Assessment and Recognition of Intellectual Capital - Concrete Implications of the Accounting in the Management of Sustainable Development

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Abstract
Intangible assets are the most important sources of competitive advantage. According to the new perspective supported by endogenous growth theory, the traditional factors of production have diminished the importance. Simultaneously, increased the importance of intangible assets, which is an important factor of competitiveness and convergence. In the intangible assets, intellectual capital is paramount. Intangible economy is a challenge at the beginning of the millennium and can be addressed in terms of demand, supply and economic system. Assessment and recognition of intellectual capital is a topical issue and is the result of research studies that have come over recent years.

Key words: intangible assets, intellectual capital, evaluation, recognition

JEL Classification: M41

1. Introduction
The knowledge economy requires an interdisciplinary approach. Personally, I plead to promote knowledge economy as a consensual, modern science, in the context of the human communities organization, namely the knowledge society and the modern concept of corporate governance, which defines the company as a social responsibility.

The issue of intangible assets is particularly studied by the accounting, for which IAS 38 - Intangible assets - does not address sufficiently clearly the intangible asset. Standard is regarding as a non-monetary asset, but identifiable, with the possibility to bring future economic benefits that can be reliably measured.

Based on these aspects, we consider necessary to identify ways of measuring intellectual capital.

The transition of most developed and emerging nations towards knowledge-based economies has led to the awareness of the importance of intellectual capital for the economic growth. While information systems designers are trying to capitalize employees' knowledge and expertise in technologies reflected in databases and logic programs, economists are trying to find the most appropriate methods for measuring and evaluating knowledge, which is the essential part of intellectual capital.
Although the specialized literature mentions differently the terms of intellectual capital and intangible assets, they both refer to all the knowledge, skills and competence of an enterprise’s employees, whose performance generates profits for it.

The management of companies has directed all efforts towards the creation and development of intangible assets to support the innovation process by: research & development expenditures, resource allocation for employees' training, etc. As a result, the market value of the enterprise is becoming more and more influenced by the intangible assets that it holds. Human capital refers both to the knowledge, skills, abilities of the employees of an enterprise, but also to the culture, set of values and principles developed therein. Regarding capital structure, it includes all databases, software, organizational structures, trademarks, patents and other assets that support the productivity of the employees. Structural capital consists of the capital represented by customers and enterprise organizational capital, the latter being composed of the innovation capital (intellectual property, other intellectual assets) that the company owns and the capital invested in their production processes. Nevertheless, the value of these forms of capital is proving to be difficult to estimate, a series of measurement indicators being developed in this respect.

2. Intangible assets monitor
Sveiby proposes a monitoring system for intangible assets consisting of a table in which indicators are gathered to estimate the value of intangible assets. These indicators vary depending on the strategy adopted by the enterprise and their grouping reflects how the value for shareholders is generated: growth of intangible assets, their renewal rate, their use efficiency and stability of their operation.

- Level of education = quantified by a score given based on the study level of the organization's employees;
- Company image enhanced by relationships with customers = share of income from contracts with various customers having the effect of improving the company’s image;
- Organizational structure improvement from relationships with customers = share of income from contracts that improve the organizational structure of the company and involve the development of R & D programs;
- Competence gained from relationships with customers = Share of income from projects undertaken for various clients that have led to an increase of the company employee competence;
- Professionals share = number of professionals (managerial staff and employees entering into relationships with the customers) in total company personnel;
- Customer satisfaction index - quantifies customer satisfaction on a scale from 1 to 6 (highest satisfaction);
- Professionals turnover rate = number of professionals who have left compared to the number of professionals at the beginning of the year;
- Frequency of renewed contracts = share of income from customers that the company has worked with in the previous year;
- Administrative staff turnover = number of administrative staff who left the company compared to the number at the beginning of the year;
- Rookie ratio = number of employees who have less than 2 years of seniority.
- Seniority = number of years employed in the same organization.
The intangible assets monitoring system proposed by Sveiby was applied by several Swedish companies, their help being reflected on the impact that the strategy adopted by the company has on customer satisfaction, that is, their loyalty, on the competence acquired by employees and their satisfaction.

There are experts in the field who, following investigations, are supporting the idea that the value of intellectual capital would be the difference between the market value of a company (market capitalization) and its book value (tangible assets - liabilities). Research has showed that the biggest difference between the two values occurs in the case of high-tech industries and those intensively based on knowledge, industries that require substantial investments in intangible assets. The difference between market value and book value is indeed largely based on the intangible elements of the enterprise that have not been capitalized in the balance sheet. The difference between market value and book value is influenced by the choice of the depreciation method (affecting comparisons between companies), and by changes in accounting rules (affecting comparisons over time within the same company). The adoption of the ratio between market value and book value as an indicator for evaluating intellectual capital has the disadvantage that the market value is being determined and revised constantly (exchange rate), while the book value is updated only once a year, through the balance sheet. There can be made a comparison between the indicator calculated as the ratio between market value and book value of an enterprise and that of similar competing companies, or with the average of the industry field, or with the indicators calculated in previous years for the same company.

3. Tobin's "Q" indicator compares the market value of an enterprise with the cost of replacing its assets. The cost of replacing fixed assets can be calculated as the value of fixed assets (including depreciation) adjusted to the inflation. This will remove the effect of adopting different depreciation methods.

The "Q" indicator is relevant when similar companies are compared over a period of several years. This indicator is appropriate when comparing the value of intangible elements belonging to enterprises in the same business sector, working on the same market and having similar fixed assets.

When both the "Q" indicator and the ratio between market value and book value decrease over time, it means that the enterprise's intangible assets are depreciating and this may be a signal for the investors that a certain company is not managing adequately its intellectual capital. In this case, they may change the investment portfolio, looking for companies having an increasing or steady "Q" indicator.

The model resembles the one based on market value and book value, except that the book value is replaced with the cost of tangible assets. It is considered that a company having a Q indicator greater than 1 and greater than the one of a competing company will achieve a higher return, this advantage being attributed to its intellectual capital.

The two models presented above define intellectual capital as the difference between the market capitalization of the company and the capital in the form of shares of shareholders. They are useful to illustrate the financial value of intellectual capital and to compare companies operating in the same business area. However, they do not contain information about the components that contribute to intellectual capital. Because of the exclusive expression in monetary units, such models based on market capitalization only provide a partial perspective on knowledge-based assets.

4. Model based on components of intellectual capital

The Technology Broker model was proposed by Annie Brooking in 1996 and it establishes the value of intellectual capital in monetary units, defined by the author as a mix of four components: human-centered assets, market assets, infrastructure assets and
intellectual property assets. Human-centered assets consist of collective expertise, creativity, ability to solve novel problems, leadership. Market assets are represented by the intangibles such as trademarks, contracts, licensing agreements or franchise contracts.

Infrastructure assets include technologies, methodologies and processes that enable the organization to function. Intellectual property refers to the legal mechanism for protecting the assets of the company, trade secrets, patents, copyrights, etc. The Technology Broker model starts with an analysis and diagnostic test based on 20 questions. The lower the number of positive answers to this test, the higher the need to strengthen the intellectual capital of that company. In this regard, an intellectual capital audit is performed, including 178 questions on its four components. Once an organization completes the audit, the model proposes three methods to calculate the monetary value of intellectual capital: cost approach, market value approach and income approach.

However, companies have intangible assets that are not recorded on their balance sheets; these intangible assets include management skill, valuable trademarks and name recognition, a good reputation, proprietary products and so forth. Such assets are valuable and would fetch their worth if a company were to be sold. Analysts should try to assess the value of such assets based on a company’s ability to earn economic profits or rents from them, even though it is difficult to do so.

Financial analysts have traditionally viewed the values assigned to intangible assets with suspicion. Consequently, in adjusting financial statements they often exclude the book value assigned to intangibles (reducing net equity by an equal amount and increasing pretax income by the amortization expense associated with the intangibles).

This arbitrary assignment of zero value to intangibles might also be inadvisable. The analyst should decide if there is any extra earning power attributable to goodwill, or any other intangible asset. If there is, it is a valuable asset.

An issue to be considered when comparing the returns on equity or assets of various companies is the degree of recognized intangible assets. An entity that has acquired many of its intangible assets in mergers and acquisitions will typically have a significantly higher amount of such assets in its balance sheet (and hence lower returns on equity and assets) than an equivalent entity that has developed most of its intangible assets internally.

It is considered that there are certain similarities between Technology Broker audit questions and the indicators of Skandia model. However, the major difficulty for the model shown is the transposition of qualitative results of the questionnaire into the monetary value of assets.

In 1992, the Harvard Business Review magazine published an article introducing the Balanced Scorecard model by which companies can assess four areas: finance (profitability, cash flow), customer oriented strategies (customer loyalty development, customer degree of satisfaction, market share), internal process initiatives (cycle of production, productivity, quality index) as well as learning and growth activities (qualification level, innovation, application of research results, the share of new products/services). This model seeks to balance the traditional accounting approach with indicators that refer to innovation, learning and creating value in financial and non-financial terms. Thus, this model is implementing an organization's mission and strategy into a set of performance indicators, becoming one of the most popular tools for the development of indicators for knowledge measurement and management. It was applied in hundreds of organizations from different economic areas in developed countries. However, there are critics who consider this model too rigid and its categories too limited.
The Intellectual Capital Index (IC-Index) proposes the replacement of individual indicators by an index and attempts to correlate the changes in intellectual capital with changes in the market value of the firm. The index is based on indicators that relate to: human capital, innovative capital, infrastructure capital, relational capital (customers). The value of the IC-index depends on the subjective assessment of the mentioned indicators and on their share. However, this model offers the managers the opportunity of understanding the effects of a certain strategy on its intellectual capital.

5. As a conclusion, one may note that the first research in the measurement and evaluation of knowledge generating assets and of intellectual capital have focused on definitions and classifications. Many models have similar construction and measures, but different names. Knowledge management and measurement models may serve specific purposes of different organizations in different ways. They can use the measurement models as analysis and diagnostic tests for assessing the progress or the hierarchy of investment projects or for obtaining facilities (political support) for a particular program.

Education plays a key role in determining human capital formation and human opportunity from economically point of view. Today, in Romania, it becomes urgent investment in human capital goal: there are necessary substantive steps, not only conceptual, but concerning the mentality. The first is the understanding that without a rapid and profound improvement in the educational system we can not have any growth or raise living standards, however funds would allocate the European Union and regardless of which method of assessment would use.

The second step is to change the managerial mentality in the Ministry of Education, Youth and Sport by reforming the educational system and by allocation of funds for investment in education.

Current assessment of human capital in Romania reveals chronic lack of investments in this area, the national labor force being used in areas where payment is at the lowest wage and productivity.

Advantages and limits of score based models:
Score based models do not result in monetary units estimates of intangible assets; however, they may be used to develop measurement models of knowledge based assets on national level, for the establishment of socio-economic and human development strategies.
Among the benefits brought by these models, it can be stated that they establish indicators compiled based on existing resources, processes and outcomes. They can help detect and correct errors between inputs and processes, on one hand, and outputs and results, on the other. Indicators are trying to use contextual nuances to enrich the analysis of data that can be the basis for elaborating appropriate development policies. Within these limits, we can mention the contextual influences which, although facilitating the expression of corrective policies, they can hinder comparisons between different results.

The intangible assets topics should be addressed, primarily, in terms of human resource management and accounting. Properties from the balance sheet begin with intangible assets, ill-defined and recognized in the annual financial statements. Intangible assets created internally are not recognized in the balance sheet and in the explanatory notes, but only those purchased from outside.

All efforts must be directed towards the development of intangible assets and identifying human capital, their value representing a real growth in the general fund of globalization.
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