

SPECIFICITY OF INVESTING IN HUMAN CAPITAL IN MODERN RUSSIAN FEDERATION

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Abstract: The article aims to analyze human capital development models in modern Russia compared to other countries of post-Soviet space. Human capital is a central factor in ensuring competitiveness in a post-industrial economy. Availability for the organization of fundamental aspects of production in traditional labor, land, and capital is due in the modern economy to the elimination of geographical barriers and the globalization of markets. Due to regional inequalities in these factors and corresponding specifics of human capital formation and development, it is advisable to study the specificity of investing in human capital in developing economies such as Russia. The methodological and theoretical basis of the research consists of the works of the classics of political economy. An increase in the diversity of supply poses the organization's new challenges, the main of which is the cost-effective selection, combination, and development of the obtained production factors. Regarding land and capital, the related problems are possible through strategic planning for the organization's development based on Total Quality Management (TQM) based on international standards. Concerning labor, such as standardization and algorithmization of development processes is not always possible. The classification of labor resources by a real firm cannot be reduced to models known from economic theory and requires a differentiated approach for each specific task facing.

Keywords: Global economy, Human capital, Human resources, Investments, National economy.

1 Introduction

The Russian economy is following the path of development using raw materials. Using the raw material potential to mitigate the crisis situation, increase the scale of investments, pay foreign currency debts, etc. is necessary, but not the main means of solving socio-economic problems. The possibilities for exploiting raw materials are not endless. The only resource, the possibilities of rational use of which are practically limitless is represented by the productive abilities of people, which are realized in modern conditions in the form of human capital.

Another problem of the economy of modern Russia is a significant depreciation of fixed capital, the lack of sources and reserves for its replacement and accumulation. In this situation, human capital is regarded by most economists as the most valuable productive resources in comparison with material capital.

At the same time, the combination of characteristics of the significant properties of the human capital of workers, which is a combination of the inherent knowledge and skills, is the main parameter of an employee's attractiveness in the labor market [15].

Ensuring a combination of relevant characteristics within the workforce focused on the implementation of a business project in the specific conditions of a competitive environment [23], as well as the financial, time, reputation and other planning restrictions facing the organization as part of achieving its goals and objectives, is a condition for the commercial success of the organization [14].

In this regard, there is a growing scientific interest in the formation of high-quality human capital, the development and substantiation of areas of interaction between the state and society for the purpose of its development.

2 Literature Review

The importance of human abilities in production, their place and role in the process of social reproduction have always occupied an important place in the history of economic thought and are reflected in the works of many economists – W. Petty, A. Smith, D. Ricardo, K. Marx, who laid the foundations of the future theory of human capital, W. Bedjhot, J.I. Walras, J.M. Clark, F. List, J. McCulloch, G.D. McLeod, A. Marshall, J. S. Mill, W. Rosher, J. Say, G. Sidgwick.

This theory received a holistic form in the 50-60s of 20th century. In the works of the representatives of the so-called Chicago school Schultz and Becker, disparate elements of the concept of human capital, developed by world scientific thought by the middle of the 20th century, were connected together, and this theory acquired the features of a systemically organized, methodologically consistent scientific concept.

In the economic literature, a lot of interesting and informative works are devoted to the study of the problems of investing in human capital [1, 2, 5, 24]. This problem was also considered by such representatives of the Chicago school as M. Collingsworth, K. Lancaster, J. Minser, R. Willis. The theoretical foundations of the concept of human capital were developed by M. Blaug, W. Bowen, B. Weisbrod, E. Denison, and others.

Despite the broad coverage of the problems of labor force reproduction, many issues are controversial, insufficiently studied, and require a critical rethinking of several theoretical concepts:

1. The issues of determining the peculiarities of the movement of human capital in the modern social reproduction process [10];
2. The formation of human capital as an investment process need to be investigated [11];
3. Clarification of indicators is required to assess the effectiveness of investment in such a form of capital, as well as clarification of the structure and composition of investments in a person [15].

It is necessary to determine the main economic sources of preserving and increasing the total human capital of Russia.

3 Materials and Methods

The methodological and theoretical basis of the research consists of the works of the classics of political economy, the works of Russian and foreign scientists-economists on the problems of reproduction of human capital, assessment of its movement in the course of the social-reproductive process and investment in a person.

The basis of the research is a general scientific methodology, which presupposes an integrated, systematic approach to solving problems, providing for the unity of qualitative and quantitative analysis; principles of dialectical logic, ensuring the objectivity of the approach; application of the method of analysis and synthesis.

4 Results

The economic value of human capital is not constant and varies over time depending on the resources invested in it [13], both by the bearer of human capital and by interested parties. The structure of investments in human capital is presented in Figure 1.

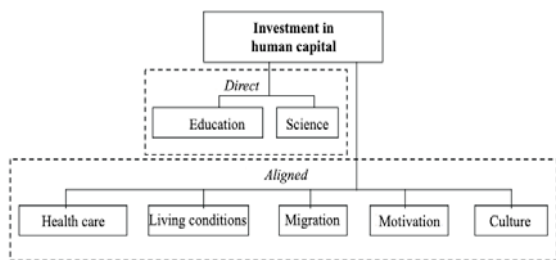


Figure 1 – Structure of investment in human capital. Source: Ye. A. Dubik and S. N. Mityakov (2013).

The structural complexity of human capital and the exclusivity of the employer's requirements for the employee's human capital make it possible to evaluate the accidental detection in the labor market of a job seeker with the required qualities that is practically equal to zero. Most often, to identify carriers of the target characteristics of human capital, the employer turns to specialized organizations, which entails significant time and financial costs. Even in this case of successful detection, a suitable employee, as a whole, needs to be adapted to the conditions of a particular organization, which includes the following [32]:

- Development of technical elements of the human capital of the employee;
- Familiarization with the business model of a particular organization and the site in which the employee is directly engaged;
- Integration into the labor collective, which requires the employee not only economic but also a social adaptation.

Since identifying, attracting, and integrating a carrier of a suitable carrier of human capital for an organization is a non-trivial and expensive task for an organization, the primary problem is the retention and development of a carrier of human capital.

Large foreign companies are currently massively creating intra-corporate systems for the development of human capital, the functioning algorithm of which is shown in Figure 2.

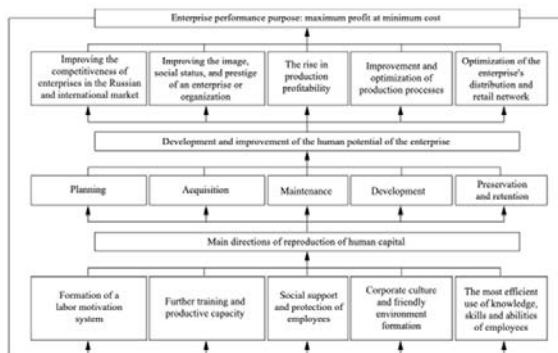


Figure 2 – Model of the corporate system for the development of human capital. Source: Compiled by the authors.

At the same time, foreign experience also indicates the impossibility of ensuring the development of the human capital of workers exclusively by organizations, even the largest of them.

A necessary condition for the development of human capital is the provision of investment support for its development by the state, especially in the early stages of the country's adaptation to the competitive requirements of the global labor market. The national system of investment support for the development of human capital includes four levels, as shown in Figure 3.

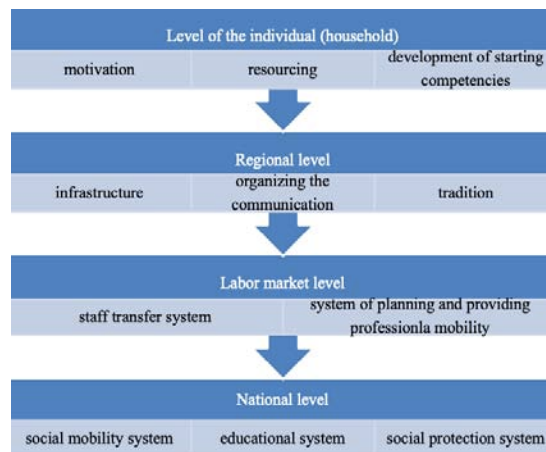


Figure 3 – Levels of the national system of investment support for the development of human capital. Source: Compiled by the authors.

Each of these levels of investment support for the development of human capital has established itself from foreign experience as cost-effective only if it permanently interacts with other levels.

5 Discussion

The system of investing in the development of human capital in Russia as a whole from harmonizing the interaction of all four levels can be described as successful as a whole. The most successful examples of harmonious investment support for the development of human capital are the majority of companies - representatives of large businesses, primarily corporations. At the same time, significant segments of the national economy, primarily allocated according to the territorial criterion, are not involved in this system. Figure 4 presents data on the volume of investment in human capital development in some regions of Russia.

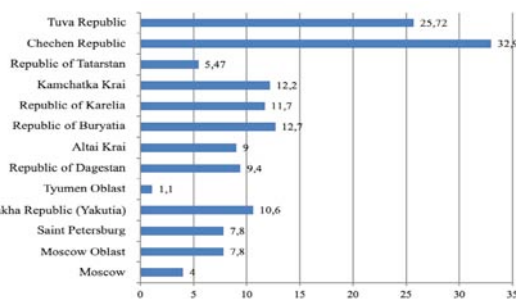


Figure 4 – Assessment of investment in human capital development in Russia and some of its regions. Source: Compiled by the authors based on S. N. Bobylev, V. S. Minakov, S. V. Solovyeva, and V. V. Tretyakova (2012) [3].

A comparison of the numbers presented in Figure 3 with other indicators of the development of the economies of the respective regions gives reason to draw the following conclusions. Investing in the development of human capital in Russia is carried out in each region, which, nevertheless, does not give reason to speak of the existence of a single unified national investment model. For the donor regions, which include Moscow, Saint Petersburg, and Tatarstan, the total investment in the development of human capital does not exceed 4 - 7% of regional GDP. There are both public and private financing in acceptable proportions as sources of such investments.

For regions characterized by a pronounced subsidized orientation of their economy, state financing prevails in the structure of investments in human capital. At the same time, access to investment in human capital is considered by the population as

the most important and often the only social elevator in the region (Muda& Ridhuan, 2016). Moreover, for regions with low involvement in the national and global division of labor, public investment in human capital is an important system-forming factor and can be considered as part of the regional economic system [9]. For the Republic of Tuva, investments in human capital account for more than 25% of the regional product, for the Chechen Republic, this figure reaches almost 33%.

The statistics of regional investments in the development of human capital presented also indicate the absence of a strict connection between the availability of reserves of economic growth and the interest of business in increasing investments in human capital. This contradiction is especially evident in the example of the Tyumen region, which has the significant resource and human development potential against the background of the share of investments in human capital in the amount of just over 1% of GRP.

The urgent problem is the uneven distribution of investments in human capital and within one territory. So, for growth centers of the Russian economy, such as Moscow, Moscow Region, Saint Petersburg and the Republic of Tatarstan, in the presence of effective federal and regional investment programs for the development of human capital and its involvement with the system of economic relations, the issue of professional non-compliance of significant population groups with market demands is acute labor. The result of such a discrepancy may be the beginning of mass cuts, especially among representatives of low-skilled workers in the context of the digitalization of the economy and a further increase in the division of the population of the regions according to the quality of their human capital [28].

The reason for these problems seems to be an insufficiently effective policy of investing in the development of human capital by the state. Consider the structure of investments in the human capital of workers in more detail in Figure 5.

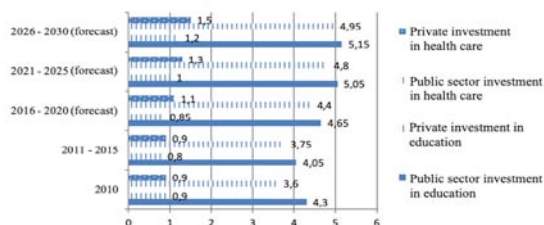


Figure 5 – Dynamics of average indicators of investments in human capital in Russia, as a percentage of GDP.

Source: Compiled by the authors based on "Forecast of the Long-term Socio-economic Development of the Russian Federation for the Period Until 2030" (2013) [6].

From the presented diagram it is clear that the main source of investment in the development of human capital in the country is budget funds. In the medium and long term, a change in the structure of the sources is not expected, although it is expected that the observed in the period 2010 - 2018 will continue. increase the share of investment in human capital.

The reason for the predominance of budget financing in Russia and the role of the national level of the human capital development system in the investment structure is the relative competitive weakness of the domestic economy. A similar bias towards budgetary funds was typical for most countries at the beginning of their transition from a Fordist economic model focused on the development of the means of production to a post-industrial one focused on the development of human capital [7, 8]. The national level provides the minimum necessary investment in the development of human capital of workers, the most important of which is an investment in education, social protection of workers and the development of a system of social elevators, the presence of which stimulates the individual

(household) to independently develop human capital. Over time, if a country was able to implement an effective model for investing in human capital, the budget programs for its investment development were partially replaced by private financing [16, 17]. At the same time, the national level is still an important part of the human capital development system in all countries of the world [30, 31, 33].

The national level of development of human capital has a significant impact on the development of human capital of its citizens, as evidenced by the high correlation between the degree of development of human capital of citizens of countries and the share of national investment in the development of their human capital per capita (Table 1).

Table 1: Correlation indicators between the volume of investments in human capital development at the national level and the Human Capital Development Index

Country	Human Capital Development Index	Assessment of investment in human capital
Singapore	0,88	High
Japan	0,84	High
South Korea	0,84	High
Canada	0,80	High
Germany	0,79	High
Great Britain	0,78	High
Italy	0,77	High
France	0,76	High
USA	0,76	High
Russia	0,73	Medium
China	0,67	Medium
Brazil	0,56	Medium
India	0,44	Low
RSA	0,41	Low

Source: Compiled by the authors based on "Russian Education in the Context of the Human Capital Index" (2018) [27].

In the context of global competition, the key posts of multinational companies most often come from developed countries. Such a situation provides the relevant state with reputational leadership and multiple reimbursements of investments in the long term due to the increased competitiveness of the national producer and tax revenues.

Let us make a comparative comparison of investment costs for the main items of investment in the development of human capital in Russia and the leading countries in the ranking of the human capital development index [29]. The most cost-effective in terms of the possibility of payback in the medium and long term is the part of the investment in human capital allocated to the education sector. Relative indicators are considered as a criterion for compiling a rating of countries according to the size of investments in the field of education. Figure 6 shows Russia's position in the international ranking of countries according to the criterion of expenditure on education in gross national product.

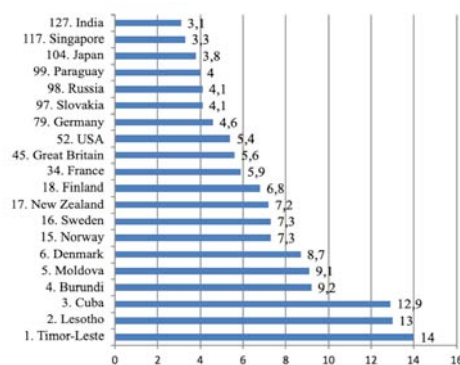


Figure 6 – Russia in the international ranking of countries according to the criterion of spending on education in gross national product.

Source: Compiled by the authors based on "Rating of Countries in the World in Terms of Spending on Education" (2019) [25].

Analysis of the information presented in Figure 3 allows us to draw the following conclusions.

There is no direct correlation between the share of expenses on education and the position of the corresponding country in the ranking of the human capital development index. Singapore, which is the leader of this rating, takes 117th place in terms of the share of investments in education in the GDP structure, while the top 5 countries include those with a predominantly low rating of human capital development. This circumstance is explained by the fact that, in addition to the actual value of the share of investments in education in the GDP structure, significant factors are:

1. The effectiveness of the development of invested funds, depending on the overall efficiency of the economy and the labor market, the level of development of the educational system itself and the degree of diversification of the economy [18]. In the leading economies of the world, investments in the field of education are being developed considering modern scientific and technical capabilities, in particular, using digital technologies and based on scaling up the use of the best educational products over a long period. For countries whose educational sphere is in a transformative state, for example, for the Indian economy, the development of human capital requires additional investments and targeted work to solve each educational problem [26]. This refers to the formation of a national educational tradition and the staffing of the teaching staff, the provision of literacy, the formation of educational infrastructure and the adaptation of foreign educational technologies to the specifics of the national labor market.

Education as the most important part of an economy of an intensive type of development is formed at the initial stages of its development. Accordingly, the maximum influx of investment in the education sector is observed at earlier stages, as evidenced by statistics on investment in education as a share of gross domestic product in developing economies and with significant growth potential, but with a low current level of capital development [19]. For the developed economies of the world, on the contrary, outstripping the growth of sectors of the economy-recipients of human capital is characteristic, which manifests itself as a decrease in the share of investments in education in GDP against the background of an increase in absolute indicators in education and an improvement in its quality.

On the whole, an analysis of the rating of the countries of the world on investment spending on education in gross domestic product confirms the thesis that there is a relationship between the share of investments in GDP and the development of human capital [30, 31].

In general, Russia takes 98th position in this indicator and lags behind most of the leading economies in the world, but is ahead of Japan (104th place) and Singapore (117th place).

Investments in the human capital of personnel at the micro-level can be estimated as average. In general, in Russia, companies that have existed on the market for at least 3 years have a system for organizing investment in human capital. Along with this, the allocation of financial resources for the development of human capital is most often not accompanied by a formalized economic justification, or such a justification is insufficiently developed [20]. An assessment of the structure of domestic companies according to the criterion of the degree of elaboration of proposals of HR units for the allocation of investments in the development of human capital of relevant organizations is presented in Figure 7.

Reasons for the lack of interest of domestic organizations in obtaining the most economically developed assessment of the effectiveness of investment in human capital is the institutional environment of domestic business. This environment has developed historically and is characterized by features described further in the article.

The significant role of informal relations between employees of organizations. This feature makes the rehearsal risks associated with the proposal by the HR specialist for consideration by the management unsuitable in terms of the expected economic efficiency of investing in the human capital of the project unacceptable.

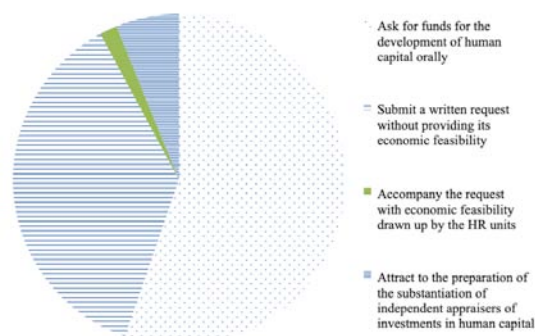


Figure 7 – Structure of domestic organizations in the forms of the validity of their corporate programs for the development of human capital.

Source: Based on V. V. Moiseyev (2017) [22].

Insufficient attention to the problems of a significant part of domestic enterprises, especially small and medium-sized businesses, to the issues of investing in human capital. On the one hand, this leads to the reluctance of management to allocate additional funds for the organization of research on the possibilities of developing human capital and assessing the optimal volumes and structure of investments in human capital [12].

On the other hand, considering the importance of human capital as a factor in the competitive development of a company, the absence of targeted investment policy in the field of human capital development periodically creates problems in its development, which requires an immediate response. The causes of such problems often turn out to be the failure of potential customers to complete the transaction until the company staff has a carrier specialist of a certain profession (competency). An example of such a problem is the situation when domestic enterprises entering the global market were forced to introduce into the staffing table the posts related to the organization of the quality management of employees.

The need to solve qualification problems in a short time makes a comprehensive economic study of the problem not always possible, and the decision is often made in the form of a brainstorming session by considering various proposals of employees.

There is an absence in most Russian organizations of a tradition of developing human capital and personnel with sufficient competence in the development of human capital of an organization. The reason for this situation is the reaction of the labor market and the education sector to the low, from the leading economies of the world, demand for the services of employees competent in the field of human capital development. Most often, in organizations in which the existence of a human capital development system is in place, the relevant powers are transferred to persons with other duties. So, the authority to organize a policy of investing in human capital is often assigned to the human resources department, HR structures and is used by employees based on the residual or as a resource for the more efficient performance of their main function. Responsible for the formation of investment policies do not always have an education in finance, which reduces the effectiveness of their activities in planning investments in human capital.

Figure 5 presents the results of studies of the competence of

authorized representatives in terms of planning investments in human capital for employees of domestic organizations. The study was conducted based on a survey of the heads of organizations and persons responsible for the development of the human capital of companies.

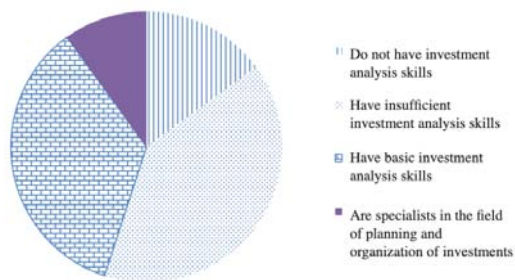


Figure 8 – Assessment of competence in matters of investment planning of persons responsible for the development of human capital in Russian organizations.

Source: Based on V. V. Moiseyev (2017) [22].

A separate aspect of investing in human capital in Russia is the creation of conditions for the adaptation of the human capital of workers to the demands of the digital environment. To solve this problem, investment in human capital by the forces of both the state and individual national companies is required. Foreign experience indicates that the development of human capital is carried out more intensively when the state invests in the formation of the conditions for its development, and companies invest in the format of supporting the efforts of employees to develop their human capital and their motivation to carry out appropriate efforts.

In Russia, the document that regulates the investment policy for the development of human capital is the Digital Economy Program, which is designed to form investments in human capital until 2025. Table 2 presents the main directions of the investment policy of Russia on the development of the human capital of existing and potential employees in terms of their adaptation to the digital economy.

Table 2: Directions and results of the Russian policy of investment support for the development of human capital in terms of its adaptation to the digital economy

	Investment direction	Result
1.	Formation of an environment and infrastructure ensuring the involvement of the human capital of scientists and educators in global competition	Involving the maximum number of carriers of human capital in the exchange of information based on the global platform "Makerspace"
2.	Implementation of programs in the field of compensation of expenses for the formation of IT competencies	Increasing the economic attractiveness of developing the competencies of employees in the IT-sphere
3.	Support for educational programs aimed at developing IT skills of the population	Overcoming the problem of technical illiteracy of certain groups of the population of Russia and their loss from the digital system of human capital development
4.	Formation in the country of a system of permanent development of IT literacy of the population	Solving the problem of "narrow spaces" in the system of development of the human capital of citizens

Source: Compiled by the authors based on "Digital Economy of the Russian Federation Program" (n.d.) [4].

6 Conclusion

In general, the current model of investing in human capital in Russia can be described as successful, as evidenced by Russia's continued leadership in many high-tech markets. This refers to arms markets, energy, and IT. However, a drawback of the current model is its lack of efficiency and scalability. Further growth in the economic and social efficiency of investments in human capital is possible if the conditions for the preservation of

human capital in the framework of the national economy and fuller use of the potential of its carriers.

The theoretical and practical significance of the article lies in the possibility of using the main scientific provisions and conclusions as a methodological basis for further study and development of new theoretical approaches to the problems of the formation and development of human capital.

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