

Assessment of Trade Performance of OIC African Members in the Face of Global Economic Crisis

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The 2007/2008 global economic crisis has threatened the economic and financial fabrics of most countries. For instance, FDI inflow as a percentage of GDP in Sub-Saharan Africa (SSA), which increased by over 85% (1995-1999) reduced by 48% in 2008. Similarly, merchandise exports as a percentage of GDP for SSA reduced by 17.9% between 1995 and 2008. This paper investigates the impact of the economic crisis on the trade performance of 25 selected Organisation of Islamic Countries-OIC in Africa. Some indicators that formed our main explained variable include trade share in world market, trade per capita, and real growth in trade. In the analysis conducted in this work, we found that trade performance and global economic crises indicators differ markedly across Africa's five sub-regions and the 'heat' of the global economic crises has a significant implication for trade share of Africa's OIC members. Other findings and suggestions on how to improve the trade performance for African countries especially the OIC members are documented in the study.

1. Introduction

The effect of the global economic crisis of 2007/2008 on countries economic system is prevalent. This is especially with the consequence of globalisation, which has integrated countries relationships. Some of the effects of the crisis can be seen in the production capacity, income and expenditure, and financial markets of countries (Signorelli, Choudhry and Marelli, 2012). One of the effects of the global economic crisis on African countries, including the Organisation of Islamic Countries-OIC members, is capital flights that results from financial mobility (Kassim, 2012). Another related effect is the fall in commodity prices at the world

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market (African Development Bank and OECD, 2010). The above occurrences have some implications on trade performance of these countries, especially in terms of the share of trade in world market.

The cause of the global economic crisis, which is majorly characterised by price fluctuations across the world, has generated some debates. Some of the causes include the breakdown in stock market and ‘financialisation’ by world opportunists, financial recklessness, among others. This situation is threatening the economic and financial *well-being* of most countries. Though most countries of the world are affected, the effects are not the same; which can be attributed to the differences in countries’ economic framework.

A cursory observation of some trade performance of African countries depicts some interesting trend. For example, the merchandise exports as a percentage of GDP for Sub-Saharan African (SSA) countries, reduced by 17.9% between 1995 and 2008 (World Bank Group, 2010). The main question that looms from this discourse is ‘what is the fate of OIC African members’ trade performance at the global market, in the era of global economic crisis?’ This essentially is the motivating inquiry for this paper. The indicators of trade performance used in this study are as follows: trade share in world market, trade per capita and real growth in trade. The paper is germane given the fact that not much has been done with regards to empirically relating the recent global economic crises to trade performance in Africa; with emphasis on members of OIC.

The research question is tackled by engaging data that was sourced from World Trade Indicators (WTI) of the World Bank Group (2010), for the period 1995 to 2008. Both descriptive and econometric analyses were performed using a panel data framework. Other section of the paper are distributed in this order: background facts on trade outcome in OIC members was presented in the second section; brief review of literature was in the third section, while the formulation of empirical model was in the fourth section; the results and discussions are discussed in the fifth section, while the sixth section concludes the paper.

2. Some Background Facts on Trade Outcome in OIC Members

The Organisation of Islamic Countries (OIC) is said to be the second largest inter-governmental organisation after the United Nations, with a

membership base of 57 countries that cut across over four continents. OIC was established on 25th September 1969, following a decision of the summit at Rabat, Morocco, with 30 founding members (Organisation of Islamic Countries–OIC, 2010).

The present OIC Charter that laid down the objectives and principles of the organisation and the fundamental purpose of strengthening the solidarity and cooperation of Member States was adopted during the 11th Islamic Summit in March 2008, at Dakar, Senegal. Out of the 57 member countries of OIC, 27 are African countries, representing about 47.37%. The trade performance of OIC countries is discussed by focusing on their share in world total trade. The advantage of using trade share as a measure of trade outcome is based on the fact that price fluctuation will not have so much influence. Table 1 shows that the values of trade share in the world market for the 24 OIC members experienced some improvements, with varying magnitudes between 1995 and 2008; only nine of them were in Africa.

Apart from those whose data were not available, many of the OIC members had almost constant values between 1995 and 2008 and three of them experienced deterioration in their trade shares. Out of the 27 OIC African members, far more than half of them had trade shares stagnated between 1995 and 2008, while about three experienced decrease. The stagnation and deterioration experienced might have resulted from the *heat* of the global economic crises as a result of the dwindling global demand for commodities. This is because, with the exception of few, majority of the OIC members especially those in Africa export mainly primary commodities. The above scenario has also been recently mentioned by The Statistical, Economic and Social Research and Training Centre of Islamic Countries (SESRIC) in its 2013 report where many OIC members concentrate on the production and export of primary products. For instance, only ten OIC members accounted for the 81.3%, 76.6%, 75.4% and 68.2% of the agricultural products (See Table AI in the Appendix).

Table 1 : OIC Members Share in Trade and FDI Inflows in the World Market (1995-2008)

SN	Countries	TRDSH (%)		FDI (%)		SN	Countries	TRDSH (%)		FDI (%)	
		1995	2008	1995	2008			1995	2008	1995	2008
1	Afghanistan	na	na	na	na	30	Malaysia	1.36	1.07	1.32	Na
2	Albania	0.01	0.03	0.02	0.06	31	Maldives	0.01	na	0.00	na
3	Algeria	0.18	0.33	Na	na	32	Mali	0.01	0.02	0.04	na
4	Azerbaijan	0.02	0.11	0.10	0.00	33	Mauritania	0.01	0.01	0.00	na
5	Bahrain	0.07	0.09	0.14	0.11	34	Morocco	0.16	0.21	0.03	0.14
6	Bangladesh	0.10	0.11	0.00	0.06	35	Mozambique	0.01	0.02	0.01	0.04
7	Benin	0.01	0.01	0.00	na	36	Niger	0.01	0.01	0.00	na
8	Brunei	na	na	na	na	37	Nigeria	0.20	0.28	0.34	na
9	Burkina Faso	0.01	0.01	na	na	38	Oman	0.09	0.17	0.01	0.18
10	Cameroon	0.03	0.03	0.00	na	39	Pakistan	0.20	0.17	0.23	0.33
11	Chad	0.01	0.01	na	na	40	Palestinian Authority	na	na	na	na
12	Comoros	0.00	0.00	0.00	na	41	Qatar	na	na	na	na
13	Côte d'Ivoire	0.06	0.06	0.07	0.02	42	Saudi Arabia	0.70	1.25	-0.59	na
14	Djibouti	0.00	0.00	0.00	0.02	43	Senegal	0.03	0.03	0.01	na
15	Egypt	0.24	0.40	0.19	na	44	Sierra Leone	0.00	0.00	0.00	na
16	Gabon	0.04	0.03	-1.00	na	45	Somalia	na	na	na	na
17	Gambia	0.00	0.00	0.00	na	46	Sudan	0.02	0.06	na	0.16
18	Guinea	0.01	0.01	0.00	na	47	Suriname	0.01	na	-0.01	-0.01
19	Guinea-Bissau	0.00	0.00	na	na	48	Syria	0.09	0.10	0.03	na
20	Guyana	0.01	0.01	0.02	na	49	Tajikistan	na	na	na	0.02
21	Indonesia	0.86	0.78	1.38	0.50	50	Togo	0.01	0.01	0.01	na
22	Iran	0.27	0.71	0.01	na	51	Tunisia	0.13	0.14	0.08	na
23	Iraq	na	na	na	na	52	Turkey	0.61	1.01	0.28	1.10
24	Jordan	0.07	0.08	0.00	0.02	53	Turkmenistan	na	na	na	na
25	Kazakhstan	0.10	0.33	0.31	0.88	54	Uganda	0.02	0.02	0.04	0.05
26	Kuwait	0.21	0.38	0.00	0.00	55	United Arab Emirates	na	na	na	na
27	Kyrgyzstan	0.01	0.02	0.03	0.01	56	Uzbekistan	0.06	0.05	na	na
28	Lebanon	0.07	0.12	na	0.22	57	Yemen	0.04	0.06	na	na
29	Libya	0.11	0.20	-0.03	na						
	World Average	0.59	0.64	0.68	1.05						

Note: na – Not Available; TRDSH (%) = Trade share of the country expressed a percentage of total world trade; FDI (%) = Net Foreign Direct Investment inflow expressed a percentage of the world FDI inflows; Countries in **bold** are African members. 0.00 values do not mean zero shares but very low as the values were approximated to 2 decimal places.

Source: Authors' compilation from World Bank Group (2010).

A different and vital observation that can be made from Table 1 is that out of the 57 OIC members, only five had trade share values that exceeded the world average of 0.59% and 0.68%, in 1995 and 2008, respectively. Some of the countries that are in this category include; Indonesia, Iran (in 2008), Malaysia, Saudi Arabia and Turkey. Not too surprisingly, none of the 27 African members were in this league. A possible explanation for this is due to the fact that many of these countries have low capacity for production and trade (Peridy and Abedini, 2008; Abedini and Peridy, 2009; Ogunrinola and Osabuohien, 2010). Furthermore, Table 1 reveals that all the African members' trade share in the world market were lower than the world average, all through the period presented.

A similar scenario can be observed for the share of FDI inflow in this region, to the world flows. In Table 1, four OIC Members experienced negative net FDI inflow, while only two (Indonesia and Malaysia) had shares in FDI inflow that were above the world average of 0.68% in 1995. However, in 2008, only Turkey exceeded the global average of 1.05%. This occurrence is likely to be connected with the global economic crisis of 2007 and 2008, which made foreign investors sceptical, especially with regards to investing in developing countries, given uncertainties in their returns on investment.

Some other significant experiences of the foreign exchange market of some African OIC members, presents a further scrutiny. The exchange rates of most of these countries have experienced some extent of depreciation in values, during the period of the crisis. For instance, Comoros depreciated by 45%, Democratic Republic of Congo (2%), Ghana (21%), Nigeria (27%), Seychelles (84%), South Africa (27%), Uganda (22%) and Zambia (43%) (United Nations Conference on Trade and Development-UNCTAD, 2009). These depreciations will have substantial impact on trade, especially with regards to the pricing of export products.

An important inference that can be drawn from the foregoing is that OIC members, especially the African countries, have experienced trade performances that are below expectations. Since most of the OIC members have comparative advantage in the trade of primary products (such as agricultural produce).

3. Brief Review of Literature

The concept of the global economic crisis is not a strange phenomenon. The current global economic crisis, which started full-swing in late 2007, is characterised by some features. These include the crash in world stock markets, the capitulation of some large financial institutions and the laying-off of workers. The crisis is having far-reaching effects on countries across the world (Dirk, 2008; World Bank, 2009; Jimoh, 2010; Osabuohien and Efobi, 2013).

Thurlow *et al.* (2011), in a study that applied the dynamic computable general equilibrium model to decompose impacts and estimate distributional outcomes, observed that in Vietnam; the 2008 commodity crisis increased unemployment and poverty, by favouring labour-intensive exports, especially in agriculture. The authors equally found that the financial crisis plunged more than a million workers into unemployment and about 3 million people were below the US\$2-a-day poverty line. The net effect of the crisis has left Vietnam little changed from a baseline path, in terms of aggregate indicators including the poverty rate.

In a related study, Chor and Manova (2009) investigated the link between credit conditions and export performance, using data that incorporates the global financial crisis period. They found that the financial crisis had severe impact on trade, majorly through adverse credit conditions. Although the conditions were unevenly prominent across industries, but the bulk of effect were on industries that were financially vulnerable, in terms of their dependence on credit (Bricongne *et al.*, 2010).

Macias and Massa (2010) studied the effect of global financial crisis on selected countries, using a panel cointegration approach and found out that the global financial crisis is likely to have an important effect on the growth of Sub Saharan African countries, through the private capital inflow channel. This is somewhat related to Dirk (2008), who pointed out that FDI is a major channel through which the global financial crisis have an effect on African countries. UNCTAD (2009) relates this effect on the fact that during the global financial crisis, the level of FDI in other nations reduced due to two major factors-falls in access to financial resources in the form of poor credit facility and high cost of

finance, as well as decline in profit and poor propensity to invest across the world. These however, have affected trade outcome (Dirk, 2008).

In a more recent study by Signorelli, Choudhry and Marelli (2012), using panel of 86 countries (1980-2005) and random effects technique, examined how global economic crises affects female labour participation and unemployment rates. It was found by the authors that labour markets in countries belonging to different income groups respond differently to the economic crises. Their results conclude that financial crises (measured by banking, currency and debt crises) has negatively and significantly impacted on female participation rates, mainly in high income and upper medium income economies.

Kassim (2012), on the other hand, observed the effect of the global economic crisis on the performance of the stock market integration of Malaysia with United States of America and Japan. The author observed that the economic crisis presents changes in the nature of integration among the markets. The author observed that the markets were shown to be highly integrated at the initial stage of the crisis, but as information became clearer and it is evident that the crisis is prolonged, investors opted for other types of investment rather than the equity markets. This action resulted in an independent performance of the markets.

Despite the far reaching effect of the crisis on many countries around the world, some level of hope is being experienced for OIC countries, as some of its members have shown recovery in 2010; GDP growth increased from 3.13% in 2009 to 5.25% in 2010 (Hzaine, 2012). However, a caution was noted that the OIC Member States in particular, which had recovered from the global recession of 2009 and has witnessed resilience to the crisis, would be hit through trade and financial channels (Hzaine, 2012). The author also noted that Mediterranean and Sub Saharan Africa OIC Countries, that are involved in some form of Preferential Trade Agreements (PTA) with EU countries, are likely to be negatively affected by the sovereign debt crisis in Euro zone; some of the effect include; the reduction of EU imports, the diminution of tourism, financial flows and the drop of the workers' remittances transfers.

4. Formulation of Empirical Model

The empirical analysis of this paper is based on the international trade theory; this theory has the basic maxim that the key factors that can influence international trade include: exchange rate, the level of growth of the domestic economies, among others (Aluko, 2003). The empirical model therefore includes measures of the global financial crisis and other covariates such as exchange rate, real per capita GDP, foreign reserves and Foreign Direct Investment-FDI. The main explained variable is Trade Performance of the selected African OIC member countries. The baseline model is presented in a functional form as:

$$trdout^k = f(rpgdr, exch, lendr, fores, fdi, globdum, U) \quad (1)$$

Equation (1) is restated in an explicit form as:

$$trdout^k_{it} = \beta_{0i} + \beta_1 rpgdr_{it} + \beta_2 exch_{it} + \beta_3 lendr_{it} + \beta_4 fores_{it} + \beta_5 fdi_{it} + \beta_6 globdum_{it} + \varepsilon_{it} \quad (2)$$

Thus, the logarithmic form of the equation can be expressed as:

$$\ln trdout^k_{it} = \beta_{0i} + \beta_1 \ln rpgdr_{it} + \beta_2 \ln exch_{it} + \beta_3 \ln lendr_{it} + \beta_4 \ln fores_{it} + \beta_5 \ln fdi_{it} + \beta_6 \ln globdum_{it} + \varepsilon_{it} \quad (3)$$

where:

trdout^k: trade performance. Superscript 'k' signifies the three indicators of trade performance, namely: trade share in the world market; trade per capita, and real growth rate in trade. The inclusion of the three covariates is with a view to obtain a more robust estimate and arrive at more informed conclusions.

rpgdr: per capita GDP. This is calculated as the real GDP divided by the total population. This measures the productivity of the country and will indicate ability to engage more in trading. A positive relationship is expected with trade performance.

exch: official exchange rate of domestic currency to the USD. As the exchange rate depreciates, it is expected to cause international demand for the country's export higher, which connotes better trade performance. However, this is dependent on whether the countries involved have satisfied the Marshal-Lerner condition with regards to the elasticity of import and export³.

³The Marshal-Lerner condition in simple terms implies that for a currency devaluation policy to have a significant and positive effect on international trade performance

- lendr*: official lending rate. This is the cost of capital; which implies that a higher lending rate will denote lesser propensity to borrow and invest. This will have effect on productivity and by extension engagement in trading activities. Lending rate is expected to have a negative relationship with trade performance.
- fores*: foreign reserve of the countries in USD (United States Dollars), shows the external credit worthiness. As a result, the external community will be more inclined to do business with a credit worthy country (Akitoby and Stratmann, 2009; Olokoyo, Osabuohien and Salami, 2009). This should have a positive relationship with trade outcome.
- fdi*: measure of foreign direct investment inflow. Most FDIs are multinationals that engage in intensive productive activities, including trade. Hence, an increase in FDI inflow will lead to an increase in trade outcome, *ceteris paribus*.
- globdum*: global economic crisis dummy, defined as the indicator of global economic crisis. Year 2007 and 2008 are represented as 1, and other years, 0. The choice of the period 2007 and 2008 is based on the fact that the *heat* of the current global economic crisis as experienced during these period (Zoellick, 2010).
- β_{0i} : intercept of the model.
- $\beta_{1...5}$: coefficients of the independent variables; it is expected to reflect the sign and magnitude of influence of the individual independent variables on the respective indicators of trade performance.
- it*: individual country and the period identifier (i.e. $i = 25$, $t = 14$, 1995-2008).

The model formulated was first estimated, using the Pooled Ordinary Least Squares (OLS) estimation technique. Then the Fixed Effect-FE and Random Effect-RE techniques were further estimated and were used to observe the relationships between our main variables. We prefer the use of the FE and RE techniques because of the following reasons: it

(especially trade balance); the sum of price elasticity of export and import in absolute terms must be greater than one. Appleyard, Field and Cobb (2010:599) provide useful mathematical derivation).

allows us to observe the changes that occur within different units over time. This approach will also allow for the control of those factors that account for unobserved country heterogeneity. Such heterogeneity is likely to be visible because of the time-invariant national characteristics (such as certain regulations and features of the financial system) and year-specific factors (such as world-wide economic shocks); the estimates from the techniques remain unbiased even when there are obvious missing data for some periods of time across the samples of study. The above are essential considering that there are some missing data for variables that involves developing countries (particularly in Africa) as have been observed by others like Signorelli *et al.*, (2012) and Cissokho *et al.* (2013). The Hausman test was performed to infer, which is more efficient between FE and RE.

5. Results and Discussions

This section presents the empirical results that were obtained from the estimations of the formulated model. STATA 10.1 and E-views 5.1 Software were used for the estimations. We started with the presentation of the summary statistics. Twenty five (25) out of twenty seven (27) OIC African countries were included in our sample. This was informed by data availability. This represents 92.59% of the entire OIC countries in Africa. The selected countries include; Algeria, Benin, Burkina Faso, Cameroon, Chad, Comoros, Djibouti, Egypt, Gabon, Gambia, Guinea, Guinea Bissau, Libya, Mali, Mauritania, Morocco, Mozambique, Niger, Nigeria, Senegal, Sierra Leone, Sudan, Uganda, Togo, and Tunisia.

Summary Statistics of Main Variables

As reported in Table 2, trade share (*trdshare*) has a mean value of 5.5% for OIC African members with a minimum value of 0 and a maximum value of 40%. This is an indication that during the period of study, the average ratio of trade as a share of the world trade is 5.5%, which is quite low. This corroborates with Peridy and Abedini (2008) who noted that most developing countries performed below capacity in trade (car export, for an example). Although the maximum value is 40%, this is traceable to some OIC countries, especially those of the North African region such as Egypt. The average real trade growth (*Trdgrot*) and trade per capita (*Trdcap*) is 6.44% and 507.81 annual growth rate, respectively. The minimum and maximum value of the real trade growth

rate and trade per capita are -58.10 and 62.27 as well as 59.48 and 8751.05, respectively.

The average real per capita GDP (*Rpgdp*) and lending rate (*Lendr*), for the OIC countries are 1207.75 and 17.48%. This is with a minimum and maximum value of 105.16 and 8751.05 for *Rpgdp* and 6% and 51.75% for *Lendr*. The average lending rate for the OIC countries is very high, which can dissuade investment especially domestic small scale investment and if there is somewhat disincentive in investment; local production of output becomes small, which is capable of affecting export adversely.

The average value of foreign reserve (*Foresrv*), foreign direct investment (*fdi*) and exchange rate (*Esch*) is 4324.41, 5.24E+08 and 480.82, respectively. The minimum and maximum values of the variables are 0.31 and 110180.00 for foreign reserve, 4.89E+08 and 1.16E+10 for FDI and 0.58 and 3644.33 for the exchange rate.

Table 2 Summary Statistics of OIC African Members

	<i>Trdshare</i>	<i>Trdgrot</i>	<i>Trdcap</i>	<i>Rpgdp</i>	<i>Lendr</i>	<i>Foresrv</i>	<i>Fdi</i>	<i>Exch</i>
Mean	0.06	6.446	507.81	1207.75	17.48	4324.41	5.24E+08	480.82
Min	0.00	-58.10	58.48	105.157	6	0.31	-4.89E+08	0.58
Max	0.40	62.265	8751.05	9922.301	51.75	110180.00	1.16E+10	3644.33

Source: Authors' computation using STATA 10.1

Correlation Test

As preliminary estimation process, we carried out the correlation matrix. The correlation matrix in Table 3 indicates that the respective measures of trade performance are positively correlated with foreign reserve and FDI. The implication of this is that trade outcome tends to move towards the same direction with them.

Contrariwise, exchange rate exhibits negative relationship with trade outcome indicators: trade share and trade per capita. This is in line with the basic international trade theory. By and large, the coefficient of the

correlation analysis for the regressors, points out that there is no issue of multicollinearity.

Table 3: Correlation Matrix among Variables

	<i>Lntrdsh</i>	<i>Lntrdpc</i>	<i>Trdgrot</i>	<i>lnrpgdp</i>	<i>Lnlenr</i>	<i>lnfores</i>	<i>lnfdi</i>	<i>lnexch</i>
<i>Lntrdsh</i>	1.000							
<i>Lntrdpc</i>	0.639	1.000						
<i>Trdgrot</i>	0.070	0.005	1.000					
<i>lnrpgdp</i>	0.678	0.921	-0.061	1.000				
<i>Lnlenr</i>	-0.421	-0.696	0.018	-0.746	1.000			
<i>lnfores</i>	0.805	0.546	0.010	0.594	-0.550	1.000		
<i>lnfdi</i>	0.702	0.290	0.261	0.293	-0.231	0.646	1.000	
<i>lnexch</i>	-0.673	-0.577	0.007	-0.543	0.429	-0.646	-0.361	1.000

Source: Authors' Computation using E-views 5.1

Regression Results of the Estimated Model

To obtain the magnitude of the impacts of the chosen explanatory variables on the indicators of trade performance, the study carried out regression analysis using the pooled Ordinary Least Squares (OLS) as baseline and then the Fixed Effect (FE) and Random Effect (RE) estimators, respectively. The results for each of the indicators of trade performance, namely; trade share, trade per capita and real growth in trade, as reported in Tables 4-6, in that order. The tables report estimates obtained using the 25 selected OIC African members, without and with global economic crisis dummy.

As observed from Table 4, foreign reserve was not significant using all the estimators for OIC members, while real per capita GDP was statistically significant. Lending rate had the expected negative sign but was not significant at the usual levels except in the OLS technique. Exchange rate had the expected negative sign which is significant for OIC sampled countries. The statistics in Table 4, which also holds true for Tables 5 and 6; especially the F-statistics and Wald test, show that the respective models had good fit. While the Hausman test points out that efficiency do not permeate.

Table 4: Regression Result for Africa and OIC Members (Dependent Variable: Trade Share)

Estimators	OIC				
	Without globdum			With globdum	
	OLS	FE	RE	FE	RE
<i>Lnlnendr</i>	1.933 (0.000) ^a	-0.145 (0.260)	-0.067 (0.651)	-0.148 (0.251)	-0.041 (0.794)
<i>Lnlnforesrv</i>	0.303 (0.000) ^a	-0.012 (0.471)	0.004 (0.837)	-0.010 (0.540)	0.010 (0.598)
<i>Lnlnfdi</i>	0.221 (0.000) ^a	-0.000 (0.970)	0.011 (0.372)	0.000 (0.985)	0.015 (0.239)
<i>Lnlnexch</i>	-0.131 (0.007) ^a	-0.162 (0.001) ^a	-0.159 (0.001) ^a	-0.164 (0.001) ^a	-0.163 (0.001) ^a
<i>Lnlnrpgdp</i>	1.008 (0.000) ^a	1.461 (0.000) ^a	1.259 (0.000) ^a	1.486 (0.000) ^a	1.221 (0.000) ^a
<i>Globdum</i>				-0.044 (0.493)	-0.035 (0.653)
<i>Constant</i>	-21.075 (0.000) ^a	-11.745 (0.000) ^a	-11.273 (0.000) ^a	-11.905 (0.000) ^a	-11.198 (0.000) ^a
<i>R²</i>	0.818	0.552	0.543	0.554	0.536
<i>f-stat</i>	120.58 (0.000) ^a	29.86 (0.000) ^a		24.86 (0.000) ^a	
<i>Wald-test</i>			147.76 (0.000) ^a		145.23 (0.000) ^a
<i>Hausman Test</i>					
<i>N</i>	350	350	350	350	350

Note: OLS- Ordinary Least Squares; FE – Fixed Effects; RE- Random Effects; P-values are in parenthesis. Superscript a,b,c indicate significant at 1,5 and 10%, respectively. R² in OLS is the adjusted, while in FE and RE, it is overall

Source: Authors' computation using STATA 10.1.

Using trade per capita as indicator of trade outcome, Table 5 reports that per capita GDP (*Lnlnrpgdp*), foreign reserve (*Lnlnforesrv*) and FDI inflow (*Lnlnfdi*), had the expected positive impact on trade per capita. However, at a closer look, one will observe that real per capita GDP was significant for OIC members, for all the estimators. Contrarily, the inflow of FDI was mainly significant for OIC Members, using the respective estimators. This can be explained by the fact that most OIC Members are rich in resource endowment, which attracts FDI and will translate to better trading activities, as most of multinational companies that come with the FDI inflow usually engage in large scale trading. For foreign reserve, it was not significant for OIC Members except for OLS, which appeared inconsistent.

Table 5: Regression Result for Africa and OIC Members (Dependent Variable: Trade Per Capita)

<i>OIC</i>					
	<i>Without Globdum</i>			<i>With Globdum</i>	
<i>Estimators</i>	<i>OLS</i>	<i>FE</i>	<i>RE</i>	<i>FE</i>	<i>RE</i>
<i>Lnendr</i>	-0.126 (0.321)	-0.027 (0.766)	-0.032 (0.722)	-0.022 (0.805)	-0.026 (0.773)
<i>Lnforesrv</i>	0.045 (0.018) ^b	0.009 (0.430)	0.006 (0.586)	0.011 (0.321)	0.009 (0.424)
<i>Lnfdi</i>	0.016 (0.211)	0.021 (0.007) ^a	0.023 (0.002) ^a	0.020 (0.009) ^a	0.022 (0.003) ^a
<i>Lnexch</i>	-0.068 (0.000) ^a	-0.049 (0.157)	-0.055 (0.044) ^b	-0.053 (0.127)	-0.053 (0.050) ^b
<i>Lnrgdp</i>	0.958 (0.000) ^a	1.410 (0.000) ^a	1.304 (0.000) ^a	1.373 (0.000) ^a	1.281 (0.000) ^a
<i>Globdum</i>				0.066 (0.050) ^c	0.076 (0.089) ^c
<i>Constant</i>	0.358 (0.612)	-3.730 (0.000) ^a	-3.160 (0.000) ^a	-3.492 (0.000) ^a	-2.988 (0.000) ^a
<i>R²</i>	0.915	0.755	0.754	0.759	0.758
<i>f-stat</i>	287.33 (0.000) ^a	74.53 (0.000) ^a		63.02 (0.000) ^a	
<i>Wald-test</i>			471.440 (0.000) ^a		483.230 (0.000) ^a
<i>Hausman Test</i>			6.970 (0.223)		5.820 (0.444)
<i>N</i>	350	350	350	350	350

Note and Source: Same as Table 4

The results in Table 5 indicate that exchange rate and lending rate both met the *a priori* expectation, with regards to inverse relationship with trade outcome, in this case, trade per capita. Be that as it may, the lending rate variable was not significant for OIC Members using the Fixed Effects and random effect models, but the contrary was observed for exchange rate, which was found significant using RE. Again, focusing on the global economic crises dummy, it can be observed that there is a significant and positive relationship between trade per capita and FDI, as well as real per capita GDP variables. However, the exchange rate variables displayed an adverse significant relationship with trade per capita. This underscores the adverse effects of the crises, especially as displayed by currency crash.

Table 6: Regression Result for Africa and OIC Members
(Dependent Variable: Real Growth in Trade)

<i>Estimators</i>	<i>OIC</i>				
	<i>Without Globdum</i>		<i>With Globdum</i>		
	<i>OLS</i>	<i>FE</i>	<i>RE</i>	<i>FE</i>	<i>RE</i>
	-5.202	10.262	-5.202	-10.097	-5.418
<i>Lnlnedr</i>	(0.359)	(0.330)	(0.357)	(0.340)	(0.343)
	1.688	1.463	1.688	1.393	1.665
<i>Lnforesrv</i>	(0.051) ^c	(0.265)	(0.049) ^b	(0.295)	(0.054) ^c
	2.258	2.601	2.258	2.622	2.276
<i>Lnfdi</i>	(0.000) ^a	(0.003) ^b	(0.000) ^a	(0.003) ^a	(0.000) ^a
	-0.292	-2.183	-0.292	-2.073	-0.254
<i>Lnexch</i>	(0.721)	(0.595)	(0.721)	(0.616)	(0.759)
	-2.368	2.956	-2.368	4.073	-2.429
<i>Lnrpgdp</i>	(0.353)	(0.804)	(0.351)	(0.741)	(0.342)
				2.009	1.505
<i>Globdum</i>				(0.714)	(0.761)
	8.414	-89.663	8.414	-96.426	8.841
<i>Constant</i>	(0.786)	(0.265)	(0.786)	(0.245)	(0.776)
<i>R²</i>	0.119	0.095	0.069	0.096	0.070
	3.430	2.410		2.010	
<i>f-stat</i>	(0.006) ^c	(0.041) ^b		(0.069) ^c	
			17.130		17.100
<i>Wald-test</i>			(0.004) ^a		(0.009) ^a
			4.510		4.570
<i>Hausman Test</i>			(0.479)		(0.600)
<i>N</i>	350	350	350	350	350

Note and Source: Same as Table V

A look at Table 6 shows that real per capita GDP, FDI and foreign reserves, like in other previous discussed trade performance, had the expected positive influence on real growth in trade for OIC members. At any rate, only FDI inflow was significant using the respective estimators, while foreign reserves were mainly significant using Random Effects estimator. The coefficient of other explanatory variables point out that lending rate and exchange rate came out with the expected negative sign but they were not significant at the usual levels. With respect to the global economic crisis dummy, it had the expected positive sign but it was not significant.

The results in Table 6 appear somewhat different, in terms of level of significance, from those in the previous trade performance models (per capita trade and trade share). A possible reason is that the real growth in trade is not a contemporaneous phenomenon. This means that the period may be too short to fully take into cognisance the influence of global economic crises. This is unlike other trade outcome indicators such as

trade per capita and trade share, which can experience changes resulting from global economic crises in a short period of time. This calls for further studies, in the near future, that examines the period of global economic crises on real growth in trade in Africa.

6. Conclusion

Some important debates have stemmed both within and outside the academic circles from global economic crisis. This study observes that not much empirical studies have been done in Africa particularly those that belong to Organisation of Islamic Countries (OIC) with regards to their trade performance. The paper achieved its objective using secondary data from World Trade Indicators of the World Bank Group (2010) for the period 1995-2008 analysed using both descriptive and econometric analyses and hinging on international trade theory.

Based on some indicators of trade performance namely: trade share and real growth in trade, it could be said that for the OIC African members, there is an indication that during the period of study, the average ratio of trade as a share of the world trade is quite lower than the global average. This suggests that the sampled countries performed below capacity in trade. The above implies that the improvement (or deterioration) of trade performance for OIC members in Africa can be trailed to the increase (or decrease) in their economic performance. Therefore, in the face of crisis at the global market, resilience nature of the domestic economy can provide a buffer for them against shocks at the international market. In view of the above, we recommend that harnessing and restructuring of the domestic economic structures, will be a veritable tool in developing trade performance.

Another important finding from the study is the relationship between the inflow of FDI and trade performance of OIC Members in Africa. Given the extent of resource endowment of OIC members, there is the high attraction of FDI, which also portends some challenge in the face of crises. This is because, at the event of crises, there is the possibility of increased outflow of these foreign capitals. This foretells that OIC members need to be committed to improved diversification of their trade basket away from primary resources to manufacturing and services. The relevance of this is that processed, manufactured and service trade tend to be more stable than primary products at the international market. The

connotation of this indicates that trade performance of OIC African members will be enhanced and become more stable when there is ability to diversify towards finished products compared to primary products. This is essential because it will help to stabilise the exchange rate, which is also an important element for enhanced trade performance.

In conclusion, although the global economic crisis appears to have adverse effects on the trade performance of OIC members, it can also create an opportunity for them to reconsider their trade and investment strategies and learn how to cope with a dramatically transforming international financial landscape. For instance, member countries need to enhance intra-regional trade to enhance greater access to their markets.

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Appendix

Table AI: Top OIC Agricultural Producers

Cereals		Fruits		Vegetables		Meat	
(Million tonnes)							
Indonesia	83.4	Indonesia	17.2	Turkey	27.4	Indonesia	3.0
Bangladesh	52.6	Turkey	14.4	Iran	26.0	Pakistan	2.8
Pakistan	36.2	Iran	11.2	Egypt	18.9	Turkey	2.6
Turkey	35.2	Uganda	11.1	Nigeria	11.4	Iran	2.2
Kazakhstan	26.6	Egypt	9.9	Indonesia	10.1	Egypt	2.0
Iran	23.7	Nigeria	9.9	Uzbekistan	8.3	Malaysia	1.7
Nigeria	22.0	Pakistan	6.3	Morocco	5.7	Nigeria	1.5
Egypt	22.0	Cameroon	5.2	Algeria	5.5	Morocco	1.1
Uzbekistan	7.1	Bangladesh	3.7	Pakistan	5.5	Kazakhstan	0.9
Morocco	6.0	Algeria	3.5	Bangladesh	4.2	Uzbekistan	0.9
OIC Total	387.3		120.8		163		27.3

Note: Countries in **bold** are African members

Source: Authors' compilation from The Statistical, Economic and Social Research and Training Centre for Islamic Countries-SESRI (2013).