

The Impact of Education in Economy. The Case of Albania

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Abstract: As an economist and researcher of macroeconomic models for economic growth, we give importance to labor efficiency to increase the level of production. Efficiency is directly related to education, qualification, specialization, etc. We give importance to the educational part, as we also connect it with the salary and the advantages that education gives to a country as a public good. Being a country in transition makes us appreciate it more and as individuals we invest in it, but generation after generation have tried to get an education and leave the country. This is the reason that education in our country gives the expected results. However, education is also related to the culture received from generation to generation. The purpose of this study is to discover the relationship between the education of the population and the economic growth of the country. The result of the study was surprising. Education in Albania does not make a positive contribution to economic growth. On the contrary, it gives a negative impact. Albania is facing an increasing emigration of educated and professional individuals. This has a negative impact on economic growth as the country has spent on their education while the host country benefits from the contribution.

Give a man a fish and he will eat for a day. Teach a man to fish and he will eat for a lifetime.”- Laozi (老子)¹.

Keywords: Gdp growth, education, Government expenditure, Enrolled in education, etc.

JEL classification: E22, H52,47

1. INTRODUCTION

There are many reasons why education is important. Education can be defined as a generator for talent, professional skills, work and specialization, all of which lead to increased productivity (EEF 2016). The reason that education is valued more is because the education of the population gives us results in the future both in private companies and in public institutions. Education creates the possibility of movement towards economic growth and technological progress. In the most advanced models of economic growth, labor efficiency and specialization have particular value as they relate to productivity and economic development. In the study of the World economic forum, as well as other economic authors, who have observed the profitability of education, have come to the conclusion that education increases productivity, promotes the development of knowledge, creativity and the capacity to produce new knowledge, new products, and advanced technology (Barro and Lee 2010). Education is not only related to one generation of the population. The more invested in the present, the more it will bring a positive impact on the education of future generations. This is exactly the aim that the evaluation of education seeks to achieve from time to time. Only in this way countries can avoid the decline in living standards and the increase in poverty. Re-

garding education, it does not mean that everyone should have a higher education or have scientific degrees and titles. According to (IIASA 2008) and Social Development Goals (SDGs) it is important that both sexes, boys and girls, have completed secondary education. But it also depends on the country's population goals. In countries that are developing, it is needed and appreciated the most for the youth to be well educated, so they have completed their university studies.

The reason is that there is a really strong connection between education and economic growth. The difficulty is because awareness programs are needed for studies conducted in developing countries. On the other hand, for politicians, it is more important that the investments are as minimal as possible from the budget income than the positive effects that education will bring. But education is not only about quantity. A very important part of it is the quality. Scientific communities and political institutions are inspired by principles generally associated with economic gain.

At the first moment, the capital invested in education seems like a waste, but in the future it gives positive effects for the possibility of continuous economic growth. Education and human capital can play a role in increasing the productivity of individual workers and the workforce as a whole.

The degree to which qualified and educated human capital will influence in the determination of wages will depend from the nature and structure in which these workers are employed and from the nature of the demand for work. If the workers are included in the field in which they are well qual-

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¹ Ancient Chinese philosopher and writer, known as the reputed author of the Tao Te Ching.

ified, then in addition to their professional growth, they will also bring an increase in the productivity levels and the profit margin. (Borjas,). Secondly, widespread empirical studies (similar to Moretti, 2002; and Borjas, 2004) have shown that companies or institutions that have tried the most to reduce expenses for employee qualifications and having the sole purpose of increasing production, have not given results. This is because the individual was not only not properly qualified, but at the same time he did not receive the desired salary which could promote him in the workplace. However, we know that a qualified worker provides more productivity than an unqualified worker, and at the same time provides opportunities for increased productivity that can be accompanied by increased wages. What is important is to value individuals for their professional talents and abilities. Moretti (2002) found that productivity changes are influenced both by the level of education and by the job position for this level of education.

2. LITERATURE REVIEW

Education and human capital are appreciated at first by Chicago academy, and then by classical economists. Education is essential for economic growth and profitability, as it increases efficiency and helps the economy move forward in the development process. Numerous checks and studies have been carried out on this issue, which have observed that if the population is more educated, there are more opportunities for the country to be more developed, both economically and socially. Not only that, but education is expressed as a guarantee that gives the possibility of long-term development. In most cases, this is what is proven, not only as an objective but as something easily achieved. At the same time, the good education of individuals leads to an increase in the appreciation of their work and an increase in the income that they benefit. This also reduces poverty. A close relationship has been seen between increased pay as a result of education and specialization with reducing poverty in the population (IIASA 2008, Woessmann 2015). Education is not only about the volume of training, but also about the quality in which it is carried out. Hanushek and Kimko (2000) pointed out that it is not simply the timing of training, but the quality of training that has a significant relationship with economic growth. Golinowska & al. (2016) noted that when the World Economic Forum measures secondary and tertiary enrollment rates, their dimension also includes training and education quality. The SDGs note that there has been great progress in access to education, but access does not always mean quality education. 103 million young people worldwide still require basic knowledge. Despite this, although in order to achieve a complete education, the costs must be borne because education itself is the key to promoting development. Developing countries have seen more focus on human capital as an engine of economic growth. Academic development should have been encouraged earlier in these categories of countries. Research has highlighted the importance of recognizing talents for individuals in order to develop faster, but sometimes developing countries have many obstacles, including the cost of education. Spending on education is receiving more priority around the world, but the budget for education is still in a low state. Researchers have often not been able to answer the feedback between

qualification and budget constraint for qualification, despite the fact that there are many studies on the relationship between education and savings in the budget for education (Naeem & al. 2012). These studies are based on a Cobb Douglas production function, where real GDP per capita is used as a measure of economic growth, physical capital is measured by gross fixed capital, and this theory has been applied to both developed and developing economies. In these studies, are taken into account individuals which are able to work and those who are currently working.

In the models that deal with how education affects economic growth and development, it can be seen that in developing countries, investing in advanced education has more value than just basic education. This has been noticed more in countries like Romania, Bulgaria and other countries that are still in the development process, (Andrei & Iefter & al, 2010, Andrei & al 2010). Other authors take and treat the relationship of human capital in terms of effectiveness and productivity achievement in the same way as seen in basic macroeconomic models with the Cobb Douglas production function, which has 3 main variables A, L, K. They present and the importance that not only natives are educated in the country, but also non-natives come. Such a case is presented in the model Soloë and even Lucas (1988), represents the most important part of the qualification of non-natives in a foreign country, that perhaps in the future, they will be suitable to bring their capital to investment in the country where they were educated Ochilov (2012), Bergerhoff, & al. (2013).

EDUCATION AND YOUTH

We often use the impact of education on increasing labor income as a development strategy. It is the incentive we give to young people to continue their education. In developing countries, not everything is always guided by social or economic principles. Young people want to make ends meet and often give up schooling to start a job, earn an income and get on with life. Today's youth find it very easy to compare what interests them the most. Maybe their point of view is wrong, that in most cases it is short-term, because of different situations they are forced to find solutions. In developing countries, the propensity of generations to continue education is high, but the conditions became difficult and this is where the flow of education falls. Looking at income generation, everyone may think to work first and collect money and then get educated. Young people do not have much inclination to open their own activities. This is because they calculate how much the self-employment income will be, how much the taxes, responsibilities, costs will be and decide that it is better to be employed and get the salary. This can happen more often to those young people who are educated because they feel that they have spent money on personal investments and now they cannot pretend to lose. So they choose a salary rather than self-employment.

Young people want to meet their living conditions. Wages in our country remain low and so young people think of working harder to accumulate money and then get an education. There are also those who think of leaving the country for chances and opportunities. What is worth noting is that there are still low wages in certain sectors. It is not without reason

that we are ranked among the countries with the lowest wages.

If we were to look for the influence of wages on development, we know that if an individual benefited from a satisfactory wage, he would use it as an incentive to work with high efficiency and this would be able to increase productivity. If this were a cycle which would continue, it would then bring about an increase in productivity and thus we would conclude that wages would increase GDP. If we had a policy that sensitizes the study, provides funds such as scholarships, pays for studies, specializations and promotes even more the belief that education is valuable, this would undoubtedly bring about continuous development. From the theoretical side, we say that the action is mutual. Education helps economic growth and economic growth affects the development of education.

3. METHODOLOGY

The source of the data is the World Bank. The data are secondary quantitative and belong to Albania. The data belong to the period 2004-2019. The SPSS program was used for data processing. The dependent variable is the annual GDP growth and the independent variables are as follows:

- Enrolled in education (% of the total population)
- Wage and salaried workers, male (% of male employment)
- Wage and salaried workers, female (% of female employment)
- Government expenditure on education, total (% of GDP)

To eliminate the problem of collinearity and to see the elasticity of the variables in the multiple regression, we have transformed the data into Ln .

The hypotheses of the study are:

- H0: There is no significant relationship between the annual growth of GDP and enrolled in education, wage and salaried workers, male, wage and salaried workers, female, government expenditure on education, total (% of GDP)
- H1: There is a significant relationship between the annual growth of GDP and enrolled in education, wage and salaried workers, male, wage and salaried workers, female, government expenditure on education, total (% of GDP)

The model used in our study is the multiple linear regression model. The purpose of multiple linear regression method is to analyze the relationship between dependent and independent variables. To estimate the parameters $\beta_0, \beta_1, \beta_2, \beta_p$ we use the method of least squares.

The estimate of R^2 determines the strength of the association between the independent variables and the dependent variables. The t-test is used to assess the individual relationship between each independent variable and the dependent variable. The Fisher test is used to determine whether or not this association determined by selection can be generalized to the entire population. The standard error of the estimate is used to determine the confidence level. The data are tested for collinearity and normality. VIF between 1 and 5 suggest that

there is a moderate correlation, but it is not severe enough to warrant corrective measures. VIFs greater than 5 represent critical levels of multicollinearity where the coefficients are poorly estimated, and the p-values are questionable. In the model used, we will calculate the elasticity of real GDP growth in relation to the independent variables entered in the model. For example, $Egdp_en$ is the elasticity of real GDP growth in relation to enroll in education variable.

$$Egdp_en = \frac{\text{Percentage Change in real growth GDP}}{\text{Percentage Change in enrolled in education}}$$

$$Egdp_en = \frac{\Delta rggdp / rggdp}{\Delta ened / ened} = \frac{(rggdp1 - rggdp0) / rggdp0}{(ened1 - ened0) / ened0}$$

$$Egdp_en = (drggdp / dened) (ened / rggdp)$$

4. RESEARCH RESULTS

After transforming the data and eliminating the collinearity problem, we noticed that our model is significant².

Value of R Square = 0.774 means that 77.4% of our model is explained by the variables used. As we mentioned above, the linear regression p value for each independent variable tests the null hypothesis that the variable has no correlation with the dependent variable.

The variables used were tested for multicollinearity and the VIF value is between 1.29-1.56.

Our model is significant as P value = 0.006 < 0.05 and F = 7.719.

Of all the independent variables included in the study, only the enrolled in education variable and Wage and salaried workers, female have a significant impact. The impact of enroll in education variable on annual GDP growth is significant and negative as P-value = 0.002 and parameter B = -1.118. Thus, a 1% increase in enrollment in variable education will cause a 1.118% decrease in the annual GDP growth. The impact of Wage and salaried workers, female variable is significant and positive as P-value = 0.055 and parameter B = 2.116. A 1% increase in Wage and salaried workers, female variable will bring a 2.116% increase in annual GDP growth.

The negative impact of the enrolled in education variable was surprising. Based on this, we made a more in-depth study of this variable and its impact on the annual GDP growth. Thus, we detailed this variable as follows.

We also transformed the data for the above variables into Ln and the data again belong to the period 2004-2019. The above variables are all correlated with each other, so their testing was done through simple linear regression. The results of their testing are presented in table 3:

By testing each variable separately, we noticed that they all have a negative impact on the annual GDP growth and the impact is significant. The only variable that does not have a significant impact since the P-value is = 0.5 > 0.05 is gross enrollment ratio, primary and lower secondary, female (%) variables. From table 3 it can be seen that the greatest elasticity is gross enrollment ratio, primary and lower secondary,

²See table 1

male variable (B=-5.688), gross enrollment ratio, primary and lower secondary, both sexes variable (B =-5.441), gross enrollment ratio, secondary, male variable (B=-4.799) and

the group of variables for tertiary education has the lowest elasticity.

Table 1. Result of the Multiple Regressions Model.

Descriptive Statistics										
		Mean		Std. Deviation		N				
lngdp		1.1149		.56577		14				
lnenrolledded		3.8089		.41504		14				
lnwagemale		3.7291		.05774		14				
lnwagefemale		3.7068		.11329		14				
lngovexpend		1.2088		.08960		14				
Variables Entered/Removed ^a										
Model		Variables Entered		Variables Removed		Method				
1		Ingovexpend, lnwagemale, lnenrolledded, lnwagefemale ^b		.		Enter				
a. Dependent Variable: lngdp										
b. All requested variables entered.										
Model Summary										
Model		R		R Square		Adjusted R Square		Std. Error of the Estimate		
1		.880 ^a		.774		.674		.32304		
a. Predictors: (Constant), lngovexpend, lnwagemale, lnenrolledded, lnwagefemale										
ANOVA ^a										
Model			Sum of Squares		df	Mean Square		F	Sig.	
1	Regression		3.222		4	.805		7.719	.006 ^b	
	Residual		.939		9	.104				
	Total		4.161		13					
a. Dependent Variable: lngdp										
b. Predictors: (Constant), lngovexpend, lnwagemale, lnenrolledded, lnwagefemale										
Coefficients ^a										
Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics		
		B	Std. Error	Beta				Tolerance	VIF	
1	(Constant)		-6.725	7.124			-.944	.370		
	lnenrolledded		-1.118	.252	-.820		-4.436	.002	.734	1.363
	lnwagemale		1.308	1.769	.133		.739	.479	.770	1.299
	lnwagefemale		2.116	.960	.424		2.205	.055	.679	1.473
	lngovexpend		-.514	1.251	-.081		-.411	.691	.639	1.565
a. Dependent Variable: lngdp										
Correlations										
			lngdp	lnenrolledded	lnwagemale		lnwagefemale		Ingovexpend	

Pearson Correlation	lngdp	1.000	-.787	-.291	.390	-.036
	lnenrolleded	-.787	1.000	.471	-.022	.247
	lnwagemale	-.291	.471	1.000	-.061	.150
	lnwagefemale	.390	-.022	-.061	1.000	.538
	lngovexpend	-.036	.247	.150	.538	1.000
Sig. (1-tailed)	lngdp	.	<.001	.156	.084	.451
	lnenrolleded	.000	.	.044	.470	.197
	lnwagemale	.156	.044	.	.419	.304
	lnwagefemale	.084	.470	.419	.	.024
	lngovexpend	.451	.197	.304	.024	.
N	lngdp	14	14	14	14	14
	lnenrolleded	14	14	14	14	14
	lnwagemale	14	14	14	14	14
	lnwagefemale	14	14	14	14	14
	lngovexpend	14	14	14	14	14

Table 2. Independent Variables Included in the Study.

Gross enrolment ratio, primary and lower secondary, both sexes (%)
Gross enrolment ratio, primary and lower secondary, female (%)
Gross enrolment ratio, primary and lower secondary, male (%)
Gross enrolment ratio, secondary, both sexes (%)
Gross enrolment ratio, secondary, female (%)
Gross enrolment ratio, secondary, male (%)
Gross enrolment ratio, upper secondary, both sexes (%)
Gross enrolment ratio, upper secondary, female (%)
Gross enrolment ratio, upper secondary, male (%)
Gross enrolment ratio for tertiary education, both sexes (%)
Gross enrolment ratio for tertiary education, female (%)
Gross enrolment ratio for tertiary education, male (%)

Table 3. Results of Simple Regression Models.

Variables	Unstandardized B	Sig.	R Square	Unstandardized B (Constant)	Pearson Correlation
Gross enrolment ratio, primary and lower secondary, both sexes (%)	-5.441	0.005	44.6	25.81	Sig. (1-tailed)
<i>Gross enrolment ratio, primary and lower secondary, female (%)</i>	-2.808	0.5	3.2	14.08	0.252
Gross enrolment ratio, primary and lower secondary, male (%)	-5.688	0.003	47.4	26.949	Sig. (1-tailed)
Gross enrolment ratio, secondary, both sexes (%)	-4.723	0.001	52.6	22.369	Sig. (1-tailed)
Gross enrolment ratio, secondary, female (%)	-4.464	0.003	46.9	21.167	Sig. (1-tailed)
Gross enrolment ratio, secondary, male (%)	-4.799	0.001	56.1	22.749	Sig. (1-tailed)
Gross enrolment ratio, upper secondary, both sexes (%)	-2.217	0.001	54.4	10.905	Sig. (1-tailed)

Gross enrolment ratio, upper secondary, female (%)	-2.156	0.002	51.1	10.575	Sig. (1-tailed)
Gross enrolment ratio, upper secondary, male (%)	-2.236	0.001	56.3	11.047	Sig. (1-tailed)
Gross enrolment ratio for tertiary education, both sexes (%)	-1.116	0.001	61.1	5.376	Sig. (1-tailed)
Gross enrolment ratio for tertiary education, female (%)	-1.083	0.001	60.7	5.44	Sig. (1-tailed)
Gross enrolment ratio for tertiary education, male (%)	-1.117	0.001	61.3	5.172	Sig. (1-tailed)

5. CONCLUSIONS

We started the study of this topic with the desire to give more importance to education in the growth of GDP in the country. The facts and reality studied by the model created with the data showed us otherwise. They showed that we invest in education but we have no product from it. The possibilities of young people to get an education exist in our country, but there are obstacles to their positioning in work for the invested education. This is also the reason why the selected variables do not give the desired impact on GDP growth. Also, being a developing country, it may take a longer time to wait for the results because it is difficult to enter the labor market in our country directly after graduating, and in most cases young graduates work outside the profession thus reducing the level of effectiveness Ochilova A. (2012). Therefore, this study leaves room for another study where the variables of the current study may be included, but seeing how the result of GDP growth will be with a difference of five or 10 years depending on the level of education chosen. A higher university education needs time to yield its product and a secondary education will need more time. What can have a more positive effect is the continuation of the program that has been started for several years in the country in which students who complete their studies with excellent results are offered a job in the state administration. This will really promote education even more and at the same time it will create opportunities for young people not to leave the country.

The government should make available more income to finance the education system from preschool to university level. According to UNESCO 2015³, low-middle income countries need to spend 3.4% of the country's GDP on preschool, primary and secondary education. While for all levels of education about 5.4% of GDP.

The government should also take measures to reduce the number of children out of school, primary, since in Albania only for the year 2021 this number is 12899 children⁴. Of course, this will be accompanied by an increase in costs, such as for teachers, facilities, etc., but it is also very important for the future of a country.

It is very important for the government to take measures and implement economic, financial and supportive policies for the Albanian youth with the aim of keeping them in Albania, because in the last 10 years, a large number of young people

are immigrating directly after completing their studies. This means that the government pays for their education and the country where they emigrate benefits from the contribution.

In recent years, professional individuals such as doctors, nurses (mainly in Germany and Italy since the policies of these countries have become very favorable for their employment), university professors, economists, IT workers, etc., are leaving Albania. So the intellectual part of the population is leaving and this is the main reason that the impact of education on the economic growth of the country is negative.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflict of interest.

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³ UNESCO Institute for Statistics (UIS). UIS. Stat Bulk Data Download Service. Accessed October 24, 2022. <https://apiportal.uis.unesco.org/bdds>.

⁴ <https://data.worldbank.org/>

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