Financing the Education System in Romania with a View to Ensuring Sustainable Development

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Abstract. The article delves into the multifaceted aspects of financing Romania's education system amidst the imperative of sustainable development. It navigates through the challenges and opportunities inherent in funding education, emphasizing its profound influence on economic, social, and environmental progress. It underscores the pivotal role of investment in education for fostering holistic development, stressing the necessity for adopting sustainable financial approaches to bolster the education sector. By examining the interplay between financial strategies and educational outcomes, the article advocates for a concerted effort in formulating policies that not only address immediate funding needs but also align with long-term sustainability goals. Ultimately, it posits that sustainable financing mechanisms are indispensable for nurturing a robust education system capable of driving enduring progress and prosperity in Romania.

Keywords: Education Funding, Investment in infrastructure, Quality of education, Education for sustainability, Innovation and technology

1. Introduction

The Romanian education system faces numerous challenges, including the transition from elite education to mass education, high costs, organizational and curricular issues, and the need to improve quality and inclusiveness, particularly for disadvantaged groups. The "Educated Romania" project, initiated by the Presidential Administration, aims to modernize Romanian education and align it with European programs like the European Green Deal and the 2030 Agenda for Sustainable Development. This comprehensive reform project focuses on areas such as the teaching profession, school leadership, vocational education and training, higher education, and student evaluation.

Despite the need for change, the Romanian education system has faced challenges in implementing drastic reforms, and the system's state remains a priority on the political agenda. The ongoing efforts and initiatives, including the "Educated Romania" project, reflect a commitment to addressing the challenges and driving positive changes in the Romanian education system. Despite various reforms, Romania's education system continues to face challenges, with a high rate of early school leavers at 15%, above the European average, and over 1 in 5 Romanian youths at risk of educational poverty. The brain drain phenomenon, exacerbated by factors like lacking jobs and better economic prospects abroad, has led to a significant loss of highly skilled Romanians, impacting key sectors of the economy.

The migration of high-skilled individuals has strained Romania's healthcare sector, with a shortage of personnel and economic disparities between Western and Eastern Europe. Efforts like the "Educated Romania" project aim to address these issues by promoting inclusive policymaking and reforming the education system to improve quality and equity. The ongoing brain drain poses challenges for Romania's

development, emphasizing the need for strategies to reverse this trend and encourage "brain gain" to foster progress and development. The Romanian education system has underperformed in recent years, with high rates of early school leavers and low levels of tertiary education attainment compared to the European average.

The pandemic-induced health and economic crisis has exacerbated these issues, with school closures and limited access to digital learning affecting a significant portion of the population. Despite these challenges, the financing of the education system reached record low levels in 2021, at only 2.5% of the country's GDP. Historically, Romanian education was seen as a springboard for young people, particularly those from disadvantaged backgrounds, to enter intellectual circles. However, the current state of the education system is a far cry from this ideal. The education system has faced numerous attempts at reform, but instability and a tendency to escape the normal policymaking cycle have hindered progress. The challenges faced by the Romanian education system are multifaceted, including a lack of digital infrastructure, inadequate support for teachers and students during school closures, and a high degree of educational poverty among Romanian youth. The system is also plagued by issues such as low levels of information on existing lifelong-learning programs and market opportunities, which contribute to low take-up of adult learning.

In order to address these challenges and improve the quality of education, the "Educated Romania" project was initiated to modernize the Romanian education system and align it with European programs like the European Green Deal and the 2030 Agenda for Sustainable Development. This comprehensive reform project aims to improve the quality and equity of education, focusing on areas such as the teaching profession, school leadership, vocational education and training, higher education, and student evaluation. The Soviet occupation from 1948 disrupted Romania's education system, aiming to re-educate teachers and students in line with communist ideology through fear and repetition-based methods. This period cemented systemic issues still present today, with politically controlled schools, hierarchical structures, and a rigid curriculum hindering critical thinking and creativity.

Despite attempts at reform, the Romanian education system faces challenges like lack of digital infrastructure, limited support during crises, and high rates of educational poverty among youth. The system's historical ambition for a modern, democratic education model has been overshadowed by current issues like underfunding and outdated teaching approaches. Efforts like the "Educated Romania" project seek to modernize the system and align it with European standards, focusing on improving teaching quality, school leadership, vocational training, and student evaluation. However, the system's deep-rooted problems require comprehensive, long-term vision and systemic revamp to create impactful and democratic learning spaces for students.

2. The importance of sustainable development in the context of education

Education for Sustainable Development (ESD) is crucial in fostering a sustainable world by integrating key sustainable development issues like climate change, disaster risk reduction, and poverty reduction into teaching and learning. ESD promotes participatory methods that empower learners to develop critical thinking skills, envision future scenarios, and make collaborative decisions By incorporating ESD into education, individuals can acquire the knowledge, values, and skills needed to participate in decisions that enhance quality of life without compromising the planet's future. Efforts by organizations like UNESCO and the Education and Training

Foundation (ETF) focus on advancing ESD through leadership, teaching excellence, and high-impact education in further education and training sectors. The UN's Sustainable Development Goals (SDGs) serve as a useful framework for exploring sustainability issues and promoting partnerships across environmental, social, and economic domains. ESD aims to equip learners with the competencies to create a more just and sustainable world by fostering sustainable development knowledge, skills, values, and attributes as core competencies. Incorporating ESD into education is essential for addressing the challenges of sustainable development and ensuring a sustainable future for all by empowering individuals to make informed decisions and take responsible actions for environmental integrity, economic viability, and social justice. The interdisciplinary nature of ESD encourages collaboration, innovation, and practical skills development among students and educators across various disciplines to drive positive change towards sustainability.

The concept of sustainable development, defined by the Brundtland Commission in 1987, aims to meet present needs without compromising future generations' ability to meet their own needs. It involves balancing environmental, social, and economic needs to ensure a strong, healthy, and just society. Sustainable development emphasizes living within environmental limits, promoting personal well-being, social inclusion, and equal opportunity. It is not solely about the environment but also about creating a better way of doing things for both the present and the future. Sustainable development is crucial for addressing global challenges like poverty, inequality, climate Nations' environmental degradation. The United Sustainable Development Goals (SDGs) provide a blueprint for achieving sustainable development by 2030, covering economic, social, and environmental aspects. Individual actions play a significant role in advancing sustainable development alongside government policies and private sector initiatives. The goal is to create a more prosperous, inclusive, and resilient world for all.

Good quality education is essential for achieving a more sustainable world, as outlined at the UN World Summit in Johannesburg in 2002. Education for Sustainable Development (ESD) promotes the development of knowledge, skills, understanding. values, and actions required to create a sustainable world. ESD is based on the principles of environmental protection, social equity, and economic sustainability. ESD has evolved from environmental education, which seeks to develop knowledge, skills, values, attitudes, and behaviors in people to care for their environment. It aims to enable people to make decisions and carry out actions to improve our quality of life without compromising the planet. Key themes in ESD include environmental concerns, poverty alleviation, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, human rights, gender equality, corporate responsibility, natural resource management, and biological diversity.ESD should be embedded in the curriculum in an interdisciplinary and holistic manner, allowing for a whole-institution approach to policy making. It should promote critical thinking, problem solving, and action, develop confidence in addressing sustainable development challenges, and employ a variety of educational methods. Learners should participate in decision-making on the design and content of educational programs, address local as well as global issues, and avoid jargon-ridden language and terms. ESD should look to the future, ensuring that the content has a long-term perspective and uses medium and long-term planning.

There are a number of key themes in ESD and while the dominant focus is on environmental concerns, it also addresses themes such as poverty alleviation, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, human rights, gender equality, corporate responsibility, natural

resource management and biological diversity. It is generally accepted that certain characteristics are important for the successful implementation of ESD, reflecting the equal importance of both the learning process and the outcomes of the education process (adapted from 'UN Decade of Sustainable Development' UNESCO Nairobi Cluster, 2006). ESD should:

- Be embedded in the curriculum in an interdisciplinary and holistic manner, allowing for a whole-institution approach to policy making.
 - Share the values and principles that underpin sustainable development.
- Promote critical thinking, problem solving and action, all of which develop confidence in addressing the challenges to sustainable development.
- Employ a variety of educational methods, such as literature, art, drama and debate to illustrate the processes.
- Allow learners to participate in decision-making on the design and content of educational programmes.
- Address local as well as global issues and avoid jargon-ridden language and terms.
- Look to the future, ensuring that the content has a long-term perspective and uses medium and long-term planning.

3. Current State of Education Funding in Romania

Over the past decade, education funding has remained relatively constant, despite some year-on-year variations. Using Eurostat2 data, which allow for continent-wide comparisons, there is a relative stability of budgetary allocations to education at European level3. The lowest allocations at EU bloc level were recorded in Romania and Bulgaria, which are also among the countries with the most problematic education outcomes in the Union.

Table 1 - Public allocations to education as a percentage of GDP. EU and countries in the region

An	2012	2013	2014	2015	2016	2017	2018	2019	2020
Uniunea Europeană (UE27)	4.9	4.9	4.9	4.8	4.7	4.7	4.7	4.7	5.0
Bulgaria	3.3	3.7	4.1	3.9	3.4	3.5	3.5	3.8	4.0
Cehia	4.5	4.5	4.5	4.4	3.9	4.1	4.6	4.9	5.1
Croația	4.7	4.8	4.9	4.9	4.7	4.7	4.7	4.7	5.4
Grecia	4.6	4.5	4.3	4.1	4.0	3.9	4.1	4.0	4.5
Polonia	5.4	5.3	5.3	5.3	5.0	4.9	5.0	5.0	5.2
România	2.9	2.8	3.0	3.1	3.4	2.9	3.1	3.6	3.7
Slovacia	4.0	4.1	4.1	4.2	3.9	3.9	3.9	4.3	4.6
Slovenia	6.4	6.4	6.0	5.6	5.5	5.4	5.4	5.5	5.8
Ungaria	4.7	4.7	5.2	5.2	5.0	5.1	5.0	4.7	4.7

Source: Eurostat COFOG

Other countries in the region have consistently higher allocations. Poland, which recently scored above the continental average in the PISA tests, has consistently had a higher resource allocation (as a percentage of GDP) than the EU average. In this context, a first conclusion is that, relative to GDP, Romania has had and has among the lowest education expenditure in the European Union.

The use of percentage of GDP as a tool for calculating public expenditure on education can lead to a distorted perception of public spending. For example, Romania's GDP is a double outlier: it is low in per capita terms, but growing year on year well above the EU average. But another aspect has remained relatively constant: Romania has low public expenditure relative to GDP. For example, in 2020, the year for which final Eurostat data are available, total public expenditure equivalent to 3.7% of GDP has been observed for education in Romania. The EU average was 5.0% in the same year. At the same time, overall government expenditure was 41.5% of GDP, compared to 52.9% at EU level4. On the one hand, government expenditure on education as a percentage of GDP placed Romania 26th out of 27, with only Ireland (a country with a particularly low share of government expenditure to GDP) having a lower allocation. At the same time, the ratio of education spending to overall government spending was 8.9:100. Although again Romania was in the bottom position in the EU, the gap with the bloc average was considerably smaller.

Table 2. General government expenditure as a percentage of GDP. EU and countries in the region

An	2012	2013	2014	2015	2016	2017	2018	2019	2020
Uniunea Europeană UE27	49.7	49.6	49.0	48.1	47.4	46.7	46.5	46.5	52.9
Bulgaria	34.3	37.8	43.2	40.4	34.8	34.8	36.9	35.5	41.8
Cehia	44.7	42.7	42.6	41.9	39.8	39.0	40.6	41.1	47.2
Croația	48.4	48.3	48.7	48.2	48.9	44.7	45.5	46.0	54.5
Grecia	56.7	62.8	50.7	54.1	49.9	48.5	48.5	47.9	59.8
Polonia	43.1	43.0	42.6	41.7	41.1	41.3	41.5	41.8	48.7
România	36.2	36.0	35.4	36.0	35.0	33.6	34.5	36.0	41.5
Slovacia	41.3	42.6	43.4	45.7	42.7	39.6	39.8	40.7	45.6
Stovenia	49.4	60.3	50.8	48.7	46.2	44.1	43.5	43.3	51.3
Ungaria	49.1	50.0	50.0	50.4	46.8	45.7	46.1	45.7	51.6

Source: Eurostat COFOG

At the same time, it should be noted that countries with similar allocations in terms of budgetary effort are either countries with particularly ageing populations (e.g. Italy) or with a considerably higher gross domestic product per capita. Also, 2020 was a pandemic year in which public spending was augmented by rising deficits amid efforts to limit the impact of Sars-CoV.

The sharp increase in defence spending in the recently announced budget is understandable in the context of the war in Ukraine and the need to strengthen national security. However, it is also important to consider the role of education in building a resilient society and a strengthened economy. The National Defence Strategy for 2020-24 mentions education in various forms, including direct

interventions such as emergency education and the need to develop an education system that contributes to meeting the current and future needs of the labour market, Romania's international competitiveness, and providing access to quality education for all. It also speaks of the need to ensure the development of the necessary skills to combat false information, reducing the vulnerability of the young generation to hybrid challenges.

The education system in Romania faces significant challenges that impact the country's competitiveness and prosperity. Despite various reforms, Romania's education system continues to underperform, with high rates of early school leaving and a significant portion of youths lacking basic competencies in reading, writing, and science. The country's education policy has been plagued by instability and a need for reforms since the 1990s, with issues such as a decline in student numbers, poor quality of private education, and challenges in research infrastructure projects. The Romanian education system has been criticized for being ineffective, irrelevant, inequitable, and of poor quality, highlighting the urgent need for structural reforms to address these shortcomings. Additionally, the brain drain phenomenon, where highly educated Romanians seek better opportunities abroad due to societal issues and a rigid work culture, further exacerbates the challenges faced by Romania's education system. Addressing these issues requires a comprehensive approach that includes improving educational competencies, reducing early school leaving rates, enhancing digital infrastructure for online learning, and creating a more engaging and supportive educational environment for both students and teachers.

The search results indicate that there is a significant need for education reform and increased funding in Romania. The country has faced issues with the quality of education, high rates of early school leaving, and a lack of investment in research and development, which have led to a brain drain of educated individuals seeking better opportunities abroad. The authors of the "Educated Romania" project emphasize the importance of focusing on inclusive policymaking and involving domestic stakeholders to ensure the success and longevity of education reforms. In terms of funding, the authors suggest that new tax policies or an increase in collection rates are necessary to allocate more resources to education.

They also mention the need for increased spending in areas such as remedial or pre-primary education and access to university education, which would automatically require higher public spending. The search results also highlight the importance of addressing the challenges faced by the education system, such as the lack of digital infrastructure and support for teachers and students during school closures. Additionally, the need to educate the population to deal with hybrid threats, including disinformation, is emphasized, which would require both new regulations and increased budgetary allocations.

In conclusion, the search results support the need for increased education funding and well-funded reforms to ensure the long-term success of any economic and social policy in Romania. The authors argue that a well-educated population is crucial for the country's convergence with Western European averages and its overall development.

4. The Impact of Investment in Education on Sustainable Development

Investing in education has a significant impact on sustainable development, influencing social, economic and environmental issues. Education provides people with the skills and knowledge to improve their quality of life. Access to quality education contributes to individual development, improved health, access to

employment opportunities and, in turn, increased overall well-being. Investing in education can help reduce poverty because education gives people equal opportunities to obtain stable and well-paid employment. Graduates of quality education are more likely to avoid poverty and secure a better standard of living. Education provides a crucial tool for promoting equal opportunities. Investing in education ensures that all individuals, regardless of social, economic or gender background, have access to equal educational opportunities. Education develops the skills and competencies needed to meet the challenges of today's world. Well-educated individuals are more likely to contribute to innovation and economic development, having a positive impact on society.

Higher levels of education in a society can contribute to social and political stability. Educated people tend to be more involved in democratic processes and are less prone to conflict and instability. Education is essential for awareness and understanding of environmental issues. Investing in education can contribute to a more responsible population, with greater awareness of its environmental impact and more sustainable behaviour. An educated workforce is more adaptable to economic change. Investment in education can ensure continuous training and skills development to meet the challenges of a changing economic environment. Investing in education contributes directly to achieving the United Nations Sustainable Development Goals (SDGs), including those on ending poverty, ensuring quality education, promoting gender equality and combating climate change. Investing in education therefore not only supports individual development but also has a significant impact on society as a whole, contributing to global sustainable development.

5. Strategies for Sustainable Financing of Education

Ensuring sustainable financing of education means implementing sound and innovative strategies to guarantee the necessary resources in the long term. Governments should give education priority status in the budget allocation process. Setting budget priorities and ensuring an adequate share of GDP for education can provide long-term financial stability. Increasing public investment in education is essential. Governments should allocate significant financial resources to meet the real needs of the education system, including for infrastructure modernisation, teacher training and the development of innovative educational programmes.vInvolving the private sector through public-private partnerships can bring additional resources to education. Companies can contribute financially or provide technological resources and expertise, and in return benefit from educational programmes tailored to labour market needs.vThe use of innovative financing mechanisms, such as social bonds for education or investment funds, can provide additional sources of funding and flexibility in the management of financial resources.

Efficiency in the use of existing resources is crucial. Regular audits of budgets and efforts to eliminate unnecessary expenditure can help to optimise existing funding. Involving communities, foundations and non-governmental organisations through donation and philanthropy programmes can bring additional financial resources for specific educational projects or to support disadvantaged students. Universities and schools can develop additional sources of income through their own economic activities, such as partnerships with business, training programmes or research activities. Implementing technology into the educational and administrative process can bring significant efficiencies and cost savings in the long run. Financial education at the individual and community level can increase awareness of the importance of investing

in education and encourage participation in education funding efforts. It is crucial to establish effective monitoring and evaluation mechanisms to ensure efficient use of resources and to adjust funding strategies based on results.

These strategies can be tailored to the specificities of each country and the particular needs of the education system. A holistic approach, involving collaboration between the public and private sectors as well as community involvement, can contribute to sustainable financing and improvement of the education system.

Meeting the Education 2030 agenda requires proper attention to financing in educational planning and management. Governments need to mobilize resources and make hard choices. Financial flows through the system – and, ultimately, expenditures - need to be monitored to determine the extent to which resources are being allocated to policy priorities, and with what effect. With growing pressure on governments to increase funding, improved financing data has become a higher priority, allowing governments to identify who is investing in education, and to calculate actual costs, and assess the effectiveness and efficiency of resource allocation.

Education financing has long been a strong point for IIEP. The Institute's pioneering work on National Education Accounts (NEAs), promoted by the recent Education Commission report, involves collaborations with UIS and the World Bank. IIEP will continue this work, and studies on sub-sector accounts are also anticipated. Beyond country-level engagement, IIEP will remain an active participant in discussions on financing mechanisms at the global level and will thus be ready to assist Member States to access appropriate resources. IIEP will consolidate and update existing lines of work (in sector analysis, simulation models, medium-term expenditure frameworks, etc.). It will also address what is currently a 'blind spot' in education financing: the area between public finance — which has its own techniques, professionals, and networks — and financing for education sector specialists, whose diagnoses and planning contributions too often fail to influence mainstream budgetary processes.

There are several countries that have adopted and implemented sustainable education financing policies and have managed to ensure adequate and stable resources for their education system. It is important to keep in mind that success in sustainable education financing depends on a number of factors, including the socioeconomic context, government policies, national priorities and other country-specific factors. Finland is often cited as an example of success in education. Their system is based on sustainable and equitable funding, where resources are allocated appropriately to ensure access to quality education for all students. Finland invests significantly in teacher training and continuous development. Canada places a strong emphasis on sustainable education funding, ensuring adequate resources at all levels of education. The Canadian government invests in school infrastructure, educational technology and programs to support student success. Sweden has implemented a fair funding system that is based on the principles of equality and access to education for all. This includes investment in student support services, modern facilities and support for inclusive education. Singapore has been successful in developing a high quality education system through significant investment in teacher training, educational technology and innovative educational programmes. Funding is targeted effectively to support human capital development goals. Norway invests considerably in education, providing adequate funding for schools and universities. This includes scholarship programmes and facilities to encourage access to higher education and research.

These examples illustrate how countries can adopt education funding strategies that ensure a sustainable, equitable and quality system. However, each national

context is unique and tailoring policies to the specificities of each country is essential for sustainable success in education.

In Romania, various projects and initiatives have been implemented at local level that have had a positive impact on the education system or supported sustainable community development. The "Scoala Altfel" (Today's School) programme: The initiative was designed to diversify the learning experience of students by giving them the opportunity to participate in educational activities outside the classroom. Students have the opportunity to explore different areas such as culture, sports, technology and volunteering. Green Schools Project - MaiMultVerde Association: This project promotes sustainability in schools, with the main objective of making schools greener and friendlier environments. By involving students and teachers, the project encourages practices such as recycling, saving energy and using sustainable resources. "School after school" program - New Horizons Foundation: The initiative provides additional educational support for children from disadvantaged backgrounds. The programme includes homework preparation, personal and cultural development activities, thus providing equal opportunities for all children to quality education. Project "Education for Life" - OvidiuRo Association: This project focuses on combating school dropout and promoting education among poor children. The association provides material and logistical support so that these children can attend school and benefit from equal opportunities. Project "My Green School" - ViitorPlus Association:This project focuses on environmental education for pupils, promoting awareness of environmental protection. Activities such as tree planting, recycling and environmental education programmes are carried out. "Happy Children's Circle" - Terre des hommes Foundation:This project focuses on integrating children with disabilities into the education system. By providing counselling services, educational support and recreational activities, it aims to improve the quality of life of these children.

These local projects and initiatives are just a few examples of efforts to improve the education system and support communities. The importance of these initiatives lies in their contribution to increasing access to education, improving the quality of learning and promoting sustainable development among local communities.

6. Conclusions

The obvious conclusion is that in order to ensure sustainable development, it is essential that Romania's education system benefits from a fair and sustainable allocation of financial resources. The allocated budget should reflect national priorities and ensure the real needs of the education system. Public-private partnerships and collaboration between different stakeholders, including government, the private sector, non-governmental organisations and local communities, are crucial to bring additional resources and promote a balanced and sustainable development of education.

Innovative financing mechanisms, such as social bonds or investment funds, could provide new and efficient ways to bring financial resources into the education system, thus contributing to sustainable development. Promoting financial education at individual and community level is essential to raise awareness of the importance of investing in education and to involve communities in supporting the education system.

The conclusion drawn from the analysis is the need for efficient and transparent management of existing resources. Regular audits and efforts to eliminate unnecessary expenditure can help to optimise the use of financial resources. Involving the private sector in education financing should be a responsible and sustainable development-oriented process, given the long-term impact of investment in

education on the workforce and society as a whole. Investment in education should focus on and promote the development of skills needed for the society of the future, including digital skills, innovation and adaptability to economic and social change. Companies should assume their corporate social responsibility in the field of education, contributing not only financially, but also through involvement in projects and initiatives that support the sustainable development of the education system.

These conclusions underline the importance of a balanced and integrated approach to the financing of the education system in Romania to ensure sustainable development, including equity in access to education, preparation for future challenges and responsible involvement of all stakeholders. Romania's efforts to finance its education system in a sustainable manner are closely linked to its broader sustainable development agenda. The country is actively pursuing education reforms, integrating ESD into its higher education institutions, and leveraging a mix of public and private funding sources to support its education system in alignment with the principles of sustainable development.

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