords: Intellectual Capital (IC), Knowledge management, Intangible Assets

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Introduction

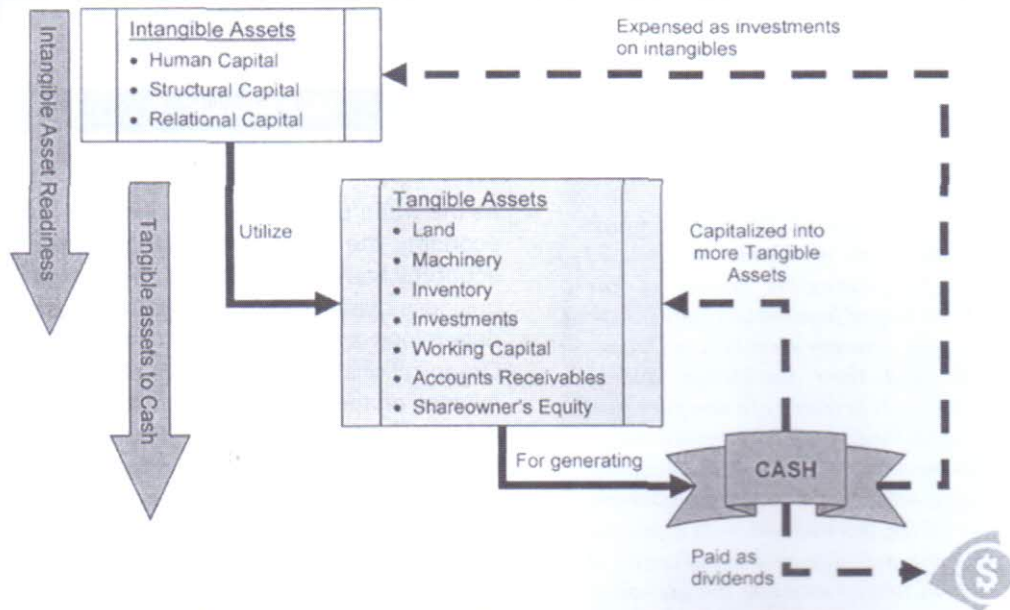
As the world changes from Industrial to knowledge economy, the boom in knowledge sector of Indian economy has been the talk the world over. The new business dynamics of 21st century are increasingly determined and driven by Intellectual Capital (IC). Organizations in the past have shown tremendous reliance on their productive tangible assets such as Raw materials, Fixed Capital, Plant and Equipment; and even Managerial Knowledge. However, it no longer accounts for the success and wealth creation of new and prospering companies. The future drivers of any modern economy will no longer be capital, land or equipment, but the "people" and their "knowledge" reservoir. Knowledge is at the core of economic life of the organizations and this puts an immense impetus on being economically viable along with retaining and exploiting the talent of people working in the organization. In order to strive and thrive in this competitive era, a knowledge-intensive company must leverage its know-how, innovation and goodwill to achieve success.

Managing a knowledge organization necessitates a focus on the critical issues of organizational adaption, survival, and competence in the face of ever-increasing, discontinuous environmental change. The profitability of a knowledge firm depends on its ability to leverage the learning of its professionals, and to enhance the reusability of their knowledge and expertise. The intangible assets of

a company include its brand, its ability to attract, develop and nurture a cadre of competent professionals, and its ability to attract. In the initial Start-up phase of a new organization, the biggest challenge lies in the identification and acquisition of resources for achieving sustainable development and competitive advantage. After successful establishment, the issues that arise in the Development phase are increasing concern for Wealth Maximization- earning profits, to gain the loyalty of the customers it serves and learns from; to estimate and increase the value of its brands, copyrights, patents and other intellectual capital and to harness the collective knowledge embodied in its systems. The above-mentioned are vital assets that

are rarely managed and almost never managed skillfully; this is more true in the Indian context.

All the above stated facts further intensify the importance of the greater investigation and understanding of Intellectual Capital. Thus, in the last decades the strategic management literature has emphasized the crucial role of intangible factors or the intellectual capital as determinants of business competitiveness (Teece). On that line, authors such as Lichtenstein and Brush find that intangible assets are more important and critical than tangible assets in such a decisive period of the life of a business. Thornhill and Gellatly found that the investment in intangible assets is associated with a track record of growth.



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The Advent of Intellectual capital

Whereas at one time the decisive factor of production was the land, and later capital ... today the decisive factor is increasingly man himself, that is, his knowledge. Pope John Paul II (1991).

The term 'Intellectual capital' came into existence in the early eighties but its use became prominent in the late nineties with the rapid emergence of information and communication technology. The Organisation for Economic Co-operation and Development (2000) describes intellectual capital as the economic value of two categories of intangible assets of a company: organizational capital and human capital. It has been defined and classified in several ways by several researchers since the concept gained importance.

Edvinsson defined it as "Knowledge that can be converted to value" [Edvinsson 1991]. He further expounded "It is possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that provide a competitive edge in the market" (Edvinsson, 1997). Peter F Drucker made an important contribution to the study of Intellectual capital when he first coined the term 'Knowledge Worker'. Drucker (1993) heralds the arrival of a new economy, referred to as the knowledge society. He suggested "the most valuable asset of a 21st-century institution, whether business or non-business, will be its knowledge workers and their productivity."

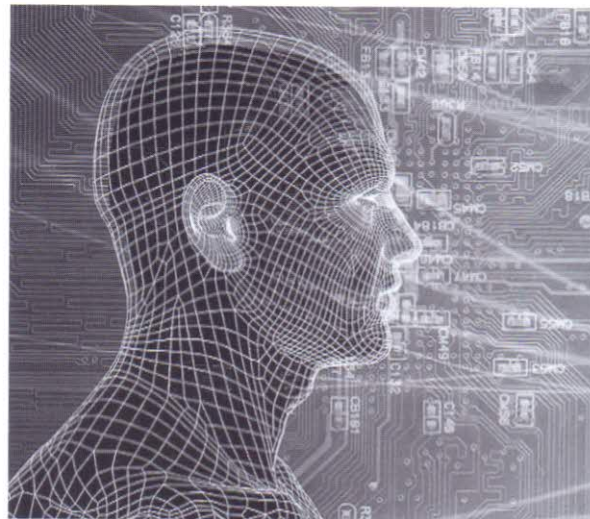


It may be said that intellectual capital deals with articular, reasonable, knowledgeable and substantial fruits of the mind. It claims intangible (tacit) and tangible (explicit) dimensions, which do not mutually exclude, but actually complement each other. The conversion of knowledge into a valuable asset has come to be known as an intellectual asset or intellectual capital. In 1994, Klein and Prusak forwarded what has become to be the standard definition of intellectual capital, popularised by Stewart in Fortune magazine (1994) and in his book Intellectual capital: the new wealth of organisations (Stewart 1997).

By the end of the 1990s, references to intellectual capital in contemporary business publications become common. With the increasing awareness towards Intellectual capital management, a new position of the so-called CKO or Chief Knowledge Officer (Bontis, 2000) came into being. Stewart (1997) defines intellectual capital as intellectual material – knowledge, information, intellectual property and experience – that can be put to use to create wealth.

There has been an increasing frequency and specificity of contribution to the field since its inception as depicted through the following timeline:

- 1980 - Itami publishes "Mobilizing Invisible Assets" in Japanese
- 1981 - Hall establishes company to commercialize research on human values
- 1986 - Sveiby publishes "The Know-How Company" on managing intangible assets
- April 1986 - Teece publishes seminal paper on extracting value from innovation
- 1988 - Sveiby publishes "The New Annual Report" introducing "knowledge Capital"
- 1989 - Sveiby publishes "The Invisible Balance Sheet"
- Summer 1989- Sullivan begins research into "commercializing innovation"
- Fall 1990 - Sveiby publishes "Knowledge Management"
- Fall 1990 - Term "Intellectual Capital" coined in Stewart's presence
- Jan. 1991 - Stewart publishes first "Brainpower" article in Fortune
- Sept. 1991 - Skandia organizes first corporate IC function, names Edvinsson VP
- Spring 1992 - Stewart publishes "Brainpower" article in Fortune
- 1993 - St. Onge establishes concept of Customer Capital
- July 1994 - First meeting of Mill Valley Group
- Oct. 1994 - Stewart authors "Intellectual Capital" cover article in Fortune



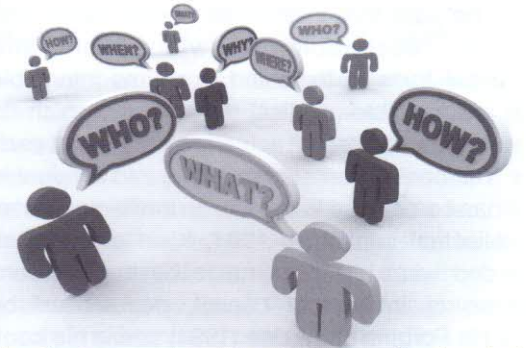
- Nov. 1994 - Sullivan, Petrash, Edvinsson decide to host a gathering of IC managers
- Jan. 1995 - Second meeting Mill Valley Group
- May 1995 - First Skandia public report on IC
- April 1996 - SEC symposium on measuring intellectual/intangible assets
- Sept. 1996 - Sullivan and Parr book, "Licensing Strategies", published
- Oct. 1996 - Lev founds Intangibles Research at New York University
- Mar. 1997 - Sveiby publishes "The New Organizational Wealth"
- Mar. 1997 - Edvinsson and Malone book, "Intellectual Capital", published
- April 1997 - Stewart book, "Intellectual Capital", published
- June 1997 - Hoover Institution conference on measuring intellectual capital
- March 1998 - Sullivan book, "Profiting from Intellectual Capital", published

Components of Intellectual Capital

As stated by Experts, IC is a combination of human capital- the brains, skills, insights and potential of Human resource of an organization and structural capital- customers, processes, databases, brands and IT systems. It is the ability to transform knowledge and intangible assets into wealth creating resources, by multiplying human capital with structural capital. Karl-Erik Sveiby first proposed a classification for Intellectual Capital into three broad areas of intangibles namely Human capital, Structural capital and Customer capital [Sveiby, 1989]; which was later modified and extended by replacing customer capital by relational capital by Dr. Nick Bontis [Nick, 1991]. The following diagram depicts the earlier classification of Human Capital.

Table I: Components of Intellectual Capital

Human Capital	Structural Capital	Customer Capital
Knowledge	Business processes	Customer relations
Competence	Manuals/ policies	Customer Loyalty
Skills	Information systems	Repeat business...
Individual & Collective	Research findings	Relational Capital
Experiences Training	Trademarks	Relations with vendors
Communities of practice...	Brands...	Investor trust and feedback...



The three sub-phenomena (or categories) as identified by the available literature constituting the concept of IC are Human, Relational, and organizational capital. First, "human capital" represents the knowledge, experience and skills of the employees of the firm. It also reflects the commitment and motivation of the employees as a result of their continuance in the firm. Second, "relational capital" reflects the organizational

value that emerges not only from a firm's relations and connections with customers, but also with current and potential suppliers, shareholders, other agents, and the society in general. Finally, "structural capital" shows a firm's supportive structures for knowledge creation and deployment, as well as, the set of knowledge, skills and abilities embedded in the organizational structure.

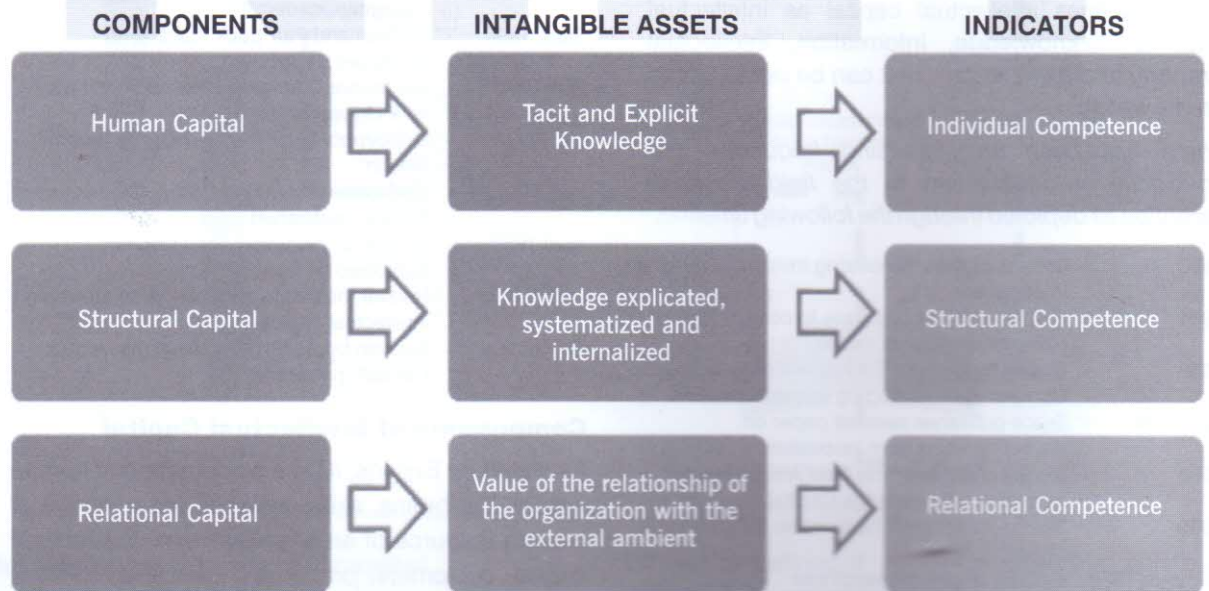


Figure 2: Components of Intellectual Capital and their indicators in Organizational context

The International Federation of Accountants (IFAC) offers a slightly different and broader classification as given below in Table II.

Table II: Classification of Intellectual Capital, IFAC (1998)

Human Capital	Relational (Customer) Capital
* Know-how	* Brands
* Education	* Customers
* Vocational qualification	* Customer loyalty
* Work related knowledge	* Company names
* Occupational assessments	* Backlog orders
* Work related competencies	* Distribution channels
* Entrepreneurial élan,	* Business collaborations
innovativeness, pro-active and	* Licensing agreements
reactive abilities, changeability's	* Favorable contracts
	* Franchising agreements

Organizational (Structural) Capital

Intellectual Property

- * Patents
- * Copyrights
- * Design rights
- * Trade secrets
- * Trademarks
- * Service marks

Infrastructure assets

- * Management philosophy
- * Corporate culture
- * Management processes
- * Information systems
- * Networking systems
- * Financial relations

Intellectual capital management: Skandia Navigator

Skandia, an internationally operating Swedish Insurance Company has made a revolutionary mark at measuring Knowledge assets. It is considered as the first large company to develop its IC report internally in 1985, and became the first company to issue an IC addendum accompanying its traditional financial reports to its shareholders in 1994 (Bontis, 1996; Huseman and Goodman, 1999). The report on intangible assets issued by Skandia AFS, a subsidiary of the Skandia Insurance company has attracted international attention.

Leif Edvinsson, one of the acclaimed world's leading expert on Knowledge assets, was appointed as the first Director of Intellectual Capital at Skandia. He designed and developed a dynamic and holistic IC reporting model called the Navigator with five areas of focus: financial, customer, process, renewal and development, and human capital.

- The key indicators for customer focus include number of accounts, number of brokers and number of lost customers.
- The key indicators for process focus include number of accounts per employee and administrative costs per employee.
- The key indicators for human focus include personnel turnover, proportion of managers, proportion of female managers and training/education costs per employee.
- The key indicators for development/renewal focus include satisfied employee index, marketing expense, training time & expense.

According to Skandia's model the hidden factors of human and structural capital when added together comprise intellectual capital. He emphasised the fact that human

capital cannot be owned, it can only be rented. Structural capital, the dimensions that are "left

Skandia AFS' Business Navigator

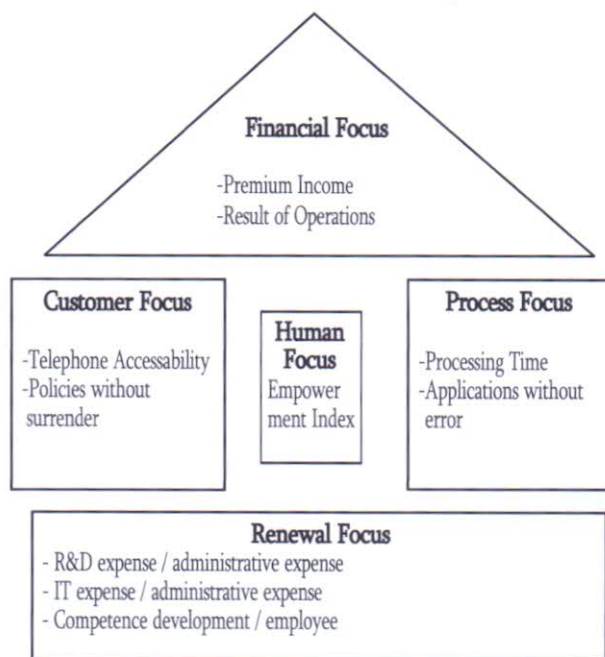


Fig 3: Some examples of Key Indicators for Skandia AFS

behind when the staff has gone home," according to Edvinsson (Roos et.al. 1997), on the other hand, may be owned or traded from a shareholder's point of view.

Some of the other well-known models are Sullivan's Model (Van den Berg 2002); the Skandia Intellectual Capital Value Scheme (Roos, Roos, Dragonetti and Edvinsson 1997); the Brooking's Model (Brooking 1996); Roos and St Onge's Model (Westberg and Sullivan 1998:71); Sveiby's Model (Sveiby 1997); and Wiig's Model (Wiig 1997).

Intellectual Capital Management Initiative in Indian Organizations

Following the footsteps of Swedish Insurance Company Skandia, not only other European companies but Indian firms also decided to publish a report on Intangible resources. Reliance Industries limited was the first Indian company to publish intellectual Capital report in 1997. At present,

disclosure of IC information across the globe is done by very few leading corporations purely on a "voluntary" basis. Annual Reports are considered to be the most widely used document for making investment decisions. Accounting Standard 26 on intangible assets issued by the Institute of Chartered Accountants of India in 2002 specifies some disclosure requirements for companies having intangible assets in their balance sheets.

Reliance from its competitors— whether it be through the speedier implementation of a project or in its implementation at a cost which is significantly lower than that of the competitors, or in the ability to extract more out of capital equipment, even when it ages. These skills are germinated in the Reliance culture. The ICR of RIL (www.ril.com) aims to: "redress the imbalance between non-financial and financial data, in recognition of the belief that value of organizations will, in times to come, increasingly reside in their intangible

Table III: Attribute-wise disclosure in annual reports

Human Capital	External Capital	Internal Capital	Intangible Assets Scoresheet	Mandatory Disclosure Requirement
<ul style="list-style-type: none"> - Number of employees - Educational requirement & Experience - Training and Development - Entrepreneurial Spirit - Human Resource Accounting 	<ul style="list-style-type: none"> - Brand Valuation - Distribution Channels - Market Share - Customer Satisfaction - Social Activities 	<ul style="list-style-type: none"> - Research Projects - Organization structure - Networking & Information system - Corporate Culture - Patents - Trademarks - Copyrights 	<ul style="list-style-type: none"> - Score sheet of Intangible Assets 	<ul style="list-style-type: none"> - Distinction between Internally generated & Acquired Intangible assets - Intangible Assets Valuation - Classification of Intangible Assets - Details of Amortization rates & methods

The review of literature reveals a number of studies conducted all over the world on the disclosure and management of Intellectual Capital. However not much research has been done in Indian context but to the best of the knowledge of researchers only one study has been conducted by Kamath (2008). Based on the research conducted by Kamath and further investigation done by Bhasin (2011) the following experience of the leading firms, which had taken the lead by providing IC-related disclosures has been successfully assimilated so as to learn some valuable lessons from them.

Infosys Technologies Ltd.: One ideal case in India is that of Infosys Technologies Ltd., which can be considered as an example for the best practice in Intellectual Capital Management (ICM). Infosys is one of the pioneers in valuation and reporting of intangibles in India. The annual report of the company incorporates these as an invaluable asset of the company. The intangible assets of the company are classified into four major categories – human resources, intellectual property assets, internal assets and external assets. Infosys Technologies was the first Indian company to incorporate additional disclosures like Intangible assets Scoresheet, Brand Valuation, Human Resource Accounting in its annual reports. Most of the intangible assets information is given in Management Discussion and Analysis section of the annual report.

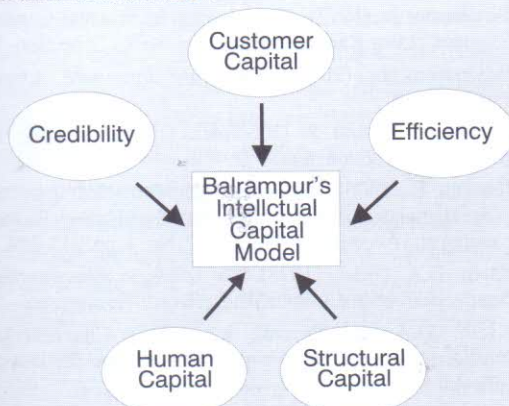
Reliance Industries Ltd.: The Reliance's employee skills are its competitive muscle. Its skills differentiate

assets". The ICR is just focused on intellectual capital and addresses several key topics: the importance of the IC report itself, IC and value creation, human capital, structural capital, customer capital, and investor capital. However, it does not address the business model. It constitutes an independent document from the annual report. The firm recognizes that "the development and the use of human potential and a learning organization is Reliance's bridge to continued success in the future." It uses the term "customer capital" not "relational capital" as most firms do. In this area, variables that matter are market creation, quality of customers, customer retention and growth, market share and the quality factor. Regarding structural capital, the firm admits that it must develop an organizational capability covering "strategy, speed of decision processes, ability to raise funds and prioritization. Organizational ability covers system architecture, the business process (horizontal integration), people processes, as well as, education, learning and knowledge building." Finally, investor capital was the growth engine of Reliance.

Balrampur Chini Mills Limited: Balrampur Chini Mills is not just one of the largest private sector sugar manufacturers in India, but one of the most sought after company when it comes to IC disclosures. The Balrampur IC Model is specific to the company (1997-98) as "it reflects our priorities, our method of working, our attitude and our people. If successfully activated, this model becomes regenerative. According to the



firm, the five elements of IC are: credibility, efficiency, human, structural, and customer capital. Customer capital has a strategic importance for the firm. As it states, "This is the apex of Balrampur's intellectual capital model. All the expertise built up on the manufacturing and marketing sides of the business is eventually judged on the ability of the company to produce sugar of acceptable quality". Moreover, the company stresses the benefits of valuing brands. The ability to outperform the sugar industry average is a reflection of the considerable intellectual capital that it has built into its business-at the farm, factory and marketing levels. The Balrampur Chini Mills' ICR constitutes an independent document to the annual report. In 1996-97 Annual Report, the firm elaborates on the rationale of IC and intangible report as: "to provide share owner a different and broader perspective of the company, and the fundamentals that drive its business".



Shree Cement Limited: The Shree Cement Limited (visit www.shreecementltd.com) is operating in the cement industry, which possesses two cement plants at Beawar, Rajasthan. Shree Cement Limited's IC report is an independent document (having 28 pages) that constitutes a 'Supplement' to the Annual Report 2001. The firm understands that IC is "capturing our various experiences for organizational benefit, cross-pollinating our collective knowledge across various operational tiers, maximizing output with the minimum of resources, and doing things right the first time". The Company's IC resides in its own employees. Thus, the firm has retained the majority of its members possessing valuable technical, financial and manufacturing skills. Shree Cement Limited's drivers of excellence have an intangible nature. As it recognizes, they are: "an achievement-oriented culture, continuous innovation, widespread employee participation, sustained plant modernization, cross-functional information sharing, constructive

dissatisfaction, personal pride in collective achievement, a family work culture, operational discipline, caring management, aggressive empowerment, reward and recognition system, workplace enthusiasm, mix of youth and experience, informal environment, spirit of "must do", and quality obsession." The ICR of the firm is in "narrative style" as it does not incorporate double-entry tables with indicators for its intellectual capital.

Conclusion

Based on the literature review and the above description, it is evident that there has been a paradigm shift in the values of organizations. Human knowledge is the key factor of the future industrial growth and the intellectual capital is the key driver of market value in the knowledge economy. Knowledge assets have a significant role in defining the growth of a company not only in its nascent stages but at all stages in its lifecycle. It is with this background in mind that the already published literature has been reviewed to identify the meaning and significance of intellectual capital along with studying the view point of early exponents of intellectual capital and to evaluate the prevailing practices of recording and reporting of intellectual capital by the corporate sector throughout the world with a special focus on Indian organizations.

With the rise of the "knowledge economy," the management of IC is becoming even more important and, therefore, it should be disclosed in the annual reports. In the knowledge-based economy, therefore, most of the organizations have realized that the true potential of creating value for their organizations lies in the measurement, valuation, and disclosure of their IC. The management of Intellect lies at the core of values in this era of knowledge. Unfortunately, methods of measuring and evaluating intellectual capital are limited and developing slowly. There is dearth of literature on IC disclosures and management. It may be partly due to reluctance of organizations to disclose their Intellectual capital details. Continued research on this phenomena shows that organizations with a high level of Intellectual Capital will be those in which value added service of the firm comes from deep professional knowledge, organizational learning and knowledge management.

Through this study an attempt has been made to provide insights into the minutes of Intellectual Capital, its components, its management and the initiative taken by Indian organizations in this regard. IC has emerged as a strategic tool that adds value to the

organization and gives a realistic picture to the stakeholders and potential investors about performance of the firm, which in turn support the corporate goal of enhancing shareholder value. The IC of a firm is its possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that provide it with a competitive edge in the market. It is the intellectual material, knowledge, information, intellectual property and experience that can be put to use to create wealth. Thus, the particular focus is to measure the organization's IC so that contribution of intangibles to the business are measured in their own right, if measurement is feasible in practice, they will render the tangible as well as intangible assets of a company to be managed explicitly.

Though not much has been done in this regard there is a rising awareness among companies at the global level. There is still much to be formulated and enforced. The accounting bodies at the global level should join hands to develop an internationally accepted valuation system and approaches for reporting of intellectual capital. The regulatory bodies should establish some parameters for the disclosure of Intellectual Capital in a similar fashion as have been defined for disclosure of corporate governance as per clause 49 of Securities Exchange Board of India (SEBI) in order to make a beginning in the field of modern era of global competitiveness. As a result, organizations are shifting their focus to measurement, disclosure and management of IC, their most valuable assets.

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