HUMAN CAPITAL AND HIGHER EDUCATION AS DRIVERS OF ECONOMY IN ALBANIA

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Abstract

Education is a strong pillar for the qualitative growth and improvement of human capital. Appropriate and necessary education of people will enable business employees to have the necessary knowledge for the activity. The growth of businesses will have its impact on the growth of the country's economy. People are turning to higher education more and more as a way to enhance their personal wellbeing. Higher education is seen by people as the best way to enable the employment and higher salary in the future. For this reason the focus of this paper is education. The main objective is to understand the impact of higher education in economic growth. This paper analyzes the impact of education through several variables on economic growth in Albania, focusing more on the impact of higher education. The independent variables considered in this paper as representatives of education are mean years of schooling, enrollment in primary education, enrollment in secondary education, enrollment in higher education, while as a representative of growth is used dependent variable Gross Domestic Product (GDP) per capita. From the model we found the variables mean years of schooling and enrollment in higher education are significant and positively related with GDP per capita. The analysis is based on model building with secondary data using the method of least squares.

Keywords: human capital, higher education, school enrollment, GDP per capita
JEL classification: I23, O15, H52

1. Introduction and literature review

1.1. Introduction

Higher education is very important for its impact on the development of human capital, technology and economic growth. After the change of political system, there was an opportunity to graduate to all those who sought to study in higher education. The country's socio-economic changes highlighted the need for increased human capital through education. People were free to attend higher education. They were eager for knowledge and headed to the universities making the demand for higher studies to grow. The demand for studies in the last three decades has been increased, a demand that led to the opening of private institutions of education.

The market needed contemporary professionals and thus universities opened the new study programs to suit the economic changes, which increased government spending to universities.

The Albanian economy did not always perform well. The country has more imports than exports and the growth rate of the Gross Domestic Product (GDP) has had fluctuations. The growth rate of GDP is very important because it is a strong determinant of the growth rate of all economic activities which is important for employment of people.

The 2008 financial crisis did not leave without affecting Albania's GDP growth rate. Economic development in Albania fell after the financial crisis of 2008, even though not immediately. In recent years, the growth rate of Gross Domestic Product (GDP) has been positive and this is expected to increase youth employment opportunities.

The focus on education in this paper is for the simple fact that we believe that education is an essential element for poverty reduction and economic growth. Undoubtedly this does not imply that economic growth depends solely on education but the purpose of this paper is to find out whether there is a direct link between education and economic growth in the country

and if so, to recognize this link and use it for further economic growth. Poverty is income poverty, lack of qualitative material goods, deprivation of physical or non-self esteem and self respect in society. They are result of training, intelligence, experience, etc. (UNDP, 2006). An individual with high school education is able to find a job in a shorter timeframe and with a higher wage than a person with no higher education (Zimmer, 2016). So, a way to reduce unemployment and poverty is through the growth of number of educated people and government's strategies and spending in this regard are essential.

In recent years there has been a slight decline in secondary and tertiary education enrollment. Albania has also been experiencing high emigration in recent years and this may be one of the reasons for the decline in secondary and tertiary education enrollment.

Another reason may be the economic situation of Albanian families and the employment of young people instead of studying. The desire of Albanians to live in developed countries and especially in European Union (EU) countries has contributed to the increase in the number of young people studying at abroad universities. This will cause a shortage of specialists in various fields in the future if graduates do not return to their home country. Businesses may not meet the needs for qualified employees and it will bring a slowdown or interruption of their growth and development and economies country as a whole. Immigration and family planning has had the effect of increasing the average age of the population in Albania. The decline in the number of students attending secondary and tertiary education is the incentive for this paper to understand the importance of education in economic growth. The level of education of a country's population is very important because it is one of the important indicators in determining the development of human capital. The development of human capital is one of the main factors influencing the development of an economy. One of the most well-known models of factors affecting economic growth is The Solow Growth Model which analyzes the impact of factors such as population growth rate, the rate of technological progress and the savings rate on economic growth. There are many authors who have emphasized the enormous impact of human capital on economic growth and added to the model to study the impact of human capital on the economy or have analyzed in particular the impact that human capital has on economic growth in a direct or indirect way. The impacts are different because the impact of human capital is very complex.

Human capital has been widely regarded by various authors as very important influencers in technology development and consequently in economic growth. Human capital also influences the saving rate because the more educated an individual, the smarter he will be at the investments he will make as well as the savings rate. Mankiw, Romer and Weil (1992) showed that the human capital has a significant role in the economic growth. The authors introduced human capital measured through education as a new variable in the model in the Solow growth model and this variable is important for explaining deference in income per capita among countries.

Many authors have studied human capital for its impact on the economy through human capital education. We are aware that human capital is much more than years of education. Human capital is also expanded and enriched by studies independently whenever an individual needs certain information or methodologies. He uses these studies throughout his life to be more efficient in his work. Human capital is also enriched by learning from each other, acquiring knowledge that someone else has and then using it in their activity or work.

1.2. Overview of previous studies on the link between education and growth

The literature suggests that the best way to calculate human capital and analyze its impact on the economy is through education. Various authors have used education-related variables to explain economic growth. Different authors have used indicators like school enrollment rates, years of education, educational attainment, etc. to understand the effect of human capital. Barro and Lee (2013) investigate the relation between output and human capital stock, measured by educational attainment. They found that schooling has a significant positive effect on the level of income.

According to Pelinescu (2015) there is a positive, statistically significant relationship between GDP per capita and innovative human capital capability and qualification of employees and specifically those with secondary education, while there is a negative relationship between education spending in GDP and GDP per capita. Investing in human

capital is essential to the economic growth of a country. Education enhances human productivity, social benefits and financial benefits by strongly influencing the household (Ozturk, 2001). The analysis conducted by Odit, Dookhan and Fauzel (2010) concluded that human capital does lead an increase in the output of the economy and facilitates the implementation of new technology in the country.

Bils and Klenow (2000) estimated the growth in human capital from 1960 to 1990 for a cross section of countries and they concluded that growth in human capital accounts only for less than one-third of observed relation between schooling and income growth. High school enrollment maybe associated with faster growth because increased human capital facilitates adoption of technology. An economy that has a stock of human capital will experience rapid growth and international trade will have a positive impact in this direction resulting in economic growth (Romer, 1990). He used as a representative of human capital, years of education.

In the long run economic growth, education and technology are like two engines. However, it should be kept in mind that human capabilities cannot grow indefinitely as technology that can be improved without limit (Gomes, 2002).The effects of education are not immediate, they even last in time. In the simulation developed by Appiah and McMahon (2002) many of the effects on economic growth are indirect and delayed, including the effects of education. The education of the population results in the strengthening of institutions which in turn contribute to a higher rate of private investment. They used variable gross enrollment rates because this variable indicates the level of investment invested in education.

Education is expected to reduce poverty but also the mobility of employees from one place to another is influenced by education. According to Lucas (1988) if labor mobility is possible and benefits can pass from one person to another, then the labor wage rate in any given skill level will be increased by increasing the wealth of the country in which he is employed. Since the labor movement normally occurs from poor countries to rich countries then the poor countries don't benefits. In a model human capital accumulation was represented by schooling and in the other model specialized human capital accumulation was represented from learning-by-doing. The results of the study of Gocer and Erdal (2015) showed that to cut down youth unemployment rate to a reasonable level recommend job training and learning skill developments, etc., because even an exclusive economic growth will not be enough to reduce the youth unemployment rate if youth unemployment is quite severe.

One of the problems of young people is the unemployment created as a result of the inconsistency of education and qualification with the labor market demands. To help young people create opportunities for employment, the Albanian government is orienting them towards vocational education. Kruss et al., (2015) emphasize the importance of linking education and economic development. Universities should focus strongly on their specialties. They need to develop their specialties by focusing their programs on priority sectors related to their expertise. This requires a clear strategy of cooperation between universities, businesses and government.

According to Breton (2012) the evidence for education returns shows that investment in schooling is subject to reduced returns, but the macro benefit of all education is substantial in highly-educated countries. In less educated countries marginal returns are much higher but this return is generally indirect and marginal returns to education are generally not appreciated. These very high macro-marginal returns to education would lead to rapid growth in poorer countries if they would focus on raising the average level of education.

Gyimah-Brempong, Paddison and Mitiku (2006) found in their study that the effect of higher education on the growth rate of per capita income is significant statistically and more important than physical capital investment. All levels of education have positive effects on income growth

According to Sapir et al. (2004) the basic requirement for an innovation-driven economy is higher education. The US has grown faster than the EU because of its investment in education. Total public and private spending on education in the USA is twice the EU average and still more than any Member State. The percentage of the population with higher education and post-secondary education is high compared to EU countries. The impact of higher education on economic growth depends on whether the economy is based on an innovative industry or on the production of imitation. Thus, innovation makes intensive use of highly

educated workers while imitation relies more on combining physical capital with less educated labor (Aghion et al., 2009).

Activities of higher education institutions, in addition to other influences, impact positively GDP per capita and reduce unemployment in the long run (Schubert and Kroll, 2016). Government policies have a major impact on higher education and higher education has an impact on the economy by creating a lasting link between higher education and the business environment by creating different approaches especially for universities (Untaru, 2012).

According to Summers (2011) most evidence would suggest that the current world economy is going to be a knowledge economy to a much greater extent than we have ever seen. Economic differences have greatly expanded. The salaries between the trainees at the best higher education institutes and those at the second-hand institutes vary widely. Salaries among high school graduates also vary among college graduates. (Kimenyi, 2011) primary and secondary education is very necessary for economic development but not sufficient. Data show that the differences between countries in higher education (enrollments in tertiary education) can explain the differences in economic development. A particular focus should be on the quality of higher education. Mariana (2015) showed that the number of students attending higher education has positive effect on economic growth.

Government support is very important for the development and encouragement of education. There are many forms of government support but direct support is through spending on education.

The starting amount of human capital (represent by school-enrollment rates) is positively correlated with growth in real per capita GDP. While that the ratio of government expenditure to GDP is negatively related to GDP per capita (Barro, 1991). Mosikari and Marivate, (2013) show in their study that student financial aid is an international problem but it is worth considering because in the long run student financial aid increases enrollment in higher education.

Investing in education is very important for a country's economic growth. The increase of government spending in education by 1 percent point will result in GDP growth by approximately about 0.3 percent points (Konopczyński, 2014).There is a negative relationship between educational expenditure, unemployment rate and Gross Domestic Product even thought with no significance (Agboola, Musa and Ibrahim, 2018).

This paper is structured in three parts. The first section describes the importance of human capital in economic growth and the importance of education for the development and advancement of human capital. The second section outlines the attitude of the government towards education through budget funds towards education. This section also deals with the financial problems of young people, especially those studying in higher education. The third section provides the analysis of the research of this paper through linear regression analysis.

Limitations of the paper are the lack of data for the entire period studied for other indicators related to education, in particular the quality of teaching.

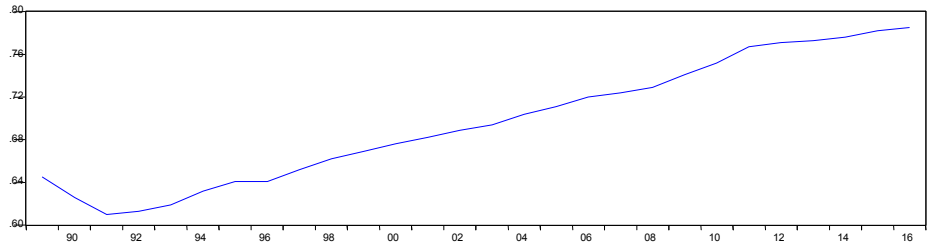
2. Education in Albania and Government Funds towards it

The importance of education and higher education in particular is indisputable for every state. The Albanian government is paying more and more attention to education. The attention to primary and secondary education consists in both attendance and increasing quality. Quality improvement consists of curricula as well as infrastructure. Many schools have been restored aiming to improve living and teaching conditions. School curricula have been and are changing with the aim of adapting best international practices. In recent years elementary school students have been given free textbooks.

The population of the country is relatively young. Primary education is compulsory and has enrollment levels above 100%. Secondary education enrollment rates are satisfactory at around 95.43% (World Bank, 2019), but a satisfactory figure that leaves room for improvement. If we compare the 1990 level of 90% with the 2018 level, it looks like the difference has been small, but there have been years with very low registration levels. After 1992, enrollment levels in secondary education dropped to about 70%, and only in 2013 it exceeded 90%.

Enrollment rates in higher education or university are around 55%. The enrollment rate in higher education has increased significantly from 8% in 1990 to 15.5% in 2000 and to 55% in 2018. This increase is very important because, first of all, the high percentage of the population in this age necessitates their orientation towards higher education or vocational education in order to qualify and enable employment. Second, the qualification enables them to adapt as closely as possible to the requirements of private businesses activities, thus increasing the productivity of these businesses and consequently increasing productivity throughout the country. Albania's human development index has grown especially since '97. One of the major determinants of this index is the education index, which has also been increasing over the years.

Figure 1. Theperformance of Human Development Index in Albania

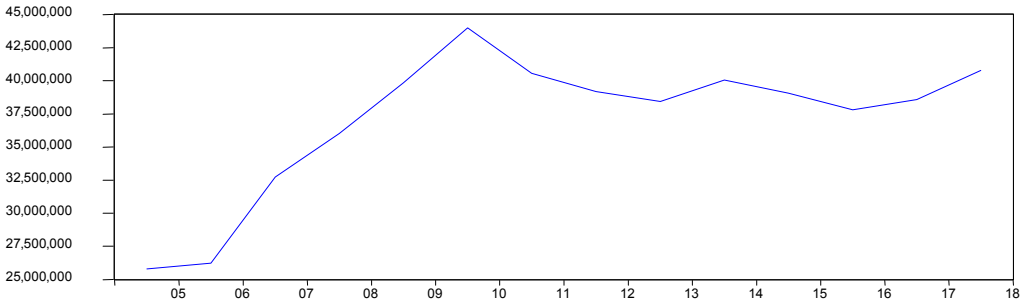


Source: UNDP 2019

It is very important to understand the government's vision of education and especially of higher education. The number of higher education quotas has always been increasing and this has facilitated and encouraged higher studies.

From the expenses that the Albanian government has realized for education, we understand that education has not been a priority, Figure 2. Expenditure on education is about 8 percent of all public spending in the last three years. Regarding the third level of study or university, besides government funding, they also have financial autonomy (depending on the number of students). However, the limited public spending is as well a result of low revenues in the state budget from corruption and mismanagement. Mismanagement is affecting all public sectors by limiting public spending.

Figure 2.Evolution of total expenditure on education



Source: Ministry of Finance, 2019

In terms of expenses that government directs toward education we are focused in spending on higher education. Expenditure on higher education, at best in the last two years, is 20 percent of total education spending; to be exact is 20 percent of 8 percent of all expenditures. But if we consider increased government spending towards students raising funds for scholarships for excellent students, for student's aid, government spending on youth education is higher.

The low level of economic development and lack of jobs combined with graduate and postgraduate study fees has made financial difficult for youth.

To facilitate studies, the personal income tax recognizes as deductible from income the interest of student loan and student scholarships. However, this is not enough because it creates uncertainty for the future. Because students who create financial obligations during their studies and face an uncertain job market would undertake financial risk if they would

finance studies with credit. Both economic theory and international experience suggest that a well-designed system require an important and sustainable government role to provide service itself, to ensure quality, to regulate levels of fees, etc. (Barr, 2011) .

Today's students will be the future economists, doctors, engineers, teachers, etc., and their work will promote economic development of the whole country.

The largest number of employees in Albania is in the private sector. The development of industries creates sustainability in employment but also changes in the skills of employees. Technology has evolved and more and more businesses are looking for up-to-date knowledgeable employees. Faculties open many new branches of study to adapt to changes and respond to new demands of the labor market.

From official statistics it turns out that unemployment has fallen but if we see growth in businesses this is not justified. However, the growth rates of the economy are positive and will thus have an impact on the opening of new jobs.

Students attending higher education must pay the tuition fee. The fee for public studies is low at Bachelor level and increases at Master level. Meanwhile students studying at private universities have high fees at both levels of study. Many students study away from family, in another city, and in addition to the expenses of living they rent out an apartment where they will live, increasing the cost of living. So, the most concern essential issue for students is cost of living and studying.

Even though a part of the students work, it is a concern that they do not all work in the same direction with the study profile. Working in any sector is important because it is an opportunity to meet the expenses, but if is worked for years in a job that has nothing to do with the qualification, it distorts formation and creates the lack of experience so much needed to move to the labor market.

The universities have included in their curricula the practices and this helps students to be close to businesses or jobs and create employment opportunities. In Albania there are not much employment opportunities for young people. In the summer period, job vacancies are opened in tourism, and this can provide income even though low and short term income.

However, a major problem is the lack of part time jobs. A student pursuing studies cannot work full time because it limits the time of learning as it limits the time for any other activity because simply the day would be insufficient. Employment is important for meeting the costs from the students' point of view but from the perspective of the economy is very important for the development. So the policies built regarding labor market should take into account the impact on economic development.

In terms of employment in 2018, the overall employment rate was 52.1 percent. People with higher education had the highest rate of employment with 62.3 percent, while those with only primary education had the lowest rate of employment, presented in Table 1.

Table 1.Employment rate by education, in percent

Years	2010	2011	2012	2013	2014	2015	2016	2017	2018
Higher education	66.9	62.9	61.6	62.5	61.3	59.2	61.6	63.3	62.3
Midlle education	50.1	56.9	54	47.8	46.7	47.9	51.5	53.5	54
Primary education	43	47.1	45	38.2	38.9	41.4	43.5	44.4	47.3

Source: INSTATb 2019

Institute of Statistics (INSTAT) data on the structure of the population outside the labor force is dominated by students. The unemployment rate in the country has decreased. During 2018 the unemployment rate in the Albanian labor market fell to 12.3%. The biggest impact on the unemployment rate are young people aged 15 -24 (INSTATa, 2019). The unemployment rate among the 15 -24 year olds in 2018 dropped to 28.3% from 31.9% in 2017. Unemployment among the 15 -24 year olds with higher education was33,8% in 2018 meanwhile in 2017 was 33.1% (INSTATb, 2019).Other levels of education also have costs for families but we are focused on higher education.

3. The analyze of the relation of higher education in economic growth, the model

3.1. Data and Methodology

In our paper we use a quantitative research method based on a regression model. The model is build with secondary data. We will test the nature of relationships between a dependent variable which is GDP per capita and some independent variables related to education using the method of the ordinary least squares method.

To determine the independent variables we consult the literature review and find that the most commonly used variables as the most determinant indicators of education are gross enrollment rates, educational attainment and years of schooling. Due to the inability to find the data we do not include education attainment. We include in the study as independent variable gross enrollment rates as a variable widely supported by studies. This variable is important to assess how education affects economic growth because according to previous studies, this variable determines in a way investment in education. The purpose of investing in education is to increase the income of individuals represented by GDP per capita.

A large number of authors support GDP per capita, which is why in this paper economic growth is analyzed through GDP per capita. For this reason, in this paper we will analyze the impact of education on economic growth represented by GDP per capita, which in our model will represent the dependent variable y_t.

The independent variables x_{it}= for $i = 1, 2, 3,4$ will be mean years of schooling, enrollment primary education (% gross), enrollment in secondary education (% gross) and enrollment in higher education (% gross). So our model is linear:

$$y_t = b_0 + b_1*x_{1t} + b_2*x_{2t} + ... + b_n*x_{nt} + \varepsilon_t \quad (1)$$

To explain the impact of education on GDP we used annual variables due to the availability of data. Time series data is selected for 28 years, from 1990 to 2017. All indicators mentioned are economic indicator for Albania, and are collected from World Bank through the World Development Indicators database and United Nations Development Programme.

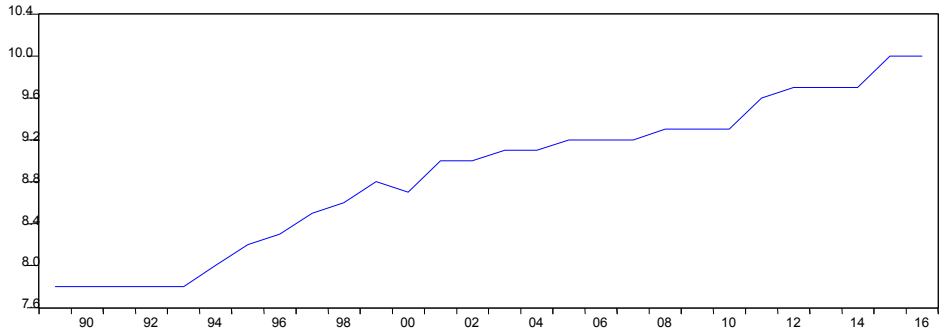
3.2. The model

To analyze the relationship between education and GDP we examined some variables that were also supported by previous studies by other authors. We found the connection between education and economic growth by examining the GDP per capita not only because it is supported by studies but also because it fits the purpose of the study.

Anyone who invests in studies spends not only financially but also their time, years. The purpose of this is to provide high income during his lifetime. Undisputed that any person has different incomes, but since the goal of the paper is to study the link of education with the economic growth for all individuals within the economy, the best dependent indicator is GDP per capita.

In terms of the variables used for education we have used mean years of schooling, an variable that has been steadily increasing with the exception of '90 -'94, 2002-2003, and the last two years when there were no change, as is indicated in the figure 3.

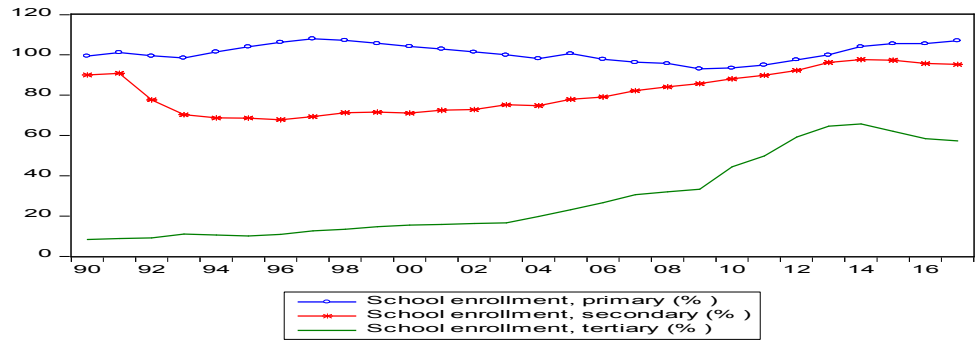
Figure 3. Mean years of schooling



Source: Authors

Other variables are enrollment primary education (%), enrollment in secondary education (%), enrollment in higher education (%). Enrollment in primary education, (%) has had steady ups and downs. Primary education (nine years) is compulsory and it explains the values around 100%. School enrollment, in secondary education (%) is an indicator that has declined sharply after '90. Economic and political changes have greatly influenced this variable. In these years, young people of this age addressed the labor market both at home country and abroad, reducing the number of students in this studies cycle. School enrollment, tertiary (%) has been increasing with the exception of the last two years, but the decline of the last two years remains to be seen, whether this is casual or due to the increase the grade level admission in universities, Figure 4.

Figure 4. The evolutions of enrollments



Source: Authors

The dependent variable and the independent variables are summarized in the Table 2.

Table 2. Dependent and the independent variables

Variable	Definition
y	GDP per capita
X1	Mean years of schooling
X2	Enrollment in primary education
X3	Enrollment in secondary education
X4	Enrollment in higher education

Source: Authors

We analyzed the relation between the independent variables and the dependent variable by the least squares method and the results of the model tested by EViews 10, are summarized in Table 3.

Table 3.The results of the model

Variables	coefficient	Std error	t-statistic	probability
b_0 = constant coefficient model	-4324.496	1575.612	-2.744646	0.0115
Mean years of schooling	1033.038	111.7679	9.242708	0
Enrollment in primary education	-32.57698	8.725054	-3.733728	0.0011
Enrollment in secondary education	10.60939	6.906222	1.536208	0.1381
Enrollment in higher education	13.30026	5.506987	3.323099	0.003
R^2	0.978995			
Adjusted R^2	0.975341			
F-statistic	267.9886			
Prob (F-statistic)	0			
Durbin-Watson stat	1.172479			

Source: Authors

The model has been subject of some econometric tests. To test homoscedasticity, we test the model with the Breusch-Pagan-Gogfrey Test. In this test the Obs * R-squared is 4.437898

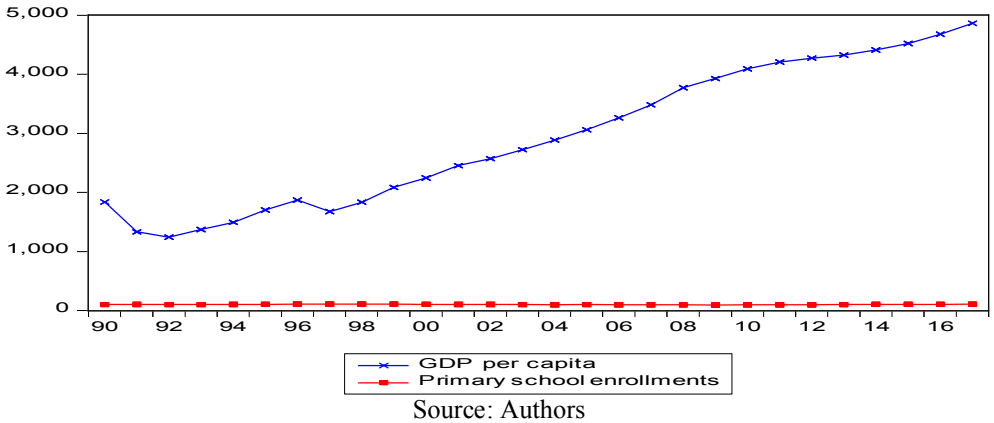
while Prob. Chi-Square 0.1087> 5%, which means that we fail to reject the null hypothesis and that the model is not heteroscedastics but homoscedastics and the model is very good there is no serial correlation.

Then we analyzed the distribution of values by the normality test and it turns out that the values are normally distributed. With probability 0.4615> 5% variable are normally distributed.

From testing the model is showed that higher education is very important for economic growth. Secondary education has a positive but not significant relationship while primary education is with opposite sign. After the '90s, higher education was the focus of people who didn't have the opportunity to study before the' 90s. They continued their studies and even directed their children to higher education. The increase in enrollment in higher education affects the creation of experts. Prob (F-statistic) is 0.0000 meaning that F statistic is significant. It means that all independent variables jointly can influence dependant value.

The percentage of enrollment in primary education has slightly fluctuated over 28 years, while GDP per capita with the exception of '92 and '97 has increased. If we look only at GDP values for capita and enrollment in primary education, the performance of which is shown in the following chart, the values do not have the same trend as presented in Figure 4.

Figure 4. The evolutions of enrollments in primary education and GDP per capita



Source: Authors

Years of falling GDP per capita do not coincide with the peak of enrollment in primary education, even the opposite may have happened. Primary education is compulsory and figures have varied from 93% in the year with the lowest enrollment in primary education up to 107% at the highest. So, since the rate of enrollment in primary education has been steady all the time, while GDP per capita has steadily increased has given the result of a negative relationship. However we have not analyzed the quality of teaching at this level of study or at all levels of study to understand the total effect of primary education on economic growth.

4. Results and discussions

According to statistical analysis of the model we came to the conclusion that education is very important for the economic growth of the country. The variables mean years of schooling, enrollment in secondary education and enrollment in higher education are found to be positively correlated with GDP per capita, this relation is especially important for independent variables mean years of schooling and enrollment in higher education which are statistically important. This result is supported from other authors. According to activities of higher education institutions, impact positively GDP per capita and reduce unemployment (Schubert and Kroll, 2016). This result is also supported by the paper by Gyimah-Brempong, Paddison and Mitiku (2006), where the effect of higher education on growth per capita income is positive and statistically significant. This is very important for future economic growth because according to Aghion et al. (2004) the basic requirement for an innovation-driven economy is higher education. Education is the foundation of human capital development and in this regard it is important to increase the number of years of education. According to (Romer, 1990) an economy that has a stock of human capital will result in economic growth.

As the number of unemployed young people with higher education is high, the government should provide fiscal incentives to businesses so that they can provide part time jobs for students and this will lead to increased enrollment in higher education.

Enrollment in primary education has a negative relationship with economic growth. However, we cannot say that elementary education has negative impact on economic growth because everyone who studies in secondary and tertiary education has undoubtedly completed primary education. Enrollment in secondary education has a positive relationship with economic growth but this relationship does not appear statistically significant. Many of the effects on economic growth are indirect and delayed, including the effects of education (Appiah and McMahon 2002). However, the fluctuating level of enrollment in secondary education highlights the needs of government policies for growth of enrollment in secondary education and the impact on economic growth will be higher, supported by the literature review. According to (Kimenyi, 2011) primary and secondary education is very necessary for economic development but not sufficient, only higher education (enrollments in tertiary education) can explain the differences in economic development.

In conclusion, mean years of schooling and enrollment in higher education have a positive and significant relationship with GDP per capita. Both variables emphasize the need to increase the number of years of study in general by emphasizing the importance of higher education. The government should use different incentives to increase enrollment in higher education. The government should support students financially, a suggestion that is also supported by Mosikari and Marivate (2013) that show in their study that in the long run student financial aid increases enrollment in higher education. It is necessary to lower Master level fees to make it possible for graduates of previous years to attend Master degree in order to acquire the necessary knowledge for current market and thus lower the unemployment and increase employment of higher education graduates.

5. Literature review

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