APPLICATION OF MARKETING APPROACH TO LABOR
MARKET RESEARCH IN THE PERSONNEL MANAGEMENT
SYSTEM OF THE ENTERPRISE

O. O. Plakhotnik,
Doctor of Economic Sciences, Professor,
Head of the Department of Economics and Industry engineering,
Dniprovsk state technical university, Kamianske
ORCID ID: 0000-0001-9717-2877

D. Pereviazko
applicant for higher education of the second (master's) level in the specialty 073 Management,
Dniprovsk state technical university, Kamianske
ORCID ID: 0000-0002-2910-0000

Based on the identification of the main trends in the labor market, the author highlights the changes in the social and labor mentality of society that arose under the influence of globalization and computerization. The features and the need for the use of marketing research in personnel management of the enterprise are considered. The problem of underutilization and devaluation of labor potential in the country has been actualized, which has led to the identification at the conceptual level of requirements for the flexibility of production and labor in the personnel management system of the enterprise.

The key factors that increase the instability of the labor market in the country and require new approaches to its regulation are substantiated. It is scientifically proved that the improvement of methodological and methodical bases of personnel management, which include the system of principles, methods, techniques, technologies of their realization, acquires special significance. responding to the new challenges of the post-industrial era and meeting the risks that lead to lower unemployment, increased flexibility, employment efficiency and wage incentives. At the same time, the new approach to personnel management should be aimed at restoring the dynamic balance of supply and demand, increasing the flexibility of the labor market, finding new opportunities to expand employment and creating effective jobs with decent working conditions.

In the development of the directions of the personnel management mechanism, a model for planning financial resources for the material support of employees has been developed, which allows
increasing the cost of the enterprise's labor force, taking into account the situation on the labor market. The proposed model can be used as the basis for financial planning of labor costs, promotion and incentives for employees, as well as built into the enterprise budgeting system, which will increase the validity of managerial decisions in the field of personnel management aimed at maximizing the value of social capital.

У статті виділено зміни в соціально-трудовій ментальнісності суспільства, що виникли під впливом глобалізації та інформатизації, на основі ідентифікації основних тенденцій ринку праці. Доведено, що трансформація соціально-економічного розвитку суспільства, перехід його на інноваційний шлях розвитку обумовлює нові тенденції в розвитку ринку праці й зміні напрямів соціальної політики.

Обґрунтовано ключові чинники, що підсилюють нестабільність функціонування ринку праці в країні та вимагають новых підходів щодо його регулювання. Науково доведено, що особливої значущості набуває вдосконалення методологічних і методичних основ управління персоналом, які включають систему принципів, методів, методик, технології їх реалізації.

що відповідають новим викликам постіндустріальної епохи та протистоять ризикам, які ведуть до скорочення безробіття, підвищення гнучкості, ефективності зайнятості й стимулюванню оплати праці. При цьому новий підхід щодо управління персоналом має бути спрямований на відновлення динамічної рівноваги попиту і пропозиції, підвищення гнучкості ринку праці, пошук нових можливостей розширення зайнятості та створення ефективних робочих місць з гідними умовами праці.

Розглянуто особливості та необхідність застосування маркетингових досліджень при управлінні персоналом підприємства. Актуалізована проблема недовикористання й значення трудового потенціалу в державі, що зумовило виділення на концептуальному рівні вимог до гнучкості виробництва і робочої сили в системі управління персоналом підприємства.

Розроблена модель планування фінансових ресурсів для матеріального забезпечення працівників, яка дозволяє збільшити вартість робочої сили підприємства з врахуванням ситуації на ринку праці. Наявність системи бюджетування дозволяє здійснювати розподіл грошових коштів між центрами фінансової відповідальності відповідно їх внеску у діяльність підприємства.

Запропонована модель може бути покладена в основу фінансового планування витрат на оплату праці, стимулювання й заохочення працівників підприємства, а також вбудована в систему бюджетування підприємства, що дозволить підвищити обґрунтованість управлінських рішень у сфері управління персоналом, направленого на максимальізацію вартості соціального капіталу.

**Keywords:** personnel management; labor market; marketing research; labor costs; employee welfare; budgeting; center of financial responsibility.

**Ключові слова:** управління персоналом; ринок праці; маркетингові дослідження; вартість робочої сили; добробут працівників; бюджетування; центр фінансової відповідальності.

**Statement of the problem in general and its connection with important scientific or practical tasks.**

In the modern market economy, the labor market plays a significant role as one of the most important factors of production. Acting as a key factor in social reproduction, it is the core of a market economy. Taking into account the trends and state of development of the labor market is fundamental in the formation of the development strategy of all economic entities, sectors of the national economy and society as a whole.

The modern economy is characterized by new trends in the labor market, resulting from social, scientific and technological progress, namely: the displacement of agricultural employment, reduction of traditional industrial employment, growing diversification of service sector, rapid growth of managerial, professional and technical jobs, relative modernization of professional structure with higher growth of occupations that require high qualification and high level of education [2].
As a consequence of these changes, the sphere of labor and employment acquires new characteristics. The changes in the social and labor mentality of society were the result of globalization and informatization: labor activity is becoming increasingly individualized, professional mobility is increasing, social and labor space of the employee is expanding, and so on.

In this regard, progressive methodological approaches to personnel management of enterprises, aimed at the formation of optimal socio-economic relations in the team, employment and improving the welfare of employees should be enhanced.

In domestic practice, the use of a marketing approach to human resource management of organizations has not yet received the proper approach. Marketing functions are often replaced by staffing needs planning. The fundamental task of the marketing approach in personnel management is to provide the organization with human resources with the optimal ratio of quantitative and qualitative characteristics at a minimum price and retain this staff by creating a highly attractive image of the organization as an employer. This problem does not find an effective solution because the methodological and organizational foundations of the personnel management process using a marketing approach at the level of employers' organizations are currently not fully developed.

**Analysis of recent research and publications, which initiated the solution of this problem and on which the author relies, the highlighting of previously unsolved issues of the general problem, which is the subject of this article.**

The methodological problems of enterprise management and their personnel potential have found the reflection in works of Meskon M., Ansoff I., Alberta M., Hedouri F., Fatkhutdinova R.A., Tel’nova A. V., Willett K. D. and others. The theory and practice of marketing research were deepened by the scientific publications of Kotler F., Evans J., Berman B., Bielavtsev M. I., Kryvoruchko O. M., Len T. V. and others.

Despite the significant amount of research in the field of marketing approach to personnel management of economic entities, aspects of the formation of an effective personnel management tool aimed to build personnel policy, identify and meet staffing needs based on marketing approach in personnel management, require further development.

**Formulation of the article objectives (task statement).**

Develop methodological bases for personnel management of the enterprise, based on the application of a marketing approach to labor market research, contributing to the sustainable development of the enterprise.

**Presentation of the main material of the study with a full justification of the obtained scientific results.**

The transformation of the socio-economic development of society, its transition to an innovative path of development causes new trends in the development of the labor market and changes in the direction of social policy. Among the key factors that increase the instability of the labor market in Ukraine and require new approaches to its regulation, the most significant are:

- processes of globalization and integration of the domestic economy into the system of world labor markets, capital, goods, services;
- the cyclical nature of the world and domestic economy;
- modernization of the domestic economy, forming, on the one hand, new opportunities for relocation, restructuring and growth of employment efficiency, on the other - the risks of structural unemployment and social instability;
- uncontrolled migration, which puts additional pressure on the labor market, contributing to the expansion of its shadow segment;
- increasing risks of unemployment associated with threats to reduce the production of non-competitive products in a number of industries.

At the same time, in the modern labor economy, conceptual approaches to the substantiation of personnel management mechanisms in conditions of socio-economic instability are still insufficiently developed. On the one hand, this is due to the difficulty of forecasting the processes in the labor market occurring during economic crises, on the other - the ongoing process of developing a methodology for personnel management in times of instability.

In modern conditions, it is especially important to improve the methodological and methodical basis of personnel management, including a system of principles, methods, techniques, technologies for their implementation, meeting new challenges of the post-industrial era and confronting risks leading to unemployment reduction, flexibility, employment efficiency and pay incentives. At the same time, the new approach to personnel management should be aimed not only at solving problems arising in connection with rising unemployment, but also at restoring the dynamic balance of supply and demand, increasing labor market flexibility, finding new employment opportunities and creating efficient jobs with decent conditions of work.

Trends in the development of the domestic economy in recent years, characterized by growth in production and increased investment activity, are mainly the result of favorable economic base (mainly in foreign markets). At the same time, the impact of positive processes on employment is very limited and will remain so unless it is consolidated by the growth of production and investment on a permanent basis. To develop the concept of medium-term and long-term forecast, it is also necessary to analyze the state and assess the prospects for the development of employment and the processes that determine its state.

The features of the current state of the labor market are of particular importance in determining the conceptual approaches, specific goals, as well as tools for the implementation of employment policy and personnel management.

Personnel management of enterprises becomes a strategic task of any business entity, and consists in the selection and maintenance of the required personnel organization, its professional training and development, evaluation
of each employee in terms of achieving the goals of the organization. In connection with the need to determine the specific objectives of the production system and priorities in the organization of management, the factor of inclusion of the subject of management in the system is of great importance for the organization of management, analysis and modeling of production systems.

In the modern socio-economic paradigm of society, personnel management includes the concept of labor potential in the production system of enterprises. The problem of underutilization and devaluation of labor potential in the country is most acute, as in contrast to other countries, the level of general and vocational education at the time of the start of reforms was quite high.

The requirement for flexibility of production and elastic labor force in a new way poses the problem of its efficiency. The use of flexible employment (part-time) is more economically justified in accordance with changing labor needs. Ensuring the flexibility of production requires the formation of a mobile workforce capable of quickly adapting to new production conditions, which allows you to maneuver the placement of personnel in different areas of production.

The dynamism of modern production, its intensification, growing demands on social working conditions, the quality of the workforce necessitate the management of the formation and development of labor potential of the enterprise. Thus, there is a task to increase the efficiency of personnel management of the enterprise.

The mechanism for implementing the personnel management process is a personnel strategy, specified for specific purposes of personnel management and implemented through personnel and social policy.

Personnel management can be considered as an economic system, as a system of labor relations, as a system of interconnected quantitative and qualitative characteristics of labor potential, etc. The use of a systems approach allows to take into account the interaction of many elements of different nature, determining the labor potential, to identify those that have the greatest impact, to find ways to effectively influence them.

A systematic approach to the study of the labor potential management system of the enterprise allows to formulate the goals, objectives and principles of the system. Considering the principle of systematization more broadly, we can determine that the management system of labor potential of the enterprise is an ordered set of elements that are interconnected and interact with each other, forming a single whole. The individual elements of the system are united by a causal relationship, and all of them are united by a single target.

The task of assessing the labor potential of the employee is to identify its potential, the degree of use of this potential, compliance with the labor potential of the employee or his willingness to take a particular position, in order to characterize the effectiveness of his work and, consequently, the value of the employee.

The need for personnel management of the enterprise as an important condition for ensuring its sustainable development is due to the following points:

1. Stands out by most economists as a separate element of the concept of economic stabilization at the level of the state and economic entities. Economists have proved that the increase in the financing cost social spending in the formation of a new economy, social policy services, social transfers has a positive impact on economic growth, as the public services sector creates surplus value that increases GDP [6].

2. Limited budget resources in the country, along with the growing need for social security, make issues of corporate social responsibility relevant. Researchers at Harvard University, having studied the activities of a number of corporations around the world, concluded that social responsibility has a positive effect on their sustainable development. In particular, by implementing the concept of social responsibility, companies received 2 - 4 times higher growth rates than competitors, limiting the distribution of profits to social programs [5].

3. For enterprises, ensuring the effective functioning of personnel management requires reducing staff turnover, improving their skills and productivity, as well as improving occupational safety, which is manifested in the reduction of occupational injuries and occupational diseases.

Insufficient level of labor potential threatens the implementation of the goals and objectives of the enterprise, leads to a decrease in its competitiveness, ultimately leading to the need to reduce the level of goals. If the level of labor potential is much higher than the current goals and objectives, it leads to the fact that either the organization «overpays» its employees (this can not last long, as the efficiency of the enterprise decreases sharply), or there is dissatisfaction among employees for insufficient remuneration of their qualifications, the lack of realization of their abilities and there is a «erosion» of labor potential, flight from the company, and therefore, labor potential is reduced and naturally comes into dynamic equilibrium with the level of claims of the enterprise.

This shows that enterprises need to provide analysis, on the one hand, of the level of goals and objectives of the enterprise, and on the other hand, of the results of monitoring the labor potential of the enterprise. Such an analysis must include not only the current situation, but also take into account the possible development of the level of goals and the level of labor potential, both in the near future and in the longer term. It is obvious that the full balance of these two sides is almost unattainable, and impractical. The practice of many successful companies shows that these parties must be in dynamic equilibrium, when the gap between them, constantly changing over time, does not exceed critical values.

The marked regularity has global character as allows to describe the phenomena occurring not only at the level of the enterprises and even separate structural divisions of the enterprise, but also at the level of regions, the states. Ensuring the dynamic balance of the components under consideration is an important tool for increasing the competitiveness of enterprises, a powerful incentive to continuously increase both the level of labor potential and the level of claims of the enterprise.
Practice shows that human labor potential is a very inertial characteristic. It is impossible to instantly increase labor potential by making even very great efforts and spending a lot of money. It is obvious that the labor potential in the most general case can be considered as a dynamic system with inertia. Based on this hypothesis, an attempt to theoretically analyze the behavior of the labor potential of a person, group of people, enterprise, industry, country as a result of the implementation of costs for the development or maintenance of labor potential was made.

In the development of these provisions of the personnel management mechanism, a model of planning financial resources for material support of employees has been developed, which allows to increase the cost of labor of the enterprise taking into account the situation on the labor market.

The development and use of innovations in the activities of enterprises requires appropriate training of personnel, which is usually accompanied by hidden resistance from the performers. In addition to explanatory work by management on the need for transformation, as well as determining the role, place and importance of each employee in the new conditions of the enterprise, operation motivational lever in the form of financial rewards is significant.

The problem of the distribution of remuneration among the employees of the enterprise arises.

Existence of system of budgeting allows to carry out distribution of money resources $S$ between the centers of financial responsibility $S_j$, $j = 1, N$ ($N$ - number of centers of financial responsibility of the enterprise) according to their contribution to activity of the enterprise:

$$S_j = \alpha_j S, \quad \sum_{j=1}^{N} \alpha_j = 1,$$

where \(\alpha_j\) - weighing coefficients of the contribution significance of the \(j\)-th center of financial responsibility of the enterprise (CFO), determined by the method of expert estimation.

The allocated amount $S_j$ for the \(j\)-th center of financial responsibility can be distributed among its employees according to a rating assessment of activity of each of them by means of the corresponding subsystem which is a part of controlling system of the enterprise.

Let consider the model of such a subsystem. Let us determine the set of indicators for evaluating the activities of employees of the \(j\)-th center of financial responsibility $P^j = \{p^j_k\}$, where $K$ is the power of the set $P^j$.

The rating assessment of the activity of CFO employees is carried out for a certain period of time $T^m = [t_{beg}^m, t_{end}^m]$, determined by the moments of beginning of $t_{beg}^m$ and end of $t_{end}^m$. Such periods of time may coincide with the periods (subperiods) of budgeting, and may coincide with the traditional period of accounting (1 month).

In order not to overload the indexes with further statements, we will assume that the subsequent calculations are carried out for the \(m\)-th period of time.

Denote by $p^j_{ik}$ the value of the index $p^j_k$ of the \(i\)-th employee of the \(j\)-th CFO. We will assume that such values are normalized, i.e. are reduced to a single scale of measurements. The most common method of normalizing the value of $\gamma$ is:

$$Y_n = \frac{Y}{Y_{\text{max}}}$$

where $Y_n$ - is the normalized value of $Y$;

$Y$ - is the current value of the processed value;

$Y_{\text{max}}$ - is the maximum allowable value of $\gamma$.

Then the total rating of the \(i\)-th employee of the \(j\)-th CFO is determined by:

$$r_{ij} = \sum_{k=1}^{K} r_{ij}^k$$

For objective and reliable information processing in the subsystem under consideration, the values $r_{ij}^k$ should appear in it as the event occurs. However, in practice, problems arise with the interpretation of the semantics of the $p^j_k$ indicators. For example, the publication of the results of innovative activities in scientific journals (a considerable
period of time passes between the preparation of materials and the actual publication); defense of a dissertation of a candidate or doctor of sciences (the question is what is considered a defense: defense of a dissertation in a specialized academic council, a decision of an expert commission to award a scientific degree, obtaining a diploma of a candidate or doctor of sciences). In both the first and second examples, the moment of the event can be interpreted in different ways, which requires a strict certainty of the semantic content of the indicators $p_k^j$.

The amount of remuneration $f_{ij}$ to the $i$-th employee of the $j$-th financial responsibility center is calculated by the formula:

$$f_{ij} = \frac{s_j \cdot r_{ij}}{I_j} \sum_{i=1}^{I_j} r_{ij},$$

where $I_j$ - is the number of employees of the $j$-th financial responsibility center.

For the practical implementation of models (1) - (4), a rational structure of stored information in the form of relations of the third normal form is required. Fig. 1 shows a fragment of the information database model (DB) of the subsystem of rating assessment of the activities of the enterprise employees.

![Fig. 1. Fragment of the information database model of the subsystem of rating assessment of enterprise employees](image)

Table 1 shows the semantic interpretation of the attributes used in the model (Fig. 1).

<table>
<thead>
<tr>
<th>File name</th>
<th>Attribute name</th>
<th>Attribute semantics</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>TN</td>
<td>ID number of employee</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Surname of employee</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>Имя работника</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>Patronymic (name) of employee</td>
</tr>
<tr>
<td></td>
<td>KCFO</td>
<td>Employee Financial Responsibility Center Code</td>
</tr>
<tr>
<td>F2</td>
<td>K_P</td>
<td>Employee performance assessment indicator code</td>
</tr>
<tr>
<td></td>
<td>N_P</td>
<td>Employee performance indicator</td>
</tr>
<tr>
<td></td>
<td>OP</td>
<td>Description of the employee performance indicator</td>
</tr>
<tr>
<td>F3</td>
<td>D_BEG</td>
<td>Start date of the employee performance assessment period</td>
</tr>
<tr>
<td></td>
<td>D_END</td>
<td>End date of the employee performance assessment period</td>
</tr>
<tr>
<td></td>
<td>TN</td>
<td>ID number of employee</td>
</tr>
<tr>
<td></td>
<td>K_P</td>
<td>Employee performance assessment indicator code</td>
</tr>
<tr>
<td></td>
<td>Z_P</td>
<td>The value of the employee performance indicator in the period under review</td>
</tr>
<tr>
<td>F4</td>
<td>D_BEG</td>
<td>Start date of the period of activity of the Central Federal District</td>
</tr>
<tr>
<td></td>
<td>TN</td>
<td>End date of the period of activity of the Central Federal District</td>
</tr>
<tr>
<td></td>
<td>KCFO</td>
<td>Financial Responsibility Center Code</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>Amount of money to be distributed among employees of the Central Federal District</td>
</tr>
</tbody>
</table>
Fig. 1 represents the information attributes of the subsystem under consideration by named rectangles, grouped into separate files. The file names are listed above the group. Primary keys that uniquely identify file records are dimmed. The relationship between the primary and foreign keys of various files is represented by straight lines. Fig. 1 and Table 1 don’t indicate the types and dimensions of attributes, which are determined by the characteristics of a particular subject area. Wavy lines at the end of attribute groups (files) indicate the possibility of including additional attributes that functionally depend on primary keys.

The presented fragment of the information database model of the rating assessment subsystem of the enterprise employees (Fig. 1) can be implemented by means of the database management system used to enter, store, process and display information. The user interface is implemented by software developed using high-level programming languages.

The advantage of the presented model is:
- canonical representation of the structure of the stored information, which excludes its duplication, and, therefore, minimizes the number of input errors;
- simplicity and transparency of the semantic load, which ensures the rapid development of procedures for controlling the integrity of the input information;
- flexibility in expanding and changing the structure of stored information due to its presentation in the form of relations of the third normal form;
- high efficiency of implementation of search procedures using SQL queries;
- low labor costs in the development of application software for the industrial operation of the subsystem.

**Conclusions from this study and prospects for further exploration in this direction.** The proposed model can be used as the basis for financial planning of labor costs, promotion and incentives for employees of the enterprise, as well as built into the budgeting system of the enterprise, which will increase the validity of managerial decisions in the field of personnel management aimed at maximizing the value of social capital.

Prospects for further scientific research in the field of enterprise personnel management based on marketing research of the labor market are defined by improvement the tools for planning personnel policy by studying the supply and demand for labor in a particular region, the level of its qualifications and market value. In this regard, the application of methods of economic and mathematical modeling of personnel management processes, the use of the principles of the theory of social capital management and conceptual approaches to the management of complex socio-economic systems are of particular importance.

**References.**


Стаття надійшла до редакції 18.11.2020 р.