

# Improvement of the Salary Organization on the Basis of the Personnel Professional-Qualification Level Evaluation Method

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**Abstract.** It is justified the use of a generic integral indicator and its graphical interpretation for the enterprise staff incentives system establishing, which makes it possible to determine the influence of group indicators as well as to establish the functional links between indicators. The integral index of personnel incentives efficiency and influence factors are determined. The most important quantitative factors that affect the high efficiency of staff incentives are defined. The relevance between the results of enterprises and indicators of the effectiveness of staff incentives is determined. The educational and professional quality of the staff is determined by means of a score. The employee motivational profile diagram is constructed. The staff assessment system has been developed to improve staff skills. The based on a competent and attributive approach review of grades and categories for staff is proposed.

## 1 Introduction

In today's economy, the main condition for the competitiveness of enterprises is the productive activity of the staff. Staff is a priority strategic resource of an enterprise and a key factor in its development and competitiveness.

The assessment of the staff performance at any enterprise or organization is a process of examining the quality of the workforce, identifying the strengths and weaknesses of the organization's staff, and it also becomes the basis for the improvement of the individual working capacity of the worker, the improvement of his qualification, and sometimes even the requalification.

Competitive growth in the modern economic conditions of Ukraine requires the efficient assessment of personnel at enterprises. High-quality professional activity of employees affects the successful activities of enterprises and the results of their activities. Therefore, there is a need to use the latest technologies for personnel management and assessment of its activities.

It becomes necessary to establish a qualitative method of staff assessment to determine and improve the effectiveness of their activities, the aim of which is not only the study of the employees skills' formation, using, developing as well as the defining a concrete result according to certain criteria, but also the contributing to the development of certain measures to improve staff reproduction.

Thus, the trends of the economic situation development in Ukraine and the domestic enterprises activity current realities impel the search for the requirements of the present approaches to the assessment of the personnel quality. This is the reason for the relevance of the research direction.

## 2 Actual scientific researches and issues analysis and the research objective

Personnel management is a «set of mechanisms, principles, forms and methods of interaction in the formation, development and operation of the enterprise personnel, which is implemented as a number of interrelated areas and activities» [1]. Ukrainian scientists V. Danyliuk, V. Petyuk and S. Tsynbalyuk believe that personnel management is «the part of the personnel management functional sphere as the main mechanism of the organization» [2, p. 43]. T. Alexandrov in his work determines the personnel management as the set of influences on the organizational behavior of people aimed to the activating of the untapped professional and spiritual opportunities to solve the tasks of an enterprise [3].

The personnel management is a component of the enterprise management system, management of strategic, priority, unique resources. It has specific

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features as a management system. Firstly, it is implemented through functions and subfunctions, and this set is constantly changing depending on social relations. So, recently, more and more scientists are paying attention to the study of knowledge management, strategic staff development on account of the information society development.

Secondly, the management system should cover all areas of HR activities (Human Resource) on the basis of science-based personnel management strategy. Several studies can be distinguished among the studies in this area of scientific knowledge. So, O. Sardak in the work [4, p. 135] offers the following elements of the personnel management system structure:

- subsystem of HR-landmarks and planning;
- subsystem for ensuring and organizing the work of staff;
- personnel marketing subsystem;
- subsystem of personnel formation and use;
- subsystem of development and activation of HR-potential.

L. Poshelyuzhna considers the following subsystems of personnel management that take part in the activities of domestic enterprises: analysis and planning of personnel; selection and hiring of staff; staff evaluation; organization of staff training and advanced training; certification and staff rotation; staff motivation; accounting of enterprise employees; organization of labor relations at the enterprise; creation of working conditions; social development and social partnership; legal and information support of the personnel management process [5, p. 127].

T. Korsakova [6] identifies the subsystems of the enterprise personnel management system: analysis and planning of personnel; hiring and accounting of personnel; motivation; assessments; personnel development management; creation of working conditions; information support of the personnel management system; development of organizational management structure; legal support.

G. Dudukalo examines the functioning of the personnel management system, which provides for the implementation of the following functions [7]: analysis and planning of personnel; staff placement; certification and evaluation; organization of labor relations; staff motivation; creation of working conditions; information support; staff development and training.

Of course, there are scientists who study certain functions of personnel management. For example, when constructing a scheme of organizational and economic mechanism for managing the development of enterprise personnel, N. Markova includes the following components in the managed subsystem: career guidance and adaptation, personnel planning, personnel evaluation, career development, staff motivation, professional training, social development [8, p. 201].

All components of the management system, which are considered by scientists, depend on the choice of the scientific approach: functional, component, complex, attributive, processing, which determines the composition of the personnel management system.

The works of many domestic and foreign scientists, in particular Balabanova L.V., Grishnova O.A., Pakulin S., Shlyaga O.V. and others, are devoted to a study of the forms and methods of personnel assessment. As a result of these studies, various approaches, procedures and methods are developed for the organization and conduct of staff assessment. Foreign scientists such as Douglas Macgregor, I. Ansoff, M. Mescon, etc., are also studying the problems of staff assessment. The results of the studies are the theoretical and methodological bases of staff assessment. However, there is a need to define the modern features of staff quality assessment methods when applying them in the conditions of the enterprises.

The goal of the research is to identify current features of staff assessment. In order to achieve the goal, the following objectives were solved: Staff incentives were evaluated by means of an integral indicator, taking into account the material, social, professional and organizational groups of indicators; Staff qualifications were assessed; The characteristics of its introduction in domestic enterprises were analyzed; Grades and categories for the staff were reviewed on the basis of competent and attribute-based approaches.

### **3 Formation of a system for evaluating staff incentives**

The modern personnel management system is based on the fact that people are the most important economic resource of the enterprise, and its source of income, competitiveness and prosperity [9]. The achievement of objectives in the process of enterprise personnel activities determines the success of the enterprise and the achievement of high results. After all, ensuring the desire of employees to perform their duties effectively is one of the important tasks of management, and it is necessary to form and develop a system of incentives that can maximize the effectiveness of enterprise management.

In order to improve competitiveness and productivity, it is necessary to develop an incentive mechanism that precisely combines and complements the means of material and non-material incentives, promote the formation of certain stereotypes in the employee about the usefulness of the chosen activity, its prospects and the possibility of obtaining advantages for himself and for society as a whole [10]. Wherein it should be noted that job incentives are provided at two levels: the first is the stimulation of each individual, and the second is the stimulation of the entire workforce as a means of spreading synergistic effect. The manager should identify incentives to increase productivity at both levels. The staff manager should establish an effective incentive system as a part of the staff management system [11, 20-25]. Thus, the stimulation of work involves the creation of conditions in which active work becomes a necessary condition for satisfying the important and socially determined needs of individuals and for forming their motivation for

work. The incentive is an integral function of the management of the enterprise's personnel, it is realized effectively only when the condition of development of all other functions is fulfilled. The establishing a staff incentive assessment system that is balanced in terms of accuracy, objectivity, relevance, simplicity, convenience and intelligibility is a complex multidimensional process [12]. Evaluation is an integral part of the staff management system, the process of determining the staff members performance effectiveness and the achievement of organizational objectives, or the process of assessing the quality of position staff (abilities, skills, motives) requirements or job [13]. Staff assessment has many objectives. The most common is the classification developed by Douglas Mac Gregor, a well-known human resources development expert, which takes into account: administrative, which consists in making personnel decisions on an objective and regular basis - Staff placement, movement and remuneration; Informative - providing managers with the necessary data on the number and quality of staff; Motivational - orientation of employees towards improvement of work in the direction needed for the organization [14].

Judging from the opinion of the analyst, the establishment of economic indicators system for calculating an integral measure of staff incentives is an important stage for the accuracy of the results obtained and is a condition for the operation of the enterprise. The based on a competent approach formation of an expert group taking into account the rank of the posts on makes it possible to form a group, in accordance with the job responsibilities as well as to build a system of personnel assessment in accordance with the objectives of the enterprises. The establishment of a staff incentive system begins with the implementation of the allocation of indicators to groups [15]: subsistence needs; social needs; recognition needs; self-realization needs. Subsistence needs are represented by material stimulation, social needs by social stimulation, recognition needs by professional stimulation, self-realization needs by organizational. Thus, according to certain expert estimates, four groups were formed according to the indicators of motivation of the employees: material, professional, social, organizational. In order to form a system of incentives for enterprise personnel, we propose the use of a composite integral indicator, which is the set of integrated group indicators of the corresponding incentive means [16]. It was calculated according to the formula:

$$I_{stimul} = \sum_{i=1}^4 \beta_i \times I_{stimuli} \quad (1)$$

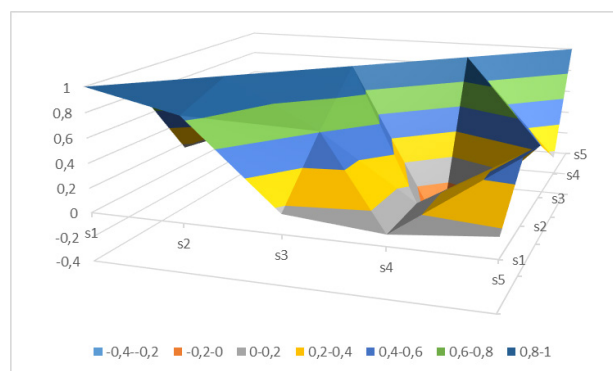
where  $\beta_i$  – coefficient of influence on the value of group integral measures of staff incentives;  $I_{stimuli}$  – group integrated staff stimulation measures;  $i$  – the number of means of staff incentives.

The integrated indicator of staff incentive assessment allows to determine the impact of group

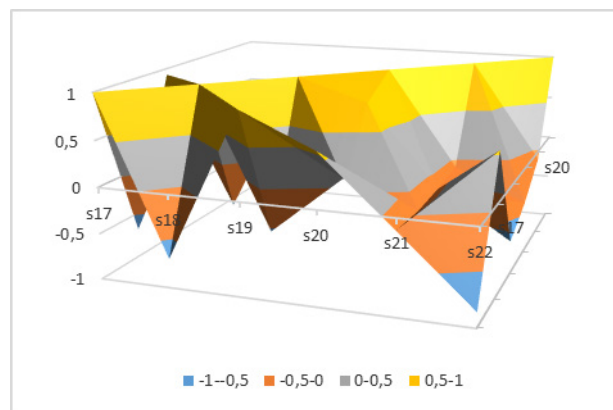
indicators of incentives on the integrated indicator, establishes functional links between indicators. The level of functional links between staff incentive indicators can be divided into ranges of values: high inverse connection  $\in [-1; -0,5]$ , middle inverse connection  $\in (-0,5; 0)$ , no connection – 0, middle direct connection  $\in (0; 0,5]$ , high direct connection  $\in (0,5; 1]$ . Graphically, the level of functional connection between the indicators of staff stimulation in three-dimensional space can be traced from the height (at direct high connection) to the decline (at inverse high connection).

The industrial enterprises of Kryvyi Rih were selected for the research: PJSC «Kryvyi Rih Central Ore Repair Plant» (PJSC «KCRZ»), PJSC «Kryvyi Rih Iron Ore Plant» (PJSC «KZRK»), PJSC «Kryvyi Rih Mining Equipment Plant» (PJSC «KZGO»).

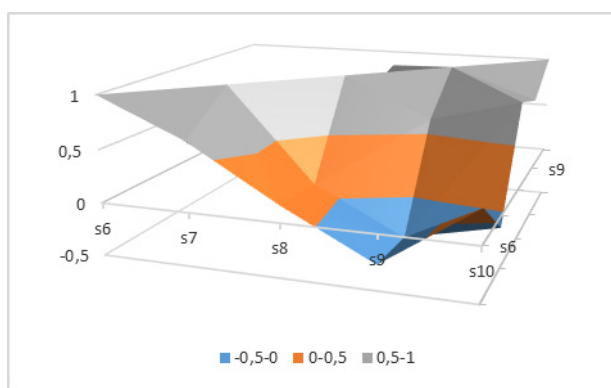
A graphical interpretation of the integral measure of staff incentives on the example of the studied enterprises (fig. 1, fig. 2, fig. 3, fig. 4).



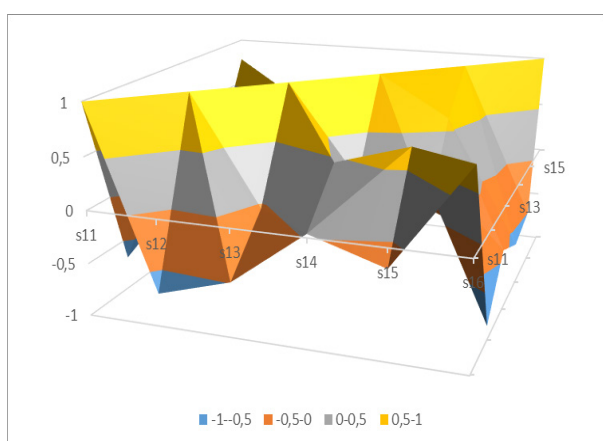
**Fig. 1.** A Graphical interpretation of the group integrated indicator of personnel incentive assessment «Material Incentive» ( $I_{mater}$ ) on the example of PJSC «KZRK»



**Fig. 2.** A Graphical interpretation of the group integrated indicator of personnel incentive assessment «Organizational Incentive» ( $I_{org}$ ) on the example of PJSC «KZRK»



**Fig. 3.** A Graphical interpretation of the group integrated indicator of personnel incentive assessment «Professional Incentive» ( $I_{prof}$ ) on the example of PJSC «KZRK»



**Fig. 4.** A Graphical interpretation of the group integrated indicator of personnel incentive assessment «Social Incentive» ( $I_{soc}$ ) on the example of PJSC «KZGO»

In the table 1 presents the value of the integrated indicator of staff incentives evaluation for three enterprises for 2016-2020.

**Table 1** The value of the integrated indicator of staff incentives evaluation for enterprises for 2016-2020.

Enterprise	Years				
	2016	2017	2018	2019	2020
PJSC «KCRZ»	0,37	0,35	0,33	0,32	0,3
PJSC «KZRK»	0,61	0,58	0,56	0,51	0,52
PJSC «KZGO»	0,43	0,46	0,44	0,46	0,45

Source: formed by the author on the basis of his own research

Taking into account the above results, we note that the most important factors influencing the efficiency high level providing of staff incentives are the indicators of material incentives [17].

Based on the values of the integrated indicator, it is determined that the indicator of evaluation of staff incentives of PJSC «KZRK» is the highest (average value  $I_{stimul} = 0.556$ ), which can not be accompanied by a significant share of material incentives to increase staff productivity. The lowest level is observed at PJSC «KCRZ» (average value  $I_{stimul} = 0.334$ ). This

value of the indicator is due to the low level of productivity, poor system of information and motivational support for the effectiveness of staff incentives. None of the three researched enterprises was included in the group with a high level of personnel incentives, that is, the incentives used at the enterprises are not effective, therefore, it is necessary to adjust the personnel incentive mechanism.

The integrated indicator use makes it possible to increase the objectivity of the incentives assessment, that directly affects the efficiency of staff performance.

It is proposed to use the method of assessing the professional qualification level of staff on the basis of a competency-based approach in order to improve the organization of remuneration as a means of material incentives. Herewith, it is necessary to select such indicators as: qualification, level of education, work experience in the profession, mastering additional professions and determine their weight on the basis of expert analysis. Forming an expert group on the basis of a competency-based approach, taking into account the ranks of positions, allows you to form a group that, in accordance with job responsibilities, has the opportunity to build a system of personnel assessment in accordance with the objectives of enterprises.

Specific requirements for members of the expert group leave their mark on the principles of their selection. To determine the competence of experts, it is necessary to assess the following qualities: competence, creativity, attitude to expertise, conformism, analytical, collectivism, self-criticism, reliability [18].

#### 4 Assessment of educational and professional quality of staff

The improved quantitative assessment of the professional and qualification level of the personnel for review of categories differs in simplicity, calculation – differs in universality and it is available for necessary information base at the enterprises of branch.

We use a method based on scoring assessment, which allows you to assess the qualification level of staff to assess the educational and professional quality of staff.

Construction of the diagram of the employee motivational profile allows to build a system of the personnel qualification assessment for the purpose of qualification increase and professional level for needs of the enterprise in modern conditions of external environment turbulent changes.

In our view, it is also necessary to propose a review of the grades and categories for staff based on a competent and attributive approach. The evaluation of the personnel according to this method allows to compare the existing competences of the employees with the competences that the enterprise needs [19]. The essence of this approach is to stimulate the desired economic behavior of each employee to achieve the goals of the enterprise.

But this approach can only be applied if the capacity of the enterprise’s personnel is developed through an



incentive mechanism. All this requires constant monitoring of the impact of the relevant organizational stimulation measures on the social and psychological climate of the collective and the productivity. The assessment of a worker social and professional quality makes it possible to quantify, by means of scores, the essential characteristics of both the worker and the work he performs.

We separate the four components of the socio-professional quality of the company's staff: qualification, education, length of service in the profession, age. These components create the necessary prerequisites for the performance of the respective functional duties. Qualifications, experience, education, age are selected to assess the quality of staff – and these components have an undeniable advantage over other personal characteristics (attributes) of the person because they can be quantified and documented in the operational and statistical reporting of the enterprise. Age is a demographic attribute as a natural quality of the person; the level of qualification, work experience at the enterprise, level of education are acquired qualities of the employees. The employer can influence through an effective system of incentives.

Let's consider each component of the socio-professional quality of staff. The information base is the documents of staff management services.

The main indicator that directly affects the quality of work performed is qualification.

To assess the qualification, we propose to use an integrated indicator that includes the following components:

existing tariff class, category –  $T_{tar.cl.}$ ;

mastering additional professions (for each - 1.4 points) –  $T_{add}$ ;

mastering related professions (for every 1.2 points) –  $T_{rel.}$ ;

creative potential, measured by the amount of data for the last five years of innovation proposals (1.1 points) –  $T_{cr.pot.}$ .

Assessment of staff qualifications ( $A_{qua.}$ ) is carried out according to the formula

$$A_{qua} = T_{tar.cl.} + 1,4 \times T_{add} + 1,2 \times T_{rel.} + 1,1 \times T_{cr.pot.} \quad (2)$$

Other components of socio-professional quality of staff (work experience at the enterprise, education and age) are assessed by experts on a scale from 0 to 10 - low -  $0 \div 4$ , medium -  $4 \div 7$ , high -  $7 \div 10$ .

According to the length of service at the enterprise, all employees are divided into four groups, each of which corresponds to a certain score (Table 2).

**Table 2.** Staff groups by length of service at the enterprise ( $A_{length}$ ) and its grade points

Staff groups	Grade points
With less than 3 years of work experience	3,0
With more than 3 years of work experience, but less than 8 years	6,0
With more than 8 years of work experience, but less than 15 years	8,0
With more than 15 years of work experience	10,0

Source: calculated by the authors

According to the level of education, employees are divided into four groups, then the assessment of the potential of the company's staff is carried out in accordance with table 3.

**Table 3** Staff groups by level of education ( $A_{edu}$ ) and its grade points

Staff groups	Grade points
With general secondary education	4,0
With the level of education "Bachelor, Junior Bachelor"	6,0
With the level of education "Master (Specialist)"	9,0
With a scientific degree	10,0

Source: calculated by the authors

By age, all employees are divided into six groups, each of which corresponds to a certain score (Table 4).

**Table 4.** Staff groups by age ( $A_{age}$ ) and its grade points

Staff groups	Grade points
Over 18 years old, but less than 24 years old	4,0
Over 24 years old, but less than 34 years old	7,0
Over 35 years old, but less than 49 years old	10,0
Over 50 years old, but less than 55 years old	9,0
Over 55 years old, but less than 59 years old	8,0
Over 60 years old	5,0

Source: calculated by the authors

At the same time, the proportion of the components of the indicators of the socio-professional quality of staff, taking into account expert analysis, is equal: qualification ( $Q_{qua.}$ ) – 0,4; work experience at the enterprise ( $Q_{w.exp.}$ ) – 0,28; education ( $Q_{edu}$ ) – 0,22; age ( $Q_{age.}$ ) – 0,1.

After calculations of indicators of components of socio-professional quality of the personnel it is possible to calculate the level of socio-professional quality on the enterprise for the average worker. ( $\bar{Q}_{soc-prof}$ ):

$$\bar{Q}_{soc-prof} = \frac{\left(\sum_{i=1}^n Q_{quai} \times A_{gri}\right) \times K_j}{n} + \frac{\left(\sum_{i=1}^n Q_{exp i} \times A_{gri}\right) \times K_j}{n} + \frac{\left(\sum_{i=1}^n Q_{ed i} \times A_{gri}\right) \times K_j}{n} + \frac{\left(\sum_{i=1}^n Q_{ag i} \times A_{gri}\right) \times K_j}{n} \quad (3)$$

where  $\bar{Q}_{soc-prof}$  – the level of socio-professional quality for the average employee of the enterprise;  $Q_{qua.}$  – indicators of the

level of qualification of staff with a total number;  $Q_{exp}$  – indicators of staff work experience with a total number;  $Q_{edu}$  – indicators of staff education with a total number;  $Q_{age}$  – indicators of the age of the staff with a total number;  $A_{gr}$  – assessment of gradations of indicators of socio-professional quality of staff;  $K_j$  – the coefficient of weight of component of socio-professional quality of staff;  $i$  – gradation of indicators;  $j$  – component of socio-professional quality of staff;  $n$  – number of employees in this category.

*Assessment of the employee socio-professional quality factors by experts.* The weight coefficient of the staff socio-professional quality components ( $K_j$ ), which is determined by experts, and the calculation are presented in table 4.

**Table 4.** Assessment of the weight coefficient of the employee socio-professional quality components

Experts (m)	Components of socio-professional quality of the employee (n)				
	$Q_{qua}$	$Q_{exp}$	$Q_{edu}$	$Q_{age}$	$\Sigma$
1	0,4	0,3	0,2	0,1	1
2	0,3	0,3	0,3	0,1	1
3	0,4	0,4	0,1	0,1	1
4	0,3	0,3	0,2	0,2	1
5	0,3	0,3	0,2	0,2	1
6	0,4	0,3	0,2	0,1	1
7	0,4	0,2	0,2	0,2	1
8	0,5	0,2	0,2	0,1	1
9	0,5	0,2	0,1	0,2	1
10	0,4	0,3	0,2	0,1	1
The sum of the ranks obtained for each factor, $\sum x_i$	3,9	2,8	1,9	1,4	8,6
Deviation from the average sum of ranks, $x - \bar{x}$	3,04	1,94	1,04	1,4	7,42
Quadratic deviation of the sum of ranks, $(x - \bar{x})^2$	29,37	3,76	1,08	34,21	68,45
Average assessment gradation by factor, $A_{gr}$	0,39	0,28	0,19	0,14	1

Source: calculated by the authors

Notes:  $Q_{qua}$  – indicators of the level of qualification of staff with a total number;  
 $Q_{exp}$  – indicators of staff work experience with a total number;  
 $Q_{edu}$  – indicators of staff education with a total number;  
 $Q_{age}$  – indicators of the age of the staff with a total number;  
 $A_{gr}$  – assessment of gradations of indicators of socio-professional quality of staff;

$i$  – gradation of indicators.

The Kendall concordance coefficient was calculated using MS Excell,  $W = 0,681$  – the consistency of experts is strong.

Thus, the range of changes in the level of socio-professional quality of the indicator for the considered enterprises  $\in [0 \div 10,0]$ . Thus, the indicator value of the staff socio-professional quality is within the range  $0 \div 4$  – low (zone C), at  $4 \div 7$  – middle (zone B), at  $7 \div 10,0$  – high (zone A).

## 5 Assessment of socio-professional quality of employees

We will make calculations according to the proposed improved method of assessment of the socio-professional quality of the staff of PJSC «Kryvoriz'kyy zalizorudnyy kombinat» (PJSC «KZRK»). The assessment is accomplished for more than 200 workers according to formula 1, then the results are summarized (table 5).

**Table 5** Assessment of the qualifications of the personnel of the division at PJSC «KZRK»

Employees	Components of qualifications and their grade points				Overall assessment qualifications
	Tariff grade	mastering additional professions	Mastering related professions	Creative potential	
1	4	0	0	0	4
2	6	1,4	1,2	0	8,6
3	3	0	0	0	3
4	5	0	1,2	1,1	7,3
5	6	2,8	1,2	0	10
6	4	0	0	0	4
7	3	0	0	0	3
8	6	1,4	0	1,1	8,5
9	4	0	0	0	4
19	3	0	0	0	3
11	5	0	0	1,1	6,1
12	5	0	0	0	5

Source: calculated by the authors

Employees received the highest grade points of qualification and mastery of additional professions. Thus, the highest assessment of qualification of the employee number two, who has the highest tariff category, has mastered an additional specialty and has a related profession and the employee number eight, who has the highest tariff category, has mastered an additional profession and has developed creative potential. Assessment of socio-professional quality of employees of the unit was carried out according to formula 2 (Table 6).

**Table 6.** Assessment of socio-professional quality of employees of the unit at PJSC «KZRK»

Employees	Components of socio-professional quality of the employee						Overall grade		
	Qualification		Work experience at the enterprise		Education			Age	
	Grade points	the weighting coefficient of the component	grade points	the weighting coefficient of the component	grade points	the weighting coefficient of the component		grade points	The weighting coefficient of the component
1	4	0,4	6	0,28	9	0,22	7	0,1	5,96
2	8,6		10		6		9		8,46
3	3		3		6		7		4,06
4	7,3		8,0		6		9		7,38
5	10		10		6		5		8,62
6	4		6		9		5		5,76
7	3		6		9		10		5,86
8	8,5		10		9		8		8,98
9	4		8		6		7		5,86
10	3		3		6		10		4,36
11	6,1		10		6		5		7,06
12	5		8		9		8		7,02

Source: author's development

The following conclusions can be drawn from the results of assessing the socio-professional quality of employees.

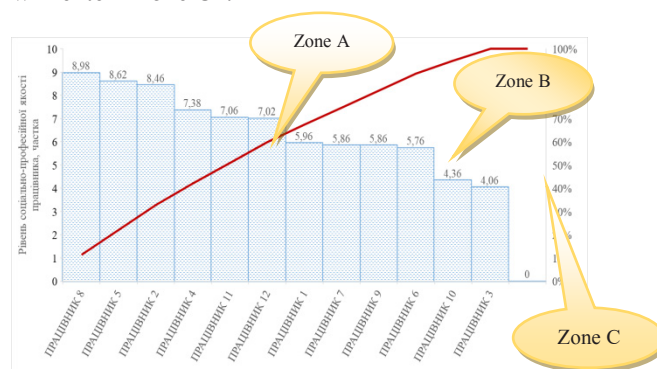
The employees numbered 2, 4, 5, 8, 11, 12 are included in the zone of high assessment of social-professional quality [7=10,0]

All other employees are included in the zone of average value of the indicator.

There are no employees with a low value of socio-professional quality in the research unit. Based on the results of the assessment, a Pareto diagram of the socio-professional qualities of the employees of the structural unit at PJSC «KZRK» was constructed on fig.1. The Pareto diagram clearly shows the distribution of values of indicators of socio-professional qualities of the employee of the structural unit at PJSC «KZRK» in descending order of their frequency.

The line of total values of the calculated indicator on the additional axis reflects the percentage of the accumulated amount of the result. «Zone A» entered 6 employees, for whom it is desirable to apply incentive methods for further professional development. Thus, employees numbered 5, 4, 11, 12 are recommended to increase the components of qualifications, in particular, to master additional and related professions and develop their creative potential. This is especially true for employees numbered 5 and 11, who have more than 15

years of work experience at the enterprise and can use the accumulated production experience to provide, for example, innovation proposals. 6 employees entered Zone «B». Staff managers need to increase the impact of incentives on the components of the socio-professional quality of these employees. The third and tenth employees have critical value of indicator of socio-professional quality, accordingly: 4.06 and 4.36, due to short work experience at the enterprise (less than 3 years), low level of qualification and level of education «Bachelor, Junior Bachelor». If the influence of the appropriate means of stimulation is not applied, this indicator may become critical, and these workers will enter «Zone C».



**Fig. 5.** Pareto diagram of socio-professional qualities of the employee of the structural unit at PJSC «KZRK»

Source: author's development

## 6 Discussion of research results

It should be noted that the composite integral indicator in the formation of the incentives system for the employees of enterprises, is a set of group integrated indicators of the appropriate means of incentives: material, professional, social, organizational.

It is possible to determine the effectiveness of the incentive mechanism based on the integral indicator calculation of staff incentive assessment.

The use of an integral indicator makes it possible to increase the objectivity of the of incentive measures assessment, what directly affects the efficiency of staff.

It is established that one of the measures of the improved economic mechanism of stimulation is the revision of the personnel qualification assessment on the base of competence and attributive approaches.

Four elements are identified in assessing graduation and the weight of socio-professional quality indicators, namely: qualifications, education work experience by profession and age. A four-pronged system is used for the assessment of qualifications: tariff grade, mastering additional professions by the worker, mastering related professions by the worker and creative potential. The proposed quantitative assessment of staff development is characterized by the simplicity, calculating - universality and availability of the necessary existing statistics of the personnel department in all communications enterprises without the involvement of a specially trained worker.

## Conclusions

It is the formation of an effective staff incentive system is based on the proposed tools, namely the calculation of the integral indicator of staff incentives, construction of motivators and demotivators maps, motivation profile, assessment of socio-professional quality of the employee on the basis of integral indicators, the construction of regression models. That allows to identify problems related to the development of personnel of enterprises and allows to make appropriate management decisions for the introduction of motivational means to increase the quality and productivity of work.

The introduction of an improved economic mechanism of personnel incentives in enterprises has led to the formation of an updated incentive system and corresponding changes in Collective Agreements, the building a system of private pension provision, staff qualification assessment system based on the socio-professional quality of employees, and the building a model of incentives for productivity of work. It is the construction of a diagram of the motivational profile of the employee that allows to build a system of assessment of staff skills as well as to improve the qualification and professional level for the needs of the enterprise in today's turbulent environment. According to the results of employees socio-professional quality assessment of the unit at PJSC «KZRK», half of the employees entered the zone of high assessment of the socio-professional quality. All other employees entered the middle quality zone. There are no employees in the study unit who have a low value of the socio-professional quality indicator. Based on the results of the assessment, a Pareto diagram of socio-professional qualities of employees of the structural unit at PJSC «KZRK» was constructed.

## References

1. Menshikova, M. (2008) On the issue of personnel management as a system and integrated subsystem of organization. Kursk: Kursk state. University. URL: <http://scientific-notes.ru/pdf>.
2. Danilyuk, V., Petyuk, V., Tsinbalyuk, S. Personnel management: teaching method. manual. K.: KNEU, 2006. 398 c.
3. Alexandrova, T. (2005) Personnel management: guidelines for practical training. O.: GOU OSU. 63 p.
4. Sardak, O. (2011) The position of personnel marketing in the management of employees of enterprises. *Economic analysis*. Vip. **8**, Part 2. P. 303-307.
5. Poshelyuzhna, L. (2010) Peculiarities of modern personnel management in domestic enterprises. URL: [http://www.nbu.gov.ua/portal/Soc\\_Gum/inek/2010\\_1/163.pdf](http://www.nbu.gov.ua/portal/Soc_Gum/inek/2010_1/163.pdf)
6. Korsakov, D. (2011) Organizational diagnostics of the personnel management system of the enterprise. *Library Bulletin*. **4**. - URL : [http://www.nbu.gov.ua/portal/Soc\\_Gum/Ecoroz/2011\\_3/e113kors.pdf](http://www.nbu.gov.ua/portal/Soc_Gum/Ecoroz/2011_3/e113kors.pdf).
7. Dudukalo, G. (2012) Organizational and economic preconditions for the development of the machine-building industry in terms of structural transformation. Collection of scientific works of Cherkasy State Technological University. Series: economic sciences. CHI. - P. 45-51.
8. Markova, N. (2012) Formation of organizational and economic mechanism of personnel development management. *Business Inform*. **6**. C. 200–202.
9. Korytko, S. (2012) Formation of the system of labor motivation at the enterprise. *Student Scientific Bulletin "Manager INFO"*. URL: <http://kerivnyk.info/2012/05/korytko.html>
10. Menshikova, M. (2008) On the issue of staff management as a system and integrated subsystem of organization/ Kursk: Kursk state University. URL: <http://scientific-notes.ru/pdf>.
11. Danilyuk, V., Petyuk, V. (2006) Tsinbalyuk S.O Staff management: teaching method manual/ K.: KNEU. 398 p.
12. Mazur, N. (2014) Stimulation of the productivity of the enterprise's staff on the basis of expert assess. *Problems of rational use of socio-economic and natural resource potential of the region: financial policy and investment*. Collection of scientific works: Issue XX, **2**. Jubilee. Kyiv, SPP/Rivne, NUWMES. P. 173-181.
13. Balabanova, L., Sardak, O. (2011) Staff management: textbook. K.: CEL. 468 p.
14. Grishnova, O. (2010) Personnel assessment: modern approaches to ensuring efficiency. *Human resource management: problems, theories and practices*. **7**. p. 42-50.
15. Pakulin, S., Kushnir, T., Chorna, M. (2006) New methodical approach to determining the wages of workers of the enterprise. *East*. **2(74)**. p. 139-140.
16. Yeliseyeva, O., Kutova, N. (2017) Personnel management performance assessment system based on the integral indicator. *Bulletin of the National Academy of Statistics, accounting and auditing*. Quarterly collection of scientific works. **1-2** (52-53). Kyiv. P. 46-54.
17. Yeliseyeva, O., Kutova, N. (2017) Assessment of the mechanism of stimulation of the enterprises. *Scientific journal Business Inform*. **5**. Kharkiv. 2017. P.76-81. URL: [http://www.business-inform.net/export\\_pdf/business-inform-2017-5\\_0-pages-76\\_81.pdf](http://www.business-inform.net/export_pdf/business-inform-2017-5_0-pages-76_81.pdf)
18. Introspective analysis. Methods and means of expert assessment: monograph. below red. E..Petrova. Kherson: Grin D.S. 2011.1168 p.



19. Shlyaga, O., Bilous, A. (2013) Approaches to staff assessment at enterprises. URL: [http://www.zgia.zp.ua/gazeta/evzdia\\_5\\_126.pdf](http://www.zgia.zp.ua/gazeta/evzdia_5_126.pdf).
20. Gudz, P., Gudz, M., Sydoruk, I., Kunaiev, A. (2019) Financial component of estimation of efficiency of management of enterprise on basis of BSC. *Collection of scientific works Financial and credit activity: problems of theory and practice*. **4**, № 31 <http://fkd.org.ua/article/view/190804>
21. DOI: <https://doi.org/10.18371/fcaptp.v4i31.190804>
22. Zavidna, L. and other. (2019) Strategy of Innovative Development as an Element to Activate Innovative Activities of Companies. In: Academy of Strategic Management Journal. <https://www.abacademies.org/articles/strategy-of-innovative-development-as-an-element-toactivate-innovative-activities-of-companies-8385.htm>
23. Shmygol, N., Galtsova, O., & Varlamova, I. (2018). Developing a methodology to assess the environmental and economic performance index based on international research to resolve the economic and environmental problems of Ukraine. *Baltic Journal of Economic Studies*, **4(4)**, 366-374
24. Zos-Kior M., Kuksa I., Samoilyk I., Storoška M. Methodology for assessing the countries' globalization development. *Economic Annals-XXI*. **11-12**. 2017. P. 4-8.
25. Kwilinski, A. (2018). Mechanism of modernization of industrial sphere of industrial enterprise in accordance with requirements of the information economy. *Marketing and Management of Innovations*, **4**, 116-128. <http://doi.org/10.21272/mmi.2018.4-11>
26. Savchenko, T., Basiurkina, N., Rodina, O., & Kwilinski, A. (2019). Improvement of the assessment methods of product competitiveness of the specialized poultry enterprises. *Management Theory and Studies for Rural Business and Infrastructure Development*, **41(1)**, 43-61. <https://doi.org/10.15544/mts.2019.05>
27. Savchenko, T., Basiurkina, N., Rodina, O., & Kwilinski, A. (2019). Improvement of the assessment methods of product competitiveness of the specialized poultry enterprises. *Management Theory and Studies for Rural Business and Infrastructure Development*, **41(1)**, 43-61. <https://doi.org/10.15544/mts.2019.05>