

# The Economics and Finance Letters

2014 Vol. 1, No. 4, pp. 24-29

ISSN(e): 2312-430X

ISSN(p): 2312-6310

DOI: 10.18488/journal.29/2014.1.4/29.4.24.29

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## LABOR AND ECONOMIC GROWTH IN ZIMBABWE

Clainos Chidoko<sup>1</sup>

<sup>1</sup>Faculty of Commerce, Great Zimbabwe University, Masvingo, Zimbabwe

### ABSTRACT

*The study investigates the impact of labour on economic growth in Zimbabwe. The research uses a simple Ordinary Least Squares regression modeling method. The results suggest that labour and capital impact positively on Zimbabwe's economic growth. The study recommends the government to pursue an employment-intensive strategy. It also recommends the government to develop an education and training system geared towards employment creation.*

**Keywords:** Human capital, Labour, Economic growth, Unemployment, Gross domestic product, Government expenditure, Informal sector.

### Contribution/ Originality

Several researchers have written on labour issues in Zimbabwe. This is because labour is one factor that is an essential ingredient for economic growth. However most of these studies have taken on a theoretical and qualitative route while the current study is quantitative and made use of econometric analysis. In this case it is one study that has used labour and capital data to analyse the Zimbabwean economy, using the gross domestic product as a proxy to that growth. The study also uses wages as a proxy to labour, since higher wages act as incentives to higher productivity. The study found out that labour impacted positively on economic growth in Zimbabwe, and as such this has important implication for policy formulation regarding labour issues.

## 1. INTRODUCTION

Labour involves issues of employment and wages. The labour markets are a platform that gives the field for interaction of employers and employees in relation to production and working conditions. In Zimbabwe the labour force has been so active. However, recently there has been a significant shortage in the agricultural sector, which is the mainstay of the economy. This is due to the fact that young people do not want to work in farms, which are considered the employment base for the poor, yet they form the bulk of the working class.

This research has been prompted by the need to understand how labour can impact on economic growth in Zimbabwe. This has come as a result of brain drain that has been experienced by Zimbabwe in the past decade as the economy has been struggling to get off from the economic woes that bedevilled it as a result of mismanagement of economic resources. The

effect of labour has not been taken into the equation of these woes yet on the ground one could notice the absence of skilled manpower that could drive the economy forward. In this case the researcher was eager to research on the extent of the degree of how labour could affect economic growth.

**Background:** The impact of labour force on economic growth in the Zimbabwean economy has been dealt with in various studies that include (Mlambo, 1995; Ncube, 2000). One of the conclusions of these studies was that the economy has not been able to create a sufficient number of jobs that would fully drive the economy of Zimbabwe.

The Zimbabwean economy has been affected adversely by the non performing labour force. In 2005, the unemployment rate was estimated at eighty percent and in 2009, it was estimated around ninety five percent. Also economic growth rates were estimated as 9.6 %, 9.4 % and 5 % for the periods 2010, 2011 and 2012 respectively. (Zimbabwe Economy, 2013). We can see from these figures that labour force has a big role to play in the growth of the economy. If labour is either non-existent, under-employed or unskilled, the consequences are that the economy will not perform, and then more and more labour will find itself being shed off from formal jobs, and the cycle continues.

The impact of labour on economic growth has been well noticed in Zimbabwe. Studies have shown that the more labour is well educated and trained, the more it will contribute positively to growth of the economy. In the early 1980s Zimbabwe invested a lot of capital into the education sector. This translated into more graduates from universities and technical colleges. The result was a boom in the labour market. The industry and commerce benefited from this investment and the economy surged up. However, as time progressed the government implemented some budget cuts into the education as one of the reforms prescribed by the International Monetary Fund (IMF) and World Bank as one of the conditions for financial support. This did a big hurt to the development of the sector and labour shortage in the economy was later felt in the 2000s. The farms, manufacturing and commercial sectors failed to get enough trained labour. The result was the slowing down of the economy, and this had an adverse effect on the welfare of the general Zimbabwean populacy. (International Labour Organisation (ILO), 2010). The purpose of this study is to investigate the impact of labour on economic growth in Zimbabwe.

**Research Hypothesis:** Labour does not contribute to economic growth in Zimbabwe.

## 2. REVIEW OF LITERATURE

The neoclassical growth model of Solow (1956) looked at population factors that determine output-input ratio. In this model the balanced path growth is achieved when the output and physical capital grow in relation to the constant rate of the labour force growth. Two main variables that determine growth are physical capital stock and quantity of labour. The empirical results of this model indicate that physical capital and labour inputs cannot explain completely the growth of output (Schultz, 1961; Denison, 1967). Their findings show that the growth rate of output exceeds the relevant input measures suggesting that investment in human capital is probably the main explanation factor for the difference (Lucas, 1988; Romer, 1989).

Some studies have looked at the relationship between human capital and economic growth. Educational level is always used as a proxy to human capital. Other variables, like literacy rate, mean year of schooling, enrolment rate and government expenditure on education, training and health are often used to indicate human capital. Some studies incorporate other variables that can enhance human capital like improvement in the capital market and trade policies. (Tallman and Wang, 1994).

The empirical results from the studies in this area show inconclusive relationship between human capital and economic growth. Some studies show a positive relationship, others conclude the otherwise. There are also studies that show unstable relationship between these two variables indicating a positive relationship in the early stage of development but a negative relationship in the later stage (Iyigun and Owen, 1996). However, despite these varying conclusions more studies give positive conclusions on the impact of labour on economic growth.

### 3. MATERIALS AND METHODS

#### 3.1. Estimation of the Model

The model for this study is specified as follows;

$$\ln GDP_t = \beta_0 + \beta_1 \ln LABOUR + \beta_2 \ln CAPITAL + \beta_3 \ln GDP_{t-1} + \varepsilon_t$$

Where

$GDP_{t-1}$  is gross domestic product

$LABOUR$  is quantity of labour

$CAPITAL$  is quantity of capital

$GDP_{t-1}$  is the gross domestic product which is lagged variable.

#### 3.2. Justification and Description of Variables

**Gross Domestic Product ( $GDP_{t-1}$ ):** In many studies gross domestic product is used as a proxy to economic growth. This is so since it captures economic activities of all sectors that contribute to the well-being of the economy.

**Labour variable:** The variable captures the factor of production that enhance economic activity in the economy. Without this the economy will be stagnant. However in this study we use wages as a proxy to labour. This is so since higher wages act as incentives for higher production at work.

**Capital variable:** This variable captures the amount of capital injected into the economy through human capital development. This has a lot of impact on the growth of economic activity in the sense that it oil the wheels of industry and commerce.

**Lagged GDP ( $GDP_{t-1}$ ):** The lagged GDP variable has significance on the growth of succeeding GDP values. The GDP variable also depends on the amount of economic activity in the preceding periods, since the income will be invested for more production in the succeeding periods.

**Data Sources and Type:** Annual time series data on the variables under study covering 30 year period 1980-2010 are used in this study for estimation of variables. The data used in this

study were collected and obtained from the Zimbabwe National Statistics Agency (ZIMSTAT) and Reserve Bank of Zimbabwe (RBZ). The study relies on secondary time series data as it is noticeable in most researches in this area that use time series data.

**Estimation Technique:** The researcher uses a simple Ordinary Least Squares (OLS) regression modeling method. The method of Ordinary Least Squares is attributed to Carl Friedman Gauss a German Mathematician. According to [Gujarati \(2004\)](#) the assumptions underlying OLS are regression model is linear, in parameters, zero mean value of disturbance  $U_i$  and homoscedasticity or equal variance of  $U_i$  and no autocorrelation between disturbances.

#### 4. RESULTS PRESENTATION AND ANALYSIS

This section gives the results of the study. It also analyses the regression results that relate economic growth and its macroeconomic variables which are labour, capital and gross domestic product which is lagged variable. The method used is Ordinary Least Squares (OLS) to produce consistent and efficient estimates using E-views computer package. The data is on annual basis for the period 1980-2010.

**Table-1.** Summary of Unit Root tests

Variables	ADF Test	Critical Values	Order of Integration	Decision
<b>GDP</b>	-3.668707*	1% -3.6752 5% -2.9627 10% -2.6200	1 (0)	Stationary
<b>LABOUR</b>	-4.936741**	1% -3.6752 5% -2.9750 10% -2.6265	1(1)	Stationary
<b>CAPITAL</b>	-5.574578**	1% -3.6752 5% -2.9750 10% -2.6265	1(1)	Stationary
<b>GDP<sub>t-1</sub></b>	-8.975116**	1% -3.6752 5% -2.9665 10% -2.6220	1(1)	Stationary

Key :\*\*,\*, denote 1%, and 5% level of significance respectively.

The stationarity of the series is confirmed by applying the Augmented Dickey Fuller (ADF) test. Table 1 gives the results of ADF for all series.

**Table-2.** Regression Results

Variable	Coefficient	Std.Error	t-statistic	Prob
<b>C</b>	-3.818383	1.445905	-2.640825	0.0140
<b>LABOUR</b>	0.578174	0.216245	2.673705	0.0130
<b>CAPITAL</b>	1.588365	0.820106	1.936779	0.0642
<b>GDP<sub>t-1</sub></b>	0.959615	0.173761	5.522596	0.0000

Dependent variable is GDP

$R^2 = 0.869504$

Adjusted  $R^2 = 0.848625$

Durban-Watson Statistic = 1.874521

F-Statistic = 41.64422

Prob (F-Statistic) = 0.000000

**Explanation of Results:** The coefficient of determination ( $R^2$ ) shows the percentage or proportion of total variation in the dependent variable that can be explained by changes in the independent variables in the model (Gujarati, 2004). The model has a considerably high  $R^2$  of 0.869504 meaning to say that approximately 86.95 % of the variation in economic growth are determined by the explanatory variables and the remaining 13.05% are accounted for by the residuals. Adjusted  $R^2$  of 0.848625 shows that approximately 84.86% of the variation in economic growth is still explained by the explanatory variables though degrees of freedom is taken into account.

In order to check the extent to which labour could boost economic growth, the study used proxy of wages. The results show that there is positive relationship between labour and economic growth. This implies that a unit increase in labour say by 1% will increase the level of gross domestic product by 57.81%. Wages act as incentives to put more effort in one's work.

In addition, the results also show statistically significant positive relationship between capital and economic growth and this indicates that capital is an important factor for boosting economic growth in Zimbabwe. This means to say that a unit increase in capital say by 1% will increase the level of gross domestic product by 158.84%. This figure is high that it magnifies the economic activity in the country.

More so, the results also reveal positive relationship between the lagged gross domestic product and economic growth in Zimbabwe. This implies that if the country increase the lagged gross domestic product say by 1%, this will increase the country's gross domestic product by 95.96%. There is a ripple effect on the production cycle if preceding periods were good.

## 5. CONCLUSION AND RECOMMENDATIONS

**Conclusion and Summary of Findings:** The study analysed the impact of labour on economic growth in Zimbabwe. The study applied a time series data during the period 1980-2010. The results confirm a positive relationship between gross domestic product and labour, capital and also lagged gross domestic product. We therefore conclude that labour, capital and lagged gross domestic product impact positively on economic growth in Zimbabwe.

**Recommendations:** The study recommends the government of Zimbabwe to pursue an employment-intensive strategy. This includes creation of jobs in the agricultural sector, formalizing the informal sector in urban areas, and also creating opportunities for the disadvantaged in society. It should also support intensively the small and medium scale enterprises, and promote the creation of new industries, while maintaining the old and mature ones.

The study also recommends the government to develop an education and training system geared towards employment creation. It has to invest more money into the training of skilled personnel. This also goes hand in hand with the need for high quality skills. These will have a high productivity.

Zimbabwe is agro-based. Any reform that will impact on agriculture will have an impact on the whole economy. Agricultural reforms and developments have seen a great improvement in the employment of young farmers, researchers and trainers. The study recommends that heavy

investment in agriculture can harness the youth labour in Zimbabwe for the good of the sector and economy as a whole.

Besides making heavy investments in agriculture, the government can also venture into other segments of the economy such as mining, manufacturing and even the service sector, and try to rejuvenate economic activities there. This will see many people being employed, for the good of the economy.

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