



Intellectual Capital: Concepts, Characteristics and Classifications

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Abstract ;

This paper aims to clarify intellectual capital definitions, its characteristics and classifications. It is more than just patents, copyrights, publishing, and other forms of intellectual property. Intellectual capital includes the organizational knowledge, experience, relationships, operations, innovations, position in the market, impact on society, goodwill, and the mental image that external public creates about it.

Its most important characteristics are: intangibility, impossible to imitate; bigger intensity of using intellectual resources increases their value and creates future long term benefits.

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1-Introduction

Economists, in ancient time, have examined physical and human capital as key resources for the firms that facilitate productive and economic activity. However, knowledge, too, has been recognized as a valuable resource by economists (Nahapietp & Ghoshal, 1998, 245). Company values are based on intangible assets such as knowledge. This knowledge has known as intellectual capital.

Intellectual capital is the main actor in creating value for an organization through a combination of human capital and structural capital and customer capital. It consists of employee's knowledge, ideas, capabilities, relations, skills, attitudes, work culture and company goodwill and values.

Intellectual capital is mostly defined as the "knowledge that is of value to an organization"; it is more than just patents, copyrights, publishing, and other forms of intellectual property. It includes the organizational knowledge, experience, relationships, operations, innovations, position in the market, impact on society, goodwill, and the mental image that external public creates about it. Intellectual capital can be positioned strategically and measurably; it is used, from a strategic perspective, to create and use knowledge to increase the value of a company while the measuring perspective focuses on the need to provide the necessary mechanism to determine the non-financial value of intellectual capital.

The concern has been focused in the organizations since their inception to increase their material assets through increasing their capital, which necessarily leads to an increase in profit. With the development of human resources management and the challenges facing organizations as a result of the technological development, organizations have tended to give more importance to intellectual capital and consider it as the main actor in creating value for organizations .By creativity and innovation to its human resources, organizations achieve excellence.

The impact of intellectual capital on the market value of many companies can be noted, many companies in u s a in the period from 1981 to 1993 had the value that was 2-9 times more in capital market in relation to their accounting value (Ognjanović, July-September 2016, p 161).

2. Intellectual Capital Conceptual Framework

2.1 Defining Intellectual Capital

Intellectual capital "comprises all resources, capabilities, relations, and networks, whether intellectual like knowledge and ideas, or emotional and interpersonal like attitude, culture, and values, that enable an organization to create and maximize value" (Al- Ali, 2003, p 33).

Intellectual capital has also been defined as "the difference between a firm's market value and the cost of replacing its assets. It

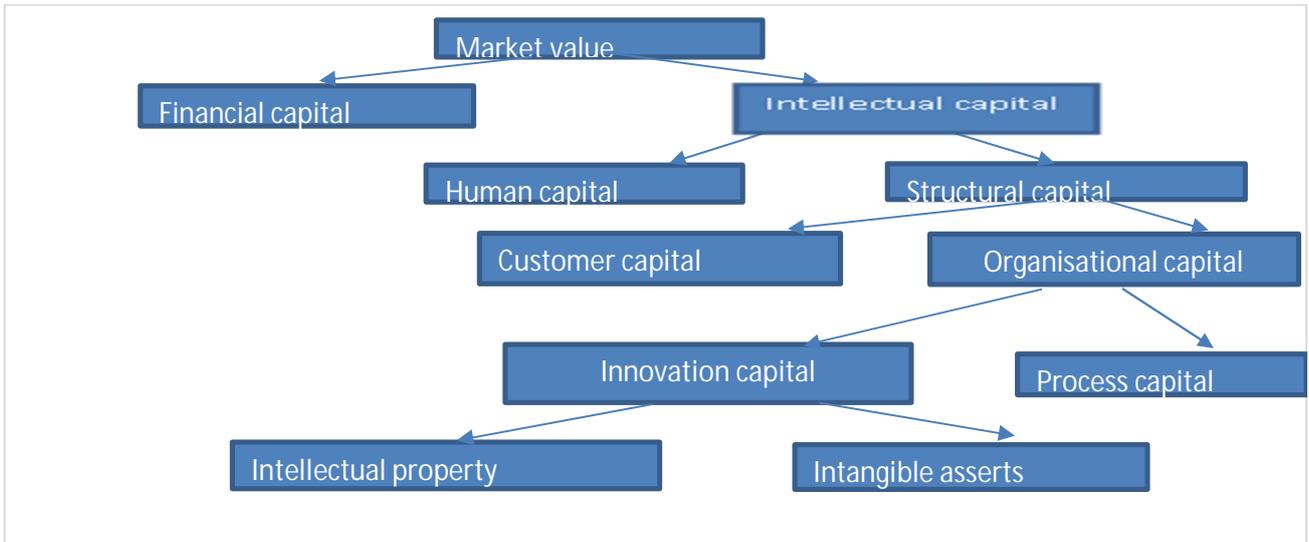
is those things that we normally cannot put a price tag on, such as expertise, knowledge and a firm's organizational learning ability. Market value equals book value plus intellectual capital, with book value usually only the tip of the iceberg of wealth" (Akpınar & Akdemir, July 2000, p 333).

According to Ognjanović, IC is a main driver of value creation in the company by combining human, structural and relational factor. Intellectual capital consists of knowledge, experience and skills of the workers employed, business culture, databases, company's reputation and relations with business partners (Ognjanović, July-September 2016, p 162). So, intellectual capital encompasses much more than patents, copyrights and other forms of intellectual property. It is the sum and synergy of a company's knowledge, experience, relationships, processes, discoveries, innovations, market presence and community influence (Akpınar & Akdemir, July 2000, p 333).

The Society of Management Accountants of Canada (SMAC) defines intellectual assets as follows: In balance sheet terms, intellectual assets are those knowledge-based items, which the company owns which will produce a future stream of benefits for the company. This can include technology, management and consulting processes as well as patented intellectual property (Šaponja et al, p235).

The most widely used definition of intellectual capital is "knowledge that is of value to an organization." Its main elements are human capital, structural capital, and customer capital. That definition suggests that the management of knowledge (the sum of what is known) creates intellectual capital (Akpınar & Akdemir, July 2000, p 333). Intellectual capital includes values of a company that "are not entered in the balance sheet or at best are entered as goodwill" (Šaponja et al., p 235).

GraghN° 1. The Skandia Value Scheme

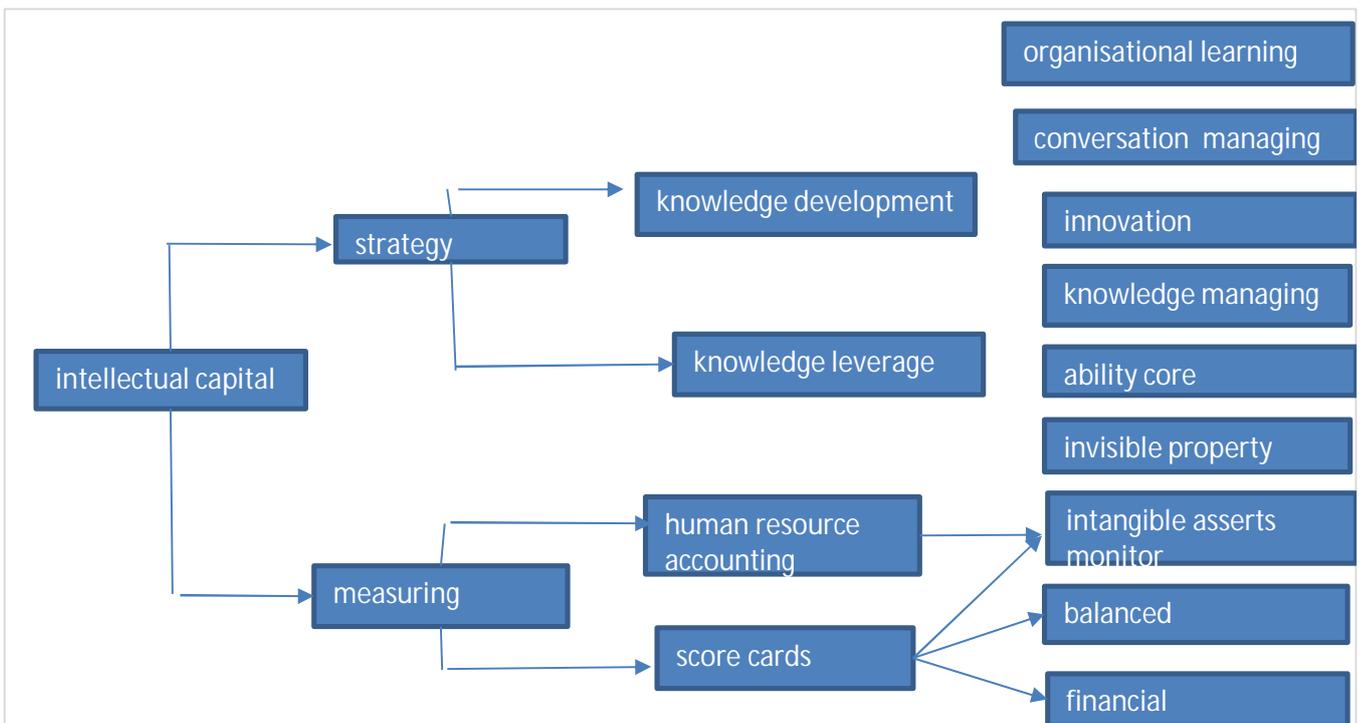


Source: Roos et al., 1997 p. 29

From a strategic perspective, intellectual capital is used to create and use knowledge to increase the value of a company. On the other hand, the measuring perspective focuses on the need

to provide the necessary mechanism to determine the non-financial value of intellectual capital and express it in a similar way like other traditional financial values do (Šaponja et al., p 237).

Gragh N° 2. Model showing how intellectual capital can be positioned



Source: Šaponja et al., p 237

2.2 The Characteristics of Intellectual Capital

“Intellectual capital is considered an asset, and can broadly be defined as the collection of all informational resources a company has at its disposal that can be used to drive profits, gain new customers, create new products, or otherwise improve the business. It is the sum of employee expertise, organizational processes, and other intangibles that contribute to a company's bottom line. Intellectual capital is considered an asset, and can broadly be defined as the collection of all informational resources a company has at its disposal that can be used to drive profits, gain new customers, create new products, or otherwise improve the business” (James Chen, What is intellectual capital, 2010).

Al- Ali states that “Academics and practitioners use the term intellectual capital more consistently to refer to the intangible assets that a business can use to create value” (Al- Ali, 2003, p 32). He adds that the term intellectual is used to refer to intangible resources and capabilities while the term capital means that human resources can be used as goods to create value for the organization, yet the use of this term raises many doubts because the organization can never possess the mental strength of employees or customer relations, even though it is supposed to have access to both.

According to Gallego and Rodríguez (2005, p. 107), the term “intangible assets” i.e. “intellectual capital” refers to a

set of assets with the following characteristics:

they are of intangible nature;

they are the fruits of economic transactions that originate from disbursements;

they have the ability to generate income in the future;

they are of greater duration than a fiscal year;

they depreciate over time; and

they hinder comparisons with market values.

Tseng and Goo (2005), in their study, concluded that intellectual capital has five characteristics:

Intangible: This makes it more or less directly, controlled by the company;

Effect of time delays: The average duration of R&D benefits is approximately 5–9 years;

Non- zero-sum effect: Intellectual capital management is not necessarily a zero-sum game; financial investments should fit the company culture;

Rule of multiplication: Intellectual capital = People × Internal capital × External capital;

Law of increasing return: value created increases with the amount of intellectual capital applied and generated.

Ognjanović sums up the most important characteristics of IC in: intangibility, impossible to imitate; bigger intensity of using intellectual resources increases their value and creates future long term benefits (Ognjanović, July-September 2016, p 162).

3. Classification of Intellectual Capital

It is widely agreed that IC is grouped into three areas- human, organizational, and relational capitals-on both organizational and individual levels.

3.1 Human Capital HC

In human resources management theories, human capital is seen as the knowledge, skill and capability, of the individual employees providing solutions to customers. It includes the knowledge and skills of both managers and staff, and their ability to innovate and innovate

Human capital is “the capabilities of individuals who are the source of innovation and renewal within companies” (Sohrabi et al., 2012, p 2445). Human capital is also defined as “the knowledge, skills, experience, intuition and attitudes of the workforce” (Akpınar & Akdemir, July 2000, p 334). It is embedded in how each employee thinks about and does work and in how an organization creates policies and systems to get work done (Akpınar & Akdemir, July 2000, p 334). Human capital categories a set of dimensions that make up human personality characteristics, and it's, as Manzari & al recalls (Manzari & al., 2012, p 2267):

Attitude & Motivation: Motivation describes the wants or needs that direct behavior toward a goal, from a psychological perspective, human beings are always motivated whether or not the motivation cause them to do what other people prefer them to do (Yi, August 2017, 1250). There is a strong relationship between motivation and attitude, and in behavioral sciences the motivational attitude is built to motivate individuals by influencing their behavior and ideas

Competence, Skill, Capabilities: Capability and competence are two manifestations of human abilities and skills. but their concept is different. Competence is defined as “a generic body of knowledge motives, traits, self images, social roles and skills that are causally related to superior of effective performance in the job” (Nagarajan and Prabhan, June 2015, P 07). “Capabilities is a term that is often used interchangeably with competencies. Historically capabilities described something that has the capacity of being realized, but that has not yet been realized. For example, someone can be capable of becoming a manager, but has not yet developed the competencies needed to be a manager. Hence, using the term capabilities is good in instances where someone may be considered for a new role. They have the capability to function in that role, but still need to obtain the necessary competencies to be fully effective”(Hadziamerovic, 30 oct 2017).

Creativity & Innovativeness: If we want to define creativity we say it an act of creating new ideas, imaginations and

possibilities. Creativity is different from innovation that defines as the introduction of something new and effective.

Experience & Expertise: Experience is Event(s) of which one is cognizant. But expertise is a great skill or knowledge in a particular field or hobby (www.askdifference.com/experience-vs-expertise).

Knowledge: Is a component of skill, competence, experience. Knowledge has to do more with skills and expertise

Efficiency: A term that indicates the effort that achieves the highest output using the least amount of input.

3.2 Organizational Capital OC or Structural Capital SC

organizational capital or structural capital is essentially “captured” human capital, and relies on some of the skills of human capital for its existence, such as the ability to communicate and the willingness to share information and allow it to be stored and maintained in organizational capital. It is conventionally used to refer to the processes and procedures that are in some ways recorded and hence accessible to the organization as how things are done in order to maintain effectiveness. It is formed by the intellectual input of the employees, but it “belongs” to the firm. In other words, organizational capital has been further subcategorized by some authors into process capital, intellectual property and innovation capital (Sohrabi et al., 2012, p 2445). Organizational capital categories are:

Customers: This term refers to all parties with interest that link it with the company; Whether the customer is internally or externally, a person or an organization. And whatever kind of relationship he has with the company.

Stakeholders: The term refers to all those who have a relationship with the organization and are influenced and influenced by the activity of the organization. The stakeholder may be an individual, group or community.

Corporate identity: The concept of corporate identity was originally coined in the ‘70s by Edgar Schine; to denote the distinctive image of the institution, which makes it different from other institutions. Corporate identity, on the other hand, encompasses all strategic measures aimed at contributing to the desired image.

Internal issues: These are among the issues related to the work of the institution and its employees, whether it relates to the rules of procedure or the organizational structure...

Market Presence and Business Contracts.

Suppliers: Any party that provides another party with a commodity or service. Is usually a manufacturer or a distributor. (Manzari et al., 2012, p 2268).

3.3 Relational Capital RC or Customer Capital CC

Relational capital or customer capital is one of the most important components for classifying and measuring the status of intellectual capital in a firm. This

importance has been repeatedly recognized in the literature. Relational capital refers to the value of an organization's external relationships with other organizations, suppliers, people, and even competitors with which, it has communications and goes through partnerships, alliance, purchase and sell contracts, etc. (Sohrabi et al., 2010, p 12). Relational capital categories are:

Culture: "La culture, dans son sens le plus large, est considérée comme l'ensemble des traits distinctifs, spirituels et matériels, intellectuels et affectifs, qui caractérisent une société ou un groupe social. Elle englobe, outre les arts et les lettres, les modes de vie, les droits fondamentaux de l'être humain, les systèmes de valeurs, les traditions et les croyances" (Déclaration de Mexico sur les politiques culturelles. 26 juillet - 6 août 1982.) It is thus used in the most varied fields and makes it possible to designate very dissimilar phenomena (IGNASSE & GENISSEL 1999, p 75)

Knowledge based infrastructure: "Knowledge Management infrastructure reflects the long-term foundations for knowledge management. In an organizational context, knowledge management infrastructure includes five major components: organization culture; organization structure; organisation's information technology infrastructure; common knowledge, and physical environment" (Becerra-Fernandez and Sabherwal, 2010)

Intellectual property: Intellectual property refers to the creations of the mind of

inventions, literary and artistic works, designs, logos, names and images used in trade. It is generally characterized as non-physical property that is the product of original thought.

Processes, Working Systems & Routines: Traditional work systems make work routine; and routine works as an obstacle to creativity and innovation. Therefore, modern work systems must be adopted to prevent routines at work.

Organization's path (Manzari et al., 2012, p 2268).

4. CONCLUSION

Intellectual capital is an important factor in creating value for an organization through a combination of human capital, structural capital and customer capital. It consists of human capital (knowledge, ideas, capabilities, relations, skills, attitudes of employees), organizational or structural capital (organization culture, databases, infrastructure), and customer or relational capital (company goodwill, values and relations with external public).

Value created in an organization increases with the amount of intellectual capital applied and generated. So, investing in intellectual capital creates, competitiveness and achieves excellence for organizations to better performances. Intellectual capital is more than just patents, copyrights, publishing, and other forms of intellectual property. It includes the organizational knowledge, experience, relationships, operations, innovations, position in the market, impact on society,

goodwill, and the mental image that external public creates about it.

5. Bibliography List:

Al- Ali, N. (2003). *Comprehensive intellectual capital management: step by step*. New Jersey: John Wiley & Sons, Ink. www.linkedin.com/pulse/competencies-capabilities-skills-whats-difference-how-aida

Sohrabi, B., et al. (2012) *Intellectual Capital Components, Measurement and Management: A Literature Survey of Concepts and Measures*. In organizational learning and knowledge: concepts, methodologies, tools and applications. USA: information resources management association.

[https://books.google.dz/books?id=bkQSRweOBzsC&pg=PA2445&lpg=PA2445&dq=Lynn+\(2000\)+defines+it+as+%E2%80%9Can+inventory+of+the+skill+sets+and+knowledge+of+individuals+within+an+organization%E2%80%9D.&source=bl&ots=K3k7dUMKum&sig=ACfU3U0TB5jE4WdUoUo2xA7DidyCZ45GpA&hl=fr&sa=X&ved=2ahUKEwj5sKqEuanoAhUF8BoKHZUbDVMQ6AEwAHoECAIQAAQ#v=onepage&q=Lynn%20\(2000\)%20defines%20it%20as%20%E2%80%9Can%20inventory%20of%20the%20skill%20sets%20and%20knowledge%20of%20individuals%20within%20an%20organization%E2%80%9D.&f=false](https://books.google.dz/books?id=bkQSRweOBzsC&pg=PA2445&lpg=PA2445&dq=Lynn+(2000)+defines+it+as+%E2%80%9Can+inventory+of+the+skill+sets+and+knowledge+of+individuals+within+an+organization%E2%80%9D.&source=bl&ots=K3k7dUMKum&sig=ACfU3U0TB5jE4WdUoUo2xA7DidyCZ45GpA&hl=fr&sa=X&ved=2ahUKEwj5sKqEuanoAhUF8BoKHZUbDVMQ6AEwAHoECAIQAAQ#v=onepage&q=Lynn%20(2000)%20defines%20it%20as%20%E2%80%9Can%20inventory%20of%20the%20skill%20sets%20and%20knowledge%20of%20individuals%20within%20an%20organization%E2%80%9D.&f=false)

Sohrabi, B., et al. (2010). *Intellectual Capital Components, Measurement and Management: A Literature Survey of*

Concepts and Measures. In *Intellectual Capital and Technological Innovation: Knowledge – Based Theory and Practice*. Hershey, New York: information science reference

<https://books.google.dz/books?id=4V--AQAAQBAJ&pg=PR7&lpg=PR7&dq=intellectual+capital+babak+sohrabi&source=bl&ots=5GkBbGsbGw&sig=ACfU3U1k2EXTWUnhZGXyWivalnVFXacjWw&hl=fr&sa=X&ved=2ahUKEwjf3P29sqnoAhUGzhoKHUzoBB8Q6AEwCnoECAoQAQ#v=onepage&q=intellectual%20capital%20babak%20sohrabi&f=false>

Šaponja, L. D., et al. *Intellectual Capital: Part of a Modern Business Enterprise of the Future*. <http://www.fm-kp.si/zalozba/ISBN/961-6486-71-3/231-243.pdf>

R. Nagarajan and R. Prabhan, (June 2015). *Competence and capability- A New look*, International Journal of Management (IJM), Vol6, Issue6, PP: 07-11.

Akpınar, A., T. & Akdemir, A. (July 2000) *Intellectual Capital*. In first joint symposium on business administration “challenges for business administrators in the new millennium”. Turkey.

Yi Ilu. (August 2014) Motivation and attitude: tow important non-intelligence factors to Arouse students’ potentialities in learning English, Scientific Research 5 1249- 1254)

Ognjanović, J. (july-september 2016). *Intellectual Capital: Characteristics and*

Significance in the Service Sector. *Економика*, 62(3), 159-172.

Manzari, M., et al. (2012). Intellectual Capital: Concepts, Components and Indicators: A Literature Review. *Management Science Letters* (2), 2255–2270.

Nahapiet, J. & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage. *Academy of Management Review*, 23(2), 242-266.

G. IGNASSE et M.-A. GENISSEL (1999). *Introduction à la sociologie*, Ed. Ellipses, Paris.

Roos, J., et al. (1997). *Intellectual capital: Navigating in the new business landscape*. UK: Macmillan Business.

Déclaration de Mexico sur les politiques culturelles. Conférence mondiale sur les politiques culturelles, Mexico City, 26 juillet - 6 août 1982.

Becerra-Fernandez, I. and Sabherwal, R. (2010). *Knowledge Management: Systems and Processes*. Armonk (N.Y.); London: M.E. Sharpe.

James Chen. (2010). *What is intellectual capital*,

www.investopedia.com/terms/i/intellectual_capital.asp, 28/10/2021, 10:05h

Gallego, I. & Rodríguez, L. (2005). Situation of Intangible Assets in Spanish Firms: An Empirical Analysis. *Journal of Intellectual Capital*, 6(1), 105 – 126.

Tesng, C.Y. Goo, Y.J.J. (2005). Intellectual Capital and Corporate Value in an Emerging Economy: Empirical

Study of Taiwanese Manufacturers. *R&D Management*, 35(2), 187-201.