

INVESTMENTS IN HUMAN CAPITAL AND ITS EFFECTIVENESS

Natela Tsiklashvili¹, Professor, Doctor of Economics;

Nato Jabnidze², Associate Professor, Doctor of Business Administration;

Tamar Beridze³, Assist. Professor, Doctor of Business Administration and

Tamila Turmanidze⁴, Assist. Professor, Doctor of Economics

^{1, 2, 3, 4}Batumi Shota Rustaveli State University

Abstract. Modern global and innovative world, effective use of the workforce is a necessary factor for the development of a competitive economy and high rates of economic growth. This is impossible without the development and improvement of human capital and modern education system. Advancement of science, technology, medicine and other fields requires appropriate development of human capital. We consider particularly important the investments made in human capital according to different (especially tourism and agricultural) sectors and the study of their effectiveness.

The purpose of our study is to justify the need to invest in human capital and to investigate its effectiveness, for which we conducted a survey of employers and employees in the field of agriculture and tourism about their attitude towards professional growth measures (training/seminars); the role of the state in this direction is also important. In the research process, we used statistical analysis and qualitative research methods. The conducted research showed us that. Holding of training/seminars for improving the qualifications of employees is without compromise, but it is becoming difficult to find funding. There is a mixed attitude on the part of the state and employees, while 57% of these measures are financed by employers. The investment made in this direction has an economic and social effect. Increases employee motivation and productivity, which has a positive impact on both the company's and employee's income.

Effective management of investment in human capital contributes to the development of creative social actions.

Based on the actual data of the developed countries, it was found that there is a direct relationship between the expenditure on education and the economic growth in the long term. As a result of acquired knowledge and experience, in the presence of highly developed human capital, productivity and profitability increase.

International indices and rankings are one way to measure a country's progress in various directions; however, it should be noted that they do not accurately reflect the current situation in the country. The human capital index (0.57) is considered a good level, however, in reality; the quality of the databases used in their calculation reduces the accuracy of the indices and ratings.

Key words: human capital, investments in human capital, education, labor productivity.

JEL code: E24, I25, D24, Z32

Introduction

In the modern global and innovative world, effective use of the workforce is a necessary factor for the development of a competitive economy and high rates of economic growth. This is impossible without the development and improvement of human capital and the modern education system.

Effective management of investment in human capital contributes to the development of creative social actions. This process is based on determining the economic value of education, its economic assessment, resource allocation, planning and management of state policy and strategy.

The purpose of our study is to justify the need to invest in human capital and and to investigate its effectiveness. The purpose of our research is to substantiate the need to invest in human capital and to investigate its effectiveness

Based on the purpose of the study, we set the following tasks:

¹ E-mail: natia.tsiklashvili@bsu.edu.ge

² E-mail: jabnidze.nato@bsu.edu.ge

³ E-mail: beridze.tamar@bsu.edu.ge

⁴ E-mail: tamila.turmanidze@bsu.edu.ge

- 1) to investigate the attitude of employers and employees working in two important areas of the economy of Georgia - agriculture and tourism - towards events related to professional growth (training/seminars);
- 2) to identify problems and determine possible solutions;
- 3) to highlight the regulatory role of the state in this regard.

Statistical analysis and qualitative study methods were used in the study process.

The object of study is Human capital index components and education/professional skills.

A scientific innovation of our study is a critical analysis of study materials of employers and employees in the field of tourism and agriculture of Georgia and, based on this, revealing the cause-and-effect relationships between investments and income in human capital.

Research results and discussion

People engage in certain labour costs to receive certain incomes in the future. Costs determining future monetary and material income are evaluated as investments in human capital. Such investments include spending on education, medical services and healthcare, training and upskilling at the organizational level, job seeking and migration (Saite I., 2021).

It should be emphasized that the size and effectiveness of human capital depend on the level of education of individuals and their ability to act. In the developed countries of the world, issues of the effectiveness of investments in education based on the cost-benefit ratio have been developed.

Johnson & Johnson (J&J) admits that health is one of the essential components of human capital. That is why they grant great importance to the health and well-being of their employees.

J&J offers employees a free course called Energy Performance. During this course, employees learn about healthy eating that increases energy. The course led to an increase in the labour productivity of employees and a decrease in personnel turnover rates.

"Our people are our most important asset," this is one of the fundamental principles of Adobe. The company pays up to USD 1,000 per year to support learning and development opportunities through conferences, books, online courses or webinars.

Continuous innovation cannot be sustained only by technology. Google is one of the most innovative companies all over the world. The tech giant fosters a culture of innovation. One of Google's 8 principles of innovation is "seeking ideas everywhere," where employees are encouraged to openly share their ideas. Another principle urges Google's employees not to be afraid of failure. This encourages employees to take risks and present their innovative ideas without fear of failure. Google invests in its human capital because it understands that people are the catalyst for growth and innovation (Bridgit, 2021).

These examples illustrate the power of developing individual skills and abilities. Human capital is one of the most important drivers of growth and innovation.

The basis for calculating the indicators of the economic efficiency of investing in human capital is the assumption that investments in human capital increase the labour productivity of workers, which, in turn, leads to an increase in income.

About determining the value of human capital, there are the following problems to be solved:

- 1) determination of human resources as production factors;
- 2) determining the value of human capital;
- 3) determination of depreciation and amortization of human capital.

The economic effectiveness of education is defined as the ratio of direct monetary income in education to the costs associated with its reception. Education increases the effectiveness of various types of human activities in the labour market and beyond its bounds.

The impact of education on the development of society as a whole is important, especially in the aspect of social integration and society stabilization. If we take into account all types of non-monetary income earned from education, we can say that education is characterized by social effectiveness. (World Bank Group, 2018)

In addition to the benefits to individuals, investment in human capital has benefits for the economy as a whole. The collective economic impact will be reflected in the rate of economic growth.

A significant part of human life takes place outside the labour and capital markets. He/she spends a lot of time on the existence and resting. The education received has a positive effect on health, and also provides for a more rational approach to the use of free time. The impact of education on the development of society as a whole, especially in terms of social integration and stabilization of society is also worth noting. If we consider all types of non-monetary income earned from education, then we can say that education is characterized by social efficiency.

International indices are used to determine the level of development of countries and international ratings, however, it should be taken into account that indices and ratings cannot accurately reflect the current situation in the country even in the area which they are an assessment tool for.

In order to assess the level of human capital development and the general situation in this field, the human capital development index accepted in international practice is used, which is a general indicator for assessing the level of human development in the country.

The Human Capital Index (HCI) evaluates the amount of human capital that a child born today is likely to have accumulated by the time he/she turns 18. This index is a modern measure developed by the World Bank that focuses on the performance and productivity of the next generation.

Human capital has an economic value. It consists of knowledge, skills and health that enable people to fulfil their potential as productive members of society.

Various approaches have been developed to measure human capital. Two approaches are mainly discussed in the economic literature. One of them relies on the assessment of this index according to the indicators. The second one is based on the reflection of the monetary aspects of human capital (both the expenses directed to the development of human capital and the incomes, the growth of which can be influenced by human capital).

In other words, the index measures the distance separating each country from the threshold level - that is, from ideal health and full education of a child born today. The index describes the state of the country in terms of labor productivity of future generations of workers. Initially, 28 countries with different regions and different incomes participated in the development of this project (including Georgia). To date, the index is developed for 173 countries, and the countries involved in this project not only make calculations but also determine national priorities to ensure the growth of human capital. The index takes values from 0 to 1. For a country where a new-born is provided with an ideal level of education and healthcare, this indicator will be equal to 1. For comparison, in the USA this index is 0.70, in Canada - 0.80, in Germany - 0.75, in Finland - 0.80, Singapore has the highest HCI in the world and its value is 0.88. According to 2020 data, the indicator of Georgia is -0.57. (World bank Group, 2020).

Globally, 56% of all children born today will at best half of their potential productivity in adulthood; and 92%, at best - 75% of their possible productivity.

A child born in Georgia today, with full education and perfect health, will reach 57% of its potential productivity in adulthood, which is relatively below the average for the Eastern Europe and Central Asia region, but slightly higher than the average for countries with higher incomes.

According to the components, the indicator of Georgia is as follows:

- probability of reaching the age of five: 99 out of every 100 children born in Georgia reach the age of 5;
- a number of years of school education: in Georgia, a child who starts education at the age of 4 is expected to complete 12.9 years of schooling by his 18th birthday;
- harmonized test assessment scores: in Georgia, school students receive 400 points on a scale, where 625 have a high result, and 300 have a minimum result;
- school years adjusted according to education: taking into account the actual education of school students, the estimated number of school years is only 8.3 years;
- the rate of reaching old age throughout Georgia - 85% of 15-year-old children will reach the age of 60. These statistics indicate the health risks that a child born today may face under current conditions (World bank Group, 2020);
- healthy development (without delays)- 2020 data on delays in development is not available for Georgia. According to 2017, 89 out of 100 children develop without delays. 11 out of 100 children have delay in development and thus face cognitive and physical risks that can last for a lifetime.

Accordingly, the methods of measuring human capital are diverse and reflect the in-depth nature of this characteristic.

Therefore, it is important to create the necessary conditions for the development of human capital, and the state should focus its attention on this factor to get results in the future.

Along with the development of society, all areas of its activity are developing. Advancement of science, technology, medicine and other fields requires appropriate development of human capital. We consider it particularly important to study the investments made in human capital according to different fields and their effectiveness.

In modern conditions, it is urgent to carry out study in the direction of agriculture and tourism, because currently, the level of labour productivity in the agricultural sector of the country is low. Factors of production are used irrationally. It should be noted about the low qualitative indicators of human capital in rural areas, which is causally related to rural social & economic problems. At the same time, in recent years, the development of tourism has become one of the priority fields of the country's economy, but only a small part of the tourism potential is used, the service culture is low, and depending on the situation, it is necessary to take measures in terms of human capital development.

It was interesting for us to find out how investments in education in these fields were evaluated in terms of the qualitative indicator of human capital and increase in income. We developed a questionnaire for employees and their employers/companies separately and conducted a survey in the field of tourism and agriculture.

We interviewed 88 employers/companies. 65% of respondents were top managers, and 35% were direct owners. The organizational-legal form of the surveyed companies was diverse. According to the annual income, 70% of the surveyed companies earn more than GEL 500 000, 25% - more than GEL 100 000, and 5% - up to GEL 100 000-500 000.

50% of the companies presented have micro enterprise status, 30% - medium enterprise status and 20% - large enterprise status. The vast majority offer training seminars for staff to improve their qualifications. 45% of them do it monthly, 35% - once every 6 months, 15% - once a year, and only 5%

do not conduct training for employees. 70% of employers finance training themselves, 20% - through various international organizations and foundations, and 10% - by employees themselves. During this question, the employers exclude the role of the state as a sponsor.

Depending on the company, the cost incurred for training one employee during the year is various. Only 20% spend more than GEL 900, 25% - GEL from 300 to 600, 10% - from 600 to 900 GEL and 45% spend GEL 300. on average. The answers seem to depend on the legal & organizational form of the companies and the number of employees. Despite the fact that the employers surveyed have different approaches to the amount and frequency of training costs, unanimously (100% of the respondents) consider it necessary to train employees in order to improve their competencies.

In their comments, the interviewees separate employee training according to the fields. It was revealed that it is important for employers not only to improve narrow professional skills (in particular, in the direction of service, and international standards of hotel operation) but also to develop general skills (in the direction of management, prompt problem solving, communication improvement, general standards and procedures of the company). In the comments, it was also pointed out that employees are doing internships abroad at different times of the year. A large number of employers believe that spending money to improve employee motivation and skills always brings positive results and has a direct impact on the quality and forms of service, as well as on the company's revenue growth.

The attitude of the employees towards professional training shall be unequivocally positive, and their economic or social effect shall not be disputable. However, a study conducted with employees showed different results.

During the study, the subject of our interest was the respondents' sector of employment; age; gender; status; the number of employees in the company. We also asked the following questions: How often do you attend training? Who finances the training? Have the completed professional training helped you in your career advancement and how? Have the training helped you to increase your work productivity (please comment)? Do you think training is necessary?

220 respondents took part in the study.

55% of respondents belong to the tourism sector, and 45% - to the agriculture sector.

41% of respondents have been employed for one year, 43% have been employed for 1-5 years, and 14.9% have been employed for more than 5 years. The ageing index of the respondents was as follows: 91% are of 20-29 years old, 4.5% are of 30-39 years old, and 4.5% are of 40-49 years old. 12% of employees belong to large businesses, 34% - to medium businesses, and 54% to small businesses.

The respondents had the opportunity, at the same time, to choose several answers to the question "How does the company provide the opportunity to raise your qualifications and develop?". 18% of the respondents think that the company does not care about raising the qualifications of its employees at all. 52% of the respondents answer that the company constantly plans internal training to develop professional or other competencies. 10% say that the company allows them to take additional study leave and to benefit from the financing of preparatory courses and exams. 16.4% answer that in order to share knowledge and experience, the company allows them to go and work in the company's branches abroad.

It was interesting to us how the companies tried to raise the motivation of the employees. The respondents had the opportunity to choose several answers at the same time. The study results are quite interesting; 67.2% think that the organization creates a pleasant working environment; 37.3% say that the organization plans some activities/meetings to build corporate spirit, including in non-work environments; 40.3% think that the organization properly assesses and encourages the results achieved

by the employees; 13.4% say that the company does not care about raising the motivation of employees at all.



Source: Constructed by the authors based on the survey results

Fig. 1. Funding of the trainings (according to survey results)

According to the training attendance frequency, the answers were as follows: 33% - every month, 30% - every 6 months, 25% - once a year, and 12% never attended the training. In 57% of cases, the employer financed the training that can be evaluated positively; 18% say that international organizations/funds financed the training; 9% - the training was financed by the state, and 16% financed the training with their own funds (Figure 1).

40.3% of respondents are ready to pay up to GEL 300 for training, 32.8% will pay GEL 300 to 600, and 3% answered that they could pay GEL 600 to 900; 23.9% think that they will not pay for the training at all.

It was interesting for us whether the training helped to increase labour productivity and income. It turned out that it helped in 66% of cases, more or less - in 28.4% of cases. And 4.5% believe that it did not help.

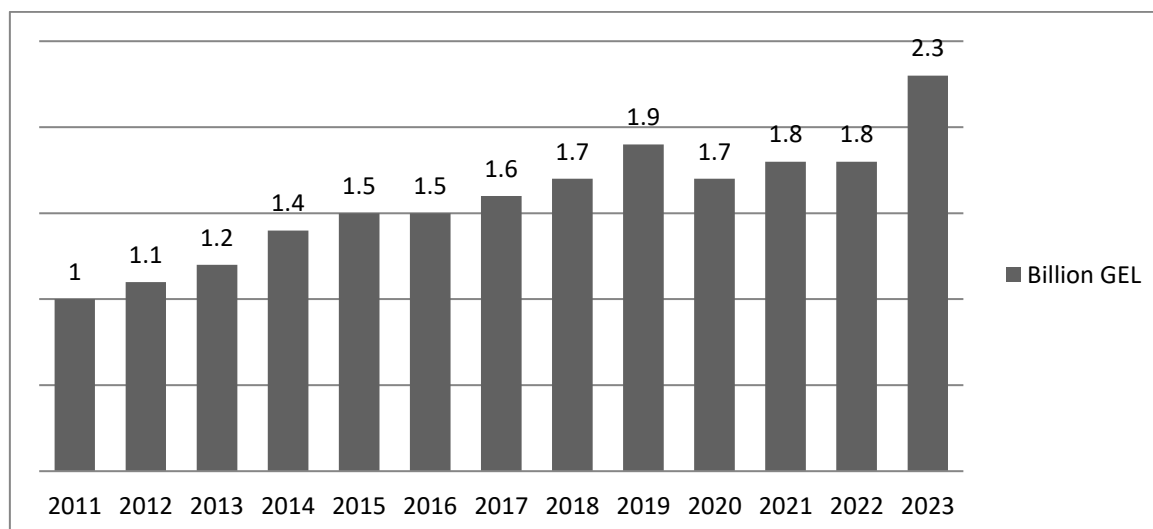
Despite the different attitudes, the vast majority (86.6%) believe that the need for qualification raising and development training courses for professional and career growth is quite high.

Respondents could also leave comments and some of them were especially interesting (see below).

- "I think one of the best ways to increase human capital and its effectiveness is to conduct training."
- "The knowledge/skills gained during the training help us in our future career development, and most importantly, the communication with more experienced, professional people and trainers motivates us to take many more successful steps in the field where we are employed."
- "It would be good if motivational activities will become more active that will increase the working capacity of the staff."

Thus, the study carried out clearly showed that there are grand problems in this regard. Namely, some employers do not consider it necessary to make expenses to raise the qualifications of the employees. And 1/3 of the employees would not have been able to raise their qualifications without the funds received from international funds and the self-financing of employees (20%+10%). The opinion of 24% of employees that they should not pay for their professional growth is unacceptable. However, we must take into account the low social background in the country and the low employee wages, which in many cases are barely enough to meet the minimum needs of the family. In the agricultural field, the employer (farmer) is often self-employed; he is advised to take training courses, rather than spending on temporary/seasonal employees and then share the developments with others. In general, the aspirations of rural residents

towards professional growth and innovation are less. Therefore, they prefer to use traditional approaches instead of high-tech, innovative methods.



Source: Constructed by the authors based on state budget of Georgia 2011-2023

Fig. 2. Expenditure on education (billion GEL) in 2011-2023*

Based on the study results we were once again convinced of how necessary and important it is for employers to take care of the professional development of their employees. The investment made in this direction has an economic and social effect. It increases the employee's productivity, which has a positive impact on both the company and the employee's salary, and everything combined has a macroeconomic effect - economic growth.

Although for respondents the state has a passive role in investing in education, state spending on education actually tripled during 2010-19 and reached GEL 1.8 billion. As a result, the share of education in total state expenditure increased by 3.7 percentage points to 11.9% in the same period. A half of the funding from the budget allocated for education in 2019 was spent on the general education level, 7.5% - on higher education and only 2.8% - on professional education. The rest spending was for preschool education (15.3%), infrastructure projects (14.7%), science promotion (3.4%) and other support programs (6.5%).

In Georgia, state spending on education increased from 2.8% to 3.6% of the GDP in 2010-2019. Despite this positive dynamic, this index is low compared to Western European countries, where education costs are more than 5% of GDP. According to the Budget Code of Georgia, since 2022, the expenditure on education has increased to 6% of the GDP in order to improve the quality and efficiency of the education system (Figure 2).

The total expenditure on inclusive education (which implies the inclusion of persons with disabilities in the educational process) increased by 33% annually on average for eight years and reached GEL 27 million in 2021, and it increased up to GEL 35 million in 2022 (1.5% of the total cost). (State budget of Georgia, 2011-2023).

The investments are distributed according to sectors or individual investment projects. Economic and non-economic favourable environmental conditions of distribution, the state's social & economic policy and tasks are primary factors of investment effectiveness.

The factors determining the overall effectiveness of investments at the macro-economic level throughout the country are acceptable social, political, cultural and ecological effectiveness conditions (income of the population, standard of living, political stability, ecological security, etc.).

In general, when discussing investment efficiency factors, we can distinguish the below traditional types, namely:

- innovative process, i.e. use of science and technology achievements;
- level of investment process management and organization, use of modern management methods; qualification of personnel.

Operation of the economy self-regulation mechanism and the state regulation mechanism; natural conditions; the nature and degree of use of the mentioned factors (level, scale) determine the effectiveness of investment resources for individual projects or the entire country.

Personnel qualification is directly related to scientific & technological progress and management improvement. Modern techniques and technology cannot be used, and progressive methods of management and organization cannot be mastered by personnel without proper qualifications - workers, specialists (engineer & technical staff). In general, in all fields, the qualification of workers - "moral wear" (obsolescence of existing knowledge) is notable. Therefore, the training of new staff requires continuous attention to the progress of modern science and technology.

As for the - state regulation mechanism, it mainly plays a supporting role in raising the economic efficiency of investments. Its role is more important in terms of increasing the social, political, cultural and environmental impact of investments. Here, investment projects are selected based on appropriate methods, especially the method of expert assessment. The state's policy should determine the directions of investments in the mentioned areas, which should be done following the needs of the society, that is, to obtain a social effect. In most cases, the largest part of investments is directed to industry, especially small investments in agriculture. The same should be said about the directions of the service sector. Such a structure of investments cannot contribute to the dynamic and proportional development of the economy, even the growth of the final result of investments throughout the country, therefore it needs improvement.

Conclusions and recommendations

- 1) It is important to develop the best skills in the formation of human capital. Skill generation is a time-consuming process; therefore, the whole process of human capital development requires a long-term policy.
- 2) Effective management of investment in human capital contributes to the development of creative social actions. This process is based on determining the economic value of education, its economic evaluation, resource allocation, planning and management state policy and strategy.
- 3) Georgia has an average index of human capital (0.57) in the world ranking, the condition of individual components of the index should be considered. The human capital index is an important tool for evaluating human capital, however, the accuracy of the indices and ratings is reduced by the quality of the databases used in their calculation. Databases and cross-country comparability are a significant problem for developing countries due to imperfect methodology and databases.
- 4) A study on how the employers and employees assessed the investments in education in terms of the quality of human capital and the increase in income was conducted with employers and employees in the agricultural and tourism sectors. Holding of training/seminars for improving the qualifications of employees is without compromise, but it is becoming difficult to find funding.
- 5) For 57% of the respondents, the employer financed the trainings, which can be evaluated positively. But the passive role of the state (only 9%) and 16% self-financing of employee training is not the desired result.

6) Despite the fact that the state annually increases budget funding for education, it is still insufficient, and both employers and employees point to the lack of public spending.

From the results of the research, we were once again convinced of how necessary and important it is for employers to take care of the professional development of their employees. The investment made in this direction has an economic and social effect. It increases the productivity of the employee, which has a positive impact on the income of both the company and the employee, raising his standard of living. Everything goes together to the macroeconomic effect - economic growth.

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