Institutional Quality and Trade: The Case for COMESA Region.

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Abstract

This paper investigates the determinants of exports using the gravity trade model with random effects for 19 COMESA member states, for period 2000-2015, with an institutional perspective. Controlling for traditional determinants of trade, four governance indicators were chosen to measure institutional quality: corruption, government effectiveness, regulatory quality and rule of law. The empirical results provide evidence that presence of corruption significantly reduce exports; improvements in government effectiveness is associated with increased exports; improved regulatory environment positively significantly facilitates increased levels of exports, deterioration in the rule of law seems to be working against improved exports of the COMESA member states. The results also provide confirmation that abiding by the WTO principles of trade liberalisation and becoming more outward oriented significantly increases export capacity.

Key words: Institutional Quality, Governance, Trade, Exports, COMESA

JEL Classification: F1, F13, F23

1.0 Introduction

International trade theories failed to recognise the role of institutions in determining trade between and across political and economic entities. Their emphasis gravitate towards factor endowments, technology, tastes and preferences, and nature of competition as key determinants of international trade. The birth of New Institutional Economics (Williamson, 1985, Coase, 1998) brought to the attention of many scholars the need to investigate the link between institutions and trade. North (1991:97) argued that institutions determine transaction costs, profitability and feasibility of economic activities, therefore a collective impact of institutions, technology, tastes and factor endowments determines actual magnitude and direction of trade at each given time. Recently, a couple of empirical studies (Hall and Jones, 1999; Anderson and Young, 1999; Bigstein et-al, 2000; Anderson, 2001; Anderson and Marcouiller, 2002; Rauch and Trindade, 2002; Dollar and Kraay, 2002; Gilbert, 2002; De Groot et-al., 2004) started to examine direct effects of institutions on bilateral trade flows. The conclusion stemming for the literature is that countries with better institutions are likely to trade more.

Although previous researches concurred on the role played by institutions in stimulating exports, the relations between institutions and trade remains ambiguous. This paper intends to solve this puzzle by investigating the relationship between institutional quality and trade in the context of the Common Market for Eastern and Southern Africa (COMESA) region. COMESA region has not been the subject matter regarding the relationship between institutional quality and trade, even though most of the countries in the region suffer from poor institutional infrastructure (*see Table 1*). Many countries in the COMESA region are characterised by poor export performance, balance of trade deficit, low levels of growth, and relative poverty resulting from narrow investments (Comstat, 2017). Comparing with other Regional Economic Communities (RECs) in Africa, COMESA has been ranking number three on intra-regional trade, following Sothern African Development Community (SADC) and Economic Community of West Africa States (ECOWAS) (Osabuohien and Efobi, 2011). There are also poor social and economic infrastructure and high production costs in the region which have thwarted financial incentives to lure more foreign direct investments that drive growth. In addition, several countries in the region are struggling to improve institutional infrastructure as they are constrained by insufficient public expenditures (Ngwenya, 2015).

The emphasis of COMESA countries on trade as the key engine for growth requires that they develop appropriate institutions that support both regional and global integration of countries. The facts regarding the quality of institution in the region point to the need for improvement, if ever the region want to boost both intra and extra trade. Recently, Osabuohien and Efobi (2011) documented that COMESA ranks number 4 on the institutional quality of regulatory quality, following after SADC (1), ECOWAS (2) and East African Community (EAC) (3). The percentile rank for all the six indicators of governance (political stability, voice and accountability, control for corruption, government effectiveness, rule of law and regulatory quality) for COMESA region are below 40 (Worldwide Governance Indicators, 2017). Such poor institutions, in which corruption prevails will inevitably depress competition and trade facilitation in the region. COMESA successfully established a Free Trade Area (FTA) established in October 2000 with the aim of promoting regional integration through zero customs tariffs on goods traded among member states. In addition to Free Trade Area, appropriate and quality institutions in respective countries would improve intra-COMESA trade and foreign direct investment in the region. More so, the development of appropriate

institutions would also help in the reduction of capacity gaps that rendered implementation of agreed obligations in member states slow. Efficient institutions will also catalyse the envisioned progress to a Common Market and eventually to a full Economic Community by 2025.

The main objective of this paper is to provide empirical evidence on the effects of institutional quality on trade flows in the COMESA region, by examining the effects of quality of institutions on exports. The specific questions this paper set out to answer are: (i) What are the patterns of institutional quality and export flows in the COMESA region? (ii) How do institutional factors explain export flows in the COMESA region? (iii) What policy implications can be drawn?

The rest of the paper is structured as follows. Section 2 presents an overview of the trade structure and performance as well as quality of institutions in the COMESA region. Section 3 presents an overview of literature linking institutional quality and trade, giving empirical evidence. Section 4 discusses the empirical model and data applied in this study. Section 5 offers the empirical analysis or results. The last section presents the conclusion and policy implications

2.0 Institutional quality and Trade in the COMESA region

Recent studies have pointed out that the quality of institutions has a strong impact on a country's competitiveness and economic growth. Anderson (2001) argue that ineffective institutions can hinder trade, and Anderson and Marcouiller (2002) postulate that bad institutions can negatively affect volumes of trade by increasing both transaction costs and risks of trading internationally. This section analyses the quality of institutions and trade performance in the COMESA region.

2.1 Quality of institutions

"Institutions are rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction" (North 1991:3). They structure incentives in human exchange and shape the framework that facilitates economic transactions. Effective institutions are expected to reduce transaction costs and improves the security of international exchange. Weak institutions, on the other hand, have impeding effects on maximising the gains from trade. Ngwenya (2015) mentioned that weak institutions and poor policies are among key factors hindering growth of agricultural trade in the COMESA region through limiting market access and demand driven intra-regional trade expansion. Unclear property rights and uncertainties around intra-COMESA exchange relations have persistently reduced the traders' access to markets and their incentive to invest. In addition, unharmonised policies in the region are also affecting trade, through imposing tedious trade processes which include unnecessary delays in crossing borders due to inefficient customs service and onerous documentary requirements (Ngwenya, 2015). These unplanned and ad hoc policies by governments tend to distort markets, depress competition and negatively affect regional integration endeavours.

Even though institutions matter, it can be hard to measure quality of institutions because various aspects of institutional infrastructure are determined with ambiguity. To address this lacuna, this study adopts the Worldwide Governance Indicators (WGI) as variables to measure

institutional quality. The WGI consist of six composite indicators of broad dimensions of governance covering over 200 countries since 1996. These indicators include: Political Stability and Absence of Violence or Terrorism, Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. These indicators are based on various variables obtained from different data sources, capturing governance perception as reported by survey respondents, commercial business information providers, non-governmental organisations and public sector organisations.

In the COMESA region, countries are striving to improve the institutional infrastructure, but are constrained by lack of sufficient public expenditure in this region. A relative analysis of the percentile rank for political stability and absence of violence/ terrorism made shows that Comoros, Djibouti, Egypt, Ethiopia, Kenya, Libya, Madagascar, Mauritius, Seychelles Swaziland and Zimbabwe experienced deterioration in the institutional quality for political stability during the period 1996 to 2015.Table 1 shows that there are high levels of political stability in Seychelles and Mauritius with rankings way above the median of 50%. Comoros, Egypt, Madagascar, Libya, Kenya and Seychelles experienced sharp declines with the margins of 16.5%, 18%, 15.4%, 14.1%, 12.7% and 13.5%, respectively. Zimbabwe suffered a marginal decline of 2.3% points during the same period 1996-2000, from 28% to 25.7%. These are worrying changes, which are attributable to weak forms of political governance, state failure, imperialism, civil wars, military intervention, contested election outcomes and non-democracies as well as intensification in political violence in the region. Regrettably, these challenges affect trade and other macroeconomic variables that are key for economic growth and development.

The aggregate of voice and accountability examines the institutional quality of press and media freedom. The rankings of COMESA countries are very much alarming. Zimbabwe, Djibouti, Eritrea, Madagascar and Seychelles experienced significant decline in the institutional quality of voice and accountability. Although Mauritius experienced a marginal decline of 0.7%, it is the top performer in the institutional quality indicator of voice and accountability. For the 19-year period, there are variations in the degrees of declines ranging from significant to marginal. The following are the countries that recorded marginal decline in the institutional quality of voice and accountability: Swaziland (2.2%) and Ethiopia (0.6%). Countries like Burundi, DR Congo, Kenya, Rwanda, Uganda and Zambia have recorded remarkable improvements in the institutional quality of voice and accountability. The percentile rank for voice and accountability for Kenya, Rwanda and Burundi have increased by 13.5%, 10.9% and 10% respectively.

The Worldwide Governance Indicators show that most of the COMESA countries are striving to improve institutional quality for government effectiveness between 1996 and 2015. Government effectiveness captures the perceptions of quality of public services, quality of civil service and degree of independence from political pressures, quality of policy implementation, and credibility of government's commitment to such policies. On government effectiveness, Rwanda, Ethiopia, Zambia, Mauritius and Uganda have remarkably improved, with the following margins: 40.2%, 22.5%, 19.5%, 17.4% and 12.6 respectively. Zimbabwe, Egypt, Madagascar and Libya experienced sharp decline in the institutional quality for government effectiveness, with the margins of 35.8%, 25.7%, 22.6% and 17.1% respectively. The

deterioration in the institutional indicator for government effectiveness in most COMESA countries implies that there is policy inconsistence, lack of commitment by the governments and high political interference in the region.

The percentile rank of regulatory quality (Table 1) shows that Mauritius and Rwanda are the top performers in the region with 82.2% and 60.6% respectively. Libya is the worst performer of the region with the percentile rank of 0.48%. In the region, countries like Rwanda, Mauritius and Burundi have remarkably improved on policy formulation and implementation and regulations that promote private sector development. Rwanda improved by 53.2%, from 7.4% in 1996 to 60.6% in 2015. These significant improvements in institutional quality for regulatory quality in Rwanda and Mauritius were as a result of specific institutional restructuring and reforms implemented in both countries. Egypt, Eritrea, Madagascar, Seychelles, Uganda and Zimbabwe have experienced disturbing deterioration in the institutional indicator for regulatory quality, with the following margins: 28%, 12.3%, 15.6%, 11.8%, 11.6% and 14.8% respectively.

The Worldwide Governance Indicators show that Mauritius, Seychelles and Rwanda are the region's top performers in rule of law holding percentile ranks of 77.4%, 62% and 60.1% respectively. Rwanda improved drastically in the percentile ranking between 1996 and 2015, gaining 57.7 points, from 2.4% in 1996 to 60.1% in 2015.Kenya, Ethiopia, Zambia, Swaziland and Uganda are the other countries that have made remarkable strides in improving the quality of contract enforcement, police, courts, as well as building confidence in the society. Countries like DR Congo, Eritrea, Libya, Sudan and Zimbabwe with percentile ranks below 10% need to implement institutional reforms in the police and courts to improve on contract enforcement mechanisms. This will build confidence in the agents and they will abide by the societal rules.

The percentile rank for corruption in table 1, illustrates that only Rwanda and Zambia have been fighting the institutionalised corruption for a 19-year period. Rwanda and Zambia have made significant strides in the fight against corruption as indicated by aggregate governance indicators between 1996 and 2015 (see Table 1). The percentile corruption rank for Rwanda has increased by 55%, from 20% in 1996 to 75% by 2015. Zambia improved from 15.1% in 1996 to 43.3% in 2015. Other countries registered positive change in the percentile rank for corruption control are Burundi and DR Congo. However, some countries in the region have experienced significant decline in the institutional indicator for corruption control index. Eritrea is the worst affected country with 65.5% decline, followed by Madagascar (39.9%), Zimbabwe (37.1%), Malawi (26.2%), Egypt (21.5%) and Swaziland (12.4%). Countries that recorded marginal declines include Djibouti, Libya and Kenya with 2.4%, 1.9% and 1.6 decline respectively. Countries in the COMESA region need to take reformative steps that strengthen the existing institutional capabilities to ensure reduction in red tape and streamlining of administrative and bureaucratic procedures, investing and prosecuting corruption cases at all levels.

Table 1: Institutional Quality Indicators (Percentile rank) for selected COMESA Member states (1996 -2015)

	Political Stability			Voice and Accountability			Government Effectiveness			Regulatory Quality			Rule of Law			Control for corruption		
	1996	2015	D. of Change	1996	2015	D. of Change	1996	2015	D. of Change	1996	2015	D. of Change	1996	2015	D. of Change	1996	2015	D. of Change
Burundi	2.90	6.70	3.8↑	3.80	13.8	10 ↑	2.90	12.0	9.1↑	4.40	27.4	23 ↑	2.90	11.5	8.6↑	4.90	10.1	5.2↑
Comoros	57.0	40.5	16.5↓	31.3	37.4	6.1 ↑	2.90	5.80	2.9↑	13.7	13.0	0.7 ↓	15.8	20.2	4.4↑	20	30.8	10.8↑
DR Congo	0	3.80	3.8↑	4.30	12.8	8.5 ↑	3.40	3.80	0.4↑	2.90	6.30	3.4 ↑	1.40	3.40	2 ↑	0	9.10	9.1↑
Djibouti	39.9	31.0	8.9↓	21.6	9.40	12.2↓	17.1	16.3	0.8↓	19.1	28.4	9.3 ↑	19.1	18.3	0.8↓	36.1	33.7	2.4↓
Egypt	26.6	8.60	18 ↓	24.0	18.2	5.8 ↓	47.8	22.1	25.7↓	52.5	24.5	28 ↓	53.6	35.6	18↓	56.6	35.1	21.5↓
Eritrea	15.0	18.1	3.1↑	13.0	0.98	12 ↓	11.2	4.80	6.4↓	13.7	1.40	12.3↓	38.8	4.80	34↓	70.2	5.30	65.9↓
Ethiopia	15.9	8.10	7.8↓	14.9	14.3	0.6↓	6.30	28.8	22.5↑	8.80	14.4	5.6↑	21.1	38.5	17.4↑	8.80	42.8	34↓
Kenya	21.7	9.0	12.7↓	28.4	41.9	13.5↑	43.4	43.8	0.4↑	36.3	43.3	7.0↑↓	16.3	36.5	20.2↑	15.1	13.5	1.6↓
Libya	17.4	3.33	14.1↓	9.13	9.85	0.72↑	19.0	1.92	17.1↓	3.43	0.48	2.95↓	15.3	1.92	13.3↓	25.9	24.0	1.9↓
Madagascar	48.3	32.9	15.4↓	43.3	34.5	8.8↓	31.2	8.65	22.6↓	17.2	26.0	8.8↑	33.0	28.8	4.2↓	63.9	24.0	39.9↓
Malawi	27.5	45.2	17.7↑	43.3	48.3	5.0↑	33.7	26.4	7.3↓	38.7	23.1	15.6↓	35.4	44.2	8.8 ↑	49.3	23.1	26.2↓
Mauritius	84.1	79.5	4.6↓	73.1	72.4	0.7↓	63.4	80.8	17.4↑	50.5	82.2	29.7↑	78.5	77.4	1.1↓	73.2	67.8	5.4↓
Rwanda	3.90	44.2	40.2↑	6.25	17.2	10.9↑	11.2	51.4	40.2↑	7.40	60.6	53.2↑	2.40	60.1	57.7↑	20.0	75.0	55↑
Seychelles	81.6	68.1	13.5↓	57.2	49.8	8.4↓	75.6	68.6	7.0↓	62.3	50.5	11.8↓	69.4	62.0	7.4 ↓	82.4	77.9	4.5↓
Sudan	1.93	4.29	2.36↑	2.40	3.45	1.05↑	12.2	6.25	5.95↓	8.33	4.81	3.52↓	4.78	8.17	3.4↑	5.37	2.40	2.97↓
Swaziland	36.2	29.5	6.7 ↓	13.5	11.3	2.2↓	27.8	34.1	6.3↑	42.2	33.2	9.0↓	32.1	46.6	14.5↑	60.5	48.1	12.4↓
Uganda	7.73	20.0	12.3↑	19.7	29.1	9.4↑	24.4	37.0	12.6↑	57.8	46.2	11.6↓	30.1	43.3	13.2↑	28.8	12.0	16.8↓
Zambia	39.6	51.4	11.8↑	36.5	44.8	8.3↑	13.7	33.2	19.5↑	33.8	37.9	4.1↑	29.7	47.1	17.4↑	15.1	43.3	28.2↑
Zimbabwe	28.0	25.7	2.3↓	30.8	15.3	15.5↓	47.3	11.5	35.8↓	18.6	3.84	14.8↓	25.4	6.25	19.2↓	44.3	7.20	37.1↓

Source: World Governance Indicators, World Bank (2017). D. of change refers to direction of change

Note: The percentile rank indicates the country's rank among all countries covered by the aggregate indicator, with 0 corresponding to lowest rank and 100 to the highest rank.

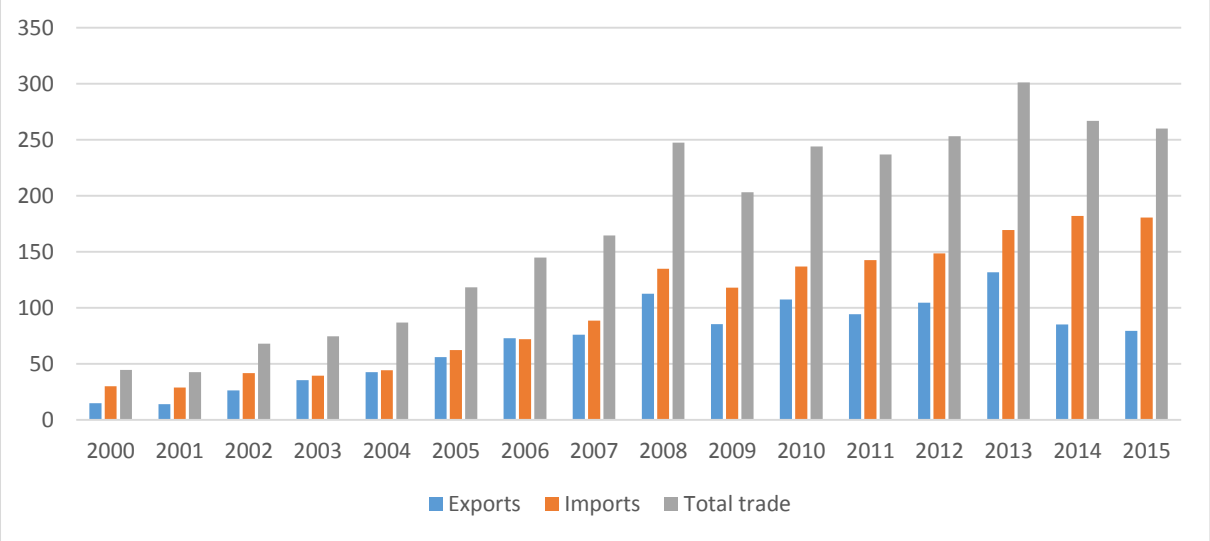
The major inference made from the above analysis is that institutional quality indicators in most COMESA countries are rather lower than the average, median of 50. Therefore there is urgent need to enhance and strengthen the institutional quality in COMESA countries within the region's framework. This is important for economic activities including trade as strong institutional quality will help reduce the effects of adverse selection, non-adherence to procedures and transaction costs and time.

The institutional framework is relevant in explaining the size of transaction costs and time that include: days to import and export, registration costs, real estate agent fees, legal fees and sales and transfer taxes. Low institutional quality increases the transaction costs incurred during the exchange and hence reduce trade.

2.2 Trade structure and performance

Global trade for COMESA member states (global-COMESA trade) grew from US$44.5 billion in 2000 to US$301.1 billion in 2013 before it plunge to US$259.9 billion in 2015. Specifically, total exports have declined from approximately US$131.6 billion by the end of 2013 to US$79.3 billion in 2015. Imports registered decline from US$182 billion by the end of 2014 to US$180.6 billion in 2015. Continuous decline in exports over the period 2013-2015 has worsened the trade deficit in the region, to approximately US$100.7 billion in 2015. Figure 1 below depicts global-COMESA trade performance from 2000 to 2015.

Figure 1: Global-COMESA Trade in US$ (Millions) 2000-2015



Source: Comstat, 2017

There was significant decline in the level of economic activities in the COMESA countries as evidenced by decreasing total exports. Of the 19 member states in the region, only Djibouti and Uganda registered positive growth in the levels of global exports in 2015 over 2014 levels. The worst affected member states were Democratic Republic of Congo (22.4%), Egypt (20.9%), Eritrea (28.3%), Libya (42.3%), Sudan (27.2) and Zambia (27.4%). On the import side, Comoros, Djibouti, Egypt, Eritrea, Ethiopia and Sudan registered negative growth in the levels of their global imports in 2015 over 2014 levels.

Regarding the major export markets for COMESA products, European Union (EU) is ranked the top, with exports worth US$42.9 billion destined to the EU market in 2015. The other export markets ranked after the EU are China, COMESA, South Africa and Saudi Arabia, with exports worth US$11.2, US$9.6, US$4.5 and US$4.4 billion respectively. On the import side, China is ranked number one, with imports into COMESA worthUS$31.1 billion. The other major sources of imports are EU, India, South Africa and COMESA, with the following import values US$20.3, US$10.8, US$10.2 and US$9.7 respectively.

Table 2: COMESA's top 5 major export and import markets in 2015

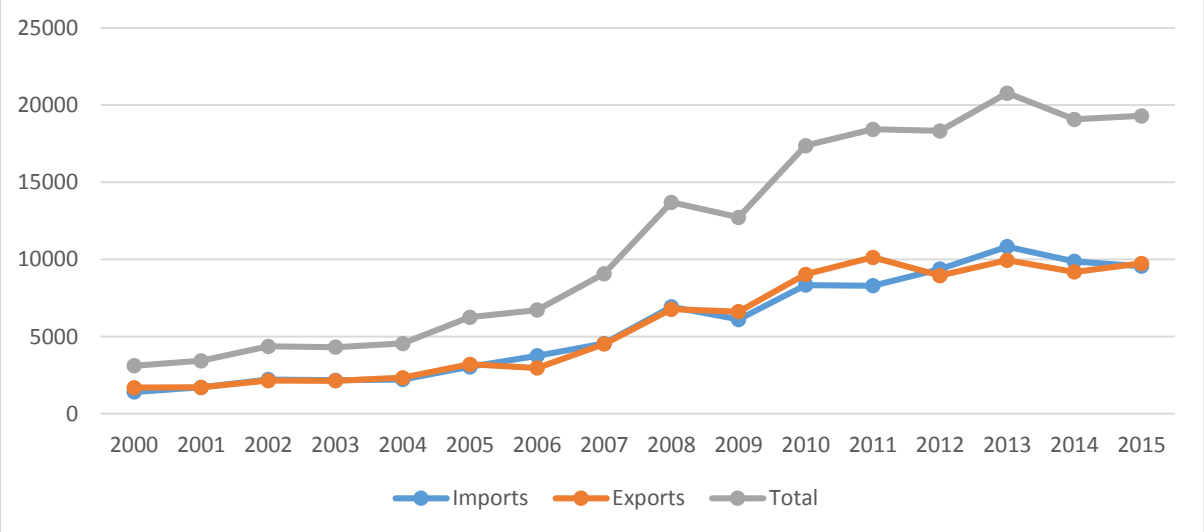
	Exports		Imports	
Rank	Market	US$ Million	Market	US$ Million
1	EU	42,918	China	31,139
2	China	11,154	EU	20,323
3	COMESA	9,561	India	10,838
4	South Africa	4,517	South Africa	10,168
5	Saudi Arabia	4,447	COMESA	9,738

Source: Comstat, 2017

2.2.1 Intra-COMESA trade performance

The establishment of Free Trade Area has in partly led to an increase in intra-COMESA trade from US$3.1 billion in 2000 to US$19.3 billion in 2015. Intra-COMESA exports increased from US$9.2 billion by the end of 2014 to US$9.7 billion in 2015, while imports declined from US$9.9 billion in 2014 to US$9.6 billion by the end of 2015. The increase in total intra-COMESA exports can partly be attributed to registered growths by key intra-trade players in the region, which are Egypt, Kenya, DR Congo, Sudan, Zambia and Uganda. Figure 2 below shows intra-COMESA trade trend over the period 2000-2015.

Figure 2: Intra-COMESA Merchandise Trade Performance (US$ Million) - 2000-2015



Source: COMSTAT, 2017

In 2015, Egypt, DR Congo and Kenya registered the largest shares of intra-COMESA export market with 18.6%, 18.2% and 15.4% respectively. Egypt exported goods worth US$1.8 billion, DR Congo US$1.7 billion and Kenya US$1.5 billion. The value of exports for Sudan, Zambia and Uganda were US$1.4, US$0.98 and US$0.84 billion respectively.

Regarding intra-COMESA import share, DR Congo and Zambia recorded the largest market share of 21% and 20.9% respectively, with goods worth US$2.0 billion; followed by Sudan, Uganda, Libya, Egypt and followed with 8.5%, 7.3%, 7.1%, 6.5% and 6.4 respectively (Table 2).

Table 3: Intra-COMESA Merchandise Trade by country (US$ Million) – 2000-2015

Country	Exports				Imports			
	2000	**2005**	**2010**	**2015**	**2000**	**2005**	**2010**	**2015**
Burundi	5	16.1	24.6	48.0	19.0	53.9	105.9	77.3
Comoros	0.1	0.1	2.4	4.1	5.0	6.6	13.0	15.6
DRC	33.7	38.8	1134	1778	107.1	188.2	806.1	2004
Djibouti	4.1	62.8	601.7	15.5	73.4	84.0	78.1	150.6
Egypt	113.8	431.4	2344	1812	239.1	298.5	961.8	625.3
Eritrea	0.2	11.6	2.1	12.4	7.8	15.5	155.5	93.6
Ethiopia	155.1	100	287.3	162.1	107.6	192.1	286.2	297.1
Kenya	595.6	1331	1658	1501	77.3	175.7	504.1	613.8
Libya	50.4	115.7	334.8	90.5	69.3	166.3	1378	681.2
Madagascar	19.1	21.7	47.1	54.7	63.5	101.4	197.3	152.0
Malawi	41.5	45.0	215.6	210.1	52.8	177.6	231.8	226.5
Mauritius	96.8	108.9	155.7	225.7	58.3	72.8	125.3	171.3
Rwanda	35.1	41.0	82.7	331	28.7	141.0	415.2	395.2
Seychelles	2.4	0.8	2.5	1.5	12.5	21.0	47.0	84.6
Sudan	78.7	57.8	336.5	1402	201.2	477.1	767.9	815.5
Swaziland	65	64.9	140.2	176.4	0.5	1.1	10.7	21.0
Uganda	71.1	248.5	713.0	835.9	152.4	565.0	586.9	699.2
Zambia	152.1	336.5	690.2	975.5	85.3	246.4	1394	2003
Zimbabwe	170.7	176.0	267.0	101.4	57.7	61.3	271.2	434.6

Source: COMSTAT, 2017

A notable feature in the majority of COMESA countries is that balance of payments have remained in deficit for the entire period even though in some countries exports rose. Narrow range of export products and rising imports have been the main causes of widening trade gap among the COMESA member states.

3.0 Brief Review of Literature

The Common Market for Eastern and Southern Africa (COMESA) region does have significant hindrances and impediments to trade that it needs to address and overcome if it intends to improve on trade performances. Another itching issue deserving serious attention in connection with the COMESA countries' achievement in trade is that several countries in the region have low levels of integration. Trade statistics reveal that most of the countries in the region have smaller export to GDP ratios. International trade literature exposes various key factors that affect a country's export performance, and for developing countries trade and exchange rate policies seem to be the most popular.

The literature regarding institutions and trade (Sachs and Warner, 1995; Hall and Jones, 1999; Rodrik, 2002; Chong and Calderon, 2000; Rodrik et-al., 2002; Dollar and Kraay, 2003; Sekkat and Varoudakis, 2003; Achy and Sekkat, 2003 etc) has been typically and broadly paying more attention on the role that good institutions and trade openness play in explaining economic growth. The major conclusion drawn from the literature is that causality is bi-directional and running in all possible directions. On one hand, good institutions are a pre-requisite for long term growth and increased productivity. On the other hand, accelerated growth and trade openness increase the demand for good institutions. Studies on countries in other regions other than COMESA indicate that more open economies tend to adjust faster from primary to secondary exports (Sachs and Warner, 1995). The study by Sekkat and Moen (2004) found out that the deterioration of institutional quality in the Middle East and North Africa (MENA) region has caused low performance in manufactured exports and foreign direct investment.

The study of the relationship between institutions and trade has received little attention, which results in the relative scarcity of solid theoretical arguments connecting trade and institutions. Although the new institutional economics emphasises that institutions are fundamental to the effective functioning of the market-based economies (Williamson, 2000), studies investigating the relationship between institutions and trade are scarce. Some researchers have documented that institutional quality is key to the promotion of trade and is catalytic to the process of economic integration. Low corruption, effective contract enforcement mechanisms, sound regulation and maintaining of efficient public sector administration are sited as key institutional and governance factors that improve trade. Despite the fact that the role of institutions and governance are not formalised as part of intelligible trade theory, a growing body of empirically recognised relations between institutions and trade is receiving much attention and is significant to this study.

Using a simple model with paradoxical comparative statics, Anderson and Young (1999) provided a first theoretical illustration on the relationship between institutions and trade. They found that lack of contract enforcement may act as custom duties on risk-neutral traders and may impede trade as much as tariffs do. Recently, a couple of empirical studies started to examine the direct effects of institutions on trade. The study by Anderson (2001) suggests that the ineffective institutions hinders international trade through increasing of both transaction costs and risks of trading internationally. Rodrik (2002) finds that the key impeding factor of international trade is the problem of contract enforcement. Studies by Ades and Di Tella (1999) and Wei (2000) identify corruption as another element that impede trade. The conclusion

stemming from their studies is that high trade intensity is associated with lower corruption levels. In their study Anderson and Marcouiller (2002) confirmed that institutional variables are significant determinants of trade. In particular, the study provide empirical evidence that weak institutions act as significant barriers to trade.

Although a couple of studies concur that the quality of institutions has a direct positive and sensitive effect on trade, some authors such as Rodrik et-al., (2002) concluded that institutions may also indirectly affect trade through their impact on variables that explain trade such as investment and productivity. The study by Hall and Jones (1999) noted that ineffective institutions reduce aggregate productivity and growth. Olson et-al., (2000) found that lower productivity and growth impedes competitiveness in the international markets, which is likely increase difficulties in exporting and trading abroad. A more recent study by Das (2010) posit that economic institutions have a more significant effect on development than social and political institutions, therefore, it is possible for countries with better institutional quality have an advantage to reap benefits from trade integration and geography. Another similar studies include: Derby et-al., (2010) on good public governance and foreign direct investments; Busse and Hefeker (2005) on the role of democratic rights, government stability and ensuring law and order as significant determinants of foreign direct investments, Barro (2001) on the relationship the rule of law and economic growth; and Li and Resnick (2003) on effects of democracy and property rights on foreign direct investment.

Nonetheless, the literature on relationship between institutions and trade have neglected the "second best theory" that considers corruption as a way to by-pass restrictions imposed by governments. There is evidence in literature that corruption must be explained as a directly unproductive profit-seeking activity and can be compared other activities such as tariff evasion in the international trade (Bhagwati, 1992). Even though these theories does not explain the interaction between trade and corruption directly, they contemplate corruption as a lubricant that catalyses trade (Lavallée, 2005).

Surprisingly, the COMESA region has not been the part of the studies done on the relationship between trade and institutions, even though the region suffer deficiencies in institutional quality. To our knowledge, this is the first paper to investigate the effects of various components institutional quality on trade in the context of COMESA region.

4.0 Empirical model and data

The gravity model continues to be the workhorse in the international trade economics because to its consistent results and comparatively compact specification (Grant and Lambert, 2008). The gravity model has undergone rigorous theoretical and empirical improvements since its genesis by Tinbergen in 1962 (Bergstrand, 1985; Anderson and Wincoop, 2003). The major advantage of the gravity trade model is its ability to examine policy and institutional variables together with traditional determinants of bilateral trade flows. In addition, the direction of effect of policy and institutional quality variables, whether negative or positive, need not to be predetermined (Anders and Caswell, 2009; Li and Saghaian, 2014)).

The augmented gravity model can be specified as follows:

$$LnEXP_{ijt} = \beta_0 + \beta_1 LnGDP_{it} + \beta_2 LnGDP_{jt} + \beta_3 LnDIST_{ij} + \beta_4 LANG_{ij} + \beta_5 LnTP_{it} + \beta_6 GE_{it} + \beta_7 RQ_{it} + \beta_8 RL_{it} + \beta_9 CC_{it} + \varepsilon_{ijt} \quad (1)$$

Where, *EXP* is the export flows from country i to j; *GDP* is the per capita gross national income for country i and country j; *DIST* is the proxy for transaction costs and denotes the geographic distance between country i and j; *LANG* is the dummy for common language between i and j; *TP* is trade policy proxied by average tariffs in country i; *GE* is government effectiveness; *RQ* is regulatory quality; *RL* is rule of law; *CC* is corruption; i and j represent domestic and trading partner respectively; t is time period taking values from 2000 to 2015 and ε is error term.

Equation 1 is the benchmark specification which controls for the overall impact of trade policy and institutional quality on trade flows. However, Anderson and Wincoop (2003) and Baier and Bergstrand (2007) argue that the gravity model suffer omitted variables and policy endogeneity problems which come from unobserved heterogeneity between countries. To correct for this, this special effect can be treated as either random variable or fixed effect. To choose the appropriate model between random effects and fixed effects model, we conducted the Hausman specification tests and the null hypothesis could not be rejected. Therefore the Random Effects Model (REM) was preferred to fixed effects model.

The random effects model used in this study was specified as follows:

$$LnEXP_{ijt} = \beta_0 + \beta_1 LnGDP_{it} + \beta_2 LnGDP_{jt} + \beta_3 LnDIST_{ij} + \beta_4 LnLANG_{ij} + \beta_5 LnTP_{it} + \beta_6 LnGE_{it} + \beta_7 LnRQ_{it} + \beta_8 LnRL_{it} + \beta_9 LnCC_{it} + \omega_i + \varepsilon_{ijt} \quad (2)$$

,where ω_i is the country-specific effects that are uncorrelated with the independent variables.

Model 2 was used to test the following hypothesis: Low Institutional Quality has a significant negative impact on trade flows from COMESA countries.

4.1 Justification of variables and data sources

The panel data used in this analysis include exports of 19 COMESA member states (Burundi, Comoros, Djibouti, DR Congo, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia and Zimbabwe) for the period 2000 to 2015 as the dependent variable. The variables that were used as trade control variables are per capita GDP *(PGDP*) for both domestic and partner countries and trade policy. Four institutional quality measures were chosen, which are government effectiveness, regulatory quality, rule of law and control for corruption.

We included the per capita GDP *(PGDP*) for both domestic and partner countries as control variables because improvements and expansion of trade is influenced by highly performing economy which is suitable for investment, production and sales (Frankel and Romer, 1999). In addition, Gani and Prasad (2006) assert that a growing economy is a reflection of factors that

favours trade such as right economic policies, rising incomes and price stability. On one hand, an economy with conducive infrastructure encourages economic agents to engage in transaction of goods and services, contributing to exports and imports of goods and services and enhancing trade. On the other hand, an economy with declining or stagnant income discourages trade. Data for both importer and exporter GDP were obtained from World Development Indicators (2017).

The standard gravity variables such as *distance (DIS)* and *common language (LANG)* were included in the model. We capture the effect of distance by taking the average distance between each country and its trading partner *(DIST).* It is measured in kilometres between the economic centres of importing and exporting countries. The greater the geographical distance between the two countries' economic centres, the higher the transaction costs of transporting goods between them and hence the coefficient is expected to be negative. A dummy variable taking the value 1 if the importer and exporter share the same language, and zero otherwise. Common official language reflects similarity in tastes that is partly explained by historically established trade ties and shared cultural links, a trade-enhancing effect is also expected for shared common language dummy. The data for geographical distance and official common language is obtained from centre d'Etudes Prospectives et d'Informations Internationales (CEPII).

Trade policy *(TP)* was included because it determines the degree of a country's inward or outward orientation (Yanikkaya, 2003). An inward oriented policy is the one in which trade and industrial incentives are biased towards production of domestic over export market. Inward regimes are generally characterised by high protection levels and direct import controls; they decrease trade between nations. On the contrary, outward policies integrate the country in to world. Anecdotal evidence suggests that outward trade policies have been more successful than inward policies (Krueger, 1978 and Edwards, 1993). The data for average tariffs level which was used as a proxy for trade policy was obtained from World Trade Integrated Solution (WITS) (2017).

On institutional quality variables, the paper used the most modern and all-inclusive data set on quality of governance available. The database was conducted for the World Bank by Kaufmann et-al. (2002). Worldwide Governance Indicators were constructed from 17 different sources and 15 organisations have been combined. The four indicators used in this paper are discussed below: corruption, government effectiveness, regulatory quality and rule of law.

The institutional quality of *government effectiveness (GE)* captures the perceptions of the quality of public services, quality of civil service and the degree of independence from political pressures, quality of policy formulation and implementation, and credibility of the government's commitment to such policies (world Governance Indicators, 2017). Competent and efficient bureaucracy can promote quick growth in trade and investment (Gani and Prasad, 2006). Efficiency and competence in carrying out government duties is important for importers and exporters to increase transactions.

We included the institutional quality for *regulatory quality (RQ)* to capture the perceptions of state's to formulate policies and implement sound polices and regulations that permit and promote private sector development (World Governance Indicators, 2016). It also refers to the

extent to which government policies impede or promote market activities. Djankov et-al (2002) state that regulatory intrusion in market enterprise activities, mainly dominated by exporters and importers, can lead to greater corruption. Gaush and Hahn (1997) argue that "the overall lesson is not that regulation is undesirable, but it often lead to undesirable economic outcomes".

Institutional quality of *rule of law* (*RL*) was also included to capture the extent to which citizens have confidence in and abide by the rules of the society, in particular quality of contract enforcement mechanisms, property rights, the police, and courts as well as the likelihood of crime and violence (World Governance Indicators, 2016). Rule of Law reflects characteristics such as maintenance of law and order in a society, limitations on government power to interfere in business activities and trading environment, and unbiased contract enforcement. Maintenance of law and order and fair contract enforcement have an important bearing on international trade as it is likely to improve exports and imports.

The fourth institutional variable included is *corruption* (*CC*). This indicator was included in the study to capture perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption (WGI, 2016). Bardhan (1997) states that the abuse of public power for private business negatively affect economic activities. In addition, corruption may allow politicians to develop institutions in one's favour (Van den Berg, 2001). For instance, quality of civil service is an important component and the absence of bribes in civil service sector directly encourage investment and trade. In their study of corruption, Tanzi and Davodi (1998) noted that "in cases of extreme corruption, maintenance of infrastructure is intentionally neglected thus allowing for corrupt officials to extract additional commission for new projects".

5.0 Estimation results

Table 4 presents the results of the gravity model specification of the determinants of COMESA export flows over the 2000-2015 period, estimated by pooled OLS estimator and random effects estimator. The Hausman specification test (table 4) failed to reject the null hypothesis of no misspecification or exogeneity of any of the regressors, hence, the random effects estimator is preferred to pooled OLS estimator and fixed effects model. The importance of the time effects, which control for common shocks affecting all COMESA countries, shows that their inclusion is justified. Therefore, estimation and interpretation of the results will be centred on the random effects model.

Table 4: Hausman specification test results

Test summary	Chi-square statistic	Chi-square d.f	Probability
Cross-section random	0.0000	7	1.000

Source: Authors' estimates from Eviews 9

Moreover, stationarity tests were conducted using LLC and IPS unit root tests. The results (table 5) display that all variables used in the model are stationary. This implies that at least one individual series does not embrace a unit root. Stationarity means that it is not necessary to perform panel cointegration tests.

Table 5: Stationarity results

Series	LLC Test	IPS test	Result
EXP	-5.66960(0.0000)***	-2.68100(0.0037)***	Stationary
GDPX	-9.52130(0.0000)***	-6.22295(0.0000)***	Stationary
GDPM	-6.46470(0.0000)***	-1.9943(0.0231)**	Stationary
TEC	-4.82885(0.0000)***	-2.68140(0.0037)***	Stationary
TP	-20.3295(0.0000)***	-10.2833(0.0000)***	Stationary

Source: Authors' estimates from EViews

Regarding the GDP-related parameter estimates, the positive and significant coefficient values of overall economic size for both exporter and importer countries support the gravity theory. The findings reflect that any increase in the per capita income in domestic economy as well as in its trading partners translate into increase in export capacity in COMESA countries at both regional and global level (table 6). The trade-impeding effect of transport costs and trade-related costs is apparent from negative coefficient of distance. Similarities in tastes and cultural ties, proxied by common language, are not important in explaining bilateral trade flows, according to the random effects model coefficient estimates.

Table 6: Gravity model estimated results for Random Effects Model

Variables	Intra-COMESA	Global-COMESA
GDP Exporter	0.1898* (3.3205)	0.7482*** (6.3633)
GDP Importer	1.3108*** (5.9477)	0.4557** (2.3205)
Distance	-3.0399*** (-5.5498)	-1.2228*** (-4.883)
Common Language	-0.7754*** (9.3071)	0.0682 (0.1750)
Trade Policy	-0.2897*** (-1.0213)	-0.1293*** (-4.4556)
Corruption	-0.33631*** (-1.4662)	-0.4786*** (-3.1407)
Government Effectiveness	0.3192** (1.1504)	0.2109* (1.2135)
Regulatory Quality	0.6334** (2.4040)	0.5102** (2.4955)
Rule of Law	-0.1811 (-0.6519)	-0.2156 (-0.8873)
Constant	12.822*** (3.5205)	4.9560** (2.0782)

Source: Authors' estimates from Eviews 9. *, **, *** indicate significance at 10%, 5% and 1%, respectively. Numbers in the parenthesis are asymptotic *t*-statistics.

The panel regression results also highlight the significance of trade policy as a major factor in explaining both intra-COMESA and global-COMESA (trade with non-COMESA countries) bilateral trade flows. The result of the trade policy variable confirm that gradual trade

liberalisation through tariff reduction strongly facilitates more trade. This also mean that living with the World Trade Organisation (WTO) principles of trade liberalisation and becoming more outward oriented strongly stimulates the export capacity in the COMESA region.

Turning to the institutional quality variables, the results obtained are more robust. The institutional variable, government effectiveness (GE), has the expected positive and statistically significant coefficient at both intra-COMESA (0.32) and global-COMESA (0.21) trade flows. The result support the findings by Francois and Manchin (2006) who note that government effectiveness positively improve the propensity to export in the developing countries. The implication of the regression result is that improvement in competence and efficiency of the civil service carrying out governments' day to day duties will improve exports by significant margins. The other implication for this finding is that countries with lower levels government intervention in the economy have higher chances of increasing exports than otherwise. The reason for low levels of significance is that the majority of the COMESA countries had poor scores for the government effectiveness indicator for institutional quality.

The rule of law variable has a negative and statistically insignificant coefficient at both intra-COMESA and global-COMESA trade levels. Although the coefficient is insignificant, the results support the theoretical analysis of Anderson and Young (1999) who concluded that lack of contract enforcement may act as a tariff on risk-neutral traders and therefore reduce trade. Poor maintenance of law and order, impartial enforcement of contracts and limitations of government power to interfere in business activities and trading environment in the region, are the key reasons for the negative sign of the coefficient. For example Egypt, Madagascar, Zimbabwe and Libya had deteriorated in their law and order situations. Other countries did not have major political or civil strife but the institutions governing law and order have been weak. The results obtained suggests that the deterioration in the quality of contract enforcement, property rights, the police and the courts seems to be weakly working against improved exports for the COMESA countries.

The coefficient of regulatory quality explain a positive and significant in influencing export flows for COMESA countries, at both regional and international levels. The implication is that improvement in regulatory quality will increase exports by 0.63% at regional level and 0.51 at global level. The result suggests that improvement in government's ability to formulate sound policies and regulations that permit and promote private sector development open up new opportunities for COMESA member states to expand export capacity through increased competitiveness. Improved regulatory quality mean reduction in transaction costs and other costs of doing business, thus lowering overall production costs while improving competitiveness. This supports the view by De Groot et-al. (2004) who note that institutional quality has a significant, positive and substantial impact on bilateral trade flows. The results are also compatible with previous empirical findings that support the significance, positive and direct impact of institutional quality on trade (Anderson and Young, 1999; Bigstein et-al., 2000; De Groot et-al., 2004; Gilbert, 2000 and Anderson and Marcouiller, 2002).

The corruption variable has the negative and statistically significant coefficient. The result is consistent with our priori expectations that the higher degrees of corruption lowers the trade volumes. It shows that the presence of corruption adds more to the costs of exporters and the

possibility of bribery and kickbacks increases the cost of doing business, hence, reduced productivity. This support the argument by Hall and Jones (1999) who found that bad institutions reduce aggregate productivity. Reduced productivity is an impediment to competitiveness in the world markets, thus countries with corruption that result in lower productivity will likely have difficulties in exporting and trading abroad. In addition, negative scores in the corruption index in majority of the countries indicate that there is high corruption level in the region which is negatively affecting trade performance. Dishonesty of civil service workforce and presence of bribes: rent seeking through bribes by civil servants from the private producers in the region, is directly discouraging trade. More so, the extreme cases of corruption in the region as denoted by lower index scores, have caused maintenance of physical infrastructure in many countries to be neglected. Poor infrastructure act as a deterrent for foreign investors who contribute to national trade and also general movement of goods and services becomes too costly.

6.0 Conclusion and Policy implications

The paper investigated the effects institutional quality as well as other traditional variables on trade. Four indicators of institutional quality were chosen: control of corruption, government effectiveness, regulatory quality and rule of law; for 19 COMESA member states: Burundi, Comoros, DR Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia and Zimbabwe. Our results of the random effects model controlled for endogeneity provide evidence that presence of corruption significantly reduces both regional and global exports; improvements in government effectiveness is weakly associated with increased regional and global exports; improved regulatory environment positively significantly facilitates increased levels of exports at both regional and global level, deterioration in the rule of law seems to be working against improved exports of the COMESA countries; abiding by the principles of WTO (reduction in tariffs) and becoming more outward oriented significantly stimulates regional and global exports.

Our results support the view that institutions do really matter and are an integral part of enhancing trade for a country. We can therefore conclude that COMESA member states have problems with the institutions that promote export flows. The results suggests that institutional quality is a pre-requisite for successful trade liberalisation policies. In addition the results encourage the efforts to increase the quality of institutions which may help COMESA region and other developing countries to improve their export capacities.

The findings of this study have the following policy implications. First, COMESA countries need to go further than just the study of several forms of institutions to focus on the improvement in quality of these institutions, particularly those that are required to facilitate trade, so as to improve export capacity. In addition, capacity building and training on effects on institutional quality on trade for easy understanding by policy-makers is worth considering.

Second, preparedness to break away from traditional ideologies and contemplate institutional reforms also make the case for reconsidering governance and challenging orthodoxy, at least because empirical studies show that the developing world have not implemented enough

reforms to control corruption and improve quality of institutions since the genesis of 'institutional quality discourse'. Zambia and Rwanda took particular reformative actions to promote reduction of red tape and streamlining of administrative and bureaucratic procedures, investigating and prosecuting corruption cases involving high-ranking officials. Supporters of institutional reform argue that COMESA countries need institutional reforms to improve governance and thus stimulating sustainable growth of economic activities, including trade.

Thirdly, by establishing Free Trade Area in 2000, COMESA have generally pursued an outward-oriented export led growth strategy. Nonetheless, the results of this policy strategy have been disappointing. Previous efforts to raise investment in key export sectors in the region have not been successful, and countries are grappling with the lack of investment in areas that support export and trade in general. There is an increasing understanding from this research evidence that institutional factors are a missing link to harness gains from trade. Therefore, it is essential that the region's become conscious of penalising effects of poor quality of institutions on their trade performance.

Finally, poor quality of institutions in the COMESA region have affected the region's ability to promote intra-regional trade and integrate into the global economy over the past decades. The reforms of the institutions in respective countries should be a highly important topic on the agenda to attract foreign direct investment and increase trade.

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