Free Movement of Persons and Bilateral Trade in COMESA: Evidence from Kenya

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Abstract
The study assesses free movement of persons on bilateral trade between Kenya and its trading partners in the Common Market for Eastern and Southern Africa. The study employed the Panel Correlated Standard Error method to estimate augmented gravity model. The data used covered 17 partners between 2012 and 2021. The findings indicate that the free movement of persons stimulates Kenya's bilateral trade in the Common Market for Eastern and Southern Africa. A unit improvement in the implementation of the no-visa policy requirement stimulates the volume of Kenya's bilateral trade with the partner country by 0.25 per cent. From the findings, Kenya and other Common Market for Eastern and Southern Africa member States could consider fast-tracking the full implementation of free movement of persons efforts put forward by each State to ease the cost of trade in the region.

Keywords: Bilateral trade; COMESA; Kenya; Free movement of persons; visa
JEL Classification Codes: F13, F15, F22, H77

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1. Introduction

The relationship between visa policies and bilateral trade has received researchers' and policymakers' attention in recent years. Countries have focused on visa openness at a bilateral level to reduce trade costs for businesspersons (Umana-Dajud, 2019). Removing visa requirements has increased trade flows for advanced communities like the European Union (EU). While visa openness in the EU has taken root through the Schengen area, implementation of free movement of persons in Africa, specifically in the Common Market for Eastern and Southern Africa (COMESA) remains low. Regional policies such as Agenda 2063 and the 2018 Free Movement Protocol are policy and legal instruments that govern and promote free movement of persons in Africa (African Union, 2015; 2018).

The Common Market for Eastern and Southern Africa (COMESA) is among regional groupings in Africa. It established the protocol for free movement of persons in 1998, the policy and legal document guiding the movement of persons across the region. This is a political recognition that the free movement of persons is vital for regional integration and development (Schöfberger, 2020). Without this policy in force, the 1984 Gradual Relaxation and Eventual Elimination of Visas (Visa protocol) is the policy along which COMESA member states promote free movement of persons. By 2021, 57% of COMESA member States had implemented the COMESA 1984 visa protocol, translating to 10 Member States (African Union, 2021). However, the enforcement of the protocol remains low as bilateral agreements signed on foreign relations between States in COMESA have taken root more than the protocol (COMESA Secretariat, 2022). Regional Economic Communities (RECs) in Africa, such as COMESA, follow the development-oriented approach based on Member States' mutual interests and not necessarily the linear model (Zielinski, 2017; Kagochi and Durmaz, 2018). Therefore, the implementation of regional integration in COMESA has seen the full implementation of the Free Trade Area and some aspects of the Customs Union.

Mathews (2003) argues that despite the challenges faced by free movement of persons, it remains significant to the integration process and cannot be separated from regional integration initiatives. Thus, there is a need to investigate its role on bilateral trade. The role of free movement of persons in trade has been emphasized in recent literature (Mayer, Rapoport, and Dajud, 2021). As evidenced in international trade, regions with a high level of free movement of persons register a high level of merchandise trade, EU (7.8%) and Asia (-5.0%), as compared to those with low implementation of free movement of persons such as Africa (-8.4%) (WTO, 2021).

In COMESA, even with the implementation of free movement of persons at bilateral levels, the share of intra-COMESA exports remains low. Between 2018 and 2019, intra-COMESA exports grew 8% to USD 10,874.40 million from USD 10,111.06 million. However, between 2019 and 2020, intra-COMESA total exports registered a decline in growth of -11.1 per cent from USD 10,907.94 million in 2019 to USD 9700.31 million in 2020. This could be explained by the fact that the main COMESA trading partner is the EU and that countries in COMESA tend to trade more with the rest of the world than within the region (Kagochi and Durmaz, 2018; COMESA, 2022). This is similar for Kenya. Kenya's trade in COMESA remains low, although it is ranked as the second exporter and third importer in intra-COMESA trade. Kenya's export contribution to intra-COMESA trade was 11.77 per cent in 2020, and its imports from COMESA declined by 6.14 per cent between 2019 and 2020.

On the other hand, the Visa Openness Report 2021 shows that only Seychelles allows free movement of all COMESA member States' nationals. In addition, only 10 member states are implementing the 1984 visa protocol. Kenya is among those countries making significant strides in bilateral visa removal, allowing 10 COMESA member States to enter Kenya visa-free. The study measures bilateral visa removal policy, eliminating visa requirements between two countries. Existing literature on trade has given little attention to free movement of persons in the context of African regional economic sub-groupings due to data limitation. Most of the studies focused on ECOWAS and EAC and considered free movement of persons' role in trade in services and on ease of human mobility (Alabi, 2020; Garba and Yeboah, 2022). Therefore, it is not clear whether removal of visa policies for COMESA member States effectively work towards stimulating trade. Furthermore, available studies on visa policies focus outside of COMESA (Neumayer, 2011; Kapelko and Volchkova, 2015; Umana-Dajud, 2019). These studies show that the implementation of visa restrictions negatively influences the level of bilateral trade. The papers employed the gravity model in analysis and focused on unilateral and bilateral visa restriction policies in different countries over a varied time period. This paper complements the existing knowledge by focusing on the effect of the no-visa requirement policy on Kenya's bilateral trade with its trading partners in COMESA. This is done using secondary data collected over 10 years between 2012 and 2021 across 17[1] partner countries. Therefore, the study analyses the effect of free movement of persons on bilateral trade between Kenya and its trading partners in COMESA.

While it is the private sector that is involved in trade, governmnets regulate the movement of persons in a state, and such regulations interfere with the volume of trade exchanged between parties. Therefore, removal of requirements for free movement of persons by allowing visa-free to citizens of member States reduce the cost involved in trade thus potential for increasing bilateral trade. The paper thus builds on the urgency of no-visa requirement policy in the COMESA region to stimulate bilateral trade volume using a case of Kenya.

The subsequent part of this paper is organized into four sections, with section two reviewing the literature, section three discussing methodology, section four discussing the findings, and section five presenting the conclusion.

2. Literature Review

Free movement of people has for a long time been associated with migration, and the latter has been identified as a predictor of trade flows. It is assumed that as people move from one country to another, they do so with goods to provide services in the destination or engage in purchase of goods in the destination country (Alabi, 2020). In his 1974 book, Wallerstein argued that the world system was a multicultural territorial division of labor (world system theory). In this territory, the production and exchange of basic goods and raw materials were necessary for the lives of inhabitants (Wallerstein, 1974). The division of labor led to interdependent regions, the core, semi-periphery, and periphery, which are geographically and culturally different, focusing on labor-intensive and capital-intensive production (Martinez-Vela, 2001; Goldfrank, 2000). The theory is applicable where migration is determined by government restrictions, exploitation, and

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[1] Burundi, Comoros, Democratic Republic of Congo, Egypt, Eswatini, Ethiopia, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Tunisia, Uganda, Zambia and Zimbabwe

involuntariness (De Haas, 2021). The political economy approach looks at immigration policies of the receiving States, including quota and admission systems, regulations of entry, duration of stay, and work permits, directly shaping the volume, dynamics, and geographical patterns of international migration flows (King, 2012). This is the case of visa policies, which, through restrictions, limit the movement of businesspersons.

The relationship between free movement of persons and trade flows has been interrogated by researchers, showing that visa restrictions negatively affect trade flows, though these studies are limited and conducted outside COMESA (Neumayer, (2011; Kapelko and Volchkova, 2015; Umana-Dajud, 2019; Mayer *et al.* (2021)). While this paper acknowledges studies done at the regional level, little is done to understand the effect of visa policies on a single country in a region. Neumayer (2011) used the gravity model to investigate how trade and Foreign Direct Investment (FDI) stocks is affected by visa restrictions in the US and Canada. Data collected was estimated using the Heckman sample-selection estimator with visa restrictions measured as a dummy of 1 if one of the two countries imposed visa restrictions on the other and 0 otherwise. The findings show that visa restrictions negatively and significantly affect trade flows. This implies that the removal of visa restrictions has the potential to stimulate bilateral trade flows.

Kapelko and Volchkova (2015) investigated the effect of visa restrictions on exports between Russia and 180 export destinations between 2003 and 2010. Visa restrictions were captured by a bilateral dummy. The study explored whether Russia's exports to those imposing strict visas were less than those with less restrictive visas. Using the 2-stage lease square method, the study found that visa restrictions reduced trade in goods by 0.003 per cent and the value of exports by 3.94 per cent. Such that visa restrictions were detrimental to bilateral trade exports.

Moreover, the critical role of visa removal on bilateral trade is supported by Umana-Dajud (2019). The author studied the effect of visa restrictions on bilateral trade in goods for the Schengen agreement from 2000 to 2010. Visa was identified as a non-tariff barrier as it restricts the travel of businesspeople for firms needing them to travel for business. Visa was measured as a dummy when visas are applied and zero otherwise. The study measured multilateral resistance using year and country-fixed effects. The author used Poisson Pseudo Maximum Likelihood (PPML) to estimate the augmented gravity model. The findings show that the coefficient associated with visa restrictions is negative on bilateral trade, implying that restrictions on visa derail the level of bilateral trade in goods.

Furthermore, Alabi (2020) examined the role of implementing the ECOWAS free movement of persons protocol for Nigeria and the Benin Republic. The study employed a mixed method in analyzing the data. Inferential statistics and chi-square were estimated to test the relationship and its strength. The study found that removing visa requirements eases businesspersons' movement but was silent on the effect of implementing ECOWAS free movement of persons protocol on trade.

Mayer *et al.* (2021) explored the effect of eliminating the barriers to the movement of businesspeople on trade between 1950 and 2015 for 100 countries. The study used a dummy variable that grouped trade agreements with aspects of mobility of persons or workers: the European Economic Area, the European Free Trade Association, and the Australia-New Zealand

Free Trade Area. The authors estimated augmented gravity model using fixed effects and PPML. The findings show that easing the movement of businesspeople boosts bilateral trade flows by 11%.

While research supports that free movement of persons increases trade flows, these studies focused outside COMESA (Neumayer, 2011; Umana-Dajud, 2019; Alabi, 2020; Mayer *et al.*, 2021). With efforts to eliminate visa restrictions for citizens by COMESA member States, a study examining how free movement of persons influences bilateral trade while considering a single country is important. The effect of free movement of persons on bilateral trade volume in COMESA is a gap in literature that this study purposes to meet.

3. Methodology
An augmented gravity model of trade was applied in this study. The gravity model borrowed from the Newtonian theory of gravitational force assumes that trade between countries will be determined positively by the country's economic size and inversely by the distance between the countries (Tinbergen, 1962; Poyhonen, 1963; Mhaka and Jeke, 2018). The model incorporates modifications by Anderson (1979) and Doumbe and Belinga (2015) to capture trade costs. It has also been modified to capture multilateral resistance term (Anderson and Van Wincoop,2003). The study uses panel data introduced in the gravity model by Baier and Bergstrand (2007) to control issues arising from estimating cross-sectional data. Common border and common language were introduced in the model to capture trade costs, while remoteness was introduced to capture multilateral resistance. The remoteness index is calculated as a function of the bilateral distance between two capitals and gross domestic product (Baier and Bergstrand, 2007).

The gravity model in this study was augmented to capture free movement of persons and other explanatory variables likely to influence bilateral trade flows. The log-linear form of the equation is:

$$lnT_{ijt} = \beta_0 + \beta_1 lnGDPpc_{it} + \beta_2 lnGDPpc_{jt} + \beta_3 lnDist_{ijt} + \beta_4 REM_{it} + +\beta_5 LANG_{ij} + \beta_6 Border_{ij} + \beta_7 FMP_{ij} + \varepsilon_{ijt} \quad\quad (1)$$

Where $\beta_{0-}\beta_7$ are the parameters to be estimated; T_{ij} denotes bilateral trade volume from country i to j; $GDPpc_i$ and $GDPpc_j$ are the GDP per capita for the exporting country i and importing country j, respectively;$Dist_{ij}$ denotes the distance between the exporting country i and importing country j; REM_{it} denotes the remoteness index; $LANG_{ij}$ is a dummy taking the value of 1 if two countries share common official language and 0 otherwise; $Border_{ij}$ is a dummy taking the value of 1 if two countries share common border and 0 otherwise; FMP$_{ij}$ is a dummy variable taking a value of 1 both countries have implemented the no-visa policy requirement and 0 otherwise; e_{ijt} is the stochastic error term.

In order to estimate equation 1, the Panel Corrected Standard Error method was used to estimate the study model. The estimator is used in panel data estimation to solve heteroscedasticity, cross-sectional dependency, and autocorrelation, which, if not corrected, render coefficients biased and standard errors inaccurate (Bai, Choi and Liao, (2020). The method is applicable where there is a

case of large N and small T. This paper is characterized by N of 17 cross-sectionals across 10 periods thus, N>T. The estimator assumes the disturbances to be heteroscedastic and contemporaneously correlated across panels (Beck and Katz, 1995; Reed and Ye, 2011). Furthermore, Moundigbaye, Rea, and Reed (2018) argue that when the primary concern is hypothesis testing PCSE is the best estimator.

3.1 Data Sources and Variable Construction
The study used secondary sources to obtain quantitative data for 10 years between 2012 and 2021 across 17 partner countries. Data on trade volume (exports and imports of goods) were extracted from the IMF Direction of Trade Statistics and measured in US dollars. Data on World GDP (used to calculate remoteness) and GDP per capita for exporter and importer were collected from the World Development Indicators (WDI) database measured in current US dollars. Data on common language, border, and distance used to measure trade costs was obtained from Centre d'Etudes Prospectives et d'Informations Internationales (CEPII).

4. Results and Discussion
4.1 Descriptive Summary Statistics
As shown in Table 2, descriptive statistics shows that from 2012 to 2021, Kenya's trade in goods with COMESA member States averaged USD17.43 million in value. The variation in bilateral trade volume is very large, as some countries recorded zero imports and close to zero exports. Furthermore, the minimum value of USD 12.08 million in trade volume could be a result of rounding off or non-reported data on imports. A standard deviation of 1.97 indicates that the trade volume values are spread out over a wider range of values.

On average, the log of GDP per capita for both Kenya and its trading countries averaged USD 7.41 million and USD 7.39 million, respectively. GDP per capita for Kenya has a standard deviation of 0.15, indicating that GDP per capita values are clustered around the mean. Partner country GDP per capita has a standard deviation of 1.17, implying that the data is more spread out from the mean. Remoteness averaged .96km with a high standard deviation of 1.75, meaning data is more spread out. Free movement of people averaged 0.58 with a standard deviation of 0.49, meaning that the data points are clustered around the mean.

Table 1: Descriptive Summary Statistics

Variable	Mean	Std. Dev.	Min	Max
Log of trade volume	17.433	1.979	12.082	20.851
LnGDP_I	7.410	.155	7.162	7.641
LnGDP_J	7.392	1.179	5.379	9.755
LnDIST	7.536	.607	6.226	8.528
REM_I	-.961	1.749	-4.049	2.739
Border	.176	.382	0	1
LANG	.529	.501	0	1
FMPs	.588	.493	0	1

Source: Author, 2023

4.2 Correlation Analysis

Correlation analysis indicates the degree to which variables in the model are correlated. According to Gujarati (2009), a high correlation coefficient=>0.8 indicates multicollinearity issues in the data. Free movement of persons is negatively correlated with the partner GDP per capita and positively correlated with exporter GDP per capita, remoteness, distance, and border. The highest correlation in the data is observed between border and distance.

Table 2: Correlation Matrix

e(V)	LnGDP_I	LnGDP_j	LnDIST	Border	LANG	REM_I	FMPs	_cons
LnGDP_I	1.000							
LnGDP_J	-0.310	1.000						
LnDIST	0.213	-0.466	1.000					
Border	0.103	-0.138	0.679	1.000				
LANG	0.098	-0.276	0.026	-0.125	1.000			
REM_I	-0.136	0.100	-0.698	-0.585	-0.144	1.000		
FMPs	0.030	-0.216	0.048	0.074	-0.700	0.321	1.000	
_cons	-0.572	0.276	-0.882	-0.640	0.013	0.677	-0.006	1.000

Source: Author, 2023

4.3 Diagnostic Tests

Diagnostic tests show that the data contains cross-sectional dependency, heteroscedasticity, and serial correlation, making the panel estimators biased (De Hoyos and Sarafidis, 2006). The Pesaran CD test (2004) shows presence of cross-sectional dependence for log of trade volume and Kenya's GDP per capita. On the other hand, the ImWhite test for heteroscedasticity shows a prob>chi2=0.0000, meaning that at 5%, there is heteroscedasticity in the residuals. The researcher tested for serial autocorrelation using Bias-corrected Born and Breitung (2016) Q(p) statistic test with lags of 2. The results show that trade volume and Kenya's GDP per capita exhibit serial correlation with a p-value<5%; thus, the series has issues of serial correlation (Wursten, 2018). These issues motivated the use of the Panel Correlated Standard Error estimator to account for heteroscedasticity, cross-sectional dependence, and serial autocorrelation.

4.4. Gravity Model Results

The Pane Correlated Standard Error (PCSE) results are presented in Table 4. Since the P-value for the F-test, in this case, is less than a 5 per cent significance level, the sample used provides sufficient evidence to conclude that the joint values of regressors explain Kenya's bilateral trade volume with its COMESA trading partners significantly.

Table 4: Effect of Free Movement of Persons on Kenya's Bilateral Trade in COMESA

lntradevolume	Coefficient	Standard Error
Ln GDPpc_I	1.278	1.187
LnGDPpc_J	-.553*	.148
Log of Distance	-2.179***	.924
Remoteness	.760***	.195
Border	-.649	.406
LANG	-.615	.451
FMPs	.252*	.466
_Constant	28.715***	11.2454
Obs.	306	
R-squared	0.8473	
Prob>chi2	0.0000	
Wald chi2 (8)	303.90	
Rho	.744	

*Significance level * p < .10, ** p < .05, *** p < .01*
Source: Author, 2023

The results of the model show that free movement of persons positively and significantly influences the volume of bilateral trade between Kenya and COMESA trading partners. A unit improvement in the implementation of the no-visa requirement policy between Kenya and its trading partner in COMESA increases bilateral trade by 0.25 per cent. This implies that Kenya trades more with those COMESA member countries with reciprocal no-visa requirement policy than those who apply visa restrictions. Figure 1 shows that countries that have reciprocated the removal of entrance visas for Kenyans, such as Uganda, Rwanda and Zambia, are among the top six trading partners between 2004 and 2021.

The results are consistent with KNBS (2023) statistics showing that although Africa is Kenya's main exporting region, the main export destinations were Uganda, Tanzania, Rwanda, Egypt, South Sudan, Ethiopia, and the Democratic Republic of Congo. Uganda, Rwanda, Egypt, Ethiopia, and the Democratic Republic of Congo were reviewed in this study. The study's findings show that implementing free movement of persons stimulates bilateral trade for Kenya and its trading partners in COMESA. The findings are consistent with Mayer *et al.* (2021) and Umana-Dajud (2019), who investigated if visas hinder international trade in goods and found that visa removals increase bilateral trade and welfare gains, respectively. In addition, the results are consistent with Neumayer's (2011) findings that unilateral and bilateral visa restrictions negatively and significantly affect bilateral trade between the US and Canada.

Figure 1: Average Trade volume in USD Millions (2004-2021)

Source: Author's calculations (2023)

Other factors influencing bilateral trade between Kenya and its trading partners in COMESA include exporters' GDP per capita, importers' GDP per capita, common border, common language, and remoteness. Kenya's GDP per capita is positive but insignificant, implying that Kenya's GDP per capita does not influence the volume of bilateral trade in COMESA. The results of Kenya's GDP per capita are consistent with those of Portugal-Perez and Wilson (2011), Turkson (2011), and Umana-Dajud (2019), who found a positive relationship between exporters' GDP per capita and bilateral exports.

On the other hand, partner GDP per capita negatively and significantly influence Kenya's bilateral trade in COMESA. A percentage increase in partner GDP per capita reduces Kenya's bilateral trade volume in COMESA by 0.53 per cent. This contradicts the gravity model assumptions that the economic size of the importer is proportionate to bilateral trade (Tinbergen, 1962). However, the findings conform to Owino (2017), who found that GDP per capita for importer is negative and significant on Kenya's bilateral trade exports with the European Union using the Hausman-Taylor model and Generalized Method of Moments estimators. The decrease in bilateral trade could be attributed to the increased level of income for importer countries, which may encourage the consumption of goods from other countries.

The remoteness index is positive and statistically significant at 1 per cent, implying that a percentage increase in remoteness for Kenya increases Kenya's bilateral trade volume in COMESA by 0.76 per cent. The results conform to Umair *et al*. (2022), who reported that a percentage increase in remoteness leads to a 2.10 per cent increase in trade volume. Furthermore, Kikerkova *et al*. (2021) found a positive relationship between remoteness and bilateral trade between North Macedonia and its trading partners. The findings imply that *ceteris paribus*, Kenya will tend to trade more with remote countries than in proximity countries. This could, moreover, explain why the border is negative and insignificant in this study.

On the other hand, the distance coefficient is negative and significant at 1 per cent. A percentage increase in kilometer distance between exporting and importing countries reduces Kenya's bilateral trade volume in COMESA by 2.18%. This implies that Kenya will trade more with countries closer than those far from its capital. In the review period, Kenya's main trading partners are Uganda, Egypt, the Democratic Republic of Congo, and Rwanda. In contrast, the lowest trading partners are Libya, Seychelles, Tunisia and Comoros, confirming that distance is a significant factor in Kenya's bilateral trade in COMESA (Figure 1).

5. Conclusion

The paper assesses the of free movement of persons on Kenya's bilateral trade in COMESA using data from World Development Indicators, CEPII and MDAs and AfDB visa openness. The study analyzed Kenya's bilateral trade performance in COMESA, focusing on 17 partner countries whose data was available for ten years between 2012 and 2021. The study estimated the augmented gravity model using the Panel Correlated Standard Error method and found that free movement of persons stimulates the volume of Kenya's bilateral trade in COMESA. Free movement of persons was measured using a no-visa requirement policy for exporting and importing countries. The results showed that a unit improvement in the implementation of the no-visa policy requirement by Kenya and the partner country for citizens of both countries stimulates the volume of Kenya's bilateral trade with the partner country by 0.25 per cent. This indicates that free movement of persons is necessary for increased levels of bilateral trade in COMESA. This is because, with the implementation of the no-visa requirement policy, the visa fees paid by citizens of both countries to enter either Kenya or the importing partner is removed, thus easing the cost involved in business transactions.

From the findings, COMESA member States could consider fast-tracking the full implementation of the no-visa requirement policy efforts put forward by each State. This will reduce the cost of doing trade between countries, thus boosting trade flows. Furthermore, Kenya's Ministry of Foreign and Diaspora Affairs could fast-track negotiations with the remaining eleven partner countries in COMESA to initiate the process of removing visa requirements at the bilateral level.

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