Corporate innovation system management as a competitiveness factor: Methodological approaches

Administración del sistema de innovación empresarial como factor de competitividad: enfoques metodológicos

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ABSTRACT:
This paper deals with the methodological approaches to the management of corporate innovation system, opening new opportunities for economic development and investment flows based on innovative approaches. Design / methodology / approach Emphasis is made on the research into the corporate management perspective, which should be seen as an important factor of growth of the national economy, the growth of business and intellectual activity of society, and the creation of business infrastructure with favorable conditions for attracting investments and assets renewal. Assessing the essence of corporation and corporate management, specific recommendations for corporate organization are made. The general laws of systemic organization and specific approaches for each individual company / corporation are analyzed. The savings multiplication model is chosen as a basis for organizing a corporation and performing its investment functions. Findings The level of corporate management is one of the processes which directly determine the status of the country in the international community, because it provides for the international integration of organizations. The issue of corporate management organization requires consideration of all the various aspects of its implementation, which have quite specific economic consequences. In this respect, the development of methodological principles for the identification of corporate issues becomes an important

RESUMEN:
Este trabajo aborda los enfoques metodológicos para la gestión del sistema de innovación empresarial, abriendo nuevas oportunidades para flujos económicos de desarrollo y la inversión, basados en enfoques innovadores. Se hizo énfasis en la investigación en la perspectiva de la gestión empresarial, que debe ser considerada como un importante factor de crecimiento de la economía nacional, el crecimiento de negocio y actividad intelectual de la sociedad y la creación de infraestructura de negocio con condiciones favorables para la atracción de inversiones y activos de la renovación. Evaluación de la esencia de la Corporación y la gestión de las empresas, se hacen recomendaciones específicas para la organización empresarial. Las leyes generales de la organización sistémica y enfoques específicos para cada empresa / Corporación se analizan. El modelo de la multiplicación de ahorro es elegido como base para la organización de una corporación y desempeño de sus funciones de inversión. Resultados El nivel de gestión corporativa es uno de los procesos que determinan directamente el estado del país en la comunidad internacional, ya que proporciona la integración internacional de las organizaciones.La cuestión de la organización de la gestión empresarial exige de todos los distintos aspectos de su aplicación, que tienen consecuencias económicas muy específicas. En este sentido, el desarrollo de principios metodológicos para la identificación de asuntos corporativos se
task, which will result in expert proposals to an organization about the functioning its management system. Corporate organization mechanisms, in their turn, are important in working out innovative approaches to management, the basis of its flexibility and adaptivity. The most important factors, determining the elements of large corporate business and its organizational forms are described. Originality / value The study of the theoretical bases and tools of corporate management carried out in the research systematizes their basic elements, substantiates the necessity for the formation of certain economic relationships and hierarchy in management structures, and creates a typified system of features and characteristics which make up the specifics of corporate management functioning.

**Key words:** innovations, innovation system, corporate management

**Palabras clave:** innovación, sistema de innovación, gestión empresarial

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### 1. Introduction

At present, the issue of achieving economic growth in Russia is closely connected with the accelerated development of the innovation sector.

The intensity of companies’ innovation activity under today’s conditions influences to a large extent the level of economic development, while building an innovation economy is one of the most efficient ways to increase a country’s competitive ability.

The position of national companies in the country’s innovation and technological development is conditioned by their specific financial possibilities and large scientific potential, as well as by the structural peculiarity of Russia’s economy, wherein state-owned corporations dominate practically in all sectors. These companies form a considerable portion of budget revenues, thus having a strong influence on providing the stability of the national economy’s functioning.

The quest for a corporate management system adequate to market economy becomes ever more topical for the Russian corporations.

### 2. Method

World practice shows that corporate management, regardless of the used theoretical tools, is generally recognized as providing protection for the participants of corporate relations from the inefficient activity of hired managers.

As the basis of the concept of corporate management we took a rapprochement principle, identification of levels of decomposition of the control (financial, corporate structure) in a company with a hierarchical functioning management system (organizational structure). In other words, the proposed concept reflects the maximum coincidence of the boundaries of legal entities as the structural units of integrated corporate structures, a consolidated center, an association in the sense of functional separation.

A corporation in its essence is one of the forms of joint activity of individual elements thereof, created by business partners for carrying on commercial activity, gaining and distributing profits among its investors.

When selecting ways of organizing corporations and corporate management, one should account for the impact of the whole variety of factors existing in the market economy and of each of them separately. The aggregate evaluation of the factors is the very basis whereon one should choose a certain model of corporate management structuring.

Nevertheless, the following can be recommended in organizing corporations:

- to account for the peculiarity of the branch wherein the corporation is planned to be founded;
- to take into account not only the specifics of organizing corporations and developing corporate relations, but also the level of attraction and adherence of population in relation to them;
- to analyze historical experience of corporations’ development in the international economic area;

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- to analyze historical experience of corporations’ development in the international economic area;
- to evaluate the evolution of the market relations nature in the country;
- to take into account the actual financial position as that of potential investors;
- to assess the possibility of state participation as one of the stockholders or ways of its influence on the corporation’s activity;
- to define the possibility and ways of regulatory agencies’ participation in the corporation’s activity.

Corporations can be classified as follows:
- by their activity type (profit; non-profit);
- by their size (small-, medium-, large-sized entities, mega-corporations);
- by their legal status (state-owned, private, cooperative, mixed-type);
- by their management structure (linear, functional, divisional, matrix, independent profit centre, holding);
- by their sectoral affiliation (producing consumer goods, producing industrial goods, export- or import-oriented);
- by territorial expansion (regional, national, transnational) (Kostin, 2005).

The impact of organizational and economic components of the enterprise business process on managerial decision making is characterized by the fact that the current legislation and legal acts of the Russian Federation do not determine the structure and composition of the corporate business. This is carried out by companies themselves.

However, corporations may also be organized as a complicated centralized management system which is a hierarchy of connected centralized units.

In such a case, the following should be basic features connecting the elements into one united corporate management system:
1) integrity of the system as a unity of mission, objectives and actions;
2) defined borders of the system’s scale as a combination of individual elements;
3) complexity of multi-channel links adapted to the maximum possible simplicity;
4) stochastic behavior of the whole system independently of its complexity and the number of elements included therein;
5) divisibility – the possibility to break down the system into its elements and to unite them into one integral item;
6) a competitive situation wherein an element striving for decreasing the system’s efficiency will always be present;
7) disconnectedness, i.e. each element can be separated from the system and function on its own;
8) hierarchical structure which allows the system to be disintegrated and to the management system to be modified top down and by its components.

The elements of a corporation as a system are investors, stockholders, managers and employees, as well as the individuals and legal entities that are able to act as an element of the system and to form its structure (Kukura, 2004).

The elements of corporate management as a system have the ability of conversion structure; the conversions may be performed by means of:
- association and dissociation;
- change of quantity;
- rearrangement of elements according to the intensity of management action;
- polymerization as a method of associating into a new system, and oligomerization as the opposite process;
- conjunction as constancy of association of two or more heterogeneous systems and hybridization as a method of establishment of contacts;
- achieving of the trigger effect, i.e. a very fast transition of the system from one state into another, in presence of triggering (i.e. acting at the beginning) processes which are able to develop avalanche-
like;
- parallel and convergent conversion, i.e. presence of similarity of processes or identity of the environment;
- heterobathmy as a pattern of various steps in conversion or presence of relatively independent components within them.

In reality there is no identity in the structure of corporations, as well as there are no any absolutely similar systems.

Consequently, one should seek for an individual organization pattern, set of elements and system of functioning for each separate corporation.

When organizing a corporation of various production units as its elements, the main rule is that the selection of them should be able to ensure the consistency of the system's functioning. At the same time, there is no universal selective principle here.

One should take into account the general laws of systems organization.

1. The law of self-preservation and creation of a sustainability mechanism. In this case, the categories of *sustainability* and *stability* are taken as analogous. It is not so, as sustainability means the ability to resist the changes of the environment and promptly (with a high response speed) adapt to these changes, while stability should be perceived as a type of permanence, i.e. qualitative certainty attached to a certain period of time but never to changes.

2. The law of equilibrium supposes the existence of goals and the development of ways to achieve them in an unstable environment.

3. The law of strength ratio, the essence of which is that in each period of time a system is subjected to impacts of various types and intensity; but there is always a "weak link" which cannot withstand even the smallest impacts of the environment ("the thread breaks where it is weakest"). So, such elements of the system should be under constant control, and special operating procedures should be created for them.

4. The law of synergism, according to which the effect of association of elements should be larger than the result of simple addition of effects from their individual action, and the potential of their fusion should be larger than the aggregate potential of their individual functioning.

Synergetic relations and contacts in a corporation can be described as:
- concentration;
- specialization;
- interchangeability;
- complementarity;
- completeness;
- optimality;
- aiming at the maximum effect.

5. The law of development, according to which the ability to develop in a system should be not only maintained but also grow. It should become a self-developing system through upgrading the organization’s forms and ability to constantly achieve equilibrium in response to external situations and their changes. It should be able to independently seek for ways of adaptation to the competitive environment, simultaneously maintaining the concord of interests of all elements included into the system.

Uniting elements into a corporation should possess the following common features.
- An organization is always determined by its personnel and management, regardless of the technical equipping and data processing sphere;
- It is necessary to actively intervene into operational processes;
- It is necessary to combine the processes whose interaction with each other is not purposeful or inefficient;
- Each business system point (BSP as an object thereof) exists only in the unity of organization of production processes and managerial processes;
- The stability in BPS as an organization’s object is achieved by organizational adjustment of corporate management;
- The stability of an organization will be achieved through constant development of equipment, technologies and organizational methods in search for new markets and improving product quality.

The elements of corporate management can act as organizers of:
- production represented by managers of various management levels;
- management as managers who form the activity of administrative personnel.

When organizing a corporation, one should account for the elements of each BSP included into it, in form of:
- materials and equipment, subjects of labor, technological rules regulating the processes of product manufacturing and distribution, the ways of obtaining organizational and technological data;
- socio-economic production potential – personnel, their professional training and labor capability, availability of average life standard conditions and social wealth, norms, rules and methods of establishing relations among the staff.

Thus, the following should be determined in the process of corporate management:
- relations and interrelations that can be established between the elements of a corporation as economic and legal norms and relations;
- relations and interrelations that cannot be established as availability of specialization, cooperation, collaboration, agreeing, harmonization and other processes which may be changed depending on the changes of external or internal environment.

The analysis of systemic features that form managerial solutions on organization of corporations is necessary for assessing the scale of its operations and a definite number of stockholders who can be involved into this activity, taking into account the fact that the aim of involving stockholders is increasing the investment potential of a corporation and its abilities to create innovations as a way to raise market competition (Mazur et al., 2005).

Thus, the selection of a corporation’s elements should be based on the savings multiplication model existing in this country.

The savings multiplication model for investment activity of corporations can be described as follows:

\[ bv = \sum_{i=1}^{m} pv(1+r)^n > pv(1+r)^n, \]  

(1)

where \( bv \) is the consolidated value of funds invested in any form into production for a certain period of time;
\( pv \) is the current value of one stockholder’s investment in production for future income;
\( r \) is the value of planned profitability of investments;
\( n \) is the number of periods of time during which investments will be returned with revenues;
\( 1, \ldots, m \) is the number of participants associated for joint investment activities on a corporate basis.

For real investment conditions in which corporations function, this model should be corrected by the factor of possible inflation at the beginning of the uniting process.

To resolve the issues of innovations development by uniting elements into one single corporation, it is necessary to evaluate (a) the life cycle of that type of product which the corporation intends to produce in certain market conditions, and (b) the phases of development of innovation cycles.

3. Discussion

One of the essential principles of creating corporations is their orientation on innovation processes.

There are various approaches to creating and implementing innovations around the world. For instance, Japan’s special feature is acquiring licenses and patents but not with creating global
innovations inside the country, while Korea tends to increase its own developments. Besides, in the innovation sector there is a certain specialization when each country creates its own special type of innovation developments or products.

In the Russian Federation, a linear approach to creating and implementing innovations has been formed, the essence of which consists in the fact that an innovation process is a chain: fundamental researches – applied researches – technological developments – implementation – manufacture – sale. All these phases, on the one hand, prolong the period of innovations’ coming into practice, but on the other hand, they are characterized with the effect of “value added summing-up” and, consequently, with the increased sale prices of the newly-created items (both innovations and know-hows).

Developed overseas countries demonstrate a non-linear approach based on plotting the intersecting contours of added value from using transfer prices with feedback couplings and with a well-developed network structure, which is possible only in conditions of structuring corporate management and by means of appraising the factors influencing the corporate management quality.

Since recently, active actions have been undertaken aimed at the improvement of innovation activity on the government’s part. However, they are realized not from the bottom upwards (which is more efficient) but from top downwards on the initiative of management authorities or the state as a whole (Tsuglevin, 2003).

Moreover, one can note a certain crudity and unpreparedness of innovation ideas and their insufficient elaboration.

The Russian Federation badly lacks venture funds and ways of attracting funds of outside agencies for innovation developments.

In addition, innovation business is a high risk activity, whereas the general risk grows sharply, taking into account production risks, and thus does not inspire many businessmen to get involved into investment activity.

As a result, the country’s budget funds assigned to the organization of scientific researches get scattered, and priority innovations are only slightly encouraged.

For corporations to exist, it is necessary to define the ways of supporting their vital activities in the form of systems of functioning and development of the organization as a whole and its individual elements in particular. The following should be taken into account.

1) Functioning is a mechanism of maintaining stability of an organization’s vital activities and its functions defining the integrity, qualitative certainty and essential features of its every element.

2) Development is acquisition of a new quality strengthening the vital activities of all elements of a corporation under conditions of the changing environment, even though such changes may lead to a situation which is not the best on the macro level.

Functioning and development within the system of corporate management are very closely connected with each other, reflecting the dialectical unity of the basic trends of socio-economic systems and their influence on all elements of a corporation separately and as a whole.

Corporations are characterized by changes in the subject and instruments of labor, and in the human, at the same time maintaining the motivation of attitude to them based on private property possession.

4. Recommendations

Thus, in Russia at the present time there is a problem of the development of the concentration of production, bringing the level of concentration of finances (organization) of business to a level that ensures a simple and expanded reproduction.

The question of creating a big business is raised, capable of operating on the principles of self-sufficiency and self-financing, to carry out normal reproduction process.

Analysis of the organizational aspects of the formation of large corporate businesses showed that the search for optimal production and management structures of the system as a corporate and group management leads to the introduction and development of organizational forms based on various combinations of large, medium and small businesses.
Such an organization of business must meet three basic requirements: efficiency, constant updating and provision of sufficient sensitivity to changes of internal and external factors. When building corporate structures factors must be analyzed to ensure the implementation of these requirements.

The most important factors, determining the composition of the participants and stimulating the development of different organizational forms of large corporate business, include:

- technological factors of formation of corporate business, the realization of their benefits is possible in the process of integration;
- market factors, allowing more efficient use of the potential within the structure of the company, to save on transaction costs;
- the need to institutionalization and development of financial capital;
- management factors.

Large business begins to take into account the need for institutional development. In particular, business transparency, better corporate management, ethical practices received wide support.

The study of the research literature on the development of corporate management makes it possible to identify a number of deficiencies that negate the effectiveness of corporations:

- the continuation of operations of the units and enterprises, which do not create, but destroy the cost (value);
- inefficient use of existing capacity of competitive enterprises;
- ineffective financing of flows of money generated by the company;
- enterprises do not develop projects with positive net present value;
- a corporation is not able to prevent the misuse of the change of ownership rights of shareholders (minority shareholders);
- corporations are not able to prevent the illegal withdrawal and assignment of assets.

Thus, qualitative corporate management should comply with two conditions:

- managers need to maximize profit of the owners, to ensure the company’s value growth;
- corporation must distribute the profits proportionally to the share of each shareholder in the capital on the basis of clear rules.

The main trends in the development of corporate business are determined:

- focus on the search for cheaper sources of funds on the stock market and the growth of capitalization through public offerings of stock;
- professionalization of the function of the owner and management functions, their division, which generates the need for accelerated implementation and development of corporate culture, corporate management and the development of modern corporate structures;
- formation of the market of corporate management and control; the need to implement corporate management practices - business value management (company).

As the main factors of business development at the present stage are identified:

- the formation and development of large corporations as a form of capital concentration and consolidation and the formation of a new business management style;
- development of the market of corporate management and control; implementation in practice of corporate management of business value (company)
- creation and development of modern large national, regional and inter-state corporations, and in the future, and transnational corporations;
- education of professional managers, who are capable to work on the global markets; improvement of the effectiveness of the corporate management, the development of corporate culture.

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