Journal of Economics



Impact of Refugee Influx on Economic Growth in Kenya

George Macharia & Dr. George Ruigu



Impact of Refugee Influx on Economic Growth in Kenya

^{1*} George Macharia & ² Dr. George Ruigu

^{1*}Postgraduate student, University of Nairobi

²Lecturer, School of Economics, University of Nairobi

*E-mail of corresponding author: geomac002@vahoo.com

How to cite this article: Macharia G. & Ruigu G. (2017), Impact of Refugee Influx on Economic Growth in Kenya, *Journal of Economics Vol* 1(1) pp. 1-14.

Abstract

Kenya has over the years competed well within the global economic market and experienced growth of its economy which is expected to continue, especially with the new constitutional dispensation. However, it still continues to have its share of setbacks, which may be a hindrance to such desired growth. The general objective of this study was to establish the impact of refugee influx on economic growth in Kenya. Specifically, this study sought to; establish the short run impact of refugee influx on economic growth in Kenya, determine the long run impact of refugee influx on economic growth in Kenya and establish the extent to which non-refugee related factors affect economic growth. The study adopted a time series methodology. Based on the findings, the study concluded that there was at least one co-integrating equation in the long run. It was also concluded that the lag GDP (denoting the previous period GDP) affects the current period GDP positively. This implies a higher GDP in the previous period leads to an increase in the current period GDP. Results also indicated that both in the long run and short run the number of refugees had a negative and significant relationship with the long-run GDP. Hence, an increase in the number of refugees resulted to a decrease in GDP. The results indicated that both in the long run and short run, labor had a positive and significant relationship with the long-run GDP. Therefore, an increase in labour resulted to an increase in GDP. The other variables were insignificant both in the short run and long run which implies that change in capital and human capital will have no effect on the short run and long run GDP. The study gave two recommendations based on the findings. First given that the effect of the number of refugees on GDP was negative and significant, it is recommended that Kenya should adopt strategies which aim at minimizing the number of



refugees in a bid to increase aggregate economic growth. Second, given that the effect of labour on GDP was positive and significant, it is recommended that Kenya should encourage selfemployment, investments and innovation since increase in development, will call for increased labour force resulting in an increase in the aggregate GDP.

Keywords: Refugee Influx, Economic Growth, Human Capital, Non-Human Capital and Labor

1.0 Introduction

1.1 Background of the study

Economic growth refers to an increase in the productive capacity of an economy as a result of which the economy is capable of producing additional quantities of goods and services. In most cases, the standard of living is measured by the quantity of goods and services available to us so that economic growth is synonymous with an increase in the general standard of living (Romer, 2012). Refugees impose a variety of security, economic and environmental burden on host countries while at the same time embody a significant flow of resources in the form of international humanitarian assistance, economic assets and human capital. These refugee resources represent an important state building contribution to the host state, but security problems and other hindrances inhibit the state's ability to access and control them (Jacobsen, 2008). By the end of 2009 there were some 42.3 million people displaced globally as a result of conflict, violence, and human rights violations. Of these, 27.1 million were internally displaced persons (IDPs) while 15.2 million were refugees outside their country of nationality or country of habitual residence, and who were often in protracted displacement situations in the host country. It is generally recognized that there are humanitarian, political, security, and development challenges during the time of displacement and the period after durable solutions have been identified, either in the home country, a neighboring state, or elsewhere (World Bank, 2011).

In the past thirty years or more, African countries have experienced repeated and sustained mass influxes of refugees. These influxes are widely seen as one more intractable problem, `a luxury [the world's poorest states] can no longer afford' (Chimni, 1998). For instance, a report concerning the impact of refugees on the national public expenditure in Malawi during the 1990s concluded that significant direct and indirect expenditure related to refugees affected the scale of the governments' capital investment in the social and infrastructure sectors. Direct and indirect costs of refugee influxes on public expenditure were estimated at US\$ 9.4 million for 1988 and U\$ 8.4



million for 1989 (Government of Malawi, 1990). Similarly, the Tanzanian government attests that the refugee population it hosts has become a burden to the nation's development by exacerbating, if not creating, a scarcity of resources. They assert that the quality of national programmes such as welfare and the national poverty reduction strategy has been compromised by the reallocation of funds from government resources to refugee programmes. It is also argued that the sharing of common goods and infrastructure has strained not only resources but also relations between refugees and citizens who find themselves competing for those goods. This is most often seen in the use of grazing land, water sources and transport routes (Ongpin, 2009)

In Kenya, a recent impact evaluation of refugee camps which hosts one of the largest refugee populations in the world, estimates that the total annual direct and indirect benefits of the camp operation for the local host community were around US\$ 82 million in 2009, and was projected to reach US\$ 100 million in 2010. Some of the funds for the camp operation are allocated to infrastructure investments that benefit the host community. The impact of the Daadab camps on the local host community are widely felt through trading opportunities and reduced food and commodity prices. Furthermore, refugee camps have developed major local markets with considerable purchasing power in relation to pastoral products such as milk and livestock. However, despite these positive indicators, the presence of refugees is also associated with the depletion of firewood and building materials as well as competition for grazing land in the immediate vicinity of the camps. The assessment concludes that impacts on the host community are complex and have both negative and positive aspects in Daadab (NORDEC, 2010).

According to UNCHR (2014), the highest number of refugee concentrations are in some of the poorest countries in the world. A large number (86%) of such movements are into least developed countries (LDCs). The presence of refugees compounds the already prevailing economic, environmental, social and at times, political difficulties in these countries. Often such countries are confronted by a combination of four of these factors. Nearly always their impact is substantial. In Kenya, the majority of refugees arrived here in the early 1990s and have been accommodated at two sites: Dadaab in northeastern Kenya and Kakuma in the northwestern part of the country with a figure of about 550,000 most of whom from this are of Somali origin with significant numbers including those from Ethiopia, South Sudan, Congo DRC and Burundi. The major factors contributing to this being war and political asylum. It is noteworthy that Kenya is among the



leading host countries for these among the developing nations with annual trends as below (UNHCR, 2014).

1.2 Statement of the Problem

Evidenced with the independence of the nation of South Sudan and a knowledge of the many refugees living in Kenya and the more recent Somalia situation where thousands have come into the country due to the war on Al-Shabab and with growth projections in Kenya changing unpredictably (Mogire, 2011), there exists a gap in the analysis of the two factors and how they relate with each other.

With increase in population comes with it an increase in pressure on resources as this would tend to put pressure on the environment. Consequently, other areas vital for creating the much needed avenues for economic growth would be affected and eventually undermine growth. Population pressure could be in the form of migrant channels such as through refugees moving in certain areas. On the other hand, one could argue that the influx of these refugees would be a recipe for growth in that they could be channels for greater consumption patterns, investment increase in the form of foreign direct investments all which could enhance economic growth significantly (Lim, 1996) observes. Thus with diverse perspectives about the effect of refugee influx, there is need to establish the implicit effect of refugee influx on economic growth independent of the entire population value as IRIN global report on the Ugandan model (2014) emphasize. The study sought to fill this intellectual gap and provide an understanding of the same.

1.3 Objectives of the study

The specific objectives of the study were;

- i. To establish the short run and long run impacts of refugee influx on economic growth in Kenya.
- ii. To establish the extent to which non-refugee related factors affect economic growth.

1.4 Research Questions

- i. What is the impact of refugee influx on economic growth in Kenya?
- ii. To what extent do non-refugee related factors affect economic growth in Kenya?

Stratford Peer Reviewed Journals and Book Publishing Journal of Economics Volume 1//Issue 1//Page1-14//December//2017/ Email: stratfordjournals.org



2.0 Literature Review

2.1 Theoretical Review: Theory of Economic Growth

Evolving from the works of Keynes (1936) focusing on the short run aspect of investment is the Harrod-Domar growth model. This model looked into the relationship between savings, investment and output. The model argued that national savings rate had to be equal to the products of the capital-output ratio and the rate of the effective labor force if the economy was to keep its stock of plant and equipment in balance with its supply of labor so that the steady growth could occur.

2.2 Empirical review

Ahmed and Olwan (2012) attempted to identify the economic, social and legal conditions of Syrian refugees residing in Jordan. The study sample consisted of 105 interviews, which were conducted with the household heads of Syrian families residing in four governorates; Irbid, Mafraq, Balqa and Amman. The respondents were asked to answer the 55 question survey included in the study questionnaire. The results of this exploratory study revealed that the Jordanian government encountered economic challenges and difficulties as a result of hosting Syrian refugees on its territory. Lozi (2013) investigated the impact of refugees on the Jordanian economy measured by three macroeconomic indicators: unemployment rate, foreign direct investment and food pricing. A questionnaire was used to find the impact of refugees on political, social, and environmental of the host country Jordan. Results indicate that the impact of refugees on unemployment rate and food prices in Jordan is positive, so the null hypotheses are rejected while in the case of the impact of refugees on foreign direct investment in Jordan, the null hypothesis is accepted.

ILO (2013) assessed this impact and identified the ramifications of an increasing number of Syrian refugees in Jordan. The study focused on the employment profile of refugees and the potential impact of their economic participation on their host communities' livelihoods. The assessment revealed a number of salient findings and confirmed, to a large extent, the anecdotal evidence about the living conditions of Syrian refugees and their effect on host communities. The majority of Syrian refugees are living in difficult socio-economic conditions with limited livelihood resources. James (2003) conducted study on the role of international agencies and their impact on the Kenyan economy as a result of supporting such refugees The study used ADF test The study outlined how there is a positive and statistically significant relationship between the share of



government expenditure in gross domestic product and share of net disbursement of overseas development assistance (ODA). Also the role of FDI comes into play as a result where Adeolu (2007) using similar tests explained how although the overall effect of FDI on economic growth may not be significant, the components of FDI do have a positive impact.

Brynen (2007) conducted a study on the impact of Palestinian refugees. He reiterates how the fact that a large number live in camps could signify insignificant impact on poverty and eventually the economy. It could be that camp refugees have lower incomes, poorer health and education levels than those outside the camps. However, camp refugees have better access to basic health and education services due to UNHCR's presence. The latter point directly leads to the conclusion that the camp population do not face homogeneously poor living conditions, nor do they constitute the main poverty problem in most counties. Xavier et al (2011) conducted a study on uncertainty and Investment Behavior in the Democratic Republic of Congo. They adopted accelerator modeling that investigated both macroeconomic uncertainty (as a measure by the conditional variance of inflation) and political uncertainty. The study found out that refugee existence had a negative impact on investment rates and eventually the economic outlook.

According to Sikod (2007), the impact of refugees influx would depend on the role of government where cross country estimation revealed that good governance is indispensable in enhancing the effectiveness of government operations and in stimulating private investment, and therefore growth. Grindheim (2013) conducted a study on exploring the impacts of Refugee Camps on Host Communities. More specific, how the camp establishment has impacted hosts household viability and how they have adapted accordingly. By interviewing respondents from the host community, refugee camp and external actors of relevance, the study found out that there were economic, social, cultural, political and environmental impacts. Patricia (2004) conducted a study on refugees and their impact on economic growth. She argues how with the presence of international agencies supporting the assistance efforts of refugees, the high volumes (1.5 million) of these refugees has inevitably had an impact on Tanzania's economic situation and consequently influencing to an extent the growth patterns.



2.3 Conceptual framework



Figure 1: Conceptual framework

3.0 Research methodology

The model estimates were based on data from various sources mainly UNHCR and IMF data bases and KNBS Statistical Abstracts. The data was for the period 1980 – 2014. This study used a time series regression model to evaluate the impact of refugee influx on economic growth in Kenya. This study presented both the theoretical and empirical models. The theoretical model is a collection of concepts and their hypothetical interrelationships. Theoretical model borrowed heavily from theories presented in literature review. The empirical model on the other hand is the econometric model that is modified from theory.

Variables were categorized according to the type of variable, measurement whether dependent /independent. This study used a time series regression model to evaluate the impact of refugee influx on economic growth in Kenya. Applying the standard OLS method to non-stationary data series can produce 'spurious regression'. That is, the OLS regression can give high R-squared, low Durbin-Watson (DW) statistics and significant t-values of the estimated coefficients suggesting a significant relationship between dependent and explanatory variables when in fact they are completely unrelated. The Augmented Dickey-Fuller (ADF) test was employed in this study to test the time-series properties of the data. The ADF tested the null hypothesis of non-stationarity against the alternative hypothesis of stationarity. The Phillips-Perron tests were also useful in testing the unit roots

The test for Multicollinearity was conducted to establish whether the independent variables are correlated. In this case the study used correlation matrix as well as the variance inflation factors to



establish whether multicollinearity existed. Heteroscedasticity checked whether the error term is constant across the observations. The test was carried out using the white tests which establishes whether the variation amongst sampling units of a variable is continuous in a regression model . The condition can be corrected by applying corrected standard errors. The LM test was conducted to test for the first order autocorrelation. To correct for autocorrelation additional lags were employed. The Durbin Watson statistic was used to identify the existence of serial correlation from a regression analysis of close to two which is an indicator that autocorrelation no longer exists (Kawakatou, 1998).

4.0 Results and findings

4.1 Descriptive Statistics

This section provides results on measures of central tendency of the variables; GDP, capital, labor, Human capital and number of refugees being measured in the study. Results in Table 1 showed that the overall mean of GDP was Ksh 15804.86 (million) which indicates the average of GDP in Kenya. The median of GDP was Ksh 15667.2 (million) which implies that half of the observations of the GDP had this value during the period 1980 and 2014. GDP had a standard deviation of Ksh 2310.19.

The results showed that the overall mean of capital was Ksh 3412.71 (million) which indicates the average of capital in Kenya. The median of capital was Ksh 3273.21 (million) which imply that half of the observations of the capital had this value during the period 1980 and 2014. The observations of capital had a standard deviation of Ksh 705.417. The results showed that the overall mean of labor was Ksh 5496.44 (million) which indicates the average of labor in Kenya. The median of labor was Ksh 4698.4 (million) which imply that half of the observations of the labor had this value during the period 1980 and 2014. The observations of 3838.19. The results showed that the overall mean of human capital was Ksh 1548.97 (million) which indicates the average of human capital in Kenya. The median of human capital was Ksh 1441.59 (million) which imply that half of the observations of the human capital was Ksh 1980 and 2014. The observations of the human capital had this value during the period 1980 and 2014. The observations of the human capital was Ksh 1441.59 (million) which imply that half of the observations of the human capital had this value during the period 1980 and 2014. The observations of human capital had a standard deviation of 374.807.

The results showed that the overall mean of number of refugees was 302,350 which indicates the average of number of refugees in Kenya. The median of number of refugees was 234,665 which



imply that half of the observations of the number of refugees had this value during the period 1980 and 2014. The observations of number of refugees had a standard deviation of 332,472.

Indicator	GDP	Capital	Labor	Human capital	Number of refugees
Mean	15804.9	3412.71	5496.44	1548.97	302350
Median	15667.2	3273.21	4698.4	1441.59	234665
Maximum	21084.3	5372.22	12476.2	2395.42	1180088
Minimum	12273.2	2552.93	1190.8	1080.89	2980
Std. Dev.	2310.19	705.417	3838.19	374.807	332472

Table 1: Descriptive Statistics

4.2 Correlation analysis.

According to William *et al.* (2013), multicollinearity refers to the presence of correlations between the predictor variables. In severe cases of perfect correlations between predictor variables, multicollinearity can imply that a unique least squares solution to a regression analysis cannot be computed (Field, 2009). Multicollinearity inflates the standard errors and confidence intervals leading to unstable estimates of the coefficients for individual predictors (Belsley *et al.*, 1980). Table 2 shows that there exist multicollinearity between human capital and labor, between number of refugees and labor, between number of refugees and human capital. The presence of multicollinearity was controlled by using white heteroscedasticity test to produce robust standard error.

Variable	GDP	Capital	Labor	Human capital	Number of refugees
GDP	1.000				
Capital	-0.3352	1.000			
Labor	-0.1172	0.181	1.000		
Human capital	-0.1855	0.28174	0.85012	1.000	
Number of refugees	-0.4174	0.32767	0.85586	0.77921	1.000

Table 2: Correlation Matrix



4.3 Regression analysis

The long run results presented in Table 3 are generated from the non-stationary variables. The model R squared was 0.7751. This implied that the goodness of fit of the model explained 77.51% of the variation in GDP was explained by the independent variables. The overall model was significant as demonstrated by an F statistic of 19.3057 (p value = 0.000). This further implied that the independent variables were good joint good predictors of the GDP.

The lagged GDP (denoting last year's GDP) was positive and significant. (The lagged GDP coefficient reported is 0.80254 and its P-value 0.000). This implies that in the long run the lagged GDP by one unit leads to an increase in this year's GDP by 0.80254 units. The results indicate that in the long run, capital has a negative and insignificant relationship with GDP. (The capital coefficient reported is -0.0991 and its P-value 0.4105). This implies that an increase or decrease in capital (non-human capital) has no effect on GDP. Table 3 indicates that in the long run, labour has a positive and significant relationship with GDP. (The labour coefficient reported is 0.1779 and its P-value 0.0448). This implies that an increase in labour by one unit leads to an increase in GDP by 0.1779 units. Table 3 also indicates that in the long run, human capital has a positive and insignificant relationship with GDP. (The human capital coefficient reported is 0.1772 and its P-value 0.2516). This implies that an increase in human capital by has no effect on GDP.

Further, Table 3 indicates that in the long run, the number of refugees has a negative and significant relationship with GDP. (The number of refugees coefficient reported is -0.0732 and its P-value 0.0406). This implies that an increase in number of refugees by one unit leads to a decrease in GDP by 0. 0732 units.

Stratford Peer Reviewed Journals and Book Publishing Journal of Economics Volume 1//Issue 1//Page1-14//December//2017/ Email: stratfordjournals.org



Table 3: Long Run Model

Coefficient	Std. Error	t-Statistic	Prob.				
0.80254	0.10984	7.30638	0.000				
-0.0991	0.11867	-0.8347	0.4105				
0.1779	0.08495	2.09425	0.0448				
-0.1772	0.15154	-1.1691	0.2516				
-0.0732	0.03423	-2.14	0.0406				
11.1251	1.19059	9.34425	0.000				
0.77515	Mean deper	Mean dependent var					
0.735	S.D. depend	0.14668					
0.07551	Akaike info	kaike info criterion					
0.15965	Schwarz cri	-1.901					
42.8955	Hannan-Quinn criter.		-2.0785				
19.3057	Durbin-Watson stat		1.90301				
0.000							
Dependent Variable: LN_GDP							
Method: Least Squares							
Sample (adjusted): 2 35							
Included observations: 34 after adjustments							
	Coefficient 0.80254 -0.0991 0.1779 -0.1772 -0.0732 11.1251 0.77515 0.735 0.07551 0.15965 42.8955 19.3057 0.000	Coefficient Std. Error 0.80254 0.10984 -0.0991 0.11867 0.1779 0.08495 -0.1772 0.15154 -0.0732 0.03423 11.1251 1.19059 0.77515 Mean dependence 0.77551 Mean dependence 0.77551 Akaike info 0.15965 Schwarz crist 42.8955 Hannan-Qu 19.3057 Durbin-Wat 0.000 State	CoefficientStd. Errort-Statistic0.802540.109847.30638-0.09910.11867-0.83470.17790.084952.09425-0.17720.15154-1.1691-0.07320.03423-2.1411.12511.190599.344250.77515Mean dependent var0.735S.D. dependent var0.07551Akaike info criterion0.15965Schwarz criterion42.8955Hannan-Quinn criter.19.3057Durbin-Watson stat0.000				

White heteroskedasticity-consistent standard errors & covariance

5.0 Conclusions

It was concluded that there was at least one co-integrating equation in the long run. It was also concluded that the la GDP (denoting the previous period GDP) affects the current period GDP positively. This implies a higher GDP in the previous period leads to an increase in the current period GDP. The results also indicated that both in the long run and short run the number of refugees had a negative and significant relationship with the long-run GDP. Hence, an increase in the number of refugees resulted in a decrease in GDP. The results indicated that both in the long run and short run, labor had a positive and significant relationship with the GDP in the long-run. Therefore, an increase in labour resulted to an increase in GDP. The other variables were insignificant both in the short run and long run which implies that change in capital and human capital will have no effect on GDP in the short run and long run



6.0 Recommendations

The study gave two recommendations based on the study findings. First given that the effect of the number of refugees on GDP was negative and significant in the long run, it is recommended that the Kenyan government should adopt strategies which aim at minimizing the number of refugees. This strategies may include having stringent laws on registration of refugees with probable reduction in refugee certificate expiry time in a bid to increase aggregate economic growth. Second, given that the effect of labour on GDP was positive and significant, it is recommended that the government should encourage self-employment, investments and innovation through such as encouraging credit administration at subsidised rates since increase in development calls for increased labour force resulting to increase in the aggregate GDP.

7.0 References

- Adeolu, A. (2007). FDI and Economic Growth: Evidence from Nigeria. AERC Kenya Research Paper.
- Ahmed, A. & Olwan, M. (2012). The Economic, Social and Legal Conditions of Syrian Refugees Residing in Jordan, Interdisciplinary Journal of Contemporary Research in Business vol 2, 5.
- Belsley A. David A. Edwin Kuh and Roy E. Wdrh. (1980). Regression dietetics: Identifying unfluctuating data and sources of collinearity (Wiky. New York. NY L
- Brynen, R. & Rifai, E. (2007). *Palestinian Refugees: Challenges of Repartition and Development*. I.B.T and Cotis, USA.
- Chimni, B. S. (1998). The geopolitics of refugee studies: A view from the South. *Journal of Refugee Studies*, 11(4), 350-374.
- Field, A.P. (2009).Discovering statistics using IBM SPSS Statistics: And sex and drugs and rock 'n' roll (3Edition).London: Sage.

Government of Kenya, (2012). Statistical Abstract Nairobi, Government Printer.

Government of Malawi, World Bank, UNDP and UNHCR, (1990). Report on the Consultative Group of Malawi on the Impact of Refugees on the Government Public Expenditure, Malawi.



Grindheim, K. (2013). Exploring the impacts of Refugee Camps on Host Communities: A Case Study of Kakuma Host Community in Kenya, University of Agder Press, Norway.

International Labour Organization [ILO], (2013). Assessment of the Impact of Syrian Refugees in Lebanon and their Employment Profile, Regional Office for the Arab States, USA.

IRIN Global Report, (2014). Refugee Economies: The Ugandan Model, Switzerland.

Jacobsen, K. (2008). Can Refugees Benefit the State? Refugee Resources and African State Building, Journal of Modern African Studies, 40, (4), 577-596.

Kawakatou, H. (1998). Econometric models and Economic forecasts, Irwin McGraw-Hill, USA.

- KNBS, (2008). Basic Report on Wellbeing in Kenya: A Socio-Economic Profile, Government Printer, Kenya.
- Lozi, B. (2013). The Effect of Refugees on Host Country Economy Evidence from Jordan, Interdisciplinary Journal of Contemporary Research in Business vol 3, 5.
- Mogire, E. (2011). Victims as Insecurity Threats: Refugee Impact on Host State, Security in Africa; Ashgate Publishing Company.
- Ndebbio, E. (2004). *Financial Deepening, Economic Growth and Development*, AERC Research Paper.
- Nordic Agency for Development and Ecology (NORDEC). (2010). *Impacts of Dadaab Refugee Camps on Host Communities*. (Draft Study Report)
- Ongpin, P. A. (2009). Refugees: asset or burden? Forced Migration Review, (33), 37.

Romer, D. (2012). Advanced Macroeconomics, Mcgraw - Hill, Irwin, USA.

Rutinwa, B. (2003). *The Impact of the Presence of Refugees in Northwestern Tanzania*. The Centre for Study of Forced Migration, University of Dar Es Salaam http://www.grandslacs.net/doc/3765. Pdf_



- Sikod, F., & Teker, J. (2007). *Governance and Economic Growth in Cameroon*, African Journal of Economic Policy 3.
- Sikod, F., & Teker, J. (2012). *Governance and Economic Growth in Cameroon* AERC Research Paper, Kenya.

UNHCR, (2014). UNHCR Statistical Online Population Portal, UN, USA.

- World Bank (2011). *The Impact of Refugees on Neighboring Countries: A Development Challenge*, Background Note, USA.
- Xavier, B., & Manika, J. (2011). Uncertainty and Investment Behavior in the Democratic Republic of Congo, AERC Research Paper, Kenya.