

HUMAN RESOURCE MANAGEMENT IN SELECTED INDUSTRIAL ENTERPRISES: INNOVATIVE TECHNOLOGY TOWARDS COMPETITIVENESS

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ABSTRACT

Invariably, the integrated approach to the formation and implementation of programs in improving the competitiveness of industrial enterprises in the context of economic globalization is assumed as one of the key areas for the creation of an effective human resource management system. The scientific novelty of this research is confounded in the development of theoretical and methodological recommendations and practical measures to improve the human resource management system in industrial, 20 private holding enterprises (n=570) in Russia on the basis of its modification. The respondents were both the heads of human resource and information technology departments. In this paper, through qualitative and quantitative, the descriptive design through primary data, recommendations are offered on modification of system of human resource management. Through survey and purposive sampling, the basis of activization of its innovative component by assessing human resource innovation taking into account the enterprise that will allow to minimize errors at determination of quality of labor potential of the industrial organization.

Keywords: Innovative Technology, Competitiveness Model, Human Resources Management, Industrial Enterprises

INTRODUCTION

Modern enterprise should be interpreted as a socio-economic system since the implementation of economic activity is impossible without the participation of the human factor (Boon, Den & Lepak, 2019; Fenech, Baguant & Ivanov, 2019; Hasan, Islam & Chowdhury, 2020). With the development of scientific and technological progress and the transition of industry to new forms of marketing activities characterized by a diversified approach, the role of the human factor in the production process is greatly increased. These economic reforms involve the formation and development of such a scientific concept as human resource management. The essence of human resource management is the formation of the human resource management system (Johnson, Carlson & Kavanagh, 2020; Hasan, Islam & Chowdhury, 2020; Ho & Kuvaas, 2020).

Under the human resource management system, we understand a set of interrelated elements of management aimed at the formation and development of personnel in accordance with the objectives of the enterprise (Johnson, Carlson & Kavanagh, 2020; Boon, Den & Lepak, 2019). A systematic approach to the management of firms determines the specifics of human resource management. This approach necessitates a systematic organization of management activities in relation to personnel work (Kumah, 2020). Generalization and clarification of scientific and practical experience in the field of human resource management offer the author's comprehensive scheme of formation of the human resource management system in manufacturing companies (Tummers, Kassahun & Tekinerdogan, 2019; Wadgule, 2020; Sergio, Ormita, Dungca & Gonzales, 2015).

In several studies, reforming the human resource management system involves a new understanding of the essence of the company's personnel as an object of management and as a process of forming a corporate culture that corresponds to the goals and objectives of the industrial enterprise and the methods for building a human resource management system and its principles (Zeebaree, Shukur & Hussan, 2019; Srivastava, Bajaj & Dev, 2020).

Under the reform of the human resource management system in industrial companies, it is understood that a set of measures aimed at structural changes in the workplace and improved human resource management system in order to create highly qualified and promising human resources for solving corporate tasks. The fundamental factor of effective functioning of the economic entity in the conditions of market uncertainty is innovative activity (Srivastava, Bajaj & Dev, 2020; Zeebaree, Shukur & Hussan, 2019). Various types of innovations create a comprehensive methodological basis for the design of human resource management systems in industrial enterprises (Tummers, Kassahun & Tekinerdogan, 2019; Silic, Marzi, Caputo & Bal, 2020).

REVIEW OF LITERATURE

By the beginning of the twenty-first century, the term “human resource management” in various countries of the world has expanded significantly. Numerous concepts and interpretations have been propounded along this term. Each of these concepts and interpretations attempts to explain with mutual exclusivity this complex type of management. Currently, a huge number of scientific papers devoted to the study of this concept have emerged. Systematizing the existing terminology, it is possible to define human resource management as a purposeful activity of the management team of the enterprise and the specialists of departments aimed at the developing personnel strategy and the methods of management activities to optimize resources and maximize profits.

Human Resource Management, as a field of scientific and practical activity, is characterized by a systematic approach to personnel issues. High research interest on the part of scientists allows objective definition of the concept and integration of the essence of human resource management system in the enterprise. (Sergio, Al Rawi & Gernal, 2011; Gernal, Sergio & Shuali, 2013; Siddiqi et al., 2021; Haladay, Sergio, Oplencia & Antiado, 2015).

A typical example of the first approach is the definition that “the human resource management system is a set of interrelated economic, organizational and socio-psychological methods that ensure the efficiency of labor activity and competitiveness of enterprises” (Haladay et al., 2015; Garcia-Arroyo & Osca, 2019; Beriev, Daudov, Tazbieva, Goltakov, Malsagova & Dadashova, 2019).

The researchers believe that the essence of human resource management is a bundle of a system at work. Firstly, the purpose of the human resource management system in the enterprise is clearly presented. Secondly, the interrelation of labor force with effective functioning of the enterprise is traced. Thirdly, the importance and expediency of providing the necessary conditions for the realization of the labor potential of the enterprise employee were noted. However, it is worth noting that the author did not mention such an important element of the human resource management system as its comprehensive development (Fei & Aun, 2019; Sergio et al., 2013; Sergio et al., 2015; Abbasi et al., 2020; Garcia-Arroyo & Osca, 2019). From the researchers' point of view, the relationship between the personnel of the enterprise and production units in the context of tasks is relevant. This relationship determines the purpose of the formation of the human resource management system in enterprises (Hassan et al., 2020; Huo & Kuvaas, 2020). Nevertheless, deciphering the tasks of human resource management is rather wanting and, accordingly, affects the tasks of enterprise management as one (Johnson et al., 2020; Kumah, 2020;

Gemar, Negrón-González, Shabbir et al., 2020; Lozano-Piedrahita, Guzmán-Parra & Rosado, 2019).

Thus, under the human resource management system of the enterprise, the researchers understand a set of interrelated elements of management aimed at the formation and development of personnel in accordance with the objectives of the enterprise. It is worth noting that under the elements of management, there is a need to explore on the production and management structure (Liao, Liu & Chen, 2020; Meijerink & Keegan, 2019; Ogbeibu, Emelifeonwu, Senadjki, Gaskin & Kaivo-oja, 2020). Since management is a rational management of the enterprise through the optimization of resources towards maximizing profits, the proposed structure serves as be the fundamental element of the human resource management system in the enterprise (Shahreki, 2019; Shabbir et al., 2021; Srivastava et al., 2020; Fenech et al., 2019; Boon et al., 2019; Gemar et al., 2019).

METHODOLOGY

The paper utilized the qualitative and quantitative methods, specifically, the descriptive design through primary data. Through survey and purposive sampling, the basis of activization of its innovative component by assessing human resource innovation taking into account the enterprise that will allow to minimize errors at determination of quality of labor potential of the industrial organization. The study involved the 20 private holding enterprises in Russia. Through survey and purposive sampling, the basis of innovative practices by assessing human resource innovation taking into account the enterprise that will allow to minimize errors at determination of quality of labor potential of the industrial organization. The respondents were both the heads of human resource and information technology departments (n=570). The success of companies as a whole is ensured by employees engaged in the innovation process. Therefore, the modern concept of management involves the allocation of a distinct number of functional areas of management. This modern concept carries with it the innovative potential as indicated in the design of the model stated in this study. This is suggestive of the feasibility of the calculation of the innovativeness of the personnel in industrial enterprises according to the proposed formula:

$$I_p = S_p * Q, \quad (1)$$

where:

I_p – innovativeness of the personnel of the industrial enterprise (the contribution of employees engaged in innovative processes in the volume of production of the company);

S_p – the share of innovative personnel in the total number of industrial enterprises;

Q – the volume of production in value or in kind.

$$S_p = N_i / N_p, \quad (2)$$

where:

N_i – the number of personnel directly related to the production processes of an innovative nature;

N_p – the average number of personnel in the industrial enterprise.

This technique is characterized by a high degree of versatility, as the volume of production can be an indicator, both in value and in kind. Innovative personnel emphasize the real dependence of the level of development of the innovative potential of the industrial enterprise on the level of participation of employees in the innovative production process. A fundamental

criterion in assessing the innovative activity of personnel is determining the proportion of employees with innovative potential in the total number of staff so that its share (real contribution) in the economic activity of an industrial enterprise focuses on the use of advanced technologies.

RESULTS AND DISCUSSION

Basis of Innovative Processes

The basis of innovative processes for reforming the human resource management system is to ensure the survival of industrial enterprises by higher rates of formation and development of their human resources compared to changes in the external environment (Boon, 2019). Therefore, the main task is to adapt the industrial enterprise not to the changes in the external environment (they always occur) but to the speed of these changes (Fenech et al., 2019; Garcia-Arroyo & Osca, 2019).

In modern conditions of the functions of companies involved in the study, the task of increasing efficiency of the system of management of personnel becomes the highest priority direction of economic activity based on innovative-oriented methods. Every economic entity is interested in solution. Meanwhile, the intensification of labor activity is characterized by more demanding approaches to the management environment with the goal of increasing the innovative potential of industrial enterprises in view of the harsh conditions of increasing competition. These are primarily the uncertainties and risks in the activities of each subsidiary and its employees as well as the transition processes in which they are covered. All this attaches special importance to the reform of the human resource management system based on the improvement of innovative processes (Gernal et al., 2013; Fei & Aun, 2019; Ho & Kuvaas, 2020).

Furthermore, the responsibility of human resource management services to employees of an industrial enterprise increases sharply due to structural changes in the field of labor activity. The particular importance in this case is due to a wider range of opportunities to ensure the survival of industrial enterprises.

The dynamic development of integration processes in the economic activity of industrial enterprises, based on diversified approaches, is accompanied by the need to develop organizational management structures, the transformation of rigid hierarchical structures into flexible and adaptive units, each of which is engaged in a certain type of production activity. This transformation organically fits into the design of the entire industrial enterprise and the concept of business activity of its employees. The transition to flexible, non-bureaucratic structures puts in the first place the factors that have a direct impact on the economic activities of the industrial enterprise. In this regard, a modern technology of human resources management should be designed based on the principles of development of the competence level of employees thereby optimizing the production sphere.

Since the basis of the concept of human resource management system is the human potential, the innovative development of the industrial enterprise is the direct activity of not only the managers of human resource management services but also the heads of all departments, as well as all employees directly related to the formation and development of the innovative potential of the whole company. The subject of labor in this case is a person as a source and carrier of information. The quality, reliability, volume, and speed are determined by a set of real competencies. This is supported by the findings of Kumah (2020); Liao et al., (2020); Meijerink & Keegan, 2019).

The Contemporary Approach to the Innovative Development of Companies

As the data indicated, the essence of the design of innovative transformations in the human resource management system is based on a certain method of changing the personnel of an

industrial enterprise in the context of improving work. The algorithm for designing innovative transformations should be governed by the objectives of the human resource management system and the goals of the industrial enterprise taken as a whole. The result of the design is a comprehensive assessment of the innovative potential of the workforce.

As part of the analysis, it follows that the purpose of reforming the human resource management system by improving innovative processes is to ensure the development of the labor potential of the industrial enterprise on the basis of modern approaches to personnel work. It focuses on the fundamental ideas of formation and development and implementation of labor potential which constitute the concept of human resource management system. The basis for this concept should be the involvement of staff in linking processes that ensure consistency between the general and special functions of management, that is, management between and among all types of work in an industrial enterprise represents a single body. Among these processes, the priority is the innovative development of enterprises. This is supported by the empirical studies as revealed by Ogbeibu, et al., (2020); Sergio, et al., (2017); Sergio & Rylova (2018); Shahreki (2019).

Therefore, the innovativeness of the personnel can be defined as one of the main characteristics of the innovative activity of industrial enterprises, the real reflection of which is the degree of intensity of the labor process.

Currently, in the context of increasing competition, many managers of industrial enterprises underestimate the importance of human resource management methods inherent in modern innovative management. These methods are actively used abroad for effective management of economic entities and increase in the profitability of production.

Changes in the principles of the human resource management system of industrial enterprises should be aimed primarily at the implementation of the policy of innovative development of labor potential, becoming crucial to modern conditions. Based on this, we propose to formulate a conceptual approach to reforming the system of human resource management in industrial enterprises on the basis of the innovative process of development of the production and labor sphere as stated in Figure 1.

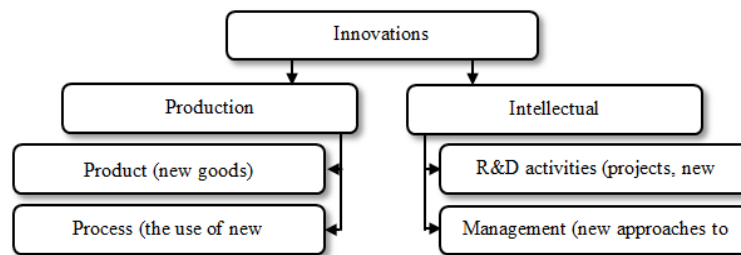


FIGURE 1
A CONTEMPORARY APPROACH TO THE INNOVATIVE DEVELOPMENT OF COMPANIES

The context of the development of integration processes (industrial enterprises and industrial groups) attracts employees to participate in management activities due to the innovation policy in the human resource management system. Such activities should be aimed at the effective expansion of interaction between the human resource management system and the industrial sector of the industrial enterprise (Shahreki et al., 2020; Silic et al., 2020; Tummers et al., 2020). This is within the perspective of achieving common goals focused on the use of innovative methods. This directly encourages staff to develop potential abilities, to become more intensive and productive at work, and to manifest creative attitude towards work. Creative approach, in turn, leads to increased

independence and responsibility of employees to the work performed, active participation in management decision-making, and direct interest in the results of their work.

Therefore, the reform of the human resource management system in industrial enterprises should be aimed at improving the level of education, skills and culture of workers in all categories; providing a wide range of employees with the conditions for the expansion of professional knowledge; continually improving skill and self-expression; observing growth of competence level and developing innovation and corporate culture. This approach will allow industrial enterprises to carry out personnel activities in the workplace on a more promising and strategically important basis.

Key Factors of Improvement of Innovative Processes of Labor Activity

As perceived by the respondents, a special role in the reform of the human resource management system based on the improvement of innovative processes is played by the competence of employees. Competence is defined as a set of professional knowledge, skills, and experience in an economic activity. Competencies create objective prerequisites for the development of innovative potential of employees. They directly affect the qualitative and quantitative indicators of labor activity. The main directions for the effective use of competencies cover the development of hidden capabilities of staff through motivational attitudes.

The restructuring of the human resource management system contributes to the effective impact on the ability of employees to conduct innovative activities. Managing staff development can have a particularly large impact on the ability of employees to generate new ideas and improve them. Based on scale of impact, it is advisable to form the key factors for the improvement of innovative processes in the human resource management system which will characterize the development of the innovative potential of the industrial enterprise as a whole as indicated on Table 1.

Factors	Tasks
Employment of personnel contributing to the activation of innovation	Recruitment of creative and promising personnel and optimization of personnel selection system focused on innovative priorities
Development of innovative activity of personnel	Stabilization of personnel and increase in competence level of employees
Rating of innovative activity of the personnel	Calculation of the innovativeness of the staff subject to the performance of the personnel involved in the innovation process
Use of modern approaches in personnel work	Strengthening of motivational mechanisms that contribute to the implementation of innovative ideas
Ratio of labor and production potential	Maximization of innovation efforts to strike the right balance between industrial and human environment

The Innovative Trend of Optimization of the Human Resource Management System

When a group of top managers possess a variety of initial trainings, innovation is showcased. This provides an opportunity to consider the problems at the highest level of

management from a variety of positions and points of view. No position or function will dominate. When the group of top management is, nevertheless, monotonous in its composition, the perspectives of consideration of the problem different from its position can remain without attention.

Based on the insights of the respondents, the innovative processes of reforming the human resource management system in the company are characterized by the following trends:

- Many different professional positions should be represented in the top management. People with education in marketing, economics, innovation management, etc., are represented in higher management along with specialists in the field of technology.
- Staff stability and staff turnover are considered contributing to the innovative activity of the enterprise. They principally reflect the desire of enterprises to form a reliable base and the basis of professional competencies for innovation.
- In the innovative activity of the company, each employee represents an important link in the information flow. After several years of work, each person more dynamically fits into the communication processes in enterprises.
- Corporate culture should contribute to the effective development of innovation. The degree of interaction between structural units in an industrial enterprise is increasing. The role of top management as a coordinating center in the economic activity of the company and individually integrated enterprises is increasing.
- Development of technical competencies should be fostered as they are acquired by employees in the process of training and professional development. They are the basis for innovation activities in the company and, accordingly, the main method of increasing its innovation and production capacity.
- Methods of personnel assessment in the company should differ significantly in the way they are produced. One dimension of difference is the style of grading. Another dimension is the criteria and data used.

The Table 2 below showcases the innovative trend in the 20 holding companies where the respondents were purposively selected:

Table 2 THE INNOVATIVE TREND OF OPTIMIZATION OF THE HUMAN RESOURCE MANAGEMENT SYSTEM	
Actions to reform the human resource management system	Economic result of reforming the human resource management system in the context of innovative processes
Based on the development of production activities	Improving the competitiveness of industrial enterprises through the introduction of innovative technologies
Based on the development of innovation	Increase of innovative potential of the industrial enterprise due to growth of innovative activity of the personnel
Through the development of stimulating activities	Increase employee engagement in the innovation processes of the industrial enterprises through the effective motivation
Based on the development of information activities	Improving the efficiency of decision-making between the structural units of the industrial enterprise

This program is particularly focused on an integrated approach to the definition of work and human resource management since this interpretation will allow industrial enterprises, as a complex

corporate and integrated structure, to systematically approach the development and improvement of innovative processes in the field of reforming the human resource management system. This is to enhance internal production capacity and improve competitiveness in modern conditions. Such changes should be based on the competence of employees as an indisputable resource of the present time.

The creation of various innovative approaches to management leads to the design of a comprehensive model that reflects the essence of innovative processes in reforming the human resource management system of industrial enterprises involved in the study. Thus, the effective development of the human resource management system should be based on innovation-oriented methods of economic activity of industrial enterprises. Competencies of employees in all categories of personnel are considered the basis for improving the innovative processes of reforming the human resource management system. These competencies are a combination of professional knowledge and work skills that provide innovative ideas and skills needed to carry out productive activities (Shahreki, 2019; Meijerink & Keegan, 2019; Liao, 2020; Johnson et al., 2020).

In order to assess the degree of innovative development of an industrial enterprise, it is necessary to use the indicator of innovative personnel as one of the main criteria for the complex characteristics of modern production. The level of development of innovative potential of the industrial enterprise is determined by the human factor.

CONCLUSION

Summarizing the abovementioned assertions, the proposed innovate HR-based programs aim to improve the innovative processes of reforming the human resource management system by optimizing it in order to improve the efficiency of work on the basis of modern approaches.

The implementation of radical measures for improving the human resource management system of industrial enterprises should focus on the manufacturing sector and human resources. Effective interaction of these elements and savvy innovation priority will allow industrial enterprises to develop dynamically, adequately, and elastically while responding to cyclical changes in scientific and technological progress and the environment taken as one. The process of reforming the human resource management system is aimed at developing primarily the innovative potential of the industrial enterprise. This is the main condition for ensuring its competitiveness in modern conditions.

Thus, the modern concept of reforming the human resource management system in industrial enterprises is determined by the basic directions of their economic activity in the field of effective use of labor resources. This approach leads to the creation of a competitive workforce necessary for the implementation of production activities that meet the requirements of modern conditions. The core measure for the development of labor potential is a comprehensive program that reflects the improvement of the leading elements of the human resource management system. One of the main methods of increasing the competitiveness of industrial enterprises in the context of optimizing the human resource management system is the comprehensive certification of all employees.

The need for structural changes and the development of modern models in the human resource management system create objective prerequisites for the formation of coordinating centers. These coordinating centers are put up for the purpose of regulating labor processes within the context of industrial enterprise, that is, human resource management services. Restructuring modelling facilitates more efficient interaction between production and work, taking into account external environmental factors and scientific and technological progress.

The innovative development of the human resource management system in industrial enterprises is due to the radically changing conditions of the national economy. These changing

conditions recalibrate the labor activity of enterprises on innovative priorities. In this regard, industrial enterprises should consider human resources a fundamental factor in increasing the efficiency of innovative activity of enterprises in the conditions of reindustrialization. Hence, radical changes in the external and internal environment require equally drastic changes in the human resource management system of industrial enterprises. Studies show that when the optimal level of development of the labor potential of enterprises is achieved, the number and structure of personnel meet the needs of production and management. The complexity of the tasks to be solved is the level of qualification of employees ensuring high quality of decisions and speedy implementation. Physical data and individual psychological characteristics of employees correspond to the specifics of an activity. This means that to achieve identified goals, industrial enterprises need to focus on the development of the competence level of employees in all categories of personnel. To this end, the reform of the human resource management system covers all aspects of labor and production activities of industrial enterprises.

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