

# Issues of human resources management in the enterprises of the machine-building complex of the Tyumen region

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**Abstract.** This article, the authors have considered theoretical-methodological and practical aspects of human resource management in the process of restructuring enterprises of the machine-building complex of the Tyumen region. Based on the study of the evolution of theories concerning the human factor in the economy, the systematization and generalization of the provisions contained therein, the system of categories in the field of human resource management is substantiated. The basic principles of such management have been identified and supplemented, the tasks facing the enterprise management have been clarified, new tools for human resource management have been proposed, to ensure the completeness, continuity and validity of the decisions made in the field of human resources management in the restructuring of industrial enterprises.

## 1 Introduction

Numerous studies show that the modern management paradigm, which is aimed at the development of human resources and implies a collegial approach to solving the problem of the reduction of workers in the enterprise, is implemented rarely. The most common is the proportional reduction of all categories of workers. The popularity of such a staff-reduction is explained by the simplicity and speed of adoption and implementation of such a decision. It does not take resources and time to analyze the current situation, evaluate the structure and functions, and develop options for changing. Such a reduction is ineffective, it rarely improves the situation in the enterprise for a long time and seriously. It is quite common to reduce only the employees of the main production divisions (24%) or employees of functional, servicing units (20%). Every second respondent (53%) responded that personnel assessment was used in the implementation of personnel reduction measures. The most popular methods for such an assessment were the management's in-depth evaluation; assessment based on the personal data of the employee; comprehensive assessment by the manager, colleagues, subordinates.

Analysis of the results of comprehensive studies of the human resources in the restructured enterprises of the Tyumen region shows that many enterprises in the Tyumen region experience a sharp drop in production and sales. Mechanical engineering in the

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Tyumen Region constitutes a significant part of the region's industrial production, with the largest share of oil and gas engineering - 31.7%, power and electrical engineering - 16.7% and transport 15.0%. In recent years there has been a steady trend of consolidation of the machine-building enterprises of the Tyumen region into various investment and industrial groups and holdings (Neftemash is part of the IPG Hydraulic Machines and Systems, which unites leading manufacturers of pumping equipment, Tyumen Motor Engineers includes machine building organizations related to different sub-industry segments). It is obvious that at the stage of transition to a new type of industrial structure of industry, characterized by the presence of a high-tech core with the predominance of manufactures of the sixth and seventh technological structures, the creation of competitive industrial complexes is the most important national task, which is impossible without increasing innovation activity and overcoming the lag from industrially developed countries.

**Problem.** One of the most important issues of improving the industry is the search for a strategy for managing human resources, in other words, an effective personnel policy. Indeed, the lack of qualified personnel (managers, engineers, representatives of working specialties), which meets the requirements, is very "beating" on the performance indicators of enterprises. The "personnel" problem is not only a consequence of the actual shortage of special labor in the labor market in the south of the Tyumen region, and in the long run, the leakage of a significant share (from 20 to 40%) of highly skilled workers who are at pre-retirement age, modern working professions for industrial enterprises, a shortage of qualified young professionals and managers.

A natural step in such conditions is the course to optimize production costs in general, including the reduction of costs associated with the company's personnel starting from 2010, when many Tyumen machine-building enterprises switched to a four-day work schedule, reduced social security expenses, increased the number of unscheduled vacations at the initiative of the enterprise, and also transferred a significant part of the employees to part-time work, thus reducing the costs of labor and social needs. Also in recent years (2013-2017) there has been a steady growth in part-time employment of employees (4.4 times for all major types of machine-building production), which reached 4,264 people in 2016. These measures, which are forced and undertaken for restructuring purposes, led to an outflow of specialists from the industry, where the number of employees who left the enterprise exceeded the number taken. Official statistics show that in recent years the intensity of the turnover of labor has been decreasing, there is clearly an outflow of human resources from the machine-building industry of the region. During 2013-2017 years, the negative balance was 0.9 and 1.2 thousand people, respectively. The analysis of the data gives grounds for the conclusion that against the background of the general attempts of the state to restrain mass layoffs, inefficient use of human resources takes place in the industry. The absence of significant labor force cuts in the region's machine-building enterprises, according to many experts, indicates a delayed process, enterprises fear of losing orders and support from the regional administration. Very often there is an outflow of workers, which constitute the "core" of the enterprise. The dynamics of worsening of a number of basic social and demographic characteristics in the qualitative composition of the workforce of the machine-building complex as a whole attests to the outlined tendency to reduce its labor potential. The exception is a few of the most stable large enterprises that have retained and increased their production volumes. For example, JSC "Neftemash", whose characteristics of the qualitative composition of the workers are significantly different from the average industry values.

Another problem is reduction in the proportion of the most qualified and educated employees in the total number of employees. It can lead to a reduction in the overall capacity of enterprises, deterioration in the quality of products and loss of customers and output. Consequently, the restructuring of machine-building enterprises, in the first place,

should be accompanied by the development of a strategy for preserving the human potential of the industry against the backdrop of inevitable cutbacks.

The purpose of this article is the development of theoretical, methodological and practical directions for the formation of a strategy for human resources management in the process of restructuring the enterprises of the machine-building complex of the Tyumen region.

The fundamental and applied scientific works of domestic and foreign scientists are devoted to the issues of human resources management in the process of enterprise restructuring. At the same time, so far mechanism of human resource management in industrial enterprises and evaluation of human resources management is poorly understood.

## 2 Methods

First, the Government of the Tyumen region developed program documents that regulate the use and development of human resources in the machine-building industry of the Tyumen region. (Including the program for the release of workers in connection with the liquidation of organizations or the reduction in the number or staff, as well as part-time workers (idle time, introduction of part-time work, the provision of holidays without saving wages on the initiative of employers, etc.). The program provides for a set of additional measures for outstripping professional training of workers, who are at risk of dismissal, temporary employment, promotion of employment for disabled people, development of various forms of self-employment.

The measures to improve the situation in the personnel policy include the following: state assignments for the provision of educational services, for training and retraining based on the analysis of labor market monitoring results; the organization of training and retraining of liberated citizens recognized as unemployed, citizens who are at risk of dismissal, in occupations in demand on the labor market, including training on applications and at the expense of employers (based on Article 78 of the Budget Code of the Russian Federation); expansion of the practice of concluding tripartite agreements with employers for training unemployed citizens for specific jobs; formation of an electronic database of graduates of vocational education institutions; the organization of course training (retraining) in educational institutions in the areas focused on employment in the field of entrepreneurial activity and self-employment; adjustment of the volume and structure of admission of students to establishments of professional education in the Tyumen region based on the analysis of labor market monitoring results to prevent the training of specialists not in demand on the labor market. However, the shortcomings in this program include the lack of innovative models of human resource management.

Secondly, at the present time, when a multistage system of human resources management has developed in the machine-building industry, most of the issues arising in the sphere of social and labor relations are solved through social partnership. In the Russian Federation, social partnership is a special area of social and labor relations aimed at harmonizing the interests of workers, employers and public authorities. In the Tyumen region, the necessary legal framework for social partnership has also been created. The law of the Tyumen region of 08.07.2003 No. 155 "On the regulation of labor and other directly related relationships in the Tyumen region" is in force. One of the important components of social partnership in the Tyumen region is the development of the collective-contractual process. Within the framework of the Strategy of investment development of the machine-building complex of the Tyumen region until 2020 (the Developer is CJSC "Consulting company" PREFISH"), the sales markets for the products of the machine-building industry of the Tyumen region were determined; solutions have been developed for the technical re-equipment of the machine-building enterprises in the region, activation of the innovative

orientation of their activities, as well as attention to the human potential of the industry, and some points of human resource management. However, the mechanism of human resources management in the machine-building industry existing in the Tyumen region can be assessed as insufficiently effective.

Despite the existence of federal programs aimed at reducing unemployment and social tension, to date, the region lacks a comprehensive program for development and management of human resources of machine-building enterprises that are in the stage of restructuring. The classical version of the management of labor, long established in the industry, does not meet the realities of the current economic situation. All of these facts explain the search for ways to improve the process of human resources management of domestic machine-building enterprises.

Thirdly, tactical, or intermediate, methods of social technology are: observance of the legitimate rights and interests of workers; Objectivity in the selection of employees subject to reduction; maintaining a favorable social and psychological climate in the team; assistance to the released workers, including in employment; rationalization of the use of the personnel potential of the enterprise; preservation of its positive image.

The developed social technology of personnel reduction can be used at the domestic enterprises of mechanical engineering. Its use is advisable in the case of mass releases of workers, since with minor staff reductions, there is no need to create a special commission, carry out outreach, conduct a general assessment of personnel, etc. The greatest effect will be achieved by this social technology, in our opinion, at enterprises where the staff is engaged in intellectual, creative work. Specificity of labor activity of the personnel influences the implementation of such measures as involvement of employees in the development and decision-making, carrying out a collective evaluation procedure for each worker.

The difference between this social technology and other techniques, programs, technologies for managing the release of personnel is an integrated approach to solving this problem. Existing methods, as a rule, focus on one of three aspects: compliance with legislation, reducing the material costs of the organization or reducing social tension in the team.

Based on the conducted studies, we propose an organizational mechanism for implementing social technology in human resources management within the framework of personnel reduction management, modified and incorporating the following stages [17].

1. Preliminary stage. Indirect methods of employment reduction are used: suspension of hiring of new employees, refusal to extend temporary labor contracts, curtailment of the practice of personnel leasing. Our position is that recourse to personnel reduction should be applied only in cases where it is impossible to eliminate inefficient use of human resources in another way.

2. Setting goals. The reasons for the inefficient use of human resources are analyzed and the goals of overcoming the negative situation are worked out for the choice of organizational measures and as the starting points for decision-making. The success of the implementation of social technology largely depends on how adequately the manager of the enterprise can assess the situation and the real difficulties associated with the changes.

3. Appointment of responsible executors. At large enterprises, operations and procedures for the release of employees are conducted not only personally by the head, it is recommended to form a special commission.

4. Management decision-making on reorganization; on the reduction of the number of employees (quantitative and qualitative characteristics, the period of holding); on categories, groups of employees subject to reduction; on the methods and criteria for staff assessing. The decision is made by the manager on the basis of the results of the work of

the commission, which includes conducting consultations and expert interviews with key employees of the enterprise to solve problems.

Fourthly, the system of collegial evaluation of the work of personnel. The use of staff assessment procedures can reduce the social and psychological tension in the team. In our opinion, it is preferable to conduct a scoring of staff, as a result of which each employee is assigned a certain number of points on a given scale, which simplifies the process of comparing business characteristics. Based on the results of processing the evaluation sheets, a rating of employees is drawn up, where it is not difficult to determine the ratio of the level of the business qualities of employees by the number of points or the rating position. Using the edited rating, the required number of employees with a lower rating position is selected and dismissed.

### 3 Results

As a result of the introduction of the proposed methods for improving the personnel policy, the following changes can be observed, both positive and negative.

First, the dynamics in the volume of wages of employees of enterprises will change, which is the most important stimulating factor for increasing labor productivity. It is impossible not to note the outstripping level of wages at enterprises engaged in the production of machinery and equipment, against the backdrop of other machine-building industries. In 2013, it was 44,784 rubles., Which is much higher than the industry average for the region - 31579 rubles. The lowest value of nominal wages was observed at enterprises that produce vehicles and equipment - 22562 rubles. Differentiation in terms of nominal wages in the main types of production in the machine-building industry of the Tyumen region is largely due to the fact that not all enterprises of this sector "work" on the oil and gas complex, carrying out large and profitable orders. This determines the high level of wages, motivates the workforce, makes it more cohesive in times of crisis, and provides less painful implementation of the restructuring process.

Secondly, as before, in the enterprises of the Tyumen region, despite the measures taken, the most common is the proportional reduction of all categories of workers. The popularity of such a reduction in staff is explained by the simplicity and speed of adoption and implementation of such a decision. It does not take resources and time to analyze the current situation, evaluate the structure and functions, and develop options for change. Such a reduction in staff is ineffective; it rarely improves the situation in the enterprise for a long time and seriously. It is quite common to reduce only the employees of the main production divisions (24%) or employees of functional, servicing units (20%). Every second respondent (53%) noticed that personnel assessment was used in the implementation of personnel reduction measures. The most popular methods for such an assessment were the management's in-depth evaluation; assessment based on the personal data of the employee; comprehensive assessment by the manager, colleagues, and subordinates.

Third, an important role was gained in the enterprises by the method of absentee appraisal by a manager of the department. It is the method that does not require a lot of time and allows avoiding the stressful situation arising in the course of the face-to-face evaluation procedures. However, it is fair to say that the head is not always able to assess the business qualities of all the employees of the enterprise adequately, except for enterprises with a small number of workers and relatively stable staff.

Fourth, reimbursement of expenses for outstripping professional training of employees is carried out in the form of a subsidy provided within the framework of the article of the Budget Code of the Russian Federation. The employer reimburses the costs of providing material support to workers at risk of dismissal during the period of advanced professional training in the form of subsidy, which are calculated on the basis of the minimum wage,

taking into account the district coefficient and the accruals to the wage fund. Expenditures for payment of educational services for advanced professional training of workers at risk of dismissal are reimbursed to educational institutions directly by the employment center. The results of this program are the contracts:

- on outstripping vocational training of 400 workers at risk of dismissal;
- on organization of public works for 4,7 thousand people;
- for the organization of temporary employment of 9.9 thousand people;
- for the organization of an internship of 1.2 thousand graduates of educational institutions.

In addition, such results should include the employment of 1.2 thousand people in the budgetary sphere, the provision of one-time payments to enter self-employment and targeted social assistance to enter into self-sufficiency of 5.3 thousand people. The total number of employed citizens in the framework of the program to promote employment of the population was about 43 thousand people.

Fifth, the majority of machine-building enterprises in the Tyumen region have formed anti-crisis programs that envisage switching to a four-day working week, reducing the working day by two hours, tightening the expenditure side of the budget, refusing to accept new employees, filling vacancies by internal relocation of specialists, providing employees with forced holidays with the payment of 2/3 salary. The main shortcomings of such programs include the lack of innovative models of human resources management, as well as the methods of personnel management that have been proven at the leading machine-building enterprises of the country and have proved their effectiveness. Thus, in many machine-building plants in the region, there is no system of comprehensive and periodic assessment of the workforce, the employee's contribution to the performance of the organization. The system approach to solving the problem of advanced training is not used, except for such enterprises as Neftemash, Grom OJSC, etc. In 2016, compared to 2014, the activity in the field of personnel management was quite effective, as evidenced by the growth of many of them, with the exception of the profitability of personnel, which decreased by 1%, and the invariability of some others (the turnover rate, the share of specialists with higher education).

## 4 Discussion

The topic for discussion may be the main directions of the human resources management program in the process of restructuring: this is the effectiveness of introducing social technology layoffs; use of systems of peer evaluation of the employee's activity, both for the purpose of material incentives and for staff reduction. Scientists (F. Shamray, V. Gutenyov) singled out two main approaches to managing the reduction of inefficient staff employment. The first approach is based on the desire to maintain the level of employment in the enterprise, in particular using system of various agreements and compromises, for example, the use of part-time work, forced vacations, etc. The second approach is aimed at release of workers. Thus, the first approach, which is a temporary measure, is increasingly losing its significance, and the second becomes more relevant. Traditionally, the reasons for the release of personnel include the phenomena of an organizational, economic or technological plan. In accordance with this principle of separation and on the basis of an analysis of the factors that determine the decision to reduce staff, it is possible to distinguish three main groups of reasons for the emergence of inefficiently employed personnel of the enterprise.

The first reason is organizational ones, which include changing the strategic priorities of the enterprise development; merger or acquisition of an enterprise; decrease in the scope of work; change in the direction of activity; reduction of work shifts, optimization of the

organizational structure of the enterprise; staff overflow due to planning errors; rapid growth of the enterprise, which was not accompanied by the timely organization of the staffing table and the normalization of the workload of employees.

The second reason is economic changes, that is, the crisis of the economy as a whole, a separate industry, the direction of business or the market segment; increased competition between manufacturers of similar goods and services; decrease in sales; deterioration of the financial and economic situation for other reasons, the need to reduce costs.

The third reason is the technological nature, that is, the automation of the production process, the modernization of equipment, the introduction of new technology, the use of new technologies. The first two groups of causes have the most significant impact on the human factor in the engineering industry and, accordingly, the growth of inefficiently employed personnel.

To diagnose inefficiently employed personnel, it is proposed to analyze the following aspects of the enterprise:

1 correspondence of the received during the training specialty with the worker's position held (on the basis of personnel data);

2 professional retrainings and professional development of employees (based on the results of organizational training programs);

3 adequacy of knowledge and skills of workers to the methods and instruments of labor existing in the enterprise (based on the assessment of personnel);

4 refusal of workers to be transferred to another position, professional and career growth, redistribution of responsibilities, development of new technologies (on the basis of documents fixing these facts);

5 organizational structure, distribution of powers and responsibilities (on the basis of organizational documents on the structure, provisions on units, job descriptions);

6 efficiency of working time expenses (based on timekeeping, comparison with regulations or time spent in organizations of a similar profile);

7 the costs of maintaining existing work positions, the acquisition and introduction of tools that reduce the use of human labor (based on organizational financial indicators and data on modern tools);

8 economic indicators of the enterprise: labor productivity, the rate of profit per employee, the competitiveness of products, etc. (based on financial and economic statements);

9 quality of goods and services produced (on the basis of documents fixing defective products, returning goods and services, consumer feedback, etc.).

Numerous studies show that the modern management paradigm is aimed at developing human resources and implying a collegial approach to solving the problem of the reduction of workers in the enterprise.

Researchers place great emphasis on information and explanatory work. Here, it is necessary to explain to the workers information on the reasons for innovations, future changes in the structure of the enterprise, the categories of employees subject to reduction, the methods and criteria for the forthcoming assessment of personnel, the possibilities for voluntary dismissal under the preferential treatment regime, and the proposed measures for the employment of laid-off workers. Representation of correct and objective information in the external environment is necessary in order to preserve the image of a competitive and stable organization.

## 5 Conclusions

In this article, the theoretical-methodological and practical aspects of human resource management in the process of restructuring the enterprises of the machine-building

complex of the Tyumen region were considered. Based on the study of the evolution of theories concerning the human factor in the economy, the systematization and generalization, the system of categories in the field of human resources management is substantiated, the author's approach to the concepts under study is suggested. To ensure the completeness, continuity and validity of the decisions made in the field of human resources management in the restructuring of industrial enterprises, the basic principles of such management have been identified and supplemented, the tasks facing the enterprise management have been clarified, new tools for human resource management have been proposed.

The analysis of the state and mechanism of human resources management of the machine-building complex of the Tyumen region revealed the key problems of the restructured enterprises and allowed to give concrete recommendations on their solution within the framework of the regional program. Strategically, such a program envisages the implementation of a complex of interrelated socio-economic transformations aimed at building an effective system of interaction between the industry and federal and regional authorities, the local business community, scientific and educational institutions of the Tyumen region to achieve sustainable development of domestic engineering.

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