Intellectual Capital: Concept and Composition

PRITI SHARMA

In today's scenario, there has been greater focus on Intellectual Capital in the realm of service sector than ever before and it, therefore, requires much more sophisticated management of the same. But for effective management, its measurement is required and which further needs the identification of its typology. In the present study, an attempt has been made to review literature of Intellectual Capital.

Keywords: Intellectual Capital, Intangible, Human Capital, Relational Capital, Organisational Capital

Paper Type: Review Paper

INTRODUCTION

As it is already known that real drivers of a company lie in the Intellectual Capital. Now a days, no firm can survive for long by virtue of financial and physical assets in the market. Effective management of Intellectual Capital is the primary requisite of any company and as said by a great researcher that "you cannot manage what you cannot measure". In order to measure Intellectual Capital, its identification is very must. But there seems to be no absolute form of conceptualisation which can embody the complete ingredients of Intellectual Capital. The definitions given by other scholars and thinkers focus primarily on one or the other aspects of IC and, thereby, fail to provide an all-inclusive and comprehensive definition of IC. As has been said by Choo & Bontis (2002), 'the challenge for academics is to frame the phenomenon using extant theories in order to develop a more rigorous conceptualization'. By knowing or recognizing the IC, the company can work to improve its value because in today's business world, real value of a firm lies in IC instead of in financial and other kinds of capital. This paper is divided into three parts, First part, delineates the literature review of the term intellectual capital, Second part, shows literature review of the components of intellectual capital and third and the last part consist of discussion and conclusion.

Priti Sharma is an Assistant Professor, Maharshi Dayanand University, Rohtak-124001, E-mail: pritisrm04@gmail.com, Contact No. 91-9896782253

INTELLECTUAL CAPITAL

Many a time the term Intellectual Capital is used as a synonym for intangible or knowledge assets (Stewart 1991), but there is difference in them. The fact of calling it 'capital' makes references to its economic roots because it was described in 1969 by the economist Galbraith as a process of value creation and bundle of assets at the same time. The term "Intellectual Capital" was first introduced by economist John Kenneth Galbraith in 1969. Bontis (1998) believed that Intellectual Capital was more than pure intellect but it also included "intellectual action". Andriessen's (2001) assertion that "The Intellectual capital movement is relatively young in terms of research, but already rich in history" means it existed in yesteryears but its existence has been realised a few decades back only. Its role as the main value driver has been objectively established by different scholars in the annals of Intellectual Capital and its development.

In a treatise, Galbraith (1969) described the term intellectual capital as "the difference of an organization's market value and book value". In another concept, Bontis (1996) demonstrated intellectual capital as "the difference between the market value of the company and the replacement cost of assets". In other studies, Intellectual Capital has been described as the difference between the market value and financial capital of that enterprise at a given date (Roos, Roos, Dragonetti, and Edvinsson, 1997, pp. 2; Sveiby, 1997, pp. 3-18). In another study, Brooking (1996) elucidated the concept of Intellectual Capital as the combination of market assets, human-centered assets, intellectual property assets, and infrastructure assets. In an article, Edvinsion and Malone (1997: 44) defined intellectual capital in the following way:

"Intellectual Capital is the possession of the knowledge, applied experience, organisational technology, customer relationships and professional skills that provide Skandia with a competitive edge in the market"

In the same book, Edvinsson and Malone (1997, p. 358) defined IC also in a simple way as "knowledge that can be converted into value" and also defined as 'those dimensions beyond the human capital that were left behind when the staff went home' means the information system or organisational or structural capital but this definition has aspect of relational capital in it. In a study, Stewart (1997) broadened the definition to IC as "intellectual material is knowledge, information, intellectual property, experience – that can be put to use to create wealth" by developing competitive advantage in an organization. When intellectual material is formalized and utilized effectively, it can create wealth by producing a higher value asset, called Intellectual Capital. In this, a more detailed delineation of intellectual capital

has been made by the author but here too the author has not included the main component that is relational capital. In a paper, Roos, et. al. (1997) have suggested two definitions of Intellectual Capital, a positive and a negative one. The positive one suggests that the Intellectual capital of a company is the sum of the knowledge of its members and the practical translation of this knowledge that is brands, trademarks and processes. The negative definition suggests that Intellectual Capital is anything that can create value but that you cannot drop on your foot. In other words, it is intangible; that is it is the difference between the total value of the company and its financial value. One of the most succinct definitions of IC given by Stewart (1997) as "packaged useful knowledge". He explained that this includes an organization's processes, technologies, patents, employees' skills, and information about customers, suppliers, and stakeholders. In this delineation too, the author has left relational capital component of intellectual capital.

Stewart (1998) said that Intellectual Capital is the fabric of knowledge, information, intellectual property, expertise which can be used for creating wealth. However, he did not include the component of relational capital in his fabric. In the same year, Bueno (1998) elucidated intellectual capital as the "set of intangibles, invisible or intangible, off-balance, allowing the company to operate, and creating value to it. In a study, Nahapiet and Ghoshal (1998) demonstrated Intellectual Capital as "knowledge and knowing capability of a social collectivity". By taking human capital aspect, Ulrich (1998, p. 15) stated that intellectual capital lies with skilled employees who are committed to business goals, which means IC equals competence multiplied by commitment. Here the sum of capital at the employee level has been presented as the Intellectual Capital of the firm. The Organisation for Economic Co-operation and Development, OECD (1999) described 'intellectual capital' as the economic value of two categories of intangible assets of a company: (a) organisational ("structural") capital; and (b) human capital. In this too, one of the main components of Intellectual Capital has been left behind called relational capital. According to Van Buren (1999) the intellectual capital of an organization includes for example the skills of the employees, the processes of an organization and the value of the customer relationships. This definition, on the one side, has included customer but has left structural capital as the rest of the sub-components of human and relational capital such as competency of employees, supplier's relation, relationship with alliances etc. In the same year, Granstrand (1999) asserted that Intellectual Capital essentially "...comprises all immaterial resources that could be considered as assets, being possible to acquire, combine, transform and exploit, and to which it is possible to acquire assign, in principle, a capitalized value". In another study, Dzinkowski (2000) demonstrated Intellectual Capital as the "intellectual assets, knowledge assets, and total

stock of knowledge-based equity possessed by a firm." Rastogi (2000a, b) conceptualized Intellectual Capital 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. An approach given by Teece (2000) includes knowledge, competence and intellectual property. It also includes other intangibles such as brands, reputations, and customer relationships and leaves rest of the sub-components of human, structural, and relational capital. In other studies, "The term Intellectual capital collectively refers to all resources that determine the value and the competitiveness of an enterprise. In this way it is gamut of the attributes that concur to building all financial statements as well as the balance sheet" (Sullivan, 2000; Stewart, 1997; Svieby, 1997). Dzinkowski (2000) and Moore (1996) stated that market-to-book ratio has also been interpreted as an aggregate indicator of Intellectual Capital. Intellectual Capital is completely different from the other conventional capital kinds in the company and in the management literature (Bontis, 2000:5). The term, Intellectual Capital, can also be described as an intellectual technique fabricated in order to isolate certain desirable assets, and to make possible the invention of techniques that are adequate to enhance control of those assets. In another treatise, Earl (2001, p. 215) "Realized that knowledge was perhaps the critical resource, rather than land, machines, or capital". A similar approach used by Mouritsen et. al. (2001, p. 12), who viewed IC as organisation-wide knowledge resources that, in combination, are constitutive for capabilities, making it possible for the organisation to take action. Rastogi (2002), for instance, viewed IC as a firm's holistic capacity or meta-capacity to meet the challenges and exploit opportunities in its continual support of and search for value creation. In this definition, Intellectual Capital has been interpreted in meta-physical terms. In this view, IC is represented as assets interwoven through the fabric of the firm. In another concept developed by giving all due attention to knowledge factor, Bontis, et al (2002) stated that "Intellectual Capital represents the stock of knowledge that exists in an organisation at a particular point in time." In a treatise, Al-Ali (2003) stated that "IC is the knowledge, experience, and brainpower of employees, as well as the knowledge resources stored in the database, systems, workflows, cultures, and management philosophy within an organization, but has left relational capital." In another study, CIC (2003) said that Intellectual Capital is the "set of intangibles, invisible or intangible, off-balance sheet, allowing the company to operate, creating value to it, includes human, technological, organisational, relational and social capitals". This concept is an all inclusive delineation of Intellectual Capital. In another study, Shaikh (2004) and Phusavat and Kanchana (2007) stated that any knowledge capabilities

stemming from manpower, creativity and innovation, organizational structure or affiliated parties can be classified as IC, provided it can store and convert knowledge for value creation in the future or translate implicit knowledge of employees into explicit knowledge for organizational structurization. In a treatise, Subramaniam and Youndt (2005) defined Intellectual Capital as the sum of all knowledge firms utilize for competitive advantage. Roos et. al. (2005) said that 'Intellectual Capital can be defined as all nonmonetary and non-physical resources that are fully or partly controlled by the organisation and that contributes to the organisation's value creation'. Here partly controlled means human resources, who can left firm anytime as well as the relational capital too up to some extent. Hedberg et. al. (2006) stated that Intellectual Capital constitutes commercialized Intellectual Property bringing value to the company. The value of the assets comes from the legal property rights associated with the ownership, including the right to exclude others from exploiting, commercializing, selling, leasing, licensing, using, and transferring the intangible asset. In this conceptualisation, author has taken up only one sub-component of structural capital that is IPRs, and has left rest of the main components constituting Intellectual Capital. In another paper, Mason (2006) indicated that IC is an intangible asset and defined it as "the aggregation of the employees and internal structure of a company." In this, the author has left external capital which too has great influence. In another study, Martínez- Torres (2006) demonstrate Intellectual Capital in a way that it includes those intangible assets of an organisation that are not recorded in financial statements but which may constitute 80% of the market value of the organisation. In this definition, author has not enunciated the components of the 80%. So this is not clear one definition. A Dictionary of Business and Management (2006) stated that **"intellectual capital** is a complex concept that includes human knowledge, information systems, brand names, and reputation. One popular definition given in the equation: intellectual capital = human capital + structural capital + relationship capital."

Here *human capital* includes knowledge, competences, and the experience and expertise of human resource; *structural capital* includes information systems and databases, and *relationship* (or *customer*) *capital* includes customer relationships, brands, and trademarks. In a treatise Reed et al. (2006) defined Intellectual Capital as the basic competences of intangible character that allow creating and maintaining competitive advantage. Kujansivu and Lo¨nnqvist (2007) stated that Intellectual Capital of an organisation consists of various non-physical resources (e.g. brands, corporate image, databases, employee competencies, immaterial property rights and stakeholder relationships) that are considered valuable. Furthermore, in another treatise, Intellectual Capital is described as knowledge stocks in different ontological levels: the individual

level (Human capital), the group level (Relational capital) and the organizational level (Structural capital), (Afiouni, 2007). According to epistemological studies, it must be stated that Intellectual Capital is not an object, it is a process which operates in the organisations and its quality is determined by the generating and maintaining abilities of the organisation (Arenas and Lavanderos, 2008:84). In the words of Choudhary (2010), Intellectual Capital can be defined as the 'economic value' of human capital, organisational capital and social capital collectively. In addition to this, he stated that Intellectual Capital is "firm's overall or holistic capacity and capability which emerges from its creative and flexible orchestration and co-ordination of its human capital, innovativeness, competencies and capabilities, streamlined processes and expertise. He also stated that Intellectual capital is a bundle of knowledge resources like constellation of employees, users, processes and technologies and work enabling a company to make a difference to users". In this relational capital aspect has been left by the author.

COMPONENTS/VARIABLES OF INTELLECTUAL CAPITAL

Karl-Erik Sveiby first proposed a classification for IC, dividing it into three broad areas of intangibles, viz., human capital, structural capital and customer capital (Sveiby, 1997)—the classification that was most accepted and which was later modified and extended by replacing customer capital with relational capital by Nick Bontis, (1996). Classification of Intellectual Capital, IFAC, (1998), Source: ICS, Research Reports:

Human Capital = Know-how, Education, Vocational qualification, Work-related knowledge, Occupational assessments, Work-related competencies, Entrepreneurial élan, innovativeness, proactive and reactive abilities, and changeability.

Organisational Capital (Structural Capital) = Intellectual Property, Patents, Copyrights, Design rights, Trade secrets, Trademarks, Service marks.

Relational (Customer) Capital = Brands, Customers, Customer loyalty, Company names, Backlog orders, Distribution channels, Business collaborations, Licensing agreements, Favourable contracts, Franchising agreements. This classification has almost included all the aspects besides, organisational culture, process and procedure, value system etc.

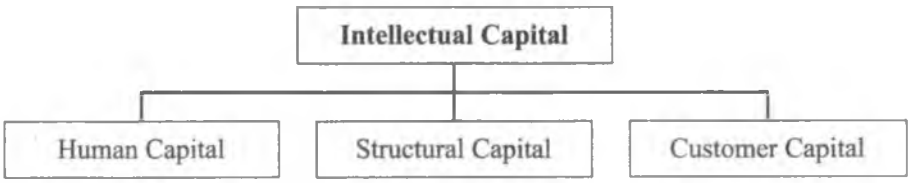
In another classification made by Guilding and Pike (1990) divided intangibles into three groups taking marketing view: value creator, marketing assets and value manifestations. Mortensen et. al. (1997) classified Intellectual Capital, from financial perspective, into innovation capital, structural capital, executory contracts, market capital and goodwill. In another taxonomy given by Roos et. al. (1997), Intellectual capital yields two classes: human capital and structural capital. This division is based on the principle of the location

of particular capital. According to Bontis (2001, 2002), the generative intangibles, like human capital, internal capital and external capital, also called Intellectual Capital. In this, he classified IC into three categories namely: human, internal, and external capital.

In another categorisation, Leliaert et. al. (2003) defined four base classes of IC:

(1) Human;
(2) Customer;
(3) Structural capital; and
(4) Strategic alliance (or partner) capital.

In another demarcation, Stewart (1997) classified IC as in figure given below:



Source: Stewart (1997)

Figure: 2.1

The classification given by Stewart is not all inclusive because it has taken only customer capital in place of relational capital. In another classification, Sveiby (1997) divided Intellectual Capital in three parts. First employee's competences, second internal structure and third external structure. In this, employee's competencies include the ability of acting in a variety of situations to create tangible and intangible assets using their experience and education. Internal structure consists of patents, concepts, models and IT systems. The external structure includes relations with clients and suppliers. It includes brands, reputations and images. This conceptualisation hasn't included the organisational capital in it.

A study by The Organisation for Economic Co-operation and Development OECD (1999) enunciates 'intellectual capital' as the economic value of two categories of intangible assets of a company: (a) organisational ("structural") capital; and (b) human capital. This classification, too, not included relational capital.

According to Edvinsson and Malone (1997), IC consists of three basic components: human capital, structural capital, and customer capital.

1. Human capital includes knowledge, skills, and abilities of employees. It is an organization's combined human capability for solving business problems.

2. Structural capital is everything in an organization that supports employees (human capital) in their work. It is the supportive infrastructure that enables human capital to function. Because of its diverse components, Edvinsson and Malone, (1997) further classified structural capital into organizational, process, innovation and intangible capital.

- Organizational capital includes the organization philosophy and systems for leveraging the organization's capability.
- Process capital includes the techniques, procedures, and programs that implement and enhance the delivery of goods and services.
- Innovation capital includes intellectual properties and intangible capital. Intellectual properties are protected by commercial rights, such as patents, copyrights and trademarks.
- Intangible capital is all of the other talents and theory by which an organization is run.

3. Customer capital is the strength and loyalty of customer relations. The relationship with customers is distinct from other relationships either within or outside an organization.

In this categorisation, author had not included relationship with other stakeholders, but this had made good delineation with structural and human capital.

In a study, McElroy (2002) suggested that IC, with basic components, should include social and innovative capital that enhances the internal value of companies with mutual trust, mutual benefits, shared values, networks, and norms.

In another taxonomy or classification, Rastogi states (2000a, b), Intellectual Capital is conceptualized as the result of the dense dynamic nexus of a firm's social capital (SC), human capital (HC), and KM. Here no description has been provided about social capital, so it's quite difficult to figure out what does author want to say here. Over the time, a broad consensus has developed that intellectual capital can be characterised in terms of a tripartite model comprising human capital, external capital and internal capital components (Edvinsson and Malone, 1997) Stewart, 1997; Sveiby, 1997) where Human capital refers to the skills/competences, training and education, and experience and value characteristics of an organisation's workforce: External capital comprises relationships with customers and suppliers, brand names, trademarks and reputation; and Internal capital refers to the knowledge embedded in organisational structures and processes, and includes patents, research and development, technology and systems. This delineation is not so complete because organisational culture and value system components not included.

The classification by Seetharaman et al. (2004), which demonstrated the taxonomy of IC components in each subcategory, includes the following:

- Human capital: Employee competence and knowledge, and Innovativeness
- Relational capital: Brand, and Customers (customer relationships)
- Structural capital: Company culture, Patents, and Internal database

Furthermore, in another study, Intellectual Capital is described as knowledge stocks in different ontological levels: the individual level (Human capital), the group level (Relational capital) and the organizational level (Structural capital) (Afiouni, 2007).

In a treatise, Bontis (1998) classified Intellectual Capital in Human Capital, Structural Capital and Relational Capital aspects. In another study, Roos et. al. (2005) categorised Intellectual Capital into three categories by taking different dimensions which were based on their economic behaviour. These are (1) Relational capital which include all the relationships that the organisation has, such as customers, consumers, intermediaries, representatives, suppliers, partners, owners, lenders, and the like., (2) Organisational capital means all those things that remain in the organisation when the employees have left the building but that you cannot find in the balance sheet. This includes resources such as brands, intellectual property, processes, systems, organisational structures, information (on paper or in data bases), and the like., (3) Human capital which includes all the attributes that relate to individuals as resources for the company and under the requirement that these attributes cannot be replaced by machines or written down on a piece of paper. This includes resources such as competence, attitude, skill, tacit knowledge, personal networks, and the like. This categorisation too has not enveloped organisational culture and value system components in it.

In a study, Bontis et. al. (2000), in their model, demonstrated three dimensions (Human, Structural and Relational) of Intellectual Capital which is further subdivided into sub factors. The dimensions of Human Capital includes: - employees' capability, employees' satisfaction, and employee sustainability; Structural Capital comprises the sub factors culture, organizational process, information system and intellectual property, while Relational Capital is divided into three sub factors customer, partner and community. The model, including the 35 measurement indicators, has been supported through empirical application. But this has not included the relation with suppliers as the component of relational capital.

In a classification, Knight (1999) identified an additional factor, financial performance, in addition to the human, structural and external capital.

In a study, Brooking (1996) classified Intellectual Capital in market assets, assets centered on humans, intellectual property and infrastructure assets.

Market assets consists in the potential that an organization has due to intangibles related to the market that gives a competitive advantage like clients' loyalty, brands, distribution channel, contracts and advertisement. Assets centered on humans are composed by experience, creativity, solving problems ability, and leadership, entrepreneurship, and management skills such as psychometric data and to perform under great stress. Infrastructure assets are technology methodologies, corporate culture, hedging, data cases, communication systems, etc. Intellectual property is know-how, trade secrets, trademarks, patents and design rights.

A Dictionary of Business and Management (2006) delineated IC as a complex concept that includes human knowledge, information systems, brand names, and reputation. One popular classification in the form of equation: intellectual capital = human capital + structural capital + relationship capital." Here *human capital* includes knowledge, competences, and the experience and expertise of staff, *structural capital* includes information systems and databases, and *relationship (or customer) capital* includes customer relationships, brands, and trademarks. Petty and Guthrie (2000, p. 158) divide Intellectual Capital into the categories of external (customer-related) capital, internal (structural) capital and human capital". Of the three categories, structural capital is sometimes subcategorised into process capital, intellectual property and innovation capital (Chatzkel, 2002). In a study, O'Donnell and O'Regan (2000) classified Intellectual Capital into People, Internal structure and External structure. Roos et al. (1998) split the intellectual capital into Human capital, Structural capital and Relational capital. Kaset classified the intellectual capital in human capital, structural capital and relation capital. Human capital is further classified into people competence, competence improvement, staff structure and stability. Structural capital is classified into process technology and IT penetration, business philosophy, organisation structure and intellectual property and relation capital is classified into customer base, customer loyalty, market proximity, suppliers and interrelation with other actors.

Chiung-Ju Liang and Ying-Li Lin (2008) categoriesed intellectual capital in their treatise into customer capital, process capital, innovation capital and human capital. Chen et al. (2004) classified intellectual capital into innovation capital, human capital, structural capital and customer capital. Brooking (1996) classified intellectual capital infrastructure assets, assets centered on humans, intellectual property and market assets in which infrastructure assets include technology, methodologies, corporate culture, hedging, data cases, communication systems, etc. Assets centered on humans is further categorises into experience, creativity, solving problem ability, leadership, entrepreneurship, management skills such as psychometric data and to perform under great stress. Intellectual property is classified into know how, trade secrets, trademarks,

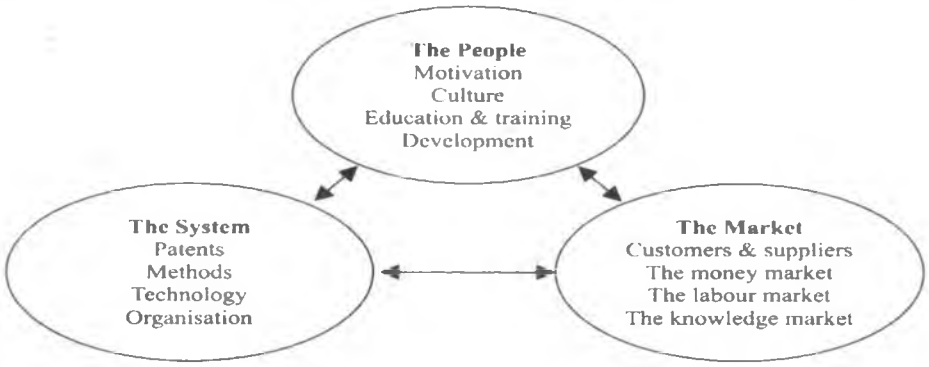
patents and design rights and market assets is classified into clients loyalty, brands, distribution channels, contracts and advertisement. In another categorical demonstration, Edvinsson and Malone (1997) categorised intellectual capital into human capital and structural capital, in which human capital includes employees knowledge, skills and innovation, company's values, culture and philosophy, and structural capital includes hardware, software, data bases, organisational structure, patents and trademarks. Stewart (1997) classified intellectual capital into structural capital, client's capital and human capital. Structural capital includes technology, inventions, data, publications strategy, corporate culture, structures, systems, routines and procedure and client's capital includes client and organisations relations, profit and loss per client. This classification too is not so clear because this has not defined what does organisational relations mean?

In a framework, the DCTU (1999) classified intellectual capital in a different way. "The People" element represents employee and managers' competence, both individually and collectively. The model suggested that this element is dependent on people's motivation, their culture, their education and their training and development. "The System" is the knowledge in the company that is independent of people. It includes patents, methods, technology and the organisation of the company. "The Market" consists of the relationships between the organisation and outsiders including suppliers, partners, distributors and customers. "The Market" is also a source of money, labour and knowledge that the company lacks. These three categories of IC are closely intertwined. For example, the success of new technology (part of Systems) is dependent on staff competence and training (part of People). In taxonomy, Seetharaman et al. (2004) illustrated IC components in each subcategory as following:

• Human capital
- Employee competence and knowledge
- Innovativeness
• Relational capital
- Brand
- Customers (customer relationships)
• Structural capital
- Company culture
- Patents
- Internal database

In this classification, in relational capital the relationship with other relevant stakeholders has not been included and in structural capital the components like organisational structure, value system, and organisational process and so on are not included.

In another taxonomy demonstrated by (DCTU, 1997), classified IC as



Source: DCTU (1997)

Figure: 2.2

Gerpott et. al. (2008), taking into account the peculiarities of the telecommunications sector, categorised intangibles into 7 categories that can be profiled as follows:

(1) Human capital. This category highlights the employee-based value drivers of a firm. It reflects the inherent knowledge and skills of the employees, but also entails a firm's culture and working climate. Operational human capital indicators include company and job tenure structures of a firm's employees, employee turnover rates, and job satisfaction levels. Frequently, special knowledge and skills required to design and operate complex networks are found to be important intangible assets to telecommunications firms.

(2) Customer capital: Customer capital consists of market-related variables such as a firm's current customer base, market share, customer satisfaction or brand strength. For TNOs, long-term relationships too contractually or emotionally bonded customers or both are among their key intangibles.

(3) Supplier capital: This category relates to the procurement processes and outcomes of a company. Supplier capital indicators include statements on radio license allocations or key suppliers. Radio spectrum licenses are particularly important intangible assets for mobile network operators (MNOs) since their number is very limited due to technical constraints. MNOs frequently tend to overpay in order to obtain radio spectrum licenses if they are allocated via auctions.

(4) Process capital: This intangible asset category focuses on the level of sophistication of a firm's internal work sequences such as its quality

management. Pertinent indicators include information on a firm's sales network, planning and maintenance, or complaint management processes.

(5) Innovation capital: Innovation capital deals with a company's R&D capitalization as reflected in a firm's number and quality of patents or other intellectual property rights. Further, absolute and relative R&D expenditures, patent portfolio structure variables, or the ratio of sales generated with new products introduced within the last x years to total sales are common innovation capital proxies.

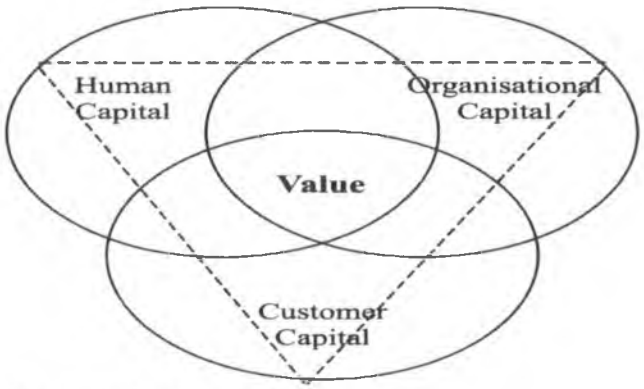
(6) Location capital: This category deals with advantages associated with the spatial location of the company. It includes valuable transport routes or a low geographical distance to universities with excellent graduates. For TNOs, location advantages often arise from the possibility of exclusively offering telecommunications services in economically highly attractive places (e.g. airports, shopping centres).

(7) Investor capital: This category deals with assets improving a firm's position on international equity and/or debt markets. Investor capital information examples include a company's (credit) rating, shareholder structure (e.g. positions of private and institutional investors), systematic risk, or the mere number of investor relations road shows/analyst meetings during a reporting period.

In "The value platform model" developed by Edvinsson (Skandia), Onge (The Mutual Group) and Petrash (Dow Chemical). The model classifies IC as:

$$IC = HC + \text{organisational capital} + CC$$

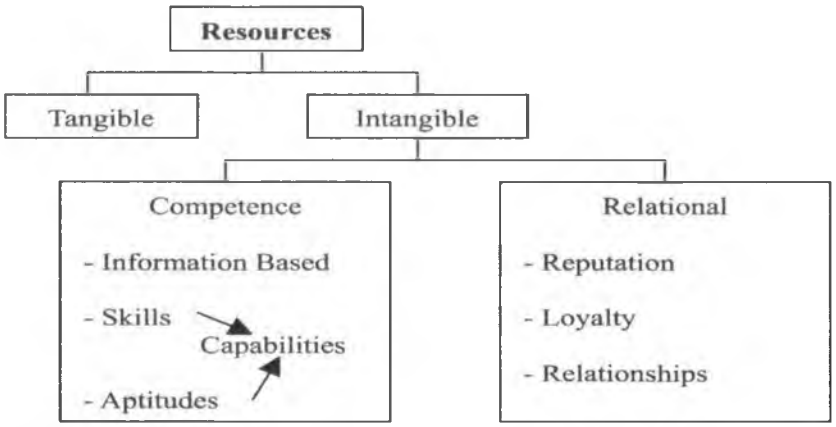
Here too Customer capital has been taken in place of relational capital. In another classification, Petrash (1996) showed the interrelationships amongst the three major components of IC. The dotted lines represent the management of the intellectual assets. The objective is to increase the number of inter-relationships so as to maximize the value space. The closer the interrelationships between human, organisational and Customer Capital, the larger the value space.



Source: Petrash (1996)

Figure: 2.3

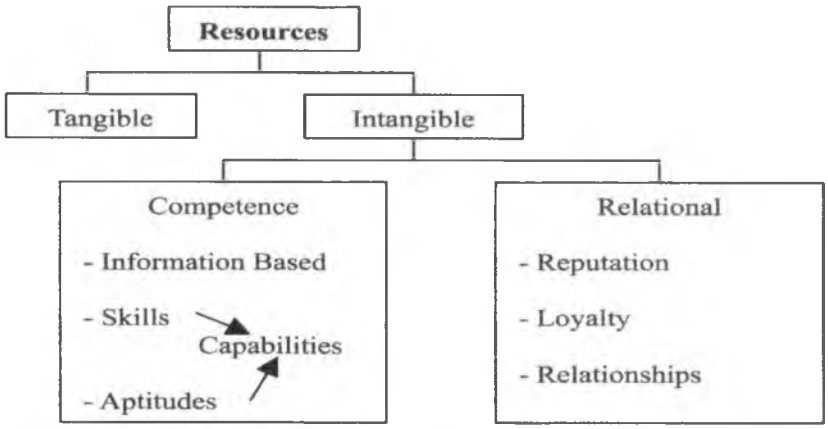
In another approach, Haanes et. al (1997) classified a company's resources into tangible and intangible resources. Intangible resources are the IC of the company, which are further divided into competence and relational resources. Competence is the ability to perform a given task. It exists at two levels – individual (knowledge, skills, aptitude or capabilities) and organisational (information-based like databases, technology and procedures). Relational resource refers to the reputation of the company, client loyalty and the relationships it has with customers.



Source: Haanes and Lowendahl (1997)

Figure: 2.4

In taxonomy, Lowendahl (1997) further divided the competence and relational categories into two subgroups, Individual and Collective, depending on whether the resource is employee or organisationally focused. This added division distinguishes between IC that is people-dependent and IC that is organisational-dependent.



Source: Haanes and Lowendahl (1997)

Figure: 2.5

In a study by, Joia, (2000) by expanding the research carried out by Edvinsson and Malone, (1997), Roos et al., (1997), Sveiby, (1997) and Stewart, (1997). He proposes a variation of market-to-book value and develops a new formula:

IC = HC + Innovation Capital + Process Capital+ Relationship Capital

HUMAN CAPITAL

Human capital comprises of both the broader human resource considerations of the business workforce (known in the literature as the labour market) and the more specific requirements of individual competence in the form of knowledge, skills and attributes of employees (McGregor, Tweed, & Pech, 2004). In a study, Roos et al. (1998) said that although organizations invest in human capital, which is movable and does not belong to the organization, employees are considered to be the owners of human capital, not the organization. According to Stewart (1997), human capital is "the place where all the ladders start: the wellspring of innovation, the home page of insight" (p. 86). Bontis et. al. (2002) stated that human capital is individual knowledge stock of organization represented by its employees. Bontis (1998) delineated human

capital as the firm's collective expertise to extract the best solutions from the knowledge of its individuals. In another paper, Bontis (1999) said that human capital is important since it is the source of innovation for organizations. In a study, Murale and Ashrafli (2010) defined human capital as a combination of highly skilled, creative, motivated, collaborative and knowledgeable people who understand the dynamic business environmental context and the competitive logic of their enterprise and the critical requirements thereof they understand and realize their own broad role and responsibility for the vision, values and competitive viability of their organization. For this purpose, they continually learn, develop, share, integrate and use their knowledge both individually and collaboratively to cultivate enterprise competencies, capabilities, innovation, expertise and speedy business processes in a proactive manner. They are focused on the success of their enterprise in facing the challenges of both today and tomorrow. According to Bontis (1998), human capital is the collection of intangible resources that are implanted in individual members of an organization. These resources can be of three main types: Competencies (including skills and know-how), attitude (motivation and leadership qualities of the top management), intellectual agility (the ability of organizational members to be "quick on their intellectual feet"), innovation and entrepreneurship (the ability to adapt and cross-fertilize etc.). Murale and Ashrafli (2010) said that human Capital is the ability source of Intellectual Capital besides its important components.

In a theory, Flamholtz and Lacey (1981) emphasized employee-skills as the human capital. Later researchers expanded this notion and included the knowledge, skills and capabilities of employees that create performance differentials for organizations as the human capital (Nahapiet and Ghoshal, 1998). According to Halim (2010, p.63), human capital is "what a single employee brings into the value adding processes, consisting of four indicators, i.e. professional competence, social competence, employee motivation, and leadership ability.

STRUCTURAL CAPITAL/ ORGANISATIONAL CAPITAL

Organisational capital is the most important capital of an organisation. Its proper maintenance and management is required for attaining great heights in the market. Organisational capital not only provides a monopoly and exclusive right in the market but also helps in acquiring stake at the market or help in increasing market share in the market (Vashishtha and Sharma, 2011). Structural capital represents technologies and other mechanisms that assist employees in creating revenues for the company. In a paper, Edvinssion and Malone (1997) defined structural capital – Company systems, tools and work philosophy as well as organizational culture. These are the elements that

accelerate the flow of knowledge through the organization and are divided into innovation capital (renovation capacity and results of the innovations obtained by means of commercial rights, intellectual property, managerial secrets, and so on) and process capital (techniques of work, procedures that increase the value of the product or service and programs that increase work efficiency). Halim (2010) stated that structural capital is a stock of knowledge that is owned by the firm; which includes corporate culture, information technology and explicit knowledge, product innovation, process optimization, and innovation among others. Structural capital is the knowledge that stays in the firm when employees go home for the night (Ordonez de Pablos, 2004; Roos et al., 1998). Therefore, organizations usually have residual claim on it. Employees provide structural capital for the company and the company is the residual owner of it. In a study Chen, Zhu, & Xie, (2004) stated that structural capital deals with the organizational structure and the information systems of an organization can lead to organizational business and intellect. Human capital is the primary factor for structural capital. Structural capital is dependent on human capital, since human capital is a determinative factor of the organizational form. However, even though influenced by human capital, structural capital exists independent of human capital. For example, patents are created by human capital, but after creation they belong to the company.

RELATIONAL CAPITAL

The third main component of intellectual capital is the relational capital. It is the ability of an organization to interact positively with business community members to motivate the potential for wealth creation by enhancing human and structural capital (Marti, 2001). Bontis (1999) conceptualised relational capital as the knowledge embedded in all the relationships an organization develops, whether it is with customers, competitors, suppliers, trade associations or government bodies. One of the main categories of relational capital is usually referred to as customer capital that denotes the "market orientation" of the organization. Relational capital includes relationships not only with customers but also with a wide variety of external stakeholders. Attempts have been made to define the relational category of Intellectual Capital by reference to the relationships that an organization has with its customers and external environment e.g. with suppliers, alliances, govt., society etc. Perhaps, first recognized in the balanced scorecard (Kaplan & Norton, 1992), client and customer capital (Bontis, 1998; Saint- Onge, 1996) and relational capital (Bontis & Fitz-enz, 2002) are embodied in the concept of a learning organization (Armstrong & Foley, 2003; Dewhurst & Navarro, 2004; Senge, 1992).

Relational intellectual capital is a dimension that is sometimes defined narrowly at the level of the customer (Johanson et al., 2001; Stewart, 1997)

or broadly to include social capital (Bueno et al., 2004, Rastogi, 2003) and relations with stakeholders (Bontis and Fitz-enz, 2002; Ordo´n˜ez de Pablos, 2003). According to Nahapiet and Ghoshal (1998), the central proposition of social capital theory is that networks of relationships constitute a valuable resource for the conduct of social affairs. Much of this capital is embedded within networks of mutual acquaintance. He stated that this dimension of intellectual capital may constitute positive long-term associations with customers, suppliers, competitors, employees, community residents, and other organizational stakeholders that eventually lead to financial results that benefit the organization (Baskerville and Dulipovici, 2006; Namasivayam and Denizci, 2006). In a study, Welbourne (2008) identified relational capital as an intangible asset that is based on developing, maintaining and nurturing high-quality relationships with any organization, individuals or group that influences or impacts your business.

In nutshell, relational capital includes relationship with not customer only but with other stakeholders too.

DISCUSSION AND CONCLUDING REMARKS

Intellectual Capital is a phenomenon like information in its essence that cannot be seen but can be observed with its effects. Therefore, to count the elements of Intellectual Capital is not very easy as it was mentioned in the other elements above. They are generally very intangible (abstract) things like skill, innovativeness of the personnel and culture and philosophy of the company, the loyalty of the customers etc. The exploration of Intellectual Capital and, more generally, in management science is a dynamic process which is likely to conjure up new areas to explore. There is lots of ambiguity pertaining to conceptualisation or the definition of intellectual capital. Some definitions include only human capital and organisational capital and some definitions include relational and social capital too. It is also well said by a great person that it is easy to define or describe what we can see or touch, but it is very difficult to describe or define which we can feel only or sometimes whose only results are visible. The same philosophy is also applicable in the case of measurement aspect Intellectual Capital. Some researchers have said it is the difference between the market value and the book value of a firm, which means all the difference of the two is Intellectual Capital. Some say that it is the difference between the book value and the replacement value, while some others are of the opinion that it is a difference between the market value and the financial capital of a firm at a given date.

Another type of conceptualisation, where authors define it by its constituents, too has lots of ambiguities. No single definition is complete. Several researchers have made an attempt to define or conceptualise but by

reviewing the literature, at last it can be concluded that none of the definitions is complete or successful in describing full meaning of Intellectual Capital. It is difficult to provide a unified definition of Intellectual Capital, and even more difficult task is to propose a commonly accepted typology for it because this phenomenon still is at an emerging stage of development (Martín-de-Castro et. al, 2010). From the foregoing analysis, it can be inferred that the term has not yet been solidified, and its identification with the concept of 'capital'- in accountability terms- presents controversy (Dean and Kretscher, 2007). Similar sort of ambiguity is also kindred with components of Intellectual Capital. Some studies show that it is a combination of human and organisational capital. Some say that it is an amalgam of human capital, organisational capital, social capital, innovation capital and relational capital. The bigger confusion lies in relational capital; most of the studies show that it is totally pertinent to the relationship with customer only. It means Intellectual Capital has nothing to do with other stakeholders, but some believe that it includes relationship with every stakeholder. However, most of the definitions decompose IC into three primary dimensions: human capital, structural capital and relationship capital (Bontis, 1996, 1998; Bontis et. al., 2000; Edvinsson and Malone, 1997; Edvinsson and Sullivan, 1996; Roos et. al., 1997; Saint-Onge, 1996; Stewart, 1997; Sveiby, 1997.

In the present study, an attempt has been made to identify the constituents of Intellectual Capital or in other words to conceptualise the term Intellectual Capital in order to develop a comprehensive model for its measurement. Here, measuring Intellectual Capital is not the ultimate aim, rather to link IC with the value creation in order to generate more cash inflows or to magnify the gap between the market value and the book value of the firm.

Table: 2.1 **Extracted constituents of Intellectual Capital**

CONSTITUENTS OF INTELLECTUAL CAPITAL EXTRACTED FROM LITERATURE REVIEW		
	HUMAN CAPITAL	1. Employee competency 2. Consistent best performance 3. Employee satisfaction 4. Employee's understanding of target market
	STRUCTURAL CAPITAL	1. Research and Development 2. Information system 3. Database 4. Coordination
	RELATIONAL CAPITAL	1. Relationship with customer 2. Relationship with suppliers 3. Relationship with partners/alliances 4. Loyalty and goodwill enjoyed among customers 5. Customer's confidence in continuing their association with organization 6. Organization's market share
	ORGANISATIONAL CULTURE AND VALUE SYSTEM CAPITAL	1. Provision of succession training programme 2. Recognition to employees' efforts 3. Up-gradation of employees' skill and knowledge when they require 4. Comprehensive recruitment policy and dedicated towards hiring best candidate 5. Quality of service 6. Preparedness towards sudden discontinuance of service from employee's side 7. Supportive and conducive atmosphere 8. Continuous on schedule

(Source: Self developed by the researcher)

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