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# INTELLECTUAL CAPITAL ACCOUNTING - A CHALLENGE OF MODERN ACCOUNTING

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**Abstract:** *In the context of the new global knowledge economy, hidden intangible assets (intellectual capital) have become the main generator of added economic value and the one that creates significant competitive advantages in the business world, but traditional valuation and accounting methods, in addition to referring only to past issues, they fail to provide concrete solutions regarding the valuation and accounting of all intangible assets generating value and competitive advantages of contemporary enterprises. This study aims to show the importance of hidden intangible assets (intellectual capital) in the knowledge economy, what are the modern methods of valuing and accounting for them and to what extent these methods manage to provide solutions to the reported valuation and accounting difficulties.*

**Keywords:** *hidden intangible assets, intellectual capital, accounting, valuation, market value*

**JEL classification:** *M41 - Accounting*

## 1. Introduction

Since the second half of the twentieth century, the world economy has evolved on the basis of new global events, or in other words, on the basis of objective circumstances and subjective factors, which have finally marked a new stage, which is clearly different from the previous Industrial Revolution. The main element that differentiates between the so-called Industrial Age and the Age of Knowledge is the predominant role and the growing relevance of intangible elements such as intellectual capital in the process of creating value in enterprises.

If until then the economy of the industrial era crowned tangible elements as the absolute source of value for enterprises, the current economy is based on the development of human skills, infrastructure to maintain, facilitate and develop these skills, communications, computer science, robotics, multimedia networks and new concepts such as: intellectual capital, human resources management, knowledge, strategic planning, etc., proposing the crowning of intellectual capital as the main source of value creation.

Intellectual capital is the golden resource of any economic entity. Financial analysts, firm appraisers, and intangible assets tried to determine the value of intellectual capital in an economic entity over time? Information and knowledge in the creative economy are the engine of the new economy. Knowledge is the most important raw material of modern production. The off-balance sheet value or “hidden value” represents the largest share of the market value of listed companies (Crețu, 2017).

## 2. Intellectual capital in accounting

Intellectual capital is a complex of intangible resources and capabilities, based on individual and collective knowledge that a company owns and controls at a certain time well defined in time, and can be a source of development and facilitation of competitive advantage. There are three strategic areas of business where intellectual capital needs to be found or generated, namely: people, structure and customers. Based on these three factors, intellectual capital is usually divided into: human capital, structural capital and relational capital. Human capital depends on the competence, intellectual ability and skills of the members of the organization concerned. Structural capital is the infrastructure of human capital, including organizational capabilities to adapt to market needs. Relational capital is represented by the company’s relations with all its collaborators.

Edvinsson and Malone (Edvinsson and Malone, 1999) define intellectual capital as the possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that give a competitive advantage in the market. Nevado and López (Nevado and López, 2002) talk about intellectual capital as total assets of a firm, even if not reflected in traditional financial statements, generate or will generate value for the company in the future, and consequence of the issues related to human capital and the structural: the capacity of innovation, customer relations, quality of processes, products and services, cultural and communicational capital, which allows a company or organization to take better advantage of opportunities, giving birth to generation of future benefits.

Intellectual capital is not recognized in the current financial statements because the criteria for defining and recognizing assets currently established are quite restrictive and there are very few assets that can meet them, according to IAS 38-2021, intangible assets must meet the following conditions:

1) Controlled by the entity as a result of past events;
2) From which future benefits are expected to affect the entity;
3) Identifiable:

(i) Separable, i.e. they can be separated and divided by the entity and sold, transferred, authorized, leased or exchanged, either individually or together with a contract, a corresponding asset or liability; or

(ii) It arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or other rights and obligations.

1) Future benefits attributable to the asset are likely to accrue to the entity; and
2) The cost of an asset can be measured reliably.

Even the *Basis for Findings in IAS 38 - Intangible Assets (IAS 3, 2021)* recognizes

that there have been major investments in intangible assets in recent decades. There have been complaints that:
i) The non-recognition of investments in intangible assets in the financial statements distorts the evaluation of the performance of an enterprise and does not allow a correct evaluation of the return on investments in intangible assets; and
ii) If the companies do not follow better the return on investments in intangible assets, there is a risk of an excess or deficit of investments in important assets. An accounting system that encourages such behaviour will become an increasingly inadequate signal, both for internal control and external purposes.

The booking of the intellectual capital begins to be recognized as one of the biggest challenges of the modern accounting. The current accounting is based on the principles of the double match, guaranteeing equilibrium between active and passive. The accounting of the intellectual capital is not based on the system of the double match and does not guarantee the equilibrium between active and passive (Radu and Gîju, 2012). The traditional accounting system is based on historical perspective and uses only financial measures that allow accurate calculation of results. If we include in our financial statements the information on intellectual capital, we are in conflict with the international accounting standards in force.
Due to this fact, it is not possible to include in the current financial statements only if it is presented in the form of an annex to the current financial statements, the appendix that we will call “The situation of hidden intangible assets (intellectual capital)”.

The situation of hidden intangible assets (intellectual capital) should include information such as (Starovic and Marr, 2004):
i. A brief description of the company
ii. Challenges and actions of the company’s management
iii. A set of financial and non-financial indicators
The brief description of the company gives organizations space to strategically explore their goals, the products they sell, and their approach to the customer. It also helps identify hidden intangible assets and describes how they lead to performance and provide value to all stakeholders.
The second part of the situation of hidden intangible assets (intellectual capital) includes information related to the challenges and actions of the company’s management, identifying which intangible assets must be consolidated or acquired in order to achieve strategic objectives. Allows the company to report on activities, initiatives and processes, either existing or planned for the future.
The third part of the report includes a set of financial and non-financial indicators, grouped on the components of intellectual capital (Peña and Ruiz, 2002):
• Human capital: investments in the salaries of qualified personnel; Investments in staff training and development; investments in employee recruitment and selection; temporary employees / permanent employees indicator; employee

satisfaction index, employee motivation index; promotion index; training-performance index.

- Structural capital: investments in quality, prevention and evaluation; suggestion index; administrative efficiency / revenue, customer satisfaction index; investment in research, development and innovation; investment in computer equipment; investments in the development and launch of new products; investment in process development; investments in computer equipment/fully active; technological index.
- Relational capital: investments in communication and marketing; investments in cultural support and solidarity projects; works performed by third parties (subcontracting); investments in after-sales services; customer satisfaction index; the image index of the enterprise.

Table 1. Situation of hidden intangible assets

| **Intellectual capital indicators** | **N-1** | **N** |
|---|---|---|
| 1. HUMAN CAPITAL | | |
| Investments in the salaries of qualified personnel | | |
| Investments in staff training and development | | |
| Investments in employee recruitment and selection | | |
| *Temporary employees / permanent employees indicator* | | |
| *Employee satisfaction index* | | |
| *Employee motivation index* | | |
| *Promotion index* | | |
| *Social action index* | | |
| *Training-improvement index* | | |
| *Work environment index* | | |
| **2. STRUCTURAL CAPITAL** | | |
| **2.1. Process Capital** | | |
| Investments in quality, prevention and evaluation | | |
| *Index of suggestions* | | |
| *Training-improvement index* | | |
| *Customer satisfaction index* | | |
| 2.2. Research and development capital | | |
| Investments in research, development and innovation | | |
| Investments in computer equipment | | |
| Investments in the development and launch of new products | | |
| Investments in process development | | |
| *Investments in computer equipment / total assets* | | |
| *Technological index* | | |
| **3. RELATIONAL CAPITAL** | | |
| Investments in communication and marketing | | |
| Investments in cultural support and solidarity projects | | |
| Works performed by third parties (subcontracting) | | |

| | | |
|---|---|---|
| Investments in after-sales services | | |
| *Customer satisfaction index* | | |
| *Enterprise image index* | | |

*Source: Integral Analysis Mode (Nevado and Lopez, 2006)*

Among the advantages of elaborating and publishing the report on the Situation of hidden intangible assets (intellectual capital) we can list (Radu and Gîju, 2012):

- Instead of recording intellectual capital as an investment, it is recorded as an expense, leading to a distorted pricing policy. This can lead to overestimated production costs due to the fact that these investments are not spread over several years and implicitly to two types of observable price behaviour: the company continues with higher costs during the investment periods and then loses part of it. price competitiveness or continues with lower costs during investment periods but suffers from insufficient margins, profitability problems, survival or jobs.
- In the case of mergers and acquisitions, where the real value of the acquired companies is much higher than those exposed in the financial statements, a report on intangible assets is required for all users. In most cases these are the ones that, along with the tangible and financial assets, determine the real value of the enterprise and they must be attributed the difference between the market value and the value in the financial statements.
- It allows its use as a marketing tool and ensures the long-term vision of the company;
- Improves transparency, resulting in lower capital costs and therefore higher stock prices (Backhuijs,1999). This is also the case of the famous Swedish company Skandia, the first company to publish a statement of intellectual capital where the price of shares rose after publication by 40%, of which 25% due exclusively to intellectual capital.
- The publication of information on intellectual capital allows to improve the relations with the clients informing them about the efforts that the company makes to satisfy, attract and maintain them with new innovations, new products and services. Canibaño and Sanchez (Canibaño and Sanchez, 2004) also agree that “the publication of such information may help to improve - and not exclusively describe - the company’s relationship with its customers, employees and owners, and in general puts more emphasis on activities that allow knowledge to be shared with interested third parties, beyond the boundaries of the organization”.
- Balanced investments in intangible assets help increase competitiveness, efficiency and effectiveness;
- The presentation of information on intellectual capital is important primarily for large organizations, as the number of trademarks is high. In this regard, some of the major Japanese companies (Misui, Mitsubishi, Softbank, Toyota) have been forced to define and develop indicators on the prospect of obtaining benefits from all their brands, grouping them according to different Criteria. Thus, the simple grouping of all these calculated indicators provided managers with a mechanism for measuring the monetary impact on the benefits of each brand, which allowed the

implementation of a more efficient TCM (Target Cost Management) (Okano, 1999).

- If the objective is to increase the competitiveness of the company, by increasing efficiency and quality, investments in intangible assets involve two types of effects and results:

- In the short term, immediate results, recorded in the profit and loss accounts for the year, with the reduction of visible costs and / or the increase of visible revenues, and with the reduction of hidden costs;
- In the long run, due to the fact that the creation of the current human and economic potential is recorded in the profit and loss account of the following years, when it comes to research and development of new products, negotiation on new markets or improvement of qualifications, given that these strategic effects are misidentified in the accounting and financial information systems of enterprises.

- Last but not least, it helps to gain a psychological advantage by discouraging competition. Roos (Roos, 2001) also agrees that this would lead the competition to believe that the company dominates the market and will not be willing to enter the same market.
- Information can significantly influence most investment decisions of financial analysts.

One of the main reluctances to adopt such a report would be the strict application of the precautionary principle, a situation which, for the time being, seems difficult to overcome. Thus, among the main limitations are the following (Radu and Gîju, 2012):

1. Ownership of intangible investments. Many of them are not owned by the company, and especially those that refer to human potential.
2. These investments are difficult to define, in the regard that they are combined with material investments and, in addition, it is quite complex to determine the level of funds recorded and the related profitability.
3. The ability to generate future profits, i.e. the potential of the asset, must contribute directly or indirectly to the company's results.
4. Possibility of control for future use.
5. Possibility of evaluation, i.e. the expression of value in monetary terms. The opacity of most items in intangible capital is due, on the one hand, to the fact that there is no market reference for its estimation and, on the other hand, to the heterogeneity of these assets, which carry different functions and activities.

## Conclusions

Intellectual capital (Ciprian and Valentin, 2012) is, as we saw, a term with many definitions but almost all it is defined as an intangible asset that is not reflected in current financial statements. It is knowledge, experience and intellectual force of employees, as resources and knowledge stored in the databases of the organization, in systems, in processes, in culture and philosophy, all managed and used to obtain services and products with the ultimate aim of obtaining benefits. Intellectual capital includes intangible assets and resources that can be used by the organization to create value transforming them in new processes, products and services.

As we have seen in the present research, traditional accounting is no longer able to indicate the market value of a company, there is a noticeable difference between the book value and the market value. We see how assets such as intellectual capital, which has become in the era of knowledge the most important economic resource that creates value added, are not reflected in the current financial statements, due to failure to meet the defining criteria for recognizing assets in the accounting rules in force. If we include in our financial statements the information on intellectual capital, we are in conflict with the international accounting standards in force. Due to this fact, it is not possible to include in the current financial statements only if it would be presented in the form of an annex to the current financial statements, the appendix that we will call “The situation of hidden intangible assets (intellectual capital).” The situation of hidden intangible assets (intellectual capital) should include information such as:

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