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**T A S K**  
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4.	Completing of the second section according to the supervisor recommendations. Preparation of the thesis' third section
5.	Completing of the third section according to the supervisor recommendations. Preparation of a report for a scientific conference with a presentation of the main results of the thesis
6.	Writing of the introduction, conclusions of the thesis. Making references list
7.	Submission of the thesis to the Department of Management and Administration

#### 5. Date of assignment issue June 30, 2023

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## INTRODUCTION

The COVID-19 pandemic, and now the war, have posed serious challenges to Ukrainian business – how to keep staff, develop production and not lose profits. Complex processes occurring today in the economic, political and social spheres require changes in approaches to personnel management. The main task of managers is to determine directions and search for innovative methods of personnel management that will create prerequisites for the further development of enterprises, increasing the share of profit due to the improvement of the efficiency of the use of human capital.

An important condition for ensuring the socio-economic development of the country is to increase the efficiency of the operation of machine-building enterprises. The experience of conducting business in developed countries indicates stable profitability of enterprises due to increased management efficiency, which is ensured by a high level of personnel costs, the share of which is 70–80%. Under such conditions, the personnel becomes the most important and inexhaustible resource of the enterprise. Taking into account the trends of recent years regarding the increase in the share of personnel costs in total costs, the management of personnel costs is becoming one of the strategic aspects of the organization of personnel management and the effective functioning of the enterprise.

Theoretical and methodical aspects of personnel management and personnel costs are devoted to scientific research by scientists: Armstrong M., Taylor S., Lussier R., Hendon J.R., Publishers V., Gilbert J., Kumar S. and others. However, despite the considerable amount of research, the issues of personnel management and personnel costs require further development. In particular, the scientific substantiation of the theoretical and methodical provisions of personnel cost management as the basis of the organization of personnel management acquires a priority in the context of the search for reserves for the optimization of personnel costs. All this determined the choice of the topic of the thesis, determined its purpose and the content of the tasks.

The aim of the research is the further development of theoretical and methodical provisions and the development of practical recommendations for improving the organization of personnel management at a modern enterprise.

To achieve this goal, the following tasks were set and solved:

- summarize the essence of personnel management and the organization of personnel management at the enterprise;
- to determine the place of management of personnel costs in ensuring the organization of personnel management;
- identify trends in the organization of personnel management at modern enterprises;
- carry out an assessment of the personnel management system at PJSC “Yuzhcable Works”;
- develop proposals for improving the management of personnel costs;
- justify directions for redistribution and optimization of personnel costs.

The object of the research is the process of organizing personnel management at PJSC “Yuzhcable Works”.

The subject of the research is theoretical and applied aspects of the organization of personnel management and management of personnel costs.

To achieve the set goal and solve the set tasks, the following methods were used in the research: structural and logical analysis – to build the logic of the research and systematize scientific ideas about personnel management; analysis and synthesis – to clarify the concepts of “personnel management”, “personnel cost management”; statistical analysis – to identify trends in the organization of personnel management at the enterprise; linear programming – to obtain optimal ratios of redistribution of funds to personnel, graphical – to visualize the obtained results.

The information base of the research is the works of leading scientists on issues of HR-management, personnel costs and the enterprise efficiency, statistical reporting of PJSC “Yuzhcable Works”, information and analytical materials, Internet resources.

Approbation of the results of the thesis. Modern approaches to organizing HR-management: challenges and opportunities was published at the International scientific and practical internet conference “Problems and prospects of ensuring sustainable socio-economic development of territories”, Kharkiv (October 27–28, 2023).

The thesis consists of an introduction, three sections, a list of used sources and appendices.

## SECTION 1

### THEORETICAL PRINCIPLES OF PERSONNEL MANAGEMENT ORGANIZATION IN A MODERN ENTERPRISE

#### 1.1 The essence of personnel management

The personnel of the enterprise is one of the key factors of production. No matter how much the production activity is mechanized and automated, the functioning of any technique is impossible without a person. It would be difficult to imagine an enterprise without management personnel, even with the rapid development of technologies and the creation of artificial intelligence. At the same time, management activities tend to become more complicated over time, which is associated with integration processes in the economy, a high level of competition in the market, rapid development of science and technology, large volumes of information, etc.

Personnel are the driving force of any organization. Therefore, this category is given a lot of attention in economic research. Most scientists study individual categories of enterprise personnel, thus trying to investigate its effectiveness.

It should be noted that a significant part of scientific research is devoted to broader concepts than the term “enterprise personnel”. In modern studies, one can find a large number of interpretations of such macroeconomic categories as: “labor resources”, “human capital” and “labor potential”. The essence of the concept of “personnel”, on the other hand, is not considered even by those scientists in whose works it is the subject of research.

Kumar S. provides the following definition of “staff”: “Staff are, first of all, people with a complex set of individual qualities, among which social and psychological play a decisive role, it is part of the economic and innovative space of the enterprise, in which radical market transformations have not only purposefully adsorb (enter the life environment of the enterprise and adapt to it), and bring the results expected from them” [36].

Publishers V., Gilbert J. interpret the concept of “personnel of the enterprise” as follows: “...it is a set of its employees who work for hire in the presence of labor relations with the employer, formalized by an employment contract (contract)” [51].

George Milkovich and John Boudreau propose to consider personnel management as “a series of decisions in the field of employee relations that affect the effectiveness of employees and the organization as a whole” [42].

Michael Armstrong notes that personnel management is “a strategic and consistent approach to managing the organization’s most valuable assets – the people who work in it and make individual and collective contributions to achieving its goals, supporting the company’s constant competitive advantage” [4]. We believe that this definition of personnel management is the most appropriate for modern enterprises.

And we suggest considering the concept of “enterprise personnel” – it is a set of employees of a certain organization interacting and performing separate functions that correspond to the qualification level and professional knowledge of each person, in order to achieve the main goal of production.

It should be noted that personnel management is implemented through strategic and functional (operational) aspects. The strategic aspect of such management means the development and implementation of the strategy of the enterprise, the components of which are the acquisition of prestige, the formation of the image of the enterprise, the analysis of development prospects and directions for the use of personnel potential, the management of informal relations in the team, the clarification of the reasons and the prevention of personnel turnover at the enterprise for the long term. The operational aspect of such management means the development and implementation of tactical actions and measures regarding labor resources that help implement the chosen strategy [48].

Lussier R., Hendon J. approach the consideration of personnel management in the context of organizational management. Scientists distinguish a certain sequence of stages of personnel management, which can be considered as interconnected subsystems of personnel management: personnel marketing, personnel planning, recruitment and selection of personnel, labor adaptation, personnel evaluation,

personnel development, career management, motivation and stimulation of personnel, social partnership and formation of favorable working conditions [39].

In the work, we offer the following classification of personnel management subsystems: payroll and social measures subsystem, personnel planning and marketing subsystem, personnel selection and recruitment subsystem, personnel evaluation and accounting subsystem, personnel development subsystem, personnel stimulation subsystem, social partnership subsystem, and working conditions organization subsystem.

The subsystem of remuneration and social measures plays an extremely important role in attracting, motivating and retaining personnel at the enterprise, which is why the specific weight of the costs of this subsystem is the largest. The main type of expenses of the payroll and social measures subsystem are expenses for wages (based on salaries and tariffs) of personnel. These costs are related to the cost of goods (works, services), so they can directly affect the market balance of supply and demand.

Another powerful tool of material stimulation is various allowances and additional payments, bonuses, compensatory payments and material assistance, which are also included in the subsystem of remuneration and social measures.

Thus, a well-founded compensation subsystem can help management control and effectively manage personnel costs, which are of fundamental importance for the overall success of the enterprise.

The personnel planning and marketing subsystem provides the company with the optimal personnel composition. Effective personnel planning has a positive effect on the enterprise's results due to the reduction of total labor costs due to a well-thought-out, consistent and active policy in the labor market [19].

The functions of the personnel selection and hiring subsystem are related to the search and selection of personnel that best meets the requirements of the enterprise. Personnel recruitment is the primary stage of personnel management service activity at the enterprise, in addition, personnel recruitment costs include a significant number of heterogeneous cost items that depend on the use of certain

personnel selection and recruitment tools by the management and employees of the personnel management service.

There are many different forms and methods of recruitment, but enterprises must find and apply those that meet the needs and goals of management and are the most effective, that is, they give the desired result (new qualified personnel) while maintaining the budget of expenses. It should be noted that Ahmad S. believes that the induction of new employees, which is systematically conducted and is properly organized, can not only reduce hiring costs, but also become a motivating factor for these employees [2]. Recruitment and staffing activities should be aimed at achieving a balance between costs and the results we will get. In turn, each stage of the recruitment process is important and can help reduce staff retention costs [43]. In this regard, the costs of the recruitment subsystem require close attention from the management.

The personnel evaluation and accounting subsystem accumulates costs not only for the organization of the rational use of personnel, but also for the logistical and clerical support of the personnel management system.

The personnel development subsystem is related to the renewal, accumulation and enrichment of the enterprise's intellectual potential, and directly affects the personnel as a socially significant link of society as a whole.

The qualifications of workers and the level of their knowledge, skills and abilities determine the success of the enterprise and its competitive position on the market. In turn, the process of rapid "aging" of knowledge in the conditions of dynamic development of science and technology dictates the need for their constant updating and timely upgrading of personnel qualifications, therefore, the costs of personnel development become the object of a more detailed study, especially from the point of view of state support and influence.

The subsystem of personnel stimulation includes functions related to the management of the labor behavior of personnel, the standardization and pricing of the labor process, the development of new or improved labor payment systems, the development and use of tools and forms of moral stimulation of personnel, and

the organization of regulatory and methodical support of the personnel management system. The functions of this subsystem are extremely important, as they must determine the growth of the motivational component of the staff's work and to a certain extent influence the social and psychological mood of an individual employee and the team as a whole.

The subsystem of the social partnership of personnel combines functions that contribute to the comprehensive development of the individual and are aimed at meeting the physical, spiritual, social and cultural needs of workers.

We believe that it is appropriate to include functions directly related to providing personnel with appropriate working conditions, as well as costs for developing the organizational structure and improving labor relations at the enterprise, to the subsystem of the organization of working conditions.

It should be noted that appropriate working conditions and favorable labor relations in the collective activate activities to create a positive moral and psychological climate, which directly affects the productivity of workers. In this regard, the costs of this subsystem have a significant impact on the efficiency of the enterprise.

Therefore, the distribution of functions in the context of the analyzed subsystems can be not only according to the intended purpose, but also according to the place of occurrence and degree of activity. In turn, this contributes to a more complete, meaningful and comprehensive analysis of the personnel management organization.

When managing personnel, enterprises use a set of administrative, economic, and socio-psychological methods [55], the characteristics of which are shown in figure 1.1.

A system of indicators and research methods grouped in table 1.1 are used to solve personnel management tasks.

The successful operation of the enterprise depends on many factors, one of the most important of which is the availability of a personnel management system. Nowadays, more and more attention is paid to issues of personnel management. It becomes clear to the heads of enterprises that effective work and solving tasks related to increasing the competitiveness of the enterprise and its stable development depend

on such a valuable resource as the enterprise's personnel. Personnel management has a complex and systemic nature and occupies a leading position in the general structure of enterprise management, which requires further scientific research in order to implement it in the practical activities of enterprises.

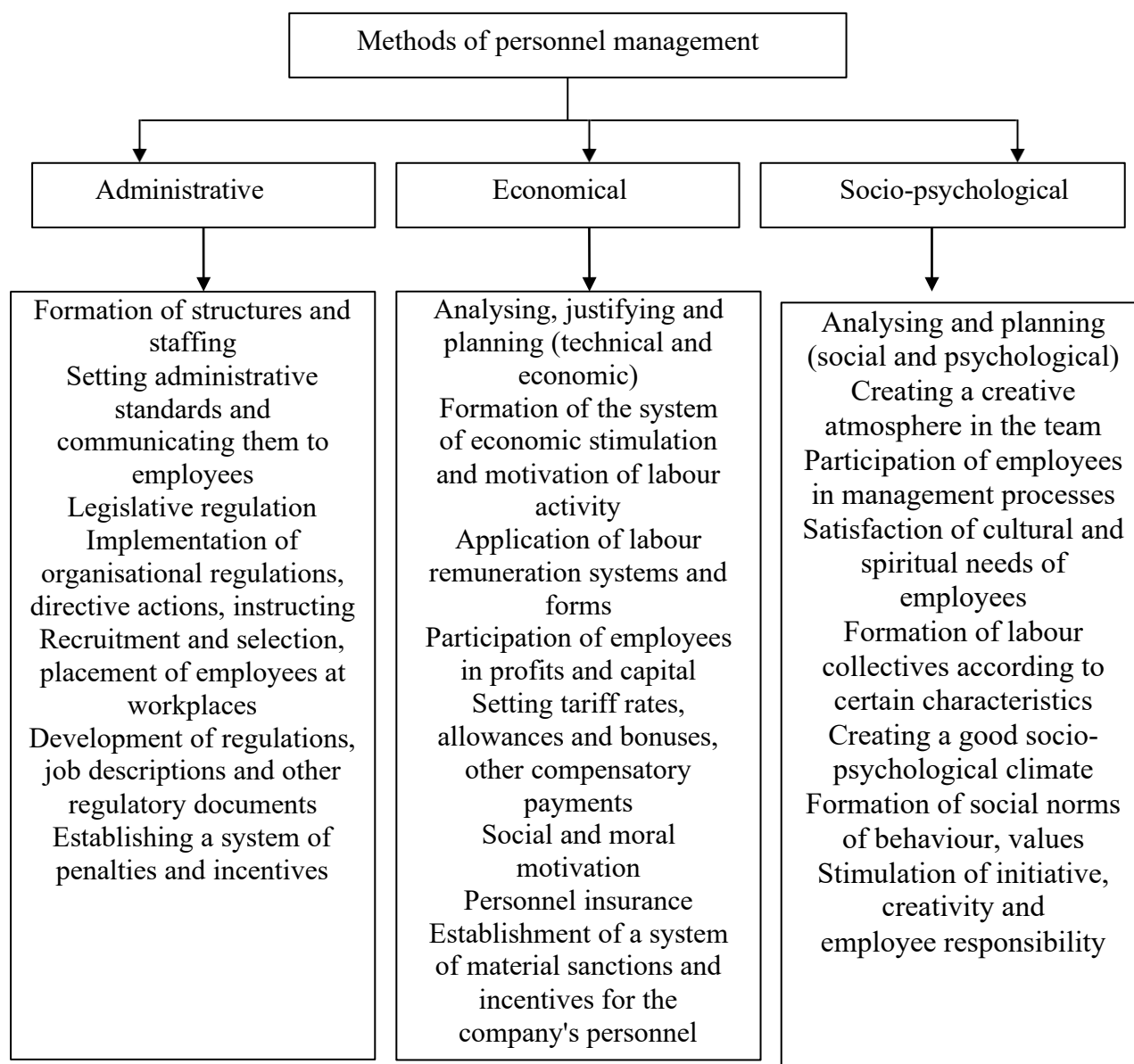


Figure 1.1 – Characteristics of enterprise personnel management methods (compiled by the author according to [55])

Summarizing the above, it should be noted that the personnel management process is a specific management function of the enterprise's management team, which acts on the object of management, i.e. personnel through the chosen personnel policy strategy and personnel management methods.

Table 1.1 – Research methods for solving enterprise personnel management tasks (compiled by the author according to [35])

Tasks of personnel management	Indicator system	Research methods
Formation of structures and states	<ul style="list-style-type: none"> <li>– norms of manageability and the optimal size of the workforce;</li> <li>– professional and qualification requirements for employees;</li> <li>– socio-psychological model of the labor team</li> </ul>	Analysis of the content of labor activity, the employee's compliance with the established requirements for the position (workplace), expert methods and modeling
Selection of personnel	<ul style="list-style-type: none"> <li>– the level of development of abilities and competencies (general and special) of the employee;</li> <li>– individual and psychological;</li> <li>– characteristics of the employee</li> </ul>	Observation, interview, evaluation of submitted documents, testing of employees
Personnel development	<ul style="list-style-type: none"> <li>– the level of professional skills, knowledge, employee competencies;</li> <li>– optimal forms of professional training;</li> <li>– assessment of acquired skills and abilities</li> </ul>	Surveys, the method of expert evaluations, conversations, business games, situational exercises, trainings
Evaluation and deployment of personnel	<ul style="list-style-type: none"> <li>– compliance of the employee to the position;</li> <li>– the employee's ability to cooperate;</li> <li>– results of labor activity;</li> <li>– the employee's place in the workforce</li> </ul>	Surveys, conducting interviews, group assessment, expert assessment, observation
Rational use of personnel	<ul style="list-style-type: none"> <li>– the level of compliance with labor discipline;</li> <li>– the state of the social and psychological climate in the workforce;</li> <li>– effectiveness of work with personnel enterprises</li> </ul>	Analysis of documents, testing, surveys, analysis of discipline, team work results, management style

Personnel management is a complex systematic, planned and organized influence with the help of interrelated organizational, economic and social measures on the process of formation, distribution, redistribution of the personnel of the enterprise and creation of conditions for the effective use of the qualities of employees in order to ensure effective management and development of the enterprise. The enterprise's personnel is a strategically valuable resource that needs to be developed and improved. Only by having a personnel management system, which is focused on improving the efficiency of personnel and labor productivity, can we talk about the successful development of the enterprise, since the essence of personnel management is to treat employees as a valuable resource.

## **1.2 Theoretical aspects of the organization of personnel management at the enterprise**

Since the enterprise does not exist outside the environment surrounding it, but is located in the macro-environment, any type of its activity, including personnel development, is influenced by various factors. The successful existence of the enterprise in the future depends on the timely identification of positive and negative factors of the impact of the macro-environment on its activities. Timely response to existing threats on the market will allow choosing the optimal path of development, avoiding dangers and using the available resources as effectively as possible, simultaneously taking advantage of the opportunities provided by the market.

In the scientific world, direct (microenvironment) and indirect (macroenvironment) factors of the influence of the external environment on the activity of the enterprise are distinguished [67, 71].

Direct factors determine the environment that directly affects the activity of the enterprise. Indirect factors determine the conditions in which the enterprise operates, they exert an indirect influence, but they are no less significant. Macro- and microenvironmental factors are in a very close relationship and are taken into account in the strategic planning of the enterprise's activities. At the same time, they can either contribute to the social development of the enterprise, or, on the contrary, inhibit it.

If the factors of the microenvironment are subject to control by the enterprise, then the factors of the macroenvironment are not controllable. However, they must be identified and appropriately responded to when making strategic and tactical management decisions. The factors of the enterprise's external environment that affect the organization of personnel management at the enterprise are shown in fig. 1.2.

The level of socio-economic development of the country and region determines the state of the national economy and is characterized by the following categories: the size of the national product, the size of the gross domestic product per capita, real incomes of the population, the rate of economic growth, the state of the balance of payments, the level of employment and inflation, the level of tax liability knitting

and others. The state of the national economy and the level of socio-economic development of the country depend on the conditions in which the enterprise's personnel exist, perform work and improve their mental abilities.

The nature and rates of growth of the gross domestic product, the level of inflation, and structural changes in the economy depend on the strategy of enterprise management, aimed at increasing the efficiency of production, improving the conditions of the social environment of the enterprise, and, therefore, creating conditions for improving the well-being of the enterprise's employees [72].

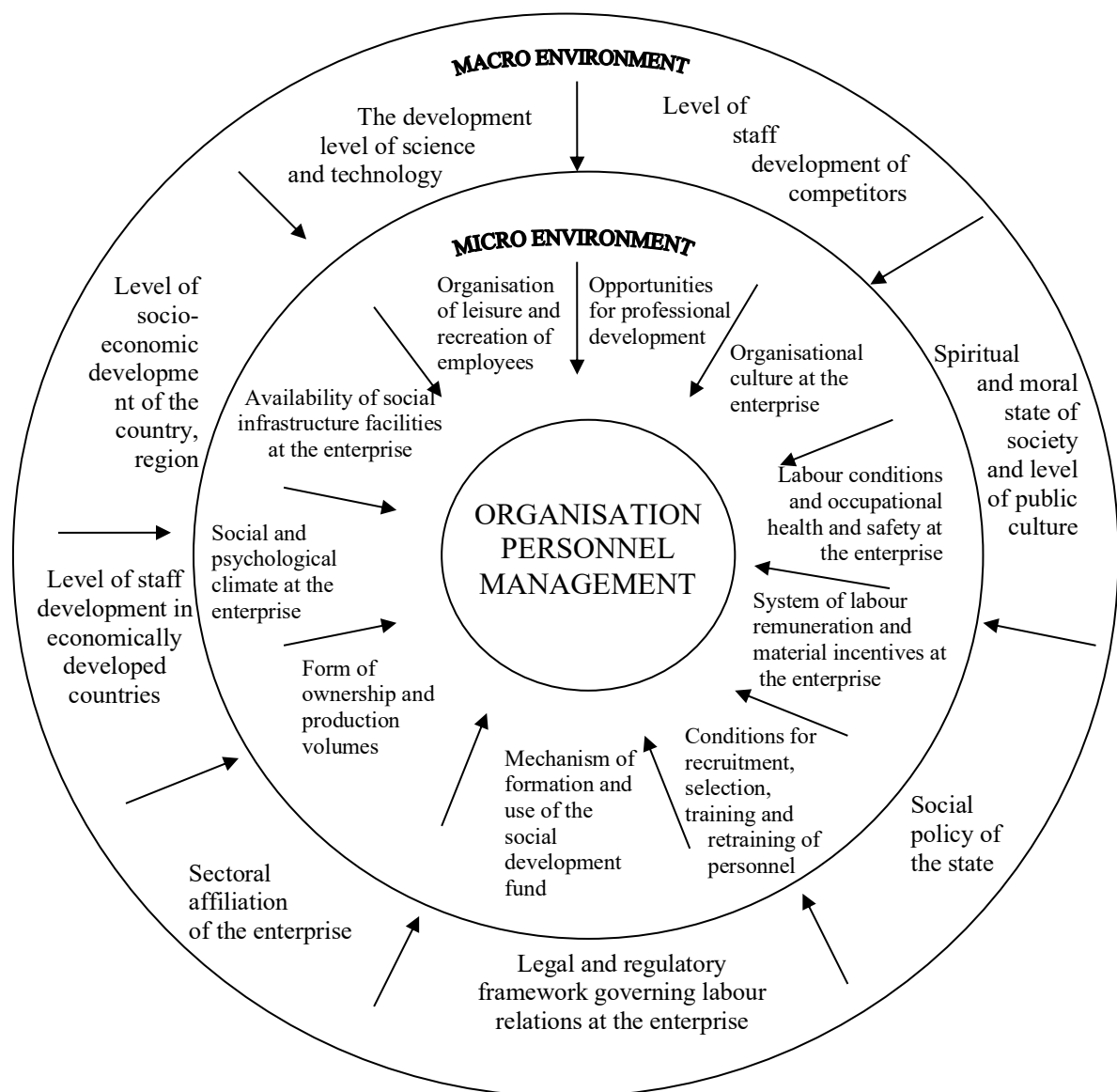


Figure 1.2 – Factors of the external and internal environment of the enterprise that affect the organization of personnel management (compiled by the author according to [67; 71])

The level of personnel's development of the economically developed countries of the world acts as a certain model to which the company strives, and its goal. A lag in personnel development leads the company to a lag in the results of production and economic activity, since its competitiveness depends on the level of development of the enterprise's personnel. As the level of staff development increases, the number of scientific developments implemented at the enterprise to improve the production process increases, the staff's responsibility for work results increases, labor productivity increases, etc. The experience of economically developed countries should be taken into account when planning the development of personnel at the enterprise.

The development of science and technology is crucial for the emergence of technological innovations in the field of production processes, materials, goods and services. With the increase in the level of development of science and technology, the production process is improved, new technologies are created, production is automated, the nature and content of work changes, which significantly affects the requirements for the enterprise's employees. In the conditions of market relations, the efficiency of production largely depends on the creative initiative of employees, which is manifested in the direct participation of engineering and technical workers, workers and employees in the processes of improving technology, equipment, organization of production, labor and management.

The industry affiliation of the enterprise determines the conditions of its activity, formation and distribution of profit, and this, in turn, forms opportunities for the implementation of the development of the enterprise's personnel.

State laws, resolutions, norms, standards and other legal acts that provide support in regulating working conditions and the minimum level of social security of employees belong to the legal framework regulating labor relations at the enterprise. The basis for regulating labor and social relations at an industrial enterprise is a collective agreement, which regulates and controls relations between employees and the employer on the basis of partnership socially responsible mutually beneficial

agreements and contains a certain list of regulated measures for the development of the enterprise's personnel.

The spiritual and moral state of society and the level of social culture are determined by moral and religious norms, the level of culture of the enterprise's employees, the professional qualities of workers, the level of criminogenicity, historical traditions, etc. All these indicators significantly affect the quality of the enterprise's workforce, its disciplinary behavior, the level of conflict, the responsible attitude of workers to their work, etc.

The level of development of the personnel of competing enterprises requires the analysis of approaches to managing the development of competing enterprises, forecasting the development trends of this process. On the basis of the received information, it is possible to create the most attractive conditions for the employment of highly qualified specialists at the enterprise.

The factors of the internal environment of the enterprise that affect the development of its personnel include: the form of ownership and the volume of production of the enterprise; conditions of recruitment, selection, training and retraining of personnel; opportunities for professional growth; conditions and labor protection; system of remuneration and material incentives; the mechanism of formation and use of the social development fund; organization of employees' leisure and recreation; provision of social infrastructure facilities; organizational culture; socio-psychological climate [9].

The analysis of internal and external factors influencing the development of the enterprise's personnel allows us to state that most of the human resources development process at the company should be aimed at creating an environment in which employees are encouraged to improve their abilities. The process of personnel development must be carried out in stages by meeting the needs of the employee.

Special attention should be paid in solving personnel management issues to the development of current and prospective personnel policy measures at each enterprise, taking into account the specifics of its activity.

Personnel policy is the main direction in work with personnel, a set of fundamental principles that are implemented by the personnel service of the enterprise. This is a strategic line in work with personnel [67].

It is developed by the owners of enterprises, the board of shareholders, top management, personnel services of the enterprise to determine the conceptual principles of personnel management, consistent observance of which contributes to providing the enterprise with competitive personnel.

When developing a personnel policy, it is necessary to take into account the general requirements that will contribute to its effective use. Such requirements include: direct connection with the enterprise's development strategy, flexibility, economic justification, accounting for real opportunities, individual approach to employees, orientation to long-term action and social orientation, which should ensure social protection of personnel.

Current personnel policy measures are a tactical aspect of solving personnel problems, and promising ones are a strategic one. Both current and prospective measures cover organizational and functional personnel management measures. As for measures to organize the work of personnel, they apply to employees of all categories of the enterprise.

The personnel policy system is presented in fig. 1.3.

A system is a set of interacting elements that are in relations and connections with each other and make up a single whole [19].

So, let's consider the elements of personnel policy.

Personnel planning involves determining the enterprise's need for personnel. That is, determining when, where, how many, with what qualifications, at what price the enterprise will need workers to achieve its goals. Therefore, the main goal of personnel planning is the implementation of part of the general plan of the enterprise to provide it with the necessary number of employees.

Enterprise managers hire people of various professional levels and need all kinds of specialties, so the recruitment network should be quite wide and diverse.

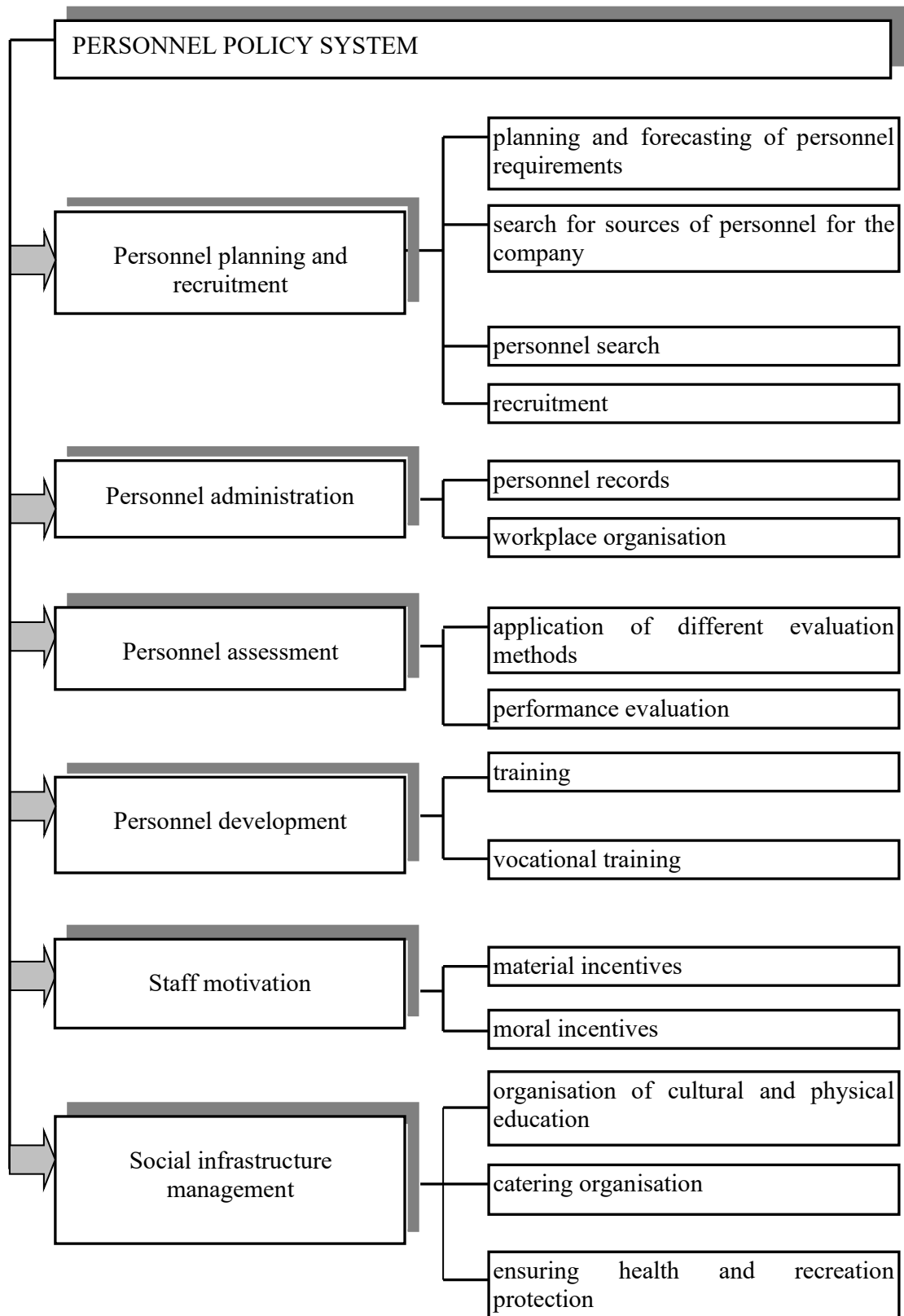


Figure 1.3 – The enterprise’s personnel policy system (compiled by the author according to [51])

Most large companies hold annual meetings with graduates of higher education institutions in order to provide potential employees with information about career opportunities at the company.

Among the sources of recruitment are employment centers, special agencies and consultants for the recruitment of personnel, or consultants for the search of managerial administrative employees. It is very important to create a reserve for the recruitment of highly qualified personnel in order to attract high-class specialists to open vacancies.

The enterprise's needs for employees change over time under the influence of a number of external and internal factors. Such changes do not always mean an increase or maintenance of demand for the manufactured product, but also for workers.

Therefore, personnel planning is an important component of the process of its continuous formation and bringing it into line with the general needs of the enterprise's development.

The predetermined need for personnel is considered as a defining stage on the way to its full provision. It is followed by the hiring process, since the personnel needed by the enterprise have quite specific characteristics. This process covers a whole system of methods for hiring workers with the required qualifications. Such methods include surveys based on questionnaires, interviews, interviews, testing, etc. In the future, the degree of effective use of these methods will be evidenced by the employee's promotion through the ranks.

Effective personnel management is based on the most complete use of the employee's labor potential, the opportunity to express himself and realize himself. This is manifested in the organization of personnel transfers, which include: induction. It is carried out by providing the new employee with information about the enterprise's policy, working conditions, rules, basic requirements for employees; promotion. The formation of an employee as a professional in his field based on the correspondence of professional, business and personal qualities to the position held; demotion. Occurs in cases where, according to the results of certification or

another method of personnel evaluation, it is found that the employee does not correspond to the position he holds.

In order to ensure the socio-economic efficiency of personnel management and quick decision-making in the field of personnel management, it is necessary to have information about personnel and the movement of personnel at the enterprise.

Personnel accounting, which is maintained at all enterprises, is entrusted to the personnel department and provides information on the number of employees by categories, professions, education, length of service, gender, age and other characteristics; changes in the enterprise's staff; state of training, retraining, advanced training and internship of employees.

The basis of development and one of the most important problems of personnel policy at the enterprise is personnel evaluation. The management of the enterprise should focus on new products, new markets, new conditions, new priorities, values, evaluate their capabilities, as well as the capabilities of the personnel in the modern conditions of the transformation of the market economy.

Personnel evaluation is considered as one of the most important elements of personnel policy, as a means of studying the professional and qualification characteristics of the enterprise's personnel, increasing the level of their interest in the fuller use of labor potential. The management, in turn, needs to have objective information about the presence of business and professional qualities in order to have an idea in which direction the staff should be developed.

The development of the enterprise's personnel is carried out with the aim of improving knowledge, abilities and skills in the existing specialty, mastering new duties and peculiarities of labor activity in the conditions of market relations, mastering the basics of management, marketing, improving the skills of managing modern production, rational and effective organization of work, etc.

The development of the enterprise's personnel should ensure the solution of the following tasks:

- timely satisfaction of the need for qualified managers and specialists, flexible response to changes occurring in the economy;

- creation of conditions for continuous improvement of the qualification level of managers and specialists, continuous development of their labor potential, deepening of intellectual and general cultural horizons, acquisition of necessary professional knowledge, abilities and skills;
- provision of obtaining a new qualification and specialty on the basis of a previously acquired specialty in higher educational institutions and practical experience;
- implementation of a flexible system of continuous education and self-education of managers and specialists, ensuring professional development of personnel throughout the entire period of their work;
- the formation of a positive attitude of the staff towards the enterprise, its management as a result of purposeful planning of the employees' careers, effective material and non-material stimulation of their development;
- increasing the positive image of the enterprise among the population;
- promotion of industrial adaptation of managers and specialists to professional activity in the conditions of implementation of the latest achievements of scientific and technical progress, improvement of socio-economic relations.

The innovative nature of modern production requires such a level of personnel management that ensures the maximum realization of employees in the process of work. With the help of a rational solution to issues of personnel planning, management should form a single direction of efforts of all employees of the enterprise to determine goals and develop measures to achieve them. The process of developing and setting goals as an important element of planning contributes to the fact that the actions of employees should be meaningful and motivated. For this, it is important to set not only significant, but also real, achievable, specific, profitable, safe and fair goals for the staff. The manager must understand that achieving the set goal is possible only with the help of motivation, because it is believed that an effective employee is a highly motivated employee.

Work motivation is the most important factor in work performance and therefore forms the basis of an employee's work behavior, which includes the entire set of qualities and affects production activity. It is impossible to achieve a high level of personnel management without understanding the motives and needs of a person and the correct use of work incentives. Labor motivation is influenced by various incentives: the system of economic norms and benefits, the level of wages and the fairness of income distribution, the conditions and content of work, relationships in the family, the team, recognition from others, creative impulse and interesting work, the desire to establish oneself and constant risk, tough external conditions and internal culture.

An important incentive in modern conditions is the presence of social infrastructure objects, the need for the development of which is to ensure the prerequisites for the productive work of the staff, and therefore effective personnel management by satisfying the utility, personal and aesthetic needs of both the enterprise's employees and their members families The social infrastructure consists, first of all, of the organization of cultural and physical education, public catering, ensuring the health protection of employees and their rest, the social infrastructure also includes the management of housing and household services, the provision of children's preschool institutions, educational institutions, the management of social conflicts and stresses, organization of social insurance. A well-formed personnel policy, which envisages the development of the social infrastructure of the enterprise, will lead to social satisfaction of employees, a sense of social security, which, in turn, will determine both the increase in labor productivity and the provision of social and economic efficiency of personnel management.

Thus, with effective personnel policy formation, it will be possible to ensure: availability of highly qualified personnel; formation of the required level of labor potential at minimal costs; team stabilization; motivation for highly productive work; rational use of labor force; high level of organization of work with personnel.

A. Formation, accumulation and use of intellectual capital.

Intellectual capital characterizes the system of knowledge, skills, abilities,

documents, developments, which can become the main or additional source of income generation of the enterprise. It is on the basis of such an intangible asset as the individual abilities of an employee that socially oriented enterprises generate profits, and intellectual capital may be necessary to identify and implement competitive advantages of the enterprise.

However, it is very important that these individual abilities do not become the property of competitors and remain in the enterprise, while constantly updating and developing. Therefore, there is a need to implement the following measures to preserve and accumulate intellectual capital in the enterprise's networks: use of modern information technologies; application of new forms of personnel training and improvement of existing ones, support and encouragement of self-education. Additional education increases the level of knowledge, increasing the volume and quality of intellectual potential; creation of favorable conditions for professional and personal growth; use of material and moral forms of employee encouragement: motivation will contribute to work with greater creative return; health support and medical care of employees, which will lead to a decrease in the number of diseases and, as a result, an increase in the time the enterprise uses intellectual capital. Ensuring the socio-economic efficiency of personnel management will become possible as a result of the implementation of these measures at all levels of management.

B. Formation, accumulation and use of social capital of the enterprise. The importance of social capital for an enterprise is manifested at almost all stages of labor relations – from planning and personnel selection to development, training, and resolution of labor conflicts.

Workers enter into social relations for profit. The basis of profit can be, at least, four most important conditions that arise or are strengthened precisely thanks to social ties and allow to increase the socio-economic efficiency of personnel management. First, access to information. Usual market relations are characterized by the imperfection of information, i.e. its closedness, inaccessibility, one-sidedness and, accordingly, high costs for obtaining complete, reliable and objective information.

Social connections in a certain environment and at certain hierarchical levels

(having at their disposal the most complete information about the current needs and prospects of market development) provide an individual with useful information that cannot be obtained from other sources, about the possibilities and options for the most profitable behavior in the market.

Such information allows the enterprise to reduce transaction costs when hiring the best in terms of qualifications, professional and general training of the employee, and the employee to find a job where his knowledge and experience will be fully applied and highly appreciated.

Secondly, social connections can influence enterprise managers or personnel managers, i.e. persons who make important personnel decisions about hiring, firing, and promoting an employee. The subjectivity of employee evaluations remains quite significant, especially if it is not about the specific results of already completed work, but about the potential opportunities of a person at a new workplace, about his abilities as an organizer, leader, manager. The strength of the influence of social ties in this case will depend on the strategic level of ties and status positions of a person who is able to “order a word” when making a decision.

Thirdly, an individual’s social ties can be perceived by the enterprise as social guarantees that provide access to certain social resources. Social ties “behind” a person indicate that, in addition to individual qualities (knowledge and experience), they have additional resources at their disposal, on which, or at least a part of them, the company can count on when hiring this person employee

And, finally, fourthly, social ties strengthen and accelerate the process of recognition and adaptation of a new employee at the enterprise. Belonging to a certain social group automatically implies the sharing of its interests and values, which in turn provides not only emotional support, but also a high degree of trust in the new employee in the team.

The formation of social capital can be ensured by creating effective communications. Management activities are inextricably linked with the need for constant exchange of information (communication activities) for the coordination of the work of the enterprise’s divisions and individuals aimed at achieving common

goals. To create effective communications, you need: an effective organizational structure; clear, distinct and defined goals of the enterprise; standards for evaluation of benchmarks; an accessible and clear system for controlling the execution of decisions. Also, the formation of social capital will be influenced by the strengthening of the role of informal interaction of management with subordinates, by involving personnel in the process of making management decisions, which is facilitated by the formation of the appropriate social and role structure of the team. The effective use of social capital will affect: the formation of the staff's focus on achieving the enterprise's strategic goals; distribution of responsibilities in order to achieve maximum dedication; ensuring the optimal inclusion of each employee in the work process, increasing the level of staff motivation based on material and moral encouragement; improvement of the social and psychological atmosphere in the team; increasing the level of confidence of the staff. The accumulation of social capital allows employees and groups to solve collective problems more easily. Norms of mutual responsibility and interconnection ensure rational labor behavior, which affects the level of labor discipline. In the absence of trust and relationships that ensure mutual concessions, there will be no social partnership, which will negatively affect the social and economic efficiency of personnel management.

So, the management process goes through several stages. At the same time, approaches to performance review are changing, becoming more integrated and consistent. Many aspects of production efficiency are distinguished, among which the leading place belongs to the socio-economic efficiency of personnel management, which covers both the economic results of the enterprise and the degree of staff satisfaction thanks to which these results were achieved. Therefore, the efficiency of the enterprise's personnel management system can be legitimately considered as a part of the efficiency of the enterprise as a whole.

Thus, it is possible to conclude that personnel occupies one of the main places in ensuring production efficiency, and personnel activity is multifaceted, the effectiveness of which should be considered through the prism of economic, social, organizational, innovation-investment, and socio-economic components of efficiency.

### **1.3 Management of personnel costs in the organization of personnel management at the enterprise**

In the conditions of globalization, the dynamism of all economic transformations increases sharply, the uncertainty of the processes of the external environment increases, the potential opportunities of personnel management in general, and the management of personnel costs in particular, turn into one of the strategic aspects of the effective functioning of the enterprise.

The efficiency of management at all levels of management is determined by the degree of involvement of intangible assets, which, in contrast to tangible assets, are an inexhaustible and renewable resource, and the use of which determines the innovativeness and competitiveness of business [60]. At the same time, the involvement of intangible assets directly leads to the emergence of personnel costs. Given the fact that the primary goal of every enterprise is to obtain a stable profit and ensure a specific level of product competitiveness, one of the main tasks is to solve the problem of the most efficient use of the human factor of the enterprise's production. Thus, the basis of ensuring the efficiency of the enterprise's activity is the personnel, as the main and decisive resource of the enterprise, which is able to activate the means of production and constantly improve them.

Employees are the ones who implement the enterprise's strategy and goals. They create, produce products or provide services that allow the enterprise to achieve its goals and succeed in the market.

Qualified personnel can bring innovations, new ideas and ways to improve production processes or service provision, which will help the company remain competitive. Workers can activate the means of production, maximizing their potential through their qualifications, experience and skills.

Companies that invest in their people create a competitive advantage. Satisfied, motivated and trained employees ensure a high quality product or service, which allows you to attract and retain customers. By providing training, development and

optimization of work processes, personnel can increase efficiency and production productivity.

Personnel management includes a set of strategies, processes and practices aimed at optimizing the potential of personnel, their development, motivation and ensuring proper working conditions. This helps ensure that staff are highly skilled, motivated and ready to perform the tasks necessary to achieve the strategic goals of the enterprise.

The role of personnel as an integral resource of the enterprise's functioning has been studied before. Thus, A. Smith and his followers, trying to assess the role of man in social production, considered him not only a source, but also a part of social wealth [63].

One of the fundamental works of the XIX century in the field of economics, there is the main work of K. Marx "Capital", which not only analyzed the role of personnel, but also its significance for achieving the goals of economic activity [33]. K. Marx especially emphasizes the fact that, like any other commodity, labor power requires socially necessary costs for its reproduction in certain social conditions.

According to economists, personnel costs make up a significant part of the costs of any enterprise [61], so it can be argued that the level of efficiency of using the entire production process as a whole depends on their management to a certain extent. Thus, the efficiency of personnel costs is related to the efficiency of the enterprise as a certain economic system. In this regard, there is a need for a detailed consideration of the place of personnel cost management in ensuring the efficiency of the enterprise.

First of all, it is necessary to determine the understanding of the category "efficiency", which characterizes the results of the enterprise. Summarizing the scientific literature (table 1.2) allows us to single out conceptual approaches to defining the concept of efficiency.

Therefore, the analysis of the essence of the category "efficiency" reflects the presence of various approaches to its definition. The most common understanding

of efficiency is the ratio of results to costs associated with the enterprise's activities. Other scientists equate efficiency with enterprise performance.

Table 1.2 – Analysis of the essence of the “efficiency” category

Scientist / Source	Definition	Scientist / Source
Jakimowicz J. [31]	Effectiveness is the ability to bring an effect	ability to generate income
Knaack J. [35]	Efficiency is a comprehensive display of the final results of the use of labor (employees) and means of production for a certain period of time	display of final results
Kumar S. [36]	Efficiency is the ratio of the effect obtained with the costs of its implementation, which is a kind of payment for achieving a given result	ratio of effect to costs
Sinha M. [61]	Efficiency is the ability to ensure the effectiveness (effect) of a process, project, etc., which is calculated as the ratio of the effect (result) to the costs that ensured this result	the ability to ensure the effectiveness of the process
Gibson J., Ivancevich J., Konopaske R. [23]	Efficiency is the optimal ratio of production, quality, effectiveness, flexibility, satisfaction, competitiveness and development	optimal ratio
Meskon M., Albert M., Hedouri F. [41]	Efficiency is internal efficiency, cost-effectiveness, which measures the best use of resources	internal efficiency, economy

Some authors reveal their understanding of efficiency in the ability to bring a certain income, effect. Thus, each approach does not sufficiently comprehensively describe efficiency as a complex definition, therefore we propose to consider it as an economic category, which is based on a combination of different approaches to the evaluation of management processes, and is defined as the state of operation of the enterprise, which provides a stable socio-economic result, taking into account the pace of its development. Ensuring the efficiency of the operation of the enterprise requires correct management of its activities, which is most fully determined by the management's ability to skillfully use the principles of financial and economic analysis, this, in turn, will prevent significant mistakes when choosing an enterprise development strategy, when making important management decisions, determining the optimal enterprise budget etc.

An economic system can be recognized as effective only if costs are not simply successfully transformed into results, but also the obtained results correspond

to the goals (functions) of the economic system [72]. This view seems to us to be the most fair and applicable in the modern conditions of management of stable economic systems, aiming not only at a certain result (current planning), but also at the target purpose of activity (strategic planning). So, if a certain strategic task was set before the enterprise, then even if it achieved excellent financial results, but did not fulfill the task, its activity cannot be recognized as effective. Thus, efficiency is considered as the degree of approach to the set goal.

So, summarizing the above provisions, it can be stated that each of the types of efficiency allows to characterize the efficiency of the enterprise. But one cannot fail to pay attention to the fact that in a complex the specified types of efficiency can significantly improve the assessment of the final results of the enterprise.

Before moving on to consider the effectiveness of cost management in general and the effectiveness of personnel cost management in particular, it is necessary to establish their relationship with the efficiency of the enterprise.

Scientists also distinguish the following components of enterprise efficiency: marketing, investment, innovation, production, organizational, financial efficiency and personnel management efficiency [17]. According to the authors, the efficiency of cost management is directly related to the efficiency of the enterprise as a whole. And the effectiveness of personnel cost management is related to such a component as the effectiveness of personnel management (fig. 1.4).

All components of the enterprise's efficiency are in the "field" of relations regarding the efficiency of cost management. In the same "field" is the effectiveness of personnel cost management, which has a direct meaningful connection with the effectiveness of personnel management.

Thus, it is possible to distinguish two ways of researching the efficiency of the enterprise. First, analyze the effectiveness of personnel cost management. Secondly, to identify the place of personnel cost management in ensuring the efficiency of the enterprise. Therefore, the effectiveness of personnel management largely determines the effectiveness of personnel cost management.

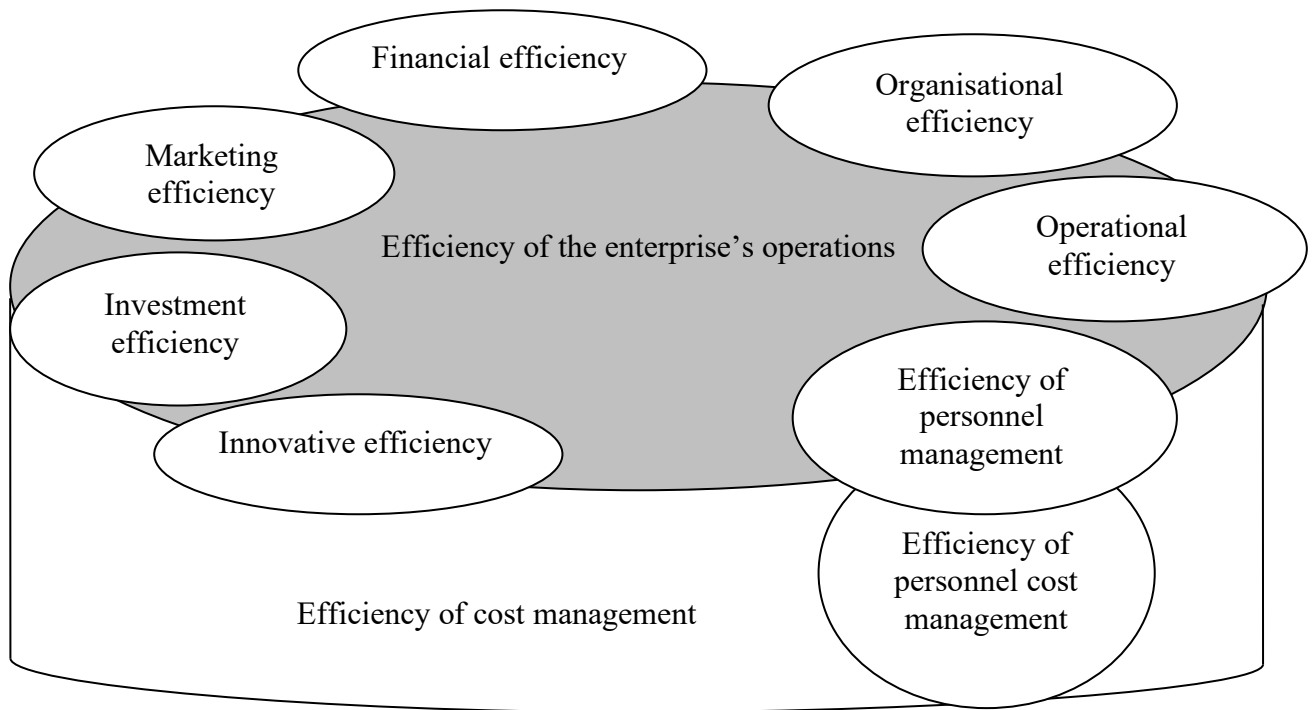


Figure 1.4 – The relationship between the components of activity efficiency and the effectiveness of cost management (compiled by the author according to [31])

Economic efficiency in the field of personnel management means achieving the enterprise's goals by using employees according to the principle of economic expenditure of limited resources. This principle is implemented with the most favorable ratio between the result of work and the scale of its use (labor productivity) and with the most favorable ratio between the results of personnel work and personnel costs (labor economy) [53]. That is, the author understands two indicators as the basis of efficiency: productivity and labor efficiency. According to the author, under certain conditions, the growth of one indicator can lead to the reduction of another, and vice versa.

Evaluating the effectiveness of personnel management is a systematic, clearly formalized process aimed at measuring the costs and benefits associated with personnel management programs in order to correlate their results with the results of the base period, with the indicators of competitors and with the enterprise's goals [39]. This definition takes into account three important aspects of determining efficiency: two internal factors, namely the analysis of planned indicators and consideration

of strategic aspects of activity; and an external factor – namely, the results of the activities of competing enterprises. Such a multifaceted approach to the definition, on the one hand, allows taking into account a wide range of factors affecting efficiency, but, at the same time, creates certain difficulties in finding the necessary reliable information and directly calculating the indicator.

In addition, it is necessary to pay attention to the main approaches to the effectiveness of personnel management. Three approaches are distinguished in relation to personnel management [51]:

- achieving a certain result of activity with the help of specially selected, trained and motivated personnel of the enterprise, formed as a result of the implementation of the chosen personnel policy;
- achievement of goals set for personnel management with minimal expenditure of funds;
- choosing the most effective management methods that ensure the effectiveness of the management process itself.

The application of a specific approach depends on the objective of the analysis and methods of accounting for personnel costs. The most expedient in practical application is the assessment of individual areas of work with personnel (subsystems), which allows not only to identify costs, but also to determine performance indicators with sufficient precision.

In order to assert how effective the personnel management system is, certain criteria are needed that allow such an analysis to be made. The choice of certain criteria depends on the management factor (activities of a specific manager), collective (labor indicators of the team), or individual (features of performers) factor.

Thus, based on the research of various economists, two groups of personnel management efficiency criteria can be distinguished, namely: socio-psychological (team satisfaction, team self-esteem, staff motivation, authority of the manager) and economic (effectiveness, quality, innovation, economy, productivity and profitability) (fig. 1.5).

According to the author, such economic criteria as economy, productivity and profitability are related to the effectiveness of personnel costs in a certain way. The effectiveness of personnel cost management is characterized by such criteria as quality, efficiency and innovation.

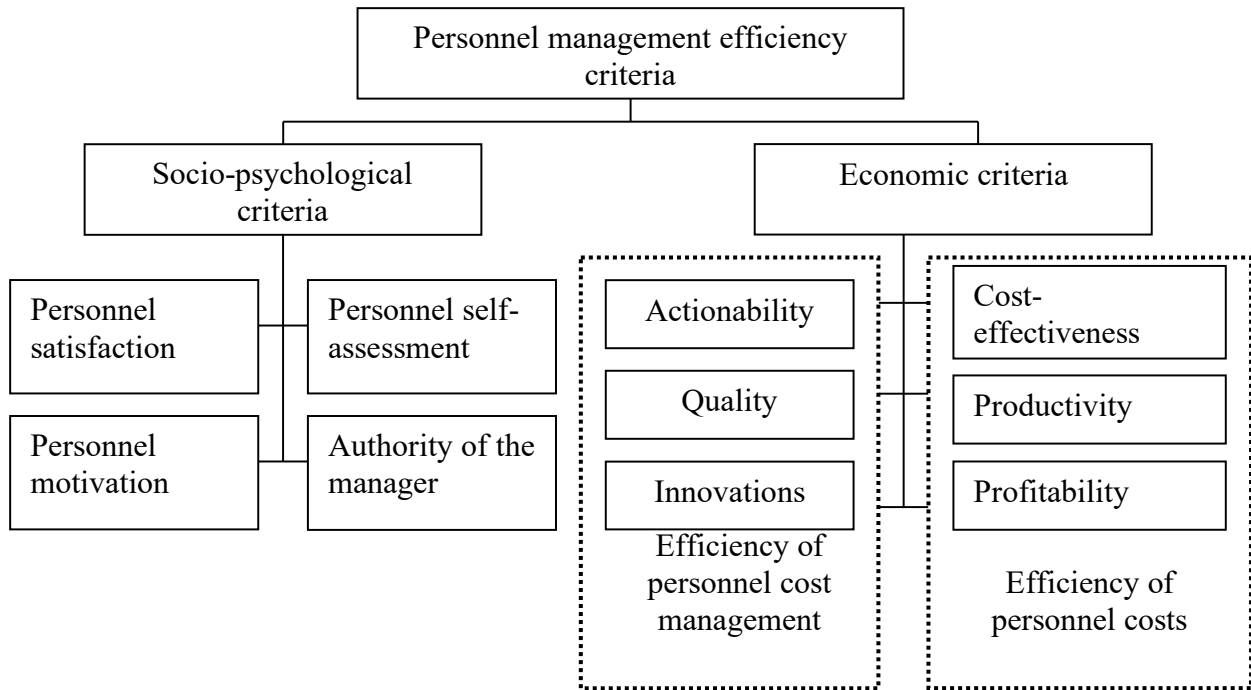


Figure 1.5 – Criteria for the effectiveness of personnel management (compiled by the author according to [50])

In order to create a holistic view of the assessment of the effectiveness of personnel costs in the table 1.3 provides a comparative analysis of its key methods.

The above review of methods for evaluating the effectiveness of personnel costs allowed us to draw the following conclusion: the listed methods, which are sufficiently well-argued, alone do not provide a complete evaluation of the effectiveness of personnel costs, since each of them has certain shortcomings. The possibility of using a specific method to solve the main tasks at the enterprise provides grounds for further research on determining the effectiveness of personnel costs.

It should be noted that increasing the efficiency of activity is important for any enterprise. It is the increase in efficiency due to the desire to obtain the greatest results at minimum costs that is a component of economic progress, which, in turn, is the basis of social progress [60]. Therefore, the growth of the efficiency of the enterprise should

be understood as the constant improvement of the mechanisms for ensuring economic activity, finding the opportunity to optimize costs and achieving the set goal.

A developed market economy orients social production to meet the specific needs of consumers. This forces manufacturers to constantly update the assortment and improve quality, and to obtain maximum profit as a result of their activities, reduce labor costs. We note that cost reduction is not always an effective mechanism for obtaining maximum profit, so enterprises need a more reasonable approach to cost optimization in the long term with the help of personnel cost management.

Thus, one of the main tools for improving the efficiency of the enterprise is the development and implementation of an effective personnel cost management system. The relationship of the personnel cost management system with the modern management concept is based on the fact that the personnel cost management functions on the basis of a combination of cost management and personnel management. This is clearly presented in fig. 1.6.

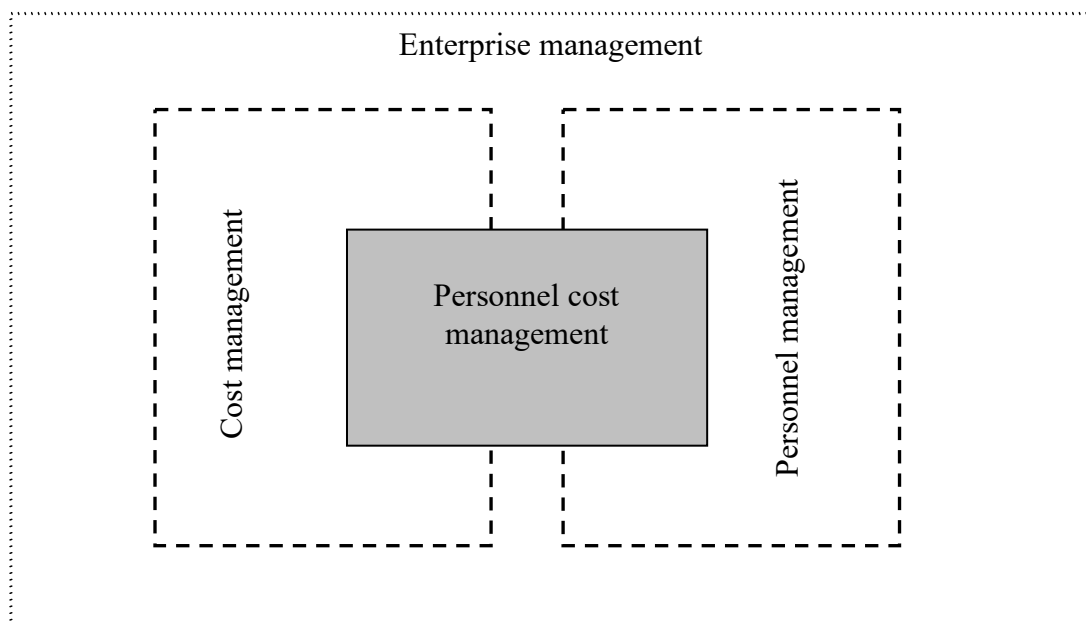


Figure 1.6 – Place of personnel cost management in the enterprise management system (compiled by the author)

Functionally, the personnel cost management system is an important element of the personnel management system and an effective subsystem of the enterprise cost management system.

Table 1.3 – Methods of assessing the efficiency of personnel costs (compiled by the author according to [19; 21])

Methods	Essence	Advantages	Disadvantages
Method of expert evaluations	Method of organising work with expert specialists and processing expert opinions expressed in quantitative and/or qualitative form in order to prepare information for decision-making	Possibility of use in conditions of information deficit and creation of an expert commission consisting of highly qualified specialists with extensive professional experience	Certain subjectivity of evaluation and complexity of processing of the obtained results
Statistical method	Based on statistical analysis with the use of average values, indices, dispersion, variation and application of correlation and regression analysis	Allows predicting the indicators of efficiency of personnel costs management	Difficulty of correct determination of the type of dependence and choice of the analysis method
Benchmarking method	It consists in comparing its personnel cost indicators with the indicators of other enterprises, first of all, market leaders	Possibility to determine the competitive position of the enterprise	Lack of a clear understanding of the effectiveness of personnel costs
Personnel audit	Assessment of compliance of the personnel potential of the organisation with its objectives and development strategy; diagnosis of the causes of problems caused by the personnel, as well as assessment of their importance and the possibility of solving them; formulation of specific recommendations for the management	Allows to manage personnel processes, therefore, it is a kind of tool for managing personnel costs	Impossibility to assess the return on investment in personnel in value terms
Method of profitability assessment	Involves calculation of payback of personnel costs, i.e. comparison of invested funds and achieved financial indicators	Allows to calculate the return on direct costs	Incomplete assessment of personnel costs efficiency
Key Performance Indicators method	Represents the benchmarks that an enterprise needs to achieve its goals	Possibility to manage the enterprise more efficiently due to the direct impact of each key indicator on the achievement of the overall goal	Indicators do not reflect the strategic goals of the enterprise
Personnel controlling	Aims to improve the efficiency of the personnel management system, support planning, management and control of personnel costs, as well as optimisation of these costs	Allows for detailed analysis of personnel costs	Inapplicability of this method in the absence of a controlling service at the enterprise
Balanced scorecard	Balanced scorecard is a tool for strategic and operational management that allows to establish a link between the strategic goal of the enterprise and business processes and daily actions of employees at each level of management, as well as to control their implementation	Comprehensive assessment of personnel costs allows to evaluate financial and non-financial performance of the enterprise	Complexity of calculations and presentation of results

In order to obtain a certain result, the effective functioning of each subordinate management system is necessary. At the same time, each management system has a direct connection with the cost management system at the enterprise, which is effective under the conditions of clear and consistent compliance with laws and principles, effective performance of all functions, and appropriate use of justified and selected cost management methods.

Having decided on the place of personnel cost management in the enterprise management system, it is necessary to identify and analyze the main ways of increasing the efficiency of the enterprise.

An enterprise, as a business system, must have reserves for increasing or decreasing costs to a rational level, which, in turn, helps to achieve growth in economic efficiency and increase competitiveness. Attention should be paid to the fact that increasing the efficiency of the enterprise can be achieved due to: maximizing the possible result, while increasing personnel costs is necessary, which can, on the other hand, lead to quantitative and qualitative growth of production; cost minimization, which can lead to a reduction in personnel costs; optimization of personnel costs, i.e. redistribution of costs within personnel management subsystems.

Summing up, it should be noted that reducing personnel costs to a minimum level is not the main task of the study, because these are specific enterprise costs associated with stimulating personnel to productive work. Management of personnel costs in order to optimize them allows to determine certain items of costs, the increase or decrease of which will contribute to increasing the efficiency of the enterprise.

### **Conclusions to section 1**

In the first section, the essence and characteristics of the enterprise's personnel management system and the functions of the subsystems are investigated: the payroll and social measures subsystems, personnel planning and marketing subsystems, personnel selection and recruitment subsystems, personnel evaluation and accounting

subsystems, personnel development subsystems, personnel stimulation subsystems, social subsystems development and subsystems of the organization of working conditions. According to the results of the research, it was determined that personnel management is considered as a type of management activity, the purpose of which is effective management of the workforce to increase the effectiveness and productivity of the enterprise as a whole.

The importance of optimizing personnel costs in order to improve the organization of personnel management is proven. The research of existing approaches to cost management made it possible to substantiate the use of a system-process approach in order to improve the quality of management and the efficiency of the enterprise. It is proposed to define the management of personnel costs as a set of consecutive and continuous management actions directly related to costs arising in the process of functioning of personnel management subsystems, the purpose of which is to ensure the efficiency of the enterprise.

Based on the theoretical justification of the place of personnel cost management in ensuring the efficiency of the enterprise's activity, the main types of efficiency were analyzed, the relationship between the components of the activity's efficiency and the efficiency of cost management was revealed, and the main ways of increasing the efficiency of the enterprise's activity, which are directly related to the management of personnel costs, were identified.

## SECTION 2

### RESEARCH THE STATE OF THE PERSONNEL MANAGEMENT ORGANIZATION AT THE ENTERPRISE

#### 2.1 Analysis of trends in the organization of personnel management

Personnel is the most complex object of management in the organization, and is the main engine that drives the business. People are not a resource, people are capital, and for its preservation and development, management approaches need to be transformed in time. Among the modern problems of companies in the field of personnel management, the following are highlighted: the outflow of personnel of working age (migration in connection with military operations); internal migration – problems with different corporate cultures, interregional differences between employees; an increase in the number of vacancies and increased competition for an employee; lack of qualified personnel; dissatisfaction of employees with the low level of wages (in connection with the optimism of business expenses); emotional state of employees, low productivity; search for optimal methods of motivation and ways to retain employees in the company in conditions of instability.

Trends in personnel management are constantly changing under the influence of technological improvements, social development, and economic and political conditions. The first global changes began to take place during the pandemic, and with the beginning of the war became even more actualized. Business is facing challenges that currently have no analogues in the world. New events completely change the attitude of employees to work and the approach to the tasks performed.

According to a survey by Deloitte, the biggest challenges in the field of people management in Ukraine as of December 2022 are the safety of employees (60%), ensuring the continuity of work processes (60%) and the psychological state of employees (55%). These results are comparable to trends as of May 2022 [18].

More than half of the surveyed organizations (58%) have reduced the number of employees since the beginning of the full-scale war (the median reduction was 10%).

Regarding the plans for 2023, only 17% of organizations plan to reduce, 35% do not plan to revise the number, another 25% could not answer this question. 71% of respondents indicated that they provide additional assistance to employees in Ukraine. Among material support, the most common are health insurance (75%), cash assistance (71%) and coverage of mobile communication costs (67%). Among the non-material – psychological support (75%), work on a flexible schedule (71%), the possibility of training/retraining (46%).

The main challenges in evaluating personnel efficiency are uneven workload in teams (62%), setting goals in conditions of uncertainty (50%) and the complexity of administering the process in current conditions (44%). Only 18% of respondents indicated that they were reviewing their approach to performance evaluation in 2022 after the onset of full-scale war. Performance indicators, the goal-setting process, and decisions based on evaluation results were most often reviewed. Another 35% of respondents indicated that they have plans to do so in the next year.

In Ukraine as a whole, enterprises that did not cease operations in 2022 cut up to 5% of their staff. In general, the reduction in the number of employees took place in all segments of enterprises, regardless of their size. According to the data of the Pension Fund of Ukraine, presented on the website [opendata.gov.ua](https://opendata.gov.ua), in September 2022, the share of employees in the processing industry (almost 19%), wholesale trade (18%) and public administration (12%) remained the most significant in the structure of employees. At the same time, the shares of people employed in the mining industry and water supply remained the lowest. This indicates a significant differentiation of the employment of employees (by types of economic activity) depending on the degree of adaptation of economic sectors to changes in the economic situation.

Against the backdrop of the shutdown of a significant number of enterprises and the optimization of the number of employees in most companies, the processes of finding and hiring personnel continued. Among the existing difficulties in the selection of employees, employers most often chose: “absence or insufficient number of candidates for the position” – 33%, “insufficient qualification of applicants”

– 23%, “inconsistency of expectations of applicants regarding the amount of salary” – 15%. That is, the most common situation is when applicants are either absent or insufficiently qualified, and in the presence of a suitable candidate, the level of his/her salary requirements is higher than the proposed one.

In the overall structure of employed workers, the share of those employed in the processing industry (23.3%), trade (14.6%), health care (12.8%), and transport and logistics (12.4%) remained the largest. The volume of personnel recruitment was determined not so much by the additional demand for workers, but by the search for replacements for dismissed workers, mainly due to mass departures abroad and mobilization. According to the results of the survey, the average turnover of personnel at enterprises in 2022 was 18.4%. At the same time, the majority of employers (57%) indicate that the turnover of personnel at the enterprise did not exceed 10%. There is also a segment of enterprises (from 4 to 12%, depending on the sector), where the turnover of personnel at the end of the year was more than 50% or more. The specified distributions, with minor fluctuations, are common to all major sectors.

The obtained estimates of the volume of additional hiring indicate that enterprises have rather cautious plans for increasing the number of employees. The total volume of the planned expansion does not exceed 2%. At the same time, there is a small amount of the planned reduction.

Therefore, one of the main external factors affecting personnel management trends is the labor market, which is understood as a complex economic and social system that is under the influence of market economic laws and administrative and legislative decisions [28].

Next, we will consider the main internal factors of personnel management at the enterprise using the example of the Private Joint Stock Company “Yuzhcable Works” (PJSC “Yuzhcable Works”).

PJSC “Yuzhcable Works” was established in 1943 to provide cable and conductor products for the consumption of the front and to restore the electrical engineering industry of Kharkiv and Ukraine. Since its establishment, the plant has

constantly paid attention to the expansion of the range of manufactured products, the improvement of production culture and the solution of social issues of the team.

Today, PJSC “Yuzhcable Works” is the largest enterprise producing cable and conductor products in Ukraine. The company offers more than 15 000 brands and sizes of products of its own production.

The plant provides nuclear and thermal power plants, oil fields and coal mines, subways and new buildings, railways and urban transport with its products. A significant part of our products is exported to dozens of countries around the world.

The quality system of PJSC “Yuzhcable Works” is certified for compliance with the requirements of the international standard ISO 9001. The plant’s products have been awarded the “International Gold Star” quality award.

PJSC “Yuzhcable Works” has a license from the Nuclear Regulatory Administration of Ukraine for the supply of cable and conductor products for nuclear power plants.

All products of the plant are checked for compliance with the requirements of the standards in a testing laboratory accredited by Ukrsepro. The brand of PJSC “Yuzhcable Works” is known all over the world and testifies to the high quality of the products produced.

A wide range of cable and conductor products of PJSC “Yuzhcable Works” allows you to meet the needs of various industries: construction, machine building, fuel and energy complex, in that case nuclear plants, transport and communication, mining industry and others. The main product groups are power cables with impregnated paper and plastic insulation for a voltage from 380 V to 10 kV, control cables, signal blocking cables, optical communication cables, wires for power lines: non-insulated and self-sustaining insulated (SIP), wires household, connecting and installation wires, winding wires (in that case with enamel insulation), non-ferrous products, consumer goods (extension cords, cords), cables and wires with plastic insulation for various purposes.

It entered into force in 2023 a 73.5 kW solar system power plant, a new solid fuel boiler and modernization of the heating system, a generating station

with uninterruptible power supplies, a rigid stranding twisting machine for the production of stranded insulated conductors up to 630 mm<sup>2</sup>, a laboratory station for the development and testing of polymeric materials.

In 2022 increasing the production capacity of plywood cable drums, Modernization of a conveyor furnace for annealing copper billet, modernization of the annealing furnace for aluminum conductors, commissioning of the Drum Twister twisting machine for twisting insulated conductors, Increasing the production capacity of cables for voltage up to 1 kV with cross-linked PE insulation using dry silane technology.

The goal of PJSC “Yuzhcable Works” in the field of quality is to satisfy consumers by ensuring high quality products, marketing research and constant communication with consumers, prompt response to market needs. For this purpose, the plant is constantly developing and launching new products that meet international and national standards, introducing new materials and working on the quality of the materials we purchase with their suppliers, such as such well-known foreign companies as Du Pont, Borealis, DOW Chemical, IVA implementation of new promising technological processes, in that case “know-how”.

Large savings are invested by the company in new equipment, old technological equipment is constantly being modernized. On the purchase of new technological and testing equipment, PJSC “Yuzhcable Works” cooperates with well-known global manufacturers: MAG (Austria), Troester (Germany), Pourtier (France), Cortinovis (Italy), Nextrom (Finland), Rosendahl (Austria), Caballe (Spain), Hipotronics (SILA), Niehoff (Germany), Maillefer (Finland), Ceeco-Bartell (SILA) and others.

Given the fact that the organization of personnel management, as well as personnel costs, depends on the internal capabilities of the enterprise, it is necessary to determine the financial condition of the enterprise.

An objective and accurate assessment of the financial situation cannot be based on an arbitrary set of indicators. Therefore, the selection and justification of indicators of financial and economic activity should be carried out in accordance with the achievements of the theory of enterprise finance.

As a rule, certain groups of indicators are used to characterize the financial and economic condition of enterprises, namely [6,7]: Group 1 – profitability assessment indicators: profitability of production, profitability of own capital, profitability of assets; Group 2 – indicators of turnover: turnover of assets, turnover of fixed assets, turnover of stocks; Group 3 – indicators of liquidity and market stability: coverage ratio, absolute liquidity ratio, autonomy ratio; Group 4 – indicators of financial stability: coefficient of financial dependence, coefficient of maneuverability of own funds, coefficient of ratio of own and borrowed funds; Group 5 – performance indicators of the enterprise: efficiency ratio; productivity; fund return; pace of sales of products. Formulas for calculating indicators and their characteristics are presented in the table A.1 of Annex A.

The indicators of each group were calculated for the period from 2020 to 2022 (table 2.1).

Evaluating profitability indicators, it should be noted that they were the lowest in 2022. The increase in the profitability of production in 2021 indicates that production costs have decreased and profits have increased.

Analysis of the indicators of the second group showed that the enterprise has negative results or a tendency to decrease results. Asset turnover shows the efficiency of using the enterprise's available resources. Inventory turnover indicators reflect how successfully the administration used the enterprise's resources.

The third group is represented by indicators of liquidity and market stability. All indicators of this group are within normal limits.

The financial stability of the enterprise is one of the most important characteristics of the financial state of the enterprise. It is inextricably linked to the level of dependence on creditors and investors and is characterized by the ratio of own and borrowed funds. Analyzing this indicator, it is possible to give a general assessment of financial stability. PJSC "Yuzhcable Works" has a favorable ratio of equity and borrowed capital.

Calculation of the indicators of the fifth group allows to determine and analyze the efficiency of the enterprise. It should be noted that the efficiency ratio is the main

resulting economic indicator, which illustrates the return of net profit from the costs invested in obtaining it for a certain period of time [6]. The analysis of this indicator indicates its increase in 2021, which indicates the profitability of the enterprise, and its decrease in 2022.

Table 2.1 – Indicators of the financial and economic status of PJSC “Yuzhcable Works” (compiled by the author according to [45])

Indicators	Years		
	2020	2021	2022
Profitability assessment indicators			
Profitability of production, %	8.46	9.51	7.26
Return on equity, %	15.53	14.52	10.56
Return on assets, %	10.00	9.55	6.96
Turnover indicators			
Asset turnover	1.70	1.19	1.18
Turnover of fixed assets	3.03	2.37	2.36
Inventory turnover	7.07	6.99	6.97
Indicators of liquidity and market stability			
Coverage ratio	1.31	1.32	1.31
Absolute liquidity ratio	0.58	0.58	0.60
Coefficient of autonomy	0.65	0.66	0.64
Coefficient of financial dependence	1.58	1.55	1.55
Indicators of financial stability			
The coefficient of maneuverability of own means	0.12	0.13	0.11
The coefficient of the ratio of own and borrowed funds	0.56	0.46	0.46
Performance indicators of the enterprise			
Efficiency coefficient	0.065	0.067	0.056
Fund return	3.667	2.410	2.466
The pace of sales of products	1.097	1.015	0.816

The obtained values of return on capital for 2020–2022 at the investigated enterprise indicate a decrease in the level of efficiency of the use of fixed assets. There is also a decrease in the rate of sales of products at PJSC “Yuzhcable Works”.

The performed analysis allows us to state that the financial and economic condition of the enterprise is sufficiently high, and the decrease of some indicators is explained by the general trend of decreasing efficiency of activity in the machine-building industry of the economy.

The next internal factor affecting the organization of personnel management and the formation of personnel costs is the personnel policy of the enterprise. This factor is one of the most important management tools, because in modern conditions the role of personnel in the implementation of entrepreneurial activity is decisive, and the quality of its management determines the efficiency of the enterprise's functioning. Therefore, the essence of the personnel policy of the enterprise is to work with personnel that corresponds to the concept of development of this enterprise. Analyzing the features of personnel policy at PJSC "Yuzhcable Works", the following main directions of personnel work can be identified. The company is characterized by a balanced personnel policy, highly qualified staff and a motivation system. Training and professional development of specialists is carried out.

Taking into account that professional qualifications indicate the competence of adequate performance of professional activities [64], improving the quality of the professional composition of employees with the aim of forming in them high professionalism, skill, the ability to work in new economic conditions and, on this basis, to ensure high productive work and effective employment is a priority task for the company in the field of personnel management.

In addition, it should be noted that the goal of personnel policy is to ensure an optimal balance of personnel retention and renewal in accordance with the needs of the enterprise and the state of the labor market, an analysis of the movement of personnel at the enterprise is necessary, which will allow to form an objective vision of the level of personnel costs in relation to its recruitment and dismissal (tables 2.2–2.3).

Table 2.2 – Dynamics of external movement of full-time employees at the enterprise (compiled by the author according to [45])

Indicators	Years			Growth rate, %	
	2020	2021	2022	2021 /2020	2022 /2021
The average number of full-time employees, persons	1045	975	955	93	98
Number of hired employees, persons	30	90	20	300	22
Number of dismissed employees, persons	100	110	156	110	142

Table 2.3 – Main indicators of personnel movement (compiled by the author according to [45])

Indicators	Years			Absolute deviation	
	2020	2021	2022	2021 /2020	2022 /2021
Hiring turnover rate	0.03	0.09	0.02	0.06	-0.07
Dismissal turnover rate	0.10	0.11	0.16	0.02	0.05
Total staff turnover rate	0.12	0.21	0.18	0.08	-0.02
Staff turnover rate	0.03	0.04	0.12	0.01	0.07

Analyzing the data in the table 2.2, it can be concluded that the average registered number of full-time employees has decreased in recent years. Accordingly, the number of dismissed in 2021–2022 is much greater than accepted. All this is connected with the crisis phenomena in the Ukrainian economy during this period.

Employee turnover is a costly and disruptive phenomenon. Therefore, an enterprise with a high staff turnover rate incurs significant costs when dismissing staff and further stabilizing the labor process. Analyzing the enterprise, one can note a rather low level of staff turnover.

The position on the labor market, legislation and the level of taxation in this area, the financial condition of enterprises, changes in the number and structure of personnel, personnel policy play an important role in the organization of personnel management at the enterprise. Also, as mentioned in part 1 of the work, the management of personnel costs plays an important role in financially ensuring the enterprise's success, ensuring a balance between personnel costs and the achievement of strategic business goals. These factors can affect their level consciously or unconsciously on the part of the enterprise (fig. 2.1).

Analyzing fig. 2.1, it is possible to argue about the conscious and unconscious (unplanned) increase or decrease in personnel costs. This is explained by the fact that the company cannot always control personnel costs due to unstable socio-economic processes in the country acting as external factors.

The company deliberately increases personnel costs under the influence of the following factors: a perfect legal framework, an increase in the level of taxation, a stable financial condition of the company, a rational personnel policy and an increase in the number of personnel. The unplanned increase in costs for the enterprise's

personnel is due to negative changes in the labor market, problems in the legislative framework and irrational personnel policy at the company. Factors such as positive changes in the labor market, availability of tax benefits, reduction in the number of personnel allow the enterprise to consciously reduce personnel costs. Crisis phenomena in the country, which lead to an unstable state of enterprises, may unplanned cut down on personnel costs.

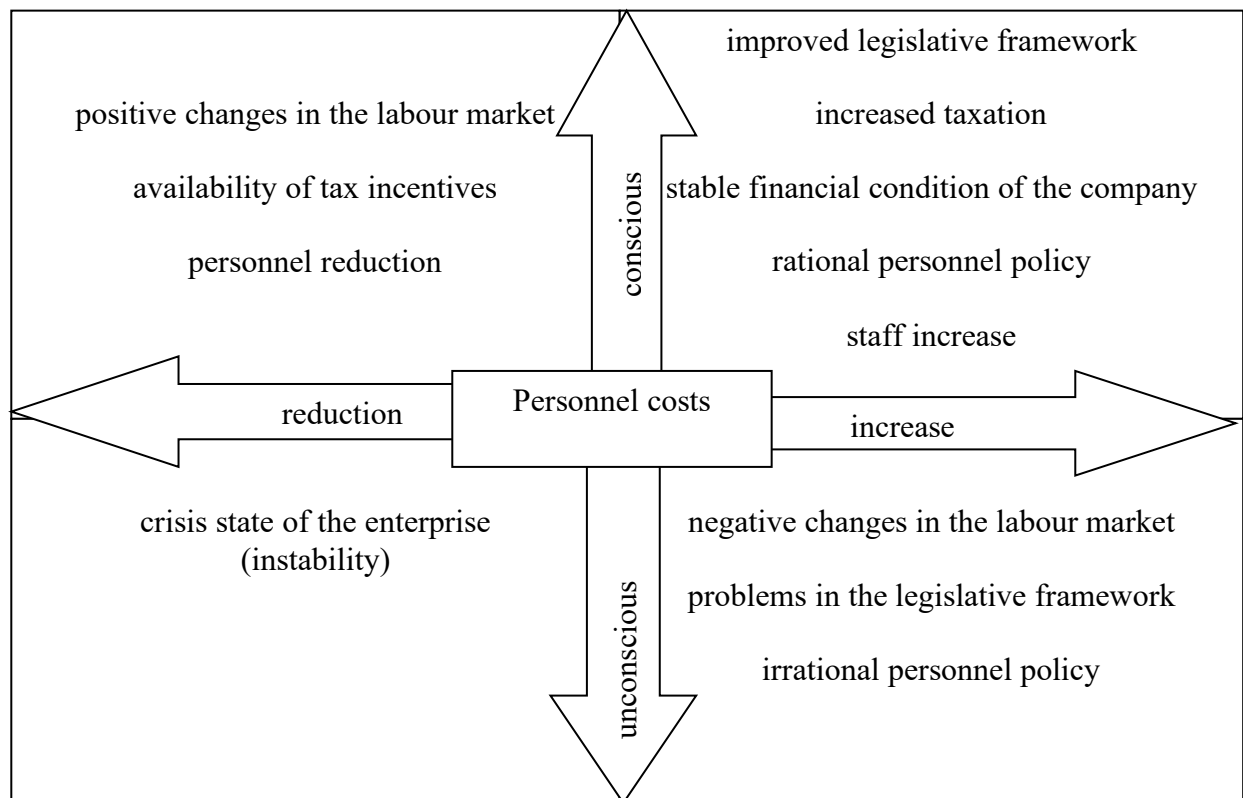


Figure 2.1 – Influence of external and internal environmental factors on personnel costs (compiled by the author)

Thus, the conducted analysis of the trends of the personnel management organization revealed the lack of effective personnel management at the enterprise, which is due to negative changes in the labor market, problems in the legislative framework, the unstable financial condition of the enterprise and its irrational personnel policy. In this regard, one of the most important tasks of personnel management is its assessment, which includes a detailed analysis of personnel management by management subsystems.

## **2.2 Evaluation of the personnel management system at the enterprise**

It should be noted that the problems of the development of the Ukrainian economy emphasize the important role of personnel cost management as a relevant and necessary tool for ensuring the efficiency of the enterprise.

Effective management of personnel costs allows you to create competitive compensation, bonus and benefits programs that help retain talented employees. Effective management of these costs allows you to optimize the budget by reducing unnecessary costs such as overpayment, underpayment, unnecessary hiring or training costs.

Therefore, one of the most important tasks of effective management of personnel costs is its assessment, which allows monitoring and making the necessary adjustments to the activities of individual units and the enterprise as a whole. At the same time, the research of scientists works' allows us to assert that the issues of managing personnel costs of the enterprise are insufficiently developed, one of which is the lack of a unified method for assessing the management of personnel costs.

Therefore, by evaluating personnel costs, especially in their dynamics, it is possible to effectively allocate costs to various subsystems of personnel work and increase competitive advantages.

Thus, the analysis of personnel costs should be carried out in two stages:

- preliminary analysis of personnel costs, which includes the calculation of general indicators of personnel cost management assessment;
- analysis of personnel costs in the context of personnel management subsystems.

The choice of both general and key indicators depends on the enterprise's policy in the field of personnel management [43]. Preliminary analysis must be carried out using general indicators of personnel cost management assessment, which cannot be attributed to a specific personnel management subsystem. It should also be noted that among the main indicators, it is necessary to use those that correspond to the principles of accessibility (we are talking about the availability of the necessary

information), meaningfulness (they have an impact on the activity of the enterprise as a whole) and simplicity in calculations. In turn, it is a well-known fact that enterprise management is based on the use of various types of information, therefore certain requirements are put forward to it [36]: availability of information consumers; objectivity of display of production, supply, and sales processes; unity of information coming from different sources; speed of information, etc. Thus, the information should be specific, objective, systematic and operational.

Therefore, as general indicators of the assessment of personnel costs, we suggest using: profitability of personnel costs, personnel profitability, labor productivity, labor intensity, and as specific indicators of the analysis of personnel costs in the context of personnel management subsystems, namely the subsystems of labor remuneration and social activities, personnel planning and marketing subsystems, personnel selection and hiring subsystems, personnel evaluation and accounting subsystems, personnel development subsystems, personnel stimulation subsystems, social partnership subsystems, working conditions organization subsystems. Formulas for calculating indicators and their characteristics are presented in Annex C.

The profitability of personnel costs is an important indicator of the analysis of the enterprise's work, which allows determining the effectiveness of the use of personnel costs. The dynamics of this indicator are presented in the table. 2.4.

Table 2.4 – Profitability of personnel costs of PJSC “Yuzhcable Works” for 2020–2022 (compiled by the author based on enterprise data)

Indicator	Years			Absolute deviation	
	2020	2021	2020	2021 /2020	2022 /2021
Profitability of personnel costs, %	448.83	350.41	472.68	-98.42	122.27

PJSC “Yuzhcable Works” is characterized by a high value of profitability of personnel costs, but this is not a positive trend for the enterprise, because it may indicate an inefficient use of the received profit.

The main labor indicators that are necessary for the analysis of personnel utilization are productivity and labor intensity. The increase in labor productivity is

a condition for increasing production volumes, the main reason for economic growth. In turn, the amount of time spent on the production of a unit of production reflects the indicator of labor intensity. The lower the labor intensity of production, the higher the labor productivity. In the table 2.5 shows the dynamics of productivity and labor intensity.

Analyzing the data in the table 2.12 it can be concluded that the average annual labor productivity per full-time employee increased in 2022 compared to 2021. The labor intensity of products in 2022 decreased accordingly compared to 2021.

Table 2.5 – Indicators of productivity and labor intensity at the enterprise (compiled by the author based on enterprise data)

Indicators	Years			Growth rate, %	
	2020	2021	2022	2021 /2020	2022 /2021
Labor productivity, thousand UAH /person	709.42	699.68	709.10	-9.74	9.42
Labor intensity, man-hours / thousand UAH	2.96	3.00	2.96	0.04	-0.04

Analyzing the payroll and social measures subsystem (table 2.6), it should be noted that labor costs make up the majority of personnel costs, so their economic evaluation will reveal internal opportunities for more rational use of labor funds. Labor costs and social measures are economic elements of operating costs [31], therefore the share of labor costs and social measures indicates the place of wages in operating costs.

Given that the ratio of growth rates of labor productivity and wages is a generalizing indicator of the effectiveness of work with personnel, it is thanks to its analysis that latent reserves for optimizing personnel costs can be determined.

It should be noted that this indicator should be higher than one in order to comply with the economic feasibility of the activity. At the analyzed enterprise, it reached the norm in 2022.

An important indicator of the analysis of labor costs is the share of costs for payment of temporary incapacity at the expense of company funds in total personnel costs.

Table 2.6 – Calculation of indicators of the analysis of the remuneration subsystem and social measures for 2019–2022 (compiled by the author based on enterprise data)

Indicators	Years		
	2020/ 2019	2021/ 2020	2022/ 2021
The rate of wage growth	1.024	1.019	1.013
The ratio of growth rates of labor productivity and salary	0.891	0.996	1.023
Share of labor costs in total personnel costs	0.707	0.794	0.741
Share of premium costs in total personnel costs	0.084	0.094	0.090
The share of costs for payment of temporary disability	0.010	0.014	0.015

One of the most important indicators of the personnel planning and marketing subsystem analysis is the enterprise's need for personnel, which allows determining and justifying the required number of employees and its structure (table 2.7).

Table 2.7 – Calculation of indicators of the analysis of the personnel planning and marketing subsystem at the enterprise (compiled by the author based on enterprise data)

Indicators	Years		
	2020	2021	2022
The share of personnel planning and marketing costs in the volume of total personnel costs	0.001	0.002	0.001
The share of expenses for the services of personnel agencies in the volume of total expenses for personnel	0.350	0.312	0.334

The enterprise satisfies the need for personnel in the process of attracting (recruiting) and creating a reserve of employees to occupy vacant positions [13], while the search for personnel is carried out either by its own forces or with the help of specialized personnel agencies. The dynamics of the share of expenses for the services of personnel agencies reflects the enterprise's marketing policy in relation to personnel. The share of expenses for the services of recruitment agencies is more than 30% of the total expenses for personnel planning and marketing. It should be noted that recruitment agencies have a better grasp of the situation on the labor market, but they do not always help to reduce the costs of personnel search and selection (table 2.8).

Table 2.8 – Calculation of the indicators of the analysis of the personnel selection and hiring subsystem at the enterprise (compiled by the author based on enterprise data)

Indicators	Years		
	2020	2021	2022
Turnover rate	0.03	0.04	0.12
Staff growth rate	0.219	-0.189	-0.018
The share of adaptation costs in the volume of total personnel costs	0.005	0.003	0.004

Analyzing the personnel evaluation and accounting subsystem, it should be noted that certification requires significant time and material resources. Therefore, formal certification, when not only the goals are not clearly defined, but also as a result, no specific actions that can increase the efficiency of individual categories of personnel and the enterprise as a whole, is an unacceptable luxury. Therefore, a necessary condition for the efficiency of the enterprise is the use of the results of the certification by the top management and the ability to make specific management decisions. An important indicator of the cost analysis of the personnel assessment and accounting subsystem is the cost of the specialist who passed the assessment. At PJSC “Yuzhcable Works”, it is low and amounts to about UAH 450, which indicates a formal assessment at the enterprise rather than purposeful actions of the management in relation to personnel (Table 2.9).

Table 2.9 – Calculation of indicators of the analysis of the evaluation and accounting subsystem of personnel at the enterprise (compiled by the author based on enterprise data)

Indicators	Years		
	2020	2021	2022
The cost of a specialist who passed the assessment, thousands UAH	0.474	0.48	0.484
Coefficient of informatization of document flow	0.53	0.57	0.64
The share of certification costs in total personnel costs	0.0051	0.0041	0.0040

Today, the level of informatization is one of the most important factors in the successful socio-economic development of an enterprise. That is why the speed and efficiency of personnel evaluation is influenced by the document flow information factor. At the enterprise, this ratio is 50–60%.

Taking into account the need for the formation of knowledge-based enterprises, the subsystem of personnel development becomes an important subsystem of personnel cost management. In this regard, the analysis of its indicators requires special attention (table 2.10).

Table 2.10 – Calculation of indicators of the analysis of the personnel development subsystem at the enterprise (compiled by the author based on enterprise data)

Indicators	Years		
	2020	2021	2022
Staff development rate	0.045	0.078	0.053
Cost-effectiveness of staff development	1616.50	1374.88	1422.33
The share of costs for professional training of personnel in total personnel costs	0.0022	0.0020	0.0026
Share of employees with higher education	0.396	0.463	0.469
Part of employees engaged in self-study	0.423	0.376	0.372

At PJSC “Yuzhcable Works”, the personnel development rate remains very low. This indicates the absence or small size of the budget in the field of personnel development at the enterprise.

The share of employees with higher education exceeds the share of self-educated employees, that is, there are unused reserves for self-development, because the staff does not fully use their own capabilities.

The analysis of the personnel development subsystem is closely related to the personnel stimulation subsystem, because the stimulation function is aimed at increasing the employee’s interest in the continuous development of his business and personal qualities, improving work results [67]. An important stage in the analysis of this subsystem is the determination of the effectiveness of staff stimulation using the ratio between the rates of growth of the wage fund and the enterprise’s profit (table 2.11).

The analysis of the table allows us to draw the following conclusions: at the enterprise, the ratio of growth rates of the wage fund and profit was more than one in 2020–2021, which indicates a violation of the necessary balance between the interests of the enterprise (in the growth of profits and ensuring financial conditions

for self-financing of development) and economic interests employees of the enterprise (as the level of pay increases). In 2022, the ratio of the rate of growth of the wage fund and profit will be less than one, the system of financial incentives for personnel ensures savings in current costs and growth in the enterprise's profit.

Table 2.11 – Calculation of indicators of the analysis of the personnel stimulation subsystem at the enterprise (compiled by the author based on enterprise data)

Indicators	Years		
	2020	2021	2022
The level of application of non-material methods of stimulation when working with personnel	0.7	0.8	0.7
The share of personnel incentive costs in total personnel costs	0.095	0.107	0.102
Ratio of IE growth rates and profit	1.635	1.023	0.725

An important element in meeting the needs of employees and ensuring their social protection, implementing the ideas of social justice within the enterprise is the functioning of social partnership [53]. The obtained data on the level of social security of employees at the enterprise are presented in table 2.12.

Table 2.12 – Calculation of the indicators of the analysis of the subsystem of social partnership at the enterprise (compiled by the author based on enterprise data)

Indicators	Years		
	2020	2021	2022
Housing development coefficient	0.003	0.003	0.002
The share of costs for providing employees with housing in the volume of total personnel costs	0.014	0.009	0.009
The level of social security	0.009	0.010	0.010

During 2020–2022, a sufficient level of social benefits at PJSC “Yuzhcable Works” contributes to attracting and retaining highly qualified employees and maintaining the competitiveness of the enterprise on the labor market.

Analyzing the subsystem of the organization of working conditions from the standpoint of expenses, it is appropriate to present an analysis of the share of expenses for labor protection and the level of organization of workplaces (table 2.13).

Table 2.13 – Calculation of indicators of the analysis of the subsystem of the organization of working conditions at the enterprise (compiled by the author based on enterprise data)

Indicators	Years		
	2020	2021	2022
Cost factor for creating an internal information base	0.0013	0.0009	0.0086
The share of labor protection costs in total personnel costs	0.0042	0.0038	0.0043
The level of workplace organization	0.8600	0.8300	0.8000

An increase in the level of production automation and, accordingly, labor productivity is impossible without an increase in the level of workplace organization and labor protection costs. The presence of costs for labor protection reduces the probability of financial consequences from accidents at work.

It is worth noting that in 2022 there is a decrease in the level of organization of workplaces.

A characteristic feature of today is the urgent need to make certain management decisions aimed at improving the production and economic activity of enterprises and ensuring safety conditions for employees. One of the features of the modern business environment is the reduction of personnel costs, which occupy the most important place in the cost structure of the enterprise. As a result, there is a decrease in staff productivity due to a lack of motivation, a reduction in staff professional development programs, and a general loss of qualified personnel.

In order to form measures for the management of personnel costs and decision-making, it is necessary to assess the relationship between personnel costs and the level of efficiency of the enterprise. The determination of such dependence must be carried out in several successive stages:

- determination of personnel costs;
- calculation of the integral coefficient of the enterprise's activity;
- identifying the relationship between the components of personnel costs and the integral coefficient of the enterprise's activity using correlation-regression analysis.

Before implementing the proposed stages, it is necessary to reveal the fact of the presence or absence of relationships between two or more quantitative indicators using correlation analysis [53]. Given that the purpose of the analysis is not to describe the type of relationships, let's consider a simpler case of linear dependence of two variables, namely net profit, the size of which determines the efficiency of the enterprise, and personnel costs.

One of the most important characteristics of connection tightness is the pairwise correlation coefficient, which is calculated using MS Excel and can vary within:

$$-1 \leq r_{xy} \leq +1 \quad (2.1)$$

The calculated pairwise correlation coefficient between the size of the enterprise's net profit and its personnel costs is equal to 1, indicating a close connection between the signs, therefore it is functional and adequate. This allows us to proceed to the proposed sequence of stages for determining the relationship between personnel costs and the efficiency of the enterprise.

At the machine-building enterprise, the following components of staff maintenance costs are allocated: labor costs; expenses for social security of employees; expenses for cultural and household services; costs of providing employees with housing; expenses for professional development of personnel; other labor costs.

An analysis of the structure of personnel costs at the investigated machine-building enterprise for three years is presented in fig. 2.2.

Analyzing the obtained results, certain conclusions can be drawn. Labor costs account for the largest share of personnel costs, which confirms their formation as one of the main items of enterprise costs. The share of spending on social security is 1% in 2021, which indicates an underdeveloped system of social development of the enterprise. The share of expenses for cultural and household services characterizes the development of the personnel incentive subsystem and is approximately 9% of all personnel expenses. This indicates the existence of a planned budget of the enterprise in relation to the stimulation of personnel in order to increase not only labor productivity, but also the efficiency of the enterprise. In 2022, expenses

for social security of employees increased. The share of costs for providing housing for employees at the enterprise is insignificant and is within 1–1.4%. The functioning of the personnel development subsystem is determined by the share of professional development, which has an insignificant percentage in the structure of personnel costs. This is explained by a sharp reduction in personnel development costs by the company. Other labor costs include costs that are not assigned to other groups, namely: costs for personnel planning and marketing, their adaptation and evaluation, costs for the organization of working conditions make up approximately 6%.

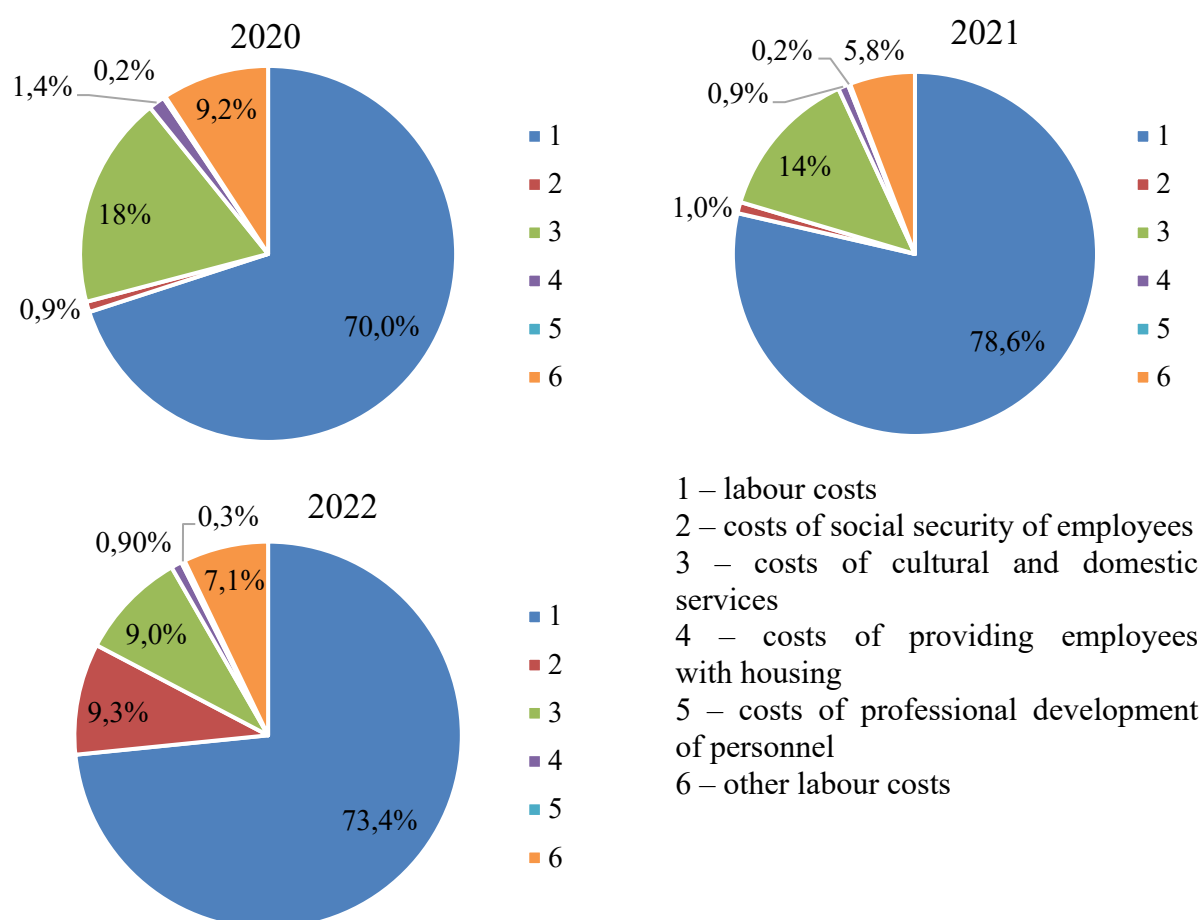


Figure 2.2 – The structure of labor costs of PJSC “Yuzhcable Works” in 2020–2022 (compiled by the author based on enterprise data)

It is also necessary to pay attention to the fact that it is necessary to distinguish between these expenditure items with the help of internal reporting of enterprises, which is quite difficult and inconvenient, therefore the form of internal statistical reporting of the enterprise needs further improvement.

### **2.3 Analysis of the business processes of the personnel management organization in terms of personnel cost management**

The conducted research shows that the enterprise has an urgent need for effective management of personnel costs. This is due to the existence of unused reserves for increasing the efficiency of personnel costs, which is associated with the lack of a clear understanding of their management processes. However, the main and primary task is to reduce personnel costs, which leads to increased staff turnover, loss of qualified personnel, and weakening of the management's motivational influence on personnel behavior. Such a situation is extremely controversial, because in order to survive in the conditions of fierce competition on the market, the enterprise needs to use personnel effectively. That is, the administrative staff reduction, which is one of the main directions of cost reduction, does not always lead to an increase in the efficiency of the enterprise. Therefore, in order to clearly understand the essence of the processes at the enterprise in relation to the management of personnel costs, it is necessary to develop an appropriate process model of personnel cost management, the main difference of which should be a consistent and detailed display of the main management functions.

Personnel cost management is a set of consistent and continuous management actions directly related to costs arising in the process of functioning of personnel management subsystems, the purpose of which is to ensure the efficiency of the enterprise. Thus, the management of personnel costs is based on the application of a system-process approach.

Given the fact that personnel is one of the most important resources of the enterprise, which is used in all processes of its operation, the development of a model of personnel cost management must be carried out in the context of business management processes. After all, in the modern practice of modeling management and production activities, it is customary to use the term "business process" to designate the objects of modeling [56].

With the help of the IDEF0 standard, a context diagram was built, where the functional block of the main task is located in the center, which reflects the purpose of the model and the essence of its construction (fig. 2.3).

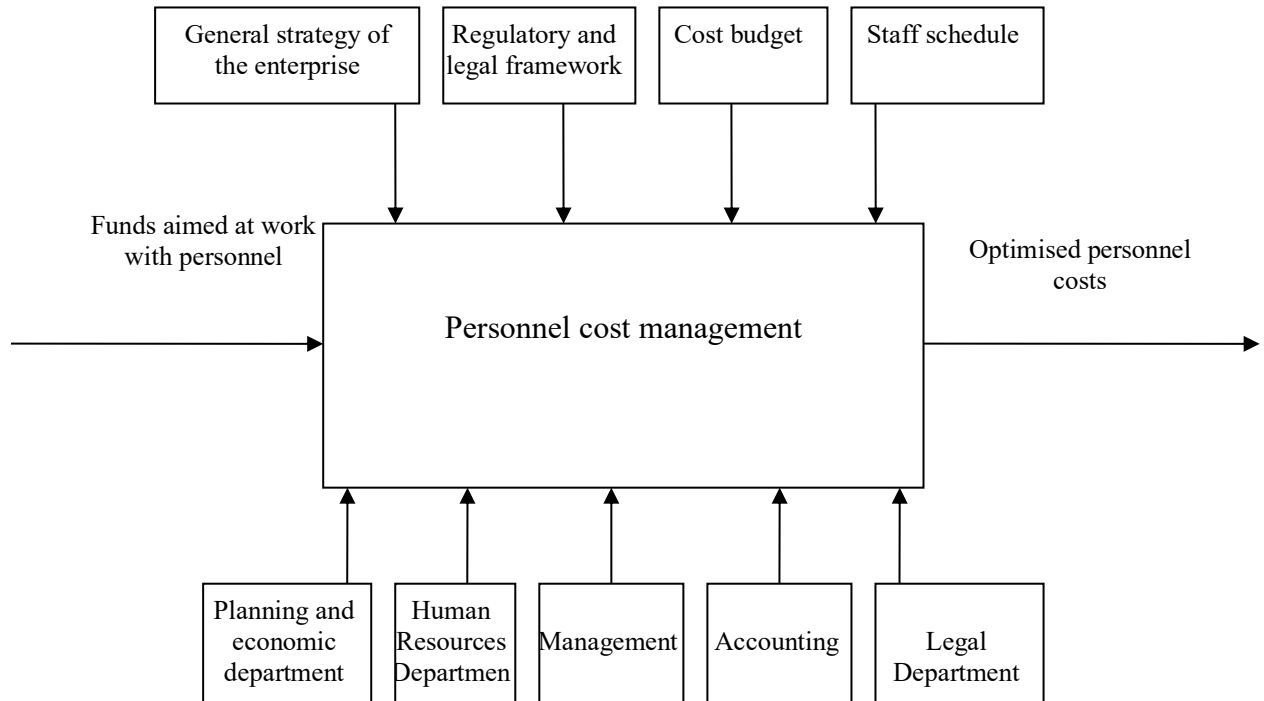


Figure 2.3 – Components of personnel cost management (compiled by the author based on enterprise data)

According to fig. 2.3 the process model of personnel cost management transforms input (funds directed to personnel work) into output (optimized personnel costs) in the presence of supporting components of management, namely the general strategy of the enterprise, regulatory and legal framework, cost budget and staffing and with the help of mechanisms that are implemented through the functioning of the planning and economic department, accounting department, legal department, management and personnel service.

The process model of personnel cost management reflects the set of stages of the personnel cost management process (fig. 2.4).

This makes it possible to single out functional subsystems, according to which the management process consists of the following stages: personnel cost planning;

organization of personnel cost management; staff motivation regarding the rational use of funds; control and accounting of personnel costs; regulation of personnel costs. At the entrance, funds are needed for work with personnel and analysis of factors affecting costs. The main result we get at the end is optimized personnel costs, which are a key guideline for ensuring the efficient operation of the enterprise. The mechanisms are the management, the planning and economic department, the accounting department, and the personnel service.

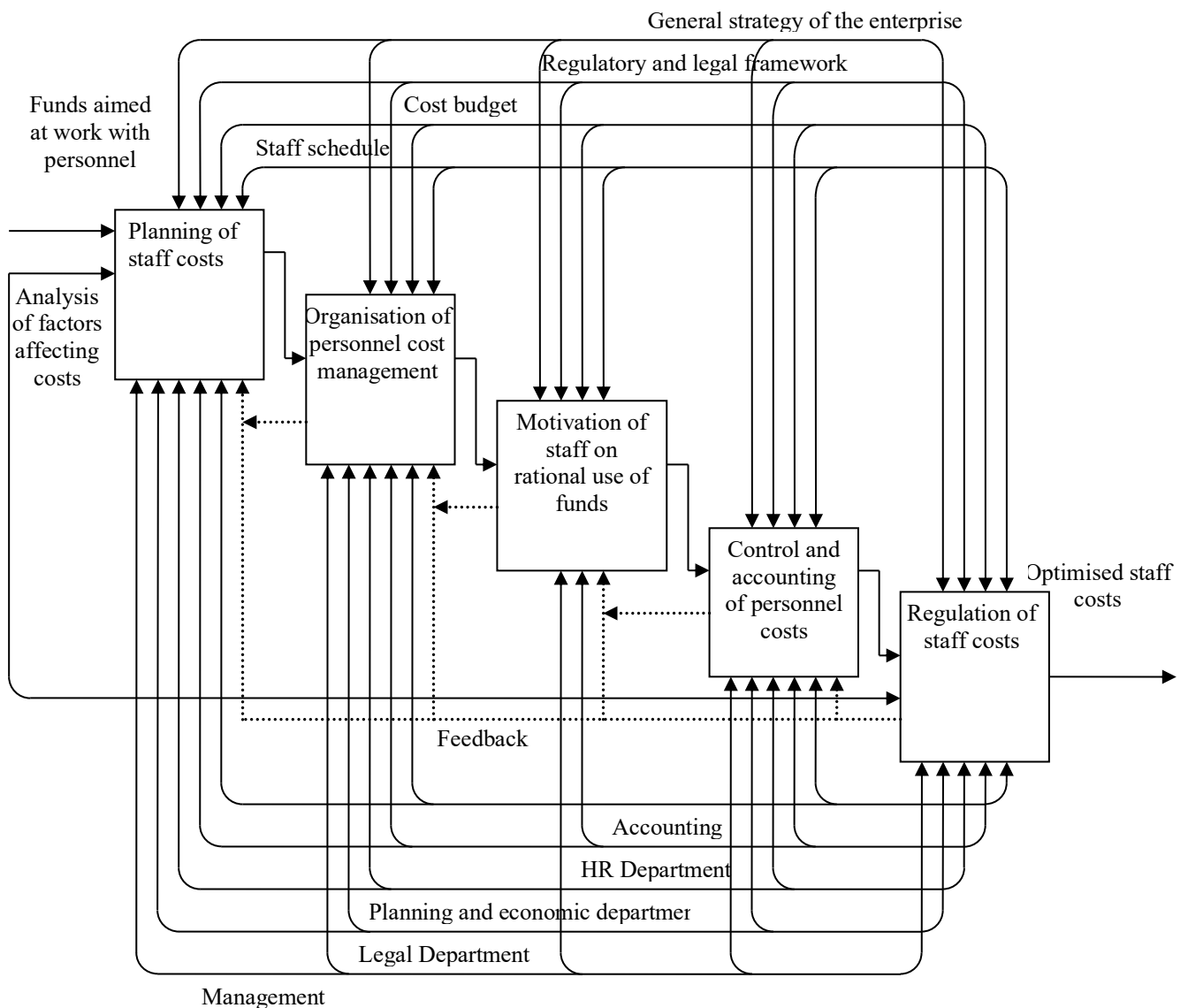


Figure 2.4 – Process model of personnel cost management (compiled by the author)

The functional block “Personnel cost planning” is presented in fig. 2.5. Planning is a primary function of management that guides the enterprise’s activities in the future.

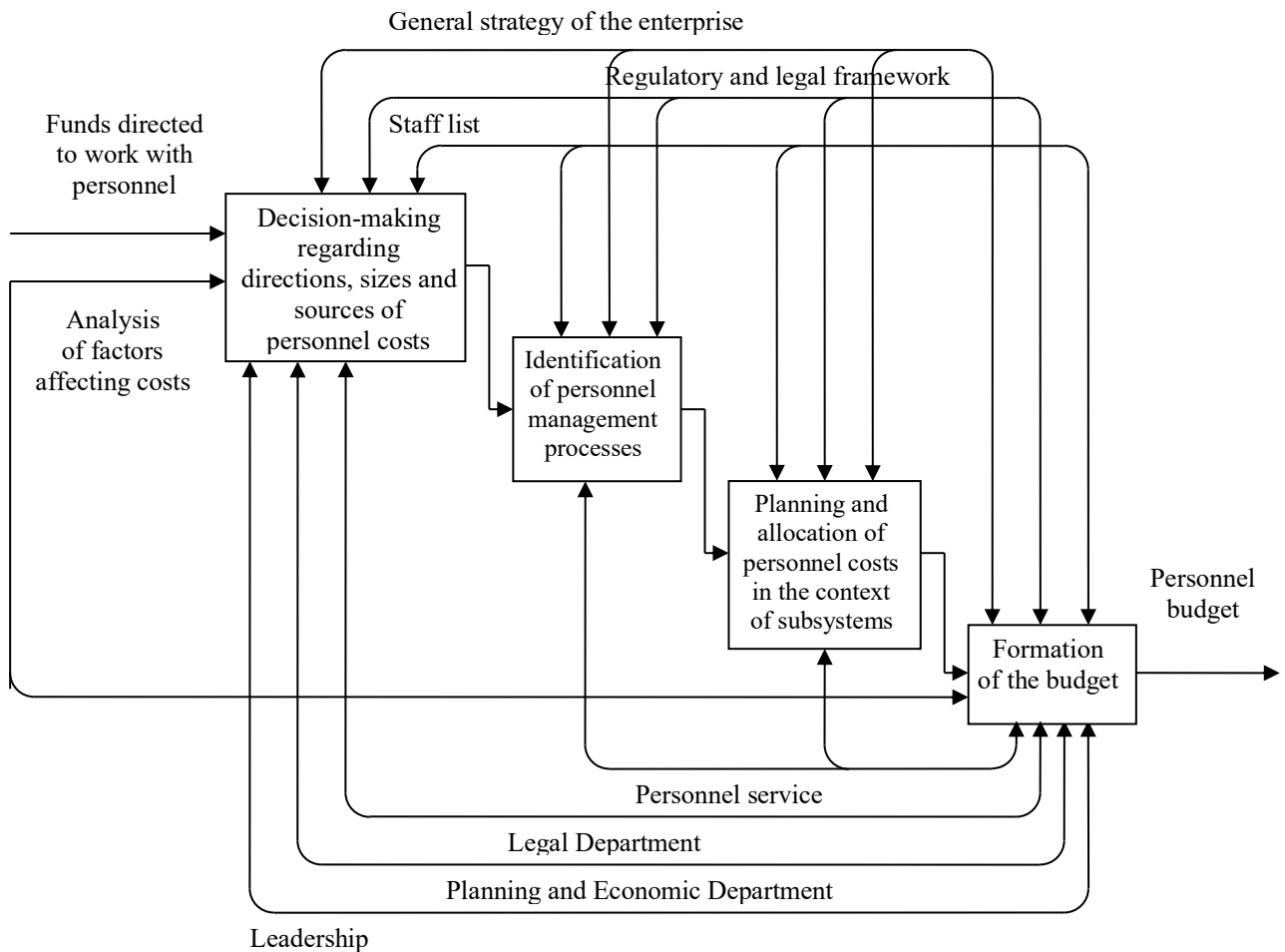


Figure 2.5 – Functional block “Personnel cost planning” (compiled by the author)

The functioning of the enterprise’s personnel cost management system, in particular, the process of their planning, is influenced by many different factors that can be grouped into two main groups: external (almost uncontrolled) and internal (controlled) [50]. Analysis of these factors allows making decisions that ensure the company achieves its goals.

When planning personnel costs, it is necessary to classify them into fixed and variable, since this enables each enterprise not only to determine the margin of its financial stability, but also to choose the optimal ratio of fixed and variable costs, taking into account the goals set for itself. The main attention should be paid

to the classification of costs that are characteristic of a specific management system. Therefore, if we are talking about planning in the personnel cost management system, first of all, such cost items as basic and additional wages, deductions for social insurance, costs for training, retraining and advanced training of personnel should be taken into account; health care and recreation expenses.

Therefore, the identification of personnel management processes is directly related to cost planning. The identification of personnel management processes consists in the analysis of the features of each process. Identification tools are observation of “inputs” and “outputs” of the personnel cost system. The logical result of the identification stage is the planning and distribution of personnel costs within each process of the personnel management system. In fact, after this stage, all subsequent management actions should be directed to each of the processes that have been identified. Therefore, all subsequent stages of the cost management system should be considered within each of the processes.

Forming a budget is a key stage in personnel cost planning. For this reason, the total amount of funds that the management of the enterprise can allocate for the full provision of personnel has a direct influence on the planning of personnel costs. A prerequisite for the formation of an effective budget is decision-making regarding the directions, sizes and sources of personnel costs. In addition, a correctly formed budget should be a tool for motivating the enterprise’s personnel [54].

It is thanks to the planning function that problems of ambiguity and inaccuracy in personnel costs are solved, which allows management to quickly respond to changes in both the internal and external environment.

The next stage is the organization of personnel cost management (fig. 2.6).

The input of the functional unit is the personnel budget, i.e. the result of the previous stage. At the same time, we get an important result at the output – a matrix of responsibility between units. The general strategy of the enterprise, the regulatory and legal framework and the staff list act as management. The main mechanisms of this stage are the management, planning and economic department, accounting and personnel service. For the correct management of personnel costs, it is

necessary to clearly understand the way of formation of personnel costs, which in the future will contribute to a more transparent system of control and accounting of personnel costs. In fig. 2.7 the way of formation of labor costs is presented.

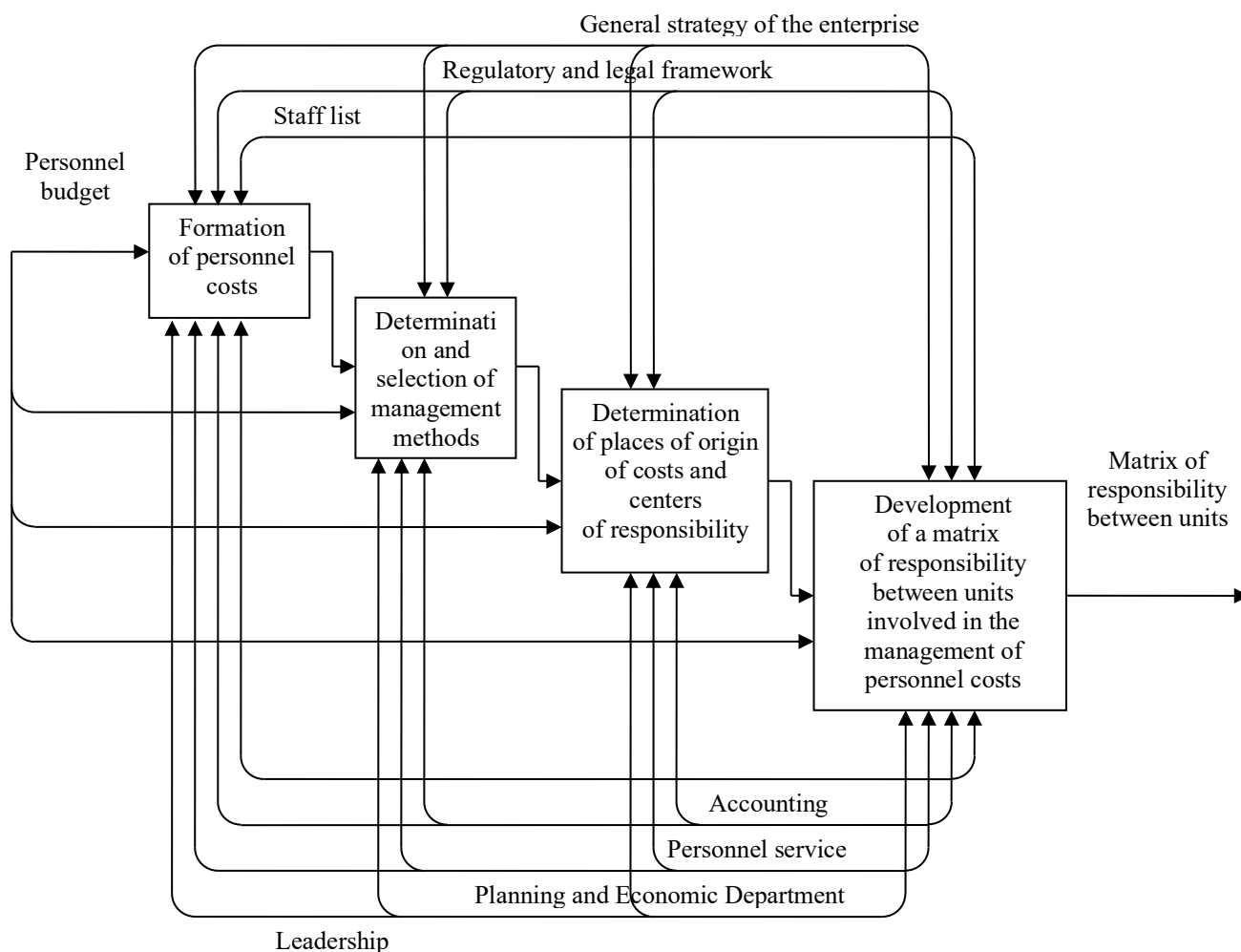


Figure 2.6 – Functional block “Organization of personnel cost management” (compiled by the author)

This stage is characterized by a reasonable definition and choice of cost management methods. As a result, deadlines, centers of responsibility, means and sources of information on costs are determined within the framework of the management organization. An important task is the development of a responsibility matrix between units that directly participate in the management of personnel costs (table 2.14).

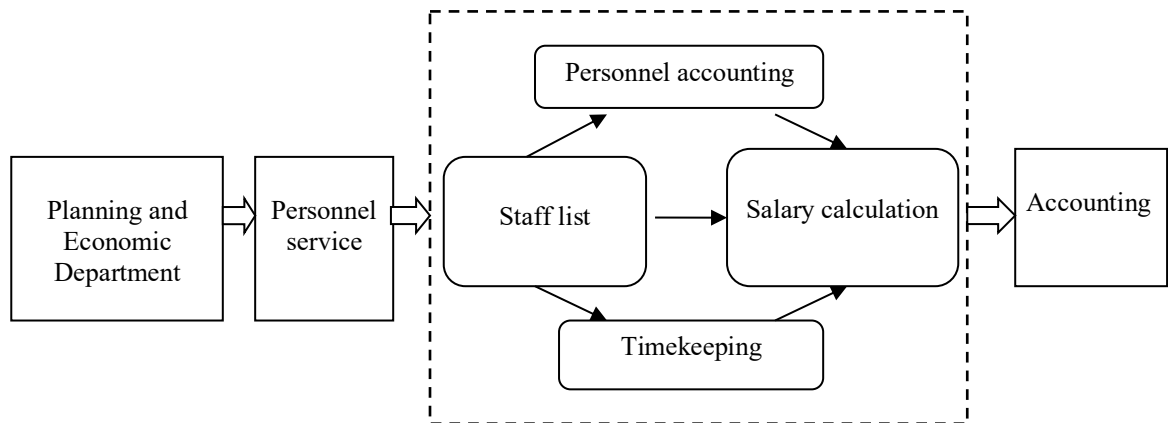


Figure 2.7 – Stages of formation of labor costs by their place of origin (compiled by the author)

Using the responsibility matrix allows you to avoid misunderstandings that sometimes arise between departments. In addition, it ensures the separation of formal powers, rights and duties among functional divisions. The responsibility of units in the process of managing personnel costs is established in accordance with the job instructions, where their duties are prescribed. It should also be noted that the result of the organization of personnel cost management affects almost all subsequent stages of the model.

Thus, the analyzed functional unit regulates not only the transition to the next stage of personnel cost management, but is also an important factor in the implementation of all resulting stages, without which optimization of personnel costs is impossible.

The motivation of personnel regarding the rational use of funds is an important component of the effective work of the entire personnel cost management system (fig. 2.8). Without understanding the motives and needs of the worker and appropriate stimulation of work, it is impossible to achieve a high level of both personnel management and cost management in particular. Traditionally, the activation and motivation of personnel is reduced to such means of influence that encourage compliance with the costs established by the plan and finding the possibility of their reduction or reduction.

Table 2.14 – Matrix of distribution of responsibility between units involved in the process of managing personnel costs (compiled by the author based on enterprise data)

Processes		Departments				
		Leadership	Planning and Economic Department	Personnel service	Accounting	Legal Department
Personnel cost planning	Decision-making regarding directions, sizes and sources of personnel costs	I	T	T	In	T
	Identification of personnel management processes	In	In	I	In	–
	Planning and allocation of personnel costs in the context of subsystems	A	I	T	In	–
	Formation of the personnel budget	A	T	T	I	T
Organization of personnel cost management	Formation of personnel costs	In	T	I	T	In
	Determination and selection of management methods	I	T	T	In	In
	Determination of places of occurrence of costs and centers of responsibility	I	T	T	T	–
	Development of a matrix of responsibility between units involved in the management of personnel costs	I	In	In	In	In
Motivation of personnel regarding the rational use of funds	Analysis of the existing motivation system (definition of tasks)	T	T	I	T	T
	Analysis of enterprise and personnel needs	T	T	I	T	T
	Determination of tools for motivating the rational use of personnel funds	T	T	I	T	T
	Development of a staff motivation program	A	T	I	T	T
Control and accounting of personnel costs	Building a system of informative reporting indicators	A	I	I	In	–
	Establishing the periodicity of updating the information base	I	T	In	In	–
	Development of an accounting form for personnel costs	A	T	I	T	T
	Evaluation of the effectiveness of personnel costs	In	I	I	T	–
Regulation of personnel costs	Identification of possible reserves for reducing personnel costs	A	T	I	T	In
	Formation of ways to optimize personnel costs	A	T	I	T	T
	Adjustment of personnel management processes	A	In	I	In	–
	Optimization of personnel costs	A	In	I	In	–

Conditional marks: I – the unit is responsible for implementation; T – the unit accepts teaching or consulting; In – the unit is informed; A – the subdivision approves.

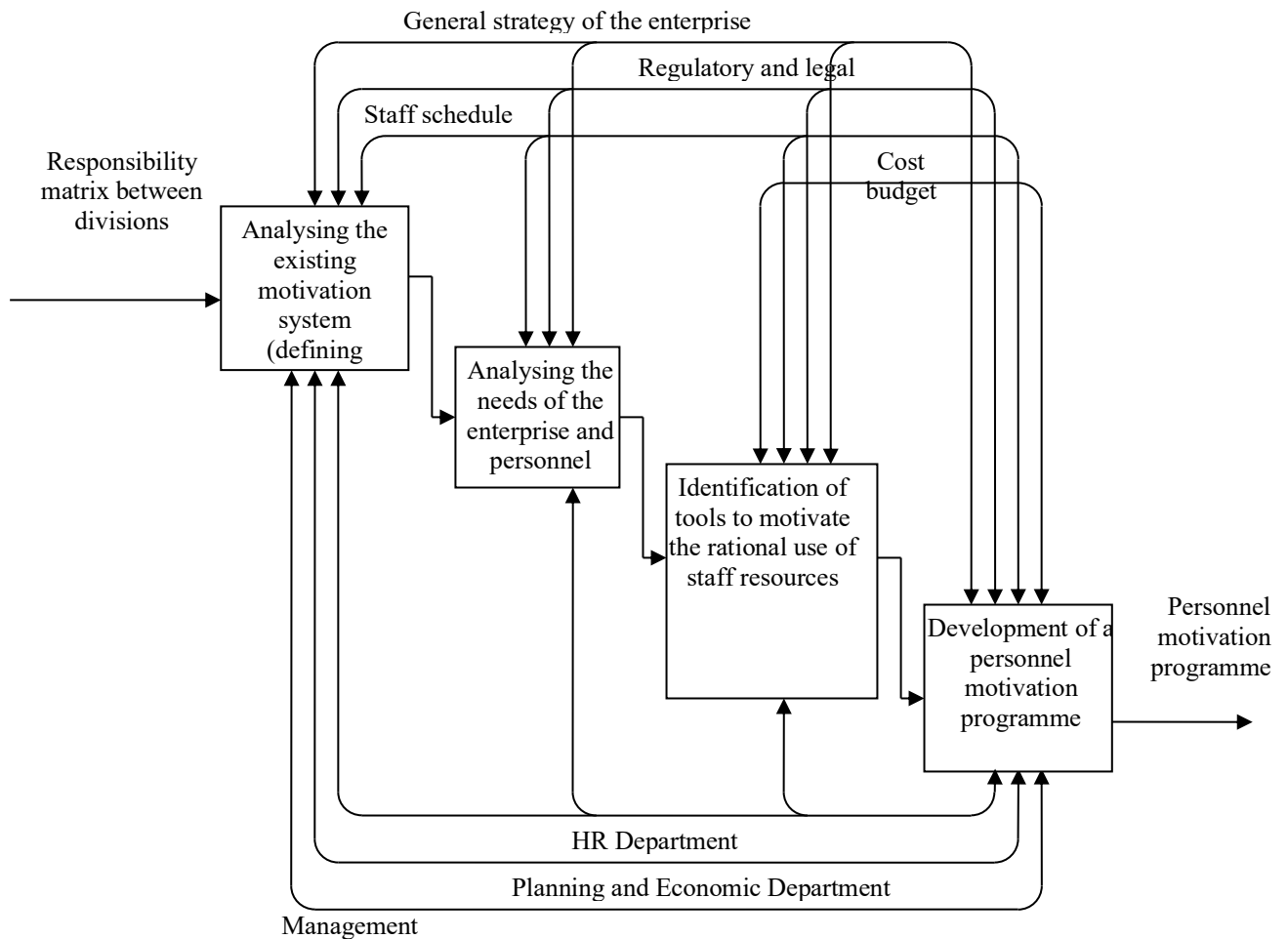


Figure 2.8 – Functional block “Motivation of personnel regarding the rational use of funds” (compiled by the author)

This stage consists of such sequential processes as: analysis of the existing motivation system; analysis of enterprise and personnel needs; determination of motivation tools for the rational use of personnel funds and development of a motivation program. The mechanisms of functioning of this stage are the management, the personnel service and the planning and economic department. As in the previous stages, management is conducted taking into account the staff list, the budget of expenses, the regulatory and legal framework and the general strategy of the enterprise.

The stages “analysis of the existing system of motivation” and “analysis of the needs of the enterprise and personnel” should be carried out with the aim of identifying the real state of use of tools for increasing the motivation of employees

and implementing the prevailing means of motivation obtained as a result of the personnel questionnaire with the sole purpose of harmonizing the goals of the enterprise and personnel. It is harmony, which is understood as consistency and mutual compliance, that allows to unite the interests of all subjects of social and labor relations through their consolidation.

Organizational culture is an important tool for staff motivation. It is a catalyst for increasing the competitiveness and future development of the enterprise. In turn, the management of organizational culture involves the constant socialization of the enterprise's personnel.

Staff turnover is one of the most important signs that indicates the need to change the organizational culture. At the same time, staff turnover causes an increase in personnel costs, so the implementation of measures to develop organizational culture contributes to a certain extent to both increasing the level of personnel motivation and ensuring the effectiveness of personnel costs. Therefore, the formation and development of organizational culture is a certain foundation for the development of a personnel motivation program, which will allow not only to improve the moral and psychological climate in the team, but also to reduce the funds for stimulation.

The next stage in the personnel cost management system is control and accounting (fig. 2.9).

Control can be characterized as one of the functions of management, which is a system of supervision and verification of the functioning of the managed object in order to assess the validity and effectiveness of management decisions, to identify the degree of their implementation, the presence of deviations and adverse situations, about which it is advisable to inform the competent authorities in a timely manner. That is, cost control provides feedback and comparison of planned and actual costs.

The effectiveness of control largely depends on the adjustment of management actions aimed at bringing the actual costs into line with the planned ones or on clarifying the plans, if the latter cannot be fulfilled due to objective reasons.

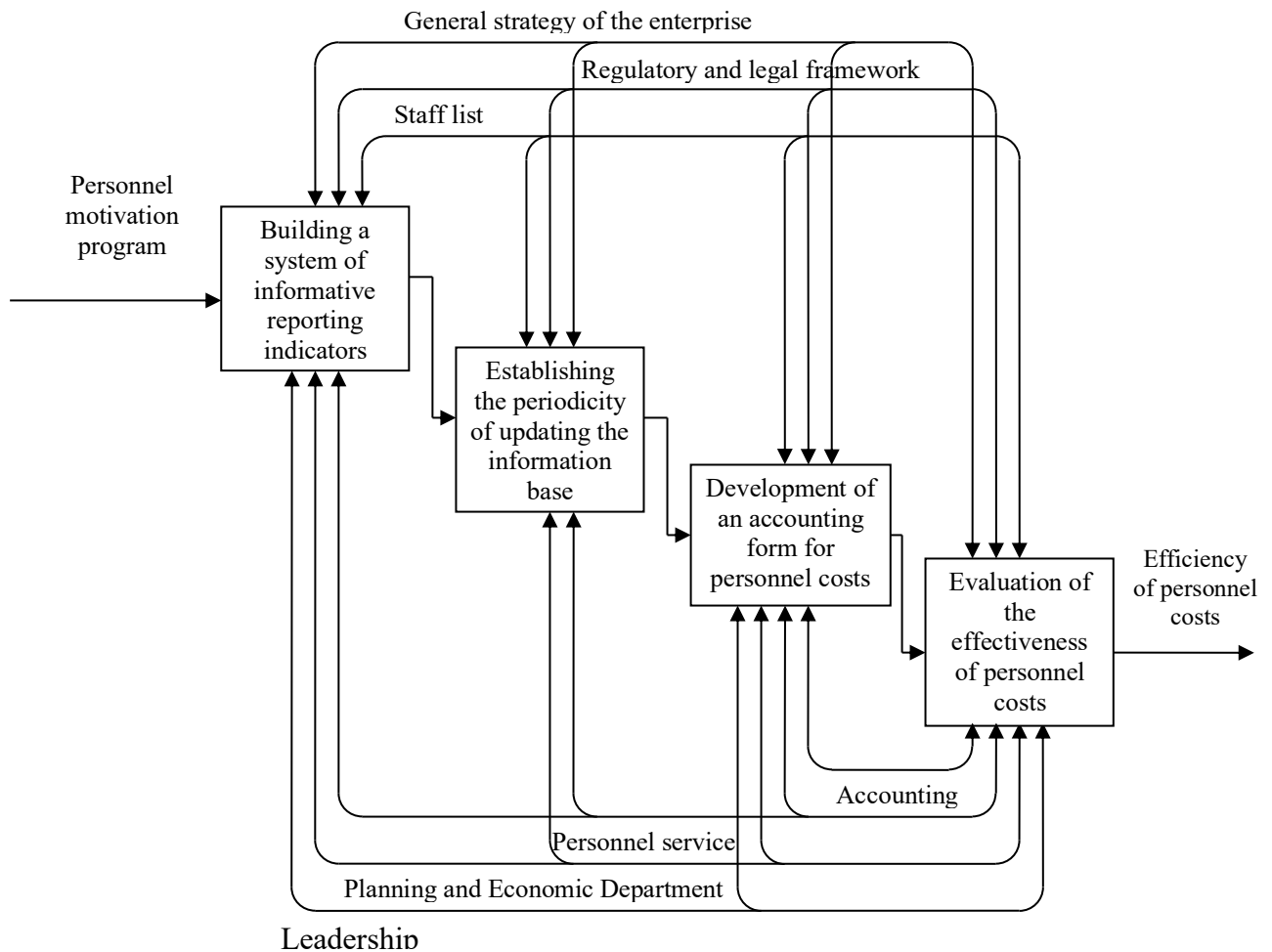


Figure 2.9 – Functional block “Control and accounting of personnel costs” (compiled by the author)

Cost accounting complements the control stage as an element necessary for the preparation of information for the purpose of making appropriate management decisions. Thus, accounting, which is part of the personnel cost management system, allows you to control costs, as well as make weighted management decisions about their feasibility. But the personnel cost accounting system, which operates at domestic machine-building enterprises, has certain shortcomings due to the lack of a uniform form of accounting reporting. The consequence of such a situation is additional work with internal reporting documents of enterprises and the difficulty of ensuring the necessary level of completeness of information regarding personnel costs.

Before making a final management decision regarding personnel costs, it is necessary to evaluate their effectiveness, subject to the implementation of all previous

stages of management. If the obtained estimate is low, then first of all it is necessary to direct management efforts to identify possible reserves for optimizing personnel costs and to form ways of optimizing them. It is these tasks that are functional components of the stage of regulation of personnel costs, which is presented in fig. 2.10.

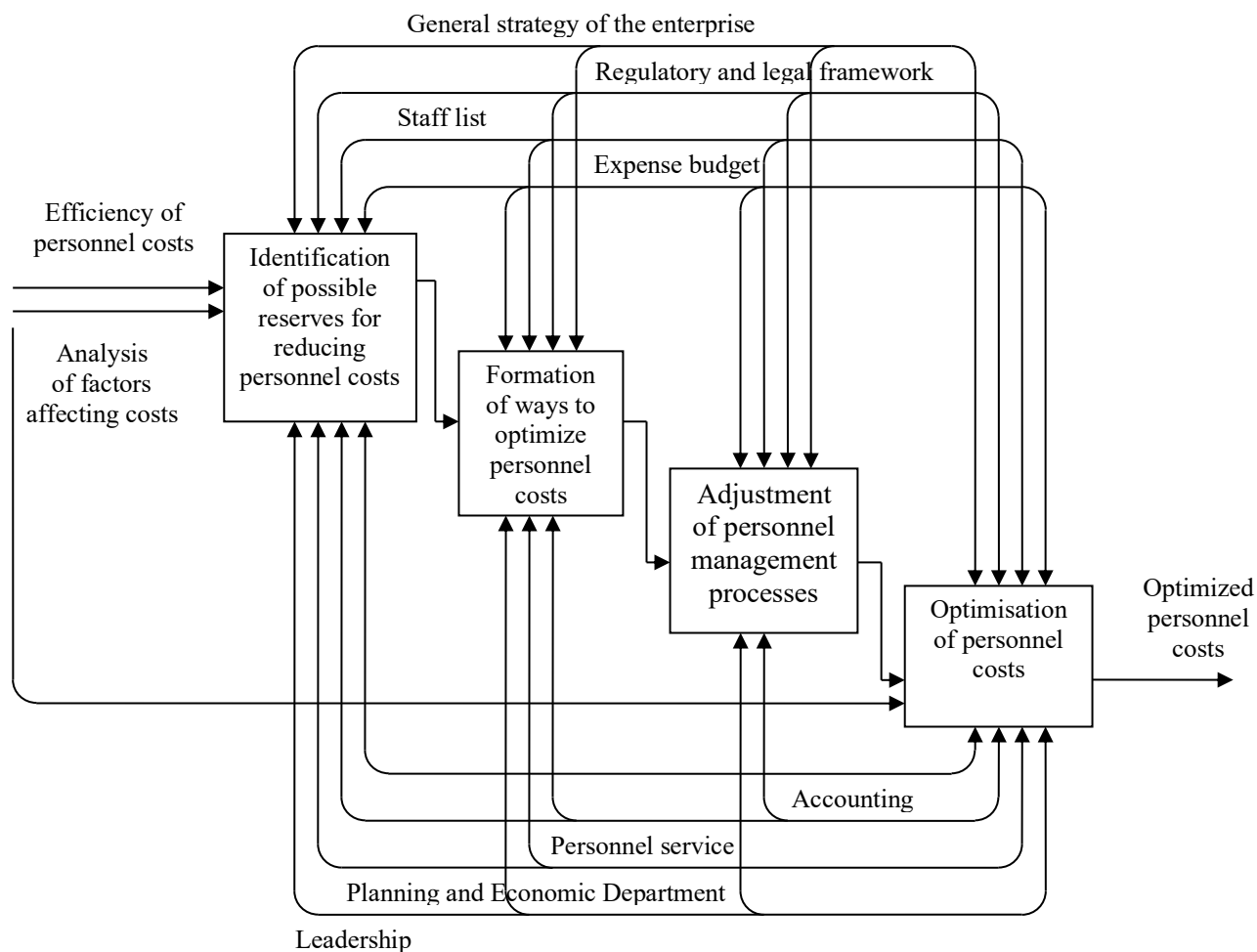


Figure 2.10 – Functional block “Regulation of personnel costs” (compiled by the author)

Regulation of employers’ labor costs should ensure, on the one hand, guarantees of reproduction of the labor force and, on the other hand, efficiency and competitiveness of production. This is the main purpose of cost regulation.

At the input we have the result of the previous stage, namely the efficiency of personnel costs, at the output we get optimized costs. The personnel service is

responsible for the implementation of each process, other management entities participate and consult.

It should be noted that the identification of possible reserves for the reduction of personnel costs and the corresponding formation of ways to optimize them allows to identify “bottlenecks”, the elimination of which will lead to the set goal of the enterprise – the reduction of personnel costs. By cost optimization, we do not mean their reduction, but an expedient change, which includes a decrease, an increase, and a redistribution

Problems in the organization of personnel management and possible ways to solve them (including reserves for optimizing personnel costs) are presented in the table 2.15.

Table 2.15 – Problems and ways to solve them in the management of personnel and their costs (compiled by the author)

Problem	As a result	Solutions	By using
Inadequacy of available labor resources to the needs of the production program	Payment of overtime work	Ensuring an optimal balance between the production program and the number of enterprises	Work schedule management
			Entering the mode of summary accounting of working hours
			Creation of “mobile groups of workers”
			Use of rotation or outsourcing
Production loss of working time	Payment of overtime and work on holidays	Minimization of “losses” of working time	Estimates of the effectiveness of personnel costs
Non-productive losses of working time	Payment of holidays, sick leaves	Distribution of annual leave according to the production program	Application of vacation schedules
Suboptimal system of remuneration and material incentives	Irrational use of the wage fund	Development of a scheme for calculating bonuses that is transparent for everyone	Incentives in the form of temporary allowances for staff who have not exceeded the annual rate of absences
Inefficient staff motivation system	Lack of interest of the staff in increasing the efficiency of the enterprise due to a decrease in job satisfaction	Implementation of the personnel motivation mechanism	Detailed analysis of the process of material stimulation

After finding an appropriate optimization option, it is necessary to adjust personnel management processes by means of cost redistribution.

Thus, the personnel cost management system combines a complex of such managerial influences as personnel cost planning, personnel cost management organization, personnel motivation regarding the rational use of funds, control and accounting of personnel costs, regulation of personnel costs.

The implementation of the process model of personnel cost management at the enterprise involves the transformation of the model into a plan of specific actions by the management in order to achieve the final result. One of the prerequisites for the effective implementation of the model is the logical justification of the need for changes in the personnel cost management subsystem.

Therefore, the proposed process model is aimed at determining the specific stages of the personnel cost management process and establishing certain persons who will be responsible for the effectiveness of the implementation of these processes.

Targeted management of personnel costs within the framework of the process model will allow solving the following tasks in the organization of personnel management:

- form a budget for personnel expenses;
- develop a responsibility matrix between functional units;
- create a staff motivation program;
- assess the effectiveness of personnel costs;
- improve the statistical form of personnel cost accounting;
- identify possible ways to optimize personnel costs.

Thanks to the development of the process model, all proposed tasks of cost management are solved comprehensively and consistently. Only such an approach will contribute to ensuring the effectiveness of the organization of personnel management, as well as the activity of the enterprise as a whole.

## **Conclusions to section 2**

Conducting a research of trends in the formation of personnel costs made it possible to determine the main factors that play an important role in ensuring personnel management: the position on the labor market, legislation and the level of taxation in this area, the financial condition of enterprises, changes in the number and structure of personnel, personnel policy. As a result of the generalization of existing approaches to the assessment of personnel cost management, an integrated assessment of the personnel cost management system using the taxonomy method was proposed, which allowed detailed analysis of personnel costs by management subsystems.

In the course of the study, a preliminary correlation analysis was conducted in order to identify the relationship between personnel costs and the enterprise's net profit, which confirmed the feasibility of determining the interdependence between individual personnel costs and the efficiency of the enterprise's activities. The components of personnel costs, including labor costs, costs of social security of employees, costs of cultural and household services, costs of professional development of personnel and other labor costs, were determined, and the components of the efficiency of the enterprise were substantiated using factor analysis.

With the help of correlation-regression analysis, the interdependence between personnel costs and the efficiency of the enterprise was revealed. Establishing a clear cause-and-effect relationship between personnel costs and the efficiency of the enterprise's activity allows you to fully and correctly manage personnel costs and, if necessary, reasonably reduce them in order to ensure the efficiency of the enterprise's activities. As part of the system-process approach, a process model of personnel cost management was developed using the BPwin simulation tool, which consists of the following processes: personnel cost planning; organization of personnel cost management; staff motivation regarding the rational use of funds; control and accounting of personnel costs; regulation of personnel costs. The presented functional processes are considered within each of the identified personnel management processes.

## SECTION 3

### IMPROVEMENT OF PERSONNEL MANAGEMENT ORGANIZATION AT THE ENTERPRISE

#### 3.1 Improving the organization of personnel cost management

Summarizing the results of the performed theoretical and analytical research of the essence and features of personnel cost management at the enterprise made it possible to propose an appropriate personnel cost management scheme, which is presented in fig. 3.1.

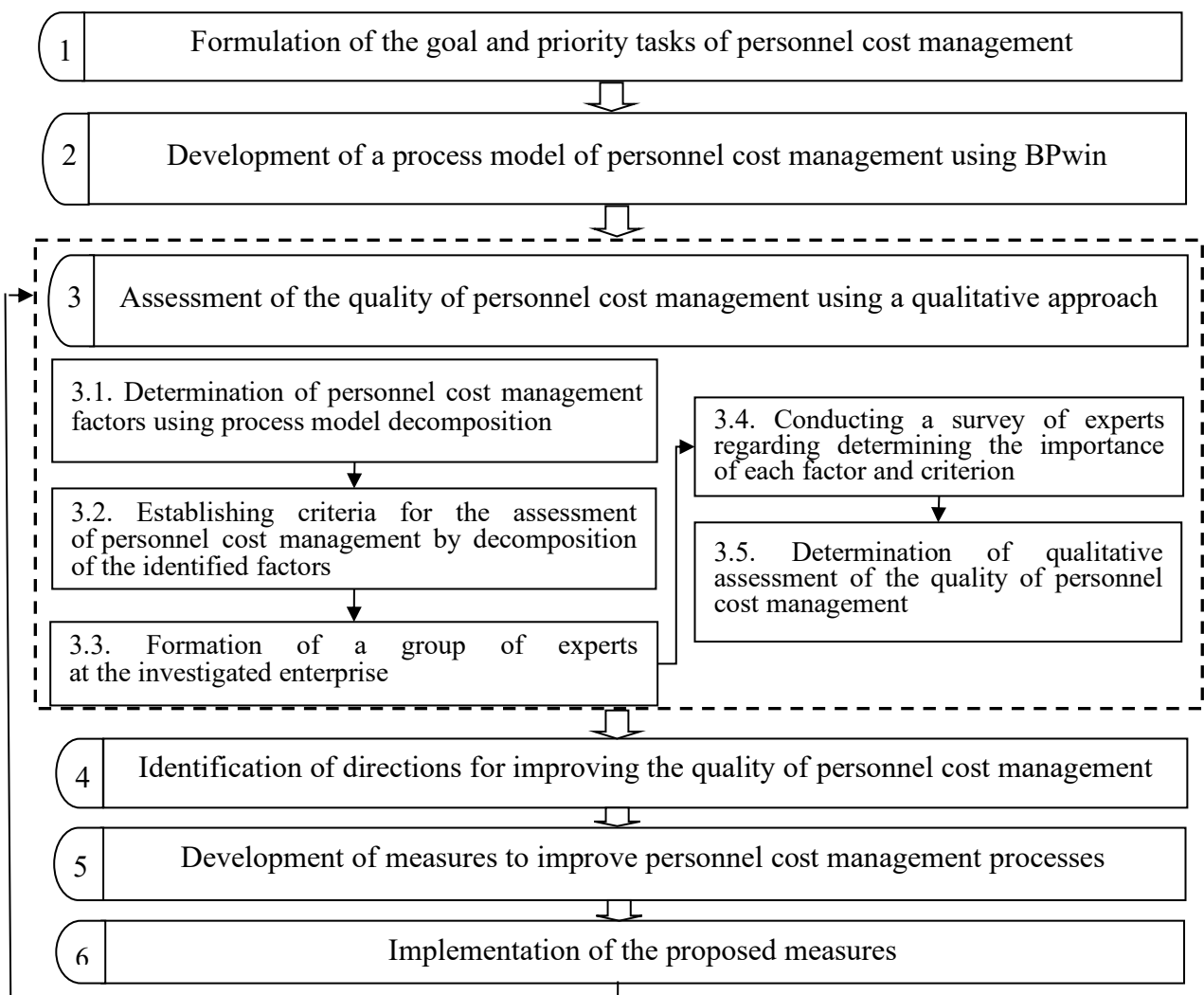


Figure 3.1 – Personnel cost management scheme

The formulation of the goal and priority tasks of personnel cost management is the beginning of the scheme. A prerequisite for formulating the goal and priority tasks is a detailed analysis of the enterprise's indicators in the field of personnel cost management.

Making changes in the appropriate direction requires a clear understanding of the essence and components of personnel cost management. Therefore, the next stage is the development of a process model for personnel cost management.

The successful development and gradual implementation of the process model of personnel cost management requires the coordination and participation in this process of all structural divisions and management of the enterprise, which perform the functions of organizational support.

In the process of implementing a process model of personnel cost management, the question of measuring its effectiveness arises. It is efficiency, not effectiveness. After all, efficiency, in contrast to effectiveness, requires not so much the achievement of a goal, but its achievement at the expense of the minimum need for resources [81]. This is confirmed by the main goal of machine-building enterprises – the desire to minimize personnel costs.

Effectiveness is related to the nature of changes that occur in the management of personnel costs under the influence of organizational and methodological support, and is evaluated according to criteria that determine the level of goal achievement. Management is a type of activity that ensures effective and productive achievement of goals by planning, organizing activities, conducting management and controlling organizational resources, and the comparison of the result and the set goal reflects the quality of management. It can be argued that the quality of management is the main criterion of efficiency.

Therefore, the implementation of the process model depends on the quality of personnel cost management. Therefore, an important stage of research is the assessment of the quality of the personnel cost management system at the enterprise. One of the most well-known approaches to the quantitative measurement of quality, which would allow to clearly determine the level of development of each

of the management processes, is the qualitative approach. Qualimetric methods are the most effective in studying management systems and their components, according to eminent scientists [70]. The essence of the qualitative method is to determine with the help of expert evaluations factors and criteria that play the role of a “benchmark” and are indicators of increasing the efficiency of the enterprise.

In general, qualimetry is a scientific field that combines quantitative methods of product quality assessment [47]. Assuming that the qualitative methods used to assess the quality of products can also be used to assess the quality of management systems, then the development of tools from the standpoint of qualimetry allows to quantitatively determine the quality of work of a certain management object. However, it should be noted that insufficient attention has been paid to research on the assessment of quality characteristics of personnel cost management. Based on the study and generalization of the essence of the qualitative approach presented in studies [1, 58], the following procedure for its implementation is proposed:

- determination of personnel cost management factors using the division of the process model;
- establishment of criteria for evaluating the management of personnel costs by means of specified factors;
- formation of a group of experts at the investigated enterprise;
- conducting a survey of experts regarding determining the importance of each factor and criterion;
- preparation and calculation of a qualitative assessment of the quality of personnel cost management.

The proposed sequence of stages of the implementation of the qualitative approach to the assessment of the quality of management is a peculiar procedure, the violation of which is an unacceptable phenomenon. The use of the category “procedure” to indicate the sequence of stages allows you to emphasize the fact that the key stages of a complex qualitative assessment of the quality of personnel cost management are detailed with the help of the procedure, which facilitates the perception of this scientific tool.

It should be noted that the determination of the characteristic factors of personnel cost management and the establishment of criteria by their distribution are justified on the basis of the study and analysis of the process model.

Taking into account the existence of a dependence between the probability of reliability of the assessments of the expert group, the number of respondents of the expert group and the level of knowledge of individual experts, the number of experts was determined and substantiated in the study using the Bernoulli formula [13]:

$$m = \frac{t^2 \times r \times g}{M_g^2} \quad (3.1)$$

where  $m$  – number of experts;

$t$  – confidence coefficient (2.63);

$r$  – the share of sample elements with the presence of a given characteristic (the share of more qualified experts) (0.9);

$g$  – the share of sample elements with the absence of a given characteristic (the share of less qualified experts) (0.1);

$M_g$  – acceptable error of representativeness (0.25).

Thus, the number of experts should be:

$$m = \frac{2,63^2 \times 0,9 \times 0,1}{0,25^2} \approx 10 \text{ (experts)}$$

Based on the received data, 10 experts were selected at the enterprise. It should be noted that when an expert group is created, an important task is to assess their level of competence. Therefore, as experts, the managers of the enterprise, as well as specialists who are directly related to the object of assessment and possess the necessary knowledge, abilities and skills in this field, acted as experts. The quantitative and qualitative composition of the enterprise's expert group is presented in Annex C.

The survey among experts was conducted in the form of filling out a Google questionnaire (Annex D), which made it possible to determine the features of personnel cost management and the priority of the enterprise's tasks in the opinion of each of the respondents. The components of the qualitative assessment of the quality of personnel cost management are presented in the table 3.1.

Table 3.1 – Components of a qualitative assessment of the quality of personnel cost management in the context of the process model (compiled by the author)

№	Factors (F <sub>i</sub> )	Weight of factor (WF <sub>i</sub> )	Substantive criteria (SK <sub>i</sub> )	Weight of criteria (WC <sub>i</sub> )	Criterion manifestation coefficient (C)
1.	Implementation of staff cost planning (F <sub>1</sub> )	WF <sub>1</sub>	Define tactical and strategic objectives regarding cost management (SC <sub>1</sub> )	WC <sub>1</sub>	C <sub>1</sub>
			Detail and identification of personnel management processes (SC <sub>2</sub> )	WC <sub>2</sub>	C <sub>2</sub>
			Rational allocation of staff costs according to prior analysis of influencing factors (SC <sub>3</sub> )	WC <sub>3</sub>	C <sub>3</sub>
			Establishment of a sound staff costs budget on a regular basis (SC <sub>4</sub> )	WC <sub>4</sub>	C <sub>4</sub>
2.	Ensuring the organisation of staff costs management (F <sub>2</sub> )	WF <sub>2</sub>	A clear and transparent mechanism for the formation and organisation of staff costs (SC <sub>5</sub> )	WC <sub>5</sub>	C <sub>5</sub>
			Variability of content and management methods (SC <sub>6</sub> )	WC <sub>6</sub>	C <sub>6</sub>
			Arrangement of cost centres and responsibility centres (SC <sub>7</sub> )	WC <sub>7</sub>	C <sub>7</sub>
			Correspondence of the existing number of functional units to the required one (SC <sub>8</sub> )	WC <sub>8</sub>	C <sub>8</sub>
3.	Staff motivation (F <sub>3</sub> )	WF <sub>3</sub>	Regular analyses of company and personnel needs (SC <sub>9</sub> )	WC <sub>9</sub>	C <sub>9</sub>
			Creation of conditions for professional development of personnel (SC <sub>10</sub> )	WC <sub>10</sub>	C <sub>10</sub>
			Use of motivation tools (SC <sub>11</sub> )	WC <sub>11</sub>	C <sub>11</sub>
			Support and development of organisational culture (SC <sub>12</sub> )	WC <sub>12</sub>	C <sub>12</sub>
4.	Staff costs analysed and monitored (F <sub>4</sub> )	WF <sub>4</sub>	Availability of a system of informative indicators to measure staff costs (SC <sub>13</sub> )	WC <sub>13</sub>	C <sub>13</sub>
			Use of a statistical form for recording staff costs (SC <sub>14</sub> )	WC <sub>14</sub>	C <sub>14</sub>
			Adherence to the staff costs budget (SC <sub>15</sub> )	WC <sub>15</sub>	C <sub>15</sub>
			Regular evaluation of the efficiency of staff costs (SC <sub>16</sub> )	WC <sub>16</sub>	C <sub>16</sub>
5.	Staff cost control level (F <sub>5</sub> )	WF <sub>5</sub>	Identifying ways to optimise staff costs (SC <sub>17</sub> )	WC <sub>17</sub>	C <sub>17</sub>
			Utilisation of reserves to reduce staff costs (SC <sub>18</sub> )	WC <sub>18</sub>	C <sub>18</sub>
			Adjusting and refining the level of staff costs (SC <sub>19</sub> )	WC <sub>19</sub>	C <sub>19</sub>
			Creating optimal conditions to ensure the necessary cost control (SC <sub>20</sub> )	WC <sub>20</sub>	C <sub>20</sub>

The next stage is the interpretation of the results of the questionnaire to determine a comprehensive qualitative assessment of the quality of personnel cost management according to this scheme (fig. 3.2).

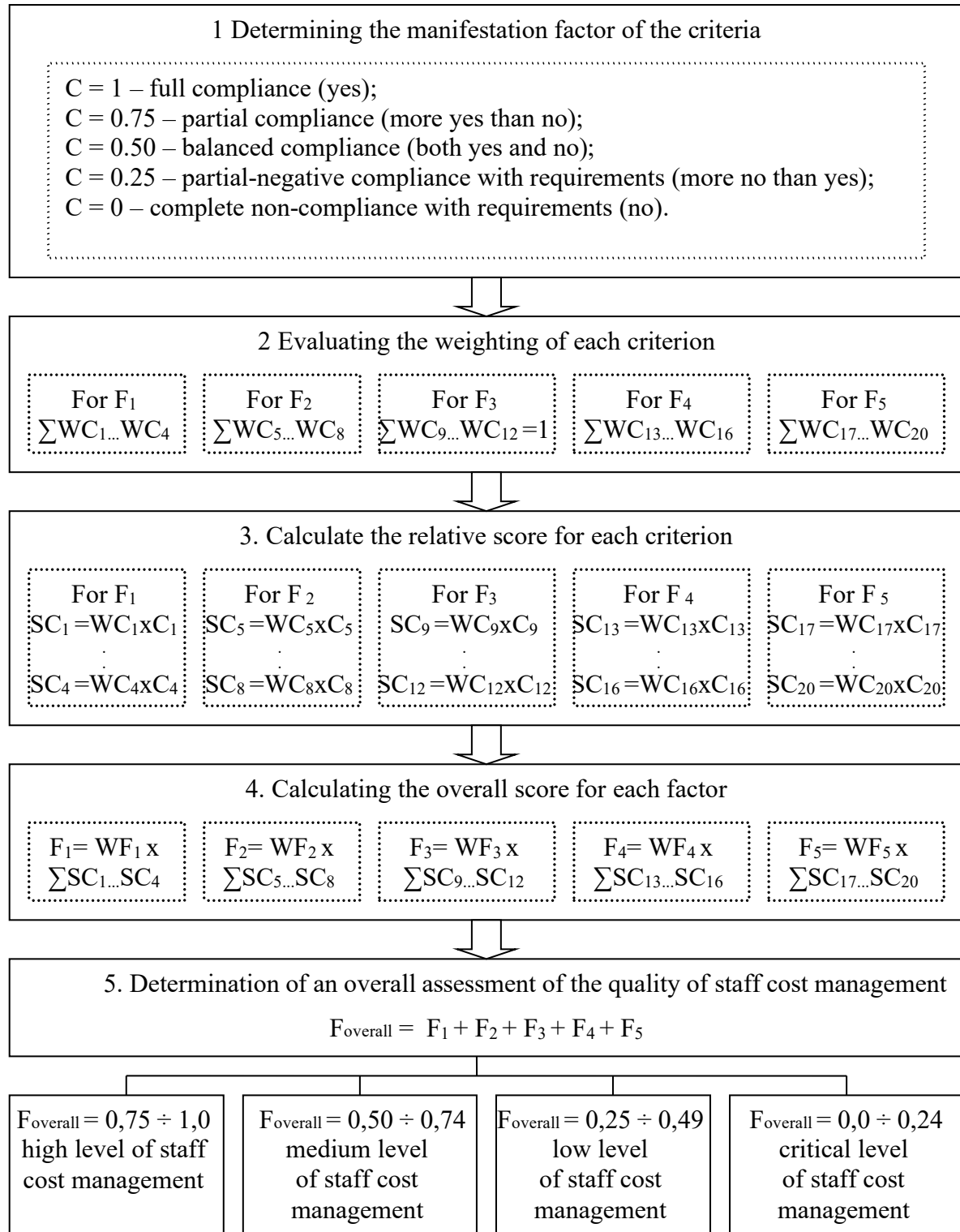


Figure 3.2 – Scheme of sequential determination of complex qualitative assessment of the quality of personnel cost management (compiled by the author)

It should be emphasized that for the expert group of enterprises, the processes of personnel cost management, which are represented by factors, are equally important for decision-making regarding cost optimization. In this regard, the specific weight of the importance of each of these factors is 0.2 (1/5).

Table 3.2 presents the calculation of a comprehensive qualitative assessment of management quality at PJSC “Yuzhcable Works” for the current year.

Table 3.2 – Qualitative assessment of the quality of personnel cost management at PJSC “Yuzhcable Works” (compiled by the author)

$F_i$	$WF_i$	$SC_i$	$WC_i$	$C$
$F_1 = 0.154$	0.2	0.25	0.25	1.00
		0.09	0.18	0.5
		0.19	0.25	0.75
		0.24	0.32	0.75
$F_2 = 0.150$	0.2	0.11	0.22	0.5
		0.21	0.28	0.75
		0.22	0.29	0.75
		0.21	0.21	1.00
$F_3 = 0.101$	0.2	0.13	0.25	0.5
		0.16	0.31	0.5
		0.17	0.23	0.75
		0.05	0.21	0.25
$F_4 = 0.148$	0.2	0.20	0.20	1.00
		0.23	0.30	0.75
		0.13	0.25	0.5
		0.19	0.25	0.75
$F_5 = 0.140$	0.2	0.19	0.25	0.75
		0.26	0.35	0.75
		0.15	0.20	0.75
		0.10	0.20	0.5
$F_{\text{overall}} = 0.154 + 0.150 + 0.101 + 0.148 + 0.140 = 0.692$				

As for the obtained overall assessment of the quality of management, it was 0.692. This indicates the average level of personnel cost management at this researched enterprise. At the same time, it can be argued that the level of management of personnel costs is close to high, but this is hindered by an insufficient assessment of the third factor, namely, the presence of personnel motivation. A visual representation

of the quality levels of each control function is shown in fig. 3.3.

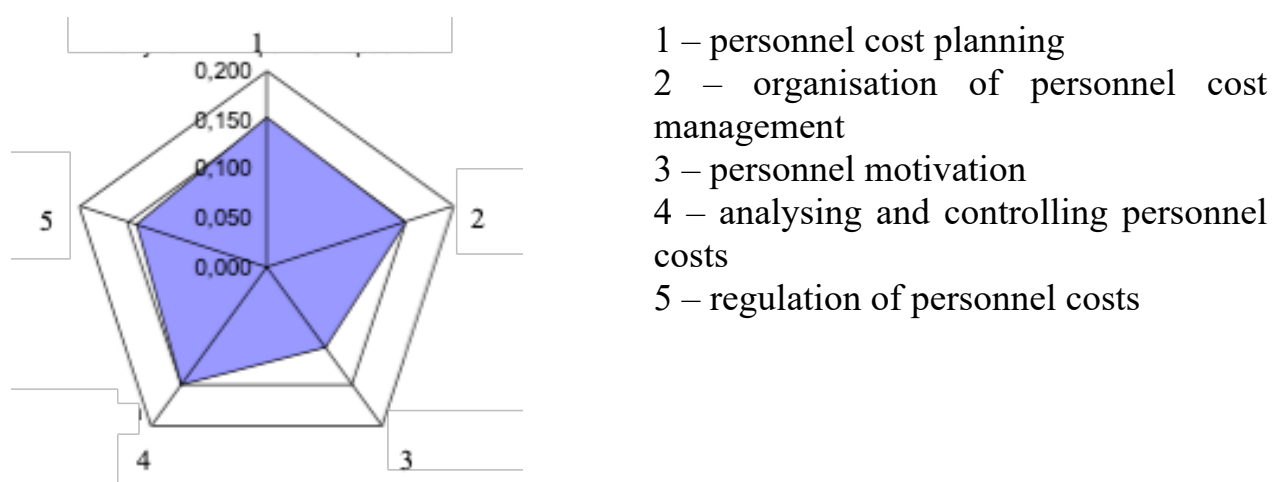


Figure 3.3 – Quality profile of personnel cost management at PJSC “Yuzhcable Works” (compiled by the author)

From the analysis of fig. 3.3, it is possible to define the process of motivating staff regarding the rational use of funds as one of the important areas of improving the quality of personnel cost management.

In addition, the research carried out in subsection 2.3 made it possible to identify personnel costs, the increase of which negatively affects the efficiency of the enterprise. These costs relate to the subsystem of personnel planning and marketing, selection and hiring, evaluation and accounting, and the subsystem of the organization of working conditions. That is why the company was offered a comprehensive measure to increase employee motivation. In order to choose the direction of improving the quality of staff motivation, it is necessary to analyze the existing methods and means of motivation, taking into account the limitations of the enterprise in terms of the use of funds. The characteristics of the main methods and means of motivation are presented in fig. 3.4.

So, given that motivation is a socio-cultural phenomenon that is realized in the economic sphere, but is formed by the cultural environment, it can be argued that the formation and development of organizational culture is one of the main directions of its improvement.

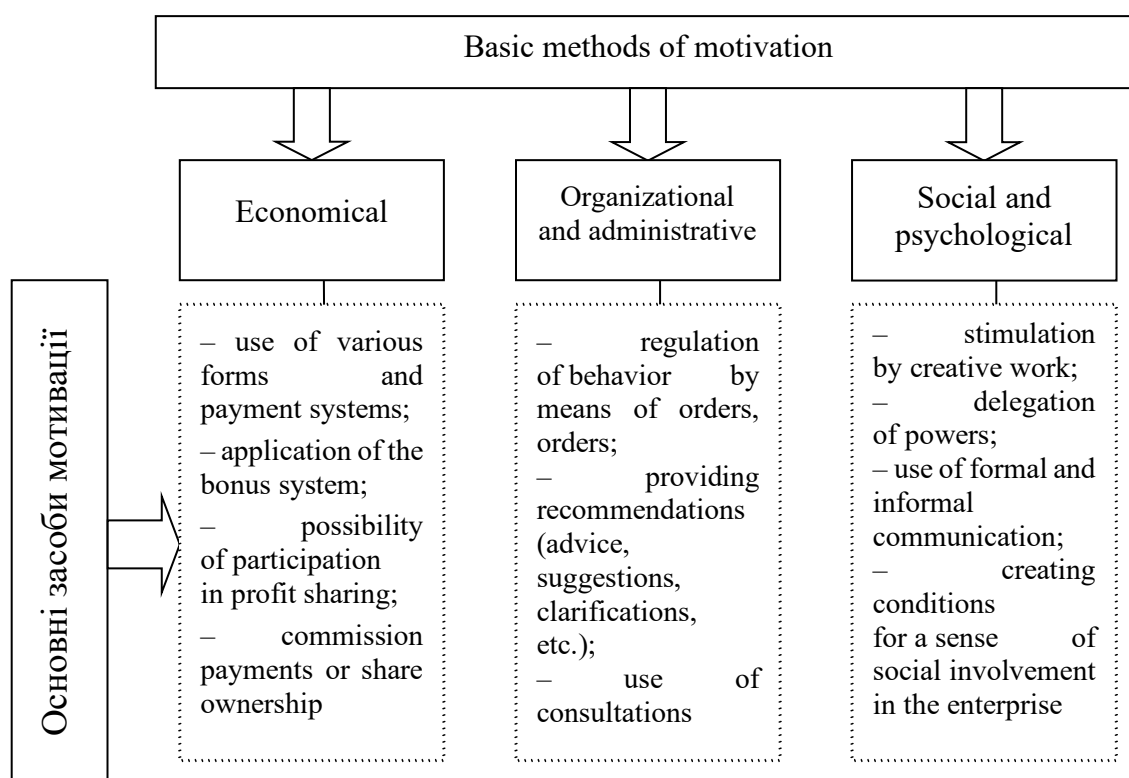


Figure 3.4 – Characteristics of the main methods and means of personnel motivation (compiled by the author according to [37; 66])

Organizational culture ensures not only the harmonization of collective and individual interests of employees, mobilizes their initiative, fosters loyalty to the enterprise, improves communication processes, moral and psychological climate, but also ensures the successful functioning and development of the enterprise. In addition, it is the organizational culture that integrates the means of motivation, the use of which almost does not require spending money on the part of the enterprise. In order to use the concept of organizational culture to solve the problem posed in the research, first of all, it is necessary to determine its essence.

We will consider the essence of the concept of organizational culture, as a management philosophy and ideology, which is perceived by most of the enterprise, values, guidelines, beliefs, expectations, norms and rules of behavior that underlie relations and interactions both inside the enterprise and outside it. Summarizing the above provisions, it can be stated that the formation and development of organizational culture is a complex and long-term process that takes into account

not only the needs of the enterprise, but also the needs of the staff. The main stages of formation and development of organizational culture, which are grouped based on the study of scientific literature [26; 74], are presented in fig. 3.5.

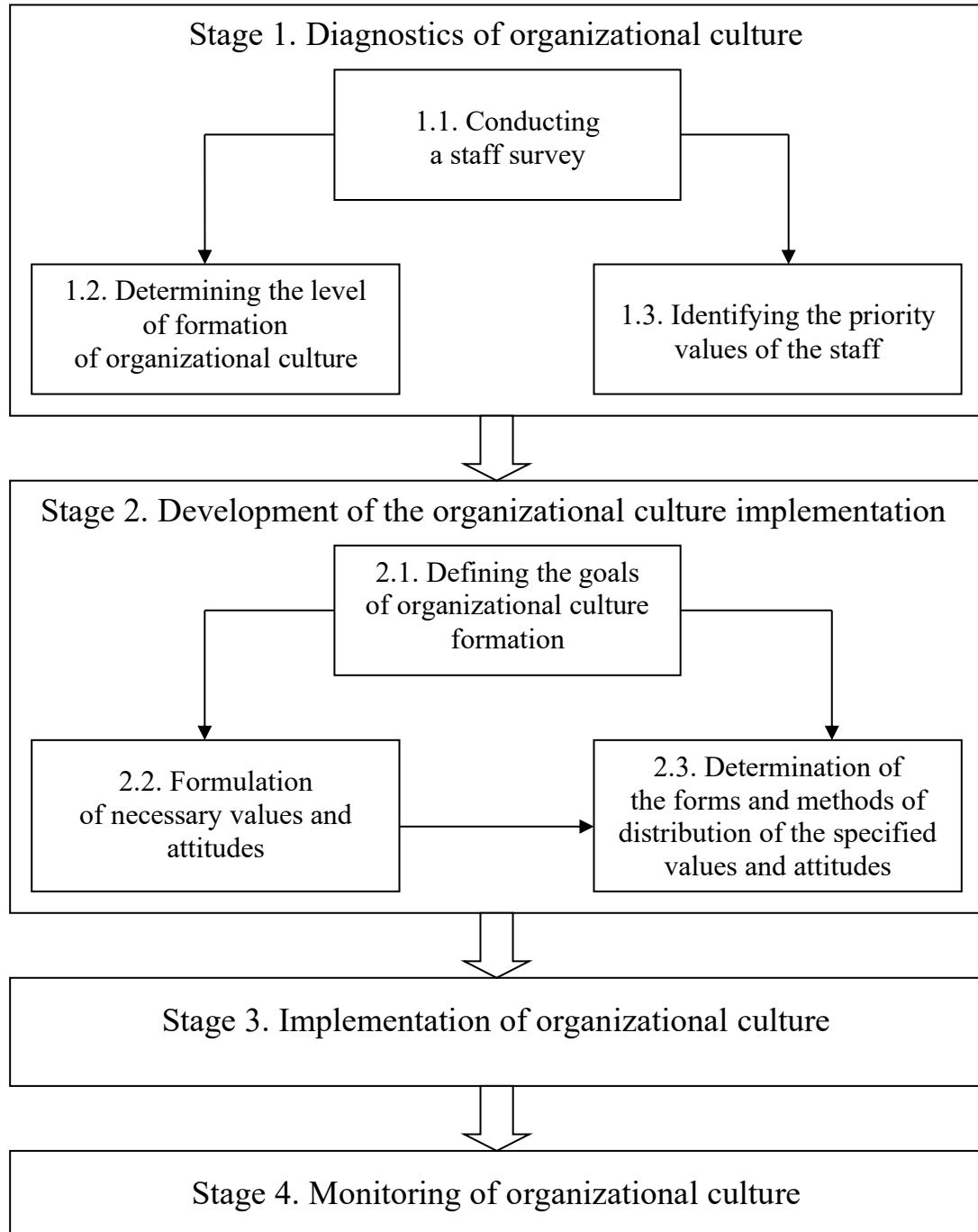


Figure 3.5 – The main stages of formation and development of organizational culture (compiled by the author according to [26; 74])

In order to form and develop organizational culture, it is necessary to first diagnose it. With the help of a survey (can be conducted both in the form of a questionnaire and with the help of interviews) determine the level of formation of the organizational culture and identify the priority values of the staff, taking into account which will prevent their resistance, that is, avoid certain difficulties at the stage of implementation of the “desired” organizational culture. After all, it is known that any attempts to change the organizational culture cause active or passive resistance of employees.

For the correct development of the organizational culture formation program, it is necessary: first, to determine the goals of organizational culture formation, taking into account the emphasis on personnel motivation regarding the rational use of personnel costs; secondly, formulate the necessary values and attitudes; thirdly, to determine the forms and methods of their distribution.

Therefore, the goal of this stage should be the maximum detailing of new values and norms of behavior that must be “instilled” in the enterprise’s personnel. To do this, it is advisable to hold a series of strategic meetings with department heads (key employees), preferably with the involvement of external consultants, the purpose of which will be to create a detailed image of the “desired” organizational culture in the production organization.

In addition, at the stage of developing the organizational culture implementation program, it is necessary to agree and form a unified vision of the future organizational culture by the enterprise’s staff and management, i.e.: determine the enterprise’s mission and priority values; to form rules and norms of behavior of the enterprise’s employees; give an estimate of the strength of staff resistance to the expected changes. Thus, a reasonable step would be to create a working group that will deal with the regulation of the process of implementing organizational culture.

The stage of implementing the organizational culture requires much more attention, because the management is faced with the resistance of the staff to changes, lack of desire for professional development, limited resources, laziness of the staff, etc. At this stage, the ideas of management and functional divisions are implemented to improve staff motivation with the help of organizational culture. The following list of measures to implement the program should be proposed (table 3.3).

Table 3.3 – Program implementation measures (compiled by the author)

Event	Expected results
Conducting lectures and seminars with the enterprise's staff on the issue of improving organizational culture	Orientation of employees to expected results, consideration of their suggestions
Conducting meetings on the preparation of normative documentation on issues of regulation of the organizational culture of personnel	Awareness of the need to create and implement a code of ethics for employees
Creation of special "idea boxes"	Ensuring two-way communication between staff and management
Creation of individual personnel development plans	Increasing staff motivation
Extensive use of symbols and rituals, emphasis on thrift slogans	Identification of personnel with the enterprise
Increasing the efficiency of meetings and negotiations	Effective time management
Promotion of self-development of personnel by heads of departments as clear role models	Overcoming active resistance
Creation of an employee's corporate map – a booklet that reflects the values and norms of the organizational culture, the history of the organization, its traditions	Better adaptation of new employees in the team
Creation of a working group	Implementation of organizational culture management
Conducting corporate events	Team cohesion

Undoubtedly, conducting such events will not solve the problem of introducing organizational culture, but with their help, not only an important step will be taken in the direction of its formation and development, but also passive resistance to the innovation will be overcome.

After six months, it is advisable to monitor the organizational culture. Based on the study and analysis of monitoring procedures in the literature [29; 32; 68], the following sequence of organizational culture monitoring is proposed:

1. Formulation of the goal of monitoring, which will consist in determining the result of the implementation of an organizational culture aimed at motivating staff regarding the rational use of funds, and systematic tracking of cultural development trends.

2. Determination of monitoring objects – organizational culture of PJSC "Yuzhcable Works".

3. Creation of a special working group that will carry out monitoring procedures with the division of functional responsibilities for collection, processing, highlighting of monitoring results, development of tools.

4. Determination of monitoring terms, the most optimal of which is every six months.

5. Development of a toolkit of monitoring procedures (reference models of organizational culture with clear indicators and criteria for measuring the manifestation of the necessary qualities of an employee; questionnaires for identifying manifestations of culture formation).

6. Carrying out periodic measurements of monitoring objects.

7. Analysis and coverage of monitoring results based on selected indicators.

8. Implementation of corrective measures regarding the desired quality of the processes and results studied.

9. Decision-making regarding forecasts of further formation and development of the relevant organizational culture.

Therefore, it should be noted that for the effective functioning of the enterprise, planned measures to improve the organizational culture should be implemented, and not create the appearance of its modernization. In addition, attention should be paid to the fact that it is necessary to motivate personnel regarding the rational use of funds with the help of organizational culture, satisfying their interests.

Thus, the proposed modern universal methodical approach to assessing the quality of personnel cost management is built on a qualitative basis by decomposing a complex phenomenon into its main components (factors). In turn, the use of qualitative assessment makes it possible not only to assess the quality of personnel cost management, but also to monitor the level of implementation of the proposed measures in the monitoring mode.

### **3.2 Development of measures to optimize personnel costs**

Management of personnel costs is a complex subject of research, as it is due to the significant influence of external and internal factors that force management to constantly monitor and control detailed management processes and adjust them if necessary. Under these conditions, it is urgent to develop provisions for optimizing personnel costs, which allow making the most competent and weighted management decisions aimed at ensuring the efficiency of the enterprise based on the effective management of personnel costs. In this regard, substantiating the efficiency of the enterprise by optimizing personnel costs is one of the main tasks in this study. The procedure for optimizing personnel costs is presented in fig. 3.6.

It is appropriate to emphasize that PJSC “Yuzhcable Works” has already developed a certain structure of personnel costs, a radical change of which can lead to negative phenomena in the enterprise’s activities. In this regard, the optimization of personnel costs should be gradual, so the most important thing is to optimize those costs that can be additionally released. It is necessary to optimize personnel costs only if additional funds for personnel are identified as a result of the implementation of specific measures. Therefore, it is advisable to optimize not the entire set of personnel costs, but, for example, additionally freed funds, which, with successful distribution, can improve not only the efficiency of the enterprise, but also the effectiveness of personnel cost management.

The proposed procedure begins with a decision on the need to optimize personnel costs, the basis of which is methodical and analytical research support. This stage is preparatory because it forms the foundation for optimizing personnel costs.

In order to optimize personnel costs, a process model of personnel cost management was developed in subsection 3.1, the difference of which is a detailed description of all management processes. In turn, the presence of a process model allows for a more balanced assessment of the quality of personnel cost management using the qualitative method, which makes it possible to identify management bottlenecks.

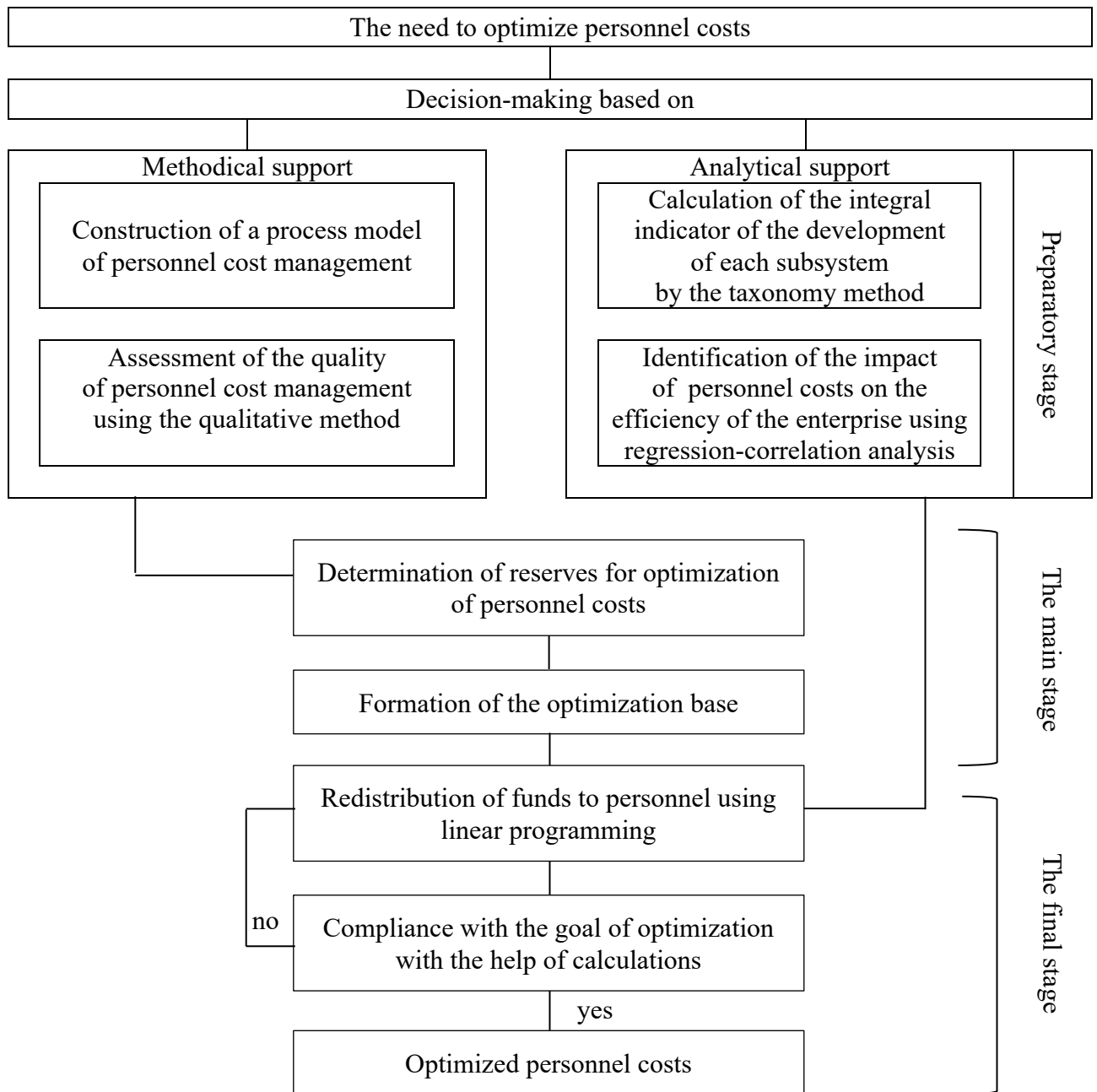


Figure 3.6 – The procedure for optimizing personnel costs (compiled by the author)

The analytical support of the research is the basis for the allocation and optimization of personnel costs, and the identification of the relationship between personnel costs and the efficiency of the enterprise using correlation-regression analysis makes it possible to identify those personnel costs that most contribute to increasing efficiency.

Dependence between the level of labor costs and personnel development at the enterprise and the level of efficiency of its activities. But it should be emphasized

that the obtained results indicate only the general trends in the enterprise. In this regard, a correlation-regression analysis was conducted at PJSC “Yuzhcable Works” with the aim of identifying the relationship between personnel costs and net profit, which is one of the most important indicators of the enterprise’s performance. The results of the correlation-regression analysis are presented in Annex E.

It is with this relationship in mind that optimization of personnel costs should be carried out.

The main stage of the procedure consists in determining the reserves for the optimization of personnel costs and forming the optimization base.

Identification of bottlenecks in the management system allows to formulate measures to improve the existing situation. These measures can not only improve the management system, but also free up funds for optimization.

It should be emphasized that the optimization base can be formed both on the basis of the entire amount of funds released from certain measures, or their part, and with the help of other sources of financing of the enterprise.

Considering the fact that the methodical assurance of the efficiency of the enterprise is formed on the basis of the optimization of personnel costs, it is worth applying optimization methods. Among optimization problems in decision-making theory, linear programming problems are the most well-known, in which the function to be maximized is linear, and the constraints are set by linear inequalities [44]. The application of linear programming allows solving optimization problems.

Therefore, the optimization process should be based on linear programming methods, which will allow determining the optimal ratio of redistribution of funds to personnel, taking into account the model obtained as a result of correlation-regression analysis. The formulation of linear programming problems is as follows: find the extreme value (max/min) of the linear objective function, under constraints that have the form of linear equalities or inequalities, and boundary conditions that show the range of variation of the variables [30].

In general, the linear mathematical model has the following form [75]:



into account the level of personnel costs. Based on the analysis of the determination of the quality of management of personnel costs, a management function was identified, the quality of which needs to be improved. For this purpose, a complex measure is proposed to improve the process of motivating personnel for the rational use of funds, namely, the formation and development of organizational culture.

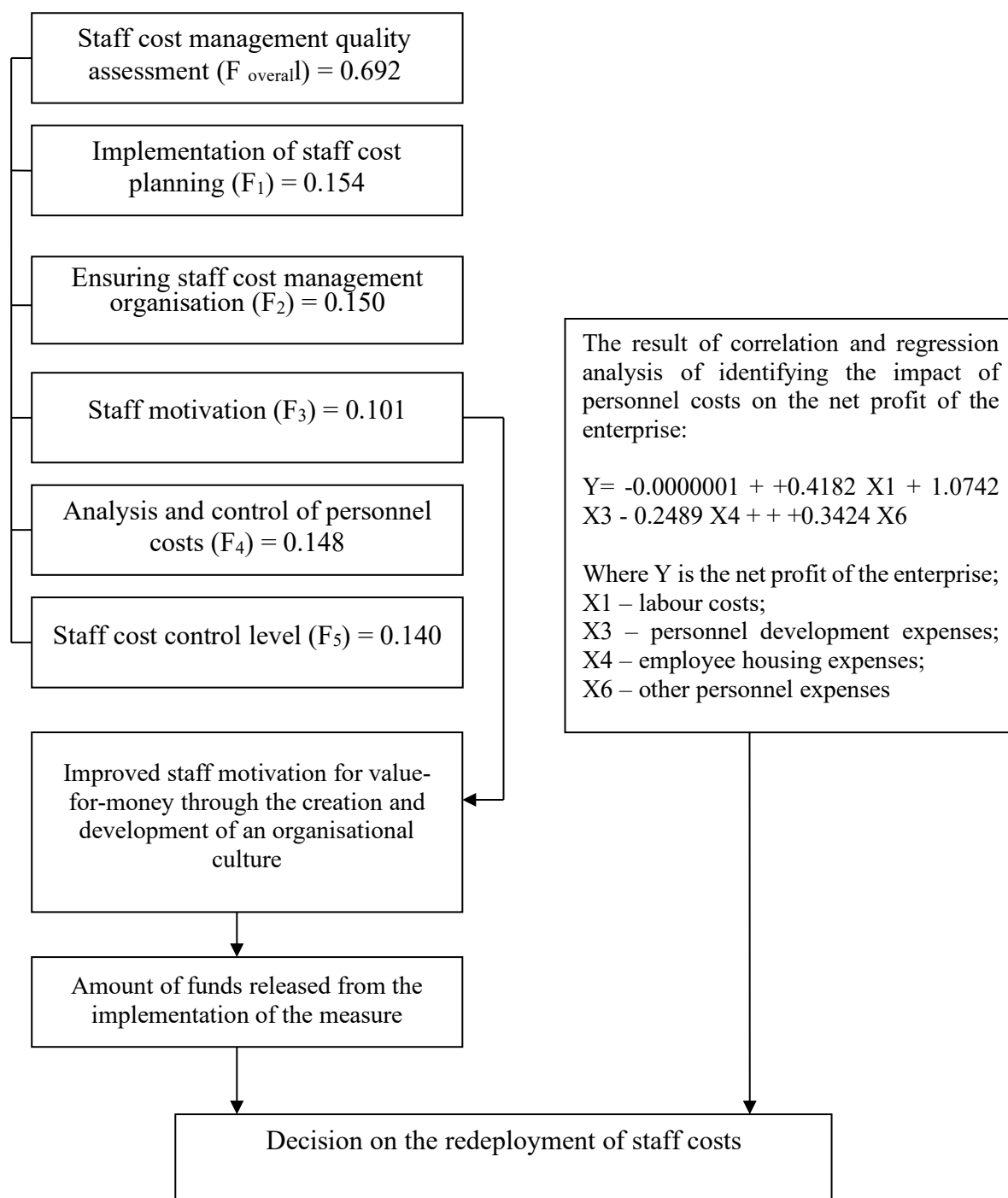


Figure 3.7 – Data for optimization of personnel management costs at PJSC “Yuzhcable Works”

As a result of the implementation of organizational culture, the management can release additional funds for personnel at the expense of:

- saving electricity by emphasizing slogans about frugality, using symbols and rituals;
- reduction of shortage as a result of increase in job satisfaction;
- reduction of costs for planning and marketing, selection and hiring of personnel by reducing staff turnover;
- rational use of materials for the purpose of waste-free production;
- creation of special “idea boxes” in order to ensure two-way communication between management and staff;
- promotion of self-development of personnel by heads of departments, as clear role models, etc.

In turn, the correlation-regression model, which was obtained in order to identify the relationship between the level of personnel costs and the net profit of the enterprise, allows us to draw the following conclusions: labor costs, personnel development and other costs, which include the costs of planning and marketing, selection, recruitment and evaluation of personnel and organization of working conditions have a positive effect on the net profit of the enterprise, and the costs of providing employees with housing have a negative effect.

It is important to note that the optimization base at each specific enterprise can be formed under the influence of a significant number of factors, and taking into account the goals set by the management. In order to demonstrate the universal nature of the optimization procedure, it is proposed to take UAH 1 as the starting base. released funds.

The final stage of optimization is redistribution of personnel costs using linear programming and calculation of the redistribution effect. The scheme of redistribution of personnel costs at PJSC “Yuzhcable Works” is presented in fig. 3.8.

First of all, in order to carry out optimization, the freed funds must be distributed among management subsystems, the costs of which affect the net profit of the enterprise. In addition to the basic restrictions, which are reduced

to the requirement of non-negative values and the general equation of the components as a whole, the data of the preparatory stage are taken into account, that is, it is important to allocate a certain amount of costs to those subsystems that need development.

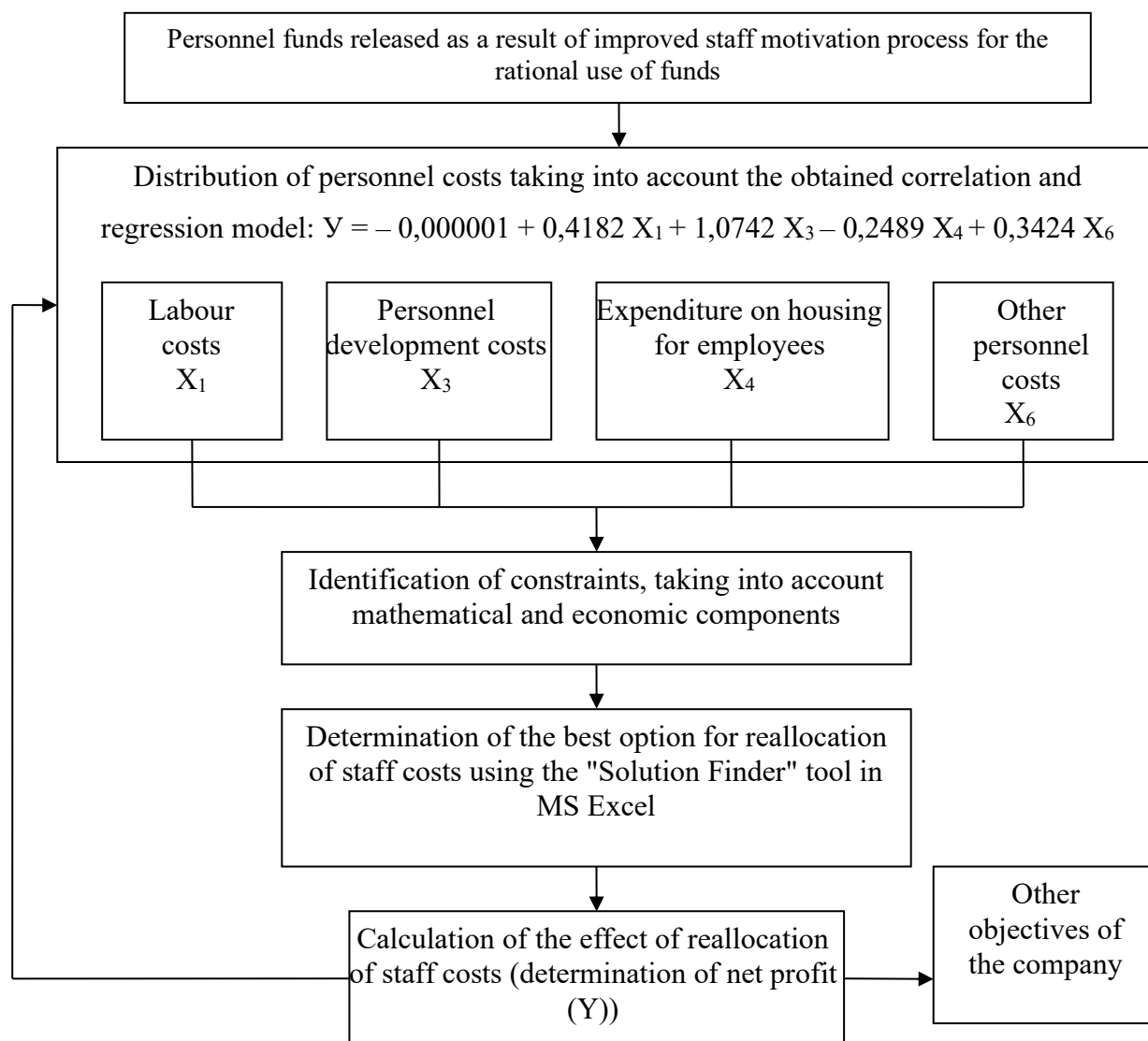


Figure 3.8 – Scheme of redistribution of personnel costs for PJSC “Yuzhcable Works”

The main task of optimization is the distribution of personnel costs, which will allow not only to increase the amount of net profit, which will ensure the efficiency of the enterprise, but will also contribute to the development of personnel management subsystems from the point of view of costs.

In this regard, taking into account the limitations, with the help of the solution search tool in MS “Excel”, the optimal option was determined, which takes into account not only the management’s desire for high performance indicators, but also the possibility of developing various subsystems of personnel cost management, which require improvement. In addition, it allows to present the most positive expectations of management regarding optimization.

In connection with the low value of the integral coefficient of the personnel development subsystem and the personnel selection and hiring, evaluation and accounting subsystems, the experts during the interview suggested using certain restrictions: the minimum development costs should be 30% of the released costs, and the minimum selection costs and recruitment, evaluation and accounting of personnel, which are related to other personnel costs – 45%.

The initial optimization model and constraint system have the following form:

$$Y = -0,000001 + 0,4182 X_1 + + 1,0742 X_3 - 0,2489 X_4 + + 0,3424 X_6 \rightarrow \max$$

$$\begin{cases} X_1, X_3, X_4, X_6 \geq 0 \\ X_1 + X_3 + X_4 + X_6 = 1 \\ X_3 \geq 0,3 \\ X_6 \geq 0,45 \end{cases}$$

The results of the application of linear programming at PJSC “Yuzhcable Works” are presented in the table 3.4.

Table 3.4 – Results of application of linear programming at PJSC “Yuzhcable Works”

Indicators	Results of redistribution of personnel costs
Labor costs ( $X_1$ )	0.00
Personnel development costs ( $X_3$ )	0.55
Expenses for providing employees with housing ( $X_4$ )	0.00
Expenses for cultural and household services ( $X_5$ )	0.00
Other personnel costs ( $X_6$ )	0.45
Net profit ( $Y$ )	0.75

The results of linear programming allow us to note that as a result of the optimization, the value of the effect of the released funds was obtained, which is equal to 0.75. That is, we get 75 kopecks from one hryvnia of released funds, distributed among specific types of personnel expenses at the exit. profit These funds can be used to solve optimization tasks in the new reporting period or for other needs of the enterprise.

If a comparison is made with an alternative option for the use of the received profit, that is, to direct these funds to the maintenance and development of the personnel management subsystem, which is unstable, it can be argued that the optimization process will be more effective. In addition, it will testify to the strategic direction of the enterprise regarding its comprehensive development.

Thus, the proposed procedure for optimizing personnel costs allows not only to create effective conditions for the organization of personnel management at the enterprise, but also to determine important criteria for optimization. The implementation of the optimization procedure allows: to determine the shortcomings of the personnel cost management system both by functions and by management subsystems; identify and implement possible ways to release funds through the implementation of measures; allocate personnel costs using an optimization problem using linear programming; calculate the effect of one hryvnia of released funds on personnel; give a general assessment of the optimization of personnel costs and draw conclusions regarding its impact on ensuring the efficiency of the enterprise.

### **Conclusions to section 3**

The research of the quality of management of personnel costs based on a qualitative approach made it possible to determine the areas of optimization of personnel costs and to develop a comprehensive measure to improve management processes with the aim of extracting additional funds. A feature of the use of qualitative assessment is the possibility not only to assess the quality of personnel cost

management, but also to monitor the level of implementation of the proposed measures in the monitoring mode.

The introduction of the developed process model of personnel cost management made it possible to state that the process of motivating personnel regarding the rational use of funds requires the greatest improvement at PJSC “Yuzhcable Works”. Based on this, organizational support was developed for PJSC “Yuzhcable Works” in the form of formation and development of organizational culture.

The procedure for optimizing personnel costs using linear programming made it possible to determine the most likely option for redistributing funds for personnel at the enterprise, which ensures not only high performance indicators, but also stable development of personnel management subsystems. The implementation of the proposed optimization procedure made it possible to justify the possible ways to release funds through the implementation of measures and to calculate the effect of one hryvnia of released funds on personnel.

## CONCLUSIONS

1. The essence of personnel management and organization of personnel management at the enterprise is summarized. The personnel of the enterprise is a set of employees of a certain organization, interacting and performing separate functions that correspond to the qualification level and professional knowledge of each person, in order to achieve the main goal of production. Based on the analysis of various approaches, the following classification of personnel management subsystems is proposed: payroll and social measures subsystem, personnel planning and marketing subsystem, personnel selection and recruitment subsystem, personnel evaluation and accounting subsystem, personnel development subsystem, personnel stimulation subsystem, social partnership subsystem and subsystem of the organization of working conditions.

An analysis of the internal and external factors influencing the organization of the enterprise's personnel management was carried out, which allows us to state that most of the process of human resources development at the enterprise should be aimed at creating an environment in which employees are encouraged to improve their abilities. The process of personnel management must be carried out in stages by meeting the needs of the employee.

2. The place of management of personnel costs in ensuring the organization of personnel management is determined. It is well-founded that one of the main tools for improving the efficiency of the enterprise is the development and implementation of an effective personnel cost management system. The relationship of the personnel cost management system with the modern concept of management is based on the fact that the personnel cost management functions on the basis of a combination of cost management and personnel management, which are the most important components of the enterprise management system.

3. The trends in the organization of personnel management at modern enterprises have been revealed. The study was conducted on the example of PJSC "Yuzhcable Works". PJSC "Yuzhcable Works" is the largest enterprise producing cable and

conductor products in Ukraine. The company offers more than 15 000 brands and sizes of products of its own production. The plant provides nuclear and thermal power plants, oil fields and coal mines, subways and new buildings, railways and urban transport with its products. A significant part of our products is exported to dozens of countries around the world.

The conducted analysis of the trends of the personnel management organization revealed the lack of effective personnel management at the enterprise, which is due to negative changes in the labor market, problems in the legislative framework, the unstable financial condition of the enterprise and its irrational personnel policy. In this regard, one of the most important tasks of personnel management is its assessment, which includes a detailed analysis of personnel management by management subsystems.

4. The evaluation of the personnel management system at PJSC “Yuzhcable Works” made it possible to conclude that in order to ensure the efficiency of the enterprise’s activities, it is necessary to implement a policy of increasing the share of costs for labor wages and professional development of personnel, that is, to develop the subsystem of labor wages and personnel development. In addition, reducing the share of costs for planning and marketing, adaptation and evaluation of personnel will not only increase the level of efficiency of the enterprise’s management, but also stabilize its personnel processes.

A process model of personnel cost management was developed using the BPwin modeling tool, which consists of the following processes: personnel cost planning; organization of personnel cost management; staff motivation regarding the rational use of funds; control and accounting of personnel costs; regulation of personnel costs. The presented functional processes are considered within each of the identified personnel management processes.

5. Proposals for improving the management of personnel costs have been developed. The study of the quality of management of personnel costs based on a qualitative approach made it possible to determine the areas of optimization of personnel costs and to develop a comprehensive measure to improve management

processes with the aim of extracting additional funds. A feature of the use of qualitative assessment is the possibility not only to assess the quality of personnel cost management, but also to monitor the level of implementation of the proposed measures in the monitoring mode.

Summarizing the results of the practical implementation of the process model of personnel cost management made it possible to state that the process of motivating personnel regarding the rational use of funds requires the greatest improvement at PJSC “Yuzhcable Works”. Based on this, organizational support was developed for PJSC “Yuzhcable Works” in the form of formation and development of organizational culture.

6. The directions of redistribution and optimization of personnel costs are substantiated. The procedure for optimizing personnel costs using linear programming made it possible to determine the most likely option for redistributing funds for personnel at the enterprise, which ensures not only high performance indicators, but also stable development of personnel management subsystems. The implementation of the proposed optimization procedure made it possible to justify the possible ways to release funds through the implementation of measures and to calculate the effect of one hryvnia of released funds on personnel.

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## **ANNEXES**

Table A.1 – List of indicators for the analysis of the financial and economic state of the enterprise

Group	Indicator	Characteristic	Norm
1. Profitability assessment indicators	Profitability of production	The indicator shows how much profit the company has from each hryvnia spent on the production and sale of products	magnification
	Return on equity	This indicator shows the profitability of the enterprise's capital and characterizes the efficiency of investment	magnification
	Return on assets	The indicator characterizes the efficiency of the use of the enterprise's assets and shows how much net profit is generated per unit of the enterprise's assets	magnification
2. Turnover indicators	Asset turnover	Determines the potential of the enterprise in relation to obtaining income with existing investments and capital structure	magnification
	Turnover of fixed assets	It is used to estimate the income received at the expense of capital invested in fixed assets	magnification
	Inventory turnover	It characterizes the speed of recovery of the enterprise's stocks	magnification
3. Indicators of liquidity and market stability	Coverage ratio	Shows the sufficiency of the enterprise's resources, which can be used to repay its current obligations	increment must be $K \geq 1$
	Absolute liquidity ratio	Shows what part of the enterprise's debts can be paid immediately	increment must be $K \geq 0,2$
	Coefficient of autonomy	It characterizes the share of own assets in the total amount of all assets of the enterprise used by it to carry out statutory activities	increment must be $K \geq 0,5$
4. Indicators of financial stability	Coefficient of financial dependence	The indicator shows the amount of the total value of the enterprise's property per UAH 1.00 own funds	decrease must be $\leq 0,5$
	The coefficient of maneuverability of own means	It characterizes the degree of mobility of the enterprise's own funds	increment must be $K > 0,1$
	The coefficient of the ratio of own and borrowed funds	It characterizes the degree of dependence of the enterprise on the funds raised	depends on the nature of economic activity
5. Performance indicators of the enterprise	Efficiency coefficient	The indicator characterizes the efficiency of the enterprise	magnification
	Fund return	Reflects the efficiency and intensity of use of fixed assets, characterizes the amount of revenue per unit of fixed assets	magnification
	The pace of sales of products	It characterizes the dynamics of increase or decrease in the volume of product sales in the reporting period compared to the previous one	magnification

Table B.1 – Indicators for the analysis of personnel cost management in the personnel management system

Indicator	Characteristic
Subsystem of the personnel management system of wages and social measures	
The rate of wage growth	Reflects the dynamics of salary changes
The ratio of growth rates of labor productivity and wages	In order to ensure the efficiency of the enterprise, the growth rate of labor productivity must be ahead of the growth rate of wages
Share of labor costs in total personnel costs	Reflects the place of wages in total personnel costs
Share of premium payments in total personnel costs	It characterizes the level of material incentives
The share of costs for payment of temporary incapacity at the expense of the enterprise's funds in total personnel costs	Reflects the general state of morbidity at the enterprise
Subsystem of the personnel management system of personnel planning and marketing	
The share of personnel planning and marketing costs in total personnel costs	It characterizes the level of development of planning and marketing at the enterprise
The enterprise's additional need for personnel	Shows the number of employees needed to create an optimal staffing structure
The share of expenses for the services of personnel agencies in the total expenses for personnel planning and marketing	It characterizes the dependence of enterprises on personnel agencies in personnel planning and marketing
Subsystem of the personnel management system of personnel selection and hiring	
Staff turnover rate	Displays the movement of personnel at the enterprise
Staff growth rate	Determines the dynamics of personnel change
The share of adaptation costs in total personnel costs	It characterizes the level of newly arrived workers
Subsystem of the personnel management system of personnel evaluation and accounting	
The cost of a specialist who has passed the assessment	Reflects the nature of personnel evaluation at the enterprise
Coefficient of informatization of document circulation	Reflects the specific weight of document circulation in electronic form
The share of certification costs in total personnel costs	It characterizes the degree of personnel evaluation at the enterprise
Subsystem of the personnel management system of personnel development	
Staff development rate	Reflects the level of development of personnel at the enterprise
Cost-effectiveness of staff development	It characterizes the payback of the enterprise's costs for personnel development
Share of costs for professional training of personnel in total costs for personnel	Reflects the need for professional training of personnel at the enterprise
The cost of training per employee	Determines the level of expenses of the enterprise for the training of one employee

Indicator	Characteristic
Share of employees with higher education	Reflects the number of employees with higher education
Share of employees engaged in self-education	It characterizes the level of self-development of personnel
Personnel incentive subsystem of the personnel management system	
The level of application of non-material methods of stimulation when working with personnel	Determines the activity of the enterprise in the use of intangible stimulation tools
The share of personnel incentive costs in total personnel costs	Reflects the level of application of stimulation at the enterprise
The share of costs for cultural and household services in total personnel costs	Determines the development of organizational culture at the enterprise
The ratio of growth rates of the wage fund and profit	It characterizes the balance between the economic interests of employees and the interests of the enterprise
Subsystem of social partnership of the personnel management system	
Coefficient of development of housing and communal services	Reflects the development of housing and communal services
The share of costs for providing employees with housing in the total costs for personnel	It characterizes the level of the enterprise's expenses for providing employees with housing
The level of social security of employees	Describes the enterprise's indirect payments policy
The share of expenses for social welfare for the absence of employees in the total expenses for personnel	Determines the level of social security of the enterprise's employees
Subsystem of organization of working conditions of the personnel management system	
The share of labor protection costs in total personnel costs	It reflects the active activity of the enterprise's team and its management to create safe working conditions
Cost factor for creating an internal information base	It characterizes the level of informatization of the enterprise
The level of workplace organization	Displays the general state of the workplace organization

Table B.2 – Formulas for calculating general indicators of personnel cost management assessment

Indicator	Characteristic
Profitability of personnel costs	Reflects the level of effectiveness and cost-effectiveness of personnel costs
Labor productivity of one worker	It characterizes the efficiency of the labor process
Labor productivity of one employee	
Labor intensity	Determines the cost of spent live labor for the production of a unit of production
Profitability of personnel	It characterizes the economic efficiency of personnel management

Table C.1 – Quantitative and qualitative composition of the expert group of PJSC “Yuzhcable Works”

Expert number	Position	Education
1.	technical director	higher
2.	commercial director	higher
3.	director of sales and marketing	higher
4.	production director	higher
5.	director of economics and finance	higher
6.	head of the material and technical supply department	higher
7.	deputy head of the sales and marketing department	higher
8.	chief accountant	higher
9.	chief engineer	higher
10.	head of human resources	higher

## Questionnaire for determining the quality of personnel cost management

Dear colleague! We ask you to take part in the questionnaire, the purpose of which is to obtain information about the state of personnel cost management at the enterprise. Your sincere and accurate answers will allow us to develop recommendations for a more complete use of reserves for optimizing staff costs. The research is conducted anonymously. Its results will be used in a generalized form.

Thank you in advance for participating in the survey!

When filling out the questionnaire in columns 3 and 5, determine the importance of the factor or criterion as a part of the whole, that is, in such a way that the sum of the parts equals the whole. To determine the degree of manifestation of the criterion, it is necessary to put a cross in the corresponding column. To do this, follow the following norms: full compliance with the requirements (yes) – 1.00; partial compliance with requirements (more yes than no) – 0.75; balanced compliance with requirements (both yes and no) – 0.50; partially negative compliance with requirements (more no than yes) – 0.25; complete non-compliance with the requirements (no) – 0.00.

№	Indicator	The weight of the factor	Meaningful criteria	Criterion weight	The degree of manifestation of the criterion				
					0.00	0.25	0.5	0.75	1.00
1.	Implementation of staff cost planning		Determination of tactical and strategic goals in relation to cost management						
			Detailing and identification of personnel management processes						
			Rational distribution of personnel costs according to a preliminary analysis of influencing factors						
			Regular formation of a justified budget for personnel costs						
2.	Ensuring the organization of personnel costs		A clear and transparent mechanism for the formation and organization of personnel costs						
			Variability of content and management methods						
			Ordering of places of occurrence of costs and centers of responsibility						

№	Indicator	The weight of the factor	Meaningful criteria	Criterion weight	The degree of manifestation of the criterion				
					0.00	0.25	0.5	0.75	1.00
			Correspondence of the existing number of functional subdivisions is required						
3.	Availability of staff motivation		Regular analysis of enterprise and personnel needs						
			Creation of conditions for professional development of personnel						
			Use of motivational tools						
			Support and development of organizational culture						
4.	Analysis and control of personnel costs		The availability of a system of informative indicators regarding the assessment of personnel costs						
			Use of a statistical form of personnel cost accounting						
			Adherence to the personnel budget						
			Regular evaluation of the effectiveness of personnel costs						
5.	The level of regulation of personnel costs		Determination of ways to optimize personnel costs						
			Use of reserves to reduce personnel costs						
			Adjustment and clarification of the level of personnel costs						
			Creating optimal conditions to ensure the necessary regulation of costs						

## Results of correlation and regression analysis

## CONCLUSION

<i>Regression statistics</i>	
Multiple R	0.9111062
R-squared	0.8301145
Normalised R-squared	0.8081938
Standard error	0.437959
Observations	36

## Analysis of variance

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	29.05429	7.263573	37.86896	1.62E-11
Residual	31	5.946052	0.191808		
Total	35	35.00035			

	<i>Coefficients</i>	<i>Standard error</i>	<i>t-statistics</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Y-intersection	0.0000	0.072993	-0.0004	0.99968	-0.1489	0.148841	-0.	0.148841
X1	0.4182	0.184726	2.264063	0.030714	0.04148	0.794983	0.04148	0.794983
X3	1.0742	0.106236	10.11175	2.46E-11	0.857563	1.290903	0.857563	1.290903
X4	-0.2489	0.128851	-1.93174	0.062576	-0.5117	0.013886	-0.5117	0.013886
X6	0.3424	0.151276	2.263433	0.030757	0.033874	0.650931	0.033874	0.650931

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# CERTIFICATE

***Cheng HAOLING***

participated at the International Scientific and Practical  
Internet Conference

**«PROBLEMS AND PROSPECTS OF ENSURING  
SUSTAINABLE SOCIO-ECONOMIC  
DEVELOPMENT OF TERRITORIES»**

The topic of the speech at the conference:

*«Modern approaches to organising HR  
management: challenges and opportunities»*

Deputy Head  
of the Scientific Committee  
of the Conference,  
D.Sc. (Economics), Professor

Volodymyr RODCHENKO

October 27, 2023