



International Journal of Economic Research

ISSN : 0972-9380

available at <http://www.serialsjournals.com>

© Serials Publications Pvt. Ltd.

Volume 14 • Number 15 • 2017

Internal Control in the System of Innovation Management in the Modern Business Environment

Elvir Munirovich Akhmetshin¹ Vladimir Lvovich Vasilev¹ Sergey Iurevich Bakhvalov¹
Aleksandra Nikolaevna Prikhod'ko² and Aleksandr Vasil'evich Kazakov³

¹Kazan Federal University, Elabuga Institute of Kazan Federal University, Russian Federation, Tatarstan, 423604, Elabuga, Kazanskaya Street, 89,

²Saint-Petersburg State University of Architecture and Civil Engineering, Russian Federation, 190005, Saint-Petersburg, 2nd Krasnoarmeiskaya Street, 4,

³North-West Institute of Management of the Russian Federation Presidential Academy of National Economy and Public Administration, Russian Federation, 199178, Saint-Petersburg, Sredniy prospect, Vasilyensky Island, 57/43,

ABSTRACT

Introduction: At present, modern companies need to combine tasks of control and innovation development for successful functioning. Internal control should promote innovation activities and stimulate it. One of tasks of the internal control system at a company is timely identification and sustained support of innovation development.

Methods: The authors use scientific methods of research, such as analysis and synthesis, deduction and induction, the laws of dialectics. As special methods, the authors used methods of innovation theory and management theory. The study is based on the works of such scientists as J. A. Schumpeter, N. D. Kondratyev, D. C. North, M. E. Porter, and K. S. Mullakhmetov.

Results: The authors consider requirements to modern innovation development of the company; substantiate role of control as the main function of management; reveal features of internal control in the system of innovation management; formulate recommendations to improvement of internal control for active change of key indicators of economic activity of the company and suggest to use flexible (adaptive) control for increase in competitiveness of the company in the conditions of innovation development.

Discussion: Innovation activity involves changing the key indicators that can lead to loss of the current position in the market. Risk of loss of competitiveness poses more threat for the company, than risk of loss of current profits. The control system must consider benefits and risks of innovation activities of the company. It is necessary to control key indicators of the company and to strive for their growth.

Closing statement: Flexible control in innovation management system of the company will allow reducing risks of strategic changes when preserving the current market positions.

Keywords: Innovation development, Internal control, business environment, innovation management, risk.

1. INTRODUCTION

At present, the main task of management is to ensure sustainable innovation development of the company. Introducing innovations, the company faces the need to change the traditional business processes. Transition from a stable state to a new, unknown, future state assumes an increase of management risk. It can lead to loss of control over innovation process and generally the company. Accordingly, it is increasing the relevance of the control of changes. The main task of management is to make changes managed and controlled. It is necessary to organize the system of internal control directed to solution of problems of innovation development of the company. We call such control flexible.

The key direction to achieve economic growth and improve the quality of life, and also to achieve a high level of economic security of the state in the modern world is development of innovation – scientific-and-technological advance, distribution of innovative technologies, products and services. Joseph A. Schumpeter is a founder of the theory of innovation development of the company (Schumpeter, 1947). The scientist based the principle of “creative destruction” when an entrepreneur, introducing innovations to the market, takes out an economic system on a new level. It ensures economic growth. Innovations lead to the creation of new institutions or “rules of the game”. Douglass C. North considered in the researches the aspect of influence of innovations on the institutions (North, 1989). The scientist proved the need of the purposeful structure of the institutions keeping innovation development. The influence of scientific-and-technical advance on economic crises and growth is considered in the works of Nikolai D. Kondratyeff (Kondratieff, 2002). The scientist proved the presence of long market cycles connected with emergence of radical and improving innovations. The aim of each company is to follow the trends of scientific-and-technical development and planning of possible radical innovations. P. Kotler determined the research problem of the market and future requirements as sources of innovations (Kotler, 1993). The scientist noted the need of control of consumer preferences and behavior of competitors in respect of innovations for success in the market environment. In the works by Khanif S. Mullakhmetov (Khanif S. Mullakhmetov) control role is investigated in management of social and economic systems and recommendations to the organization of the effective control system of financial-economic activity of the company (Mullakhmetov, 2015a), (Mullakhmetov, 2016). Control of possible innovative changes can be exercised based on the analysis of the five competitive forces. Michael E. Porter has developed this principle (Porter, 2008). It is advisable to consider in more detail both theories of innovation and control theories for development of an approach to the organization of an effective innovative development management system through flexible control.

2. METHODS

Methodological foundations of the article are the theory of innovation development and the theory of scientific management. The authors consider innovations as a source of competitiveness of the company. Control is presented as a stage and a function of management. Flexible control of innovation process is considered as the necessary tool to improve the company's efficiency in modern conditions. The authors use such methods of research as the institutional approach, analysis and synthesis of historical data, the laws of dialectics, the causality method.

3. RESULTS

The innovative potential of the enterprise is determined by presence of a number of conditions for innovation: presence of the research, design and technological organizations, experimental productions, testing grounds, educational institutions, staff and equipment at the enterprise, and also possibility of cooperation with the organizations having necessary resources (Osadchy and Akhmetshin, 2015a), (Osadchy and Akhmetshin, 2015c), (Shatunova, 2013).

Innovation management is necessary in order to effectively manage innovation activities, determine long-term development of the economic system, estimate possible options, organizational and production structures (Hamel, 2006).

Innovation management is a management system (science and practice) directed to stimulation and effective management of innovations and innovation processes. As distinct from classical management, innovation management is connected with unstable internal and external conditions of the organization, a high degree of uncertainty and risks (Lebedeva *et al.*, 2016). The purpose of innovation management is to study methods, approaches and technologies for company management for ensuring its development and strengthening of competitive positions in the market. It can be reached by creation, implementation and development of innovations in various sectors of economy.

Recognizing the role of innovation and innovation management as a factor of providing competitiveness of the organization in modern business environment, we consider the role of control in the system of innovation management (Sadriev *et al.*, 2016), (Khusainova and Ustyuzhina, 2015).

Control is one of the least studied management functions in the theory and the Russian management practice. It is perceived ambiguously in the Russian business environment (Mullakhmetov, 2011). Peter F. Drucker characterized the role of control in the control system and correlation of terms “management” and “control”: “if we express the basic idea of these concepts extremely compressed, control is measurement and information, and management is action first of all. Thus, the purpose of control is identification of the events, and the purpose of management is to provide the performed work corresponded to initial plans. “Control” allows to obtain information on the basis of which “management” is exercised” (Drucker, 2006).

Scientific and scientific-practical sources adduce various interpretation of the purposes and problems of control. In this work we adhere to the position of Khanif S. Mullakhmetov: “The purpose of control in the management system is to increase in efficiency of management activity”. Control has the following problems to achieve its purpose:

1. Collection and analysis of relevant and high-quality (reliable, timely and complete) information about deviations in the course of functioning and development of the organization (about a problem) which is necessary:
 - a) For goal-setting –mission, vision, strategic goals (strategic level);
 - b) For planning of actions for implementation of the purposes (tactical level);
 - c) For preparation and management decision-making for individual tasks (operational level);
2. Monitoring processes of functioning and development of the organization and timely reports to management about essential deviations from the expected results (the desired state of management objects) and standards of execution;

3. Comparison of the received and expected results and identification of deviations; collection, generalization and variance analysis, consequences and origins of deviations, presentation to management of reasonable options of the adjusting impacts adequate to consequences of the revealed deviations (to what the deviations have led and how to eliminate optimally negative consequences of deviations) and to the reasons of their origin (why it became possible and what should be done that in the future it did not repeat) (Vasilev and Akhmetshin, 2014).

The first task is carried out by methods of preliminary control, the second task is carried out by methods of current control and the third task is carried out by methods of final control (Mullakhmetov, 2013a).

On the basis of stated, control can be defined as: "... an integral part and one of the main functions of management consisting in constant and systematic tracking of objects and processes regarding compliance of their behavior and condition (results) of control system of the company and to the law in force" (Mullakhmetov, 2008).

According to M. H. Mescon, control is a process of ensuring achievement of the purposes by the organization. Process of control consists of setting standards, measurement of actually achieved results. Corrections are carried out in case the achieved results significantly differ from the established standards.

One of the most important reasons for need of control is that organization must be able to fix the mistakes in time and to correct them before they do harm to achievement of company goals (Mescon et. al., 1988).

The subsystem of control is formed under the influence of many factors. Important factors are the characteristic of management object, national and territorial features (Krotkova, 2016) and approaches to creation of management system of the company (Mullakhmetov et.al, 2016).

Researchers of management and control problems note that control as a subsystem of control system, shows all system characteristics, changes the content reacting to changes of characteristics of management objects (Mullakhmetov, 2005). The levels of management and national and historical factors have defined the condition of control in substantial aspects, forms and methods of application respectively. Thus, in case of the organization of innovation management system, control subsystem shall change, too (Mullakhmetov, 2012).

Strategic control is concentrated on the key issues of organization development: analysis and control of the scientific subsystem of the entity, research of structure and quality of marketing actions, forecasting and assessment of possibilities of further specialization, etc. Operational control allows to estimate work indicators of divisions at the moment. Strategic control is a set of interacting closed contours at strategic and operational levels. Strategic control relies on methods and mechanisms of control at the operational level which provide tools of control over implementation of strategic objectives (Mullakhmetov, 2013b).

By subject structure, control is subdivided into:

1. Financial, based on financial analysis of the company and financial efficiency of innovations;
2. Administrative, the object of which are activities of divisions, plans of researches, developments, etc.

Financial control allows revealing and eliminating (or minimizing) timely factors which do not promote effective functioning of the organization and achievement of goals (Osadchy & Akhmetshin, 2015b). Innovation and its products require, as a rule, heavy money expenditure. Being inefficiently used, these resources, at best, turn into nonoperating assets of the organization, and, at worst, change into losses and unproductive expenses of society. Financial control can and should prevent such negative consequences (Bondar & Volochko, 2013).

The scope of control depends on specifics of products and industrial process, and also on complexity and novelty of products, on structure of the organization (Akhmetshin and Vasilev, 2016). Thus, control of innovation development of the company can be exercised by stages, selectively and in the form of continuous control.

4. DISCUSSION

In the future, economic growth will be provided due to scientific and technical progress and intellectualization of the main components of production in all spheres of economy (Gapsalamov, 2015). For providing strong long-term growth of national economy, transition to innovation development is necessary (Latyshev and Akhmetshin, 2015). System effectiveness of innovation management at the same time is in many respects determined by the control subsystem adequate to the purposes and tasks of management.

Inadequate reaction of management on changing the environment leads to crisis of the organization. Experts consider that management actions have to be at the same time both active and adaptive (Pearce and Robinson, 2013), (Thompson and Strickland, 2002), (Campbell and Lachs, 2004). It is defined by an ambiguous role of changes: first, changes are destruction of the operating order, second – possibility of creation of a new system of parameters of the organization activity adapted to the changed conditions. The control subsystem in system of innovation management has to be constructed taking into account these circumstances (Mullakhmetov *et. al*, 2014), (Mullakhmetov, 2015b).

Understanding of the system of flexible control is based on research of innovation processes. Innovation processes have a high degree of uncertainty. Innovation is a way of adaptation to changes of the external environment. Accordingly, it is important to change quickly control parameters and procedures based on the changed conditions.

The main goal of the flexible control system is objective assessment of the organization and innovation process, development and implementation of corrective actions. In the broadest sense in modern innovation economy the flexible control system is necessary for accomplishment of management functions in all divisions, business processes and projects. Therefore, the authors propose the following definition of the flexible control system of the company. It is the system intended for regulation and development of self-organized behavior of individuals and their groups forming the organization as a unit for accomplishment of management functions in all divisions, business processes and projects on the basis of system implementation of innovation projects, practice, processes and structures representing a considerable separation from the current regulations.

For further discussion about the nature of the flexible control system we will list the features of its formation: formulation of mission control for internal and external participants; definition and expansion of target groups of clients, development of innovative approaches to work with them; choice of product policy, including innovative solutions, considering quickly changing needs of clients; establishment of the key directions of organization development in general and its major divisions based on both traditional and innovative approaches.

5. CONCLUSIONS

Innovation is controlled in the conditions of a high level of uncertainty and risk. Respectively, the management system at the same time shall be adaptive, considering both factors of the environment of operating and development, and internal capacity of the organization.

Using corresponding instruments of flexible control in innovation management, the top management can initiate and implement new products and methods of the business organization for further development of the company.

It is known that any innovation process is implemented through a chain of stages. It is necessary to make decisions and constantly control their subsequent execution, at the same time changing control parameters and procedures. The officials in an organizational hierarchical structure of management make management decisions and implement them. Execution of officials' functions is connected with their personal responsibility.

Flexible control of innovation process is expressed through a consecutive number of actions connected with collection (updating) of information on condition of management object or information from the external environment, its processing, and transfer of decisions on management object and further control of its execution. The system of flexible control promotes performance of functions of innovation management: forecasting, planning, organization, monitoring, regulation, accounting and analysis.

In modern conditions, operational (flexible) improvement of the internal control system at the entity allows achieving big results, in comparison with hard (limiting freedom) separate standards and control procedures. At the same time, efficiency of the flexible control system in the enterprises substantially depends on working out in detail and accuracy of the set control parameters reviewed in compliance with market changes.

6. IMPLICATIONS

Thus, innovation development of the company is a complex process. Requirements to control in system of innovation management increase. Innovation activities consist in search for effective changes for the company in the market. Control of innovation activities implies monitoring of technical and economic indices. Control shall become flexible for increase in efficiency of innovation activities.

The approach to organization of control activity must be changed. Control of achievement of the established standards shall be replaced by control of the effective changes oriented to ensure competitiveness. At the same time, flexible regulation of quantitative and qualitative indexes of economic activity of the company is necessary. Control has to be balanced, directing and stimulating, and not just ordering and forbidding. We can speak about setting new, institutional rules of conduct – control functions. Thus, we propose a new vision for the solution of traditional problems of companies that will allow reaching new level of development.

It will allow optimizing economic activity of the entity, improving the control and management system of the entity, raising susceptibility of the organization to innovations, developing effective mechanisms of implementation of innovative projects.

7. ACKNOWLEDGEMENT

This work was supported by the research grant of Kazan Federal University.

References

- Akhmetshin, E. M., & Vasilev, V. L. (2016). Control as an instrument of management and institution of economic security. *Academy of Strategic Management Journal*, 15(Special Issue1), 1-7.
- Bondar, T. E., Volochko, N. K. (2013). State financial control as a tool of innovative activity management. *Bulletin of the Polotsk state university. Series D: Economics and jurisprudence*. 6, 99-104
- Campbell, A., & Lachs, C. S. (2004). *Strategic sinergizm* (2nd ed.). St. Petersburg: Piter.
- Drucker, P. F. (2006). Management: The problems of success. *IEEE Engineering Management Review*, 34(2), 19-26.
- Gapsalamov, A. R. (2015). Conditions of soviet economy development in the middle of XX century and factors of its crisis. *International Business Management*, 9(5), 862-867. doi:10.3923/ibm.2015.862.867
- Hamel, G. (2006). The why, what, and how of management innovation. *Harvard Business Review*, 84(2), 72-84
- Khusainova, S. V., & Ustyuzhina, O. N. (2015). The essence and factors determining the competitive capacity of an enterprise. *International Business Management*, 9(5), 848-855.
- Kondratieff, N. (2002), *Big Cycles of Conjuncture and Theory of Prevision, Selected Works*, Yakovets, Y.V., and L.I. Abalkin, editors, In Russian (Bol'shie cikly kon'junktury i teoriya predvideniya. Izbrannye trudy). Moscow: Ekonomika.
- Kotler, F. (1993). Marketing basis. development of goods: Approach to new good development and problems of good life cycle. *Khimicheskoe I Neftegazovoe Mashinostroenie*, (5), 34-35.
- Latyshev, I. O., & Akhmetshin, E. M. (2015). Methodological approaches to analyzing the indicators of human capital management in the interests of innovation development of enterprise. *International Business Management*, 9(6), 1565-1570. doi:10.3923/ibm.2015.1565.1570
- Lebedeva, T. E., Akhmetshin, E. M., Dzagoyeva, M. R., Kobersy, I. S., & Ikoev, S. K. (2016). Corporate governance issues and control in conditions of unstable capital risk. *International Journal of Economics and Financial Issues*, 6(1S), 25-32.
- Mescon, M. H., Albert, M., & Khedouri, F. (1988). *Management*. New York: Harper & Row. pp: 279.
- Mullakhmetov, K.S. (2005). Evolution of control activity. *Auditor*. 11, 34-36, 34.
- Mullakhmetov, K.S. (2008). *Corporate control*. Kazan: Publishing house of the Kazan state university.
- Mullakhmetov, K. S. (2011). Effective control system as a factor of the quality improvement of management activity: a training manual. Kazan: Kazan university, pp: 9.
- Mullakhmetov, K.S. (2012). Scientific schools of management and its influence on control function evolution. *Management in Russia and abroad*. 6, 129-133, pp: 131.
- Mullakhmetov, K. S. (2013a). *Control-management*. Moscow: JSC Ekonomika Publishing House, pp: 105.
- Mullakhmetov, K. S. (2013b). Process of the organization of strategic control for successful functioning and development organization. *Economy and management. Russian scientific magazine*, 7, 50-55.
- Mullakhmetov, K. S. (2015a). Some approaches to the development of the management control concept. *Journal of Advanced Research in Law and Economics*, 6(1), 128-137.
- Mullakhmetov, K. S. (2015b). Problems of management and control in the conditions of uncertainty. *Management in Russia and abroad*, 6, 25-34.

- Mullakhmetov, K. (2016). Control in the system of managerial decisions procedures: A conceptual view. *Problems and Perspectives in Management*, 14(3), 64-76.
- Mullakhmetov, K. S., Aminova, R. M., & Akhmetshin, E. M. (2014). Control in a management system in modern conditions. *Asian Social Science*, 10(24), 237-247.
- Mullakhmetov, K. S., Sadriev, R. D., Gabidinova, G. S., & Akhmetshin, E. M. (2016). Control in marketing-based management. *Academy of Marketing Studies Journal*, 20(Specialissue2), 13-19.
- North, D. C. (1989). Institutions and economic growth: An historical introduction. *World Development*, 17(9), 1319-1332.
- Osadchy, E. A., & Akhmetshin, E. M. (2015a). Integration of industrial and educational sphere in modernization of economic relations. *Journal of Applied Economic Sciences*, 10(5), 669-676
- Osadchy, E. A., & Akhmetshin, E. M. (2015b). Development of the financial control system in the company in crisis. *Mediterranean Journal of Social Sciences*, 6(5S2), 390-398.
- Osadchy, E. A., & Akhmetshin, E. M. (2015c). The intellectual capital importance and the role of organizations against the backdrop of a crisis: Innovation vector. *Social Sciences (Pakistan)*, 10(6), 1013-1020.
- Pearce, J., & Robinson, R. (2013). *Strategic management* (12 ed.). St. Petersburg: Piter.
- Porter, M. E. (2008). The five competitive forces that strategy. *Harvard Business Review*, 86(1), 78-93
- Sadriev R. D., Mullakhmetov K. S., & Akhmetshin E. M. (2016). Russian Business Medium: Competition Problems. *International Journal of Economics and Financial Issues*, 6(S8), 30-38.
- Schumpeter, J. A. (1947). Theoretical problems of economic growth. *The Journal of Economic History*, 7(S1), 1-9.
- Shatunova, O. V. (2013). Ways of development of innovative activity of school teachers in modern Russia. *Middle East Journal of Scientific Research*, 17(4), 414-418.
- Thompson, A. A., & Strickland, A. J. (2002). *Strategic Management: Concepts and Cases* (12 ed.). Moscow: Williams publishing house.
- Vasilev, V. L., & Akhmetshin, E. M. (2014). The role of information and information technology in the management control function. *Biosciences Biotechnology Research Asia*, 11(3), 1469-1474.