

**THE TOOLS OF INCREASING EFFICIENCY OF HUMAN RESOURCE IN THE LEAN
PRODUCTION ENVIRONMENT: CONCEPTUAL STUDY**

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Abstract

Human resource management, as one of the main factors in the formation of competitive advantages of the organization, in the conditions of "lean management" is based on increasing the motivation of employees, involving them in managerial decision-making, developing professional competencies, increasing the level of loyalty to management. Employees' activities should be aimed at reducing production costs.

The aimed of this study is to devote the usage of modern scientific approach to the organization's deployment of human resource management based on the concept of the "lean production". In this study, we try to clarify the link between lean production environment and human resource management (HRM) to increase the organizational performance based on an integrated system approach, which takes into account the goals of management to rationalized resource utilization by reducing the intensity of workers and improving their efficiency.

Keywords: Human resource management, lean production, system of balanced indicators, worker effectiveness.

I. INTRODUCTION

In the intensive global competitive environment of the world economy, the survival of many organizations depends on the ability to continuously increase the output and improve quality while reducing costs. This problem is particularly more relevant for commercial and manufacturing organizations upon the fact that they are undergoing changes aimed at improving the effectiveness of their activities through the rational use of human resources. Based on this, it is necessary to develop methods and tools for human resource management in accordance with the concept of lean production based on the lean building organization.

So, in today's so complicated world economic environment, the organizations are facing many challenges: tough competition, the challenge of reducing costs and the ways of increasing the effectiveness, innovation, and the ability to adapt the changes. The comprehensive solutions to these problems are impossible without participation of human resource, which is a very essential

valuable organizational resource. Stimulating employees to do high-performance work will ensure an increase in the main indicators of the organization's activity. However, research shows that more than 70% of employees are not interested in the effectiveness of their work. (Medvedeva, P. 256-258, 2012) To change the situation, it is necessary to improve the approaches and style of human resource management. Meanwhile, to improve the effectiveness of human resource, it's important to adopt a new approach, because the human resource is considered as a vital source of developing the organization.

To achieve such improvement, the organization should search for a new modern management approach that leads to increase the involvement of employees in management decision making processes. The most significant well design approach is transfer the organization into lean one which led to improve the work processes effectiveness and eliminate the unproductive works. The solution to such problem of improving the effectiveness of employees' participation in management decision process should achieve through development a lean human resource management system in accordance with the concept of "lean production".

First of all, we have to clarify the concept of Lean Production (LP) one question naturally comes to mind: 'What is Lean? How is Lean defined? How does Lean relate to other management concepts? What does lean have in common with organization's concept? What discriminates lean organization from other management concepts?'

The origins of lean production initiatives based to the Toyota Production System (TPS) and were initiated by Ohno (1978) and Shingo (1989) at Toyota with its focus on the systematic efficient use of resource through level scheduling. They used the Japanese word "muda" or "waste". These concepts were defined as any human activity that absorbs resources but creates no value (Dettmer, 2008). Taiichi Ohno has identified the first seven type of "muda" (means waste) and the main goal is on the systematic identification, reduction and elimination of all waste from the production processes in order to create value for both the organization and customer. In the production lean context, waste was viewed as any activity that does not lead directly to creating the product or service a customer wants. Then, the lean production was coined by Womack et al. (1990) in their book entitled "The machine that have changed the world" in order to show a better way to organize and manage production processes with customer relations, the supply chain, product development, and other production operations. This is a vision of a world transformed from mass production to Lean Production which has dominated much of the theory and practice of production systems design. In this context, the idea of "lean thinking" has been expounded by Womack and Jones (1996) and have emphasised Lean Production through Lean Organization rather (Womack et al., 2003). Today it is arguably the paradigm for operations that can be found in a wide range of manufacturing and service strategies.

The introduction of "Lean Production" means a process of continuity of increasing the workflow output through eliminating all types of waste and achieves maximization of work flows' output. This important goal can be achieved only through the Lean Production which is the elimination of everything that does not added value to the product and services (Womack and Jones, 1996). Though, this sort of activities may exist in all the areas of the organization. For this target the human resource management of the organization should compatible with a "lean production" that

requires minimizing work efforts and improving its effectiveness by creating conditions for the disclosure of the potential skills of employees.

II. LITERATURE REVIEW

In recent decades, there has been an increase in research into the effect of the human variable on the success of Lean Production (LP). Several authors, who have studied the Lean Production (LP), became to summarize that this production system brings significant changes on organizations' human resource management. Samson (1993) indicated that the result of his study the new lean production system cannot easily be implemented into an organization without considering the issues and conditions of human resource. Moreover, the organization should well understand the content of Lean Production system before implementing it through the changing accoutred during the process of implementation the system. Forza (1996) highlighted that the importance of recruiting, compensation, promotion and training in the success of LP system. He focused on an analysis of work organization practices, and concluded his concern for a further big issue: the role of the HRM practices which are needed in order to maintain the LP practices in time.

The integration of "lean production" involves human resources in the optimization process. Ohno (1998) pointed out at the same time; that the "unrealized creative potential" of human resource is regarded as one of the types of losses. Human resource is considered as the most important resource for improving the production systems' efficiency at any organization. The construction of Lean Production system leads to improve the human resource management, in which there is a needs to make a changes in the organizational structure; workers performance optimization; continuous training and development of employees and taking into account their participations in making management decisions.

Consider the essence of the concept of Lean Production. The author of the concept of Taiichi Ohno (1998) also defined that the elimination of unnecessary actions that take time, but do not create added values. On the other hand, the formulation of healthy environment conditions under which the remaining actions (processes) that create value should built into such processes like continuous workflow, applications of "push-pull systems".

However, at the beginning of 2000s a more relevant debate on the topic started. Indeed, research about the integration of Lean agile systems and environmental sustainability of the supply chain seems to have become more prolific as many papers demonstrate for the scope of this research only the most significant papers in terms of integration and mutual benefits have been taken into account.

Transformation to the Lean Production has been studied from different viewpoints. Some researchers are argued that transformation to the lean organization may positively affect human resource performance and lead to competitive advantage (Marshall and Goldsby). On the other side, Charbe, etl., (2013), investigated in their field study in Brazilian manufacturing environment found a very important issues that there is a strong relationship between strategic human resource management and internal environmental concern of lean organization. They indicated that the model tested revealed an adequate goodness of fit, showing that overall, the relations proposed between environmental production and operational performance, and between human resource,

Lean Production tend to be statistically valid. Also, they showed that the LP has a greater influence on organization environment when compared to the influence human resource. However, they achieved that the human resource has a positive relationship over production environment, but the statistical significance of this relationship is less than that of the other evaluated relationships. While, Bonavia, and Marin-Garcia, (2011) analyzed the effects of (LP) on the policy of human resource management (HRM). And determine whether or not implementation of human resource management practices associated with Lean Production (LP) explains the differences in organizational performance between production plants. They found that the production organizations under their investigation make the most of Lean Production practices are take care to workers in using these practices as well as improving their employment security. Also, they found that the combination of Lean Production (LP) with human resource management practices reduces inventory and boosts productivity but does not appear to affect the other performance variables analyzed.

On the other side, Liker, and Convis (2011) considered the Lean Production as a method, task and basis that should involves all personnel in deployment the optimizing processes for the purpose of continuous improvement and efficiency growth. The continuous improvement can be achieved through effective development and maximization of human resource potential based on mutual respect of all stakeholders such like organization, management and employees. Michael Wader (2008) highlighted that the "Lean Production System" as a comprehensive production system that covers the whole organization through the workplaces, the layout of production shops, maintenance and repair services, logistics, accounting, and other administrative and support services. While Davydova (2012) pointed out that the "Lean Production System" is based on a systematic reduction of non-productive activities' costs and it's a system of continuous improvement of the production process.

Chiarini (2014) highlighted that the main objective to investigate whether or not Lean Production tools can help reduce the environmental impacts of manufacturing companies. The research is based on empirical observation inside five European companies that manufacture motorcycle components and which are also committed to Lean and environmental management. The environmental impacts of the production processes of the five companies were observed and measured before and after el results using-greening processes using specific Lean Production tools: an empirical observation from European motorcycle component manufacturers, University of Ferrara, Via Savonarola, 9, 44121 Ferrara, Italy, Available online 11 August 2014.

Thus, Lean Production is aimed at eliminating actions that do not create value – losses. Increasing the level of production efficiency and product competitiveness can be achieved by implementing the principles and methods of "lean production". At the same time, "Lean Production" should be understood as a management system containing the following subsystems: (Klochkov, 2012)

*Subsystem "strategic management" – development and implementation of strategic goals, management based on key performance indicators, customer satisfaction;

* Subsystem "processes" – analysis of production processes, identification and reduction of losses, organization of a continuous flow of production;

* Subsystem "personnel" – formation of an effective team, continuous development of personnel, opens exchange of information.

III. THE LEAN PRODUCTION MANAGEMENT

Lean Production (LP) has been adopted by organizations in various service and industrial sectors in recent decades and these companies have subsequently moved forward in its implementation. In many cases this has enabled them to improve their results and competitiveness. LP adoption entails significant organizational change which requires companies to properly manage the key factors that might influence on the success of the adoption process. Despite LP involving significant changes in HR practices and policies, there is no consensus in the literature on the way that LP might affect people. Consequently, it is important to address in depth the role that people play during the different phases of the transition process to LP, including both LP adoption and implementation.

However, Lean Production offers several tools to help organizations reduce wastes. It is out of the scope of this paper to investigate in what ways these tools affect the wastes. One of the most important features of the Lean Production (LP) is the search of continuous improvement in products and processes, which require the involvement all the production employees with the fully support of management. Recognition of human resources as a source of increasing the effectiveness of organizations functioning implies their effective use, the formation of conditions for self-realization and potential development. The use of "lean technologies" is an actual and pop by carefully and consistently eliminating losses and at the same time respect for the workforce management tool in modern environment. Their essence is to increase the efficiency of Lean Production technologies are universal and can be adapted to any business or organization. Consider the essence of the organizational concept of "Lean Production", which was formed at the output of intersection of various disciplines. These disciplines are:

- Scientific-based organization of workforce means that the process of improving enterprises and organizations based on the implementation of scientific and engineering research achievements, which related to the findings of the employee as a subject of the labor process;
- Quality-based organization means the activity of managing all stages of the product life cycle, as well as interaction with the external environment;
- Psychology-based organization, which oriented on the activity of studies the human morels, patterns the behavior of individuals and their groups, as well as the features of their interaction relationships between them;
- Technology-based organization means the continuing development a set of significant new methods for processing, manufacturing, changing the state, properties, shape of raw materials, materials or semi-finished products use in the production processes to obtain finished products;
- Strategic oriented management is the activity that related to setting long-term goals and objectives of the organization's operations to achieve its goals, internal capabilities and allow it to dominate on external requirements;
- Financial management means the ability of having a cash flow management system for optimizing risks in accordance with the criteria and preferences of management entities within the selected overall strategy;
- Innovation oriented organization based on research and development through scientific

and High-Tech production processes and intellectual of the organizational personnel potentiality in order to improve the production processes. The output of innovative processes should meet the development of a new product (service), to meet the needs of society in supply the competitive goods and services;

- High-skilled production management leadership that direct and lead the professional activities associated with effective and rationalization of any production process;
- Well-organized production facilities are a set of measures aimed at a rational combination of labor processes with material elements of production in space and time in order to increase the efficiency;

Accordingly, the concept of Lean Production depends upon the applications of scientific techniques of human resource management, the product quality management (TQM) and other production activities. For the purpose of our study, we identify a number of functions of human resource activities that ensure the effectiveness of employees:

- Resource-saving (labor-saving) through eliminate the production cycle time, raw materials, energy, and other production necessities.
- Optimizing the production output through the compatibility workforce organization with the advanced level of technical equipment of production;
- Formation of an effective employee based on professional orientation and professional selection, training, and systematic professional development;
- Workforce-saving function means the manifestation the creation of favorable, safe and healthy working conditions upon establishment of a rational healthy work environment.
- Improve the function of workforce harmony and the coordination of physical and mental loads experienced by the employee.
- Increase the job satisfaction that ensures the creation of healthy working environment in the production workshops and other facilities to increase the content and attractiveness of work, the elimination of routine and primitive labor processes;
- Improve work discipline and orders through the continuous development and self-learning and stimulate the initiatives with a good promotion scheme.

Finally, the Lean Production concept is a management philosophy based on continuous identification and elimination of non-productive activities and continuous improvement of the production processes. The introduction of (LP) requires new approaches to human resource management, based on the recognition of employees as the main source of improving the efficiency of the enterprise.

Based on the above, we will highlight the main principles of "Lean Production": (George, 2003)

- Increasing the value of the product to the consumer.
- Reducing or eliminating all types of losses.
- Pulling out production (not pushing out), focused on the real need for the product.
- Continuous improvement based on the use of advanced technologies and scientific discoveries.

The formulation of a new type of management "Lean Management", based on a change in attitude to the organization and employees in conjunction with the development and application of management technologies that save and develop human resources. Lean management is based on

involving employees in managing and improving business processes, delegating, and creating internal communication (information exchange between management, subordinates, and employees).

The following principles of lean management should be highlighted:

- 1- The rejection of coercion to achieve the goals of the transition to the engagement;
- 2- Recognition of the right of employees not to work at the limit of their capabilities;
- 3- Involvement of employees in management decision-making and optimization processes;
- 4- Delegation of part of management functions and responsibilities;
- 5- Dominance of network communications;
- 6- The right of every employee to know how money is earned in the organization, what the rules for building a career are and releasing employees.

The Lean management should focused not only on increasing profits and reducing costs, but also on the formation of organizational culture, motivation, and a "lean" attitude to the organization's human resources. The "lean" approach to human resource management involves the formation of an "effective" employee who corresponds to the position and competence profile of the profession, who has such a qualification that allows him to solve production tasks and problems in a timely and high-quality manner and achieve the goals set. The core of the employee performance management is the integration of the goals of the organization and the employee through the development of their competencies.

Finally, the concept of Lean Production with human resource management involves increasing efforts to apply new management tools and technologies in all productive and non-productive activities. Regardless, there is a need to develop a framework that would demonstrate how to implement the principles and methods of Lean Production in the practice of human resource management.

IV. THE CONCEPTUAL FRAMEWORK: THE MODEL AND HYPOTHESES

In a constantly changing external environment, human resources are considered as a source of competitive advantages of the organization. Strategic human resource management involves achieving long-term organizational goals through effective use of employees. In accordance with the strategic goals of human resources management, a system of balanced indicators is formed. Evaluation of the human resource management process as an element of the proposed model involves analyzing the effectiveness of human resource management based on continuous monitoring of the main areas of human resource management. Sources of information for analysis are the results of surveys and questionnaires of employees, observation, and statistical reporting of the organization. The framework of "lean" human resource management is shown in "Fig. 1".

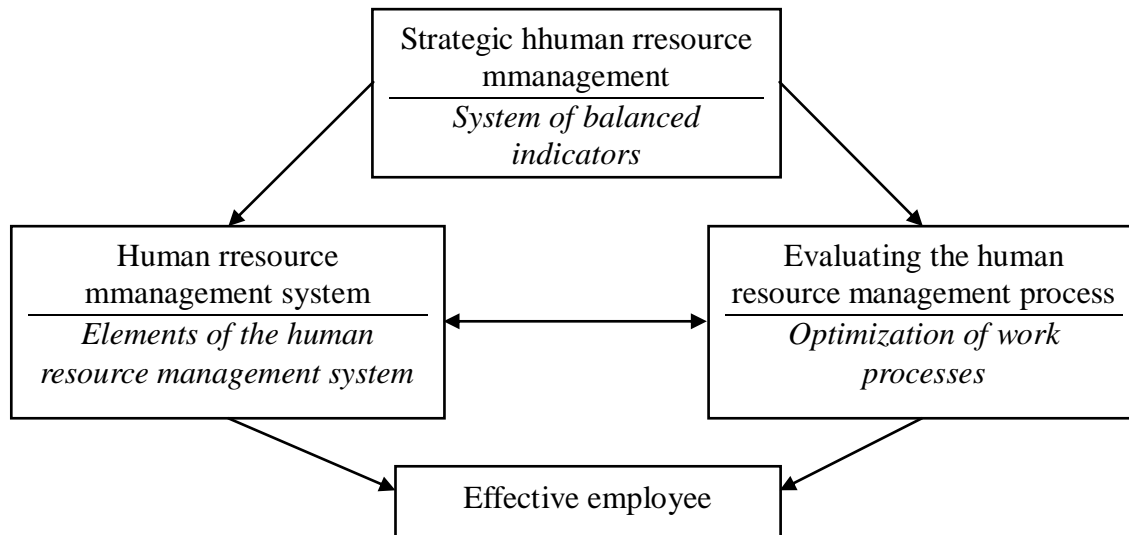


Figure 1. Framework of "lean" human resource management

Developing a human resource management system within the above framework assumes the following structure: the formation, use and development of human resources, workforce organization. The formation of human resources is aimed at providing the organization with the necessary quantity and quality of personnel. This includes planning, hiring, and adapting employees. The use of human resources is ensured by managing the behavior of employees, motivating and stimulating labor. The development of human resources involvement means increasing the level of competence of employees on their basic promotion. The subsystem of labor organization provides comfortable conditions for work, both in terms of equipment of the workplace, and the formation of a moral and psychological climate in the team.

All the blocks of the proposed framework are interconnected; strategic human resource management allows you to define criteria for evaluating the effectiveness of human resource management, as well as the structure of the human resource management system. "Lean" human resource management provides for the formation of an effective employee.

Improving the effectiveness of human resource management based on "lean management" requires the use of methods that contribute to the realization of the human resource potential. So, it is necessary to create a significant human resource management system, which leads to improve work effectiveness and maximize the productive high quality output. Also, this system will realize the empowerment and active involvement in the managerial areas of the organization. Evaluating the effectiveness of human resource management is inextricably linked to evaluating the performance of each employee. It is the activities that based on knowledge, interests, values and motives that determine the features of functioning development, and contribute to the achievement of strategic goals of the organization.

Within the framework of this research, a system of balanced indicators (SBI) is proposed for evaluating the effectiveness of human resource management in four areas: effectiveness, labor organization, labor potential, and customer satisfaction. The SBI allows linking the strategy of human resource management with tactical and operational activities in the field of human resource management. Diagnostics of the selected balanced indicators gives the opportunity to

increase the accountability of the human resource management and its activities and improvement of work effectiveness.

In accordance with the strategic goals of human resource management of the organization, the authors offer some objective and subjective indicators for evaluating the effectiveness as shown in Table1. The objective indicators are calculated based on the organization's reporting data, and they reflect the inter-relationship of human resource management. Subjective indicators are determined on the basis of the questionnaire and survey.

Table 1. Structure of the SBI for evaluating the effectiveness of HRM

Areas	Strategic goals of HRM	Objective indicators (indexes)	Subjective indicators (indexes)
Work effectiveness	Increase employees' effectiveness	Index of work effectiveness	Index of compliance of employees with the standard of professions
		Working time utilisation rate	
Workforce organization	Improve working environment	Index of the rotation of fresh professionals	Index of satisfaction career growth
		Index of job promotion	Work satisfaction index
		Index of sanitary and hygienic requirements	
	Index of work automotive	Index of work satisfaction	
	The stability of staff	Index of workforce stability	-
Workforce potentiality	Assessment of the use of workforce potentiality	Index of innovation susceptibility	-
		Index of personnel development	Satisfaction coefficient with the training system
		Index of payroll grade	Payroll satisfaction Index
Customer satisfaction	Customer satisfaction with the quality of the product or service	Customer satisfaction index	-

The selected areas in the SBI are united by cause-and-effect relationships and allow achieving strategic goals in the field of human resource management. The main indicator that reflects the effectiveness of human resource management is the employees' work effectiveness. The structuring of controlling and analysis the effectiveness of human resource management is necessary for justification overall managerial decisions process as shown in "Fig. 2". Objective assessment implies the calculation and analysis of balanced indicators; on the other hand the subjective assessment includes evaluating the effectiveness of human resource management should be done by employees himself and experts from among managers. The proposed controlling algorithm model helps to identify the ways of solving the problems of human resource management within the organization.

Model Formulation:

For a comprehensive assessment of the effectiveness of human resource management, using an integral indicator:

$$C_{man.ef.} = \sum_{1}^n \frac{C_n}{n}$$

where:

$C_{man.ef.}$ - the integral indicator of the effectiveness of HRM;

$\sum C_n$ - the sum of the values of the SBI;

n - Number of indicators.

To determine the assessment level of effectiveness for human resource management in an organization, we are using an interval scale shown in Table (2).

Table 2. Scales for evaluating the level of HRM effectiveness

Poor effectiveness		Low effectiveness			Moderate level of effectiveness			High level of effectiveness		
0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1

The proposed controlling algorithm model helps to identify and determine the ways of solving the problems concern the human resource management effectiveness in the organization.

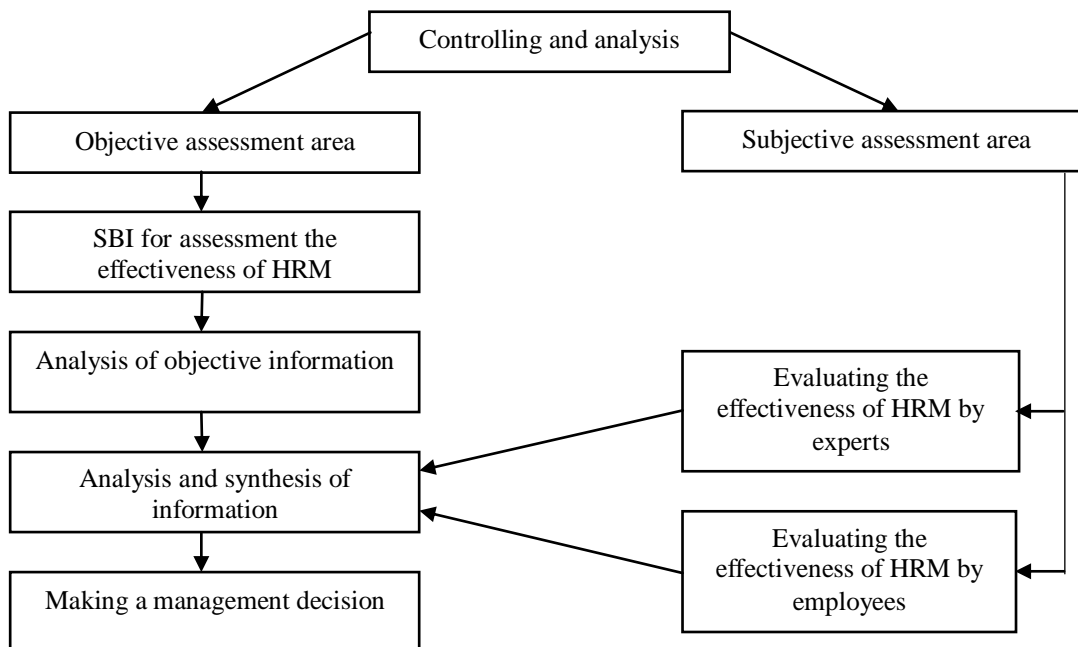


Figure 2. Algorithm for integrated assessment of HRM productivity

The results of implementations the labor organization system classify into main groups:

- Functional issues such as creating favorable working conditions, changing the nature and organization of work, improving the work professionalism, intellectual and spiritual level of human resources; and
- Social and labor indicators like productivity index improvement, and other indicators of work improvements.

The evaluation of social and labor results by using the indicator(s) of elimination the waste of working time as follow:

$$S_{rlwt} = (\Delta T \times N \times F_e) \times C$$

where:

S_{rlwt} - Savings from reducing the loss of working time;

ΔT - Reducing the loss of working time;

N - The number of employees who reduced the loss of working time;

F_e - Annual working time fund for one employee;

C - Average annual cost per employee hour.

- Socio-psychological issues such as the formulation of an effect of positive socio-psychological morale on the work groups, and the employees' commitment to the organization for the disclosure of their work potential.

The evaluation of socio-psychological results in terms of reducing the damage caused by staff turnover will be taken by the following model:

$$E_{st} = L \times \left(1 - \frac{C_{st2}}{C_{st1}} \right)$$

where:

E_{st} - Savings from reduced staff turnover;

L - Average annual damage caused to the organization by staff turnover;

C_{st1} and C_{st2} - Actual and predicted turnover coefficient.

The proposed framework of this study, there are four areas identified for evaluation the effectiveness of human resource management in accordance with the proposed algorithm for developing the SBI: productivity and labor organization, customer satisfaction, and labor potential as shown in "Fig. 3".

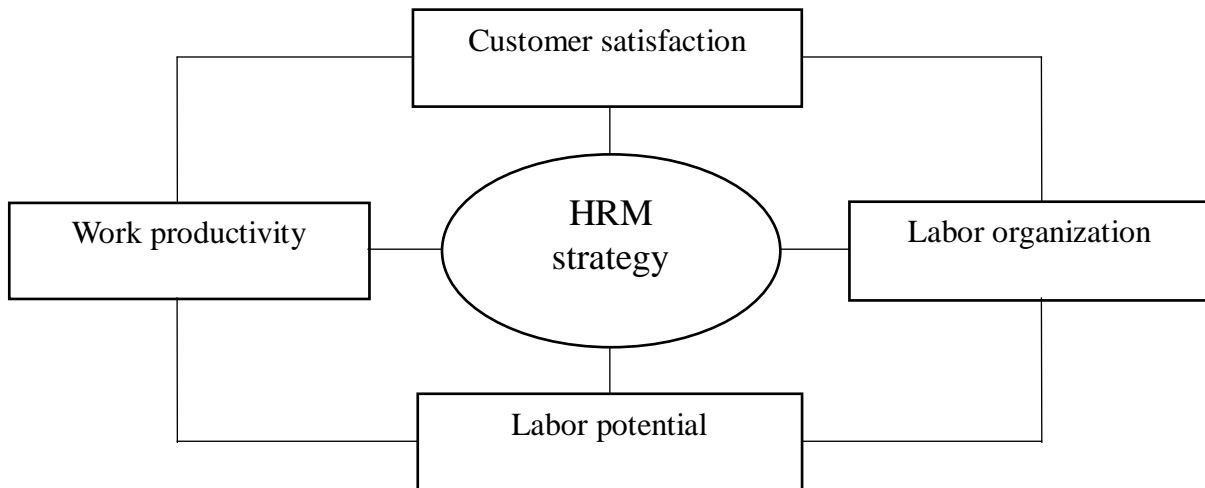


Figure 3. Grouping of SBI goals the effectiveness of HRM

The SBI allows you to link the strategy of human resource management with tactical and operational activities in this area. The SBI makes it possible to define a set of indicators that form a system of strategic control and management. Diagnostics of the selected indicators will allow you to adjust human resource management activities and thus increase the productivity of labor. The selection of evaluation areas and indicators is due to the need of problem solving in the field of human resource management and further lead to improvement of work efficiency.

V. PROPOSED METHODOLOGY

"Lean" management of human resources is based on highly moral principles, among which the understanding of labor as a vital necessity, the possibility of obtaining funds to meet the material and spiritual needs of people, and the realization of the social essence of a person prevails. These principles include respect for a useful cause for society, professional and economic success, condemnation of idleness and laziness, the desire to profit at someone else's expense, to get rich dishonestly. They are imbued with the belief that the desire and willingness to work with full dedication, on the conscience, should be inherent in every person, because work is needed as air, as freedom to express you, as joy and the highest value.

In this study, we will consider several issues of "lean" human resource management at the micro level. First, the object of the management process is the employee. The activities of international organizations, the state, enterprises in the field of labor are aimed at creating health working environment and observing the rights of employees. Secondly, the management process is determined by the relationship between the employees and the organization, compliance with legal and moral standards in the labor sphere. At the mega- and macro-level, legal norms defining "lean" human resource management may be adopted, but at the micro-level, these norms may not be implemented.

The management of the organization together with employees can form an organizational culture that sets the criteria for "lean" human resource management. At the micro level, employees and management need to understand the importance of including lean management principles in all areas of the organization. It's also important for the organization's management to understand the need to observe moral standards when building relationships with employees.

Third, "lean" human resource management is aimed at improving the quality of work, providing employees with such working environment that makes them feel more comfortable and capable of creative high work performance.

In the context of the proposed definition of principles and methods of "lean" human resource management, the authors believe that the organization of work becomes the main concern.

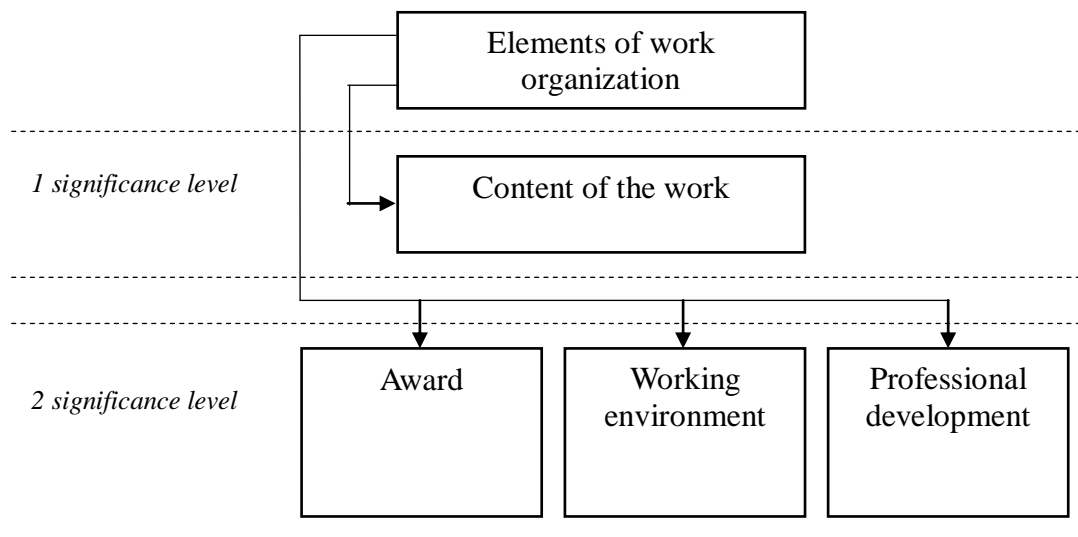


Figure 4. Elements of labor organization

The elements of work organization shown in "Fig. 4", we classified into two main levels. The first one includes the content of work, while the second level is the remuneration of employees, their professional development, and working environment. These levels state that the rational work organization means the creation of favorable working environment, reducing labor intensity, increasing the content of work, ensuring labor remuneration that corresponds to the labor contribution. These should lead to solve four interrelated tasks: (a) economic (production of competitive goods, labor productivity growth); (b) physiological (favorable working environment, maintaining a high level of efficiency); (c) social (increasing employees' satisfaction, opportunities for professional and personal development); and (d) psychological (comfortable working conditions, team building, minimization of stress and conflicts in the team).

The amount of remuneration the framework concept of "lean" human resource management depends on the performance of work. On the other hand, the remuneration system should be based on the principles of "transparency" that means the employees should know properly the criteria used for evaluating their work and be able to influence on the intensive promotions

learned from improving their work performance.

The development of human resources is a complicated continuous process, which effected by qualitative changes in the structure, professionalism, skills and job consistency. Development achievement is on benefit of both employees and employers. The work commitment of employees usually leads to increase the productivity, job satisfaction, reduce workforce turnover, and increase the loyalty to the organization.

The formulation of effective mechanism within the functioning "lean" human resource management system in the organization leads to reducing the negative impact the influence of factors on improve effectiveness of human resource management. The effective mechanism of such a system is a good tool for implementing the strategy of advance human resource management. The creation of optimality in working environment and development of a mechanism for "lean" human resource management make it possible to reach a comprehensive problems' solutions may face human resource management at any organization. Thus, the mechanism of "lean" human resource management is a system of interaction between processes that affect the management of human resources from the internal and external environment as shown in "Fig. 5".

When developing and implementing an organization's strategy, the goals of human resource management must be defined, i.e. economic and social aspects should be taken into account when making decisions among the personnel management. Economic efficiency means the optimal use of human resources to achieve the organization's goals. In addition, conditions must be defined for maintaining a balance between the economic and social components of the organization's human resource efficiency. The strategy, as the main tool for the formation of a human resource management system, is constantly changing and, depending on the needs of the business, launches various processes; either the: (i) cycle of labor organization, legal support for labor, motivation, development; (ii) motivation and development; (iii) development, motivation, labor organization; (iv) organization and legal support.

These four processes in the mechanism of "lean" human resource management are formed at the micro level within the organization, but should determined the selection the process is fundamental, which needs to be developed. Also the mechanism should include a set of processes, tools, and evaluation criterion. "Figure 6" explicit the structure of the mechanism of "lean" human resource management.

The process of motivation to work should be based on the use of material intensive methods and non-material incentives. Remuneration should be fair enough and carried out according to the principle of "transparency", that means the employees should quite understand the criterion used for evaluating their work and be able to increase the amount of their income by improving the work performance.

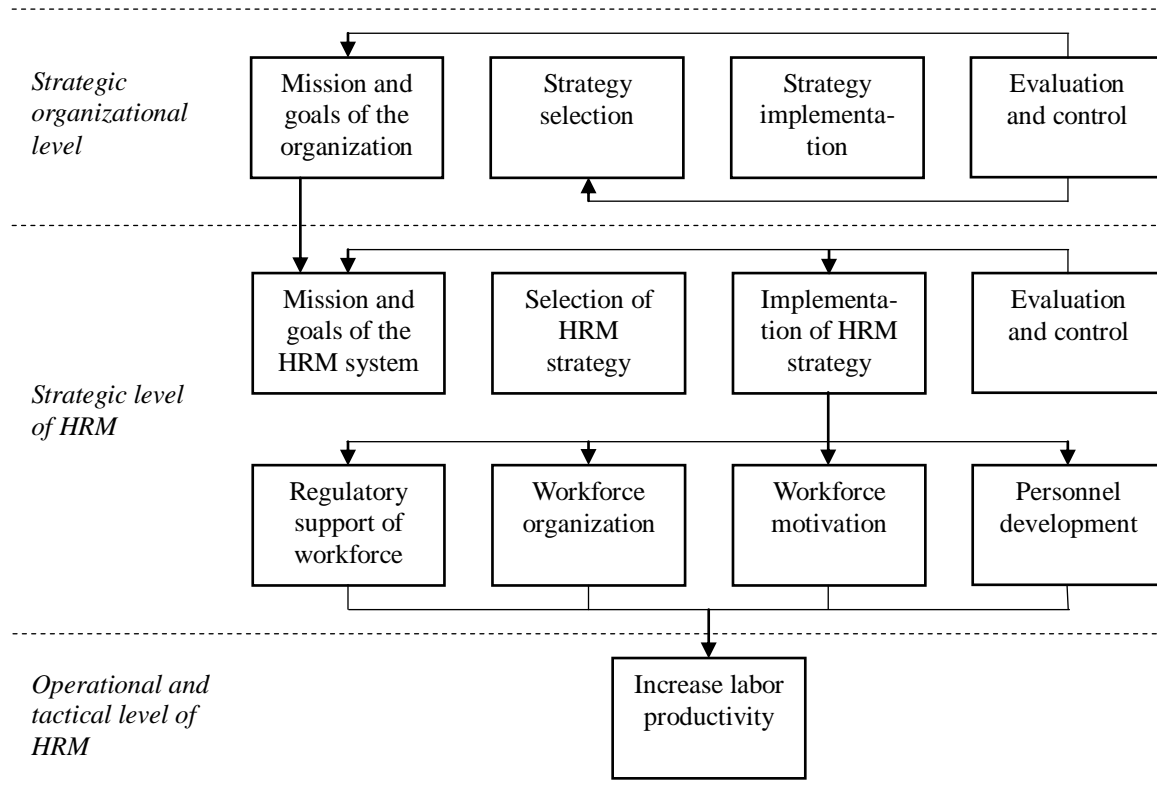


Figure 5. Socio-economic functions of the mechanism "lean" HRM

An important tool for increasing motivation to work is the delegation of authority and employees participation in managerial decision-making. Additionally, by taking the responsibility, independence and initiative, which allow the employees, feel on their own importance role. Thus, the delegation of authority increases the interest of employees in the results of their work.

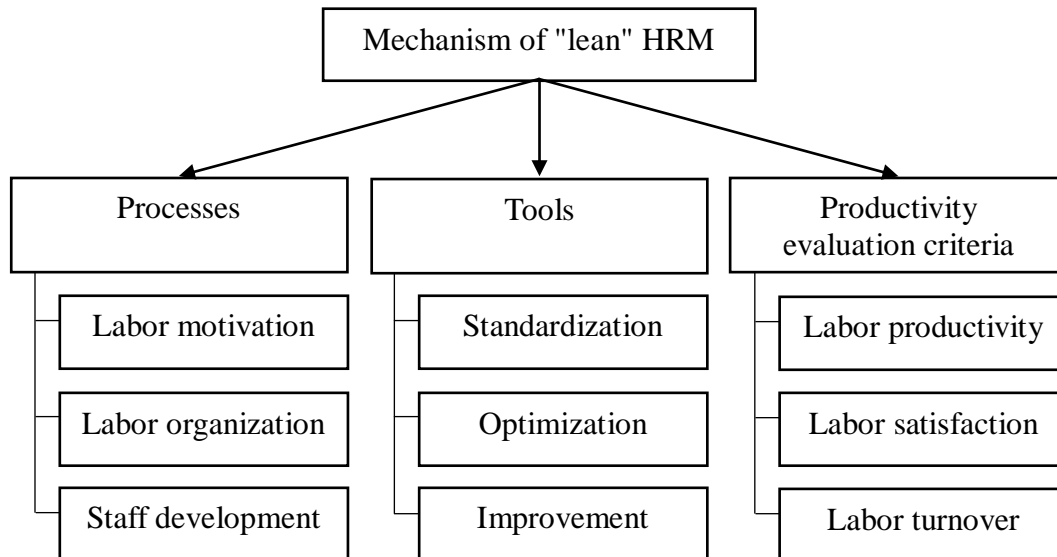


Figure 6. Structure of the mechanism of "lean" HRM

Participation in management decision-making is aimed increasing employees' loyalty to the organization. The empowerment and involvement of employees lead to increase their morale and productivity to meet the organization's goals.

Development of human resources in the "lean" human resource management system is one of the important issues of management activities that aimed the continuous improvement and carrier development of employees through corporate development and training programs. The development of such programs contributes and providing the organization to reach the high level of performance and quality, which lead to changes in the market competitive advantage.

VI. CONCLUSIONS

From this study, we conclude the following main points:

- 1- Based on the concept of "Lean Production", the proposed framework of human resource management has been developed, which consists of three interrelated blocks: strategic human resource management, evaluation process of the human resource management, and building a human resource management system. The SBI, as part of this model, uses subjective and objective indicators to evaluate the effectiveness of human resource management.
- 2- Developed a methodology for comprehensive assessment of human resource management effectiveness based on the analysis of the values of SBI indexes and judgmental expert assessments.
- 3- Human resource management in accordance with the concept of "Lean Production" involves the creation of favorable working environment on the principle of "organization - for the person". In this regard, it is proposed a developing a human resource management

system that includes subsystems for the formulation, through development of human resources and work organization.

- 4- For the successful implementation of the human resource management system, a mechanism has been developed and its structure defined: processes, tools and criteria for evaluating work effectiveness. The proposed measures will increase the level of effectiveness of human resource management.

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