METHODOLOGICAL APPROACH TO EVALUATION OF THE LEVEL OF HUMAN RESOURCES OF THE ENTERPRISE

High level of informatization, implementation of the newest innovative technologies, modern transformational transformations and many other factors cause constant search of new approaches to formation, management, estimation of the personnel of the organization. One of the tasks of an effective personnel management system of the enterprise is to assess its human resources.

The aim of the article is to develop a mathematical model for estimating the level of human resources of the enterprise based on the theory of fuzzy sets and linguistic variable, which allows to take into account both quantitative and qualitative parameters.

The article proposes a methodical approach to assessing the level of human resources of the enterprise, which involves building a mathematical model based on the theory of fuzzy sets and linguistic variables, which allows to take into account a set of quantitative and qualitative indicators given by fuzzy statements.

Assessment of the level of human resources of the enterprise consists of successive stages:

1. Selection and substantiation of indicators for assessing the level of human resources of the enterprise and determining the range of their change. Based on the analysis of existing methodological approaches to assessing the human resources of the enterprise, a system of indicators was identified and, through expert evaluation, confirmed the feasibility of using these indicators in further research. The proposed set of indicators was classified according to four intermediate initial changes, namely: the level of professional qualification potential, the level of physical and psychological potential, the level of efficiency of the personnel management system at the enterprise and the level of external assistance.

2. Construction of a fuzzy inference tree, which is based on the construction of four intermediate output parameters.

3. Construction of membership functions of fuzzy estimates (fassification). This stage of modulating the assessment of human resources of the enterprise involves the choice of the method of construction of membership functions, which will formalize fuzzy sets of each of the terms by which linguistic parameters are evaluated.

4. Creating a knowledge base and constructing fuzzy logical equations. Fuzzy logical equations are used in modeling the human resources of the enterprise. Each fuzzy equation is preceded by a knowledge base that takes into account the views of competent experts.

5. Defasification - the transformation of fuzzy (fuzzy) information into a clear form, which gives a quantitative assessment of the level of human resources of the enterprise at a given value of the factors of influence.
The proposed methodological approach to assessing the level of human resources of the enterprise, based on the use of mathematical apparatus of fuzzy logic theory, allows to take into account a set of both quantitative and qualitative indicators that affect the activities of employees and allows to obtain reliable information for timely management decisions. Flexibility of human resources in an unstable market environment.