# EDUCATION POLICY AND KNOWLEDGE BASED ECONOMY: CASE OF GEORGIA

## Dr. Natia Zedginidze-Jishkariani, Shalva Gachechiladze Kutaisi International University

DOI: https://doi.org/10.52320/svv.v1iIX.353

### Abstract

Georgia is gradually shifting to a Knowledge Based Economy (KBE). The following study examines the relationship between the government's expenditure on education and enrollment rates in Georgia, which focuses on the ongoing education reforms in the country. The research aims to assess the extent view to which increased public investment in education has influenced enrollment rates across the three levels of education (primary, secondary, and tertiary levels). Due to a lack of historical and inaccurate statistics from 1990 to 2006, a longitudinal analysis is conducted data from 2006 to the present day, with particular attention to two distinct periods: 2006–2016 and 2016–present, it is also important to note that Georgia has joined Bologna Process in 2005 and establish EHEA (European Higher Education Area). Methodologically, regression analysis is used to quantify the impact of educational spending on enrollment rates, while controlling for other socio-economic variables. The findings reveal a positive, albeit delayed; correlation between education expenditure and enrollment rates increased, with the most significant improvements observed in the post-2016 period, coinciding with intensified reform efforts and the government's prioritization of education. However, the study acknowledges that it may not fully capture the true dependency of enrollment rates on spending, as other influential factors, such as demographic shifts and economic conditions, are not included. Despite these limitations, the analysis provides a partial yet substantive explanation of the core relationship between government spending and enrollment rates.

Keywords: education policy, reforms, public investments, knowledge-based economy, Georgia.

### Introduction

Since 1980, the knowledge-based economy as a new paradigm of economic development has become the focus of business, government, and academic sectors. Research on the knowledge economy has mainly focused on the mechanisms of knowledge creation and knowledge diffusion, the role of knowledge in economic growth and income contribution, the creation of knowledge-based linkages between companies, and the state-business-society relationship. It is widely believed that the knowledge economy is emerging in developed, advanced economies, but there are still no unique, uniform definitions of the knowledge economy. In an article about the knowledge-based economy, Walter and Kaisa (Snellman, 2004) define the knowledge economy as production and service-based knowledge-intensive activities. The authors define the concepts and the era of the knowledge economy by highlighting the following central pillars of KBE: knowledge, information, and technologies. According to the authors, KBE is characterized by the centrality of knowledge and information in driving economic growth and innovation (Snellman, 2004).

**Research problem.** Despite the notable increases in educational funding and numerous reform initiatives that were held over the past 15 years, there is a lack of empirical research examining the direct effects of these investments on educational outcomes in Georgia, it is also worth mentioning that such effects need time to appear on actual real-life environment. This study seeks to fill this research gap by exploring the correlation between heightened educational expenditure and its subsequent effects on enrollment figures. Understanding the relationship between these variables is crucial for assessing the efficacy of educational policies and ensuring that financial resources are allocated efficiently to achieve desired educational goals, later on, we found that resources that were spent were ineffective and could have benefited different areas of education.

**Subject matter of the research.** The primary focus of this research is to analyze the impact of government expenditure on education in Georgia, with a specific emphasis and enrollment figures, as we mentioned above, enrollment and encouraging the educational sector requires large historical data analysis to show how it paid off in the long term. The study also explores how recent educational reforms have influenced these outcomes, providing a comprehensive view of the interplay between financial investment and educational quality.

**Research aim.** This study aims to evaluate the effects of increased government expenditure on educational outcomes, specifically enrollment figures, within the context of Georgia's recent educational reforms and increased funding. The research seeks to determine whether these financial investments have led to significant improvements in educational attainment and access, thereby offering valuable insights into the effectiveness of policy measures.

**Research objective is** to assess changes in student enrollment figures in response to increased educational funding and identify any patterns or anomalies.

**Research methods.** This study employs a quantitative research methodology, utilizing regression analysis to investigate the relationship between educational spending and key outcome variables such as graduation rates and enrollment figures. Data is sourced from government reports, educational databases, and relevant literature. Statistical analysis is conducted using software tools, including SPSS, to ensure rigorous, accurate examination and reliable results. Moreover, the study also takes into account various factors that might influence the results, providing a more detailed and nuanced view of how increased spending impacts educational outcomes.

## 1. Regulation of Policy Documents in Georgia

In 2020 the resolution of the government of Georgia N629 "rules for development monitoring and evaluation of policy documents" came into force (Government, 2019, December 20). The resolution defined the types of policy documents and their hierarchy, development, and monitoring, as well as evaluation procedures, methodology, and standards. The main essence of the resolution is the establishment of quality assurance mechanisms for policy documents. Such unification of the resolution itself is a step forward, as it serves to establish quality assurance mechanisms and establish them in practice, which subsequently ensures the quality of policy documents. According to the resolution, the hierarchy of documents was defined on the one hand, and the types of documents on the other hand with appropriate definitions. According to the resolution, the first level documents are national policy documents are institutional policy documents.

First and second level documents are conceptual frameworks that define the needs, vision, principles, and priorities for strategy development. The content of these documents is determined by the same resolution. Specifically:

- 1. National Policy Documents establish the primary priorities, goals, and objectives for the country's development.
- 2. Sectoral Policy Documents outline the goals and objectives for addressing specific challenges within particular fields.
- 3. Institutional Policy Documents identify methods for overcoming challenges and promoting development within individual institutions.

The implementation of these policy documents is monitored through the production and submission of periodic reports, such as progress and annual reports. Therefore, the education policy document of Georgia (along with other national policy documents) is developed in accordance with the resolution and the established framework.

- 1. Constitution of Georgia.
- 2. Law of Georgia on Early and Preschool Education.
- 3. Law of Georgia on Secondary Education.
- 4. Law of Georgia on Vocational Education.
- 5. Law of Georgia on Higher Education
- 6. Other legislative and by-law acts in the field.

Policy analysis involves evaluating and comparing public policy options to address societal challenges. Various tools and methods are used in policy analysis to systematically examine the potential impacts and effectiveness of those policies. Some key tools and methods include: quantitative methods (e.g., Cost-Benefit Analysis – CBA, Cost-Effectiveness Analysis – CEA), Regression Analysis, Simulation Modeling, and Risk Analysis. In this research, regression analysis is employed.

## 2. Education Policy of 2017-2021 in Georgia

The policy documents on education and science for the years 2017-2021 were elaborated in the absence of a systematic approach in the country to the development of policy methodology, planning, monitoring, and performance evaluation, an issue also identified by the European Training Foundation (2020) in its analysis of skills and labor market alignment in transition economies. On December 20, 2019, the Government of Georgia issued Resolution N 629 – "On Approval of Policy Development, Monitoring and Evaluation Rules", which prescribed and laid down the guiding principles, procedures, and procedures of planning, monitoring, and evaluation of policies. The main objective of the defined education and science strategy for 2017 - 2021 was to create such a system that would itself create equal opportunities for the lives of individuals, promotion of employment, and personal and professional development.

According to the levels of education, this policy document defined the following main priorities (Altbach & Knight, 2007):

1) Pre-School Education: increasing access to high-quality preschool education.

2) General Education: to prepare students for their future life, access to general education, reaching educational results according to the international standards; educational environment improvement; and development of effective management system.

3) Vocational Education: increasing the number of professional students; compliance of professional education with the labor market and internationalization of the system; Ensuring access to vocational education.

4) Higher Education: internationalization of higher education; increasing the access to higher education, and quality enhancement. As Altbach and Knight (2007) argue, the internationalization of higher education is driven by motivations such as fostering global academic cooperation, improving education quality, and addressing global challenges in education.

Education policy has undergone significant changes in recent years, driven by both direct and indirect factors, particularly in emerging economies like Georgia (Georgia Ministry of Education, 2023).

Following political, social, and economic transformations, Georgia has prioritized educational reform as a key component of its long-term socio-economic development, given the increasing role of effective policy in shaping education for the future (European Commission, 2019; Hanushek and Woessmann, 2011), it is essential to consider the recent increases in government spending and comprehensive reform packages: It is important to evaluate the effectiveness of recent government involvement and its impact on educational outcomes (Government of Georgia 2022). Understanding how financial investments and policy changes impact educational outcomes is crucial for evaluating their effectiveness in advancing the country's development goals. This study aims to provide a detailed analysis of how these financial investments and policy changes could have possibly influenced/encouraged key indicators such as student enrollment figures in Georgia. This research provides insights into the effectiveness of educational policies and offers recommendations for optimizing educational investments to improve outcomes, due to the lack of historical data, this study offers a partial evaluation of the government's involvement in the education sector, recognizing that the full impact of such strategic investments may take time to materialize

### 3. Educational Spending's Analysis

The analysis of educational spending's impact on enrollment rates in Georgia offers a nuanced view of how financial investments shape educational outcomes. As Barro and Lee (2013) demonstrate through their comprehensive dataset, understanding trends in educational attainment requires longitudinal analysis that accounts for global and regional variations in socio-economic and policy contexts. Our study, encompassing various periods and data types, reveals intricate dynamics between government expenditure and student enrollment trends.

Year	Higher Education	Sum of All Students	GDP Percentage	Country's GDP (\$ billions)	Education Expenditure Total Sum (\$ Billions)
2006	144991	786015	3	7.75	0.23
2007	141303	784723	2.69	10.17	0.27
2008	129926	746579	2.91	12.8	0.37
2009	95225	735809	3.22	10.77	0.35
2010	105696	724219	2.8	12.43	0.35
2011	110557	713219	2.57	15.48	0.40
2012	99376	691480	1.9	16.89	0.32
2013	112746	692685	3.47	17.52	0.61
2014	120923	687991	2.99	17.97	0.54
2015	127633	694048	3.16	15.22	0.48
2016	136709	702735	3.59	15.44	0.55

Table 1. Enrollment statistics of Georgia between 2006-2016 and GDP Spending on Education

Source: https://databank.worldbank.org/source/education-statistics-%5e-all-indicators#, 2024; Georgia Ministry of Education and Science, 2023

In the regression analysis, several terms are essential for interpreting the relationship between variables. By applying the regression equation:

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Where:

- y is the dependent variable (enrollment rates), which represents the outcome or value we are trying to predict.

- x is the independent variable (educational spending), which is the predictor variable. It is the variable we believe influences y.

-  $\beta_0$  is the intercept, which indicates the expected value of y when x = 0. It represents the base enrollment level without any spending.

 $-\beta_1$  is the coefficient of the independent variable x, which measures the change in y for a one-unit increase in x. In this case, it reflects how much enrollment changes for every additional unit of spending. -  $\varepsilon$  is the error term, accounting for the variability in y that cannot be explained by x.

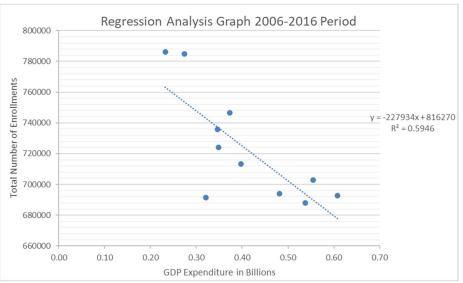


Figure 1. Regression Analysis Graph for 2006-2016 period

First, we have analyzed normal enrollment data in order to do a thorough analysis starting from 2006 up to 2023 (Georgia Ministry of Education and Science, 2023). Regression analysis of that period shows that the two variables are moderately correlated. More specifically, the Multiple R of 0.4136

shows that there is a moderate positive relationship whereby increased educational expenditure leads to higher enrollment rates. However, the R Square value of 0.1711 explains that it is only 17.11% of the variability in enrollment rates that may be explained by changes in educational spending, and these are explained by several factors including policy changes and inexperience of field knowledge. Also, the Adjusted R Square, which considers the number of predictors and sample size, is 0.1193, further reinforcing this observation that the model accounts for a limited variance in enrollment when adjusting for those two factors. This complexity of the relationship therefore suggests that other variables, like economic conditions, policy implementation, and institutional factors, are very influential in shaping enrollment outcomes. These results from ANOVA, with the F-statistic being 3.302 and the p-value at 0.088, show that there is no statistically significant relationship at the 0.05 level between educational spending and enrollment. Yet, even though the coefficient for spending on education is positive at 66,753.67, showing the possibility of having a positive influence on enrollment, the wide confidence interval, from -11,121.99 to 144,629.33, stands to be highly uncertain in estimation. However, such a scope of variability presupposes that with an increase in funding, there would be higher enrollment, but this relationship is weak and unreliable. It means that an examination of the two variables of educational spending and the rate at which students enroll had a fair correlation, but the findings indicate that enrollment is to be determined from a wider perspective. Other determinants that could affect allocation strategies should be identified through further research, which would bring better returns on the investment in education. This would also allow more valid modeling of how financial inputs translate into educational outcomes and would help policymakers in the pursuit of effective education reform (Psacharopoulos and Patrinos, 2018).

In contrast, the analysis of the 2006-2016 period presents a more challenging narrative due to several factors, including insufficient historical data from the earlier years (Georgia National Statistics Office, 2024). The model for this period showed a Multiple R of 0.7711 and an R Square of 0.5946, indicating a moderate to strong relationship between educational spending and enrollment rates. The R Square value suggests that 59.46% of the variance in enrollment can be explained by changes in educational spending. Despite this, the period's results indicate that factors other than funding, such as external economic conditions or allocation strategies, may also have influenced the impact of financial investments. These results emphasize the potential inefficiency in the allocation of funds to needed areas and highlight the need for improved allocation strategies and a more strategic approach to utilizing educational funds to enhance their effectiveness. As Becker (1993) argues, human capital investment is crucial for economic growth, and the efficiency of educational spending can directly impact long-term economic development (Hanushek and Woessmann, 2011).

Year	Higher Education	Sum of All Students	GDP Percentage	Country's GDP (\$ billions)	Education Expenditure Total Sum (\$ Billions)
2016	136709	702735	3.59	15.44	0.55
2017	144337	720895	3.57	16.47	0.59
2018	147785	733578	3.52	17.9	0.63
2019	151226	750697	3.86	17.64	0.68
2020	-	766000	3.85	16.01	0.62
2021	-	783000	3.63	18.85	0.68
2022	-	794000	3.81	24.98	0.95
2023	-	811000	4	30.54	1.22

Table 2. Enrollment statistics of	Georgia betweer	2016-2023 and 0	GDP Spending on Education

Source: https://databank.worldbank.org/source/education-statistics-%5e-all-indicators# , 2024 Source: Georgia National Statistics Office (2024)

The most recent data, covering the period from 2016 to 2023 (Georgia Ministry of Education and Science, 2023), presents a more promising picture with respect to past actions that were taken (Georgia National Statistics Office,2024) This model achieved a Multiple R of 0.8256 and an R Square of 0.6815, demonstrating a strong correlation between recent educational spending and enrollment rates. The substantial explanatory power of this model indicates that 68.15% of the variance in enrollment can be

attributed to recent financial investments. This robust correlation underscores the immediate and significant impact of targeted funding on educational outcomes and highlights the effectiveness of recent policy measures and investments in driving positive changes in enrollment.

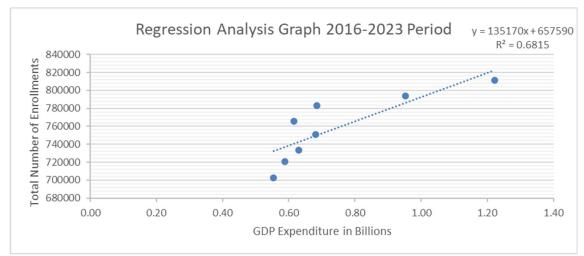


Figure 2. Regression Analysis Graph for 2016-2023 period

Overall, the comprehensive analysis provides several critical insights.

These findings underline the importance of both financial investment and systemic reforms. Barro, Lee (2013) emphasize that improvements in educational attainment are often the result of sustained, targeted investments and policy interventions, as seen in diverse global contexts. By understanding the intricate relationship between financial inputs and educational outcomes, field experts and policymakers can make more informed decisions to enhance the effectiveness of educational investments (Becker, 2013). This approach ensures that funding addresses immediate needs while also contributing to long-term improvements in the education sector, ultimately fostering a more robust and equitable educational environment.

The relationship between instructive investing and enrolment is multifaceted, impacted by both coordinated money-related inputs and relevant financial variables. Investigation of other countries' encounters underscores the significance of vital ventures in instruction, not fair in terms of add up to use but moreover in the effectiveness of support allocation. For occurrence, Finland has long been recognized for its exceptional instructive results, which are regularly credited to its focus on investing techniques. Despite distributing a moderately humble rate of its GDP to instruction compared to worldwide midpoints, Finland prioritizes instructor quality, evenhanded asset dissemination, and allencompassing understudy improvement (World Bank, 2024; Hanushek and Woessmann, 2011). This approach guarantees tall enrollment and maintenance rates overall instructive levels while cultivating an environment conducive to learning (UNICEF, 2022). Similarly, in South Korea, a nation eminent for its quick post-war financial development, instruction has been the foundation of its improvement methodology. South Korea's government reliably apportioned over 4% of its GDP to instruction amid its high-growth decades, centering intensely on auxiliary and tertiary instruction (Mincer, 1974). This supported speculation made a pipeline of gifted labor, adjusting instructive yields with labor advertise requests and boosting higher instruction enrollment rates significantly (World Bank, 2024). In differentiation, rising economies like India and Brazil outline the challenges of guaranteeing that expanded investing interprets into substantial enrollment picks up. India's allotment of over 4% of GDP to instruction has seen blended comes about (World Bank, 2024).. Whereas essential enrollment rates have taken off due to arrangements like the Right to Instruction Act, incongruities in country and urban regions and challenges in quality affirmation have restricted the effect at auxiliary and tertiary levels. Brazil, in the meantime, has confronted issues with asset wastefulness, where noteworthy open investing regularly comes up short of addressing crevices in getting quality, especially in underserved districts. These cases highlight that the unimportant volume of investing is inadequate; key assignment and

vigorous arrangement systems are significant to accomplishing desired outcomes. Georgia's post-2016 changes adjust with these lessons. By centering on adjusting with European guidelines through the Bologna Handle, the government has emphasized not as it was subsidizing but moreover quality enhancement and availability. Be that as it may, the comes about moreover shows that financing must address systemic challenges like framework holes and impartial dissemination to realize its full potential (Georgia Ministry of Education and Science, 2023). Looking ahead, Georgia might receive a few best hones from nations like Estonia, which combines advanced advancement with the open venture to improve instructive get-to and results (UNICEF, 2022; UNDP, 2021). Estonia's e-learning stages and accentuation on advanced proficiency have altogether boosted enrollment and maintenance rates, especially in further regions. Such activities may be adjusted to Georgia's setting to overcome geographic and infrastructural boundaries. (UNICEF, 2022)

## 4. Expanded Analysis of Influence of Educational Spending on Enrollment

**Socioeconomic Variables' Impact.** Although this current analysis shows that the present status of educational spending in 2016 relates moderately strongly with the rate of enrollment, it has to be put into a broader socio-economic context. From 2006 through 2016 Georgia faced a volatile economic situation caused by most notable factors in 2008, changes in demography and political transitions. GDP growth, unemployment rates, and migration patterns are some of the factors most likely to influence demand for education and were not included in the present regression model (World Bank, 2024; UNESCO, 2015; UNDP, 2021).

Conceivably, in periods of unfavorable economic conditions, a family may not be able to invest in higher or even all three levels of education, and this could explain enrollment stagnation or declines irrespective of increased government spending. On the other hand, periods of growth and stability in the economy may be responsible for the growing requirement for an educational platform; high increases in digital information consumption and usage provided an enabling platform for higher enrollment to take place, even when funding is modest.

In this regard, future studies may even capture a subtler and, hence, more realistic picture of how such external factors combine to influence the impact that educational spending has on enrollment rates. In turn, this can provide policymakers with more reliable means of foreseeing the impacts' funding will have on education outcomes, targeting investments where needs are greatest (OECD, 2019).

Why 2016-2023 Shows Stronger Results? The highest development in the correlation of the series of educational spending and enrollment during the 2016-2023 period is  $R^2 = 0.6815$  (Georgia Ministry of Education and Science, 2023). Indeed, it was after 2016 that efforts began to be made more intensively by the government to bring Georgia's education system into line with European standards, notably through the Bologna Process. It was signed back in 2006, but there were no particular reforms or programs aligned with Georgia's region. This reform increased not only public investment in education but also worked on the quality and access to higher education, thus aligning the Georgian academic standards with EHEA academic standards; it improved the quality of education at the middle and low levels (UNDP, 2021).

Other factors that may account for the increased correlation in this period are improved allocation of resources and implementation of policies that reduce obstacles to education. A case in point is when vocational and tertiary education opportunities were opened to more students, thus bringing in groups that were hitherto not well represented. Moreover, the establishment of monitoring and evaluation systems facilitated better targeting of investment in education to areas of greatest need (Mincer, 1974).

Consequently, the reforms might have improved the short-term efficiency of government expenditure and would have had a more direct impact on enrollment rates. While the association seems strong, there is a need for future follow-up on the said results of the reforms in the long term related to educational quality and learning achievement apart from pure enrollment figures (Psacharopoulos & Patrinos, 2018).

Quality Education: A Priority. Although enrollment is a very important measure, it does not, unfortunately, indicate the full success of various educational investments. The underlying quality of education relating to student retention, graduation rates, and development of critical skills are also

equally critical in fostering a knowledge-based economy. Increased spending, in light of this, needs to ensure not only an increase in enrollment but also facilities, teaching quality, and curriculum development that produces a skilled workforce (Powell & Snellman, 2004).

Any comprehensive analysis of the contribution of education expenditure, therefore, must be completed with an analysis of resource utilization for improving the quality of the learning environment. Whether schools and institutions of higher learning are adequate for the task? Students are acquiring the necessary competence to succeed in a knowledge-based economy. Such questions, at least, have to be addressed by policy decision-makers while determining financing and formulating future educational reforms (European Training Foundation, 2020; OECD, 2019).

**Suggestions for Future Policy.** With that in mind, the following moves should be made to better spend the money injected into the education sectors to maximize the impacts: targeted investment should take place wherein any subsequent funding apportioned to the sector should first and foremost be funneled into the realization of higher enrolment and assurance of quality at all levels of education in developing the economy's required skills-a knowledge-based economy.

1. Data-driven Policymaking: further use of socio-economic data in the next set of analyses will yield a more comprehensive insight into the drivers of enrolment and, therefore, lead to a more focused and effective use of educational resources.

2. Long-term Monitoring: the creation of long-term mechanisms for the monitoring of outcomes of educational reform, especially at the level of student performance, graduation rates, and employability, would go a long way toward the success of the knowledge-based economy there shouldn't be big letters in the middle of a sentence.

## Conclusions

**Impact on Graduation Rates.** In the long term, increased graduation rates are expected to encourage greater participation and raise competitive standards for individuals in the knowledge-based economy. The impact of enrollment growth will unfold over an extended period, and sustained educational investment will gradually prepare a more skilled and knowledgeable workforce. However, this progression may introduce greater challenges as the labor market evolves in response to rising educational attainment and the complexities of the knowledge-driven economy.

**Enrolment Trends.** The study finds that while there is an observable trend towards increased student enrolment, the impact of increased educational spending on enrolment figures is less pronounced compared to its effect on graduation rates. This indicates that other factors, such as educational infrastructure, policy implementation, and socioeconomic conditions, may significantly influence enrolment trends. The findings suggest that financial investment alone may not be sufficient to achieve substantial improvements in enrolment, and a multifaceted approach is necessary to address these challenges.

### References

- 1. Altbach, P. G., & Knight, J. (2007). The internationalization of higher education: Motivations and realities. *Journal of Studies in International Education*, 11(3-4), 290-305. https://doi.org/10.1177/1028315307303532
- 2. Barro, R. J., & Lee, J. W. (2013). A new data set of educational attainment in the world, 1950–2010. *Journal of Development Economics, 104*, 184-198. https://doi.org/10.1016/j.jdeveco.2013.04.001
- 3. Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: University of Chicago Press.
- 4. Education Statistics All Indicators. (2024). Retrieved July 13, 2024, from https://databank.worldbank.org/source/education-statistics-%5e-all-indicators#
- 5. European Commission. (2019). *The Bologna process implementation report*. Luxembourg: Publications Office of the European Union.
- 6. European Training Foundation. (2020). *Skills and labor market analysis in transition economies*. Luxembourg: ETF.

- 7. General Education Enrollment numbers. (2024). Retrieved July 13, 2024, from https://www.geostat.ge/en/modules/categories/59/general-education
- 8. Georgia Ministry of Education and Science. (2023). *Annual report on education reform and implementation*. Tbilisi: Government of Georgia.
- 9. Georgia National Statistics Office. (2024). *Educational expenditure and enrollment trends*. Retrieved from https://www.geostat.ge
- Hanushek, E. A., & Woessmann, L. (2011). The economics of international differences in educational achievement. In *Handbook of the economics of education* (Vol. 3, pp. 89-200). Amsterdam: Elsevier. https://doi.org/10.1016/B978-0-444-53429-3.00002-0
- 11. Mincer, J. (1974). Schooling, experience, and earnings. New York: NBER.
- 12. National Strategy of Education and Science of Georgia, 2022-2030. Retrieved from https://mes.gov.ge/content.php?id=7755&lang=eng
- 13. OECD. (2019). Education at a glance 2019: OECD indicators. Paris: OECD Publishing.
- 14. Psacharopoulos, G., & Patrinos, H. A. (2018). *Returns to investment in education: A decennial review of the global literature*. The World Bank. https://doi.org/10.1596/1813-9450-8495
- 15. UNESCO. (2015). Education for all global monitoring report. Paris: UNESCO.
- 16. UNICEF. (2022). *Digital learning for every child: Closing the educational divide*. New York: UNICEF.
- 17. United Nations Development Programme. (2021). Sustainable development goals and education in *Eastern Europe*. New York: UNDP.
- Walter W. Powell and Kaisa Snellman, K. (2004) The knowledge economy. Annual Review of Sociology, 30, 199-220 https://doi.org/10.1146/annurev.soc.29.010202.100037
- 19. World Bank. (2024). *Education statistics All indicators*. Retrieved from https://databank.worldbank.org

### EDUCATION POLICY AND KNOWLEDGE BASED ECONOMY: CASE OF GEORGIA

## Dr. Natia Zedginidze-Jishkariani, Shalva Gachechiladze

Kutaisi International University

#### Summary

The transition to a knowledge-based economy has turned the wheel of thinking and economic policies worldwide. The KBEs have been central to the agendas of corporations, governments, and academic institutions since the 1980s when a large volume of research was devoted to making sense of their dynamics. In this paper, the authors investigate the causal relationship between government education expenditure and enrollment rates in Georgia, with a focus on the nation's educational reforms and their correspondence to the KBE paradigm.

Georgia's current education reforms are closely related to its commitment to the Bologna Process, which it joined in 2005 to integrate into the European Higher Education Area. The government has been working to reform the educational system at all levels to improve its quality and overcome some long-standing problems. The study considers how growing public expenditure in education has impacted access to all three levels of education. The study explores data from 2006 to the present, given the unreliability of historical data before this period; this longitudinal study has thus been divided into two divergent periods, which range from 2006 to 2016, and from 2016 until today. This division is made by considering variations within the implementation of the policy and investment results.

Methodologically, the research project applies regression methods to quantify, with socio-economic controls, how much spending on education will increase enrolment. The findings show that government spending positively correlates with enrollment rates, but rather late. During the 2006–2016 period, the relationship stood at a moderate level, which would lead one to believe that other supplementary elements like economic conditions and inefficiency of policies were strong determinants. On the contrary, during the 2016–to–present period, the correlation was stronger due to advanced reform endeavors and an orientation of standards toward European frameworks. This increase underlines that targeted spending is indeed a driver for higher enrollment.

However, this study also points out several limitations it has. Demographic trends and macroeconomic variables, like leading indicators of economic activity, have not been included in this model. This would leave some variability unexplained. Whereas the results indicated there was a partial relationship between educational spending and enrollment, the results did not completely capture the systemic dependencies. For instance, external influences such as population growth, labor market demands, and migration patterns could dramatically affect enrollment trends. This constitutes the complexity of assessing education reforms through financial inputs alone.

These challenges notwithstanding, the study provides some useful insights into policymaking. It calls for strategic investments in education that can have a multiplier effect. Drawing from experiences around the world, such as Finland's strict teacher quality and equitable distribution of resources or Estonia's adoption of digital learning platforms, the investment has to be coupled with systemic improvements. It further identifies reforms at all levels of learning Access, Quality, and Learning outcomes as the main factors that underpin change.

The conclusions point out that a balance between financial inputs and qualitative improvements is crucial in education. Increased financing can indeed promote infrastructure development, enhance teachers' capabilities, and increase accessibility. However, simultaneously, it needs to overcome systemic inefficiencies to ensure persistence. Building a strong and inclusive education system requires Georgia to focus on evidence-based policy and establish mechanisms for regular follow-up and evaluation of educational reforms. These steps are necessary to ensure that the increase in spending not only enhances enrollment but also builds the competencies needed for a successful KBE.

This report highlights how education reforms, coupled with strategic investments, have the potential to be truly transformational. Set against the backdrop of Georgia's development as a knowledge-based economy, this research makes useful contributions to the wider debate about how public spending on education can achieve the twin goals of human capital and economic development. While context-specific, the findings have lessons for other countries in similar transitions. Further research should incorporate more socio-economic variables that capture a broader understanding of the determinants of education outcomes.

Keywords: education policy, reforms, public investments, knowledge-based economy, Georgia.