

WAYS TO INCREASE PROJECT EFFICIENCY THROUGH HUMAN CAPITAL DEVELOPMENT

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Abstract: The article analyzes the structural elements of human capital and their impact on project efficiency, identifies existing problems and proposes effective solutions. The scientific novelty of the article lies in the systematic study of the relationship between project management and human capital, and also provides recommendations for its implementation in real practice in the modern conditions of the economy of Uzbekistan.

Keywords: Human capital, economy, Uzbek economy, leadership, projects, Gary Becker, Theodore Schultz, Jacob Mintzer, HRM, Prime Minister,

VISION

The role of human capital in ensuring modern economic development and social stability is increasingly growing. The experience of developed countries shows that the main driving force of economic growth today is not only natural resources or material factors, but also the human factor, that is, human resources with qualified, healthy and modern competencies. Human capital is understood as an educated, capable and productive workforce available to the state or organization. This concept includes not only the level of formal education, but also professional training, health, personal motivation, innovative thinking and active social participation in the life of society. The formation and development of human capital is closely linked to the system of continuous education, health protection policy, ensuring social equality and openness to modern technologies. Therefore, it is natural that improving the quality of human capital is recognized as a strategic priority for building a competitive economy.

From this perspective, it is particularly relevant that the success of projects in various fields is also directly related to human capital. Project performance is understood as the achievement of set objectives and results within the set deadlines, within the allocated budget, based on the established quality standards and in compliance with the principles of sustainability. However, in practice, many projects, especially initiatives related to infrastructure, education, healthcare, digital transformation or agriculture, do not fully achieve the expected results. Among the reasons for this, in addition to financial insufficiency or technical errors, human capital-related factors such as insufficient human resource readiness, uncertainty in the strategic decision-making of project managers, low motivation of participants, communication problems and skill mismatch play an important role. This situation brings the issue of human capital development to the center of project management.

METHODOLOGY

The object of the study is the project management system, and the subject is the role and influence of human capital in this system. The methodological basis of the article is analytical and comparative approaches. In particular, the reports of international organizations, national statistics, advanced project management theories and real practical examples are analyzed. The real impact of human capital on projects is also determined based on empirical data obtained through SWOT analysis, expert interviews and questionnaires. The conceptual approach is based on the theories of human capital and management by such scientists as P. Romer, G. Becker and R. Kaplan. At the same time, human capital is considered in the article as a strategic resource in the context of a systems approach and the paradigm of sustainable development. This allows us to present the results of scientific analysis not only at the theoretical level, but also in the form of recommendations focused on practical activities. Based on the fundamental principle of Uzbekistan "For the sake of human dignity", the article deeply examines the inextricable link between the development of human capital and increasing the success of projects.

RESULTS

The concept of human capital occupies an important place in modern economic thought. Although the concept was not first directly mentioned by the classics of economics, its foundations were found in their ideas about labor productivity and factors of production. In the late 19th and early 20th centuries, the problem of human capital found itself at the center of socio-economic analysis. In particular, economists such as Gary Becker, Theodore Schultz, and Jacob Mintzer created the scientific foundations of this concept and interpreted human capital as the main driving force of social development. Human capital is understood as a complex human potential consisting of knowledge, skills, health, experience, social connections, and personal motives that determine his or her participation in production. This form of capital, unlike material capital, is directly related to a person's personality and can develop or disappear over time. The main components of human capital include the level of education, professional qualifications, health, communication and social skills, digital literacy, cultural approach, and innovative thinking. From this point of view, human capital is not only an economic resource, but also the basis for social stability and cultural development.

A number of methods have been developed to measure and assess human capital, based primarily on quantitative and qualitative aspects. One of the most popular indices is the Human Capital Index developed by the World Bank, which takes into account the healthy development of children, access to quality education, and employment rates. This index assesses the productivity of the future workforce in different countries. The UNDP Human Capital Development Index (HDI) is also an important indicator for measuring human capital. It is based on components such as per capita income, life expectancy, and years of schooling. Another methodological approach includes indices that separately assess human capital components, such as health indices, education quality ratings, digital skills, and workforce skills. Some researchers also directly link human capital to economic outcomes and assess it based on investment returns. This approach, for example, compares the cost of educating a person with the future income that he or she can earn. Thus, human capital is viewed as a factor that has economic value at the individual, organizational, and societal levels.

Global experience has shown that human capital has a direct and indirect impact on economic development. For example, in the Scandinavian countries, large investments in

education and health care have led to their economic stability and high innovative potential. Finland, Norway and Sweden have achieved sustainable human capital formation through equal opportunities and high-quality programs in the education system. These countries have high labor productivity and the share of the service sector in GDP, which is directly related to the maturity of human capital. Similarly, the experience of South Korea is noteworthy as an example of economic growth based on education and technology. Since the 1960s, the Republic of Korea has achieved industrialization, expanded export potential and technological independence through investments in human capital. Today, it occupies a leading position in the field of artificial intelligence, biotechnology and semiconductors. This is due to the high qualification of human resources, professional training and research-oriented policies.

Based on the above, the theoretical foundations of human capital are becoming increasingly relevant in the modern global economy. The quality of human capital in any society directly affects not only economic efficiency, but also the level of innovative development, social stability and competitiveness. Therefore, today, the consideration of human capital as a strategic resource and its systemic development has become one of the priority tasks for any country. Investments in human capital are investments in the potential of the future generation, the development of the country and a sustainable social system. This approach has proven itself not only theoretically, but also practically.

Project management plays an important role in modern economic and social processes and is one of the main tools for the effective implementation of any initiative. Such a management system ensures the success of a project through the optimal distribution of resources, the development of clear strategies for achieving goals and the coordination of collective activities. From this point of view, human capital plays a key role among the factors determining the effectiveness of any project. After all, any technological, financial or organizational resources cannot fully function without the potential of the people who manage them. The human factor is not only an executive force, but also a source of initiative, the ability to solve problems, communication skills and strategic thinking. Four main criteria are usually used to evaluate the effectiveness of a project: time, cost, quality and sustainability. The time criterion refers to the completion of project stages within the established deadlines. Delays in deadlines not only lead to overspending of resources, but also reduce the confidence of project participants. The cost criterion is related to compliance with the budget allocated for the project and the prevention of excessive financial losses. One of the most important issues related to human capital here is the development of effective cost management with the participation of qualified specialists. The quality criterion refers to the degree of compliance of the received product or service with technical, functional and aesthetic requirements. Quality assurance directly depends on the knowledge, experience and work culture of the project team. The last criterion - sustainability - is determined by the long-term impact of the project, its environmental and social balance. To ensure such sustainability, strategically thinking and socially responsible human capital is necessary.

The potential of the personnel and their role in the project process are of great importance. Each project requires teamwork to achieve specific goals. The professional training, experience, problem-solving skills and teamwork culture of individuals in the team directly affect the outcome of the project. For example, the project manager, as a person making strategic decisions and managing the entire team, must have high-level leadership qualities. In addition

to deep knowledge and technical skills in their field, specialists must also demonstrate openness to innovation and adaptability. Among the reasons for the failure of many projects is the selection of personnel and the incorrect assessment of their potential. In addition, the ability to quickly solve problems that arise during the project, adapt to unforeseen circumstances and establish effective communication are also quality indicators of human capital.

Human resource management strategies are another important aspect that influences project efficiency. Today, human resource management (HRM), project management (PM) and talent management are considered integrated. The main goal of HRM is to improve personnel efficiency through selection, training, development and motivation. HRM processes within a project include team building, role definition, productivity monitoring and creation of motivation systems. For example, if the achievements of project participants are regularly assessed and their activities are encouraged in tangible and intangible ways, this in turn increases commitment to the project.

Project management (PM) involves effective project management, maintaining a balance between time, resources and goals. The key resource here is human capital. The project manager must have deep knowledge not only in technical aspects, but also in human resource management. He or she identifies the potential of personnel, distributes it by roles, organizes teamwork, manages risks and builds partnerships. In addition, the project manager must be able to master modern management technologies (for example, Agile, Scrum or Lean) and adapt them to the characteristics of the team.

Talent management is a priority, especially in competitive projects. This strategy develops mechanisms to identify the most talented and promising specialists participating in the project, ensure their professional growth, management and retention. Talent development, especially in long-term and innovative projects, serves to achieve higher-quality results in the future. In addition, this approach reduces the transfer of talented specialists to other organizations, maintains the stability of project processes and promotes institutionalization.

DISCUSSION

The role of human capital in the economic development of Uzbekistan has risen to a strategic level in recent years. Within the framework of the reforms implemented in the country since 2017, the development of human capital, in particular, the modernization of education, healthcare and the labor market, has been identified as one of the priority areas. The priority principle put forward by the President "In the name of human dignity" reflects the state policy aimed at human capital. Step-by-step reforms have been implemented in the education system, 11-year general education has been restored, the number of higher education institutions has increased from 77 in 2017 to more than 200 by 2023, including the number of universities created on the basis of international cooperation. In the field of healthcare, within the framework of the Health 2030 program, preventive examinations of the population have been strengthened, the quality of perinatal and specialized medical services has been improved. However, along with these achievements, there are also problems. Regional differences in the quality of education, insufficient teacher qualifications and working conditions, and a shortage of personnel in the health care system, especially in remote areas, hinder the full formation of human capital. According to the Ministry of Finance's 2023 report, although Uzbekistan spends 6.2% of its GDP on education and 4.5% on health care, these figures still lag behind international best practices.

The impact of human capital is clearly visible in major projects in the public and private sectors. For example, the project "Modernization of the Tashkent public transport system" not only updated the infrastructure, but also increased the level of competence of specialists working in this area, introduced an electronic ticketing system, and retrained personnel taking into account foreign experience. As part of this project, the number of public transport users increased by 30 percent, and a significant increase in the productivity of drivers and technical personnel was noted. In the private sector, projects implemented by Artel to improve production efficiency deserve attention. Training of the company's employees in foreign technology parks contributed to increasing their technical knowledge and production culture. As a result, the export potential of the company's products expanded and its internal technological upgrade was ensured. Also, as part of the "Digitalization of farms" project, implemented in the agricultural sector, training courses were organized for agronomists, accountants and technical specialists, which increased their digital literacy. According to the Agency for Innovative Development of the Republic of Uzbekistan, in 2022 the number of organizations cooperating with technology parks and innovation centers doubled, which confirms the effectiveness of investments in human capital.

Significant improvements are currently being observed in terms of the influence of digital technologies, innovations and the education system on projects. Within the framework of the Digital Uzbekistan - 2030 program, the use of digital solutions in public and private sector projects is expanding. In particular, an e-government system, distance learning platforms, online monitoring and evaluation systems are being introduced. For example, through the Bilim.uz and Ziyonet platforms, schoolchildren and students expand their opportunities for independent education. This, in turn, opens the way to a new model of human capital formation: self-development, independent learning, technological literacy and digital skills are becoming the main criteria. Another important project related to innovation is supporting youth startup ideas through the IT-Park platform and directing them to foreign acceleration programs. In 2023, IT-Park resident companies exported services worth 1.2 billion soums. This result was achieved through investments in human capital - grants for training programmers, English language training and obtaining international certifications.

The development of human capital is one of the important strategic areas for increasing the efficiency of projects, and in this area, such factors as professional training, continuous education, digital competencies, flexible skills, the formation of leadership qualities and motivation, as well as the integration of human resource management and monitoring systems into project processes are of particular importance. After all, human capital is considered not only as a set of knowledge and skills, but also as human potential capable of adapting to changing conditions, thinking creatively and working in a team. Therefore, the success of any project directly depends on the quality of human capital. Systems of professional training, advanced training and retraining of personnel are one of the main tools for ensuring the competitiveness of specialists participating in projects. In the conditions of today's rapidly changing labor market, professional skills quickly become obsolete, and the introduction of new technologies and working methods requires specialists to constantly update themselves. Therefore, modern project management systems introduce programs for continuous training and retraining of personnel. For example, according to the 2023 World Economic Forum report, by 2025, at least 50% of the world's workforce will need retraining courses. In Uzbekistan, professional training of young people and the unemployed is organized through "Vocational

Schools", "Monocenters" and "Ishga Markhamat" centers. In 2023, more than 160 thousand citizens were trained in monocenters in various specialties, 45% of whom were employed. This situation shows how important investments in human capital are to improve the quality of personnel participating in projects and, consequently, ensure their effectiveness.

The development of modern digital competencies and soft skills to improve the quality of human capital has become an integral part of global and national projects. Digital competencies, in particular such skills as computer literacy, programming basics, online analysis and visualization, use of artificial intelligence tools, are important requirements of a modern project environment. At the same time, soft skills such as communication, teamwork, problem solving, flexibility, leadership and time management are the main conditions for successful participation in project processes. According to the International Labor Organization, more than 70 percent of projects successfully implemented by large corporations were implemented with the participation of personnel with soft skills. In Uzbekistan, the project "Digital Skills for the Digital Economy" was implemented in this direction, and by the end of 2023, more than 250,000 young people have completed free training in digital literacy and programming courses. Such initiatives will form universal competencies of personnel, ensuring their successful participation not only in traditional projects, but also in projects based on modern technologies.

CONCLUSION

Based on the analysis, theoretical views, practical examples and statistical data on the topic "Ways to improve project efficiency through human capital development", it can be concluded that human capital should be recognized as the most important and strategic resource in modern economic and social development. Any project - whether it is an infrastructure project financed by the state or an innovative project implemented within the framework of a private sector initiative - relies primarily on the quality, potential and management system of human capital. After all, although the criteria of time, cost and quality are technically important among the factors determining the success of a project, it is the human factor that is the main force implementing these factors. Taking this aspect into account, there is a need for a deep understanding of the role of human capital and strategies for its development in order to improve the efficiency of projects.

First of all, the concept of human capital is not limited to education and healthcare, but requires a comprehensive, systemic approach. The level of education, professional qualifications, social skills, commitment to a healthy lifestyle, digital literacy and personal motivation are all components of human capital. It is the combination of these elements that determines the effectiveness of any project team. Therefore, through the development of human capital, it is possible to ensure the stability, quality and effectiveness of project management. As noted in the article, despite certain achievements in this area in Uzbekistan, there are also many problems. In particular, regional inequality, qualitative differences in the education system, limited digital skills and uneven distribution of health services across regions hinder the full formation of human capital. In such conditions, the development of a special approach to working with human resources within each project and its systematic application is of great importance.

The systems of professional training, retraining and advanced training ensure the constant renewal of personnel participating in projects. This process is of strategic importance, especially in the context of technological progress, when the obsolescence of traditional

professions and skills accelerates. Therefore, the expansion of the network of Ishga Markhamat mono-centers and vocational schools in Uzbekistan serves to renew human capital. This, in turn, creates the basis for the activities of specialists participating in projects in accordance with modern requirements. Through the development of digital competencies and soft skills, universal characteristics of human capital are formed, that is, individuals who are able to quickly adapt to any project environment, think creatively, work in a team and have an innovative approach. This increases the level of success of projects, especially in the services, IT, education and healthcare sectors.

The concepts of encouragement, motivation and leadership are also factors that directly influence the effectiveness of the project. Especially when working with human capital, the correct selection of material and non-material incentives increases the initiative of employees and strengthens their attitude to work. Highly motivated employees not only perform their duties well, but also actively participate in achieving the overall goals of the project. This is clearly reflected in the activities of individuals with leadership potential. Therefore, it is important to integrate human resource management (HRM) and talent development (talent management) systems within each project. The experience of developed countries also shows that projects with effectively managed human capital not only bring economic benefits, but also ensure social trust, stability and innovative potential.

Monitoring and evaluation systems allow you to determine the dynamics of human capital development in a timely manner and take the necessary corrective measures within the project. By assessing the potential of employees for each project, determining their competencies and analyzing the effectiveness of training, you can manage the project from the point of view of human resources. Thanks to HR platforms developed on the basis of modern technologies, this process is automated and becomes more efficient. Therefore, it is necessary to consider human capital not only within the framework of HR policy, but also more broadly - as a project strategy, integrating it into each stage and constantly analyzing through monitoring.

In general, in the conditions of Uzbekistan there are sufficient opportunities to improve the effectiveness of projects through the development of human capital. This process can be further deepened through the reforms carried out in the country, international cooperation programs, the introduction of innovative technologies and the modernization of the education system. However, it is necessary to systematically analyze the existing problems and strengthen the connection between human capital policy and the practice of project implementation. Human capital is not only a resource, but also the basis for any changes, progress and stability. Therefore, investments in human potential, its preservation, development and stimulation remain an important factor in ensuring the success of any project.

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Links:

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<https://www.worldbank.org/en/publication/human-capital>
2. UNDP – Human Development Index (HDI):
<https://hdr.undp.org>
3. World Economic Forum:
<https://www.weforum.org>
4. Official website of the President of the Republic of Uzbekistan (for decrees and orders):
<https://president.uz>
5. Agency for Innovative Development of the Republic of Uzbekistan:
<https://mininnovation.uz>
6. Ministry of Employment and Labor Relations of the Republic of Uzbekistan:
<https://labour.uz>
7. Official website of IT Park of Uzbekistan:
<https://it-park.uz>
8. About monocenters "Ishga Markhamat":
<https://monomarkaz.uz>