

THE IMPACT OF UNEMPLOYMENT OF HIGHER EDUCATION GRADUATES ON ECONOMIC GROWTH IN LIBYA

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Abstract: *The study attempts to understand if the increase in the level of employment of new graduates in the Libyan universities contributes positively to increasing the economic growth. Thus the study aims to investigate the relationship between unemployment of higher education graduates and economic growth in Libya. To measure the strength of correlation between unemployment and economic growth in Libya, the study conducted a quantitative survey and statistical analysis based on simple linear regression. The findings from this approach determine the degree of association between unemployment and economic growth. Economic growth is highly predicted by the variation in unemployment rate in a reverse relationship, where unemployment decreases then economic growth increases and vice versa. The results of this study highlight the importance of unemployment to Libyan government. The government may need to lower the level of unemployment in order to enhance the economic growth. Previous studies on consumer animosity did not investigate the effect of unemployment of fresh graduate from higher education on economic growth in the country. This study contributes to the body of knowledge by linking fresh graduates unemployment with economic growth. The examination of their qualifications and their training are sought to be provided in the future. The results also help the government to provide more job opportunities and raise economic growth in return.*

Keywords: *Unemployment, Economic Growth, Education Revenue*

Introduction

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,

2003). Economic growth is viewed as the way forward in rectifying the plight of those in sub-Saharan Africa including Libya. Sachs (2005) asserted that economic development is a way to end extreme poverty (p. 25).

The unemployment is the absence of paid employment opportunities for potential labor force in the context of wage labour. Unemployment has become a continuous problem especially in third world countries, where people who cannot secure their jobs (International Labor Organization, October 1982). According to International Labour Organization report, there are more than 200 million people worldwide or equal 6% of the current world's workforce without a job in 2012 and this rate is expected to increase dramatically (International Labour Organization, 2013).

A major benefit of higher education is lowering the risk of unemployment and difficulty to get a job that match qualifications of fresh graduates, where the reduced unemployment rate of the highly educated workers and employees is an important factor in developing the economy (Jacob, 1993).

Some researchers showed that unemployment and the underemployment of fresh graduates from higher education institutes are disturbing phenomena in the lives of young graduates (Bai, Limin, 2006). The economic recession is one of the main factors and increases unemployment rate and weakening the economic growth. For example, the start of the economic recession in the United States in 2007 affected the lives of large number of new graduates who have been unable to find permanent jobs compatible with their qualifications and according to their chosen field (Sternberg, 2013). According to statistics, the unemployment rate for recent college graduates has been higher than all college graduates in the past decade, implying that it has been more difficult for graduates to find a job in recent years (Abel et al., 2014). Underemployment among graduates is high. Educated unemployment or underemployment is due to a mismatch between the aspirations of graduates and employment opportunities available to them (Lawrence, 2013).

In Libya, the unemployment was and still a permanent problem. For decade fresh graduates from Libyan universities are unable to work in their field of education which is reflected negatively on the economic growth of the country. According to the 2006 survey, Libya was struggling with a high unemployment rate reaching 20.7%. At the same time, the private sector has not been capable to fill the gap given the broader problems facing the business in Libya. Additionally, the high level of corruption and a lack of transparency in the public sector has hindered competition and increased unemployment rate as well as lowered the plans to improve the economy through higher education. Available data shows that the public sector accounted for more than 50% of the country's employment.

The informal economy accounts for most of the remainder given its flexibility, including the relatively low wages that employers can offer, as well as their ability to avoid labour laws such as working hours' regulations, severance packages and other benefits. The rigidity and inefficiency of the private sector is certainly a source of the high level of unemployment in the country but the mismatch between the skills taught by the education system and those demanded in the market place has a large role to play, especially in youth unemployment (African Economic Outlook, 2012).

The Problem Statement

Libya has a record of high social inequality, high rates of youth unemployment and regional economic disparities, not to mention years of poor governance and corruption. Libya's future depends on the ability of the interim government, headed by the National Transitional Council (NTC), to guarantee political stability and encourage thorough reform of the economy (African Economic Outlook, 2012).

Libya has invested a great amount in access to education, as demonstrated by high literacy and enrolment rates, but it has been less successful providing jobs for fresh graduates from Libyan universities. As a result, Libyan employers prefer to hire those who have a good working experience rather than those who have high degrees but no work experience at all.

The current level of unemployment is still high without any solutions in the prospect to reduce the rate of unemployment which affects all government efforts in Libya to improve the income of citizens and develop the economic growth in the country. Therefore, the current employment rate is not satisfactory for the people of Libya and affected their lives and income. Based on that, the problem that will be discussed in this study is lack of economic growth in Libya due to low unemployment of new graduates from Libyan universities, which is reflected negatively on economic growth in the country.

The Aim of this study

This study aims to investigate the relationship between unemployment of higher education graduates and economic growth in Libya. The study attempts to understand how increasing the level of employment of new graduates from Libyan universities will contribute positively on increasing the economic growth, and investigates the degree of association between these two variables.

Methodology

To measure the strength of correlation between unemployment and economic growth in Libya, the study conducted a quantitative survey and statistical analysis based on Pearson correlation and simple linear regression. The findings from this approach determine the degree of degree of association between unemployment and economic growth.

Unemployment

Unemployment means the wastage of human capital for educated persons. The reason for unemployment among educated people can be a mismatching of the required skills, expansion of higher education and other job preference skill, outdated education system policy. Such type of policies should be made that youth becomes job creators instead of job seekers (Rajnalkar Laxman, 2012).

In Libya, the unemployment rate measures the number of people actively looking for a job as a percentage of the labour force (Shaaeldin and Saidi-Hammami, 2009). Unemployment Rate in Libya decreased to 19.50 percent in 2011 from 20.70 percent in 2009. Unemployment Rate in Libya averaged 17.73 percent from 2005 until 2011, reaching an all-time high of 20.70

percent in 2009 and a record low of 13 percent in 2005. (the General Information Authority, Lybia, 2013). The following figure shows the Libyan unemployment rate.

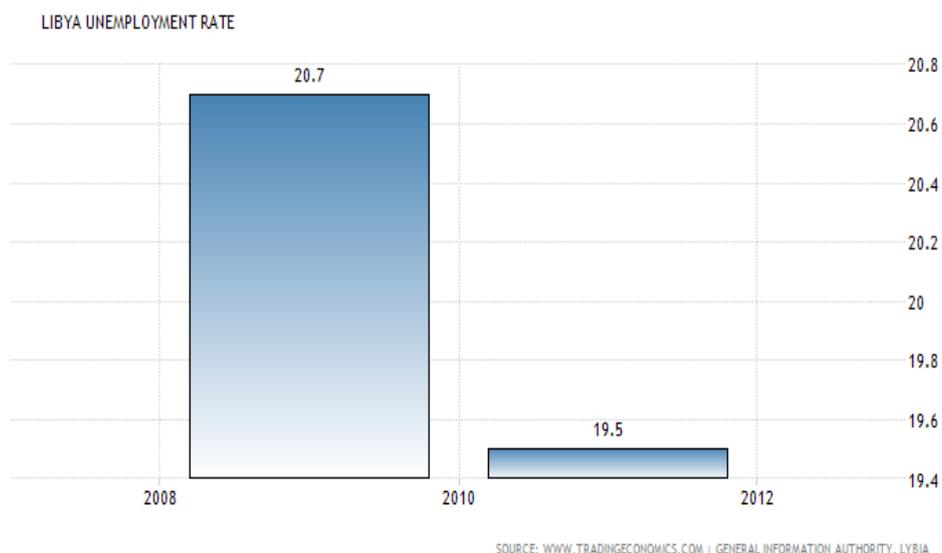


Figure 1
Unemployment rate in Libya

As shown in the figure-1, the unemployment Rate in Libya decreased to 19.50 percent in 2011 from 20.70 percent in 2009. Unemployment Rate in Libya averaged 17.73 percent from 2005 until 2011, reaching an all-time high of 20.70 percent in 2009 and a record low of 13 percent in 2005. Unemployment Rate in Libya is reported by the General Information Authority, Lybia.

Some studies confirm a correlation between unemployment rate and economic growth. Adeyemi (2008) found that a relationship existed between the number of students in a class and unemployment in Ekiti State, Nigeria. The study found that increase in enrolment schools can be used to determine the unemployment rate reduction in the near future which affect the economic growth significantly. The author concluded that the government should increase the number of schools at all levels of learning to maintain if unemployment is to be controlled. The study tries to explain the effects of overcrowded classes with teachers-student's interaction and found a weak positive correlation between the opinion of teachers and students about the overcrowded classrooms. The Arthur suggested that over crowdedness reduce the quality of teaching and learning. These findings showed that education practices contributed unemployment as a teaching environment in most cases constrains the impartation of knowledge.

Economic Growth in Libya

In economics, "economic growth" typically refers to growth of potential output, i.e., production at "full employment". As an area of study, economic growth is generally distinguished from development economics. The former is primarily the study of how countries can advance their economies. The latter is the study of the economic development process particularly in low-income countries (Alexander, 2011).

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Libya is included in the Middle East and North Africa (MENA) countries (Mina, 2012). Libya is one of middle income countries which oil and natural gas contributing to its economic growth (Hanouz et al., 2007; Shaaeldin and Saidi-Hammami, 2009; Mina, 2012). According to The Global Competitiveness Report, Libya per capita GDP share of world GDP is 0.11% and 0.13% in 2006 and 2009 respectively. Thus, there has been an increment in GDP after this period. Economically, in 2010 to 2011, it was found that Libya has been placed in rank of 37th on higher education enrolment rate. Other important economic variables such as a global competitive index, macroeconomic environment, unemployment, were ranked at 100th and 7th (Schwab, 2011).

The rise in youth unemployment in Libya has also resulted from the tendency of those who are well educated to pursue careers abroad. Such a 'brain drain' is a damaging since it creates negative returns on education investment while at the same time decreases the ability of the home country to develop 'high knowledge' and productive industries. In addition, many young Libyans are reluctant to take jobs that are not considered "prestigious" or require intense labour. The social stigma associated to labour intensive employment, as well as high salary demands is the result of a general expectation that the public sector will be able to provide young graduates with employment opportunities. Rather than searching for alternatives in the private sector, many young Libyans were, prior to the conflict, willing to remain unemployed until an opportunity in the shrinking public sector became available (African Economic Outlook, 2012).

After the end of revolution in 2011, A number of trends are evident. The interim government has taken necessary measures to build on the oil industry's strengths while mitigating the former government's mismanagement of the resource. Overall, the NTC intends to reform the economy as part of a comprehensive approach to the country's reconstruction. Government spending faces major pressures as subsidies and other forms of wealth transfers are channelled to those most affected by the conflict. As a result, the budget is expected to show a deficit equal to 17.1% of GDP in 2011, compared with a surplus of 8.7% in 2010, but this is expected to improve by 2012 with a positive balance of 13.6%. Despite the many challenges Libya faces in such areas as economic management, structural policies, social inclusion and governance, it is expected that the country will be able to make important strides in its reconstruction efforts if the interim government is able to maintain stability (African Economic Outlook, 2015).

Today, the internal political and armed conflict that disrupted oil production and exports was exacerbated by the steep decline in the global oil prices, all of which have driven the Libyan economy into recession since 2013. A series of strikes and security breaches at oil sites have significantly disrupted activity in the domestic hydrocarbon sector. Libyan oil production dropped to an average of 0.5 million bpd in 2014 (down from 1 million bpd in 2013 and a potential 1.6 million bpd). As a result, real GDP is estimated to have contracted by 24 percent in 2014, following a 13.6 percent drop recorded in 2013. The economic recession over two

consecutive years cut nominal GDP by half (US\$ 82 billion in 2012 and US\$ 41.2 billion in 2014) as did income per capita (from US\$ 12,800 in 2012 to US\$ 6,600 in 2014). The real economy continued to suffer in 2015 from disruptions to the oil sector (The world Bank, 2015).

The Role of Higher Education in Economic Growth

Numerous studies emphasized that higher education is a component of economic growth especially in the developing countries (Mora and Vila, 2003; Mattoon, 2006; Zhu et al., 2008; Anchor et al., 2011; Wang, 2012).

The contribution of higher education to economic growth can be diverse but notably; it helps in reducing poverty (Brasington et al., 2010; Teal, 2011), contribute to economic sustainability and growth (King, 2009), to the swift industrialization of the economy (Yamarik, 2011), by providing educated labor through higher education (Brunello and Comi, 2004) with higher productivity (Fleisher et al., 2012) and transfer innovative technology (Mattoon, 2006). In fact, higher education is considered as a specialized form of human capital, the involvement of which to economic growth is very significant (Blundell et al., 1999; Oketch, 2006; Ang et al., 2011; Castelló-Climent and Hidalgo-Cabrillana, 2012).

Esfahani and Ramírez, (2003) revealed that approximately 2% increment in per capita GDP in respect to education in Africa. Education is a significantly enhanced economic development in Africa (Seetanah, 2009). In fact that the author found there is an increment in enrollment rates of all education levels.

Friedman (2005) found that India and China through a long-term fifteen years' investment in the education system developed scientists and advanced engineers. The study showed that economic return in education involves a long process requiring time and huge investment (p. 275). The development in higher education poised the opportunities to compete in the new knowledge-based global economy. Improvement in this direction will enhance human capital growth through GDP growth and motivates Libyan citizens to enroll into higher education or further studies.

Previous studies have argued that economic growth can be easily fostered through higher education (Chuang and Chao, 2000; Cai and Yu, 2011; Zhong, 2011; Azam, 2012). Most studies on the economic growth through higher education studies emphasized on the influence to return to education (El-Araby Aly and Ragan Jr, 2010; Qiu and Hudson, 2010).

Anaman (2004) suggested that there is a need to improve higher education in order to improve human capital growth. In Japan, Sugimoto and Nakagawa, (2010) noted that changing in an economic environment by using modern facilities has lead to high demand in higher education. They explained that the declining childbirth rate was caused by the high dependency of ICT infrastructure and could cause negative impacts to economic development in Japan especially on the number of workforce.

A more recent study by Wang, (2012) showed that the rate of college enrollments is increased from 16.7% to 20% in 1995 and 2002 respectively. Overall, there is increment in the rate of enrollments for both female (from 11.1% to 14.5% in 1995 and 2002) and males (from 21.7%

to 25% in 1995 and 2002). However, the study found that huge inequity between human capital growths and the returns to higher education. This could be due to premium associated with the levels of competence in the use of ICT infrastructures.

Khan and Naru, (2006) reported that education reforms in Pakistan are very low at about 2.6% of GDP growth when compared to other countries such as Korea (3.3% of GDP growth), India (3.7% of GDP growth), Malaysia (5.1% of GDP growth) and Thailand (3.5% of GDP growth).

In contrast, a study by Jamison et al., (2007) pointed out that higher education has no influence on economic growth and per capita income. However, the study found that technological progress showed positive outcomes in the economy grows.

Akyola and Athreya, (2005) stressed out that the higher investments and over subsidized higher education by government may impede economic growth. Factors such as students drop-out, escape from class and unable to complete their education may the number of unemployment which has a negative economic effect.

Analysis and Discussion

The test of the following hypothesis is made using Simple Linear Regression, ANOVA, and Coefficient table:

H1: There is a statistical relationship between Unemployment and Economic Growth.

H0 (Null Hypothesis): There is no statistical relationship between Unemployment and

Economic Growth.

In the following analysis the study examines a simple linear regression model (see below) for testing the relationship between these two variables.

The following figure shows a simple linear regression model for testing the above hypothesis.

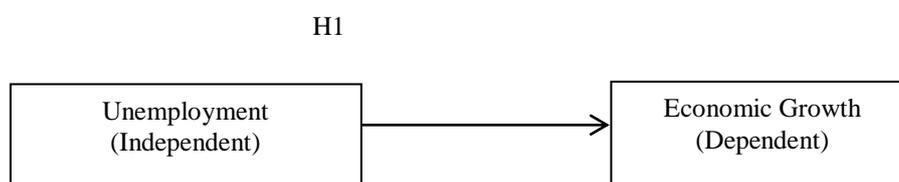


Figure 2
The regression model between Unemployment and Economic growth

The Model Summary of Simple Linear Regression

The model summary provides the simple correlation coefficient (R) and coefficient of determination (R²) for the regression model. A correlation coefficient of R= 0.509 shows a strong positive relationship between Unemployment and Economic Growth.

Table I
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.509 ^a	.259	.257	.59771

The above table provides the R and R2 values. Reading the value of R2 = 0.259 shows that (25.90%) of the change in Economic Growth can be explained by the change in Unemployment.

The ANOVA Output

The ANOVA table indicates the degree of fitness in the regression equation to fits the collected data.

Table II
ANOVA output

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	42.161	1	42.161	118.013	.000 ^b
Residual	120.397	337	.357		
Total	162.558	338			

This table indicates that the regression model predicts the dependent variable significantly and good degree of association. Reading the F-value > 1, and F= 118.013, p < 0.05, which is less than 0.05, then the regression model is statistically significantly predicts the outcome variable.

The result shown in ANOVA table indicates a strong correlation between Unemployment and Economic Growth. Since we have a large F ratio then the null hypothesis is found incorrect. Therefore, the study rejects the null-hypothesis (H0) and accept the alternative hypothesis (H1).

The Coefficients

The Coefficients table provides the needed information for the researcher to predict well Economic Growth from decreasing the rate of Unemployment, reading B and beta coefficient will show whether lowering Unemployment is significantly increases economic growth (by checking the "Sig." of this correlation).

Table III
Coefficient Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.534	.106		42.696	.000
	Unemployment	-.443	.041	-.509	-	.000
					10.863	

Based on the output of coefficient table (B= -0.443 at Sig. = 0.000), it is found that Economic Growth is highly predicted by the change in Unemployment in a reverse relationship, in other

words if unemployment decrease then economic growth increases and vice versa. The following table indicates the summary of results from simple regression outputs between Unemployment and Economic Growth:

Table IV
Regression Summary

Output	Value	Sig. level ($\rho < 0.05$)
R	0.509	.000
R ²	0.259 (25.90%)	
F	118.013	.000
B	- 0.443	.000

* Correlation between Unemployment and Economic Growth is positive and linear

The data in the table above shows there is a statistical, causal and reverse relationship between the unemployment and Economic Growth in Libya.

Conclusion

The results of the study show that decreasing the rate of employment in Libya contributes to the better economic development. Libya will also have to challenge the growing issues of high rate of unemployment to fresh graduates from Libyan universities. Today, many problems facing the people of Libya to overcome the low rate of employment that has been worsen the economic difficulties. Libya has usually relied on the better employment in public sector comparing to private sector because private firms preferred highly experienced people rather than new graduates without experience in their field.

It is concluded that the country's incompetent private sector has been unable to decrease the rate of unemployment which is affected the economic growth in Libya, the inefficiencies of Libya's economy require more attention from higher education institutes to provide qualified graduates who are capable to cope with different business environment. At the same time, Libya's education system requires more development to prepare students for many challenges in business world so that they could be capable to meet the demands of the labour market. Moreover, the new government in Libya has taken important initial steps to address the rise in youth unemployment, but the country will continue to face a number of challenges in its attempts to create more jobs as a result of the economic problems inherited from last 40 year.

Recommendations

It is highly recommended to focus on developing higher education system in order to provide qualified graduates who serve their country better and national economy rather than relying strictly on the public sector or the oil industry to provide the majority of employment opportunities. In addition to that the study recommends that the administrations of Libyan universities to establish contacts with major public and private firms offering them annual quota of graduates ready for start working and serving these firms effectively after carefully examines their qualifications and train them to be experienced and qualified employees in the future, adopting this strategy will enable Libya to provide more job opportunities and raise economic growth.

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