Improving Management Functions at an Enterprise: Levels of the Internal Control System

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Abstract

The purpose of the present work is summarizing the areas of economic activity of an enterprise that need to be controlled and offering the most optimal set of factors to ensure effective control in the enterprise management. The article uses general scientific research methods, such as analysis and synthesis, deduction and induction, the connection of logical and historical processes, the search for causal relationships, the laws of dialectics. In addition, in the present study, based on a multi-level approach, four major management functions are considered that would make control more effective. To improve the internal control system, management functions such as risk management, quality management, innovation management, and personnel management are identified. Recommendations are proposed on structuring the identified functions and their integration into the work of the internal control system.

Keywords: *management; control; internal control system; control levels; effectiveness of the control system.*

1. Introduction

Currently, control activities are becoming relevant. In the context of economic instability, control allows one to identify economic reserves and improve business activity.

In our opinion, control should be considered as a tool to improve the functions of management at an enterprise. As researchers note, the lack of the internal control system at an enterprise not only leads to poor management of human resources and other business processes, but also increases the likelihood of negative consequences for the company: loss of commercially important information, assignment of market share to competitors, increased fraud risks. (Rahim *et al*., 2017). Control allows the company to make optimal use of limited economic resources. In addition, control becomes necessary when implementing programs for investment and innovative development of an enterprise. The researchers note that the main problem of innovation development is the lack of mechanisms to stimulate innovation activity, which should be based on a system of rates and indicators. Control can be such a mechanism. Control allows one to plan innovation, set control points, create a "road map" and implement the established rates and indicators (Kodolova *et al*., 2017). In order to reach a new competitive level, active investment and innovation efforts are required with increasing limits on the expenditure of economic resources. On the other hand, the traditional financial and economic activity involves the establishment of controls to limit the use of economic resources. The researchers note that the incorporated control mechanisms make it possible to work out a flexible market policy of an enterprise, resolve contradictions between traditional and innovative business processes, increase the efficiency of using economic resources (Akhmetshin *et al*., 2017a). Accordingly, there increases the urgency of finding effective ways of organizing control activities for solving current financial and business tasks and plans for strategic (innovative) development.

The purpose of the present research is to summarize the areas of economic activity of an enterprise that need to be controlled and to offer the most optimal set of factors that ensure effective control in managing the innovative development of an enterprise.

2. Methods

The article uses general scientific research methods, such as analysis and synthesis, deduction and induction, the connection of logical and historical processes, the search for

cause-effect relationships, the laws of dialectics.

The project and process approaches are used as special economic and managerial methods. The process approach has allowed us to consider areas of economic activity as independent processes that need to be controlled. The project approach has revealed common factors that create effective control at the enterprise level as a whole.

Innovative techniques are used. Innovation is needed to improve the competitiveness of enterprises in the market. Innovations are in conflict with established standards, rules, indicators of control. Finding a balance between retaining the traditional market niche and entering an innovative product is a difficult task. Systematic approach and the laws of dialectics allow to solve this problem.

International standards of enterprise management in the field of control, quality, development strategy are used. This suggests a high practical significance, universality and the possibility of introducing the results of the research into the economic activity of a real enterprise.

Currently, there is a wide variety of approaches to the organization of the internal control system at an enterprise. This article presents the author's attempt to use the main levels (cross-sections) of economic activity to form an effective system of internal control of a real enterprise.

3. Results

As part of solving current and strategic tasks of any enterprise, it is important to ensure that control procedures are carried out when performing various management functions. The author's approach proposes to consider the following managerial functionality:

3.1. Risk management

This management task can be effected using the international management standard COSO ERM (Enterprise Risk Management) (COSO, 2017). In the framework of this direction the classical stages of the organization of control activities should be considered (Figure 1).

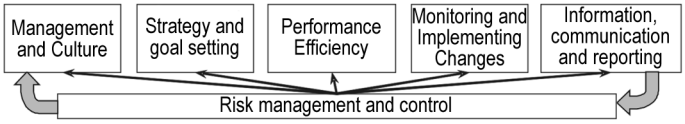

Figure 1. Risk management function control

First, it is management and culture. The effectiveness of control becomes higher if it is incorporated and implemented through corporate culture and established standards of behavior. In the face of increasing competition for human resources, such concepts as team building and leadership become important. All employees of the company should understand common goals and contribute to their achievement. On the other hand, the company's management must understand the needs of its employees and take care of their personal development and career growth. In this case, the staff incentive system will create a positive work motivation and lead to the effective fulfilment of current and strategic tasks.

Second, it is a strategy and goal setting. The strategy must take into account the competitive advantages of the enterprise. An analysis of the strengths, weaknesses, opportunities and threats for the company should be performed. The time horizon of the strategy must be at least five years. The goals should be measurable, specific, achievable, relevant, time-bound. Strategists and goals should cover all structural and functional units of the enterprise. This will make monitoring their implementation and managing risks easier.

Third, the effectiveness of activities. Control procedures should take into account the performance criteria. On the other hand, a mechanism should be developed for the informed choice between efficiency and risk. It is well known that the magnitude of the effect and risk have an inverse functional relationship. This must be taken into account when entering the market, struggling with competitors, modifying products and services, managing the economic resources of the company.

Fourth, monitoring and implementing changes. Control in the modern economy is a transition from the control of rigid standards to the control of flexibly changing goals and objectives of the enterprise. This is a process of constant change. The main difficulties in the work of the internal control system are related to the reluctance of employees to change. Accordingly, for effective risk management, constant monitoring of the company business is required. This task should be performed by the internal control system.

Fifth, information, communication and reporting. This position is particularly relevant in the innovation economy, where knowledge sharing becomes a key factor in the development of companies. In modern corporations, integrated information systems are being created. Depending on the tasks and functions performed, employees have access to the company's general information resource and its reporting. Accordingly, there is the possibility of rapid decision-making and checking in the context of rapid market changes.

3.2. Quality management

This management task can be solved using international quality management standards ISO 9001:2015. In this area, it is necessary to consider the process of quality management at the enterprise and ensure its control (Figure 2).

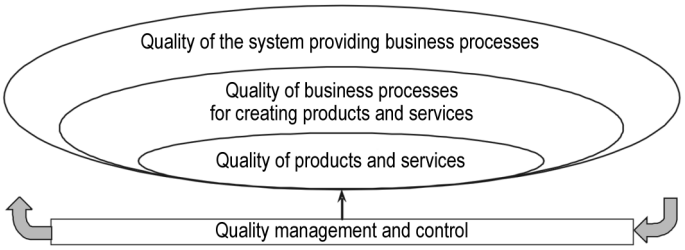

Figure 2. Quality management function control

The author's approach is a multi-level organization of control and quality management at the enterprise. We proceed from the value orientation of the company's products and services to consumer preferences. Modern market competition is not price competition, it is competition through the quality of products and services. This thesis is confirmed by the development of the innovative (digital) economy. On the other hand, a quality product (service) is the result of a quality business process. Accordingly, the quality of business processes is entirely determined by the quality of the enterprise's management.

In this regard, such concepts as the life cycle of products (services) are of particular relevance; resource management; management responsibility; analysis, measurement improvement. This approach involves the use of international quality standards in the formation of the internal control system at the enterprise. The control function should be logically interconnected with the procedures for checking and maintaining the quality of products and business processes of the enterprise management system.

In the scientific literature it is noted that the quality management system should link the control of internal and external indicators of financial and economic activities (Anttila, & Jussila, 2017). It is necessary to constantly monitor such indicators as the level of product sales, the company's market share, the composition and structure of market demand, the efficiency of using property and sources of its formation, the cost of products (services), the ratio of fixed and variable costs, labor pro-

ductivity, the number of rejects and consumer complaints, quantitative and qualitative composition of the workforce, turnover rate, other indicators of the development strategy and business plan of the company (Chen *et al*., 2016).

3.3. Innovation management

This management task can be effected using the Balanced Scorecard (BSC) with the appropriate control organization (Schäfer, 2001). This methodical approach involves the use of control procedures at the level of financial activity, market activity, organization of business processes and in the field of personnel development (figure 3).

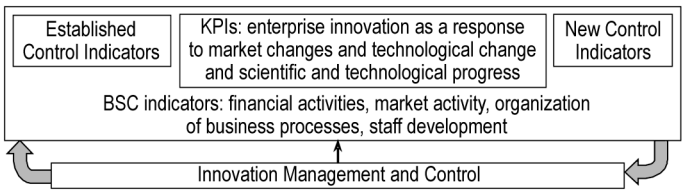

Figure 3. Innovation management function control

A balanced scorecard allows one to manage the enterprise and control its investment attractiveness. As components of investment attractiveness, one can consider the market, financial, social, budgetary and environmental attractiveness of an enterprise. The main task of the balanced scorecard is to preserve the stock of the investment attractiveness of an enterprise when moving from current production and business activities to promising (innovative). KPIs (Key Performance Indicators) can be considered an alternative and additional tool of the balanced scorecard system (Iorga, & Scarlat, 2014).

BSC and KPI must be applied simultaneously to more effectively address the challenges of innovative enterprise development. The fact is that BSC allows to ensure the strategic development of the organization in conditions of limited economic resources and market opportunities, and KPI will provide the most effective transition from current control indicators to new ones established under the influence of market changes and scientific and technological progress.

As already noted, modern conditions require the organization of a flexible system of control of innovative activity of the enterprise. To ensure the effectiveness of this task the organization of the project office is required. It is necessary to create a center of responsibility for the adjustment of control indicators and their monitoring. Analysis is possible on such parameters as the price of a new product (service), the availability of market analogs, the competitive advantages of the innovation, the cost of research and pilot tests, the costs of organizing manufacturing and industrial production of innovation, profitability and the life cycle of the innovation (Amanchaeva, 2012).

At the same time, the internal control system should be financially, methodically and technically provided. Control procedures should be structured according to goals, objectives, cost centers and profit centers, functional responsibilities and responsibility centers. The innovative development strategy should be consistent with the current strategy of the enterprise. Indicators of innovation activities should be included in the BSC and KPI (Moskvin, *et al*., 2016).

In an innovative (digital) economy, every enterprise has to pay attention to its employees. Employees are the generators of new ideas and knowledge. The incentive and control system should contribute to the innovation activities of the company's employees.

3.4. Personnel (HR) Management

This management task can be effected using a three-degree protection model (FERMA/ECIIA, 2010). The essence of the approach is to establish a system level of personnel management with incorporated control procedures (figure 4).

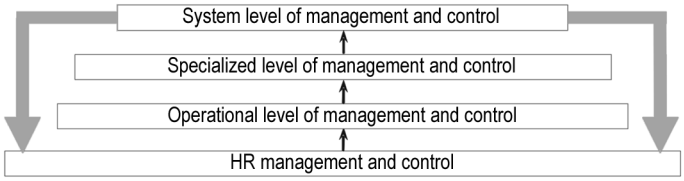

Figure 4. Personnel management function control

A systematic approach to the formation of control procedures in personnel management, in turn, assumes that the enterprise has an operational and specialized level of management and control. The operational circuit includes all employees of the company responsible for the qualitative performance of their duties to solve current and strategic tasks involved in the company's traditional and innovative projects. Control procedures in this case are prescribed in the job descriptions of employees. The specialized circuit can be represented by an internal control service of the enterprise or by external auditors for specific control tasks. In their unity, the three levels of protection represent the enterprise's internal control system.

In the scientific literature, it is noted that modern international financial reporting standards imply setting internal control as a mandatory element of the personnel management system. (Vyruchayeva, 2014). At the same time, the three levels of personnel management and control allow one to integrate the implementation of tasks of risk, quality and innovation management.

Human resource management involves continuous monitoring of the effectiveness of the organization under various innovative scenarios. In this context, the internal control system acts as a consultant, providing feedback and adjustment of the financial and economic activities of the enterprise. Such actions allow the organization to effectively predict potential innovative risks and to improve the internal control process accordingly. Thus, with the help of the three levels of personnel control, elements of the risk management standard and the stages of the innovation process, the enterprise regularly assesses the potential consequences of internal control for its innovation activity and the infrastructure in use, flexibly changes and improves KPI and BSC.

As a result, after the analysis of the four most important management functions in the field of risk management, quality management, innovation management and personnel management in relation to the control activities, the following author's thesis can be formulated. The effectiveness of the internal control system can be increased through a multi-level approach to its organization and regulation.

4. Discussion

Many scientific papers are devoted to the integration of various international standards into the enterprise management system. This is due to the need for standardization of business procedures and business processes to improve product quality. Researchers point out that control is a necessary element of the quality management system (Batbooti, *et al*., 2015). Control activity is necessary for the effective development of an enterprise. Control allows one to optimize current costs and select the most promising areas for innovative development of the enterprise. The internal control system ensures the fulfillment of the preset current and strategic indicators, their flexible change in the conditions of the innovation economy and changes in consumer requirements for the quality of products (services). It is especially important to note that in the formation of the internal control system and the quality management system, it is nece-

ssary to use the practical experience and results of diagnostics of the enterprise (Chiarini, 2017).

A significant debatable point is the issue of monitoring and adjusting the established key performance indicators of an enterprise and as a result of a balanced scorecard (Wu, 2012). The fact is that the control itself, the control procedures and those responsible for the control must also be assessed. There is a considerable amount of research to assess the internal control system. The most important criterion of the effectiveness of the internal control system is the analysis of deviations of the obtained actual indicators from their predicted values. Deviations analysis can be carried out according to the functions of the management system identified in this study – in the field of risk, quality, innovation, personnel management. This will make it possible to most accurately assess the system of internal control of any enterprise.

In the matter of resolving contradictions between the production of traditional and innovative products, the authors proposed an approach to integrating the control function into the institutional environment of the enterprise. This implies both formal and informal establishment of control procedures. The staff incentive system should be formed in such a way as to minimize resistance to control. This can be done through studying the composition and structure of the needs of employees, their personal qualities, the adjustment of their professional and job responsibilities (Akhmetshin *et al*., 2017b).

Other studies confirm the correctness of the author's point of view. Researchers note that high rates of innovative development of an enterprise are possible if the tasks of innovative activity are logically connected with the strategy of the enterprise and are carried out at all levels of management. At the same time, it is necessary to strictly follow the established plan and fulfill the tasks of innovation activity in corporate, business, functional and strategic areas (Melnik, *et al*., 2015).

On the issue of implementation of the methodology of the three levels of personnel management and control at the enterprise, it can be noted that this stage is final and integrating all the areas of economic activity. In this case, all previous steps must be fulfilled: the internal control system created, the international quality standards introduced, the enterprise strategy developed and implemented, the tasks of innovation activity defined and logically connected to the strategy, the feedback procedures and improvement of the control system provided. The systematic work of the internal control system will allow the company to respond in a timely manner to market changes, conduct effective innovation, ensure compliance with the requirements of state bodies, and minimize errors in maintaining financial, accounting, tax and statistical reports. In an innovative economy, success is granted to an enterprise that can quickly and flexibly change the established benchmarks and improve its development strategy.

5. Implementations

Improving the company's internal control system is possible through the effective implementation of the following management functions:

1. Risk management. In establishing control procedures, the following steps should be taken into account: management and culture; strategy and goal setting; operational efficiency; monitoring and implementation of changes; information, communication and reporting.

2. Quality Management. When establishing control procedures, the following steps should be taken into account: product (service) life cycle; resource management; management responsibility; analysis, measurement and improvement.

3. Innovation management. When establishing control procedures, the following steps should be taken into account: financial activity, market activity, organization of business processes, development of personnel management; analysis, measurement and improvement.

4. Human Resource Management. In establishing control procedures, the following steps should be taken into account: operational, specialized, systemic.

Thus, the control activity is an effective tool for improving the development strategy of an enterprise in the context of constant market changes, increasing requirements for human resources and the quality of work of an enterprise.

6. Conclusion

The main result of the study is the identification of a special place of control in various sections of the economic activity of an enterprise. The international standards for the formation and operation of the control system contain recommendations on risk assessment, control procedures, information exchange and the establishment of monitoring. This allows the company in the simplest form to provide control of its economic activity. To ensure high quality products, we must ensure the functioning of the control system with regard to international quality standards. Control should be the responsibility of management and executives, be present at all stages of the product life cycle, ensure effective resource management. The next task is to provide both current and strategic control tools in the enterprise management. To this effect, control must be integrated into the system of balanced indicators and key performance indicators. It is important to ensure control of financial activities, use of human resources, business processes and counterparties of the enterprise. For the organization of innovation, it is important to move to a system of flexible internal control. This will allow to resolve the contradiction between the traditional and innovative tasks of enterprise development. It is necessary to take into account the proven practice recommendations for the formation of a control system associated with the three levels of protection – in the operating, specialized and system activities of the enterprise.

References

[1] Rahim, S. A. A., Nawawi, A., & Salin, A. S. A. P. (2017). Internal control weaknesses in a cooperative body: Malaysian experience. *International Journal of Management Practice*, 10(2), 131-151. 10.1504/IJMP.2017.083082

[2] Kodolova, I. A., Yusupova, L. M., Nikonova, T. V., Khisamova, E. D., Hasbiullina, G. M., & Solodkova, I. M. (2017). The dynamics of innovative activity development: The enterprises of Tatarstan. *Astra Salvensis*, Supplement No. 2/2017, 415-428.

[3] Akhmetshin, E. M., Vasilev, V. L., Bakhvalov, S. I., Prikhod'ko, A. N., & Kazakov, A. V. (2017a). Internal control in the system of innovation management in the modern business environment. *International Journal of Economic Research*, 14(15), 409-416.

[4] COSO (2017). Enterprise Risk Management. Integrating with Strategy and Performance. Executive Summary. The Committee of Sponsoring Organizations of the Treadway Commission.

[5] Anttila, J., & Jussila, K. (2017). ISO 9001:2015 – A questionable reform. What should the implementing organisations understand and do? *Total Quality Management and Business Excellence*, 28(9-10), 1090-1105. 10.1080/14783363.2017.1309119

[6] Chen, C., Anchecta, K., Lee, Y., & Dahlgaard, J. J. (2016). A stepwise ISO-based TQM implementation approach using ISO 9001:2015. *Management and Production Engineering Review*, 7(4), 65-75. 10.1515/mper-2016-0037

[7] Schäfer, M. (2001). Balanced scorecards – Control of strategic planning and management. [Balanced scorecards – Wie man werthebel richtig einstellt] *Nachrichten Aus Der Chemie*, 49(5), 663-665.

[8] Iorga, D., & Scarlat, C. (2014). Matrix-type model to control the business processes. UPB Scientific Bulletin, Series D: *Mechanical Engineering*, 76(1), 243-256.

[9] Amanchaeva, K. (2012). Innovative potential of socioeconomic development: Risks and ways to overcome them. *Actual Problems of Economics*, 136(10), 292-298.
[10] Moskvin, E., Gorodilov, S., Rusyaeva, T., & Stotckaia, A. (2016). An approach to overcoming the limitations for launching and functioning the innovative cycle in the scientific and production companies. Paper presented at the *2015 4th Forum Strategic Partnership of Universities and Enterprises of Hi-Tech Branches* (Science. Education. Innovation), 66-68. 10.1109/IVForum.2015.7388256
[11] FERMA/ECIIA (Federation of European Risk Management Associations & European Confederation of Institutes of Internal Auditing). (2010). Guidance on the 8th EU Company Law Directive. Article 41. Brussels, Belgium.
[12] Vyruchayeva, A. E. (2014). Statement of internal control of transactions of IFRS. Urgent accounts department, 9. http://gaap.ru/articles/Postanovka_vnutrennego_kontrolya_operatsiy_po_MSFO/
[13] Batbooti, R. S., Ransing, R. S., & Ransing, M. R. (2015). Discover and embed product specific process knowledge inline with ISO9001:2015 requirements. Paper presented at the *Proceedings – CIE 45: 2015 International Conference on Computers and Industrial Engineering*.
[14] Chiarini, A. (2017). Risk-based thinking according to ISO 9001:2015 standard and the risk sources european manufacturing SMEs intend to manage. *TQM Journal*, 29(2), 310-323. 10.1108/TQM-04-2016-0038
[15] Wu, H. (2012). Constructing a strategy map for banking institutions with key performance indicators of the balanced scorecard. *Evaluation and Program Planning*, 35(3), 303-320. 10.1016/j.evalprogplan.2011.11.009
[16] Akhmetshin, E. M., Vasilev, V. L., Puryaev, A. S., Sharipov, R. R., & Bochkareva, T. N. (2017b). Exchange of property rights and control as a condition of the innovation process effectiveness at collaboration between university and enterprise. *Academy of Strategic Management Journal*, 16(Specialissue1), 1-9.
[17] Melnik, A. N., Mustafina, O. N., & Sadriev, A. R. (2015). Features of formation of the system of innovative development of the industrial enterprise. *International Journal of Applied Engineering Research*, 10(18), 39398-39403.