

THE IMPACT OF EDUCATION ON ECONOMIC DEVELOPMENT: THE ALBANIAN CASE

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Abstract

During the twentieth century education was considered a key factor in the economic development of different countries. After the fall of the communist regime and the liberalization of its market over the past two and a half decades Albania has been able to maintain a positive economic growth rate, despite the consequences of the recent crisis. Before the global financial crisis, Albania was one of the countries with the fastest economic growth in Europe (with an average increase of 6%). This figure was reduced by half immediately after the effects that this crisis began to have in our country reaching only 2.1% for 2014. Albania's challenge consists on finding ways to support economic growth in a difficult international environment (mainly in the countries that border with Albania). This study will address the impact that education has on economic growth by identifying it as one of the priorities that policymakers should have.

Keywords: Economic Development, Education, Human Capital, Productivity

INTRODUCTION

Theoretical literature on economic growth underline at least three ways in which education affects economic growth; (I) the increase in productivity as a result of workforce education (ii) the distribution and transmission of the needed knowledge in order to support technological progress (iii) the increase of the innovative capacity of the economy. No country has achieved sustainable economic growth without considerable investments in terms of well-educating their human capital. Practical evidence show this clearly.

Education is one of the main pillars of a healthy and developed society. Development in many dimensions of a State, prioritizing its economic development, is achieved by paying special attention to the education system. Surely education is not simply about learning or

getting good grades. Considered in an economic perspective according to Global Partnership for Education one more year of schooling increases individual earnings by more than 10% each year of schooling increases the average annual Gross Domestic Product with 12:37%; if all pupils of low income countries acquired basic knowledge at school then no less than 171 million people would overcome extreme poverty which would be equivalent to the reduction of 12% of global poverty. If we take into account the population of some countries this 171 would be equal to it Australia (20.6 milion), Cambodia (14.8 milion), Canada (33 milion), Colombia (45.3 milion), Holland (16.6 milion), Tunisia (10.4 milion) dhe Uganda (30.9 milion).

Employment, technological innovation, scientific research, these words have often been cited by economic researchers recently, as the only possibility to cope with the crisis and global competitiveness, which are rapidly modifying the traditions and values of our society. This change includes utilities, social and institutional assets, patterns of production and characteristics of the labor market.

Paradoxically in this new context we should start from the ancient hence, the "man". The secret to successfully cope with the crisis today is to place the employees in the center of the enterprise, to invest in them, to increase their knowledge and training through continuous education programs and lifelong learning. This does not only apply to current enterprises, but also to new ones that will supposedly be created in Albania in the future. Frequently, our policy makers talk about foreign investments and orienting them towards productive sectors so as to increase production and employment. If a new enterprise is created in Albania, it needs skilled human resources.

Should governments invest more in education to support their economic growth? The studies which address this issue are early, but mainly during the twentieth century there was an increase in interest to explore the impact that education has on the economic development of countries. However, despite the great interest in the connection between education and economic development, evidence is fragile. The studies were conducted with reference to the educational system as a whole without specifically focusing on his level.

The link between education and economic development has been the center of attention for studies carried out by development analysts, who study the long-term growth. Investigations conducted in the researches mentioned above show that there is general agreement in academic literature that human capital is an important indicator for productivity both at individual and aggregate level. (Bassanini and Scarpetta, 2001; Fuente and Ciccone, 2003; Jones, 2005; Bassanini, 2007). Empirical studies show that by means of training you can increase productivity. Analyzing a sample of Irish companies Barrett and O'Connell (2001) found that continuous training had a positive impact on sales growth in the period 1993 to 1995.

On assessing French and Swedish companies Scrutinio et al. (2006) have found a positive relationship between training and productivity at work. We note that for both countries vocational training increases productivity and contributes to the raise of salary which on the other hand as we said above positively impacts the improvement of people welfare. Zwick (2002) has shown that in German companies, an increase in the number of employees participating in training courses in the first semester has a positive effect on the growth of annual production. In general, these records show that preuniversity education, university and training courses have a positive impact on productivity growth, which in its turn positively affects the economic development of a country.

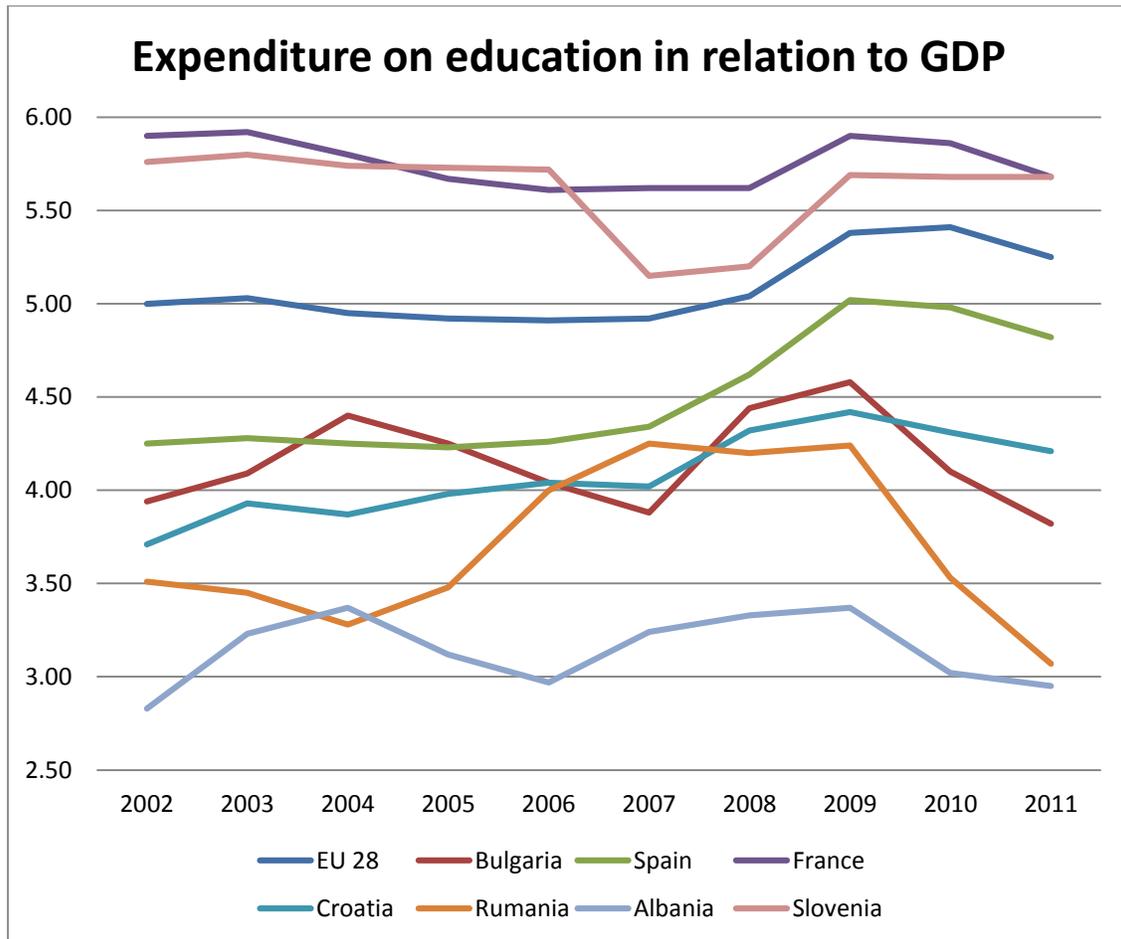
If we take into account developing countries like Albania we note that if in theoretical models education is considered the key to a country's economic growth, in empirical ones the importance of education was very small. The reason for this discrepancy lay in that for a long time education was measured through years of attendance at school, and not with the knowledge and skills gained during the school years, which according to a study of the OSCE, an increase of 100 points in student competences (measuring unit) produces an increase of 2% of GDP per person.

Thanks to this recording, education is recognized as one of the keys to development for countries like ours. Urgent needs for electricity, water, free health care or contemporary infrastructure have consequences mainly only in the present, the education system, the university and its role in changing theoretical knowledge into added value for companies, which is essential for the creation of a dynamic labor market for the development of economic enterprises in particular and economic development of the country as a whole, the consequences of which become apparent only after several years.

SOME DESCRIPTIVE STATISTICS ON EDUCATION IN ALBANIA

Qualified labor force is a key determiner for economic growth. Literature refers to education as a boosting asset in economic growth. Education is the main pillar of the Lisbon Strategy. Gonads (2007) stresses that the efficiency gained in spending on education will have major effects on the GDP in the long term. According to him, an increase of 10% in the education product can increase the GDP by 3 to 6% in the long term in most member countries of the Organization for Economic Cooperation and Development. With the launch of the Lisbon Strategy, the average spending on education in 25 European Union countries grew from 4.7% in 2000 to 5.2% in 2003 and 5.25% in 2011 (the average of 28 countries in the European Union).

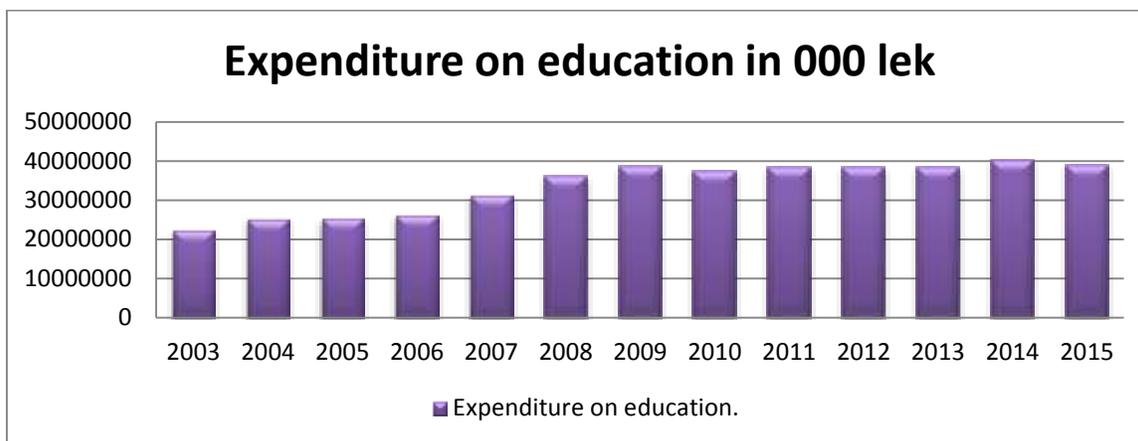
Chart 1: Total expenditure on education as a percentage of Gross Domestic Product



Source: EUROSTAT

Traditionally education is financed mainly by public revenue. Based on the structure of each government and fiscal relations within the levels of government schools of each education level are funded by local and central government. The analysis of the chart above shows that the total expenditure on education in Albania in relation to the Gross Domestic Product is very low compared to some countries in the Balkans and the average of the 28 member states of the European Union. Spendings on education as percentage of GDP have had their ups and downs but are still at very low levels. In 2004 and 2009, the ratio of public expenditure on education to GDP has been recorded at its highest with 3.37%. A large increase compared to the previous year is observed in 2012-2013, where the growth of expenditure in relation to GDP ran at 0.38 percentage points.

Chart 2: Spending on education in value (in 000 lek)

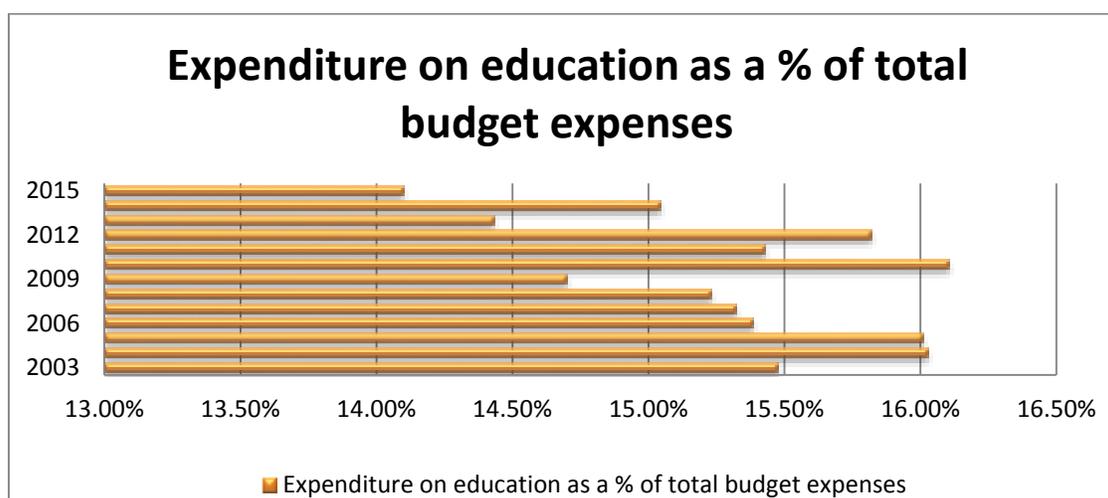


Source: MES, MF, annual budgets revised

If we refer to the expenditure for the years 2003-2015 we will see that spending on education has had a significant increase in the transition from 2006 to 2007 by about 19% more than the previous year. There was also a satisfactory increase from 2007 to 2008 by about 18%. The maximum level of expenditure on education was in 2014 to around 40 billion lek but compared to the previous year the increase is only 5%.

Although the budget approved for MES in 2015 was absolutely lower than that of 2014, the transition of vocational education from MES to MoSWY with a budget of nearly 2.4 billion shows a completely different situation. In 2014 the budget for education excluding the budget for vocational education was approximately 38 billion while in 2015 the estimated budget was 39 billion ie an increase of 2.6%.

Chart 3: Spending on education in the total expenditures of the state budget



Source: MES, MF

For 13 years in the period 2003-2015 the budget for education has been 15% of total budget expenditure, a figure comparable to many developing and developed countries. According to annual reports published by the OECD in 2014 we see that public funds available to education ranged to 13% of total public expenditure for the OECD countries, remaining stable since 2009 until today. In countries such as the Czech Republic, Italy, Japan or Slovakia the figure is around 10-11%, while there are also countries like Chile, Mexico or New Zealand in which education in relation to the total budget expenditure reaches greater rates than 20%.

We need to clarify the fact that in 2015 a part of the budget was transferred from MES to MSWY since vocational education was moved under the jurisdiction of this ministry. Despite being a percentage on total public expenditure the budget of 2015 indicates an amount smaller than in the 2014, if we adjust this value with the effect of changes in the funding between ministries, it will be kept at the same levels of the previous, with a slight reduction of 0.7 percentage points.

After analyzing these three indicators and comparing them to other countries we can summarize that spending on education have been considered a priority since 2003 and continue to be seen as such when governments allocate budget expenditures. In percentage of budget expenditures, education spendings are at satisfactory levels, even surpassing the report that developed countries bear on this indicator. However, in relation to Gross Domestic Product Albania should consider increasing the share of the state budget that goes to education.

EMPIRICAL ANALYSIS

Impact of Human Capital in the Economic Development of Albania

Given the evidence above, we will confirm what was said above in the Albanian context to understand the impact that education has on the economic development of the country. Moreover based on the last poll from INSTAT (2015), where a sharp increase is noticed in the expenses of Albanian families for education, we will verify the impact of this trend in Albania. Does an increase in education transform to a higher level of welfare? Do education spending change into added value?

Therefore we will actually verify the impact that spending have on the education of young people by presenting below an empirical analysis so as to confirm the impact that spending on education of youth have in productivity growth, which is a very important indicator of an increase in competitiveness and has a very positive effect on GDP and later on in welfare growth.

To realize this analysis we start from a linear multivariabel model, taking as dependent variable productivity and as independent variables, expenditures for education (EE), enrollment in schools (Ge) and knowledge of literacy among young people (YI)

$$productivity = \beta_1 + \beta_2 E_e + \beta_3 G_e + \beta_4 Y_1$$

Using the Gretl data processing program, we get these results:

Model 1

KVZ, the sample from 2003 to 2014 (T = 12)

Dependent variable: Productivity

Table 1. Model 1 Estimation a

	<i>Coefficient</i>	<i>Std.Error</i>	<i>t-Student</i>	<i>p. critical</i>	
const	505851	274512	1,8427	0,10261	
Expenses for education	2,03837e-05	6,38393e-06	3,1930	0,01275	**
Enrollment in schools	65,7287	24,6692	2,6644	0,02861	**
Literacy in young people	-5085,78	2758,2	-1,8439	0,10243	

Table 2. Model 1 Estimation b

Overall diff. var.	11699,20	Dev. std. diff. var.	2815,500
The sum remaining square	5697219	std.error. regression	843,8912
R-square	0,934663	R-square corrected	0,910162
F(3, 8)	38,14738	P. critical for F	0,000044
Log-pergjasia	-95,45075	Akaike criteria	198,9015
Schwarz criteria	200,8411	Hannan-Quinn criteria	198,1834
Rho	-0,108248	Stat. Durbin-Watson	1,919524

From the results above we notice that in the period mentioned there is a positive correlation between productivity and the Ee and Ge with a regression equation:

$$productivity = 505851 + 2,03837e - 05E_e + 65,7287G_e + -5085,78Y_1$$

with $R^2 = 0,93$ and with corrected $R^2 = 0,91$.

The result of this correlation is very surprising for two reasons. Firstly for the fact that although Ee has a very positive impact on productivity its coefficient is very low. And secondly YI has no impact on productivity and its coefficient is negative. However here the Std. Error (ϵ) is very high.

This result may be due to the fact that the data for this indication were limited and we had to manufacture data.

As for the model we can say that its results are credible because we have a high R2. Durbin-Watson is also greater than 1, while the p-value is very low.

Tests for evaluating the model

To assess the importance of the model we have also conducted other tests, ranging from White to test heteroskedasticitet since R2 was very high and this test resulted that there is no heteroskedasticitet.

In addition to that to evaluate the importance of the model we tried assessing the model with that of criteria: i *student* with reliability coefficient $\alpha = 0.05$ it turned out that $t_v = 9.813309$ hence with a positive value, $t_v > t_{kr}$ this shows that the coefficients are important and Ee, Ge are important for the growth of productivity.

In order to strengthen the above results and to show that even in the future education costs in human capital will have a positive impact on the growth of productivity and GDP. Further ahead we will introduce the quintiles regression, which is a regression model that serves for predictions

Model 2

Quintiles rating, for the sample from 2003 to 2014 (T = 12)

Dependent variable: Productivity

tau = 0,5

Std error. asymptotic under the hypothesis of remaining IID

Table 3. Model 2 Estimation a

	Coefficient	Std.error	t-Student	p. critical	
const	464327	284670	1,6311	0,14151	
Expenses for education	2,07192e-05	6,62018e-06	3,1297	0,01402	**
Enrollment in schools	69,4416	25,5821	2,7145	0,02647	**
Literacy in young people	-4670,43	2860,27	-1,6329	0,14114	

Table 4. Model 2 Estimation b

Average diff. var.	13029,87	Dev. std. diff. var.	2815,500
Remaining sum abs.	6090,770	Remaining square sum	6060664
Log-pergjasia	-95,07324	Akaike criteria	198,1465
Schwarz criteria	200,0861	Hannan-Quinn criteria	197,4284

Observing the model one can notice that even in the future spending on education and education itself will have a positive effect in increasing productivity. The margin of error for education expenditures is very low as well as the coefficient of impact, while gross Enrollment has a tremendous impact on increasing productivity. After conducting a number of tests we can state that the first model and the second model are reliable.

Although the patterns above have limitations since the number of observations is only 12 and data indicator for literacy have been processed by us and not very reliable, we can say, however, that human capital has a major role in increasing productivity and consequently the economic development of a country. Also the growth of expenses by the government in educating the human capital has a primary role in productivity and GDP growth.

CONCLUSIONS

The empirical analysis confirmed the important role that has investing in the education of the human capital for the economic development of a country. Countries like Albania which aim at a rapid and stable economic growth should evaluate this area as one of the important keys to success.

Public spending on education has a key role on productivity, which is often used as a synonym for increased competitiveness and development of a country.

If we take for granted the Schumpeterian saying that schools transform theoretical knowledge into added value for enterprises (and, consequently, for the whole economy) it is important to draft policies which aim not only at promoting and enhancing education (conveyed in average years of schooling), but also at increasing the quality of training for students in the pre-university system and university students.

The budget for education should be supported more by the Albanian government, if rapid and stable growth is required. The need for a skilled human capital that will serve not only to increase the productivity of local enterprises but mainly to attract serious foreign investments should be in the foreground of pre-university and university curricula.

At the same time it is necessary to build cooperation bridges between businesses operating in a certain area and vocational schools or the local universities so that the knowledge acquired in school is that required by the labor market.

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