

Human capital assessment and monitoring in the organization

*Irina Borisovna Romashova*¹, *Victoria Sergeevna Novikova*², *Liubov Nikolaevna Pertseva*¹, *Lyudmila Anatolievna Savinykh*², and *Elena Lvovna Ter-Semenova*³

¹Lobachevsky State University, Department of Management Psychology, Nizhny Novgorod, Russia

²Lobachevsky State University, Department of Finance and Credit, Nizhny Novgorod, Russia

³Pushkin Joint Turkmen Russian Secondary School, English Department, Turkmenia

Abstract. The analysis of scientific research has shown that the topic related to human capital remains relevant and insufficiently researched in current conditions due to the lack of a clear methodology for its assessment and monitoring. It is known that the basic aspects of measuring human capital are due to its ability to influence the value of companies' assets, the development of the socio-economic sphere, and economic growth in general. Human capital is one of the most important types of assets of any organization, which can also be calculated, evaluated using both qualitative and quantitative indicators, and predicted, provided there is a dynamic series of changes. The purpose of this study was to analyze and compare various methods of assessing and monitoring human capital used by progressive organizations, as well as the selection and justification of the best methodological approach and its testing at one of the largest enterprises with a branch in the Nizhny Novgorod region.

Keywords: assessment, human capital, monitoring, methodology, digitalization, development

1 Introduction

In the era of information technology, organizations begin to compete on technical equipment development and their employees with the necessary capacity. The set of knowledge, abilities, skills of the personnel, which are actively used to create value and income, was called human capital [1, 2].

The concept of human capital was theorized in the middle of the 20th century. The scientific and technological revolution created a shortage of highly qualified personnel, and in the 1950s, the direction of research shifted from the process of using the available workforce to the process of creating a qualitatively new workforce.

The theory of human capital was proposed by the famous American economist, a representative of the Chicago School, T. Schultz [3]. The term “human capital” first appeared in his writings. T. Schultz believed that improving poor people's well-being did not depend on the land, technology, or efforts but rather on knowledge. The accompanying

¹ Corresponding author: ya.irinar2013@yandex.ru

investments we call human capital" [4]. To develop the theory of human capital, T. Schultz was awarded the Nobel Prize in 1979.

At almost the same time, another American scientist, a representative of the same Chicago school, G. Becker, was working on human capital theory [1]. His work, rightly regarded as fundamental and classic, is entitled: "Human Capital: Theoretical and Empirical Analysis. It is devoted to investment in human capital its importance and significance in the life of society. G. Becker was awarded the Nobel Prize in 1992.

The scientists who develop this theory are B. Weisbrod, J. Mintzer, U. Bowen, M. Fisher, J. Vaizey, Y. Ben-Poret, S. Bowles, and others [5-8].

Among domestic scientists who have made a significant contribution to human capital theory are Kapelyushnikov R.I., Nureyev N.N., V. Shchetinin, and others [9-15]. In their view, human capital in modern conditions is the main value of society and the leading factor of economic growth. It can create new value and preserve (transfer) the old, embodied in the material elements of capital.

In general, all works related to the theory of human capital (HC) have conducted sufficiently in-depth research and proposed various methods for assessing HC. However, a certain disadvantage is a difficulty of applying these techniques at the level of a particular organization. Any theoretical approach requires adaptation, certain refraction of it to the characteristics of the economic entity.

In our article, we consider the theoretical and methodological aspects associated with the assessment of human capital at the organizational level; we identify the relationship between the level of education, health, and social well-being of people with their ability to produce demanded products (services) and bring income to the organization.

2 Materials and methods

The study aims to substantiate and outline the methodology of human capital assessment, which is recommended for monitoring and management of human capital at the corporate (organizational) level.

A modern manager should be well-versed in existing personnel assessment methods and be able to select those methods and techniques that are most suitable for making decisions related to the development of a particular employee, workforce, structural unit, or organization as a whole [16, 17]. This approach allows ensuring that the organization's strategic goals correspond to the personal qualities and professional experience of employees.

To realize this goal, the following tasks were set:

1. Systematize theoretical approaches and modern methods assess the HC of an organization, propose own methodology;
2. Determine the correlation of HC assessment with the quality of personnel management and socio-economic sustainability of the organization;
3. Carry out testing of the proposed methodology for HC estimation.

The material for the study was existing approaches to HC evaluation and statistical data on the development of a particular organization.

The methods used in the study include comparative analysis, corporate documentation analysis, SWOT analysis, observation, testing and interviewing, and other methods of analytical assessment of human capital.

3 Results

First, the organization's human capital assessment goals are systematized (See Table 1).

Table 1. Objectives of HC assessment in organization.

Goal types	Goal characteristics
Administrative goal	Consists in making objective and informed decisions (hiring, transfer to another position, assignment for training or retraining, reduction or dismissal)
Informational goal	Achieved by providing the management with reliable information about the success of employees in the activities of the organization
Motivational goal	Concludes that the HC assessment is a scientific basis for motivating and incentivizing high-performance work

Second, all the subjects of HC assessment were divided into formal and informal (see Table 2), and they were given a reasonable characterization.

Table 2. Characteristics of personnel evaluation subjects.

Subject name	Brief description	Representatives
Formal	Responsible for the completeness, reliability, and objectivity of the information they receive on HC and use it to make administrative decisions	Line managers, human resources employees
Informal	Provide their conclusion on HC, explain their conclusions, and make recommendations to the heads of the organization.	Independent experts, colleagues, assessment center

Third, the criteria that are recommended to be used in organizations for HC assessment are classified (see Table 3).

Table 3. Criteria for HC assessment.

Criteria	Characteristic
Professional	The availability and level of development of professional knowledge, skills and abilities, professional experience of the individual, his qualifications, and labor results
Business	Personal and business characteristics (organization, initiative, responsibility, enterprise, punctuality, etc.)
Moral and psychological	Employee personality traits: honesty, fairness, stress tolerance, self-awareness, determination, etc.
Specific	Characteristic qualities and features of a particular person's personality, physical and psychological health, authority

Further, all known methods of HC estimation were divided into three groups and briefly characterized (see Table 4).

Table 4. Methods for HC assessment in an organization.

Quantitative methods	
Rank method	Multiple supervisors rating of employees
Scoring method	Summation of points for the achievement
Free point evaluation	Summation of points for each professional quality of an employee
Questionnaire and testing	Questionnaires and tests aimed at identifying personal and professional personality traits (e.g., personality questionnaires by Kettel, Leongard, FPI, MMPI; self-esteem questionnaires by Stefanson, Budassi; Rean motivational characteristics questionnaires; Gilford, Raven, Amthauer

	tests on active behavior; emotional ability questionnaires by Dodonov, Beck, and others)
Qualitative methods	
"360-degree" method	Comprehensive assessment of an employee by a manager, colleagues, subordinates, clients, self-assessment
Matrix method	Comparison of the qualities of a particular employee with the portrait of a successful specialist
Arbitrary characteristics method	Highlighting the achievements and mistakes of the employee
Group discussion method	Conversation between the employee and his supervisor or experts about his performance and prospects
Assessment of task completion	Comprehensive employee performance evaluation
Interviews	Biographical interview, behavioral interview, situational interview, projective interview, and others
Complex methods	
Summary estimates method	Each person's quality is evaluated on a scale, then the average is derived and compared to the ideal.
Testing	Evaluation based on test results
Grouping system	Division of all employees into groups based on the quality of performance of functional responsibilities
Case study method	Decision making in typical business situations

The analysis showed that modern methods of HC assessment are a set of approaches aimed at assessing the potential of employees and the contribution to the organization. This often does not assess the synergistic effect of strengthening HC when combining people into specific teams (by project, division, organization as a whole). This can be explained by the difficulty of establishing correlations between the studied indicators. In addition, the HC score is weakly linked to such a feedback indicator as employee satisfaction with their work and organizational policies.

We have tried to overcome these shortcomings in our case study. We used data from "Modny Kontinent" JSC, which represents the Russian market in fashionable women's and children's clothing. The company's personnel policy is transparent to potential employees at any level. You can come to the company and start working from a line and a management-level position. It all depends on the soft and hard skills of the candidates.

Fig. 1 shows the results of the job satisfaction analysis among the company's employees based on the results of our survey of 100 people.



Fig. 1. Employee’s work satisfaction level.

The study showed a generally high degree of HC satisfaction, although the criteria “working conditions” and “achievements in the work” are estimated at only 60%.

We conducted testing by the Assessment Centre method and compared the results with the Competency Model of salesperson-consultants to identify the level of existing employees’ professional knowledge and personal characteristics. The highlighted competencies reflect the portrait of the position or “ideal employee”. The following competencies were identified to determine the level for each position:

- K1 – Communication;
- K2 – Professionalism;
- K3 – Striving for results;
- K4 – Sales management;
- K5 – Teamwork;
- K6 – Self-organization.

For a more differentiated approach to assessing the performance of sales assistants and administrators, several levels of professionalism were identified calculated separately for each competence, the sum of which provides the final assessment of the respondent’s performance and is compared to the “ideal” model of employee competences (see Table 5).

Table 5. Professionalism level of employees.

Points	Professionalism level	Description
98-114	Master	Complete understanding and excellent ability to apply existing knowledge, skills, and abilities to work, leading to outstanding results. Extremely productive, efficient, and stable employee. A true master of his craft who brings his strategic vision and the creative transformation of working aspects to the profession. Has the ability to train other professionals
74-97	Professional	Has the necessary knowledge and skills and substantial experience in this area. Performs duties according to set standards and in most cases achieves excellent results, solving difficult tasks without assistance. Still needs to improve his skills and knowledge

up to 73	Developing	Quite often demonstrates his knowledge and skills in practice, demonstrating the performance of functions according to labor standards. However, the level of these skills is not high and stable enough. Needs additional training
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Fig. 2 shows a graph of the professionalism levels by competencies for different categories of “Modny Kontinent” JSC employees in the studied group. This data served as the basis for the development strategy of HC for 2021.

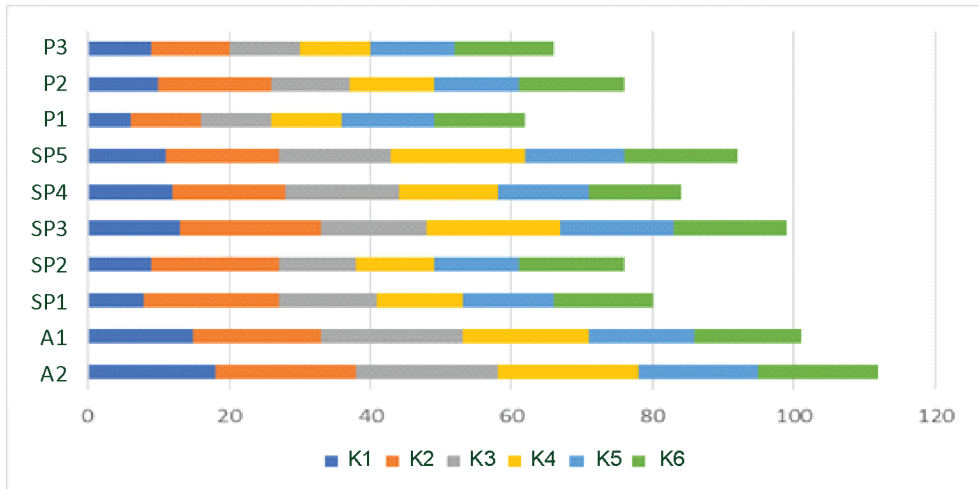


Fig. 2. Diagram of professionalism levels by competencies.

The results of assessing the degree of socio-economic development of the company on the example of its Nizhny Novgorod branch after the measures taken to manage the HC in 2021 were studied using SWOT analysis (Table 6). The number of strengths increased over the year due to the development factors of the HC, and weaknesses, on the contrary, decreased.

Table 6. SWOT analysis of the organization.

Strengths	Weaknesses
High level of customer service Effective development strategy Strong brand and reputation of the company Diverse product range Competent supply chain management Effective advertising campaigns and product promotion methods Competently structured training system High customer orientation of employees Loyalty program and discount system	Low return on capital in recent years Insufficient market coverage compared to competitors Insufficient investment in development
Opportunities	Threats
Overcoming the pandemic and temporary crisis Increasing demand for goods and services Emergence of new technologies Weakening of competitors Production and sale of related products Entering new markets for goods or market segments	Decrease in the solvency of the population Changing the terms of supply and import Increase in purchase prices Increased competition

In general, we can conclude that monitoring the relationship between HC and the company's performance allows assessing the degree of effectiveness of human capital management.

4 Discussion

In modern theory and practice, the use of private methods for HC assessment based on the experience of past years predominates. These methods are weakly related to the assessment of staff satisfaction with their work and working conditions and the company's final results.

However, the human capital management concept implies that the organization's employees are considered the most important intangible asset, the efficiency of the use of which depends directly on the well-being of the person his degree of well-being in the work environment.

5 Conclusion

Thus, we have considered the approach that we consider appropriate for measuring organizations' human capital.

The study's practical significance lies in the approach outlined above can be successfully used for organizations in other industries and the regional aspect.

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