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Intellectual capital management: Intellectual capital in different fields and its components

Gestion du capital intellectuel : Le capital intellectuel dans différents domaines et ses composantes

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Abstract

The purpose of our article is to definethe concept of intellectual capital, to talk about its history, its models of measurement, the components that characterize it, its impact on organizations, and lastly how it is manifested in different fields and its relationship with knowledge management , that is all to highlight its importance in an economy dominated by the creation and diffusion of knowledge, since the role of intellectual capital is indelible, especially with the increase in overall corporate investment in IC - and because of its economic characteristics, notably its intangible nature, itss value inscreased, it also has characteristics that are, by definition, growth-enhancing, and permit to establish evidences of a link between investment in this intellectual capital to growth and changes in productivity.

Keywords

Intellectual capital, intangible assets, knowledge management, measurement

Introduction :

Intellectual capital is the result of companies' investment in non-physical assets such as research and development (R&D), data, software, patents, new organizational processesorganizational processes, firm-specific skills and design, the theoretical debate on intangible resources has been enriched, since the second half of the 1990s, by a new concept that is globalizing, that of intellectual capital. This concept recognizes that human capital is a key component of the value of the company, despite its absence in the financial statements published by the entity.

Intellectual capital has emerged as a key concept for analyzing and evaluating the knowledge dimensions of organizations, as it is known, intangible assets play an important role in the scope of developed economies, Bontis also affirmed that the proper and fast use of incorporal and intangible assets are the most successful companies, the theory of organizational resources and capacities is largely responsible for the formation of intellectual capital.

The intellectual capital strategy, according to Reed , enables firms to identify the intangible resources and competencies that they need to stay ahead of the competition. It distinguishes three types of intellectual capital, allowing for better precision.[1]

Understanding intellectual capital has become one of the most important concerns of companies, because, in a context of increasing financialization of economic relations, the underlying question is the presumed the underlying question is the presumed impact of this intellectual capital on value creation. The strong presence of intangibles in these companies has probably accelerated reflection on the sources of value creation in the company.

Defining intellectual capital :

Intellectual capital is a business asset, although its measurement is a very subjective task. This asset of a company is not recorded on the balance sheet as "intellectual capital"; rather, it is, to the extent possible, included in intellectual property (as part of intangible assets and goodwill on the balance sheet), which in itself is difficult to measure.

Companies spend a great deal of time and resources developing management expertise and training employees in company-specific areas to increase the "mental capacity," so to speak, of their company. This capital used to enhance intellectual capital provides a return to the company, although difficult to quantify, but which can contribute to the business value of the company for many year

The contemporary world is undergoing a real mutation. We are clearly experiencing a new scientific and technological revolution that is far superior to previous ones. Today, 80% of the value of both products and companies comes from the intelligence that is injected into them: we have entered the knowledge society and the economy of the immaterial (EU Declaration in Lisbon in 2000).

The transition from IBM to Facebook, via Microsoft and Google, clearly indicates that the rise of the immaterial marks a paradigmatic break within the company: it imposes new rules of the game, new methods, new organizations.

The invisible has progressively taken precedence over the visible. It is no longer as obvious to clearly identify the intellectual capital of an entity, unless a property right has been registered, as in the case of a brand or a patent, for example. It is even less obvious to be able to measure it, as the value must be as "fair" as possible, which often leads to a dilemma between the relevance of the valuation model used and its reliability. As a result, only certain elements of an entity's intellectual capital can be found on the assets side of the balance sheet and thus become visible.

Understanding this invisible part of the intangible economy is therefore a major challenge: being able to identify it, measure it, manage it, protect it or transmit it are all questions that animate the community of researchers in economics and management.

Unlike physical capital, intellectual capital can stimulate growth, because the initial cost of creating certain types of knowledge is not repeated when this knowledge is used again, which can promote economies of scale. On the contrary, it is an investment that does not wear out and whose value can increase (the value of Facebook increases with the number of its users, the activation of a network improves its functioning).

History of Intellectual capital :

In 1963, Theodore Schultz developed the concept of human capital, which became famous thanks to the work of Gary Becker in 1964.

In addition to the inventory of assets of a material (tangible) nature, which are in principle taken into account in financial capital, the concept of intellectual capital emerged towards the end of the 20th century to integrate the development of service activities and the growing importance of information, which brought the human factor and the management of human resources to the forefront.

On April 3, 1986, interviewed in L'Expansion, Bruno Bizalion indicated that the capital of companies also includes immaterial elements and developed a method to value this immaterial potential.

In 1992, Leif Edvinsson proposed the term "intangible capital" as part of his research on the evolution of group management methods. Five years later, in collaboration with Michael Malone, he published the results of his work. They sought to identify the hidden wealth of the company, i.e. everything that enables it to create value and that cannot always be detected by reading its balance sheet (not all the values of the organization's synergies are represented). Intangible capital is therefore associated by definition with the difference between the real, or market, value of the company and its book value (see company valuation).

Components of Intellectual capital :

Intellectual Capital is made up of three primary components: Human Capital as in the skills and qualifications of individuals, Structural capital which represents the organization and Relational capital that is all the stakeholders and the environment.

Human capital is incorporated in individuals and cannot be held by a company. The build it via their instinctive and acquired knowledge, skills, abilities, talents, and competencies. Human capital may be viewed as a dynamic indicator and a critical aspect for the success of a business. Quality and development of such characteristics of human capital are highly significant in terms of future success, perspective, and development of any company, and they must be used properly to raise its competitiveness.

Human capital is a significant component of an organization's market worth in terms of its employees' ability to create things that will ensure its success. On that note we can say that in order to insure this success the companies need to utilize its human resources creatively and innovatively. One technique for properly managing human capital is to encourage knowledge exchange and information transfer among workers inside the firm. Encouraging employees to attend seminars, conferences, and continuing education is another strategy to improve the organization's human capital.

The second component of intellectual capital is the relational capital, it is composed of business transactions, consumer satisfaction, and business relation. It refers to a business's official and informal relationships with its stakeholders, as well as the way they perceive the organization and the exchange of knowledge between the organization and its external stakeholders.

Furthermore, it comprises the relationships that individuals outside the company have with it, customer loyalty, customer satisfaction, commercial power, image, and bargaining capabilities with financial institutions. Improving relational capital entails reaching outside an organization's walls to create connections and trust with customers, suppliers, and neighboring communities.

Unlike the human capital and relational capital, the structural capital can't be bought or exchanged between companies. It represents the company's immaterial that provides it with a long-term competitive advantage since it is difficult to imitate, difficult to substitute, and is not tradable on the market. A solid structural capital will create an atmosphere conducive to quick information exchange, collective knowledge growth, shorter lead times, and more productive employees.

It encompasses all intangible resources for keeping information in companies, such as databases, process manuals, strategies, routines, cultures, procedures, copyrights, trademarks, trade secrets, and licensing. Employees develop these, which are technically owned by the organization as a whole. The underlying core of structural capital is the pool of knowledge that remains in an organization at the end of the day after individuals inside the company leave it (whether they were fired or they resigned).

Importance of Intellectual capital :

The intellectual capital boosts the company's market reputation.It is considered to be a source of competitive advantage, and there is evidence that company performance may be explained in part by its intellectual capital. As a result, it is crucial to the organization's survival. Employees, managers, suppliers, customers… all contribute to the success of a company, as do work culture, the organization's interaction with internal and external human contributors, the organization's relationship with investors, the organization's goals and vision, and so on. The organization will prosper if all of these variables are favorable.

If for some reason a company lost all its financial assets, the intellectual capital is all that the organization has left, and it can revive the business by applying that knowledge, information, innovation in developing new products and find new customers that can all contribute to rebuilding the organization again. It is crucial for any organization since it symbolizes the firm's genuine capital and worth and allows the company to start over.

As a result, we may conclude that Intellectual Capital plays a vital role in companies' performance, thus creating in many companies the majority of their added value of products and services. As a result, it is not hard to see the importance of intellectual capital as an important component of organizational success.

Managers must devote sufficient attention to the management of the company's intellectual capital, primarily by focusing on identifying the most critical factors for organizational performance. Nonetheless, for effective management, it is critical to measure it rather than merely describe it, with the goal of recognizing objectively its relationship with organizational performance.

Measuring the intellectual capital :

The main question that asks itself here is, why should we measure intellectual capital? And is this intellectual capital even measurable? A study conducted by the Danish Trade and Industry Agency of ten companies working on the measurement of intellectual capital found that the measurement and active management of intellectual capital was important to a company's long-term success. The companies that measured and managed their intellectual capital significantly outperformed other companies.[2]

There are various methods to measure the intellectual capital, including direct methods, which cannot be carried out or established using financial data, but can be done using surverys, and interviews, because the elements are usually unobservable,direct methods examine and quantify the elements that made up the notion. Foundational indicators are elements that contribute to the concept's development. Reflective indicators are aspects that arise from a notion and reflect its characteristics, intellectual capital is a construct, and it is very difficult to quantify or measure it, although there are different models and tools of measurement of intellectual capital, the results remain inaccurate.

We can mention among these methods of measurement the market value and book value ratio, which is a financial valuation tool that compares a corporation's current market value to its book value. It also indicates how much a firm is worth in addition to its fiscal viability, the Skandia Navigator which is a collection of intangible asset measuring methods divided into five categories: financial, customer, process, renewal and development, and human, or even the balanced scorecard, it is a metric that examines financial, customer, internal process, and growth aspects of an organization's performance to determine how much value is created at each step.

Other methods also include the "human resource costing & accounting" developed in 1985 byFlamholtzthen which measures intellectual capital through the measurement of the contribution of human capital held by the company divided by the the company divided by the capitalization of wage expenditures, and the EVVICA or Estimated Value Via Intellectual Capital Analysis developed by (McCutcheon, 2008), is a method inspired by the work of (Sullivan, 2000) which which jointly analyzes the human, relational and structural capital of a company and theand the renewal capacity of this same company, Tobin's Q which states that intangible capital is equal to the market value of the firm divided by the replacement value of capital divided by the replacement value of capital. The firm will investcapital that results in a market value higher than its replacement value, the advantage of these methods lies in the fact that they allow each component of intangible capital to be assessed each component of intangible capital individually.

Although there are many methods of measuring intangible capital, there is no single method that isapproved by all scientists. Indeed, each method has its advantagesand disadvantages. Intangible capital is studied through several disciplines, hence the existence of severalthe existence of several methods in order to meet the goals and objectives of each scientific field

However, because the indicators employed are contextual and may differ from one organization to another, these methodologies may not allow for comparisons between companies. These methodologies, by their very nature, do not allow for the inclusion of intangible capital in financial capital in a company's financial statements.

Intellectual capital and knowledge management :

RBV views the firm's internal resources to be the most important factor in determining its long-term competitive advantages, while knowledge based view (KBV) views knowledge as a vital resource for obtaining competitive advantage, despite its scarcity and difficulty in transferring and replicating it.

Knowledge resources, their application, and growth, according to the KBV, are increasingly providing competitive advantages. As a result, putting together a good knowledge base and managing it toward strategic goals (Zack, 1999) utilizing deliberate KMP is predicted to boost overall business performance, and this can be seen from various points of view, from an individual point of view , through which one can gain from recognition that he contributed to the country ’s economic growth through his knowledge, and from the standpoint of the company's operations: contributions of knowledge management at the corporate level are recorded using numerical data and a collection of situations in which contributions of knowledge management are clearly represented, and lastly, from the perspective of the client: every business subject that is geared toward the client should address the client's viewpoint.

The relationship between the IC and the knowledge based view theory : Knowledge is seen as one of an organization's most strategic sources in the KBV theory. This theory also proves that knowledge-related resources are more valuable than actual resources in achieving organizational effectiveness.
Human capital is defined as the skills, satisfaction, and motivation of employees in the context of the IC. Structural capital, on the other hand, refers to the organization's structure, procedures, and processes, as well as administrative programs. Finally, relational capital refers to a company's relationships with customers and suppliers, as well as their devotion to it. Knowledge acquisition, documentation, transfer, creation, and application are the five sub segments of the knowledge process capacity. Knowledge is a critical component of today's knowledge-based businesses.

How to manage the Intellectual Capital effectively?

Intellectual capital management (ICM) is a term used to characterize how well a firm develops and manages its knowledge. ICM's aim is to maximize the company's productivity, profits, and value by combining all of the company's available knowledge. The manner in which this is accomplished varies considerably depending on the type and size of the firm. Regardless of the company's nature or organizational structure, ICM normally involves:

· Identifying and classifying the company's various types and sources of knowledge · Analyzing the data to see how it could be improved by being updated, shared across the firm, and put to use.

· Protecting intellectual property through establishing trademarks and copyrights, as well as implementing rules and procedures to keep other proprietary and sensitive information private.

· Improving the role of human resources by implementing strategies and processes for hiring, managing, and retaining qualified people.

· Creating and sustaining company rules for effective communication and relationships with consumers, suppliers, regulators, and investors.

Steps of IC management :

The active management of intellectual capital resources with multiplying effects is known as intellectual capital management, include the methods that can be used separately or in combination with the three types are as follows:

· Value creation: the development of information in a strategic manner and its conversion into useful forms.

· Value extraction: the process of converting created value into useable forms in a thoughtful way.

· Value reporting: the most accurate reflection of intellectual capital's worth

Once the what, why, how, when, and where of qualitative and quantitative measurement, as well as its responsibility center, have been determined for both internal and external analysis and decision making, both by senior management and clients, audiences, and partners, it can be used for both analysis and decision making. Naturally, efficient intellectual capital management requires a careful balance between value production and value preservation.

Impact Of Intellectual Capital On Business Organization :

Innovation: Intellectual capital is seem to have quite a positive impact on the ability to innovate. Human capital, for example, tends to support both gradual and radical innovation.

Organizations cannot develop wealth in today's competitive climate unless they actively engage in innovating, which is accomplished through intellectual capital. Human capital, for example, refers to an employee's exposure, experience, and creative ability. The higher the level of human capital, the greater the ability to innovate and provide superior results.

Competitive Advantage: Business organizations benefit from intellectual capital since it gives them a competitive advantage. It is feasible for organizations to develop successful tactics that are difficult to duplicate. Businesses, for example, can register trademarks, patents, and even copyrights to prevent competitors from copying their products and works. Employees are able to provide value to the organization through unique skills and capabilities that they learn through experience and training, giving them a competitive advantage.

Business Performance: Profitability, productivity, and market value are all areas where intellectual property promotes corporate performance. The higher the value of intellectual property, the higher an organization's productivity; also, a high value of intellectual property adds to higher profitability, which raises the organization's market value. Intellectual capital, such as patents and trademarks, causes a business's market worth to rise faster than the value of its physical and financial assets.

Organizational Strategy: The competence, abilities, and expertise of individuals in an organization determine organizational strategy. The correct management of intellectual capital allows for the design of effective strategies that help the business achieve its goals. In a business climate that allows for the open flow of information, stronger survival tactics can be developed. To address operational and technical obstacles, business organizations must be able to constantly produce, update, and efficiently use knowledge intellectual capital. Failure to update intellectual capital and integrate it with current knowledge will result in a failed organization.

IC in different fields :

In the new international context that we're living now, and in order to survive in the face of the fierce competitiveness that has resulted from globalization, companies must distinguish themselves by innovating. This is a radical transformation for the world economy.

The world economy is moving from a largely manufacturing-based economy that relies heavily on investment in physical goods and machines to an economy that focus on new activities, mainly service activities, where human capital and activities that place human capital and knowledge at the center of the company's evolution. In the era of the knowledge economy, human capital, which refers to the tacit knowledge embodied in the heads of individuals, is the fundamental source of innovation. Human capital, with its multiple domains of knowledge, allows a varied interpretation of problems and situations. Thus, experience, professional skills, creativity, and managerial abilities in a company have a positive effect on its innovation performance. This means that there is a strong positive relationship between human capital and innovation. The production of new knowledge depends on the knowledge held by the individual, the group or the whole organization. This leads us to assume that the key to a successful innovation process lies in the mobilization and conversion of tacit knowledge. This can lead to the improvement of the innovation process. Thus, according to the theory of knowledge conversion, tacit and explicit interactive knowledge between individuals improves the creative activities of human beings.

Conclusion

The non-recognition of a considerable part of a company's intangible capital in the accounts is not the result of a deliberate desire on the part of standard setters to deny the importance of intangibles; it is the result of the requirement for reliability that characterizes accounting. This lack of understanding of intangible capital at the level of financial statements leads to a distortion in the information disclosed by the company.

In the framework of accounting standards, and more particularly international standards, a significant part of intangible investments is expensed. This relative lack of accounting knowledge of intangibles as well as balance sheet assets has led several researchers to question the consequences of the inability of financial statements to reflect the totality of the intangible capital of companies and to show the role of voluntary disclosure as a palliative to these problems.

In this context of the inability of financial statements to communicate the wealth and value of the firm, most of the company, most researchers agree that "immaterial" information has an informative power that can be superior to traditional accounting variables, allowing investors to improve their forecasts and value the hidden face of companies. of companies. This awareness of the important role of intangible assets encourages companies to voluntarily companies to voluntarily communicate on this topic. This type of communication is supposed to help managers **meet** the **demand** for information on intangible capital.

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