

Configurations of Corporation's Capitals

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Doi:10.5901/mjss.2015.v6n5s3p317

Abstract

The paper describes a new campaign to solve an actual problem concerning the formation of the capitals' corporation configuration (capitallogramms). The formation of capitallogramms, consisting of a core, fringe and capital in its internal space, is considered to be one of the areas of introduction of the corporation management capacity into the solution of the corporation's problem. The hypothesis of the study is that the configuration of the corporation's capitals may be designed by analogy with the structure of the corporation, the functioning and development of which is determined by means of interaction between its real and fictitious capital defined by the intellectual human capital, the nature of power, a content of mechanisms of the property inclusion into the reproduction process and harmonization of interests of the subjects of corporate relations. The paper gives the author's definition of a new term "capitallogramm". The feature of the proposed structure of the corporation's capitals is the formation in some configurations of capitals (capitallogramms) which are the "grids" consisting of a "core", a "fringe" of capitals or framing a "core". It also offers operations of a synthesis or a configuring of capitals' elements and on the whole over capitals, resulting in the capitallogramms' formation. The paper has considered a graphical representation of the capitals' configuration in the form of a modified enneagram. It has brought forth the problems concerning the capitallogramms' formation in the inner space of the corporation. The human capital, which has the ability to be self-expanding value, has the leading role in such combinations creation.

Keywords: real and virtual components, harmonization of capitals, capitallogramma, complementarity, substitution of capitals.

1. Introduction

The general idea of the authors' proposed approach is that the development of the corporation is based on the allocation of its internal space and the creation of a special capitals' configuration (natural - resource, physical (industrial), financial, human, entrepreneurial, social, consumer or client (marketing), organizational, informational). The configuration and the structure of the enterprise's capitals should be formed under the decision of certain strategic issues of a corporation which are typical for transition to the post-industrial society.

Formation of a harmonious capitallogramm consisting of real, virtual and environmental components and having different topologies creates the conditions for resolving conflicts and solving problems in the modern corporation, the harmonization of corporate relations, which ultimately will lead to improving quality of management decisions and create conditions for reducing the probability of occurrence of the crisis in corporate activities.

By a *capitallogramm* we understand the effective combination of a real component and the financial capital and a virtual component (intangible forms of capitals), as well as social - communicative relationships, institutions (norms, traditions, procedures), the organization (experience, culture, models) which are created during the active participation of the human and specially intellectual capital, lying at the base of the vertical of power and competitive advantages of a corporation (Ermolenko, 2012).

The formation of adequate characteristics of the chosen development strategy of the capitals' configuration corporation (capitallogramms) refers to the number of actual scientific problems, which is solved in the practice of strategic management by empirical methods.

The authors' research efforts are focused on the development of elements of the technology of a synthesis of capitallogramms in the internal space of the corporation.

2. Literature Review

The fundamental ideas of building the harmonious capitals' configuration were presented by J. Clark. He recognized the possibility of substitution of one factor by other, the allocation of such factor which is dominated by the formation of an effective combination of a capital. As the subject of the economic process the entrepreneur selects the most effective combination of the basic factors of production taking into account natural relationships between them (Clark).

Complementarity means that the value of two (or more) products at a joint consumption is higher than each one separately. Milgrom and Roberts merit is that they have extended the concept of "complementarity" to the company's resources also. They give the following definition: several activities are considered complementary if the increasing volume of any of them increases (or at least does not reduce) the marginal profitability of each of all other activities of the group. Milgrom and Roberts make a conclusion: the evaluation of complementary elements of the organization which has achieved success - how they interact with each other and how they fit with the strategy of the company - is one of the most challenging and promising sections of the organizational analysis (Paul Milgrom and John Roberts, 1990).

K. Zimin comes by analogy and gives the following definition of complementary assets: assets that complement each other so that the increase of one asset increases the effect of the other. Complementary assets are mutually increase the effectiveness of each other and must be developing together. Moreover, the main problem with the company interferes with is the choice of a work strategy with complementary assets. Only coordinated changes in all variables will allow the company to achieve a maximum profit. But how to define the set of assets, that has to be changed in order to maximize the profits of the enterprise? (Zimin, 2001).

V.S. Kalkalo notes that scientific literature pays much attention to the methodology of solving the problems of the formation of, as a rule, the natural - resource, financial and industrial capital, and considers the complementarity of capitals and replacement of capital's elements (Kalkalo, 2008).

V.V. Ermolenko thinks that capitals of the modern corporation have the following set of the following properties:

- have a purpose of existence;
- have a structure consisting of elements, connections and relationships;
- have the ability to the joint movement with other capitals in the economic process;
- have the ability to conversion, i.e. the permanent change of ownership forms;
- are included in the cost of the process circuit, in which the money form at the same time sets a starting point and end point of the motion; they are limited, dynamic, saved, and replenish resources;
- have the ability to accumulate; they are the subject of ownership and management;
- may be involved in the economic process;
- have liquidity, i.e. the ability directly or indirectly, regardless of their objective forms, to come into the money form;
- have the cost by which is understood the quantitatively determined ability to be exchanged for other resources;
- bring extra (surplus) cost (profit) in the process of circulation, i.e. it acts as a self-expanding cost (Ermolenko, 2012).

P. Bourdieu, analyzing the forms of capital, goes far beyond the scope of the economic theory and the category of the traditional economic capital. For example, using the cultural capital he considers its three states: incorporated, objectified, institutionalized. He argues that the ability to convert various types of capital is the basis of strategies which are directed to ensure the reproduction of capital by conversion, minimizing costs and losses, which involves the conversion itself (Bourdieu, 1993).

V.V. Radaev has extended these states on all forms of the capital, and has noted that in the initial determination of the political and economic determination the capital has a number of constituent properties: the limited economic and cumulative resource which possesses certain liquidity and the ability to turn into the money form, the cost reproducing in the process of the continuous circuit in forms and bringing new, additional cost. And by the capital, he understands the cumulative economic resource that is included in the processes of reproduction and growth of the mutual cost through the conversion of its various forms. (Radaev, 2002).

V.I. Ivanus considers the nature of occurrence of the mechanisms of harmonization of capital and their use in the management of innovation development of economy, using cognitive technology (Ivanus).

V.V. Ermolenko and D.V. Lanskaya consider the problem of providing the capital configuration adequacy of the chosen strategy of the corporation development (Ermolenko. 2012, Lanskaya). New methods of the construction of the objective function of the corporation, whose arguments were the elements of the various capitals, described by some functional dependencies, are required to solve this problem. They think that procedures of the capital configuration are determined by the type of knowledge reproduction which is realized in the corporation (Ermolenko.).

Therefore, the actual problem in the strategic management of corporations is to develop mechanisms for the harmonization of interests of the subjects of corporate relations and to build a configuration of capitals corresponding to the peculiarities of the current system of the corporate's strategies.

The hypothesis is that the configuration of capitals of the corporation may be designed on analogy with the structure of the corporation, functioning and development, by which is determined by means of interaction between its real and fictitious capital defined by the intellectual human capital, the nature of power, the content of mechanisms of the property inclusion in the reproduction process and harmonization of interests of the corporate relations' subjects.

The analysis of a life cycle of American, European and Russian companies for the last century, the root causes of the collapse and ruin has revealed the following patterns:

- corporations in their development face crises;
- crises are caused by the appearing imbalances or the lack of harmony between the external and internal factors;
- the precondition of crises is a discrepancy between the corporation's strategic system and capital (tangible and intangible) formed for the implementation of strategies;
- the effectiveness of the corporation activity depends on the level of formation of the subject structure (a degree of interests' coordination of partial and integral subjects);
- the involvement of the real and fictitious capital in realization of the expanded reproduction of the generating type.

The presence of coherence, harmony in the proportions of components of the material and immaterial capital significantly enhance the quality of the adaptation of the corporation and make its successful and prosperous development, and their absence leads to inefficient use of resources, to the collapse of the business and the decline (the crisis).

V. Dahl's dictionary a harmony is defined as ... the consistency, harmony together with something ", and the Great Soviet Encyclopedia gives the following definition: "Harmony – accord, consent, consistency ... of parts in dismembered general".

There are multiple types of capital and they raise the issue of the construction of their efficient configuration.

3. Methods

The idea of harmony and consistency of parts as a whole would be useful in relation to the corporation. This fact has prompted a search of ways of constructing of optimal capitallogramms which in the tasks of management of the market systems which the principle of harmonious order and consistency of all components of systems both inside between each other and with the external factors.

O. Inshakov's ideas about the formation of the core of capitals of the organization make it possible to make a conclusion about the possibility of forming of the corporation's capitals configurations. This configuration of capitals, including the "core" and "framing", is determined by the conditi of the external and internal environment, priorities, strategic objectives, the chosen strategy of business development, as well as the limited resources available to the corporation (Inshakov.).

The peculiarity of the proposed corporation capitals' structure is to form in it some configurations of capitals (capitallogramms), which are "grids" consisting of:

- "cores" of capitals, including a material component, the financial, human and technological capital;
- "fringe" or framing of the "core" consisting of capitals of a virtual component: the market (customer), innovation, social, organizational and capital capital;
- environment capitals forming the scope of the mental, cultural, informational, intellectual and institutional capital.

One of the areas of involvement of the corporation's management capacity in the corporation's problem solution is considered to be the formation of capitallogramms, consisting of a core, fringe and capitals in its internal space.

The "core" of capitals is a transformational part, including a material component, the financial, human and technological capital and focuses on the transformation of raw material, energy, and resources involved in the production process to meet the needs of the community in knowledge, information, products and services.

Framing of the "core" is a transactional portion consisting of a part of the virtual component: the market (client), innovation, social, organizational, and structural and other capitals.

The environmental capital, forming the environmental (external) corporation's space, which is the mental, cultural, information, intellectual, institutional, and other capitals.

The use of capitallogramms in business there is the business structure with clear signs of harmony of all sets and of the internal processes of functioning and external influences. Due to the harmony the effect of creating such new feature, which did not exist before, but which provides the market distinct advantages over competitors appears. It turns out that if to connect and align these components into the unified harmonious structure that, as a result, increases the corporation's "immunity" in relation to the internal and external destructive factors.

Harmonization of relations between the subjects of the corporate relations and capital creates the qualitatively new conditions of functioning and development of corporations.

For formalized description of capitals the following formalism are used: sets, tuples, graphs, ontologies.

Communication and social - economic relations between different capitals within the corporation are treated as the capitals' system, which is characterized by:

- the common objective of the whole sets of components (capitals);
- the submission of objectives of each component of the system and common goals and understanding by each element of any capital of their tasks and understanding the common purpose;
- the implementation of each element of the capital of its functions due to the task;
- the coordination between the system components;
- the inverse relationships between the management and control subsystem in the capital of the corporation.

Over the elements of capitals and capitals as a whole the following operations of a synthesis or configuration, leading to the formation of capitallogramms in the inner space of the corporation (a description of the operations of the corporation capital configuration is shown in the table) many be executed:

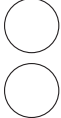

- a deep diffusion of elements to the measure transition with the acquisition of the new systemic quality and the loss of the old identity; this operation by analogy corresponds to the operation of intersection of two or more sets of tuples;
- a surface diffusion approaching the measure border, thus there is a "pollination" of the elements of one capital by elements of the other capital without acquiring the new systemic quality with preservation of elements' identity and capitals as a whole; this operation by analogy also corresponds to the operation of intersection of two or more sets without the measure transition;
- «blotches" of separate elements of the capital in the set of elements of the other type of the capital; this operation can be seen as a special case of the previous operation; this operation has a "dot" character;
- the complementary of elements of one capital by all elements of the other capital ("capitals' grinding") with a full preservation of their identity; a synergistic effect occurs in the course of harmonization of relations between the elements of two or more capitals in the course of their conjugate work;
- the integration of various elements of the different capitals with the formation (generation) of a new community (a cluster) of capitals with its acquisition of fundamentally new systemic properties and the acquisition of a new identity; this operation on its content is composite (complex). The result of the application of this complex operation is the formation of the quasicapital.

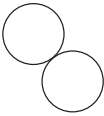


In the creation of such combinations the leading role belongs to the human capital, which has the ability to be a self-expanding value. The essence of the human capital is its ability to provide the universal upgrade of elements of self-propelled cost and their synergy.

The formation of such capitallogramms in the inner space of the corporation is associated with the decision of the following basic set of interrelated issues:

- the synthesis of a strategic objective function of the corporation's development with the definition of arguments - factors;

Table 1 – Description of operations of the corporation's capital configuration

N	Name of operation	Mathematical writing of operation	The essence of the configuration operation and capital	Graphic representation	The set-theoretic description of operation
1	Independent capitals	$A(a_1; a_2; \dots a_n)$, $B(b_1; b_2; \dots b_m)$	Complementary elements of all elements of the capital of another capital ("Capital grinding") with full preservation of their identity		Elements of the capital do not intersect A synergistic effect occurs in the course of harmonization of relations between the elements of two or more of the capital in the course of their work together conjugate
2	Crossing capital	$A(a_1; a_2; \dots a_n) \cap B(b_1; b_2; \dots b_m)$	"The inclusion of" individual elements of capital in the set of elements of different types of capital		Although one element of the two capital complementary to each other. This operation corresponds to the operation of intersection of two or more sets without transition

				arrangements
3	Addition of capital	$A(a_1; a_2; \dots a_n)_A$ $B(b_1; b_2; \dots b_m)$	Surface diffusion approaching the border measures, thus there is a "pollination" of the elements of capital other capital items without acquiring a new quality system with preservation of identity elements in the capital as a whole	 At least one of the two elements intersect capital. This operation can be considered as a special case of the previous operation; This operation has a "point" character
4	The imposition of capital	$A(a_1; a_2; \dots a_n)_I$ $B(b_1; b_2; \dots b_m)$	Deep diffusion elements to the transition measures, the purchase of a new system of quality and the loss of old identity	 All capital elements intersect. This operation is similar to the operation corresponds to the intersection
5	The diffusion of the elements of capital	$A(b_1) \Leftrightarrow$ $B(b_2; b_3; \dots b_m)$	The integration of various elements of the various capitals to the generation of a new cluster of capital with the acquisition of innovative system properties and a new identity.	 Some complementary elements of capital is replaced (to compensate the absence of) other necessary elements of capital. The result of the application of this complex operation is the formation of quasi-capital

- the development of a method description (formalization) of various capitals of the corporation;
- the development of a method of graphic representation of the space - figurative description of capitals' elements and the joint capital of the corporation;
- the development of operations over elements and capitals;
- the development of a method of the ontological modeling of the corporation's capitalogramm;
- the development of a methodology for assessing the completeness of corporation's capitals;
- the development of methods for determining a compliance of the corporation's capitalogramm configuration strategy and its development;
- the technology of the strategic management over the formation and the corporation's capitals set configuration development.

List of operations of the corporation's capitals configuration has an open character.

The graphical representation of the capitals' configuration in the form of a modified enneagram is shown in the figure 1.

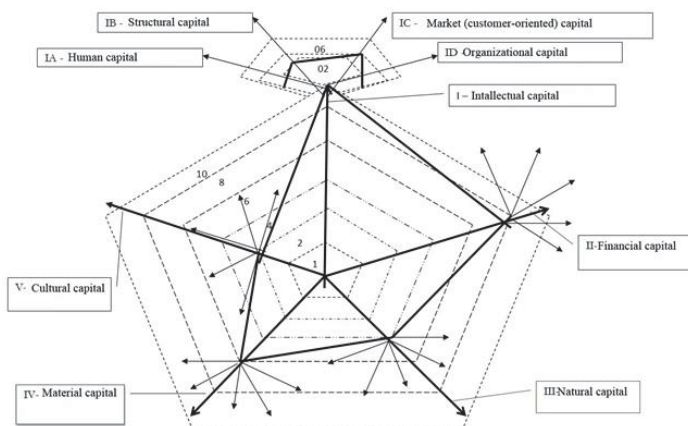


Figure 1 – The graphical representation of the capitals' configuration in the form of a modified enneagram

The graphical representation of the capitals' configuration in the form of Lissajous figures is presented in D.D. Ivanus's figure. The presence of steady signs of harmonization of the economic systems is confirmed by the presence of harmonious proportions (for example, Fibonacci), especially when the matter concerns the processes of the dynamic development.

The need of PUUR ensuring of the corporation is a need to create effective types of combinations or capitallogramms which needs:

- the public mechanism of investing in the human capital development possessing different levels:
- 1) the macro level is presented by the respective national projects on development of different kinds of education, health care, healthy lifestyle, etc.;
- 2) the mesolevel is presented by regional projects on support for gifted children and talented youth, holding competitions, summer and winter science schools;
- 3) the corporate level is presented by corporate investment programs related to the creation of educational - scientific centers, support for talented youth in educational institutions, investment to youth innovation - investment projects, programs for attraction the carriers of unique knowledge and competencies, etc.;
- 4) the level of the household is presented by family programs: the cross financing of additional education for children, the creation of the federal and regional infrastructure for the family support related to the formation of funds of generations' development with the participation of business, municipalities and state;
- 5) the nanolevel is presented by individual programs on individual's self-development connected with the formation of their own educational trajectory in educational institutions of various types, supported by business in the early years of the professional education.

The investment mechanism of human capital demands the following tools:

- 1) the budget co-investment (an irrevocable character is provided by following the terms imposed to the development quality and healthy lifestyle);
- 2) the credit co-investment (by means of commercial banks and corporations on the return basis with a deferred payments for an average duration);
- 3) the leasing (an acquisition of new competencies by the lessee reasoning from the needs of the lessor - the investor and their further redemption by him);
 - new ways to specifications of the human capital among the other assets of the corporation:
 - 4) investment contracts with the owners of the HC on the basis of the use of the results of the capital for the investments' return;
 - 5) the transfer (sale) of long-term contracts with the owner of the human capital to the other economic entities (corporations);
 - 6) the objective investment lending of the owner of the human capital from the corporation for the development with different conditions: with a deferred compensation, with a gradual return, with a one-time write-off of the debt on the loan and insurance in a situation of a risk - the loss of knowledge.

The need in PUUR rises in the process of the formation of a stable core of capitals under the priority role of the human capital providing the synergistic extraction of a socio - economic impact on the basis of the formation of optimal capitallogramms, adequate operating characteristics of the active corporate development strategy.

The dominant IR demand is the necessity of the investment of the human capital and its intellectual component. Methods of specifying the assets of the human capital in the corporation are long-term investment contracts with the owners of the human capital, a transfer of such contracts and the objective investment lending.

Thus, it is established that the requirements act as a manifestation of the imperatives of the development of the human and intellectual capital operating in the modern economics and in the specific environment of the corporation. They are a reflection of the interaction between the subjective and objective elements of the structure of the corporation. Therefore, the classification of needs is made on the basis of the compliance to elements of the object structure and on the basis of the relevant on the basis of the compliance to elements of the subjective structure of the corporation.

Moreover, the correlation of needs and the structure of a process of management decision-making of the corporation is determined. Costs for the intellectual support of unique management in the structure of the corporation's expenses can be referred to transformational or transactional costs. Hence the problem of cost measurement needs of ensuring the making unique management decisions in the corporation serves as actual.

4. Results and Discussions

With the transition to the market economics and the growing influence of intangible factors on the situation of the corporation in the market, the value of the other capital increases, especially in the knowledge economics.

And the essence of a new view to the formation of the corporation's capital configuration is not in their different structuring, but in the allocation and recognition of those types of the capital which were previously ignored and underestimated, and now they are involved in the synthesis of efficient capitallogramms.

The main advantage of capitallogramms becomes their ability to create a new cost. Capitallogramms make the socio - economic impact when their constituent capitals and elements of their capital complement each other and

reproduce each other, i.e. are complementary to each other.

Capitallogramms are a new instrument for realization of the corporation's development strategies along with well-known (the management system, the structure, the budget development, the balanced system of signs, etc.).

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