

A POSSIBLE APPROACH FOR GENERIC MODEL CONCERNING INTELLECTUAL CAPITAL EVALUATION

Maria Luminita GOGAN¹, Anca DRAGHICI²

¹Politehnica University of Timisoara, gogan_maria@yahoo.com

²Politehnica University of Timisoara, Draghici Anca, ancadraghici2003@yahoo.fr

Abstract— The groundwork of intellectual capital (IC) management, evaluation IC, attracts much attention from academics and practitioners. Today the intellectual capital is a key factor in company's profitability and has become the preeminent resource for creating economic wealth. In this environment, the intellectual capital and intangible assets is fundamental to success. In the new economic competition, intellectual capital provides a sustainable competitive advantage. The evaluation is fundamental to support management decision in allocation investment and investor's decision regarding the value versus price. The purpose of this paper is to presents an analysis for the generic model to explain the genesis of the multidimensional concept of intellectual capital and an empirical study in a company. Given the recent proliferation of IC evaluation models, it is necessary to classify it according to criteria that are linked with their practical exploitation and use.

Keywords—analysis, evaluation, intellectual capital, model

I. INTRODUCTION

THERE are a growing number of models for the evaluation of intellectual capital (IC) at the organization level. The fact that the list is increasing is probably a testament to both the difficulty of incorporating something quite amorphous, the importance of doing this, and perseverance with which researchers have approached the issue. The challenge for the academics is to develop new innovative model of intellectual capital valuation or to improve existing models by conducting a more rigorous conceptualization [1]-[3]. In this context, the purpose of this paper is to present an analysis for one of the latest models of intellectual capital evaluation, generic model as a first step in approaching this challenge. Considering also the massive growth of IC models, it is necessary to review the valuation model and to classify him according: the origin, the main concepts and structure, the functional characteristics, the operational performances, limitations.

A. Origin

In this section are presented researchers who contributed to the realization of the model.

B. Concept and structure

The concepts and structure of the model is based are extremely important because they explain the results make sense and lead to making relevant suggestions only reference system described at the beginning

C. The analysis of functional characteristics

From the perspective of functional characteristics it wants to make the distinction between measurement model and valuation model of intellectual capital. Most of the times, researchers do not make any difference between these two terms, which are used substitutable.

This issue has been approached for the first time by Andriessen in his book "*Making Sense of Intellectual Capital*", where he says that these confusions appear as consequence of the embryonic stage of this subject.

According to him the valuation needs an object to be evaluated, a framework for the valuation, and a rule that illustrates the usefulness or necessity of the object [2].

Therefore, the difference between valuation and measurement is this criterion that reflects the optimal value of the object to be valued. By valuation it determines how close to that optimal value is the object under valuation.

D. The analysis of operational performances

Through the analysis the operational performance, it tries to see the extent that this model can be implemented from point of view of collecting and processing data and information useful to the stakeholders.

E. Limitations

Usually models are conceptually simple can be easily implemented, but the relevance to different stakeholders is somewhat limited. So it is important to review the limitations of the model analyzed.

In the context of the proposed approach, this model will be classified according to the following criteria (Table I):

TABLE I

IC Model	CRITERIA FOR ANALYZE
x	origin concepts and structure functional characteristics operational performances limitations

ISSUES TO ANALYZE IC MODEL

II. A BRIEF OVERVIEW OF INTELLECTUAL CAPITAL

In the center of the current economic reality is the concept of intellectual capital. Interest in intellectual capital has undergone a tremendous development in the early 1990s. The increasing difference between the market value and the book value of the company made academics and practitioners to consider the concept of *intellectual capital* as a determining factor in the creation of value for shareholders, managers, and society in general [4]. Many authors have explained the importance of intellectual capital, comparing it to technological advances in the past. Developing intellectual capital theory was primarily driven by ideas and thoughts of a handful of influential practitioners, including Sveiby and Edvinson. In this context, IC is an intangible asset that has supplanted industrial machinery and natural resources, and is today considered one of the most valuable factors for the creation of wealth, being at the same time source and final product. The management of intellectual resources has thus become the most important task of business, governments and people in contemporary society. Intellectual capital represents the resources that produce imagination, inventiveness, and competitiveness, through the generation and dissemination of thoughts, ideas and fresh approaches. It is the sum and synergy of knowledge, experience, relationships, processes, discoveries, innovations, market presence, and community influence. Intellectual Capital represents the fusion between these two streams of thought [5].

By analyzing this definition one can see that the focus of intellectual capital theory is given by a new approach that deemed knowledge as a dominance resource, and even vital, with all the consequences related to the individual or company.

The emergence and fast development of the intellectual capital concept have also touched, in the most pragmatic ways, the accounting and finance fields.

Therefore, it is a real challenge to measure and value the intellectual capital of a firm, especially due to the fact that financial reporting has not yet developed an accurate set of tools in order to disclose it to its beneficiaries. "We easily admit the importance of immaterial issues, but at the same time we omit to make the efforts justified by their importance" [6], this referring to accounting measurement, recognition, disclosure and normalization.

The concept has a strategic importance for the

business valuation, and the specialists are looking for practical means to properly value this key element for the firm, especially in the present economic context, characterized by an increasing number of mergers and acquisitions.

III. RESEARCH APPROACH FOR THE IC MODEL

A. Origin

The generic model of intellectual capital was developed by Adrian Curaj in collaboration with Constantin Bratianu, as a result of research conducted during the PhD program, the model having as idea of reflection genesis of intellectual capital in a multidimensional perspective and dynamic.

B. Concept and structure

Unlike other models are on the market, generic model captures the dynamic transformation of intellectual capital intellectual capital used.

The model is divided into three basic components as follows (Fig. 1.):

- 1) *Human capital*;
- 2) *Organizational capital*;
- 3) *Customers capital*

In the first stage, the *individual contributions* of each employee, in terms of knowledge models of thinking, emotions, behavior models and values are transformed into organizational capital using integrators. An *integrator* is a tangible or intangible aggregation of individual contributions based on a nonlinear law. There is therefore a summation of individual contributions, but their integration. The end result is not a multiple of the number of employees, but a higher and sometimes lower than the multiplication of individual intellectual capital.

Organizational capital is the result of a dynamic process of integration individual contributions of human capital of employees.

In a later stage, there is a distinction *organizational intellectual capital* to better meet consumer needs and demands. A *differentiator* is a nonlinear decomposition organizational capital that can convert and transfer from the internal environment to the external environment of the organization through its functional interface [7].

Customer capital is the result of a dynamic process of differentiation in terms of requirements and consumer demands.

This model is a dynamic model convergent-divergent.

Summarizing what has been said it may be noted that in the first phase of brainpower genesis occurs convergence of individual employee contributions toward organizational components, and in the second stage there is a divergence of organizational capital to consumers. It can be pointed out that although the knowledge and thought patterns appear explicitly in the first entity of the employees, they essentially found both at the organizational level and at the consumer level. Knowledge Management aims to identify and evaluate

the best use of these intangible resources and create systems integration and differentiation leading to a more efficient use them in creating value for customers and, respectively, for the society. The most important aspects of knowledge and thought patterns are (Fig. 1.):

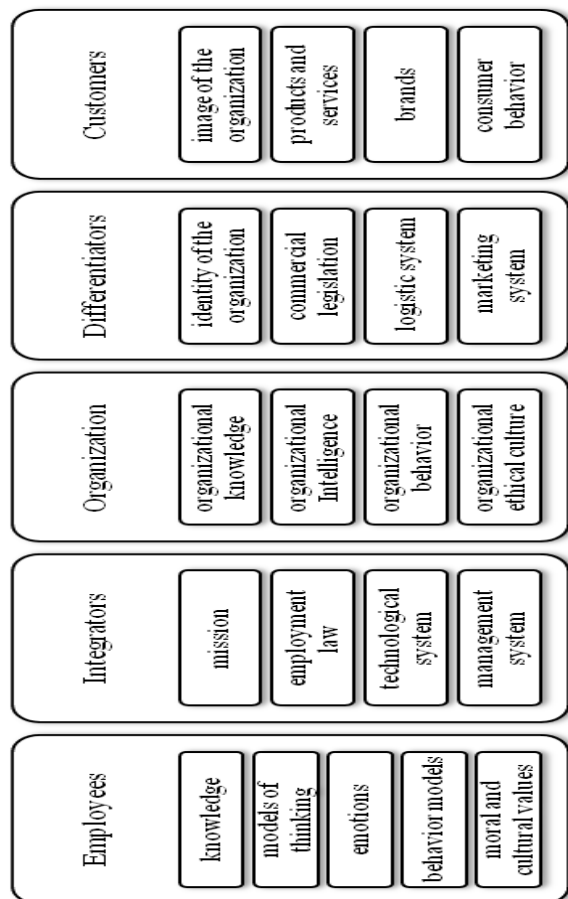


Fig. 1. Aspects of knowledge and thought model (adapted after Bratianu, 2006, [8]).

C. The analysis of functional characteristics

It is the first model of intellectual capital valuation developed in Romania.

D. The analysis of operational performances

The model generic makes a distinction between intellectual capital entities associated each employee individually and the organization as a whole associated with them. Genesis of intellectual capital reflects a multidimensional and dynamic perspective. The generic model captures the dynamic transformation of intellectual capital intellectual capital potential usable.

E. Limitations

The indicator does not have a numeric value, so comparisons with other companies intellectual capital is more difficult. Achieving results requires a rather complex analysis: studying employees of the organization and customers from different perspectives.

IV. CASE STUDY IN COMPANY

A. Theoretical Framework

Generic model is the first model of intellectual capital valuation developed in Romania, is the result of collaboration between Adrian Curaj and Constantin Bratianu from the Academy of Economic Sciences. The IC generic model is illustrated in Fig. 2 and has three components: human capital, organizational capital and consumers.

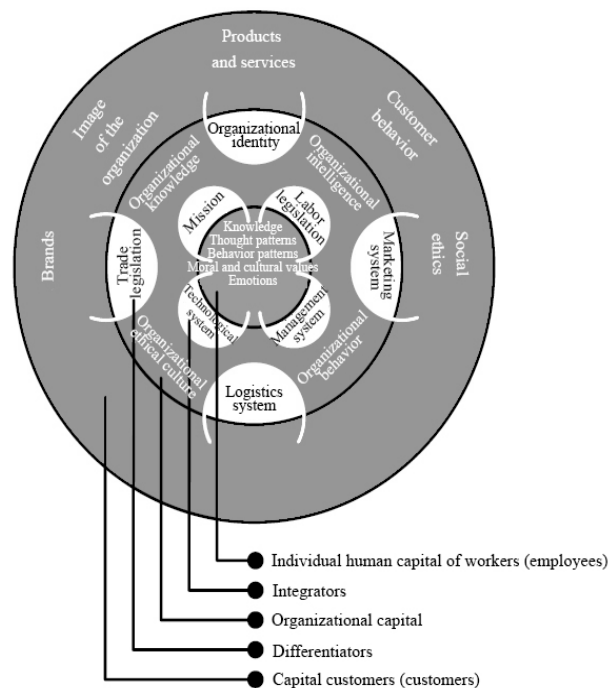


Fig. 2. The generic model (adapted after Bratianu, 2007, [7]).

1) Human capital

a) Knowledge

The concept of *knowledge* is rather vague, though fundamental for understanding intellectual capital. It is vague because throughout its history has been defined and used by specialists in different scientific areas, which have defined the concept from their perspective and tried very hard to fit the definition of their research objectives. Knowledge workers in the company include a wide range of knowledge, to different specializations in possession employees.

b) Models of thinking

The *thinking model* is a cognitive structure to approximate knowledge of the universe in which is life. They are formed by the educational efforts of others persons and their own educational effort. Thinking models can continually improve at any age. Any decision, personal or business, depends on the power model of thinking. Managerial performance depends directly on the performance model of thinking. Difficulties in the relationship between two or more

people are given the differences in thinking models which they have [8].

Human thinking is not uniform, it works the same for all people or one and the same man at times and in different situations, so you cannot generalize.

A comprehensive system of criteria can be presented as follows:

(1) Orientation

Directional processes, corresponding untargeted thinking, are generated by logic, not subject to reality, while non-directional processes, corresponding directed thinking, is characterized precisely by their government by logic.

(2) Alleged operation type

Algorithm thinking is based on operations foreshadowed, conservative, habitual, the rigorous passes from one status to another in the sequence of events required time, correct a *step* necessarily leads to full and safe solution to the problem.

Heuristic thinking involves operations in preparation hardly be discovered, its development tree in character from each "node" subject must choose a state of several possible. Operations are not strictly defined, but rather , probabilistic, branched, many approaches are possible.

(3) Finality

Reproductive thinking type corresponds to an operating mode characterized by following properties: simple, linear, unproductive in terms of quality, extremely low level of active integration of operations, he was rather automatic and stereotyped.

The second type of thinking is more developed, involves the discovery of a new principle of relational data problem than already mastered. Since the solution is obtained quickly, this type of thinking was called productive thinking.

(4) Meaning of evolution

Divergent thinking requires subjects to find many solutions or she must depart in many directions from the first point of departure. She moves from unity to diversity, from synthetic to analytic.

Convergent thinking is moving in reverse, from diversity to unity, from dissociation in synthesis.

c) Emotions

Emotions play a role in every interaction between two people. It is interesting studying emotions for leaders that emotional intelligence at work. There are many aspects that can help an individual to become a good leader and a strong man: knowledge, passion, ambition, will, intellect. But there is another factor that becomes increasingly more important: emotional intelligence [9].

Emotional intelligence is the ability to use emotions in a positive and constructive relationship with others, to know how to interact with people in ways that are

attractive to you, not depart from you to recognize your own emotional state and recognize the emotional state of others. It's about knowing how to make the right choices at the moment, to interact well with others, about knowing how to treat people in a positive and constructive way. All are things that matters a lot in a business and the company is aware of this.

d) Behavior models

Behavior at work can have a big impact on the atmosphere of the office. At the workplace where people do not behave properly can create a negative environment in which employees are always in conflict then the productivity is low. A workplace where employees have good manners and appropriate behavior can be a place where employees grow professionally.

e) Moral and cultural values

Moral values always refer to the effects or consequences of the acts on others or on person. They define those traits of character whose cultivation and especially practical affirmation in action, are liable to rein in aggressive tendencies, antisocial, preventing the production of unnecessary suffering and unfair disadvantages but, above all, to stimulate the attitudes of solidarity with others, so that the acts lead to the fullest affirmation of humanity.

Cardinal value of the field of ethics is the good. Abstract itself, basically only good can be realized by tracking of certain subordinated values such as honesty, courage, truth, justice, generosity, solidarity, etc. People are becoming better in cultivate these moral values cherished in all societies and historical periods.

2) Organizational capital

a) Organizational knowledge

Information society where humanity is framed irreversible as a knowledge society and at the same time, as a organizations society. Knowledge management can be defined as an action-oriented strategy, an action by motivation and by facilitate the employment of members in the development and use their cognitive capacities, by value, subject to its overall objectives, sources of information, experience and skills of each of them. In the organizational environment, the knowledge derives from data processed by assimilation and integrative understanding followed by operating in contexts [10]-[11].

Based on Nonaka and Takeuchi's research aimed at developing a typology of forms of organizational knowledge in the domain literature proposed takeover seised of epistemological distinction Polanyi: that between explicit knowledge that is formalized, accessible and communicated, on one hand, and implicit knowledge (tacit), which is subtle, deeply personalized unofficial and diffusely present in the organizational context.

b) *Organizational intelligence*

Organizational intelligence can be defined as the collective capacity of the organization to generate, integrate and apply knowledge.

To assess organizational intelligence necessary to assess seven factors: strategic vision, common fate, orientation change, dedicated *body and soul*, alignment, dissemination of knowledge, performance pressure.

c) *Organizational ethical culture*

When a group of people living and working together for a longer period of time, they share a number of values and opinions about life of the organization about what is right and proper for the advancement and success of the organization. They contribute to the development of models of thought and behavioral models in accordance with the organization's experience accumulated in the organization, with strategic interests and objectives of the organization. All these models of thinking and behavior and to seize tradition formed organization culture.

d) *Organizational behavior*

Organizational behavior covers a wide range of activities: knowledge and employee satisfaction, understanding group dynamics, accepting and respecting differences between people of different cultural values with which they come into the organization and many other skills, activities and management practices.

Founder of the concept of organizational behavior was Fritz Roethlisberger with Elton Mayo identified the relationship between individual and group behavior on labor productivity. Although the area of organizational behavior seems so vast that, apparently, no consistency, the glue without which organizations cannot survive and cannot grow.

3) *Customers capital*

a) *Image of an organization*

A good image of the organization has a major influence on business achievements, while a negative image affect, sometimes in incredible proportions the success of the organization. This is well understood by experts of successful companies from the West and increasingly better understood by business people in our country.

b) *Products and services*

Products and customer services of the organization should be at a high quality to compete in the market.

c) *Brands*

A brand is a name, a sign or symbol used to identify products or services of a manufacturer and used to distinguish it from the competition. A brand is how it is seen a product, a service, an idea, a state, a person or a company in the eyes of those with whom they interact, which is addressed.

d) *Customer behavior*

Study of customer behavior has become a preoccupation of marketers because they can find out how shoppers choose their goods and services necessary to satisfy multiple needs, which are stimuli, factors that affect their choice. Customer buying behavior refers to the behavior of end users who purchase goods and services for personal consumption, individuals and households - by which their meets current requirements and indicate their role in society.

B.IC Analyses in X Company – Case Study

The model adopted structure of the generic IC model that was used for the IC analysis in X Company is show in Fig. 2. The chosen company is part of the most powerful retail chains in Europe, specializing in beauty, wellness, baby and household, with a rich offer of categories: cosmetics and decorative cosmetics, perfumes, hair dyes, body care products, care products and baby foods, natural products and foods for diabetics, photography equipment, household products, pet food, etc.

1) *Human capital*

a) *Knowledge*

About 95% of employees in the company have graduated from a college or a university during graduation. Every employee of the company speaks fluently at least one foreign language, but generally two languages. All this knowledge is acquired in the company, making the company to be a successful company, very competitive in the market. Being a working community selected, knowledge workers are steadily growing, learning from each other, often without noticing it consciously. Most employees have knowledge in the following areas: economics, IT, management, law, language, mechanics, tourism, etc.

b) *Models of thinking*

What makes these managers will succeed in Romania or in any foreign country is structured thinking of the models of the employees. This is felt deeply and if the firm studied. In every country of concern development companies held under the coordination of the Austrians.

c) *Emotions*

Emotional intelligence is essential for the company's employees, especially when dealing with difficult people, including clients, colleagues and bosses. Employee's ability to understand and empathize with others is the most important quality he can develop. Emotional intelligence is important to make the changes, to understand the requirements of a new project to move more easily over obstacles, to motivate and influence others and be able to work with a team who are different personalities.

d) *Behavior models*

In the case the implementation of changes in general behavior to Company X, managers should inform employees about the new rules of behavior. This happens in one of two ways to makes a meeting or to make a poster with the new rules. This notification happens sometimes in a more natural, in a personal interview with each employee on new rules of etiquette. Employees are always approached with a positive attitude.

e) *Moral and cultural values*

The motto of the company in terms of moral and cultural values could be formulated as: without honor cannot create a stable foundation for collaborative relationships, we cannot develop without courage, without truth there would be no democracy without justice there would be peace, without the generosity life could not be understood without solidarity there is community.

2) *Organizational capital*

a) *Organizational knowledge*

Company X puts great emphasis on the importance of knowledge management organizational. In the current economic climate, which places great emphasis on information, company get the most value from its assets, intellectual rather than physical. Organizational knowledge management helps keep the knowledge to be distributed for the foundations of collaboration.

b) *Organizational intelligence*

The seven elements are present in the company, so organizational intelligence is high.

c) *Organizational ethical culture*

In the Company X are employees of different nationalities, each representing a different nationality culture influenced to some measure by the culture of the nation in which they performing.

d) *Organizational behavior*

Company X wants to offer all employees the opportunity: to learn from each other, to know each other as human beings and to recognize each other's individuality.

3) *Customers capital*

a) *Image of an organization*

Neither Company X is not an exceptional in the treatment very seriously the organization's image in the eyes of customers, consumers. Marketing studies show that, often, the most loyal buyers of certain types of products or services cannot distinguish it from similar products or services

b) *Products and services*

Company X is part of the most powerful retail chains in Europe, specializing in beauty, wellness, baby and household, with a rich offer of categories: cosmetics and

decorative cosmetics, perfumes, hair dyes, body care products, care products and baby foods, natural products and foods for diabetics, photography equipment, household products etc. Offer in category personal services emphasizes differentiation developed markets. Services and products used meet the high quality demands.

c) *Brands*

The shareholders of the company are brand customers who invest capital in the business, express confidence in the power company and generate brand value.

d) *Customer behavior*

The company sells basic products used daily by 98% of the population, so we can say that this is a positive influence in buyer behavior.

V. CONCLUSION

Evaluation of IC and other intangible assets helps to discover hidden organization resources, which must be exploited and used.

Company X has obtained very good results with regard to intellectual capital evaluation, employees constitute a dynamic team that brings profit to the company, thereby increasing the the company's tangible capital.

REFERENCES

- [1] C. Berg, S. Ambler "Assurance & Agile Processes". *Dr. Dobb's Journal*, vol. 31, 2006.
- [2] D. Andriessen, "Making Sense of Intellectual Capital" – *Designing a Method for the Valuation of Intangibles*, Ed. Elsevier Butterworth-Heinemann, Amsterdam, 2004.
- [3] L. Hai, R. Anderson, T. Harrison, "The evolution of agile manufacturing", *Business Process Management Journal*, Vol. 9 Iss: 2, pp.170 – 189, 2003.
- [4] C. Brătianu, I. Jianu, Evaluation models for intellectual capital, *Proceedings of the 6th International Conference on Commerce*, March 27-29, 2006, [CD-ROM], Academy of Economic Studies, Bucharest.
- [5] J. Ross, L. Edvinson, N. Dragonetti, *Intellectual capital: navigating in the new business*, London, 1997.
- [6] du Montcel H. T. – *Intangible Investment*, Encyclopedia of Management, Ed. Economica, Paris, 1997
- [7] C. Brătianu, I. Jianu, S. Vasilache, Integrators for organizational intellectual capital. *Proceedings of the IC-Congress*, 3-4 May 2007, Inholland University of Professional Education.
- [8] C. Brătianu, The learning paradox and the university. *Journal of Applied Quantitative Methods*. Vol.2, No.4, pp. 375-386, 2007.
- [9] C. Brătianu, () Knowledge welding. *Proceedings of the First South-East European Welding Congress*, pp.5-15, May 24-26, 2006, Timisoara, Romania.
- [10] R. P. Beijerse, "Questions in knowledge management: defining and conceptualising a phenomenon", *Journal of Knowledge Management*, Vol. 3 Iss: 2, pp.94 – 110, 1999.
- [11] F. A. Murray, Perceptions of politics and organizational cynicism: An attributional and leader-member exchange perspective, Vol. 15, Issue 4, August 2004, pp. 439-465.