QUALITY MANAGEMENT OF INTANGIBLE ASSETS IN THE CONTEXT OF THE KNOWLEDGE-BASED ECONOMY

Mihail Aurel ȚÎȚU[1]
Constantin OPREAN[2]
Andreea Simina RĂULEA[3]
Ştefan ȚÎȚU [4]

ABSTRACT
Currently, the issue of the quality is one of the most debated. The most important theme is represented by the way in which organizations are able to build a competitive strategy based on quality products and services in the circumstances of the increasing pace of competition. The aim of this paper is to present some aspects related to intellectual property, innovation and after a short analysis to present some intellectual property indicators from the point of view of the quality management. Namely, to evaluate the intangible assets that influence the success of the industrial organizations and also of health organisations. These indicators are the result of working in an international research program that proposed a methodology for visualization and evaluation of intellectual property capital within industrial organizations and health organizations. All these indicators proposed are divided in four categories, namely human resources capital, intellectual property capital, relational capital and organizational capital. The valuation of intangible assets is necessary for a great number of reasons, among which the most important one brings bank loans into discussion and their warranty with these assets but also we can name the competitive advantage.

KEYWORDS: *intellectual capital, quality management, innovation, knowledge based organization.*

JEL CLASSIFICATION: *O34, L21, M1*.

1. INTRODUCTION

Throughout history many societies have deemed intellectual creations such as technological inventions, artistic, and literary works as the property of inventors and authors. But this is not completely true. The intellectual creations, in fact, represent the wealth of a nation and then the legacy that will always remains and develop.
Innovation is considered to be a vision, a concept, a strategy but also a solution. In this context we can assume that innovation projects in order to become a fact and to achieve their purpose need an idea that helps reaching a certain aim either economic, social or organizational.
Perceived in most of the cases as an exclusive concept, innovation can be approached only by some companies. This thing should be changed because innovation is accessible and comes in hand for

[1] „Lucian Blaga" University of Sibiu, Romania, mihail.titu@ulbsibiu.ro
[2] „Lucian Blaga" University of Sibiu, Romania, constantin.oprean@ulbsibiu.ro
[3] „Lucian Blaga" University of Sibiu, Romania, andreea.raulea@ulbsibiu.ro
[4] „Iuliu Haţ ieganu" University of Medicine and Pharmacy Cluj Napoca, Romania, stefan.titu@ymail.com

everyone. What leads to a successful innovation are the good ideas, the process and the best assigned resources. But there must be paid a lot of attention and elaboration when we are making the selection of the good ideas. Even if the intuition is spirit's component for a leader, it must be oriented towards a well designed process. When the process is well based and defined, and the organization is capable of heading the creativity of the stakeholders on generating new and valuable ideas, their performance is rising and the rate of success becomes better.

Innovation is a source of competitive advantage. In other words, firms may leverage innovation to generate rents, at least temporarily. And this is intended to be a self-sustained business model: part of the rent extracted from the market may be re-invested into new technological developments which in turn permit additional innovations, thus regenerating the sources of rents. This is the positive loop of innovation. In this sense, business would be a permanent hunt for innovations, in search of rents. Yet, innovations need to be protected if firms want to benefit from rents over long periods of time.

In the 21st century the most valuable strategic resources for business enterprises will no longer be physical assets such as land, machines, etc., as it was the case in the beginning of the 20th century, but rather intangible assets such as knowledge, know-how, and intellectual property rights. Moreover, various authors have stated that in order to be successful in most industries, companies need to have a competitive advantage on technological grounds which enables them to offer superior products. Particular technological progress has continuously accelerated over the last century so that the average duration of product-life-cycles and even technology-life-cycles has been considerable reduced. This increasing technological progress has not decreased, but rather increased the strategic importance of technological expertise. Therefore, companies are forced to constantly learn, create, and update new technological competencies, as well as unlearn obsolete procedures in order to be able to remain competitive in a world characterized by rapid technological progress (Klaus, 2005).

Innovation helps individual firms to maintain their competitive edge, contributing to expansion of capacity and also generating additional capital investments, productivity, technological advancement, employment, and growth.

The aim of this paper is to present some aspects related to intellectual property, innovation and after a short analysis to present some intellectual property indicators from the point of view of the quality management. These indicators are the result of working in an international research program that proposed a methodology for visualization and evaluation of intellectual property capital within industrial and health organizations.

All these indicators divided in four categories, namely human resources capital, intellectual property capital, relational capital and organizational capital represent the result of hours of studying and hard work.

We propose these list of indicators because we consider that every organization in the world should be aware of their resources and more than that every manager should be aware of the quality that exist within the organization, at all levels, even if we are speaking of tangible or intangible resources.

Currently, the issue of the quality is one of the most debated. The most important theme is represented by the way in which industrial and health organizations are able to build a competitive strategy based on quality products and services in the circumstances of the increasing pace of competition.

The importance of the research theme relies on the fact that in order to survive in a more and more competitive world, industrial and health organization must adopt an approach of continuous improvement without resisting changes and to do that every organization should be aware of the intangible assets that they hold. Improvement begins with the belief that every industrial and health organization has opportunities for change and improvement. The traditional wisdom holds that "If it isn't broke, don't fix it." However, the some current philosophy takes the view that every process

can be improved and therefore even if you think "It isn't broke, fix it anyway." That is also the case of intellectual property assets, even if managers think that these are not important, they should focus on identifying and evaluate them in order to create value and competitive advantage.

2. FROM INTANGIBLE ASSETS TO INTELLECTUAL CAPITAL

Innovation is not a process that has a beginning and an end, but this doesn't mean that it shouldn't happen in an organized manner, with a degree of strategy. It must be mentioned that innovation doesn't have an end, there is also an aspect that can bring value, or even a whole new thing that could replace what was there before. But a defining element for innovation is that it must be tested by a great number of potential users and this process must have an end and a conclusion as soon as possible in order to evaluate its degree of success or failure. The failure of an idea doesn't have to demobilize that industrial and health organization but to make it stronger for refining what can offer in the future.

All these lead to a try of quantification of the resources involved in innovation. Even if the creative spirit can't be put into default shapes, the practical and analytical feature of innovation must contain elements and resources of time. That is the reason for what the allocation of budgets can stimulate the innovation showing on this way the importance within theindustrial and health organization, but it has to be counterbalanced by emphasizing the results. This thing will show the degree of success of the initiatives that took place and it can be a deciding element in the analysis of the future actions.

The historical moment where we are found is one where no matter the place in the world we are, we are able to access a large amount of information that no human being or a group of people would be capable of processing and remember. But just the information is not enough. For example, to be able to access the data disposed by the internet, a connection to the internet is not enough, it must be known the way of using the computer, what means owning some knowledge. The characteristic of the knowledge based society is not that we have great amount of information but that in this framework we must find out more through the process of their transformation in knowledge (new products, technology, etc).

In spite of the vast amount of research on the topic, there is still no single definition that is universally accepted and applied with some homogeneity in the majority of studies (Cañibano et al. 1999; Edvinsson and Malone 1999; Bukh et al. 2001; Kaufmann and Schneider 2004; Sullivan 2005).Thus, intellectual capital can be defined as the relationships with customers and partners, innovation efforts, the infrastructure of the firm and the knowledge and skill of the members of the organization (Edvinsson and Malone 1999). Similarly, Sullivan (1999) indicates that intellectual capital is that knowledge that can be converted into future profits and comprises resources such as ideas, inventions, technologies, designs, processes and informatics programs. Stewart (1991) indicates that intellectual capital is everything that cannot be touched but can earn money for the firm. On the same line, Lev (2001) considers that intangible resources are those that can generate value in the future but have no physical or financial form.

For an organization, the identification and acquisition of resources will be of vital importance to achieving good performance in the long term (Katz and Gartner 1988; Brush and Greene 1996; Lichtenstein and Brush 2001). Thus, in the last decades the strategic management literature has emphasized the crucial role of intangible factors or the intellectual capital as determinants of business competitiveness (Teece 2000). On that line, authors such as Lichtenstein and Brush (2001) find that intangible assets are more important and critical than tangible assets in such a decisive period of the life of a business. Thornhill and Gellatly (2005) found that the investment in intangible assets is associated with a track record of growth.

However, one of the main problems of research into this topic is the fact that many organizations do not explicitly recognize their intangible assets and so do not manage them correctly (Andriessen

2004). If, from the moment of the organization's beginning, the managers and owners were aware of the importance of these assets to the short and medium-term performance of the firm and, especially to the long term competitive advantage, the management of these assets would improve, as would the profits they generate.

Intangible assets or intellectual capital are recognized as the most important assets of many of the world's largest and most powerful organizations. These represent the foundation for the market dominance and continuing profitability.

In addition, it is often the key objective in mergers and acquisitions, and knowledgeable companies are increasingly using licensing routes in order to transfer these assets to low tax jurisdictions. Nevertheless, the role of intangible assets in the industrial and health organizations is insufficiently understood. Accounting standards are generally not helpful in representing the worth of intangible assets in organizations accounts and they are often under-valued, under-managed, or underexploited. Namely, despite the importance and complexity of intangible assets, there is generally little coordination between the different professionals dealing with these relating issues.

All the above leads us to propose the principal objective of this research. Namely, to evaluate the intangible assets that influence the success of the organizations. To that end, we also propose an indicators list in accordance with the fourth categories of intellectual capital most frequently referred to in the literature: human capital, intellectual property, structural capital and relational capital.

Taking into account the above mentioned theory we can say that, the medical act, seen as an ideal one, represents an activity in the service of some human principles, and its progress could not have been possible without the economic factor. One aspect of fundamental importance is the very relationship between inventions, innovations, medical treatments and laws governing intellectual property rights over them. It is well known that the medical treatments and methods of diagnostics are governed as unpatentable by European laws but the way that they can be recognized is publishing in journals or presentations at national and international congresses or conferences. The decision taken against patenting treatments and methods of diagnostics is based on some arguments that are more or less founded. A first category of arguments is related to ethical concerns and the various public health policies. On the other hand, it is believed that patenting these innovative treatments could lead to an obstruction of the free flow of information though patenting entails a stronger advertising. Among the arguments for introducing the possibility of patenting methods of treatment and diagnostics, the most important one highlights that the financial rights that are recovered from patenting, will help to cover the costs involved in the discovery of those treatments, while at the same time, having financial possibilities for further research (Viaț a medicală, 2014).

2.1 Intangible capital: the key to growth

In the new economy, one based on knowledge, intellectual property plays an extremely important role. At company level, intangible assets represent the "engine", the element that makes the company function on a strongly competitive market and this proves the importance of a generally accepted legal framework within which the visualization and valuation of assets may be performed.

The valuation of intangible assets is necessary for a great number of reasons, among which the most important one brings bank loans into discussion and their warranty with these assets but also we can name the competitive advantage.

The intangible assets have become the main generators of income in most of the companies, even if they aren't entirely exploited to their true value. The role in the system of creating value leads to the awareness of needing a better strategy in terms of organization and the need of a more aggressive management of the intangible resources.

In these circumstances, the success of the companies doesn't depend on the production facilities or on the material capital that was the case years ago. Appropriate in this context is the statement of the regretted executive director of Coca- Cola, Roberto Goizueta who said: "even if all our factories

and endowments would entirely burn over night, wouldn't succeed to affect too much of the value of the company; all this value resides, actually, in the trading fund ensured by the franchise of our brand and the collective knowledge thesaurus of the company". (Kotler, 2004).
In the same context, Peter Drucker states that "The firm has two, and only two, basic functions: marketing and innovation. Only the marketing and innovation are developing results- anything else is expenses" (Drucker, 2006).
The evaluation of the overall significance of intangible capital in economic activity is constrained by the indirect way in which this kind of capital influence economic behavior and because data on intellectual-property–related transactions is scattered and often difficult to interpret. This notwithstanding, the main conclusion is that although intellectual property still do not appear as a top policy priority for developing countries, they have become more relevant in some sectors and have gained importance in international transactions of goods and services. These patterns are reflected in an increasing global demand for intellectual property protection.
Intellectual property protection is largely considered to be part of economic policymaking, although economic theories of growth and development have so far ignored, or only peripherally considered, the role of IPRs (intellectual property rights) policy. The evolution of a country from the point of view of intellectual property and intangible assets depends on circumstances such as educational attainment, openness to trade and investment, and related business regulations.

3. INTANGIBLE ASSETS VALUATION

Intellectual capital has gained prominence after Sveiby (1997) gave a new vision of intellectual capital considering the intangible assets as the main strategic issue that should be put to the organizations. Since then, several authors proposed models and methodologies for assessing the intellectual capital of organizations. The further development of these models was found with authors such as Edvinsson and Malone (Edvinson and Malone, 1997) that proposed a model, "Skandia Navigator", which divides intellectual capital into two categories: human capital and structural capital. Thus, according to this vision, intellectual capital is the sum of structural capital and human capital, this being the basic capacity for the creation of high quality value.
Sveiby, (1997), developed a measurement methodology, "The Intangible Asset Monitor", by dividing the intangible assets into three groups: individual competence, internal structure and external structure. This methodology is based on quantitative and qualitative indicators to assess the intellectual capital. The "Intangible Asset Monitor" is used by several companies around the world that offer an overview of intellectual capital. The "Skandia IC Report" is the result of that assessment. Sveiby (1997) recommends replacing the traditional accounting methodology with a new methodology that contains a knowledge perspective. But there are many authors that have developed models for measure intellectual capital. To understand the abundance of attempts to measure intellectual capital, a list with some of the most stated models is presented (Florinda, Albino, Nuno, Valter, 2013) in table 1.

Table 1. Classification of methods and methodologies for measuring intellectual capital

No. crt.	Williams Classification	Model	Author
1.	MCM	*The Invisible Balance Sheet*	*Sveiby (1990)*
2.	SC	*Balanced Scorecard*	Kaplan & Norton (1992)
3.	DIC	*Citation - Weighted Patents*	*Dow Chemical (1996)*
4.	DIC	*Technology Broker*	Brooking (1996)
5.	DIC	*Citation-Weighted Patents*	Bontis (1996)
6.	DIC	*Human Resource Costing & Accounting*	Johansson (1996)
7.	MCM	*Tobin´s Q*	Tobin (1997)
8.	ROA	*Economic Value Added (EVA™)*	Stern Stewart & Co (1997)

9.	MCM	*Calculated Intangible Value*	Stewart (1997)
10.	SC	*IC-Index™*	Roos et al. (1997)
11.	ROA	*Value Added Intellectual Coefficient (VAIC™)*	Pulic (1997)
12.	SC	*Skandia Navigator™*	Edvinsson & Malone (1997)
13.	SC	*Intangible Asset Monitor*	Sveiby (1997)
14.	DIC	*Accounting for the Future (AFTF)*	*Nash H. (1998)*
15.	DIC	*HR Statement*	*Ahonen (1998)*
16.	DIC	*Inclusive Valuation Methodology (IVM)*	McPherson (1998)
17.	ROA	*Calculated Intangible Value*	Luthy (1998)
18.	SC	*Intelect Model*	Euroforum (1998)
19.	MCM	*Investor Assigned Market Value (IAMV™)*	Standfield (1998)
20.	SC	*Holistic Accounts*	*Rambøll Grou (1999)*
21.	ROA	*Knowledge Capital Earnings*	Lev (1999)
22.	SC	*Nova Model*	Camisón, Palácios et al.(1999)
23.	SC	*Intangible Value Framework*	Allee (2000)
24.	SC	*Value Creation Index (VCI)*	Baum et al. (2000)
25.	SC	*IC Rating™*	Edvinsson (2000)
26.	DIC	*The Value Explorer*	Andriessen & Tissen (2000)
27.	DIC	*Total Value Creation, TVC™*	Anderson & McLean (2000)
28.	DIC	*Intellectual Asset Valuation*	Sullivan (2000)
29.	SC	*Intellectual Capital Rating*	Joia (2000)
30.	DIC	*Inclusive Valuation Methodology*	M´Pherson & Pike (2001)
31.	SC	*Knowledge Audit Cycle*	Schiuma & Marr (2001)
32.	SC	*Intangible Assets Statement*	Garcia (2001)
33.	SC	*Modelo de Heng*	Heng (2001)
34.	SC	*Meritum Guidelines*	Meritum (2001)
35.	SC	*Value Chain Scoreboard™*	Lev (2001)
36.	DIC e MCM	*FIMIAM*	Rodov & Leliaert (2002)
37.	SC	*Public Sector IC*	Bossi (2003)
38.	DIC	*The 4-Leaf Model*	Leliaert, Candries et al. (2003)
39.	SC	*Danish Guidelines*	Mouritzen, Bukh et al. (2003)
40.	SC	*IC-dVAL™*	Bonfour (2003)
41.	SC	*Chen, Zhu and Xie Model*	Chen, Zhu & Xie (2004)
42.	SC	*IAbM*	Japanese Ministry of Economy, Trade and Industry (2004)
43.	SC	*SICAP - EU Project*	Bueno (2004)
44.	SC	*Intellectus*	IADE (2003)
45.	SC	*National Intellectual Capital Index*	Bontis (2004)
46.	SC	*Topplinjen / Business IQ*	Sandvik (2004)
47.	SC	*Intellectual Capital Value Creation*	Boedker, Guthrie et al. (2005)
48.	DIC	*The Plexus Model*	Litschka, Markom et al. (2006)
49.	SC	*Intellectual Capital Statements for Europe (InCaS)*	InCaS Consortium (2006)
50.	SC	*Intellectus Model*	Sanchez-Canizares et al. (2007)
51.	DIC	*Dynamic Monetary Model*	Milost (2007)
52.	DIC	*EVVICAE™*	McCutcheon (2008)
53.	SC	*Regional Intellectual Capital Index (RICI)*	Schiuma, Lerro et al.(2008)
54.	SC	*ICU Report*	Sanchez (2009)

Source: Florinda, Albino, Nuno, Valter, (2013), p. 82

These models and methodologies will not be developed as this is not the objective of this paper. On the other hand, it is assumed that the readers of this paper will be able to access the different approaches in these models, easily.

We choose to present these models and methodologies given the fact that the aim of this paper is to present some indicators that intend to evaluate the intangible assets quality within an organization.

4. INDICATORS FOR PROPER EVALUATION OF INTANGIBLE ASSETS OF AN ORGANIZATION

The need of financial evaluations of the intellectual property becomes relevant especially when these are used as instruments of financing by the organizations and as investment assets assured by the financial institutions. The analysts and the financial investors consider more often the intellectual property as a key element in the value of the organization and a sign of its technological capacities.

In the case of the organizations, especially in the small and medium enterprises that do not own internal sources of financing and a necessary portfolio of success for attracting the external investors, the patents are considered a manner of attracting and assuring from a financial point of view.

Owning a strong portfolio of intellectual properties can signal to the investors that the company has a technological advantage against its competitors- one that can be protected by the patent law (Weltz, 2013).

The aim of this paper is to identify, describe and assess the quality indicators relate with intangible assets of knowledge-based organizations in an effort to contribute to effective communication between financial institutions and organizations aimed at obtaining financing.

Global indicators proposed for quantifying quality management application can be used both for precise analysis and with regard to the degree of quality management implementation.

For the development of the knowledge-based economy, it is known that nowadays are made special efforts for the development of long-term relationships between organizations (in particular SMEs) and banks.

Financial institutions are concerned mainly of tangible assets, without having a clear vision with regard to sustainable development or quality management implemented. Topics that we consider proper to analysis in order to receive financial support.

High quality entails customer confidence that in time translates as continuity and stability on economic, social and financial plan. Quality level in a organization consists in quantifying the level of performance across multiple plans in close compliance with the performance standards.

It is known that the overall objective of any organization is, first, to obtain profit. As a result, the measurement of performance represents a process through which the degree of efficiency and effectiveness of activities inside organizations are determined. Measuring the performance of an organization can be regarded from a managerial perspective and the degree of objectives fulfillment must be evaluated.

The proposed quality indicators focus on meeting the customer's requirements but, overall are analyzed in terms of the intangible assets held by an organization.

We believe that an assessment of these indicators and the extent to which they are contributing to the increased competitiveness must be accomplished. Therefore, financial institutions would be able to establish their decision to support the organization.

The methodology used is based on the self-assessment in a structured manner and based on reality in order to identify strengths but also weaknesses aspects that are requiring improvement.

The proposed model operates with four fundamental concepts both in respect of intangible assets as well as excellence and their ability to achieve sustainable competitive advantage. These fundamental concepts are transformed into four tables containing multiple criteria that form the framework of quality evaluation in modern organizations.

Thus, the first group of indicators consist in human resources (see table 2) indicators and their contribution to the transformation of an organization in terms of the quality of intangible assets.

Table 2. Human resources indicators

Human Resources		
Indicator	Percent (%)	Description
I1. Level of entrepreneurial experience	6	The extent to which the manager or managers prove their professionalism and entrepreneur skills
I2. Level of professional skills	9	The extent to which staff have skills that contribute to the smooth running of the organization. Number of employees participating in further training. The amount of funds invested.
I3. Tacit knowledge	5	The degree to which tacit knowledge is converted into benefits for the organization.
I4. Motivation and loialty leve of the employees	5	The extent to which employees satisfaction at work and loyalty to the organization are relevant to customer satisfaction.

Industrial and Health organizations should understand that innovation, (Ţîţu, 2011), in order to materialize the results expected, it needs to be defined and implemented in the form of a strategy for innovation, focused mostly on employees, and, in the alternative, on technology. In table 3 are developed intellectual property indicators that are considered important.

Table 3. Intellectual property indicators

Intellectual Property		
Indicator	**Percentage (%)**	**Description**
I5. The level of existing codified knowledge	5.5	The degree to which codified knowledge contributes to competitive advantage.
I6. The level of existing business information and patented technologies	5	The extent to which investment in structuring business information and technologies bring benefits in terms of quality.
I7. The number of existing inventions within the organization	4.5	The level of patenting correlated with the extent to which the patent is applicable and the results of this approach brings technological and financially benefits.
I8. The effect of trademarks on consumers	5.5	The extent to which recognition and exploitation of trademarks is a competitive advantage for attracting and keeping customers connected with the organization.
I9. The extent to which industrial designs are exploited	3	The manner in which the designs of the organization are operated and produce long-term benefits.
I10. The extent to which copyright is exploited	3	The income level produced by exploitation of copyright in the context of creating market visibility and reputation.

Therefore, it is important for organizations to create the context in which any employee can in a simple way, to convey the ideas in practice. And, moreover, it is important that an organization's employees to be motivated to carry out their tasks and, moreover bring innovative contributions. Staff satisfaction can be measured through periodical questionnaires as well as analysing their

behavior within the organization. Another important aspect, packed in large part by satisfaction at work is the loyalty of employees. Often, organizations are experiencing problems when it comes to personnel movements. We can consider that we cannot speak of quality and innovation at high levels within organizations where staffing fluctuations are very high. Training and integration are processes that involve a long period of time, and significant costs. When staff fluctuation is at a low level, the cost can be reallocated toward other processes and employees with seniority in the organization can contribute in greater measure to the improvement of existing products and processes.

Of course that the quantification of tacit knowledge held by employees is a difficult one. However, it is more important that such knowledge, of each employee to bring an actual benefit to the organization. Beyond the measurement of knowledge must be directed attention towards the establishment of an environment conducive to raising the knowledge among employees for the benefit of the organization.

Organizations that invest in developing and motivating employees, but also in improving performance of employees through activities devoted to the balance between professional and personal life are the ones that are in the world charts. Investment in human resources, whereas materializes in the processes and products of quality. The amounts of money invested often are multiplied by the curiosity and interest of employees for the field in which they are formed and this in the long run translates into immeasurable benefits.

Skilled entrepreneurs develops talent management policy that focuses just on attracting, motivating and developing those talents that will transform innovative ideas into reality, and last but not least, develop and facilitate an organizational culture in which innovation is part of the DNA. Entrepreneurial spirit is vital for the development of an organization.

Of course it is difficult to quantify the level of the entrepreneurial skills but over time it can be measured in terms of results, ideas and performance achieved by the employee.

To create and sustain the spirit of beneficial development oriented to quality and innovation, it needs an appropriate organizational culture in which tacit knowledge is shared and exploited.

Normality should be represented by quality and innovation at any level. Innovation and quality are the underlying functioning of businesses nowadays. A concept that in the past was an attribute of the large companies and industries of high complexity has now in the viewfinder all companies, regardless of age, size or turnover. We consider that there is no area where it can withstand without foundation made by a successful combination of quality and innovation.

The consumer is increasingly more sophisticated and has a very simple and quick access to information of quality so organizations must take into account the expectations of the customers. So this assume a lot of research and testing, but also human resources very well trained.

Even though the concept sounds simple, innovation is hard to quantify. Innovation represents primarily an attitude whereby we want to bring about a change for the better in the environment in which we live.

To be sure, business information and structuring investments in knowledge encoded bring benefits in the long run, the question arises, however, for the purposes of quantification in terms of their competitive advantage. In this respect, we propose monitoring of such actions and decisions based on results over time.

Another important aspect of the discussion related to intellectual property indicators is the level of patenting within an organization and financial benefits and technological developments resulting from the process. Analysis of this indicator can be done by comparing the number of patents carried out by an organization with the patent number implemented or recovered from a financial standpoint. It should be noted that, often, organizations do not take advantage of the patents. The financial quantification of patents constitutes a step towards development and a significant step towards motivating and involving employees.

With regard to the extent to which they operate marks, drawings and industrial models, but also copyrights to create long-term benefits in terms of attracting and retaining customers must set up a system in each organization, to ensure that these intellectual property rights are properly recovered. These intellectual property rights, together with the effects of the products is a prerequisite that each organization would need to succeed.

A successful organization must continually reinvent both inside and outside, towards the market, customers, and partners. Inside the organization, the communication should occupy a place on the top. Employees should communicate effectively to collaborate and develop procedures that contribute to efficiency of production. Production efficiency is reflected in the quality so has a major impact on income but also on the customer satisfaction.

Certification means customer assurance that the organization is one of trust. We consider that this is extremely important because once a customer has confidence in the company or organization's products, the chances that it would bring other clients are quite high. The number of certifications held represents an important indicator of the quality for the customers.

We believe that sources of ideas that lead to innovation: technology, society, community, organization, process, etc. come from organic experimentation, experience, from challenging the status quo in everyday life. Companies need innovation because it is the only way they can grow in this competitive environment where the pressure comes, first and foremost, from the customers. In this regard, I believe that each organization should develop tools and project management systems to exploit them in the development of new services or products that may be of interest to the competition and customers. As we pointed out in the previous chapters, the novelty or in other words, innovation is a decisive factor in determining quality along with the action of a particular product or service.

With regard to the need for a change in the organization must be taken into consideration its objectives and resources. Changing the business model must integrate all resources starting with the human resources, financial and technological needs. We consider that services and projects have evolved especially due to the impact of the Internet and technology.

In this respect, it should be found answers to the new model to exploit the resources to be sustainable in this era in which all past paradigms are changing.

Structural capital (see table 4) as a whole represents an indicator of quality considering that it consists of issues that can be readily quantified.

Table 4. Structural Capital indicators

Structural Capital		
Indicator	Percentage (%)	Description
I11. The extent to which the procedures used contribute to production efficiency	8	The quality of partnerships between employees departments in the use and application of procedures.
I12. The extent to which certifications are obtained and used	5	The advantage accruing after obtaining certifications in terms of the relationship with suppliers and consumers.
I13. Tools and systems of project management	5	The extent to which project management tools and systems are used in the development of new services which could be of interest to competition and customers.
I14. The manner of operation of administrative management	6	Extent to which the project management related to specific assets of the organization are properly correlated with the resources and objectives.

In a world in which everything happens immediately and the automation of processes and activities the relational capital can represent the business card. In this way in table 5 are presented the relational capital indicators.

Table 5. Relational Capital indicators

Relational Capital		
Indicator	Percentage (%)	Description
I15. Consumer degree of attraction	7	The extent to which the organization's image helps to attract a considerable number of consumers.
I16. The degree to which client portfolio management adds value in the organization	7	The extent to which managing client portfolios contribute to customer satisfaction .
I17. The impact on the quality of the management suppliers	6	The extent to which better management of suppliers contribute to effectiveness, efficiency and increased sales
I18. The extent to which there is cooperation and networking within the organization	5	Partnerships impact on costs , sales volume and how these networks contribute to the transfer of information with long-term benefits .

We can take the simple example of the extent to which the organization's image contributes to attracting a considerable number of consumers. We consider that the image of an organization can be quantified as an indicator of quality in terms of consumers who choose an organization's products or services over others.
Moreover, the way that portfolios of clients are managed helps organisations to develop because they can boost production and export, can support the development of new products, logistic processes. To innovate and to have measurable results in terms of quality we have, therefore, a need for people. They are represented by both customers and suppliers.
One of the eight principles of quality management refers to the mutually beneficial relations with suppliers. The quantification management of suppliers and the extent to which they contribute to the effectiveness, efficiency and an increase in the sales volume of the organization represents a quality indicator that should be taken into account both by the organizations and the representatives of the financial environment.
Cooperation and networks represent an indicator that can be quantified in terms of the impact of partnerships on costs, sales volumes, and the way these networks contribute to the transfer of information with long-term benefits.
A prime indicator (see Equation 1) of the quality of intangible assets held by knowledge-based organizations can be defined as an aggregate indicator of quality.

$$I_{\text{overall quality}} = p_1 I_1 + p_2 I_2 + p_3 I_3 + \ldots + p_{16} I_{16} + p_{17} I_{17} + p_{18} I_{18}, \quad I_1, I_2, I_3 \ldots, I_{18} \in \{1,2, \ldots -10\} \tag{1}$$

where $p_1, p_2, \ldots, p_{18}$ represents the weights; $I_1, I_2, I_3 \ldots, I_{18}$ represents the indicators.

The global indicator values may have different quality levels (table 6):

Table 6. Indicator Values

Value quality index	Quality level
1-4	Low quality
4-7	Average quality
8-10	High quality

Depending on the level achieved, organizations can implement improvement programs and also, financial and economic entities can base their decisions with regard to the organization.

5. CONCLUSIONS

Intellectual capital represents high value to industrial and health organizations at present, but due to the composition of intangible assets, it will generate even greater economic value in the short-, medium- and long-term. Therefore, it is of utmost importance for managers who generate and manage value and wealth within industrial and health organizations to be aware of the importance of these resources. The only possible way to manage intangible assets is by being aware of their composition and recognizing their value in the industrial and health organization.
The importance of the valuation for the intellectual property assets is indisputable, especially when we talk about an economy found in a continuous change, when the information gives power and the innovation is a must.
The list of proposed indicators represents a first step when it comes to put together management, quality, intellectual capital and strategy.
Any entrepreneur or manager must base his strategy on the intangible assets that represent unlimited and renewable resources. This fact gives strength to the idea that sustains that intangible assets have a higher utility than the tangible assets.
Taking into consideration the economic instability of the markets where the nowadays industrial and health organizations are activating, the protection and valuation of the intangible assets make the difference between failure and success. So, the organizations must manage the most accurate possible these assets for identification of the additional modalities of capitalization.
Innovative growth requires investment in intangibles, most of which are imprecisely valued in any balance of accounts. There is a clear need for a broad view of intangible capital type work that includes managerial and marketing work. More and more of the expenditures on marketing and organizational investment need to be recognized as intangible investments that increase productivity over a longer period. Organizational capital is also more clearly firm-specific and owned by the firm than are other types of intangibles.
In the new economy the intangible assets become the new nucleus of the competences. That is the reason for what we must become aware that we live in a world that focuses on the economic value of the intangible assets. We deal with a period of time where the ideas value billions, while the products cost less and less.
These basic ideas outlined above find their explanations and appropriate treatment in the content of this scientific papers.

REFERENCES

Andriessen, D. (2004). IC valuation and measurement: classifying the state of the art. *Journal of Intellectual* Capital, 5(2), 230–242.

Brush C. G. & Greene P. G. (1996). Resources in the new venture creation process: strategies for acquisition. *Paper presented at the Annual Meetings of the Academy of Management, Cincinnati*, Ohio.

Bukh, P. N., Larsen, H. T. & Mouritsen, J. (2001). Constructing intellectual capital statements. *Scandinavian Journal of Management*, 17(1), 87–108.

Cañibano L., Sánchez P., Chaminade C., Olea M., Escobar C. G. & García-Ayuso M. (1999). *Measuring intangibles to understand and improbe innovation management*. Working paper, Universidad Autónoma de Madrid & Universidad de Sevilla.

Drucker, P. (2006). *Innovation and Entrepreneurship Practice and Principles*. New York: Harper Business.

Edvinsson, L. & Malone, M. S. (1997). *Intellectual Capital*, Harper Collins Publishers Inc., New York.

Jennewein, K. (2005). *Intellectual Property Management. The Role of Technology-Brands in the Appropriation of Technological Innovation*, ISSN 1431-1941, ISBN 3-7908-0280-8 Physica-Verlag Heidelberg New York.

Katz, J. & Gartner, W. B. (1988). Properties of emerging organizations. *Academy of Management Review*, 13(3), 429–441.

Kaufmann, L. & Schneider, Y. (2004). Intangibles: a synthesis of current research. *Journal of Intellectual Capital*, 5(3), 366–388.

Kotler, P. (2004). *Marketingul de la A la Z.* CODECS Publisher, Bucharest.

Lev, B. (2001). *Intangibles—management, measurement and reporting*. Washington: The Brookings Institution.

Lichtenstein, B. M. B. & Brush, C. G. (2001). How do 'resource bundles' develop and change in new ventures? A dynamic model and longitudinal exploration. *Entrepreneurship: Theory and Practice*, 25 (3), 37–59.

Matos, F., Lopes, A., Matos, N. & Vairinhos, V. (2013). Biplot Methodology Applied to an Intellectual Capital Model. *EJKM*, Volume 11 Issue 1, pp. 81-92.

Medical inventions and Intellectual property right (2014). *Viaţ a Medicală*, *no. 7*. Viaţ a Medicală Românească Publushing House, Bucharest, Romania.

Oprean, C., Ţîţ u, M., Bucur, V. (2011). *Managementul global al organizaţ iei bazată pe cunoş tinţ e*. AGIR Publishing House, ISBN 978-973-720-363-2, Bucharest.

Sullivan, P. H. (2005). An intellectual property perspective on intellectual capital. In B. En Marr (Ed.), Perspective on intellectual capital. *Multidisciplinary insights into management, measurement and reporting*. Boston: Elsevier.

Sveiby, K. E. (1997). *The New Organizational Wealth. Managing & Measuring Knowledge-Based Assets*, Berrett-Koehler Publishers, San Francisco.

Teece, D. J. (2000). *Strategies for knowledge assets: the role of the firm structure and industrial context*. Long Range Planning, 33(1), 35–54.

Thornhill, S. & Gellatly, G. (2005). Intangible assets and entrepreneurial finance: the role of growth history and growth expectations. *International Entrepreneurship and Management Journal*, 1(2), 135–148.

Ţîţ u, M., Oprean, C. & Boroiu, Al. (2011). *Cercetarea experimentală aplicată în creş terea calităţ ii produselor şi serviciilor*. AGIR Publishing House, ISBN 978-973-720-362-5, Bucharest.

Weltz A., Fichtinger & Felicia, Kerschbaum (2013). *Analiza de Status Quo pentru valorificarea proprietății intelectuale în zona Europei de Sud Est şi în context Global.* Viena: Institutul "Economica" de Cercetare Economică.