The Effect of Regional Financial Integration on Intra-Regional Trade in the East African Community

Samuel Muthoga,
Kenyatta University,
Kenya.
Almadi Obere,
Kenyatta University,
Kenya.
Kimani Mburu,
Africa Economic Research Consortium (AERC),
Kenya.
Diana Mukwate-Muchai,
Kenyatta University,
Kenya.

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Abstract

This paper aimed at establishing effects of regional financial integration on intraregional trade in East African Community (EAC). The importance of financial integration on trade prompted the study. Quantitative and qualitative data between year 2000 and 2009 from the East African community was used. This paper employed the general method of moments in its analysis. Results showed that regional financial integration significantly affect intraregional trade in the EAC. The study recommends that EAC coordinating committee promote effective bank supervision to achieve uniform bank spread, initiate ways of issuance of common bond and develop secondary markets for all financial assets in the region.
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Key words: *Regional financial integration, intraregional trade, custom union, free trade area, Common external tariff, bank spread, government security rate, exchange rate.*

1. Introduction

1.1 Background to the Study

Regional groupings have been part of part of African strategy to overcome fragmentation, marginalization and improve the continent's position in the global political economy. Many countries in Africa are members of at least one regional economic grouping.

One such regional grouping is East African Community (EAC), whose goal promoting sustainable development in the region. The five EAC Partner States are aware that by pooling their resources and potential, they are in a better position to realize and sustain common development goals more easily than through unilateral national efforts.

East African Community attaches great importance to financial sector development in pursuit of their regional integration goal. One of the pillars of this effort as enumerated in Chapter 14 of EAC treaty is the pursuit of financial integration with a view to maximizing the ability of financial sectors to mobilize resources and efficiently allocate them to the most productive sectors. Wakeman-Linn and Wagh (2008) refers to regional financial integration as a process, market driven and/or institutionalized, which broadens and deepens financial links within a region. This process involves eliminating barriers to cross-border investments and differential treatment of foreign investors.

1.1.1 East African Community Integration Efforts

Remarkable progress has been made in liberalizing intra-regional trade by removing a number of non-tariff barriers on cross-border trade and establishing a customs union. The East African Community Customs Union commenced operations on 1 January, 2005 following the signing of the protocol establishing it in March 2004.

The member countries agreed to apply the principle of asymmetry in the elimination of internal tariff so as to avoid the shortcomings associated with the earlier integration initiatives. Under the program, the goods from Uganda and Tanzania entered Kenya duty-free while the two countries imposed tariffs on reducing level on selected imports from Kenya for a period of five years.

The partner countries agreed to impose a common external tariff (CET) that applies uniformly on goods imported into EAC. The CET rates are zero percent for raw materials, 10 percent for intermediate goods and 25 percent for finished goods. Rwanda and Burundi signed the EAC Treaty on June 18, 2007 and became full members from July 1, 2007. EAC officially entered into the Common Market on the 1st of July 2010.

In order to facilitate the free movement of labour, capital and investment, a number of processes had to be instituted. They include removal of restrictions on movement of labour; harmonization of labour policies; programs, legislation, social services and provision of social

security benefits; establishment of common standards and measures for association of workers and employers; establishment of employment promotion centers; and eventual adoption of a common employment policy, (EAC, 2009).

1.1.2 Intra-regional Trade in EAC

Table 1.1 and Table 1.2 give the share of intra-EAC commodity exports and imports as a percentage of each country's GDP.

Table 1.1: Direction of Intra-EAC Export, 2001-2009

Exports (as a percentage of GDP)								
Export by	Partner	2001	2003	2005	2007	2009	Average	Regional Average Exports
Kenya	Burundi	0.18	0.24	0.16	0.10	0.08	0.152	
	Rwanda	0.34	0.53	0.48	0.50	0.50	0.47	4.22
	Tanzania	1.32	1.29	1.38	1.46	1.35	1.36	
	Uganda	2.94	2.71	2.53	1.66	1.38	2.24	
Tanzania	Burundi	0.07	0.14	0.08	0.05	0.06	0.08	
	Kenya	0.34	0.14	0.19	0.24	0.19	0.22	0.52
	Rwanda	0.03	0.04	0.05	0.07	0.20	0.08	
	Uganda	0.05	0.08	0.19	0.17	0.21	0.14	
Uganda	Burundi	0.08	0.16	0.23	0.36	0.25	0.22	
	Kenya	1.01	1.24	0.80	0.99	0.89	0.99	1.81
	Rwanda	0	0.33	0.40	0.71	0.75	0.44	
	Tanzania	0.11	0.09	0.17	0.26	0.17	0.16	
Rwanda	Burundi	0.03	0.04	0.03	0.04	0.10	0.05	
	Kenya	0	0	0.01	0.01	2.13	0.43	0.61
	Tanzania	0	0	0	0	0.02	0.004	
	Uganda	0.2	0.03	0.02	0.09	0.12	0.13	
Burundi	Kenya	0.40	0.01	0.05	0.22	0.10	0.16	
	Rwanda	0.33	0.36	0.34	0.22	0.23	0.3	0.59
	Tanzania	0.01	0.01	0	0.01	0	0.01	
	Uganda	0.12	0.13	0.12	0.10	0.11	0.12	

Source: IMF (2010), Direction of Trade Statistics, CD-ROM.

Table 1.2: Direction of Intra-EAC Import, 2001-2009

Imports (as a percentage of GDP)								
Imports to	Partner	2001	2003	2005	2007	2009	Average	Regional Average Imports
Kenya	Burundi	0.01	0	0	0.01	0	0.01	
	Rwanda	0	0	0	0	0.41	0.08	0.54
	Tanzania	0.06	0.12	0.15	0.16	0.15	0.13	
	Uganda	0.07	0.09	0.43	0.48	0.54	0.32	
Tanzania	Burundi	0	0	0	0	0	0	
	Kenya	0.92	1.81	2.01	2.59	2.04	1.87	
	Rwanda	0	0	0	0	0	0	2
	Uganda	0.12	0.06	0.12	0.2	0.14	0.13	
Uganda	Burundi	0	0	0	0.01	0.01	0.01	
	Kenya	4.82	5.64	5.79	4.17	2.79	4.64	4.89

	Rwanda	0	0.01	0.01	0.03	0.02	0.01	
	Tanzania	0.11	0.17	0.33	0.26	0.30	0.23	
Rwanda	Burundi	0.14	0.13	0.12	0.06	0.10	0.11	5.54
	Kenya	2.94	4.72	3.81	4.03	3.08	3.72	
	Tanzania	0.19	0.29	0.31	0.33	0.90	0.41	
	Uganda	0	1.24	0	2.45	2.78	1.30	
Burundi	Kenya	1.41	3.78	4.27	3.0	2.00	2.90	
	Rwanda	0.07	0.12	0.11	0.17	0.02	0.10	6.57
	Tanzania	1.70	3.09	1.61	1.00	1.11	1.70	
	Uganda	0.12	1.55	1.43	3.95	2.28	1.87	

Source: IMF (2010), *Direction of Trade Statistics*, CD-ROM.

From Table 1.1 and Table 1.2, it can be observed that Kenya is the dominant trading partner among the East African countries, exporting more to the others than it imports. Between 2001 and 2009, Kenya's intra-EAC exports as a percentage of GDP was on average 4 per cent, compared to an average import of 0.5 per cent from the EAC partner states. Kenya's dominance in trade could be attributed to its comparatively wider range of highly developed manufacturing industries. The table also reveals that Kenya's trade has been dominated by its exports to Uganda. In contrast, Burundi is the major importer of commodities from the region, followed by Rwanda and finally Uganda, each accounting on average 6.6%, 5.5% and 4.9% of their GDP, respectively. What is noticeable from Table 1.1 is that the EAC region is becoming increasingly important as an export market for all the Partner States.

Total intra-EAC trade has continued to grow following the establishment of the EAC Customs union on 1st January 2005. Total intra EAC trade grew from US$1,617.1 million in 2006 to US$ 3,800.7 million in 2010 (ADB, 2012). This is more than Doubling of the trade in a period of 5 years. The increase of the intra-EAC trade has been on the account of increased imports and exports within the EAC bloc. The performance of each partner state shows similar upward trends in both exports and imports over the period.

1.2 Statement of the Problem

Africa has witnessed a renewed momentum for financial integration. The small size of most African economies hinders effective negotiatiation with powerful trading blocs and has led to increased interest towards regional economic and financial integration. The continent has witnessed a shift from closed regionalism with import competing approach to a more open approach.

Regional financial arrangements have become a popular vehicle for the promotion of trade and growth. To this end, the EAC partner countries ratified the Common Market Protocol in year 2010 and turned the attention to monetary and financial integration, and the negotiation of a Monetary Union Protocol. Part G and H of the common market spells the

efforts of EAC towards achievement of regional financial integration. This includes effecting policies towards coordinating and harmonizing financial sector regulations and encouraging convertibility of EAC partner countries foreign currencies.

Whether the EAC efforts towards deeper financial integration have yielded positive results in terms of improved intraregional trade remains largely unexplored or uncertain. Further, the increase in total intra-EAC trade has seen the share of intra-EAC trade in total trade rise from 7.8% in 2006 to around 11.38% in 2010 (ADB, 2012). However, this still remains low compared to Europe where intra-regional trade account for around 60% of total trade. It is against this background that following research questions arises.

1.3 Research Questions

    (a) What is the effect of regional financial integration on intra-regional trade in the EAC?

    (b) What are the policy implications arising from the above research questions?

1.4 Objectives of the Study

The main objective of the study was to investigate the effects of regional financial integration on intraregional trade of EAC member countries.

The specific objectives of the study were to:

(a) Investigate the effect of financial integration on intra-regional trade in EAC.

(b) Draw the policy implications from the study findings.

1.5 Significance of the Study

This paper reviewed some of the issues relating to financial markets and the regional financial integration. It was an attempt to clarify the role of financial integration in contributing to international trade in a regional setting, with a strong bias to the EAC. It was important for various reasons. First it gave empirical and theoretical insights into the nature of the relationship between the regional financial integration, economic growth and trade integration. To be consistent with regional development objectives, it is important to forge a consensus on financial policy reform and implementation. The result of the studycan serve as source of information for designing and implementing regional and sovereign national policies to this end. Of great use is this study to policy makers in assessing the appropriateness of the existing financial policies designed towards an East African Monetary Union. This study adds to the existing knowledge on this topical issue and provides impetus for further research to the current and future crop of academicians and researchers. These papers help critically assess whether financial integration through its role of intermediation can be relied on to stimulate trade and growth in Regional Economic Communities.

1.6 Organization of the study

The study is organized in five chapters. The foregoing chapter gave the background of the study and its objectives. Chapter two is devoted to the review of the relevant literature both theoretical and empirical. Chapter three highlights the research design and the methodology that was used in undertaking this study.

The fourth chapter presents the study findings and discussions. It highlights the descriptive statistics, diagnostic test results and presentation and discussions.

Chapter five contains the summary of the study findings, conclusions drawn from the study, policy implications emanating from the study and finally areas for further research are suggested.

1.7 Limitations of the study

The focus of this paper is the analysis of effects of regional financial integration on intraregional trade, it is important to explore in future the distributional effects of regional financial integration. This issue was no addressed in this paper. An important issue to address for further research is enhancement of better understanding of the effect of regional financial integration on income inequality in the region. Current literature provide many and conflicting models that explain weather regional inequalities will disappear with regional financial integration. The proponents of neoclassical theory argue that income disparities are could be eliminated due to law of variable proportions in production. There is therefore the need to test empirically this phenomenon in the EAC members.

Cross-country econometric evidence gives rather limited support to the issue that corruption perception encourages growth and trade. In terms of future research, both data quality and the standards of the econometric modeling remain huge concerns in this area. Macro-data should be analyzed together with micro evidence so as to nail down exact transmission mechanisms through which growth is affected by corruption. Future econometric modeling should envisages too examine clearer links to this theoretical discourse and be more keen to endogeneity, reporting and errors- in-variables concerns.

2. Literature review

2.1 Theoretical Literature

The law of one price (LOOP), pioneered by Augustin Cournot and Alfred Marshall provides the basic principle that explains the integration of financial sectors (www.rbi.org.in/scripts/pulication). Accordingly, assets with identical risk characteristics should have the same price, independently of the location where they are traded. The cash flow and risk characteristics of money and government bond markets are comparable to allow for the law of one price to be tested.

Several recent papers use changes in returns dispersion to test the law of one price (see, for example, Solnik and Roulet, 2000, Adjaouté and Danthine, 2004, Baele et al., 2004, and Eiling and Gerard, 2006). The rationale is simple: If returns are highly correlated, then more often than not they will move together on the up side or on the down side. If they do, the instantaneous cross sectional variance of these returns will be low. Conversely, lower correlations mean that returns often diverge, inducing a high level of dispersion. Hence dispersions and correlations are inversely related.

The traditional case of the integration of different financial systems is based on the benefits of pooling and allocating savings towards the most productive uses across countries. The principle of comparative advantages and mutual gains from free trade has been extended to trade in financial assets along three main dimensions: countries can benefit from financial integration if they have different capital endowments and different risk-free returns to capital and benefit (neoclassical convergence argument); have desired consumption and savings time patterns not in line with their available income (inter-temporal trade argument); and face different potential fluctuations of production that affects their consumption possibilities (risk-sharing argument).

The neoclassical-Solow model has given a convincing argument for regional financial integration. If technology easily moves across economies, nations with less of a capital endowment will enjoy higher investment returns and vice versa. When there is financial openness, the differential in real rate of interest capital intensive countries and capital-scarce economies generate an immediate flow of funds that give incremental foreign savings that encourage new growth an investment. When there is regional financial integration, push of finance from developed economies and pull to less developed countries causes a convergence in the financial instruments returns, technology and per capita growth via net capital inflows.

In the inter-temporal approach to the current account trade in foreign assets and the variations in current account are the mean of smoothing the desired level of consumption. Decisions about investments are made on the basis of the world interest rate.

2.2 Empirical Literature

IMF (2003) examined the effects of financial globalization on developing countries. The main purpose of the study was to provide an assessment of empirical evidence on the effects of financial globalization on developing economies. The objectives of the study were to: examine whether or not financial globalization promoted economic growth and trade in developing countries; determine whether financial globalization impacted on macroeconomic volatility in these countries; and assess the factors that appeared to help countries obtain the

benefits of financial globalization. The study found out that many developing economies with a high degree of financial integration had also experienced higher growth rates. It also found out that there were many channels through which financial openness could enhance growth. A systematic examination of the evidence, however, suggested that it was difficult to establish a robust causal relationship between the degree of financial integration and output growth performance. However, this study used time series data which may not capture the effects of cross section analysis. This study sought to overcome this drawback by employing panel analysis charactresistics.

Tükenmez et al. (2005) investigated whether financial globalization promoted economic growth and trade in Small Island Developing Countries (SIDs). The study based on Cyprus also determined factors that helped countries obtain the benefits of financial globalization and identified the role played by SIDs in the financial globalization process. The empirical results using OLS showed that there was no strong and uniform support for the theoretical argument that financial globalization per se increased the rate of economic growth. The study noted that one of the musts of financial globalization was the removal or reduction of trade barriers, which in turn would not necessarily lead to economic success. Small island states with their limited capacity were encouraged to upgrade their productivity or to promote innovation if they wanted to win this competitiveness game.

This study employed Ordinary Least Squares (OLS) estimation of cross-country growth regressions which potentially suffers from a number of statistical problems. First, this methodology does not control for the unobserved country-specific effects, hence does not account for the possible heterogeneity in the relationship between privatization and growth. Second, cross-country growth regressions suffer from the omitted variable bias since the empirical growth literature have identified over fifty variables that are significantly correlated with growth (Levine and Renelt, 1992) and it is impossible to include them all in one regression.

There may be also a bias of simultaneity arising from probable reverse causality from intraregional trade and financial integration. In addition some factors that affect trade and are included in cross-section of country regressions should not be captured as exogenous, specifically when unobserved country-particular effects are not controlled for. This study overcame these weaknesses by employing system GMM method.

Wang (2010) sought to quantify existing financial barriers among East African Community (EAC) member countries based on analysis of each member country's foreign exchange market. The primary contribution of the paper was the generation of an aggregate measure of financial barriers for the three relatively more advanced members (Kenya,

Uganda, and Tanzania) using forward foreign exchange and interbank interest rate data. The empirical results, which are corroborated by other evidence such as the levels of development of the financial markets and restrictions on capital flows, suggested that Kenya was the EAC's most financially open country, followed by Uganda and then Tanzania. The fact that the three countries exhibited different degrees of financial openness suggests that financial integration in the EAC region has a long way to go. Using data from the forward foreign exchange and interbank funding markets of certain EAC countries, the paper presented a measure of financial barriers for each country. The results showed that financial barriers existed within the EAC, and member countries were significantly less open financially than developed countries. These results, which should be treated with caution due to data limitations, are corroborated by other evidence such as the stage of development of money and foreign exchange markets, and restrictions on capital flows in EAC countries. The current research sought to eliminate some of these weaknesses.

Further empirical studies on the finance-trade link have emerged in both firm-level and country or sectoral level. Muuls (2008) and Berman and Hericourt (2008) are among those who focus on firm-level data. Using a dataset on export transactions at the firm level for the Belgian manufacturing sector, Muul analyzes the interaction between credit constraints and exporting behavior. He found that firms are more likely to be exporting if they enjoy higher productivity levels and lower credit constraints. He concludes that credit constraints really do matter for export patterns.

Berman and Hericourt (2008) show that the financial factor affects both the firms' export decisions and the amount exported by firms. Using a large cross-country firm level database in developing and emerging economies, they found that financial constraints create a disconnection between a firms productivity and its export status. According to their results, an increase in a country's financial development increases the number of exporters and affects the exporters' selection process through dampening such a disconnection. These two studies agree that financial development does really matter for export patterns and economies with a higher level of financial development should have greater comparative advantage.

Examples of empirical work that study the sectoral level are given by Hur et al. (2006) and Manova (2008). Hur et al. investigate the impact of a country's financial development and a firm's asset structure on the trade flow of different industries. Using data for 27 industries in 42 countries they found that economies with higher levels of financial development have higher export shares and trade balance in industries with more intangible assets. Manova (2008) developed a model with credit-constrained heterogtneous firms, countries at different levels of financial development, and sectors of varying financial

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vulnerability. She shows that financially developed countries are more likely to export bilaterally and ship greater volumes when they become exporters. She empirically found robust, systematic variations in export participation, volumes, product variety, product turnover, and trade partners across countries at different levels of financial development and across sectors at different levels of financial vulnerability.

3. Methodology

3.1 Research Design

This study aimed at establishing the effects of regional financial integration on intra-regional trade in EAC. In order to achieve the objectives of the study, both quantitative and qualitative data were used. The study employed data for the period 2000 to 2009. The choice of the period was necessitated by the fact that the EAC treaty came in to force during this period, marking a major milestone in the integration process. Further, it is within this period when various efforts were undertaken to harmonize the financial markets in the region, for example, establishment of a custom union in the year 2005, harmonized capital markets policies on cross border listing, unimpeded flow of capital and allowing of national regulators to recognize players from all members' states.

3.2 Model Specification and Estimation

To analyze the effect of regional financial integration on trade, the study used a dynamic panel approach with system GMM estimation. Dynamic panel model has been formulated to allow for individual country heterogeneity in the levels of all variables. Accordingly, the following dynamic panel will be modeled

$$GDP_{it} = \alpha_i + \sum \beta_i \Delta Z_{it} + \sum \pi_i \Delta X_{it} + \delta_i \Delta GDP_{it-1} + D + U_{it}$$

3.1

where, Z is a vector of additional predetermined variables that the study used to control for other potential growth determinants like inflation, corruption and government balance. X is a vector of significant explanatory variables like financial integration variables (IFI) and trade variables (TR), while D is a dummy variable representing the period Burundi and Rwanda joined the EAC. U_{it} is the error term and α_i is the individual heterogeneity of the cross sectional units (Schularick and Steger 2006).

The System General Method of Moments (GMM) is a method of estimation of dynamic panel models that provides consistent estimates (Baum, 2006; Roodman, 2006). SGMM approach assumes linearity and that the disturbance terms are not auto -correlated, or that the applied instruments in the model are exogenous. An important procedure in testing the statistical properties of this model is testing for the validity of instruments, which requires

testing for the presence of first- order and, in particular, second-order autocorrelation in the error term.

The Im-Pesaran-Shin (IPS) Panel unit root test was performed to investigate whether there were any variables in the model that were non-stationary. The test was developed by Im, Pesaran and Shin (1997). The IPS estimates the t-test for unit roots in heterogeneous panels (Wakeman-Linn, 2005). The test allows for individual effects, time trends and common time effects. It is based on the mean of the individual Dickey- Fuller (DF) t- statistics of each unit in the panel, and assumes that all series are non- stationary (have unit roots) under the null hypothesis that all panel contain unit roots.

3.3 Data Analysis

To achieve the objectives of the study, annual time series data for the period 2000 to 2009 was be collected. The variables and data were selected from World Bank Development indicators (various issues), International Financial Statistics (IFS), various issues of economic surveys and the statistical abstracts from the region, and EAC publications. The study employed SGMM dynamic panel developed by Arellano and Bover (1995), and Blundell and Bond (1998) to answer the study objectives. In order to assess the effect of regional financial integration on intraregional trade, the squared dispersion of the bank rate spread from the mean of the four countries, the squared dispersion of the government security rate from the mean of the four countries, and the squared dispersion of the real exchange rate from the mean real exchange rate of the four countries were used as proxies for regional financial integration.

3.4 Diagnostic Tests

3.4.1 Unit Root Tests

The Im-Pesaran-Shin (IPS) Panel unit root test was performed to investigate whether there were any variables in the model that were non-stationary

The results of the unit root test showed that real GDP growth rate, real exchange rate (dispersion from mean squared), foreign direct investment (FDI), government security rate (dispersion from mean squared), inflation, government balance as a percentage of GDP, trade as a percentage of GDP, corruption perception index and bank spread (dispersion from mean squared) were all stationary at levels, since the null hypothesis that all panels contain unit roots was rejected. The implication is that all the variables are stationary, and hence they could be used directly in regression to establish the long term effects.

3.4.2 Tests for Autocorrelation

The validity of the obtained results in System General Method of Moments (SGMM) depends on the statistical diagnostics. Hence, the study starts the interpretation with the model

diagnostics. Compared to the OLS model, SGMM does not assume normality and it allows for heteroskedasticity in the data. Dynamic panel models are known for having common problem with the heteroskedasticity of data, which fortunately they can control (Baltagi, 2008). Accordingly, robust standard errors consistent in the presence of heteroskedasticity within the panel were reported.

The study reports estimates that yield theoretically robust results. SGMM approach assumes linearity and that the disturbance term is not autocorrelated. This requires testing for the presence of first- order and, in particular, second-order autocorrelation in the error term. The results showed that the chosen lags are valid instruments for the model specifications.

4. Findings and discussion of the results

4.1 The Effect of Regional Financial Integration on Trade in EAC

The main objective of this study was to estimate the effect of regional financial integration on intra-regional trade in EAC. The study employed SGMM dynamic panel developed by Arellano and Bover (1995), and Blundell and Bond (1998). The regression results are presented in Table 4.1, 4.2 and 4.3, with each table capturing each measure of regional financial integration plus other control variables.

Table 4.1 shows the effect of regional financial integration on trade in EAC when Bank spread (dispersion from mean squared) is applied as a proxy for regional financial integration. The table indicates that the bank spread (dispersion from mean squared) negatively and significantly affect intra-regional trade in EAC. This may be true because the higher the squared deviations of the spread, the lower the regional financial integration and vice versa. It, therefore, means that regional financial integration complement trade in the region.

Table 4.1: SGMM Dynamic Panel Estimation Results of Effect of Bank Spread on Intra-regional Trade

Dependent variable : Intra-regional Trade			
Indipendent Variable	**Coefficient**	**Standard Error**	**P>‖z‖**
Lagged Intra-regional Trade	0.6489606 ***	.0666793	0.000
Bank spread(dispersion from mean squared)	-0.0005379***	0.0000355	0.000
Inflation	-0.0002079*	0.0005788	0.072
Government balance as a percentage of GDP	-0.0001668	0.0006472	0.797
Corruption Perception Index	0.0040879 ***	0.0008592	0.000
Dummy	0.0315246 ***	0.0098692	0.001
Foreign Direct	0.1015411	0.2293933	0.658

Investment			
Constant	0.0009228	0.0124715	0.941

***, **, and * denotes rejection of the hypothesis at 1%, 5%, and 10% significant level
Source: Constructed from the Study Data.

Both Ricardian and Heckscher- Ohlin model show the role of financial sector on international trade flows (Beck, 2003). Some studies indicate that trade follows finance. Ronci (2004) suggested that external financing helps to determine trade.

The coefficient of inflation, 0.0002, has a statistically significant negative effect on intra-regional trade. These findings indicate that trade in the region respond negatively to inflation by a very small percentage. This negative response supports the economic theory which postulates a negative relationship between inflation and growth of trade. Accordingly, inflation erodes international competitiveness. Exports become more expensive abroad. This can cause a decrease in demand for exports. That in turn can lead to a decrease in demand for the currency and to a devaluation of the currency. The devaluation may restore exports, but at the cost of making imports more expensive, thus increasing inflation again. The results could be explained by the fact that East African Community is a net importer of food, industrial inputs and oil products, which form a big proportion of the region's trade.

The coefficient of the Rwanda dummy variable, 0.032, of inclusion of Rwanda and Burundi in EAC is positive and significant, meaning that the inclusion positively influenced trade in the East African Community. With the enlargement of the Community in 2007, the EAC really became energized. The enlarged custom union and common market has brought many benefits to the region, which includes the creation of trade, the channeling of existing trade into intra-community exchanges, broader markets to absorb products, increased productivity and stimulation of investment.

Corruption has a statistically significant positive effect on trade in the region. The coefficient which is 0.004 indicates a one unit change in corruption perception results to a 0.004 percent increase in economic growth. These results agree with earlier notions advanced by Le (1964) and Huntington (1968) that corruption can be efficiency enhancing because it removes government-imposed rigidities that impede investment and interfere with other economic decisions favourable to growth. This view is succinctly captured in the notion that corruption greases the wheels of trade (Rose-Ackerman, 1997). In a country rife with onerous regulations, the opportunity to offer bribes allows firms to circumvent unproductive government control.

Therefore corruption can actually increase market efficiency. One example would be a country which initially has arduous bureaucracy. In such cases, corruption can enable the creation of black market businesses and therefore increase economic growth (1997; Leff,

1964; Huntington, 1968). In trade terms, corruption can speed up administration at the border and thus decrease border transaction costs. Whether corruption will slow down or speed up administration is determined by both the country's size of bureaucracy and its organisation. Méndez and Fecund (2006) have found that for free countries to reach the highest possible economic growth; the level of corruption should be significantly greater than zero.

Table 4.2 show the effect of regional financial integration on intra-regional trade in EAC when government security (dispersion from mean squared) is applied as a proxy for regional financial integration.

Table 4.2: SGMM Dynamic Panel Estimation Results of Effect of Government Security Rate on Intra-regional Trade

Dependent Variable Intra-regional Trade			
Independent variable	**Coefficient**	**Standard Error**	**P>‖z‖**
Lagged Intra-regional Trade	0.44739 ***	0.1536013	0.004
Government Security Rate (dispersion from mean squared)	-0.000114 **	0.0001389	0.012
Inflation	0.0005578	0.0006715	0.406
Government Balance as a percentage of GDP	-0.0008853*	0.0006411	0.067
Corruption Perception Index	0.0042839***	0.000806	0.000
Dummy	0.0322587 ***	0.012105	0.008
Foreign Direct Investment as a percentage of GDP	0.2048988	0.2367405	0.387
Constant	-0.0008437	0.0117322	0.943

***, **, and * denotes rejection of the hypothesis at 1%, 5%, and 10% significant level
Source: Constructed from the Study Data.

The government security rate (dispersion from mean squared) has a statistically significantly negative effect on intra-regional trade. This is true because the higher the squared deviations of the measures, the lower the regional financial integration and vice versa. It, therefore, means that changes of one percentage change in regional financial integration complement trade in the region by a percentage change of 0.0001. While the five EAC member countries have opened up their stock markets to investors wishing to trade across borders, the sale of government and corporate bonds remains localised.

Companies operating in East African countries with relatively small domestic markets will thus be able to take advantage of the availability of a larger pool of funds on the regional market and boost trade according to the results in Table 4.2

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The Government balance as percentage of GDP has a statistically significant negative effect on intra-regional trade of 0.00088. This means that a one percentage change in government balance reduces intraregional trade by 0.0008 per cent. This conforms to economic theory, which argues that an increase in the government budget deficit means that the government increases its demand for loanable funds from the private sector, looking to borrow money from its own citizens as well as from international investors. In a healthy region, this means that the government begins competing with private borrowers for a fixed supply of savings, thus driving up interest rates. This increase in interest rates may reduce ("crowd out") private-sector investments in plants and equipment.

The coefficient of foreign direct Investment has a positive effect on intra-regional trade. This means that a one percentage change in government balance reduces intraregional trade by 0.2048 per cent. Studies which observe the relation between the FDI and the foreign trade have explained that both complementariness and substitution could exist between the two factors. According to Krugman (1992), if there are significant differences in the factor equipment, the capital factor will export the management, research and development services to the labour intensive country by means of FDI, and will import differentiated and homogeneous goods from the foreign country. Thus, the FDI would be the complementary of the trade movements in the labour intense country.

Table 4.3 shows the effect of regional financial integration on intra-regional trade in EAC when real exchange rate (dispersion from mean squared) is applied as a proxy for regional financial integration. The real exchange rate (dispersion from mean squared) has a statistically significantly negative effect of a coefficient of 0.013 on the trade. This means that a one percentage change in real exchange rate changes intra-regional trade by 0.013 per cent. This is true because the higher the squared deviations of the measures, the lower the regional financial integration and vice versa. It, therefore, means that regional financial integration complement trade in the region. Financial integration is always accompanied by intra-regional exchange rates showing less great dispersion, which potentially promote the further expansion of intra-regional trade.

Table 4.3: SGMM Dynamic Panel Estimation Results of Effect of Exchange Rate on Intra-regional Trade

Dependent variable :Intra-Regional Trade (TR)			
Independent Variable	**Coefficient**	**Standard Error**	**P>‖z‖**
Lagged Intra-Regional trade	0.4420399***	0.1171341	0.000
Exchange rate (dispersion from mean squared)	-3.11e-08 *	2.79e-08	0.065

Inflation	0.0007948**	0.0007378	0.081
Government balance as a percentage of GDP	-0.0012939 *	0.0006959	0.063
Corruption Perception Index	0.0046861***	0.0012238	0.000
Dummy	0.0256716***	0.0084311	0.002
Foreign Direct Investment as a percentage of GDP	0.1165275	0.2248232	0.604
Constant	0.0066886	0.0131859	0.612

***, **, and * denotes rejection of the hypothesis at 1%, 5%, and 10% significant level
Source: Constructed from the Study Data.

Achieving greater intra-regional exchange rate stability promotes intra-regional trade, reduces exchange allocation of regional resources. Reducing exchange rate uncertainty, most importantly, helps expand intra-regional trade in goods and financial assets as a key component of the region's rebalancing strategy.

The foreign direct investment has a positive significant effect on trade. The coefficient of FDI which is 0.1165 implies that a one percentage increase in FDI will affect intra-regional trade by 0.1165 per cent.   The results presented here imply that foreign direct investment plays a significant and a dominant role in stimulating trade volumes among EAC member countries. FDI does not displace exports but rather stimulates them. This can occur for a number of reasons. Among these are that FDI enables a firm to establish a larger distribution base and thus enlarge the line of products sold in a foreign market over and above what could be achieved if all sales were made via exports from the home market.

The coefficient of the dummy variable has a positive and significant coefficient of 0.0257 on trade. This implies that the ascension of Rwanda and Burundi in the EAC has enhanced trade in the region. The improvement in total intra-EAC as a share of total trade is due to the diversification of trade towards regional trading blocs.

5. Summary, Conclusions and Policy Implications

5.1 Summary

The main purpose of this study was to investigate the effects of regional financial integration on economic growth and intra-regional trade in EAC. Annual time series data for the period 2000 to 2009 was collected for the four East African Community countries,

namely: Kenya, Tanzania, Uganda and Rwanda. Burundi was excluded because of insufficient data.

The main objective of this study was to investigate the effect of regional financial integration on intra-regional trade in EAC. The SGMM dynamic panel model and three proxies of regional financial integration as well as control variables were used to estimate the effect of regional financial integration on intra-regional tare in EAC. The study findings showed that regional financial integration complement trade in the region. The results conform to established economic theories which show the complementing role of financial sector on international trade flows (Beck, 2003). Financial integration is accompanied by intra-regional exchanges, which potentially promote the further expansion of intra-regional trade.

Inflation has a statistically significant negative effect on intra-regional trade. Inflation erodes international competitiveness by making exports become more expensive abroad. This can cause a depreciation of domestic currency, which although may restore exports, is likely to make import more expensive, thus increasing inflation again. The results could be explained by the fact that East African Community is a net importer of food, industrial inputs and oil products, which form a big proportion of the region's trade.

5.2 Conclusions

On the basis of empirical results, the study concludes that there is a complementing nature of financial integration on intraregional trade. Integration is accompanied by intra-regional exchanges which potentially promote the further expansion of intra-regional trade.

5.3 Policy Implications

Regional financial integration can generate potentially large benefits to East African countries through increased trade flows according to the study results. The approaches taken toward financial integration and its implementation have differed among the individual member countries. Considering this, key reforms need to be undertaken among the EAC countries as enumerated below.

Government security rate as a measure of financial integration directly affect intra-regional trade. It can therefore be noted that investment in regional bonds can contribute to the development of regional bond markets. EAC Council of Ministers should seek ways to spur issuance of bonds within the region and member countries.

Trade openness and integration are closely related to the degree of financial integration. It is suggested that East Africa Community member countries strengthen regional cooperation to facilitate intra-regional trade and financial integration and reap the accompanying benefits.

The study results shows that the integration of the major sectors of the financial market in the EAC i.e. the money market, the foreign exchange market, the government securities market and the credit market segments depends on various conditions. These conditions include the power of participants to purchase and sell various financial instruments; the ability to lend and borrow money and securities. To achieve effective regional financial integration, it is important to have secondary segments for trading various financial assets so as to have liquidity and achieve effective pricing of risk in the financial market in the region.

Secondary market is almost nonexistent for financial assets like the commercial paper, (CP), certificates of deposit (CD) and corporate bonds. CDs are commonly issued by banks when there is no liquidity and are given at higher interest rates. Because of the higher rates of interest rates on CD investor usually hold them up to the date of maturity. As a result, the CDs secondary market is at infant stage in the EAC.

At this crucial turning point in East Africa, the study suggests that East Africa Community countries work dynamically to increase the various benefits of the regional mechanisms with smoothly functioning, integrated regional markets. Their efforts should focus on enhancing trade policy cooperation, expediting capital market development, effectively managing cross-border portfolio investments, and strengthening regional safety networks.

Misalignments of tariffs, inflation rates, exchange rates, rate of money growth and other vital macroeconomic variables between member countries would be disruptive to financial integration. In addition, these misalignments could lead to rent-seeking activities by governments and private individuals that could stifle legitimate investment opportunities. This could contribute to the demise of the economy of a member country, thereby weakening the whole integration process. It is, therefore, imperative that the process of strengthening regional financial integration should include guidelines for the convergence of the macroeconomic and trade policies of the entire regional space so as to strengthen the overall regional integration agenda.

Corruption causes an increase in economic growth according to the study results, this could be because of bureaucracy in the EAC operations and so many non-tariff barriers to trade that increases the level of inefficiency. Much need to be done by the stake holders to reduce this bureaucracy and non-tariff barriers which will eliminate traces of corruption in EAC operations. Such efforts include cooperating on the legally-binding mechanisms governing NTBs would be valuable to reproduce their best practices of dealing with NTBs. A legal institutional framework is also needed to deal with NTBs among the partner states.

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