The Romanian Education Budget: Financing Pre-University Education (2001–2020)

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Abstract

Although the economic crisis has not been as substantial to Romania as it has been to Greece or Ireland, it has still had an impact on the education system. The Romanian education budget underwent significant changes in the periods 2001-2020. The budgetary policies for secondary education were affected by the periods of economic crisis. When the economy is recession, the government is more likely to reduce the public expenditure, which includes education. The Economic Crisis of 2008 led to the government reducing the budget for education in Romania in order to balance spending. This meant that there were budget cuts for secondary education in Romania in the period 2001-2020. This paper will review literature on Romania's pre-university budgetary allocation and conduct a regression analysis to establish the relationship between GDP on the hand and GNI index and Government expenditure on secondary education between 2000 and 2020.

Keywords: economic crisis, pre-university budget, recession, education budget, budget cuts
J.E.L. classification: H52, P44, P43, H61, I22, M48, H75

1. Introduction

Romanian educational budget has not always shown stability in the past decade. From an accounting perspective, Romania has seen many swings in the educational budget due to periods of economic crises. The 2001-2020 has had three significant economic crises, which may have affected the budgetary policies, but the economy is currently recovering with education funding likely to increase. With this change, it is possible for the budgetary policies to become more stable in the future. The period 2001-2020 saw the budgetary policies for secondary education get changed to meet the needs of the changing economy. The main point of change was switching to a tuition-free system (Luţ, 2018). This change has been effective in reducing the number of days lost in Romanian universities for lack of funding. However, it has also led to a decrease in quality and efficiency. The long-term effects of this lack of government support and participation in the education system, however, remains to be seen. The Romanian education budget frequently overlaps with the economic policies due to the fact that education is one of the major expenditures in the country. A study done by the OECD showed that the education budget had a decline in the periods of economic crisis (Laperche, Lefebvre, and Langlet, 2011). It is surmised that the decline has been due to the conservative policies adopted by the government. This can be attributed to the fact that the government had to make trade-offs and would like to spend less on education. However, this is not feasible as it will lead to sustainability issues.

The relationship between education and GDP is a well-known statistic. Teodorescu and Mandela (2018) note that education positively affects GDP. The authors mention that the knowledge society is a world of opportunities and the future is bright. They insist that Romania is

no exception and that it is just as possible for the country to achieve its global potential. Schooling can be seen as a predictor of the GDP. The correlation between education and GDP is a major factor in the Romanian economy. Romanian government tries to invest more in secondary education, unlike primary education, which is supported by the private sector. In Romania, secondary education is funded by both private and public sectors. The private sector invests in secondary education through tuition fees and so does the public sector via the taxes paid by individuals and corporations. In a period of economic crises, a government can decide to invest more in the public sector and less on the private sector. This could be because during difficult times, education levels and job prospects for high school and college graduates may be low and the government wants to help these people by providing funding. On the other hand, the private sector could also be feeling the pinch and will be able to maintain its level of investment more easily than the public sector.

2. Literature Review

The Romanian economy has enjoyed growth in the last few years, but the budgetary policies for secondary education were not affected. Leontina (2019) state that the economic growth has generated the resources required for the education budget, but there has been a problem with the funds generated by taxes. In 2008, public spending on education in Romania (% GDP) was 4.3 %, which dropped to 3.8% in 2009. This rate had reduced sharply from 5.2% in 2007 (Leontina, 2019, p. 248). Scholarships and grants as well as other social benefits were removed as a result of the economic crisis. There is also the issue that there were not enough jobs, which meant that they could not pay for the education. The Romanian government responded by creating a freeze on new teachers and recruiting teachers by reducing the salary and by reducing the benefits and allowances for teachers. All secondary education institutions in Romania were not able to cover their expenditures. The 2009 austerity measures and the 2010 austerity measures have also had a deep impact on secondary education institutions in Romania. The Romania's government measures to decrease their deficit and debt had an impact on the country's education budget. Funding for university education has been decreased and access to university education has become more difficult due to tough admission requirements.

Although the state was trying to work towards improving the state of Romanian education during the periods of economic crisis, this objective faced many obstacles. First, when an economic crisis is in place, the state needs to decide which of its projects are of more priority- or when spending less money is of more priority than spending more money. Given the fact that the educational sector in Romania is one of the biggest costs in the budget, in times of economic hardships, it is often cut in order to save the most money possible (Androniceanu and Ohanyan, 2016).

Miricescu and Țâțu (2014) used a SWOT analysis to show how pre-university education is going through a slow period of evolution, covering the possible future changes that could intervene. They use data from the Ministry of Regional Development and Public Administration and Ministry of Public Finance and come up with the statistics as show in Table 1. Miricescu and Țâțu (2014) argue that the education system is highly centralized as the Central Government as a whole has control over the education system. In addition, funding for higher education is coming from a funding formula that requires the Central Government to receive certain funds from re-allocations. The article also mentions that the pre-university education expenditures accounted for 23.1%% of total local expenditures in 2012, which is a significant drop from 36.5% in 2001 (Miricescu and Țâțu, 2014, p. 23).

There is no question that an adequate educational system is an integral part of economic development. The quality of education that a country offers is crucial for determining the future of its economy. Romania, like many of its Eastern European counterparts, has taken some strides to create a competitive education system (Tiitset al., 2008). The Romanian government has made an effort to decentralize many of the pre-university expenditures to municipal governments, which may help to create an environment where the municipalities are more engaged with the education system. The government must now provide financial support to the institutions, especially the poorest ones. Financial support could come in the form of direct grants to institutions (Carothers,

2013). This would be a more effective strategy than the current strategy which utilizes loans. The government should make necessary changes to the current system and also focus on improving and providing more financial transparency and accountability.

Figure no. 1: Pre-university education expenditures as ratio to total local expenditures
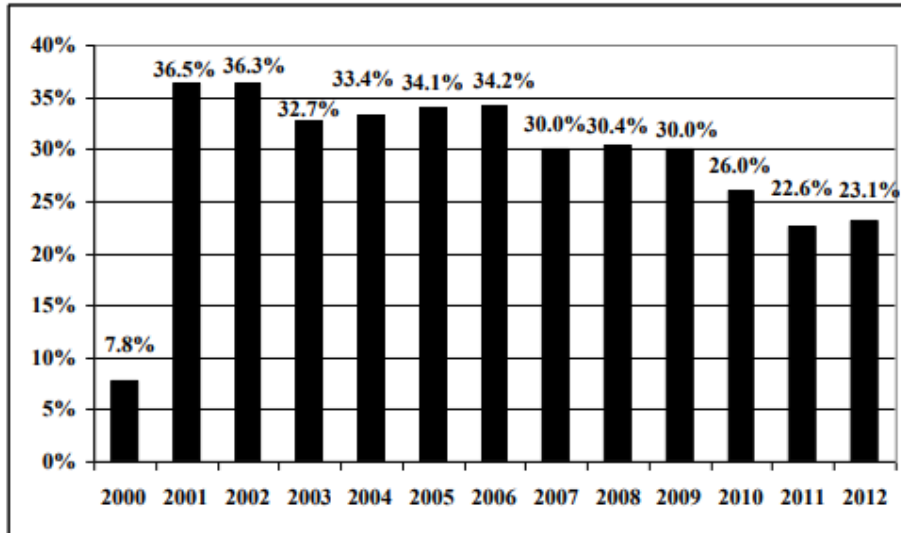
Source: Miricescu and Țâțu, 2014

The article by Togoe (2010) discussed about the Romanian pre-university education financing. As a European Union Member, Romania has to follow to EU's educational directives. In these directives, education is placed as a national priority, should be universal and compulsory, and access to it should be free of charge. The second serious periods of economic crisis appeared during the economic crisis of 2009, which led to a significant reduction in the number of pupils. From an accounting perspective, there were consequences for pre-university students because there was less money available to offer to them. In Romania, the government made a decision that secondary education should be free within the public schooling system (Gavurova et al., 2017). They acknowledged that these schools were struggling with being able to provide a quality education. In order to provide a higher quality of education, the government funded a small percentage of the costs for these schools. When they were experiencing periods of economic crisis, they included supplementary funding as a means to maintain as many schools as possible.

The Romanian budget for secondary education has been altered considerably by periods of economic crisis. The factors are most noticeable in the most recent years, most notably over the last six years, which have seen cuts to both teachers and facilities (Amariei, 2020). These cuts are one of the most visible ways in which the effects of the economic crisis are most acutely felt in public education. The employment of recent graduates in the EU public schools reached the lowest point in 2013 (75.4%), but the rate has since been increasing. The 2008 pre-crisis rate reached 82% (Ștefănescu, 2021). After the 2000-2009 period of economic growth, Romania experienced a long period of economic stagnation that led to budget deficits and imposed austerity measures (Dachin and Burcea, 2013). Subsequently, the 2008-2009 period was one of recession, which had a significant impact on the Romanian education budget. The educational budgets of Romania were significantly reduced during this period. Some of the budget cuts that have taken place have been in the area of staff cuts. The personnel cuts were being used to, for example, provide more grants for students. Schools had to work hard to keep the school open and maintain their daily activities.

3. Research methodology

In the midst of a national crisis, a country's pre-school budget will be heavily influenced by a number of factors (White & Skogstad, 2017). One of the most important factors is the degree of the country's financial crisis. In a full-blown crisis, it will be hard for a country to allocate much

money to pre-school programs. In a less severe crisis, the country may be able to invest more into pre-school programs. In addition to the degree and severity of the crisis, it is also important to consider the country's GDP and GINI coefficient to see how the country fares economically (Islam, 2004). GINI is the degree of inequality of income distribution (Mehran, 1976). It ranges from 0 to 1, where 0 corresponds to perfect equality and 1 corresponds to perfect inequality. Generally, the higher the degree of inequality, the higher the GINI value. A low GDP and high GINI coefficient could indicate an uneven distribution of wealth and a country may not

For the purpose of this project, we are going to hypothesize that a country's GDP is directly correlated with economic crisis. In that case, we shall use GDP as the dependent variable representing the effect of different economic crisis between 2001 and 2020. Due to lack of the most recent data (which will be collected from the World Bank database), we are going to reduce our window to 2001-2018. The independent variables will be GINI and Government expenditure on education, total (% of GDP). The raw data is presented in the Appendix I. Our model will apply linear regression to establish whether our dependent variables is correlated with the independent variables. Our model will apply linear regression to establish whether our dependent variables is correlated with the independent variables. Linear regression is a statistical modeling procedure that uses a linear equation to relate dependent variables and independent variables (Kumari and Yadav, 2018). For example, the dependent variable in our model will be Gross domestic product during 2001- 2018 in US$, and the independent variables will be GINI index during 2001-2018 as well as Government expenditure during the same period. The purpose of the model is to establish whether GDP is correlated with the independent variables.

4. Results and Analysis

Table no. 1: Summary output

Regression Statistics	
Multiple R	0.169811536
R Square	0.028835958
Adjusted R Square	-0.186978274
Standard Error	1336.562045
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	2	477378.1575	238689.1	0.133615	**0.876630695**
Residual	9	16077582.89	1786398		
Total	11	16554961.05			

	Coefficients	Standard Error	t Stat	P-value	
Intercept	15729.8551	19303.37821	0.814876	0.436175	
GE	-315.3067548	946.6371064	-0.33308	0.746701	
GINI	-142.2727253	560.089698	-0.25402	0.80519	

The coefficient of the regression is 315 for government expenditure and 1427 for GINI Index. P-value for the model is 0.87. The dependent variable is GDP. National wealth is linked to certain key factors in a country. These factors can be seen through data and analyzed through regression. Data from the graph shows that there is no significant relationship between GDP and the independent variable because the p-value is less than 0.05. This is evident in the equation of y = 316x + 1427. To understand the reasoning behind Romania's GDP statistics, one has to first dive

into the Gini index and the expenditure on education. The Gini index is a measure of income inequality. A high Gini index value suggests that the income distribution among the population is unequal. The expenditure on education shows increase and decrease of government spending on education from 2000 to 2018, with a sharp decline during 2009 financial crisis. Since the years of the economic crisis, the GDP seems to be correlated with economic spike. From the chart, GDP has been quickly increasing since 2010, but the government expenditure on secondary education has been declining, showing that the expenditure on secondary education by the government of Romania neither follows trends on the GDP not Gini index.

Figure no. 2: Government expenditure on secondary education between 2000 and 2018
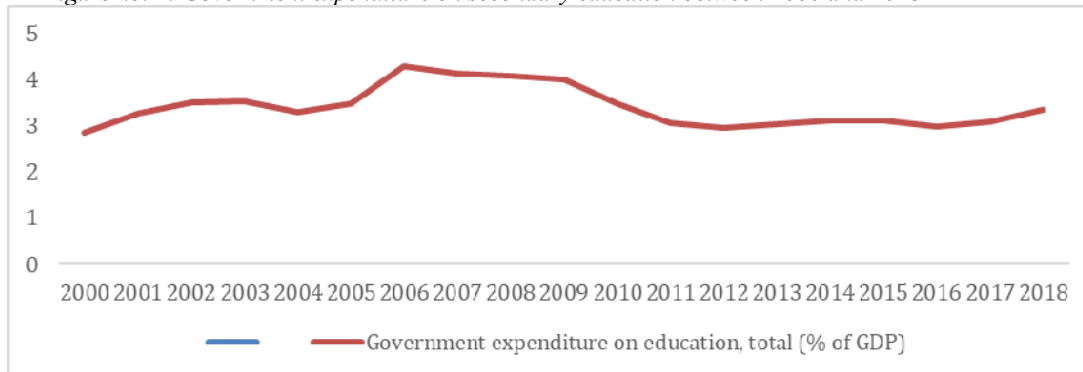
Source: authors proceeding

Figure no. 3: GDP between 2000 and 2018
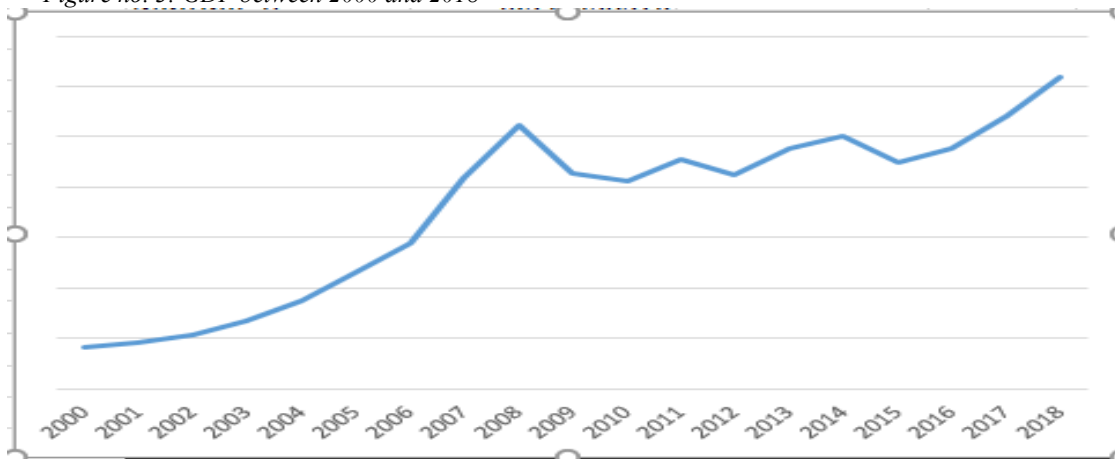
Source: authors proceeding

5. Findings

The Romanian economy has been affected significantly during the past few years and the government has been affected in many ways. The government has declared a fiscal crisis and has implemented a series of fiscal measures to help get the country out of the crisis. One such measure has been to reduce the public budget, which has had consequence for Romanian pre-schools (Gustafsson and Deliwe, 2020). While government funding for pre-school programs has been reduced, these programs still exist and continue to provide quality care and education to children. They have reduced the number of teachers and reduced teacher hours (by reducing working hours and cutting salaries and other benefits) (Vaughan-Whitehead, 2013). They also have reduced the number of hours for each child while still maintaining the same level of quality.

The Romanian government has had to come up with ways to deal with their troubled economy. One of these ways is to cut back on expenditures, especially in the pre-school education sector (Alesina and Giavazzi, 2008). The. An accounting view of this is that, in tough economic times,

one has to cut back everywhere they can. This is one of many areas in which to save, but it is also one of the most impactful.

6. Conclusion

Romanian educators and policymakers have had to rethink and adjust the public education system so it is able to meet the needs of the country and its citizens. For more than a decade, Romania has had to grapple with the economic crisis and so it has made some adjustments to the education budget. Romania's education budget is financed through the State Budget and all revenues from taxes and contributions on salaries. From 2001 through 2020, the budget for secondary education has been affected by the periods of economic crisis. From an accounting perspective, this budget has increased significantly due to the financial support from international organizations and European Union.

While there are various factors that could be taken into account when determining the implications of Romania's pre-school budget, there are some factors that are more pertinent when looking at the effects of the crisis that has taken place over the last decade. It is important to look at the consequences on the investments in education in Romania, as well as how it affects the future workforce in the country. The pre-school budget will likely be in jeopardy in the coming years in Romania. This is because pre-schools in Romania are typically government funded, which means that with the economic crisis, there will likely not be enough money to fund these institutions. With less money to go around, the quality of the education provided by the government could be compromised.

Recently, Bucharest has been unable to provide for enough pre-school education, and the Romanian budget has been unable to meet this demand. The cutbacks in pre-school education has been life-changing for students and their families. It has also changed how two-parent households raise their children. The effect is felt long before children enroll in public schools.

7. References

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Appendix I: Raw Data

Year	GDP	Government expenditure on education, total (% of GDP)	GINI INDEX
2000	1,659.9	2.868629932	
2001	1,825.2	3.266289949	
2002	2,119.9	3.504129887	
2003	2,679.4	3.543970108	
2004	3,494.9	3.312730074	
2005	4,617.9	3.500390053	
2006	5,757.5	4.306509972	39.6
2007	8,360.2	4.149539948	37.5
2008	10,435.0	4.097199917	36.4
2009	8,548.1	4.002130032	35.6
2010	8,214.1	3.493609905	35.5
2011	9,099.2	3.061369896	35.9
2012	8,507.1	2.963799953	36.5
2013	9,547.9	3.051739931	36.9
2014	10,043.7	3.121220112	36
2015	8,969.1	3.109630108	35.9
2016	9,548.6	2.979890108	34.4
2017	10,807.0	3.095390081	36
2018	12,399.0	3.344749928	35.8