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The Effect of Higher Education quality on Economic Growth in Libya

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Abstract

Purpose– The study tries to understand how the quality of higher education in higher education contributes to economic growth in Libya and studies the degree of association between these two variables.

Design/methodology/approach– to measure the correlation between the quality of higher education and economic growth in Libya, the study used a quantitative approach and statistical analysis based on simple linear regression. The results of this approach determine the degree of association between the quality of higher education and economic growth.

Findings– results it is concluded that higher education quality is the strongest factor that mediate the relationship between return to higher education and economic growth, also it has a high degree of contribution to economic growth in Libya

Practical implications– The results of this study highlight the importance of higher education quality in higher education to the Libyan government so that the government should lower the quality of higher education in order to strengthen economic growth in Libya.

Originality/value– Previous studies on consumer animosity did not investigate the effect of higher education quality in higher education on economic growth in Libya. This study contributes to the body of knowledge on linking higher education quality from higher education with economic growth and examines their qualifications and train them to be experienced and qualified higher education quality in the future, the results of this study help the government of Libya to raise economic growth in return.

Keywords Higher Education Quality, Economic Growth, Higher Education.

Introduction

This study aims to investigate the relationship between higher education quality and economic growth in Libya. The study attempts to understand how higher education quality in Libyan universities contributes positively on increasing the economic growth, and investigates the degree of association between these two variables.

Higher education contributes to the national development by producing higher-level skills and competencies needed for a shift towards knowledge-based economy. For these reasons, countries all over the world especially the developing countries such as Libya, are giving higher education special attention to facilitate learning at all levels(UNESCO, 2013).Economic growth is viewed as the way forward in rectifying the plight of those in sub-Saharan Africa including

Libya. Economic development is a way to end extreme poverty where many developing nations consistently showed that human capital growth enhances return to higher education including public, private and social return. It then implies that the findings of the present study will put to end poverty in Libya (Seetanah, 2009). Most works on economic growth in sub-Saharan Africa includes village level projects using community focus groups showed congruence with agricultural inputs, basic health, power and communication infrastructure, safe drinking water and sanitation and investments in education (Sachs, 2005).

Education contributes to the economic development by enabling those who receives it to contribute to the national development. This is because education exposes students to what is most needed in the society from their own personal experiences leads to effective and appropriate economic development (Schwab, 2011). Therefore, a clear understanding of the factors that constrained economic growth in Libya higher education would provide social and cultural capital needed to transform human values, political visions, and the societal rules of the game in the present times Libyan government is undergoing transformation into digitized.

1. The Aim of this study

This study aims to investigate the relationship between higher education quality and economic growth in Libya. The study attempts to understand how higher education quality in Libyan universities contributes positively on increasing the economic growth, and investigates the degree of association between these two variables.

2. The Problem Statement

Currently there is weak focus from the government on the factors associated with higher education quality that influence economic growth in Libya. The weak economic growth in Libya is facing many challenges on developing the economy, where future economic development should rely on strengthening higher education quality in higher education so that to increase the economic growth in Libya, but this is not an easy task as economic system in Libya is not based on higher education quality comparing to other developing countries in Africa or other parts in the world. Therefore, this paper is discussing the problem of weak economic growth in Libya because of neglecting the effect of higher education quality.

2. Methodology

This study is based on quantitative approach to measure the association between higher education quality and economic growth in Libya. The study conducted a quantitative survey questioner and statistical analysis based on simple linear regression. The findings from this approach determine the degree correlation between higher education quality and economic growth.

3. Significance of the study

Currently there is no study investigated the relationship between higher education quality and economic growth through higher education in Libya. Therefore, successful completion of

this study can improve not only economic growth in Libya, but also other developing countries in Africa and other parts in the world.

4. Higher education in Libya

Education reform is a key philosophy of higher education in Africa including Libya (Mama, 2003). Education plays an important role in economic growth and in human development and became the main component to improve living standards, reduce poverty and reduce wage disparity in Libya (Libya history and educational background, 2013).

The Ministry of Education in Libya has taken numerous steps to improve higher education by implementing research innovation and the introduction of knowledge ICT-based learning (The National Report of the Great Libyan Jamahiriya, 2008).

National Tempus Office Libya, (2011) revealed the structure of Libya's higher education. There are three categories of higher education institutions; universities, technical colleges and higher vocational institutions. It was documented that public higher institutions are fully funded by Libya's "General Peoples' Committee for Education & Scientific Research." Therefore, student fees at public institutions are very small.

In 2011, the higher education enrollment rate was estimated at 57 % for female and 90 % for male (340 thousand in populations) in Libyan public universities (National Tempus Office Libya, 2011). At present, a total number of 10 universities which consists of 7 general universities and 3 special nature universities in Libya region. Besides, 4 private universities are formed to boost and support higher education in Libya (Libya history and educational background, 2013).

A study by Viaene and Zilcha, (2009) measured education role (home and public) towards human capital growth based on per capita income. It was found that home education leads to higher wage inequality than public education. In order to enhance human capital growth, education quality and training should be taken seriously (Folloni and Vittadini, 2010) in Libya.

Higher education serves as a part of investment in human capital development. Libya Herald Press, (2012) reported that Libya's Deputy Prime Minister, Mustafa Abushagur mentioned that Libyan teenagers serve as a Libya future generation. They play a vital role in Libya human capital growth by utilizing their capabilities and knowledge through education. According to World Wise, (2011), the article documented that higher education role to help Libya pull through from civil war, and the positive influence on economic growth through higher education becomes so demanded. However, Libya higher education has potential to strengthen the economic growth through knowledge economy and human capital in higher education. It has been noted that knowledge economy can be achieved by providing human capital with well-equipped and qualified lecturers. According to Bukhres and Singh-Molares in Hanouz et al., (2007), Libya is improving its higher education sector by providing appropriate courses in order to fulfill the need of labor markets. Besides, the program such as the elite academy has been designed to enhance the performance of Libya's higher education

ECONOMIC GROWTH

Economists have consistently emphasized the major role that education plays in enhancing economic growth. Beyond its traditional role of providing skills for economic growth, education represents a powerful tool for social development; for example, it can help reduce inequalities and improve health and living conditions. Higher Education fosters innovation and progression through academic research community that facilitates the creative knowledge-based development to a fundamental set of requirements for high quality and professional as researcher. This can be achieved through the fully trained apprenticeship program with access to competent and personal engagement with the skills of scholarship, highly knowledgeable building on conducting practical work using standards of evidence through collaborative team's new insights on disseminating findings to other institutions of higher learning. With this, higher educations in Libya can measure up the idea of working as a community of practice and the progress of innovation is rapid and effective (Wenger, 1999).

Philip Steven (2003) finds the relationship between education and economic growth. He analysis the role of education in the use of technology and suggests that education is necessary for economic growth and for learning new technology. Harry A. Sackey (2008) found that the private returns to schooling in Ghana and concluded that the private returns to education at the higher level is high for both male and female. Earning rises with education to increase in educational level. Adefabi (2005) investigated the long run relationship between education and economic growth in Nigeria by using Johansen Cointegration and Vector Error Correction techniques. The study found that human capital growth leads to economic growth when it uses as an input in the production function. These findings showed that the educational level of labor force determines the rate of economic growth.

Perhaps for these reasons, economic analyses of education have been extensive, ranging from endogenous growth models (e.g., Lucas 1988; Romer 1990) to microeconomic analyses of educational outcomes that measure the rates of return to investment in education. Throughout, the issue of government's role in providing and financing education has been paramount and has stimulated much debate. Some economists favor mixed financing systems (e.g., Glomm and Ravikumar 1992), while others advocate public subsidies

HIGHER EDUCATION QUALITY

Higher education plays a leadership role in education. Higher education plays a vital role in the development of society (Muhammed et al., 2008). Universities, for centuries, had a crucial role in educating the potential professionals, businessmen, political leaders, religious and social scholars, who serve the society, to enrich its values and develop its resources (Mustard, 1998).
Quality means the 'Fitness for purpose' (Juran, 2004) and 'Conformance to requirements' (Crosby, 2004).
Quality in educations is an educational definition is that of an ongoing process ensuring the delivery of agreed standards. These agreed standards should ensure that every educational institution where quality is assured has the potential to achieve a high quality of content and

results. The quality in education includes the following standards (The National Unions of Students of Europe, 2014):

- **Quality Control**
  Quality control refers to the verification procedures (both formal and informal) used by institutions in order to monitor quality and standards to a satisfactory standard and as intended.
- **Quality Enhancement**
  Quality Enhancement is the process of positively changing activities in order to provide for a continuous improvement in the quality of institutional provision.
- **Quality Assessment**
  Quality Assessment is the process of external evaluation undertaken by an external body of the quality of educational provisions in institutions, in particular the quality of the student experience.
- **Quality Culture**
  Quality Culture is the creation of a high level of internal institutional quality assessment mechanisms and the ongoing implementation of the results. Quality Culture can be seen as the ability of the institution, program to develop quality assurance implicitly in the day to day work of the institution and marks a move away from periodic assessment to ingrained quality assurance.

Quality clearly emerged as a principal business methodology in the Western world throughout the 1950's and in the early 1960's. The concept of "quality" is rather elusive, because it expresses a relative, though, noticeable difference between one thing and another. Relative terms such as "better", "superior", "and acceptable" are applied to judge quality. However, quality is a universally acknowledged factor in successful business. Winning companies are those that meet quality standards and for whom customer services is an obsession in every single market in which they operate (Kalam, 2003).

The increasing demands for good quality higher education by students and society imply that Higher Educational Institution (HEI's) now face similar pressures that the business sector has been facing for decades. These implications often become even more serious for HEI's who lack the finance and infrastructure resources and have recognition issues, as well as facing stronger competition from local, distance and international education institutions. Some of the lessons to be learnt from industry are as follows:

- Make the desire for quality an overarching principle in every operation (creating a quality culture)
- Be knowledgeable about the needs of students and academics (the actors involved in the service)
- Creating desirability for the HEI through meeting social and economic trends while maintaining high level of academic integrating and superior quality.

Quality in higher education is a multidimensional concept, which includes all the related functions and activities that form part of the academic life in a university system. Therefore,

any framework for the assessment of quality should take into account the quality of students, teachers, infrastructure, student support services, curricula, assessment and learning resources. A number of factors, such as internationalization, marketing, proliferation, competition, expansion of higher education and greater accountability have brought the concern of quality of higher education to the forefront of national debate. Given below are some of the main indicators of quality education (Muhammed et al., 2008):

Higher Education Quality

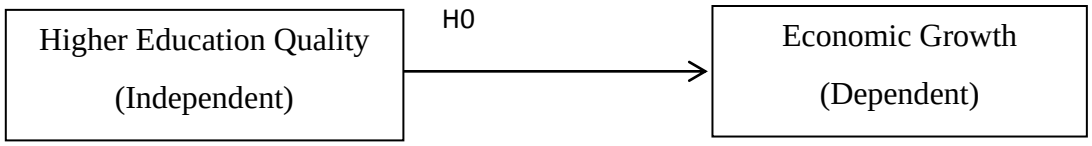
Testing hypothesis 3 is made using the output of the three tables of Simple Linear Regression, ANOVA.

H3: There is a statistical relationship between the Higher Education Quality and Economic Growth.

H0 (Null Hypothesis): There is no statistical relationship between Higher Education Quality and Economic Growth.

In the following analysis the study examine a simple linear regression model (see below) for testing the relationship between Higher Education Quality and Economic Growth (H3) and examining the null hypothesis (H0).

Figure 4.9: Regression model between Higher Education Quality and Economic Growth.



The Model Summary of Simple Linear Regression

Model Summary of Simple Linear Regression output between Higher Education Quality and Economic Growth. The model summary provides the simple correlation coefficient (R) and coefficient of determination (R^2) for the regression model (see table below). A correlation coefficient of R= .898 suggests there is a very high degree of positive correlation between the independent variable (Higher Education Quality) and the dependent variable (Economic Growth).

Table (4. 1)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898[a]	.806	.805	.29786

a. Predictors: (Constan)

b. Dependent Variable: Economic Growth

The R^2 (the "R Square" column) indicates how much of the total variation in the dependent variable (Economic Growth) can be explained by the independent variable (Higher Education Quality). Reading the value of R^2 = .806 suggests that (80.60%) of the variance in Economic Growth can be explained and interpreted by the variance in Higher Education Quality. In other words the change (variability) in Economic Growth is 80.60% predicted by the Higher Education Quality. The remaining variance in Economic Growth which is equal (10.20%) is presumed to be due to random variability not related to Higher Education Quality. SPSS adjusted at 80.50% of the variance between the two variables which indicates a very small difference (0.001) between adjusted R-Squared and Predicted R^2 obtained from the regression output. Both R^2 and the adjusted R^2 having a small difference indicates a good fit on the line of the regression equation.. The next table is the ANOVA table, which shows the level of fit of the regression model and the fit of the regression equation between the independent and dependent variable.

The ANOVA Output

The ANOVA output table shows if the correlation R (.806) between Higher Education Quality and Economic Growth is statistically significant. Comparing the (ρ-value) to the significance level (Sig <.05), and rejecting the null hypothesis when the (ρ-value) is less than the significance level.

Table (4. 2)

ANOVA Output

Model		Sum of Squares	df	Mean Square	F	Sig.(α) = 0.05
1	Regression	120.321	1	120.321	1356.190	.000[b]
	Residual	29.011	327	.089		
	Total	149.332	328			

a. Dependent Variable: Y _economic Growth

b. Predictors: (Constant), Higher Education Quality

This table indicates that the regression model predicts the dependent variable significantly well. The "Sig." column indicates the statistical significance of the regression model that was run in SPSS. Here, ρ< 0.05, which is less than 0.05 and equal (0.000), this level of significance indicates that, the overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

The F value in the table above is equal to the ratio of two mean square values. If the null hypothesis (H0) is true then the F value should be close to 1.0. A large F ratio means that the variation among independent variable means is not by chance (p < 0.05 or ρ≤ 0.01). As ANOVA table indicates (F = 1356.190), which is a large ration and indicates that the variance between Higher Education Quality and Economic Growth is statistically highly significant at (ρ≤ 0.01). The output of ANOVA table shows a strong correlation between the independent and dependent variables. Therefore, the null-hypothesis (H0) is rejected and (H3) the alternative hypothesis (opposite of the null hypothesis) is true.

The Coefficients

The Coefficients table shows the values in the "B" column under the "Unstandardized Coefficients" column ($p < 0.05$, $\rho = 0.000$), which is statistically significant, as shown below:

Table (4. 3)

Coefficients of regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.688	.046		14.956	.000
	X3_Higher Education Quality	.681	.019	.898	36.826	.000
a. Dependent Variable: Y_ economic Growth						

The regression equation of this model as follow:

$Y_{(\text{dependent variable})} = B + B1 * X_{3\ (\text{independent variable})}$, Economic Growth = 0.688+ 0.681 * Higher Education Quality

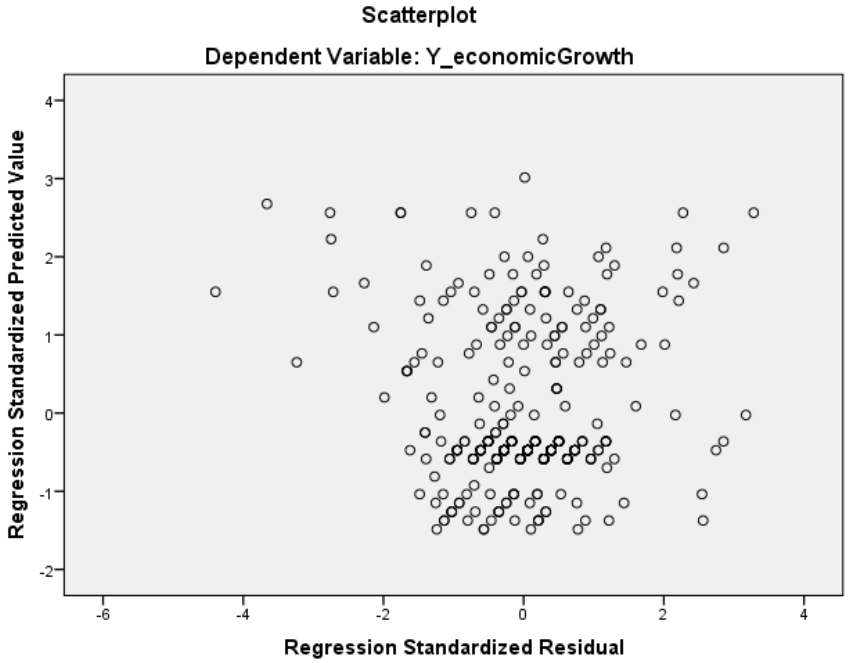
Based on the output of coefficient table (B= 0.681 at Sig. = 0.000), it is found that Economic Growth is highly predicted by the change in Higher Education Quality.

Residual Plots for Regression Analysis

As shown in the chart above, most of residuals are centered on zero, and throughout the range of fitted values of residuals, it is found that residual values are not distributed systematically.

Figure (4. 1)

The scatterplot of residuals



Summary of Hypothesis 3 test

The following table shows the summary of simple regression result between Higher Education Quality and Economic Growth:

Table (4. 4)

The summary of regression analysis

Output	Value	Sig. level (ρ< 0.05)
R	0.806	.000
R^2	0.806 (80.60%)	
F	1356.190	.000
B	.681	.000
* Correlation between Higher Education quality and Economic Growth is positive and linear		

Based on the outputs of model summary, ANOVA, and Coefficients, the study rejects the null hypothesis (H0) and accepts the alternative hypothesis (H3).

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