



COMPANY'S VALUE ADDED AND ITS INTELLECTUAL CAPITAL COHERENCE

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Abstract. The importance of small and medium-sized business companies has always been indisputable. Governments are trying to facilitate the entrance into a marketplace; the activity itself and managers are able to administer their companies in their best manner. Despite these facts, the changing environment has made a strong impact on all companies all over the world. In addition to this, nowadays it is not enough just to have a sack of tangible assets in order to have huge company's value added. The modern century of new technologies, the importance of knowledge and information brought a new attitude to the company. The value added, which is created by the company, depends not only on tangible assets but also on intangible assets, which, by the way, are among the most important in a new modern company. Intellectual capital is intangible, hardly measurable, but plays a vital role in every company's value added. This paper is aimed at analysing this company's value added and its intellectual capital coherence, and the model of new company's value added and its-intellectual capital coherence is proposed.

Keywords: company's value added, intellectual capital, human capital, structural capital, customer capital, people as technology.

JEL Classification: M12, M14, M21.

ĮMONĖS PRIDĖTINĖS VERTĖS IR JOS INTELEKTINIO KAPITALO ŠAŠAJA

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Santrauka. Smulkiojo ir vidutinio verslo įmonių svarba visada buvo nenuginčijama. Vyriausybės stengiasi palengvinti šių įmonių įėjimą į rinką ir pačių jų veiklą, o vadovai stengiasi valdyti savo įmones pačiu efektyviausiu ir geriausiu būdu. Nepaisant šių pastangų, besikeičianti aplinka padarė didžiulę įtaką įmonėms visame pasaulyje. Taip pat šiais laikais jau neužtenka turėti „maišo materialaus turto“, kad įmonės pridėtinė vertė būtų didelė. Modernus naujų technologijų amžius, žinių ir informacijos svarba suteikė naują požiūrį į įmonę. Pridėtinė vertė, sukurta įmonės, dabar jau priklauso ne tik nuo materialaus turto, bet ir nuo nematerialaus turto, ir nematerialių vertybių, kurios šiuolaikinei įmonei yra pačios svarbios. Intelektinis kapitalas yra nematerialus, neapčiuopiamas, sunkiai apskaičiuojamas, tačiau yra gyvybiškai svarbus kuriant įmonės pridėtinę vertę. Šiame straipsnyje ištirtas įmonės intelektinis kapitalas ir jos pridėtinės vertės sąsaja, pristatytas įmonės intelektinis kapitalas ir pridėtinės vertės modelis.

Reikšminiai žodžiai: įmonės pridėtinė vertė, intelektinis kapitalas, žmogiškasis kapitalas, struktūrinis kapitalas, klientų kapitalas, žmonės kaip technologija.

1. Introduction

Many scientists emphasize the importance of company's value added as the main factor of a normal and stable every company's activity (Kay 1995; Berry 1996; Herling 2000; Malgioglio *et al.* 2001; Zapata 2001; McLean 2006; Godoy 2008; Wang, Swanson 2008; Pitelis 2009; Bowman, Ambrosini 2010; Bang *et al.* 2010; Díez *et al.* 2010; Hughes 2010). Every company is trying to increase its value added as much as possible. Formerly, one of the main resources was tangible assets: buildings, machinery, real estate, equipment and other smart mechanisms. However, the changing environment replaced the perception of company's value added sources. Intangible assets as well as intellectual capital make influence on company's value added and even increase it. Many scientists were analysing and they are still investigating these two processes (Edvinsson, Malone 1997; Stewart 1997; Ulrich 1998; Bontis 1999; Mikulėnienė and Jucevičius 2000; Palumickaitė, Matuzevičiūtė 2007; Sanchez 2007; Zéghal, Maaloul 2010). In essence, intellectual capital increases company's value added, but intellectual capital is a difficult concept that has no clear definition. Nevertheless, it is composed of mainly three components: human capital, structural capital (organisational) and customer capital (client capital). In addition, there are scientists (Sveiby 1996; O'Donnell and O'Regan 2000) who assume that intellectual capital is composed of the following three main parts: external structure, internal structure, and human capital. As we can see, the definition, the structure and the relation between company's value added and intellectual capital is not clear. In addition, there were only few articles about the influence of company's value added on intellectual capital itself. That is why *the problem* arises – how to identify coherence of company's value added and its intellectual capital? *The object* of this paper is company's value added and its intellectual capital coherence. *The aim* is to evaluate the cohesion between company's value added and intellectual capital. *The objectives of the article are as follows:*

- to reveal the main theoretical and practical aspects of the company's value added;
- to detect the main theoretical and practical aspects of company's intellectual capital;
- to discover the cohesion between company's value added and intellectual capital;
- to present the results of the research on company's value added and its intellectual capital coherence;
- to introduce the company's value added and its intellectual capital model.

Methods of research: comparative analysis of scientific literature, statistical analysis, GNB matrix method.

2. Company's value added

The definition of nowadays economy might be called "knowledge economy" because basically everything is based on information and knowledge. Value added is important for all the companies all over the world. As Warren Buffett, the Chairman of Berkshire Securities said: "Price is what you pay – value is what you get", the value added can be called "what you get" after all expenditure.

J. Kay (1995) describes company's value added as "the difference between the value of a firm's output and the cost of the firm's inputs." Firm's outputs and inputs, according to J. Kay (1995), are comprehensively accounted. He also emphasises the importance of company's value added and defines it as "the key measure of corporate success".

Lithuanian companies also measure their value added. It is calculated in the same way according to the formula for all types of companies, except individual companies (the Lithuanian Statistics Yearbook 2009).

$$\begin{aligned} \text{Value added} &= \text{Income from sales of goods and services} \\ &+ \text{The capitalized production} \\ &\pm \text{Change in inventor during the year} \\ &= \text{The purchase of goods and services} \\ &+ \text{Subsidies on products and production} \\ &- \text{Taxes on production and products} \end{aligned}$$

For individual companies the value added is calculated according to another formula. Individual companies frequently have more simple procedures than the others. That is why the formula is much easier to calculate.

$$\text{Value added} = \text{Total revenue} - \text{The cost of expenditure}$$

Value creation is not as easy as it seems: only difference between incomes and expenditures. D. P. Lepak *et al.* (2007) emphasise that one of the most important concepts in the management and organisation is value added, but the value creation itself is not well understood. D. P. Lepak *et al.* (2007) revealed that "value creation depends on the relative amount of value that is subjectively realised by a target user (or buyer) who is the focus of value creation". In addition, C. Helfat *et al.* (2007) describe value and value creation as "willingness to pay minus opportunity costs". Likewise willingness to pay is from the customer / client's side and opportunity costs are from the company's side. It is quite an interesting point of view that can be the goal for every company (Fig. 1).

Nevertheless, value added can be understood as well as only from company's point of view. C. C. N. Pitelis (2009) gives the definition of value: "Value is perceived as worthiness of a subject matter to a socio-economic agent that is exposed to and / or makes use of the subject matter in question".



Fig. 1. Value added according to Helfat *et al.*

In addition, knowledge and information are very important in nowadays changing knowledge economy. P. F. Drucker (1993) accentuates this and emphasises that “main producers of wealth have become information and knowledge”. The importance of information, all knowledge of work force can accelerate and increase company’s value added. However, the knowledge can be useless if it is utilized in an inadequate way. For instance, a great informatics specialist and his knowledge would not create any value added for a sewing company and vice versa – a great sewing specialist would not create any value added for a company that offers informatics services. That is why P. F. Drucker (1993) emphasises not only the importance of knowledge, but also the knowledge productivity. According to him, “knowledge only becomes productive by fusing different kinds of specialised knowledge into something that makes a difference”. The following question arises: how to create a business value? Drucker (1992) argues that all work should be organised and related with the task and its flow. The mate should be the “time”. P. F. Drucker (1992) accentuates that “the only thing that is variable and controllable is how much time a given process takes. And benefit is whatever reduces that time”. In this case, if an employee is a sophisticated and highly educated person, he will manage to do his works and tasks quickly.

C. Bowman and V. Ambrosini (2010) divide value added into two different parts: use value and exchange value. Use value is “all products and services that provide utility”, while exchange value is “a monetary amount exchanged between the firm and its customers or suppliers when use values are traded”. This means that use values are converted into exchange values when they are sold. In addition, use values include both – tangible and intangible assets. Use values can be any equipment, machinery, buildings, software, installations and human inputs in the form of accomplished tasks (services or activities).

Another interesting and new concept that increases value creation for any company is created by C. Hughes (2010). She proposes a “people as technology” conceptual model. First of all, she introduces two types of value creation – value is created through *technology development* and value is created through *human capital investment*. Scientists, who follow the strategic technology management theory, believe that value is created through technology development while those, who observe the human resource management and economics theory, accentuate the value creation through

human capital perspective. In addition, scientists, who follow human resource management theory, exclude three main components of value creation:

- training and development;
- career development;
- organisation development.

C. Hughes (2010) involves these components into model “People as technology” and incorporates them into the human resource development section (Fig. 2).

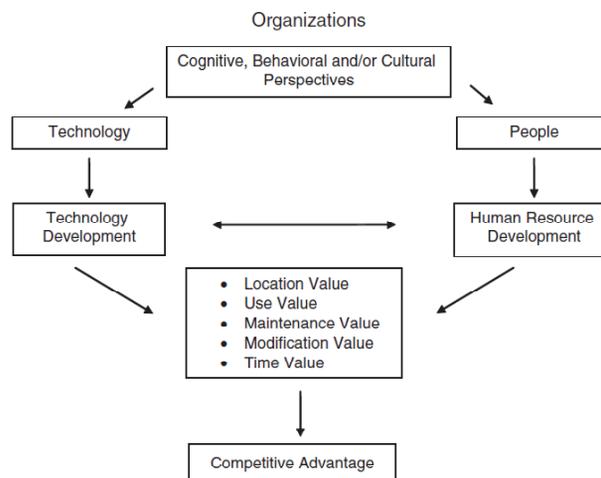


Fig. 2. The conceptual model of “People as technology” (Source: Hughes 2010)

Figure 2 shows that competitive advantage of every company is composed of different types of values: location, use, maintenance, modification, and time value. Both human resources development and technology development create these values and they are related with each other. This model “relates the development of people to the technology development processes used within organisations and involves a more proactive, strategic approach toward human resources development within organisations”. In addition, people and technology are impacted by the cognitive, behavioural and cultural perspectives that “live” in all types of companies. Also in this model different types of value in the company were used:

- location value – power and structure inside companies;
- use value – created value within the workplace;
- maintenance value – “preventive maintenance systems and processes and investment in tools needed to maintain technology”;
- modification value – “expressed through upgrades and minor or major modification of the technology”;
- time value – time interval or time gap that is necessary for human or technology in order to accomplish their tasks.

Nevertheless, the C. Hughes's (2010) conceptual model is not highly related with the company's value added, but it also shows a new form of value creation and emphasises the human capital perspective, which involves informational and knowledge skills. These skills are related to intellectual capital. But this concept is still under debate.

One example from real world shows the existence of intellectual capital and its strong impact on company's value added. The success of Microsoft Software Company and the example of its founder Bill Gates showed for the entire world that strong and high intellectual capital can increase and even boost company's value added. In the newspaper "Time" he accentuated that the success of his company was due to the very intelligent employees. He searched for those people who are sophisticated, have a strong will to win, have a vision and want to generate the high flows of value added. That was the great success of Bill Gates.

Spanish scientist J. G. A. Godoy (2008) assumes that value added is calculated by the combination of profitability and risk. It is described as the function of financial resources and capital costs and this function should satisfy shareholders' needs. J. G. A. Godoy (2008) sees intellectual capital as the liability of the company as there are many working people who create the value for a company. He even proposes the distribution of company's assets and liabilities (Fig. 3).

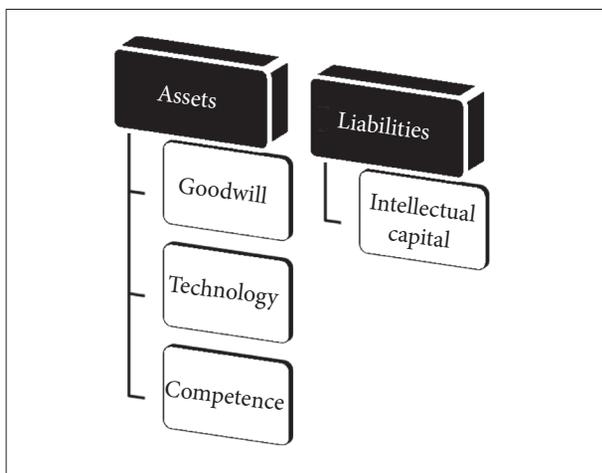


Fig. 3. Distribution of company's assets and liabilities (Source: Godoy 2008)

J. G. A. Godoy (2008) emphasizes the importance of company's value added and its intellectual capital. He accentuates that companies incorporate, train and try to sustain all intelligent and qualified employees in order to increase their company's value. J. G. A. Godoy (2008) proposes that "the intellectual capital is an intangible value that should incorporate into the financial state like part of the generation of all workers' of an organization value".

To conclude, company's value added is the difference between inputs and outputs, it is the difference between company's inputs and expenses. In addition, there is coherence between company's value added and its intellectual capital.

2. Intellectual capital and its relation with the company's value added

Many scientists have quite a similar opinion about intellectual capital and its definition. Bontis (1999) considers that intellectual capital is everything that is in a company: all intangible resources and processes that belong to the company, patents, innovations, and customers, tacit and explicit knowledge. Tacit knowledge is such knowledge that cannot be transferred to other people and cannot be written or described. For instance: studying, learning, training, and improving. Tacit knowledge cannot be transferred due to the fact that it is impossible to explain how a person learns or improves himself; it is hard to explain the process of learning. Explicit knowledge, vice versa, is the knowledge that can be expressed easily. This means that explicit knowledge can be coded, saved and incorporated in a special media, like computer files, USB keys, compact discs and other media equipment. For instance: procedures, documents, tutorials, and routines.

T. A. Stewart (1997) expresses a very interesting opinion about intellectual capital. He claims that intellectual capital is not a professors' sitting in locked laboratories, it is not an intellectual property. According to him, intellectual capital is the sum of everything what everybody knows in a company. He specifies that it is the knowledge of a labour force, improvement and intuition. T. A. Stewart (1997) describes intellectual capital as a bunch of useful knowledge that exists in a company and in a company's employees.

According to the International Federation of Accountants (IAFC 1998), intellectual capital is a capital property that is based on knowledge. D. Ulrich (1998) is of the same opinion – he claims that intellectual capital is knowledge and skills that employees have. L. Edvinsson and M. S. Malone (1997) affirm that intellectual capital is management of employees' knowledge, experience, skills, customer relations, technologies and innovations.

B. Campos (1998) describes intellectual capital as the composition of basic competences that allow creating and sustaining company's competitive advantage. C. L. Calvo *et al.* (1999) consider that intellectual capital is a key determinant of the value added of the company. It is related with the existence of competitive advantage.

J. E. V. Zapata (2001) investigated intellectual capital as the value added factor and he assumes that the main source of company's value added is on the investments in human capital and informational technology. He accentuates that in all companies continuous learning, innovations and inte-

grated growth must exist. Everything has to be done according to values and principles that must be in all companies which want to have their competitive advantage and seek to increase its value added. These values are as follows: humanism, excellence, responsibility, and cooperation. Person who works in a company where these values are core values has a different attitude, high motivation and high learning and self-development skills. J. E. V. Zapata (2001) explores that the company's value added (*Spanish: valor agregado*) is in the intellectual capital and its main components: human capital (*Spanish: capital humano*), structural capital (*Spanish: capital estructural*) and customer capital (*Spanish: capital cliente*).

J. M. Díez *et al.* (2010) also accentuate the importance of intellectual capital as the factor of company's value added. They performed an exploratory analysis on the concept of intellectual capital and company's value added. The research was carried out according to the European Commission in the RICARDIS report's (2006) given definition of intellectual capital:

"Intellectual capital is defined as the combination of the human, organizational and relational resources and activities of an organization. It includes the knowledge, skills, experiences and abilities of the employees; the R&D activities, the organizational routines, procedures, systems, databases and intellectual property rights of the company; and all resources linked to the external relationships of the enterprise, such as customers, suppliers, R&D partners, etc."

According to this definition, J. M. Díez *et al.* (2010) focused only on human capital and structural capital. Human capital was considered as the sum of knowledge, skills and experience that have employees in the company and structural capital was assumed as the amount of all structures and mechanisms that an employee can use in order to gain his goals. The results of an exploratory analysis showed that company's value added and its intellectual capital were related to each other; they are coherent. This means that intellectual capital increases company's value added as well.

Y. C. Huang and Y. C. J. Wu (2010) also consider that company's value added is related to its intellectual capital. Despite this fact, they accentuate that intellectual capital itself is related to knowledge productivity. Overall, then company's value also depends on the intellectual capital and knowledge productivity. This concept can be interpreted differently:

- knowledge productivity can be understood as a result (Machlup 1972);
- knowledge productivity can be understood as a human ability (Drucker 1999).

Y. C. Huang and Y. C. J. Wu (2010) defined both types of knowledge productivity and described it "as the capability with which individuals, teams, and units across an organization achieve knowledge-based improvements and innovations". Some of the main factors that influence knowledge productivity are as follows: task, autonomy, continuous learning and

teaching, innovation, quality and "treating the knowledge worker as an asset rather than a cost". In order to investigate the relation between company's value added, its intellectual capital and knowledge productivity, the research was carried out and intellectual capital was understood as the sum of three capitals: human, organizational and social capital. Y. C. Huang and Y. C. J. Wu (2010) accentuates that all knowledge that is in the company is in the wealth creation process: individuals can improve themselves and stimulate the growth of the company as well as the increase of value added. The results showed that the knowledge productivity had significantly positive relation to company's value added and intellectual capital.

In order to sum up the theory of intellectual capital and its relation to company's value added, the "sum up" table was organized (Table 1). It shows intellectual capital definitions offered by different authors. These definitions can be clarified by the following criteria: either it is related to intangible assets, knowledge, management of knowledge, competitive advantage, value added or value added and knowledge productivity. For instance, T. A. Stewart (1997) describes intellectual capital as the sum of everything that everybody knows in a company. The word "knows" is emphasized, that is why the main criteria of this definition are "knowledge". The next column shows the intellectual capital structure and the last one shows the author and the year in which the intellectual capital theory was investigated.

Table 1 shows that basically later intellectual capital was understood as knowledge, skills or experience. During the years intellectual capital's meaning changed a little, and mainly value added or competitive advantage were emphasized most. The latest intellectual capital description (Huang, Wu 2010) was related not only to company's value added, but also to knowledge productivity. In addition, the table shows intellectual capital structure. Most common structure is composed of three main components: human capital, structural capital and customer capital. International Federation of Accountants (1998) structure is composed of internal, external and human capital. Internal capital is all the processes that take place in a company. External capital is all the relations with clients and suppliers. D. Ulrich (1998) offers that intellectual capital structure is composed of competence and commitment due to the fact, that he describes intellectual capital as the multiplication by these two elements. C. L. Calvo *et al.* (1999) offer more intellectual capital components: human capital, structural capital, customer capital, commercial secrets, intellectual property, and innovation capital. Different types of intellectual capital elements do not mean that some scientists are wrong or that they are making mistakes. The structure depends on what they are trying to investigate and from what point of view they are viewing.

To conclude, different scientists differently describe intellectual capital as a concept. In this case, intellectual capital is understood as the sum of all knowledge in the

company that is able to generate company's value added. It is affected by knowledge and knowledge productivity. In addition, intellectual capital is related to the company's value added and has a strong impact on it. The structure of intellectual capital depends on the investigation type. Basically, it is composed of human, structural and customer capital. In this case, this type of intellectual capital classification will be used.

3. Results of the research

In April – August 2010, a survey of Lithuanian small and medium-sized companies was conducted. The subject of the analysis was intellectual capital and its components and how company's value added affects its intellectual capital.

428 representatives of small and medium-sized businesses were surveyed. Those companies were selected ran-

domly. A sample of respondents was measured according to the formula:

$$n = \frac{1}{\Delta^2 + \frac{1}{N}}, \quad (1)$$

where:

n – sample when error probability $P = 0,95$,

N – general population,

Δ – allowable size of sample error ($\Delta = 0,05$).

The sum of respondents, according to the formula (3), was nearly 400.

$$n = \frac{1}{0,05^2 + \frac{1}{83201}} \approx 400. \quad (2)$$

Table 1. Intellectual capital structure

Intellectual capital definition	Criteria	Intellectual capital structure	Author (year)
Intellectual capital – <i>all intangible resources and processes</i> that belong to the company, patents, innovations, customers, tacit and explicit knowledge.	Intangible assets	Human capital Structural capital Customer capital	Bontis (1999)
Intellectual capital – the sum of everything that everybody <i>knows</i> in a company.	Knowledge	Human capital Structural capital Customer capital	Stewart (1997)
Intellectual capital – a capital property that is based on <i>knowledge</i> .	Knowledge	Internal capital External capital Human capital	International Federation of Accountants (1998)
Intellectual capital – <i>knowledge</i> and skills that employees have.	Knowledge	Competence Commitment	Ulrich (1998)
Intellectual capital – a <i>management of employees' knowledge</i> , experience, skills, customer relations, technologies and innovations.	Management of knowledge	Human capital Structural capital Customer capital	Edvinsson and Malone (1997)
Intellectual capital – the composition of basic competences that allow to create and sustain company's <i>competitive advantage</i> .	Competitive advantage	Human capital Structural capital Relational capital	Campos (1998)
Intellectual capital – a key determinant of the <i>value added</i> of the company.	Value added	Human capital Structural capital Customer capital Commercial secrets Intellectual property Innovation capital	Calvo <i>et al.</i> (1999)
Intellectual capital – the <i>value added</i> factor in a company.	Value added	Human capital Structural capital Customer capital	Zapata (2001)
Intellectual capital – the factor of company's <i>value added</i> .	Value added	Human capital Structural capital	Díez <i>et al.</i> (2010)
Intellectual capital – related to <i>value added and knowledge productivity</i> .	Value added and knowledge productivity	Human capital Organisational capital Social capital	Huang and Wu (2010)

First of all, company's intellectual capital was divided into three main parts and respondents were asked to evaluate them. The question was: "Evaluate these factors that influence company's value added". According to the Likert scale, five answers were given: significantly increase company's value added, increase company's value added, have no influence on company's value added, decrease company's value added and significantly decrease company's value added. The results are presented in the diagram (Fig. 4).

Figure 4 shows that the most important element that influences company's value added is human capital (mean – 3.87). Customer capital is less important than human capital (mean – 3.7991). Structural capital, however, is very important too (mean – 3.6927). The significance of these numbers in the Likert scale is "important". The results of this diagram show that human capital is one of the most important sources for company's value added increase. A more sophisticated, educated and skilled worker manages to do the tasks faster, more fluently and without many mistakes. It can assure the professionalism and cost saving for any company, especially for those, which are coping with the customer service.

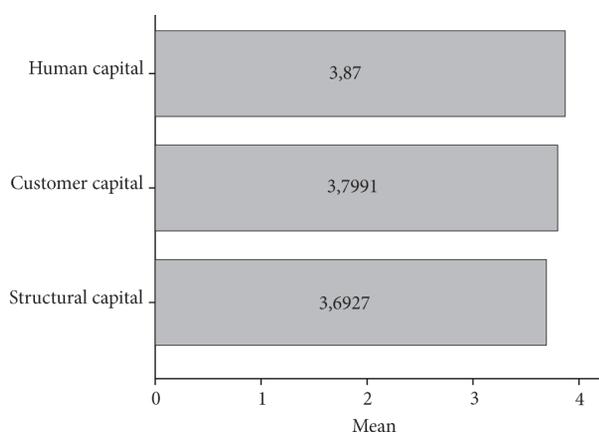


Fig. 4. The importance of intellectual capital's components for company's value added



Fig. 5. The importance of intellectual capital factors for intellectual capital itself

In addition, it was analysed how company's value added influenced intellectual capital. Previously it was analysed what the main factors that influence intellectual capital were and only the most important ones were selected (Mačerinskienė, Survilaitė 2010). The respondents were given intellectual capital elements that were taken from three main components (human capital, structural capital and customer capital). The results are presented in the diagram (Fig. 5).

Figure 5 shows that the product quality was mentioned as the most important element for intellectual capital (mean – 4.133). In the Likert scale it means "important". In addition, all other elements were defined as important (if mean is from 3.5 to 4.4): motivation, customer relations, experience, prestige, education, workers' communication, the uniqueness of the product, informational technologies, effectiveness of activity, innovativeness, supplier relations, culture, relations with financial institutions, databases, social activity, trademarks, governmental support and R&D. The results show that intellectual capital is very important for company's value added and intellectual capital can increase it. While all parts of intellectual capital are gathered and managed together as well as the company has the core values related to the knowledge productivity, companies can generate high flows of value added.

To sum up, it is important to understand, how intellectual capital is related to company's value added. The results of the survey showed that intellectual capital increased company's value added. There is no data how value added affects intellectual capital. Due to this reason, it is necessary to investigate this feedback further.

4. The company's value added and its intellectual capital model

According to the literature about company's value added and its intellectual capital, the model showing the coherence of these two concepts was composed. The method of contingencies' dimensions was used in order to design this model. One of the most popular types of this method is Global Business Network (GBN) matrix method. This method was created by Pierre Wack and popularized by Peter Schwartz (1991) in his book "The Art of the Long View". The main point of this model is scenario writing and the choice of the best suitable one.

According to GBN, it is necessary to identify eight steps in order to create a script. The following steps comprise the GBN methodology:

- **Step 1:** Identify the main problem.
- **Step 2:** What are the major domestic factors (muscles), with the greatest impact for addressing the problem in question?

- **Step 3:** What are the most important external factors that are owned and controlled by local factors? What happens if they are to be removed or replaced by the action line?
- **Step 4:** The second and third step listed factors are ranked in order of importance and uncertainty.
- **Step 5:** Definition of scenario logic. This is needed in order to find out the main axes in the model. These axes will form a matrix, which has different and detailed scenarios. This is the hardest step of the script method.
- **Step 6:** Developing a script. The aim of this step – to create a script stories.
- **Step 7:** Checking scenarios. In this step it is necessary to answer what conclusions can be done. It should be stepped back to the basic problems and decided if scenarios can be considered as fixed ones or in some cases there is a common scenario.
- **Step 8:** Monitoring the establishment. In this step, the model should be observed in order to modify some discrepancies.

Following these eight steps the company's value added and its intellectual capital model was designed (Fig. 6).

Figure 6 shows that two axes (company's intellectual capital and company's value added) are related together and can be analyzed according to the GBN method. First of all, the horizontal axis shows company's value added size while the vertical axis shows company's intellectual capital size. In the field between these two axes there are four main scenarios:

I – when company's intellectual capital is high but its value added is low. That could mean that there is an inap-

propriate use of intellectual capital. Maybe company does not cover all the possibilities that intellectual capital could offer.

II – when company's intellectual capital and its value added is low. It can happen due to the inappropriate use of intellectual capital and also maybe company does not cover all the possibilities that intellectual capital could offer. In order to increase company's value added and its intellectual capital it is necessary to pay attention to human capital – whether it is qualified, educated and motivated enough.

III – when company's intellectual capital is low, but its value added is high. It means that company has many possibilities to create its value added, but despite this fact, there is inappropriate usage of intellectual capital.

IV – when company's intellectual capital and its value added is high. This means that company properly uses intellectual capital and covers all the possibilities that intellectual capital owns.

To conclude, the GBN method helped to create company's value added and its intellectual capital model. This model helps better understand intellectual capital and value added coherence and supports in defining in which scenario the company is. When company defines it, appropriate conclusions can be made and managers can improve company's activity. In addition, company's value added and its intellectual capital model is new and it needs a lot of further investigations in order to improve its validity.

5. Conclusions

The importance of intellectual capital, its components and knowledge productivity is non-negotiable. Nowadays companies are trying to manage their work properly and to increase the value added. Company's value added can be

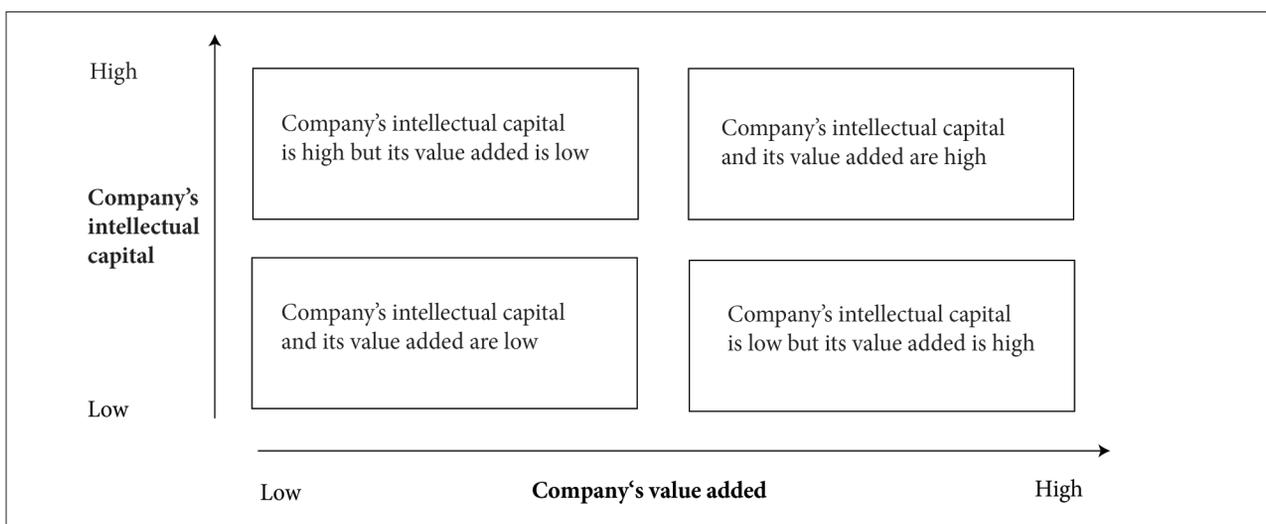


Fig. 6. Company's value added and its intellectual capital model

described as the difference between inputs and outputs, as the difference between company's inputs and expenses. In addition, there is coherence between company's value added and its intellectual capital.

Many scientists were analyzing intellectual capital and its relation with company's value added. Intellectual capital is understood as the sum of all knowledge in the company that is able to generate company's value added. In addition, intellectual capital is related to the company's value added and makes a strong impact on it. In this case, the structure of intellectual capital is composed of human, structural and customer capital.

The survey was carried out in order to better understand how company's value added and its intellectual capital are related. The results showed that intellectual capital increases company's value added. Also the most important element of intellectual capital that influences value added was the product quality. Despite this fact, there is no data how value added affects intellectual capital. Due to this reason, it is necessary to investigate this feedback further.

Using the GBN method the model of company's value added and its intellectual capital was created. This model shows in which scenario (position) the company is. When company defines it, appropriate conclusions can be made and managers can improve company's activity.

Finally, according to the opinion of the authors, in order to verify the model many investigations should be carried out, some surveys must be performed and the opinion of experts should be gathered and analyzed. Due to further researches the model can be specified and corrected.

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