Effects Of East African Community Customs Union On Trade And Economic Growth In Kenya

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ABSTRACT

During the 1990’s the world experienced a new wave of regional integration agreements (RIAs) that reached unprecedented proportions. The increasing importance of regional integration agreements and in particular their extraordinary expansions during the 1990’s are among the most salient developments of the international trading system and its believed to be a vehicle for the promotion of trade and economic growth. The main driver for increasing number of Regional Integrations Agreements on the African sub-continent is the need to increase regional co-operation by creating a unified economic bloc and building blocs for stronger integration between member countries that will eventually lead to the creation of an African Economic Community. The East Africa Community was resurrected in 1999 which was transformed to a custom union in the year 2005. One of the objectives of the custom union was aimed at improving trade between the member states. The objectives of this study were to determine the trade effect of the EAC custom union and to analyze the effect of intra-EAC trade on economic growth in Kenya. Time series data for the years 2000 to 2013 was used for analysis. The coefficient of the EAC dummy used to measure the effect of custom union was found to be statistically significant and positive. This finding shows that after the formation of the custom union, the volume of trade in Kenya has increased proportionately by 0.9083 percent. For the effect of the custom union on Kenya intra-EAC trade, the EAC dummy coefficient was also found to be positive and statistically significant. This means that after the formation of the custom union, the GDP of Kenya has proportionately increased by 0.6214 percent. The study revealed that the formation of the EAC Custom Union has had positive effect on trade and economic growth in Kenya. The findings also show that after the formation of the custom union, increase in the volume of trade for Kenya has been realized. Therefore the formation of the EAC customs union is an important step in the process of deepening regional integration among the member states.

ABBREVIATIONS AND ACRONYMS

ARCH  Autoregressive Conditional Heteroskedasticity
CET  Common External Tariffs
COMESA  Common Market for Eastern and Southern Africa
COMTRADE  Commodity Trade Statistics Database of the United Nations
CU  Customs Union
CUSUM  Cumulative Sum
EAC  East African Community
EACCU  East African Community Customs Union
FDI  Foreign Direct Investment
FTA  Free Trade Area
GATT  General Agreement on Trade and Tariffs
GDP  Gross Domestic Product
GNP  Gross National Product
IMF  International Monetary Fund
MPK  Marginal Product of Capital
NAFTA  North American Free Trade Area
OECD  Organization for Economic Co-operation and Development
OLS  Ordinary Least Squares
RESET  Regression Specification Error Test
ROW  Rest of the World
1. INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Regional integration arrangements (RIAs) constitute an increasingly significant feature of the world trade system. Africa and in particular East Africa is not an exception to this phenomenon. According to Organization for Economic Co-operation and Development (OECD), more than half of the total world trade occurs through regional trade agreements. World trade under RIAs grew from 43 percent to 60 percent between 2001 and 2005 (OECD, 2005). World Bank (2000) points out that most countries in the world are members of at least one RIA and at least one third of world trade is covered by RIA provisions. As at June 2014, the cumulative number of Regional Trade Agreements (RTAs) as reported by the General Agreements on Trade and Tariffs (GATT) and World Trade Organization (WTO) was 595. The common feature of all the RTAs is that they are reciprocal trade agreements between two or more partners (World Trade Organization, 2014).

East African Community member countries have taken radical steps towards mainstreaming trade into their national development strategies. Kenya’s trade policy has evolved through various distinct orientations: Import Substitution Policies in 1960s to 1980s; trade liberalization through Structural Adjustment Policies (SAPs) of 1980s; and Export Oriented Policies of the 1990s, which led to the creation of the Export Processing Zones (EPZs). Trade plays a significant role in Kenya’s economic growth and development through its linkages with all the economic sectors by creating markets through which goods and services get to the consumer. Trade liberalization strategies and programmes to sustain economic growth within the tenets of Vision 2030. This included promotion of trade both wholesale and retail, manufacturing, agriculture, financial services, Information and Communications Technology (ICT) and business process outsourcing implementation through the five year medium term plans (MTPs) (Republic of Kenya, 2012).

The establishment of the EAC custom union is therefore believed to play an important role in the economic growth of Kenya through trade integration. Trade plays an important role in the country’s economic growth and development through its linkages with all the sectors of the economy. Trade is one of the pillar anchored in the Kenya vision 2030 strategies to support the manufacturing and service industries by creating markets
through which goods and services get to the consumer thus providing a channel through which trade occurs leading to economic growth.

1.2 KENYA’S ECONOMIC GROWTH
Kenya’s economic growth has been fluctuating since independence. Kenya’s economic performance has been declining rather sharply since independence. Annual GDP growth rates have dropped from an average of 6.7 percent in the 1960s and 70s to an all-time low of 2 percent in the 1990s as shown in figure 1.3 (Republic of Kenya, 2012). The reasons that explain this progressive decline among other factors include the inappropriate choice of development strategies; collapse of infrastructure; unstable and conflicting macro-economic environment an overheated/uncertain institutional and political environment; decline in regional markets especially after the collapse of the East African Community and poorly managed policy transition (KIPPRA, 2014)

![Figure 1.1: Economic growth patterns in Kenya for period 1971-2013](image)


During the initial years after independence, the country achieved high economic growth which later declined (Government of Kenya, 2010). In the year 2000, the IMF and World Bank offered loans to Kenya to prevent a severe economic crisis with GDP growth falling to 0.5 percent (Government of Kenya, 2010). Between the year 2000 and 2010 other than in 2005, Kenya recorded lower annual economic growth than the average for sub-Saharan Africa and compared to its member countries in the East African Community as illustrated in Table 1.1.

1.3 STATEMENT OF THE PROBLEM
Regional trade arrangements are becoming an increasingly popular vehicle for the promotion and creation of trade and enhancing economic growth. The economic growth of Kenya has been fluctuating since independence. Kenya’s average GDP growth rate has remained lower than the expected 10 percent envisioned in the Kenya vision 2030. The Kenya government has been working through the ministry of East African
Affairs, Commerce and Tourism to promote trade in the EAC region as one of the strategies towards attaining the 10 percent economic growth rate.

Vamvakidis (1998) found out that rapid economic growth of developing countries opened their markets to free international trade which has stimulated empirical and theoretical literature on the effects of trade on economic growth. Kasekende and Ngeno (2000) found out that regional integrations increased intra-regional trade which in turn led to economic growth and development through economies of scale. McIntyre (2005) further confirmed that the EAC member countries had a potential benefit from trade through lowering of the common external tariffs and forming a regional integration.

Otinga (2009) further found out that the EAC custom union had a positive effect on Kenya’s overall trade. Nga’ng’a (2006) found out that RTAs had a trade diversion effects between the EAC member countries, trade between the EAC and the rest of the world had reduced. Buigut (2012) further found out that individual countries in the EAC custom union had disproportionate impacts on its exports and import trade but the effect of EAC on individual country was not empirically estimated.

1.4 RESEARCH QUESTIONS
The study sought to answer the following questions:
- What is the effect of East African Community Customs Union on trade in Kenya?
- What is the effect of Kenya’s intra EAC trade on its economic growth?

1.5 OBJECTIVE OF THE STUDY
The general objective of this study is to analyze the effects of East African Community Customs Union on trade and economic growth in Kenya. The specific objectives are:
- To determine the effect of East African Community Customs Union on trade in Kenya.
- To analyze the effect of Kenya’s intra trade on its economic growth.

1.6 ORGANIZATION OF THIS STUDY
This research project is organized in five chapters. Chapter one presents the background information about RTAs, the East African Community. Theoretical literature and the empirical literature review of previous studies are presented in Chapter two. Chapter three gives the methodology that was adopted in the study to meet its objectives. Chapter four presents empirical findings of the study while chapter Five presents summary, conclusions, policy implications of the study and areas of further research.
2. LITERATURE REVIEW

2.1 THEORETICAL LITERATURE

The study used the Comparative advantage theory, gravity model and Solow growth model. According to the theory, a country tends to specialize in the production and export of those commodities in which it has a maximum comparative cost advantage. A country will export the good that uses its abundant factor intensively i.e. under free trade, the capital abundant country is expected to produce relatively more of the capital intensive good than the other country (Feenstra, 2001).

Due to the unrealistic assumptions of the comparative advantage theory, Eli Heckscher (1919) and Bertil Ohlin (1933) came up with the Heckscher-Ohlin theory to address this. The Heckscher-Ohlin model assumes that the countries have identical technologies; different factor endowments, identical and homothetic tastes, free trade, but not free factor movements. According to the model, countries will export products that utilize their abundant factor endowments and import products that utilize the countries’ scarce factor endowments. In the Heckscher–Ohlin model, the country exports the good which uses its abundant factor more intensively. As the economy opens, there is a shift in resources toward the sectors that draw upon the abundant factor and the value of total production increases.

2.2 THE GRAVITY MODEL

Its origin goes back to the law of universal gravitation in physics which was developed by Isaac Newton in 1687. It predicts that the flow of people, ideas or commodities between two locations is positively related to their size and negatively related to the distance (Gosh and Yamarik, 2004). According to Tinbergen (1962) and Poyhonen (1963), the model is specified in equation 2.1:

\[ \text{trade}_{ij} = A \left( \frac{\text{GDP}_i \cdot \text{GDP}_j}{\text{distance}_{ij}} \right)^{b_1} \left( \frac{\text{distance}_{ij}}{\text{distance}_{ij}} \right)^{b_2} \]  \hspace{1cm} (2.1)

Where \( \text{trade}_{ij} \) is the bilateral trade flows between country \( i \) and \( j \), \( \text{GDP}_i \) and \( \text{GDP}_j \) are Gross Domestic Products (GDP) for country \( i \) and \( j \) respectively. Distance\( _{ij} \) measures the bilateral distance between the two countries and \( A \) is a constant of proportionality. The equation predicts that the volume of trade between two economies should increase with their size (proxied by real GDP) and decrease with transaction costs measured by the bilateral distance (Gosh and Yamarik, 2004).

The study followed the following relationship:

\[ X_{ij} = A \left( \frac{Y_i Y_j}{D_{ij}} \right)^{\alpha \beta} \]  \hspace{1cm} (2.2)

Where \( Y_i \) and \( Y_j \) are the respective GDPs for importing and exporting countries, \( D_{ij} \) is the distance and \( A \) is a constant. The value of \( (\alpha) \) refers to the elasticity of the exporting country’s GDP, \( (\beta) \) is the elasticity of the
importing country’s GDP and \((\gamma)\) is the elasticity of distance corresponding to the universal gravitation equation.

The gravity model is an important empirical tool to help us understand trade and other economic flows in the world economy and have been used as a baseline model for estimating the impact of a variety of policy issues.

2.3 THE SOLOW GROWTH MODEL

The Solow model also known as the Solow-Swan model was developed by Robert Solow (Solow, 1956) and T. W. Swan (Swan, 1956). The model focuses on four variables: Output \((Y)\), Capital \((K)\), Labour \((L)\) and Knowledge or the effectiveness of labour \((A)\) and follows the properties of the Cobb-Douglas production function (Romer, 1996).

\[
Y_t = F(K_t A_t L_t)
\]  
(2.3)

The model states that at any one time, the economy has some amounts of capital, labour and effectiveness of labour combined to produce output \((Y)\). The model assumes that the function has a constant return to scale in production regardless of its starting point; the economy converges to a balanced growth path where each variable in the model is growing at a constant rate. The model also assumes that the long run growth of output per worker depends only on technological progress whereas short run growth results from either technological progress or capital accumulation (Romer, 1996).

2.4 EMPIRICAL LITERATURE

McIntyre (2005) and Othieno and Shinyekwa (2011) have both used simulation analysis; which does not use real figures thus the results obtained may be erroneous and cannot be used to make conclusions and policy recommendations. Shinyekwa and Mawejje (2013) used the gravity model to compare the effects of different trading blocs in Uganda. Buigut (2012) used the panel data to estimate the trade effects in each member country of the EAC custom union.

Gosh and Yamarik (2004) provided a strong theoretical foundation of the gravity model which was borrowed in this study to analyze the effect of the EACCU. Mjema et al, (2012) examined the determinants of trade using the gravity model between Tanzania and Kenya. Ng’ang’a (2006) examined the effects of the establishment of RTAs among developing nations and found out that intra-bloc trade has improved Otinga (2009) found out that international trade has a positive effect on economic growth in Kenya; the study was done using descriptive method and recommended policies on promoting trade.

From all the aforementioned studies, there is confirmed evidence that belonging to RTAs has an effect on trade patterns of member countries as well as its economic growth. There is however lack of evidence concerning a study on the trade effects of the East African Community Customs Union and intra-EAC trade on economic growth in Kenya.
3. METHODOLOGY

3.1 RESEARCH DESIGN
The study sought to analyze the effect of the intra-EAC trade on trade and economic growth in Kenya. Time series data and non-experimental research design was adopted in this study. Regression analysis was used to capture causal relationship between variables and to measure the effect of intra-EAC trade and the formation of the custom union.

3.2 THEORETICAL FRAMEWORK
The methodology of the study was based on the theories of gravity model and the Solow growth models to address the objectives of the study. To estimate the effect of East African Community Customs Union on trade in Kenya, the study used the gravity model.

\[
\text{trade}_{ij} = A \left( \frac{\text{GDP}_i \text{GDP}_j}{\text{distance}_{ij}} \right)^{b_1} \left( \text{distance}_{ij} \right)^{b_2}
\]  

Where \(\text{trade}_{ij}\) is the bilateral trade flows between country \(i\) and \(j\), \(\text{GDP}_i\) and \(\text{GDP}_j\) are Gross Domestic Products (GDP) for country \(i\) and \(j\) respectively, \(\text{distance}_{ij}\) measures the bilateral distance between the two countries and \(A\) is a constant of proportionality. Based on the Newton’s Law of gravity, the equation predicts that the volume of trade between two economies should increase with their size (proxied by real GDP) and decrease with transaction costs measured by the bilateral distance (Gosh and Yamarik, 2004).

The Solow growth model theoretical foundation was used to analyze the effect of Kenya’s intra-EAC trade on its economic growth. The model also assumes that an economy will always work itself to a steady state where each variable in the model will grow at a constant rate and it follows the properties of the Cobb-Douglas production function (Romer, 2006) as shown in equation 3.2.

\[
Y = f (K, L, A)
\]  

Where \(Y\) is the output, \(K, L\&A\) is the level of capital, Labour and effective of labour or knowledge respectively. The model also assumes that countries that are below their steady state level of the GDP per-capita should grow faster and countries that are above the steady state level of GDP should grow slower so as to approach the steady state (Feenstra, 2001).

3.3 EMPIRICAL MODEL
This study adopted and extended the model by Mjema et al. (2012) in log-linear form and included other variables that affect bilateral trade flows to determine and analyze trade effects in Kenya from the creation of the EAC Customs Union. The stochastic form of the equation as shown in 3.3 was used to address objective one of the study.
\[ \ln T_D_{ij} = \beta_0 + \beta_1 \ln Y_K + \beta_2 \ln Y_B + \beta_3 \ln Y_U + \beta_4 \ln Y_T + \beta_5 \ln Y_R + \beta_6 \ln EAC_{ij} + \mu_{ij} \]  

Where $T_D_{ij}$ is the volume of trade between Kenya and the EAC member states, $Y_K$ is the GDP for Kenya, $Y_B$, $Y_U$, $Y_T$ & $Y_R$ are the GDPs for Burundi, Uganda, Tanzania and Rwanda respectively. An EAC dummy variable is introduced to capture the two periods before and after the formation of the custom union. $EAC_{ij}$ variable takes the value zero when the period is the year 2000 to 2004; period before the custom union and one when the year is 2005 to 2013; the period after which the custom union came into effect, the $\epsilon_{ij}$ represents the error term. The dummy variables are usually introduced to take into account other factors that affect bilateral trade, to avoid perfect collinearity and also to capture the time fixed effect (Buigut, 2012).

To answer the second objective, the study used the model developed by Seetenah (2008) and extended it to include other factors that affect the formation of the EACCU in its log-linear form as follows:

\[ \ln Y_t = \alpha_0 + \alpha_1 \ln EDU + \alpha_2 \ln LAB + \alpha_3 \ln TRADE + \alpha_4 \ln XMGDP + \alpha_5 \ln EAC + \mu_{ij} \]  

Where $Y_t$ is the GDP at time $t$ for Kenya measured in real gross values, $\alpha_0$ is the constant term, $\alpha_1, \alpha_2, \alpha_3$ represent the elasticity of output relative to education (EDU), labour(LAB), $XMGDP$ represents the ratio of export plus import to GDP and volume of trade (TRADE) to EAC member states and the $\mu_{ij}$ represent the error term. The value of $XMGDP$ measures the openness and the dummy EAC captures time effects of the formation of the EACCU.

### 3.4 DATA TYPES AND SOURCES

The study used quarterly time series data for the period 2000 to 2013. The data was drawn from different sources and compiled to suit the analysis. Trade flow data was extracted from the Commodity Trade Statistics (COMTRADE), UN data, World Integrated Trade Solutions (WITS), Organization for Economic Corporation and Development (OECD) and World Trade Organization (WTO) databases. The Kenya’s Economic surveys from the Kenya National Bureau of Statistics and the Central bank of the EAC partner states data was also used.

### 4. EMPIRICAL FINDINGS

#### 4.1 STATIONARITY TEST

This study used the Augmented Dickey-Fuller (ADF), Philips-Perron Tests and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) to check for stationarity of the series. $\ln TRADE$, $\ln GDP_U$, $\ln GDP_T$, $\ln GDP_R$, $\ln GDP_K$, $\ln EDU$, $\ln TRADE$and $\ln XMGDP$ were found to be stationary at first difference; the series are therefore said to be integrated of order one I (1). $\ln GDP$ and $\ln LAB$ was found to be stationary at level; the series are therefore said to be integrated of order zero I (0) and $\ln GDP_B$ was found to be stationary at lag two. The stationary series was estimated to answer the objectives of this study.
4.2 DIAGNOSTIC TESTS

Two equations were estimated as shown in equations 3.3 and 3.4 in chapter three. In order to determine the effect of EACCU, equation 3.3 was estimated. To determine the effect of intra-EAC trade on economic growth in Kenya equation 3.4 was estimated. The Ordinary Least Square approach was used to estimate the equations.

Before reporting the regression results, various tests were carried out to ascertain the reliability of the model used. The serial correlation tests, Heteroskedasticity tests, RESET and the stability tests were carried out in the model. Adjusted R-squared and F-statistics were utilized to evaluate parsimony, stability and reliability of the model used (Wooldridge, 2003).

4.2.1 SERIAL CORRELATION TEST RESULTS

The presence of multicollinearity may cause the Ordinary Least Squares (OLS) estimators and their standard errors to be sensitive to small changes in the data. It may also result to t-statistic of one or more coefficients to be statistically insignificant though the overall measure of fit (R-squared) is high (Gujarati, 2007). For the purpose of this study Breusch-Godfrey LM test was used to test for this property. A probability value of less than 5 percent leads to the acceptance of the null hypothesis of presence serial correlation and rejecting the alternative of no serial correlation.

<table>
<thead>
<tr>
<th>Specification Model</th>
<th>Observed R-squared</th>
<th>Probability Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model I</td>
<td>0.514134</td>
<td>0.5092</td>
</tr>
<tr>
<td>Model II</td>
<td>2.523372</td>
<td>0.2832</td>
</tr>
</tbody>
</table>

Source: Extracted from Estimated output equation

4.2.2 HETEROSEDASTICITY TEST RESULTS

The test is usually done when there is reason to believe that, at any point in a series, the error terms will have a characteristic variance. Autoregressive conditional heteroskedasticity (ARCH) test was used to test for this property. A probability value of less than 5 percent leads to accepting the null hypothesis that the error terms are not homoscedastic and accepting the alternative.

<table>
<thead>
<tr>
<th>Specification Model</th>
<th>Observed R-squared</th>
<th>Probability Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model I</td>
<td>2.518191</td>
<td>0.6756</td>
</tr>
<tr>
<td>Model II</td>
<td>2.241915</td>
<td>0.3260</td>
</tr>
</tbody>
</table>

Source: Extracted from Estimated output equation

4.2.3 STABILITY TEST

The CUSUM test is based on the cumulative sum of the recursive residuals; this option plots the cumulative sum together with the 5% critical lines. The test finds parameter instability if the cumulative sum goes outside the area between the two critical lines (Brown et al, 1975).
4.2.4 OMITTED VARIABLES TEST

Regression Specification Error Test (RESET), was used this property. The null hypothesis states that there is no misspecification in the model. A small probability value of less than 5% of the test leads to the rejection of the null hypothesis.

Table 4.3: Specification Model Ramsey RESET Test

<table>
<thead>
<tr>
<th>Specification Model</th>
<th>Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model I</td>
<td>0.7223</td>
<td>0.4910</td>
</tr>
<tr>
<td></td>
<td>1.7007</td>
<td>0.4273</td>
</tr>
<tr>
<td>Model II</td>
<td>1.3188</td>
<td>0.2771</td>
</tr>
<tr>
<td></td>
<td>3.0032</td>
<td>0.2228</td>
</tr>
</tbody>
</table>

Source: Extracted from estimated model
4.3 EMPIRICAL RESULTS

4.3.1 EFFECT OF EAST AFRICAN COMMUNITY CUSTOMS UNION ON TRADE IN KENYA

In order to determine the effect of EACCU on trade in Kenya for the period 2000 to 2013, equation 3.3 from chapter three was estimated. The variables in the model are: volume of trade ($Y_{TD}$) as the dependent variable; the Gross Domestic Products (GDPs) for EAC member countries represented by $GDP_K$, $GDP_B$, $GDP_U$, $GDP_T$ and $GDP_R$ for Kenya, Burundi, Uganda, Tanzania and Rwanda respectively as the independent variables. The dummy of the regional integration takes the value one in the years 2005 to 2013 and zero in the years 2000-2004. The Ordinary Least Square approach is used to estimate the equation.

Table 4.4: Regression results for the effect of East African Community Customs Union on trade in Kenya

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Z</th>
<th>P-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>First difference Log of GDP$_B$</td>
<td>-3.0915***</td>
<td>-2.59</td>
<td>0.010</td>
</tr>
<tr>
<td>First difference Log of GDP$_U$</td>
<td>2.3705***</td>
<td>2.46</td>
<td>0.014</td>
</tr>
<tr>
<td>First difference Log of GDP$_T$</td>
<td>10.8159***</td>
<td>-7.94</td>
<td>0.000</td>
</tr>
<tr>
<td>First difference Log of GDP$_R$</td>
<td>5.7140***</td>
<td>3.16</td>
<td>0.002</td>
</tr>
<tr>
<td>First difference Log of GDP$_K$</td>
<td>2.1476***</td>
<td>2.31</td>
<td>0.049</td>
</tr>
<tr>
<td>EACDUMMY</td>
<td>0.9083***</td>
<td>2.83</td>
<td>0.005</td>
</tr>
<tr>
<td>Constant</td>
<td>0.0039***</td>
<td>0.80</td>
<td>0.430</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.551172</td>
<td>F-statistic</td>
<td>4.991077</td>
</tr>
<tr>
<td>Durbin-Watson statistic</td>
<td>2.241661</td>
<td>Probability(F-statistic)</td>
<td>0.000031</td>
</tr>
</tbody>
</table>

The asterisk shows the level of significance: (***) 1%  
Source: Extracted Estimated output response equation

The value of adjusted R square is 0.5512 which shows that 55 percent of the variations are explained within the model and the remaining 45 percent of the volume of trade variations is explained by exogenous variables. The probability of F-statistic is 0.00003; therefore the null hypothesis that the coefficients are equal to zero is rejected. The Durbin Watson Statistic (2.2) shows that the variables do not suffer from serial correlation.

The coefficient of the EAC dummy variable was found to be positive and statistically significant showing that after the formation of the Custom Union in the year 2005, volume of trade in Kenya has increased proportionately by 0.9083 percent. The findings were consistent with Buigut (2012) which found out that volume of trade in Kenya increased due to the formation of the EAC Custom Union. Othieno and Shinyekwa (2011) also found out that to realize more trade in the region effective elimination of non-tariff barriers was necessary to promote trade in the region.

4.3.2 EFFECT OF KENYA’S INTRA EAC TRADE ON ITS ECONOMIC GROWTH

To determine the effect of intra-EAC trade on economic growth in Kenya for the year 2000 to 2013, equation 3.4 from chapter three was estimated and the findings are presented in Table 4.7. The variables used in the estimation are: Gross Domestic Product ($GDP$) for Kenya as the dependent variable and $EDU$, $LAB$, $TRADE$, $XMGD$ and $EAC_{dummy}$ as the independent variables.
Table 4.5: Regression results for the effect of Kenya’s intra EAC trade on its economic growth

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Z</th>
<th>P-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log of EDU</td>
<td>2.1724**</td>
<td>-6.53</td>
<td>0.000</td>
</tr>
<tr>
<td>Log of LAB</td>
<td>11.9048**</td>
<td>2.42</td>
<td>0.016</td>
</tr>
<tr>
<td>Log of XMGDP</td>
<td>1.2238***</td>
<td>2.02</td>
<td>0.049</td>
</tr>
<tr>
<td>Log of TRADE</td>
<td>0.9961**</td>
<td>25.64</td>
<td>0.000</td>
</tr>
<tr>
<td>EACDUMMY</td>
<td>0.6214**</td>
<td>2.67</td>
<td>0.008</td>
</tr>
<tr>
<td>Constant</td>
<td>1.4657**</td>
<td>-2.62</td>
<td>0.043</td>
</tr>
</tbody>
</table>

Adjusted R-squared 0.651841  F-statistic 7.954066
Durbin-Watson statistic 2.057281  Probability(F-statistic) 0.000000

The asterisk shows the level of significance: (** 5% (*** 1%)

Source: Extracted Estimated output response equation

The value of adjusted R squared is 0.6518 which indicating that 65 percent of the variations are explained within the model and the remaining 35 percent of the GDP variations is explained by the exogenous variables. The Durbin Watson statistic (2.1) shows that there is no serial correlation between variables in the model. The probability of F-Statistic is 0.0000, which leads to rejection of the null hypothesis that the coefficients are not jointly equal to zero.

The coefficient of EAC dummy was found to be positive and was statistically significant. This means that after the formation of the EAC custom union, GDP for Kenya has increased proportionately by 0.6214 percent. The findings are consistent with Kwaku (1995) which concluded that belonging to a RTA is beneficial to member country which will spur economic growth through creation of a unified economic bloc.

5. SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

5.1 SUMMARY

To determine the effect of EACCU on trade in Kenya, the linear model approach was used in which the volume of trade \( Y_{TD} \) was the dependent variable; the Gross Domestic Products (GDPs) for EAC member countries represented by GDPK, GDPB, GDPU, GPD and GDPR for Kenya, Burundi, Uganda, Tanzania and Rwanda respectively and the EAC dummy as the independent variables. The dummy for the regional integration takes the value one in the years 2005 to 2013 and zero in the years 2000 to 2004. The finding shows that after the formation of the custom union, the volume of trade in Kenya improved thus concluding that the EACCU is important in the promotion of trade.

To determine the effect of intra-EAC trade on economic growth in Kenya, a linear model was used in which the GDP for Kenya was the dependent variable. The explanatory variables used were: secondary enrollment rate, labour participation rate, volume of trade in Kenya, the imports plus exports to GDP ratio and the EAC dummy. Time series data for the period 2000 to 2013 was estimated using the Ordinary Least Squares (OLS)
approach. Estimation result shows that the formation of the custom union had a positive effect on the volume of GDP for Kenya. The volume of intra-EAC trade for Kenya had also increased.

5.2 CONCLUSION
The study revealed that the formation of the EAC custom union has a positive effect towards trade and economic growth in Kenya. The findings also show that after the formation of the custom union, the volume of intra-EAC trade in Kenya has increased and has led to improvement in economic growth. The study therefore concludes that the intra-EAC trade in Kenya has led to increase in economic growth.

The study also found out that the level of education and labour participation rate has an effect to Kenya’s economic growth. The findings also found out that after the formation of the custom union, trade in Kenya has improved significantly. The study therefore concludes that EAC customs union is an important step in trade development and a process of deepening regional integration among the EAC member countries.

5.3 POLICY IMPLICATIONS
On the basis of the findings of this study, Kenya government through the Ministry of East African Affairs, Commerce and Tourism needs to strengthen its economic partnership with the EAC member countries and increase its trade volume in the region. Based on the findings, it’s expected that after the formation of the custom union, trade between Kenya and the member countries has improved significantly and led to economic growth through economies of scale.

The Kenya government should therefore continue to play its key roles in the promotion of the EAC objectives trade being one of them. The government through the Ministry of Industrialization should promote its local manufacturing sector and put more resources in the small and medium enterprises to increase its output thus creating goods for export. The Kenya government should also improve on its level of education intake; knowledge is an asset to economic growth.

5.4 SUGGESTION FOR FURTHER RESEARCH
The study has confirmed that there is positive effect of the EAC custom union on trade and the intra-EAC trade has led to economic growth in Kenya. Further research can also be done on the effect of trade tariffs on trade in Kenya after the formation of the EAC custom Union.

6. REFERENCES


Kwentua, G E (1988), Trade creation and trade diversion effects In the EU-South Africa free trade agreement.


Republic of Kenya (2009), National Trade policy.


Otinga, HesbonNangabo (2009), The impact of international trade on economic growth in developing countries(exports for rapid economic growth) a case study of Kenya


World Bank, (2003), “Regional Trade Integration in East Africa, Trade and Revenue