GLOBAL ECONOMIC CRISIS AND TRADE OUTCOMES IN OIC: THE CASE OF AFRICAN MEMBERS

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Abstract
Global economic crisis, which is characterised by price fluctuations across the world, has generated several debates. The crisis is threatening the economic and financial fabrics of most countries with varying degrees of effects due to differences in country's structural framework. This may have some implications on trade outcomes. For instance, merchandise exports as a percentage of GDP for SSA reduced by 17.9% between 1995 and 2007. Thus, this paper investigates the effects of global economic crisis on trade outcomes using some indicators, namely: trade share in world market, trade per capita, and real growth in trade in selected OIC Members in Africa. This was achieved by employing data sourced from World Trade Indicators and World Development Indicators, which were analysed with descriptive analysis and econometric techniques based panel data framework for the period 1995-2008. It was established, among others, that trade outcomes of OIC Members in Africa are adversely and significantly influenced by global economic crisis. The results, inter alia, call for inward-looking alternatives such as pursuance of investment friendly ambience in enhancing their trade outcomes.

Keywords: Exchange rate, FDI, Global economic crisis, Trade outcomes.

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Global economic crisis and Trade Outcomes in OIC: The Case of African Members

1 Introduction

Global economic crisis that is characterised by price fluctuations across the world, among other features, has generated serious debates both within and outside the academic spheres. Some factors have been adduced as its causes such as breakdown in stock market and 'financialisation' by world opportunists, financial recklessness, *inter alia*. The global economic crisis is threatening the economic and financial fabrics of most countries; while most countries of the world are affected, the effects may not be uniform due to differences in structural peculiarities in countries.

Integrating national systems into the globalised world has become a major aspect in economic relations and co-operations around the world. This has led to several integrations and co-operations amongst countries with a view to utilising economies of scale and achieving mutual progress. Examples of such integrations include: European Union (EU), North America Free Trade Agreement (NAFTA), Asia-Pacific Economic Co-operation (APEC), Southern African Currency Union (SACU), Organisation of Islamic Countries (OIC), and so on.

One of the effects of global economic crisis experienced in most African countries including the Members of OIC is the issue of financial mobility especially foreign investments, which has resulted from speculations and uncertainties in most economies. For instance, Foreign Direct Investment (FDI) inflow as a percentage of Gross Domestic Products (GDP) in Sub-Saharan Africa (SSA), which increased by over 85% between 1995 and 1999 drastically reduced by 48% between 2004 and 2008 (World Bank Group, 2010). Another related effect is the fall in commodity prices at the world market. The above occurrences have some implications on trade outcomes in OIC Members in Africa especially in terms of their share of trade in world market, and so on.

A cursory observation at some trade outcomes, which imply the benefits/costs that a country gets from engaging in trade with the rest of the world, depicts some features. An example is, the merchandise exports as a percentage of GDP for SSA that reduced by 17.9% between 1995 and 2007 (World Bank Group, 2010). The main question that looms in this discourse is 'what is the fate of OIC African Members' trade outcomes at the global market in the era of global economic

crisis? This essentially motivated this paper, which is poised at examining the effects of the global economic crisis on trade outcomes in Africa especially those of OIC Members. The indicators of trade outcomes used include: 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 in empirically relating the current global economic crises to trade outcomes in Africa with emphasis on African OIC members.

The objective of the paper was achieved by engaging data sourced from World Development Indicators (WDI) and World Trade Indicators (WTI) for the period 1995 to 2008. Both descriptive and empirical analyses were carried out using panel data framework involving Pooled Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE). Other parts of the paper are presented in sections in this order: some background facts on trade outcome in OIC Members; brief review of literature; formulation of empirical model; results and discussions; and conclusion.

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 of 57 countries that cut across four continents. It was established 25th September, 1969 following a decision of the summit at Rabat, Morocco with 30 founding Members, which has grown to 57 as at 2010 (Organisation of Islamic Countries –OIC, 2010). However, the present OIC Charter that laid down the objectives and principles of the organisation and fundamental purposes to strengthen the solidarity and cooperation among the Members was adopted during the 11th Islamic Summit in March 2008 at Dakar, Senegal. Out of the 57 OIC countries, 27 are in Africa, which represent about 47.37%. The OIC Members and some trade outcome indicators are presented in Table 1.

Trade share in world total trade as an indicator of trade outcome presented in Table 1 shows that trade share values in the world market for 24 OIC Members had improvement with varying magnitudes between 1995 and 2008; only nine of them were in Africa. The advantage of using trade share as a measure of trade outcome is the fact that price fluctuation will not have much influence as such changes will fizzle out from the numerator and denominator. The African Members that had increase include the five Northern African countries and four others.

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

SN	Countries	TRDSH (%) 1995	TRDSH (%) 2008	FDI (%) 1995	FDI (%) 2008	SN	Countries	TRDSH (%) 1995	TRDSH (%) 2008	FDI (%) 1995	FDI (%) 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: World Bank Group (2010).

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 global economic crises where the global

demand for commodities has dwindled. Furthermore, majority of the OIC Members especially those in Africa export majorly commodities.

Another important observation that can be made from Table 1 is that out of the 57 OIC Members, only four/five had trade share values that exceeded the world average of 0.59% and 0.68% in 1995/2008, respectively. These include; Indonesia, Iran (in 2008), Malaysia, Saudi Arabia and Turkey; unfortunately, none of the 27 African Members were in the league. 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. This can be traceable to their low capacity in production and trade as it has been noted that most developing countries have low capacity in production, and by extension, trade (Peridy and Abedini, 2008; Abedini and Peridy, 2009).

A similar scene can be observed for the share of FDI inflow in 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. In 2008, only one (Turkey) exceeded the global average of 1.05%. The reason for the above may be related to global economic crisis that has made investors to be sceptical given uncertainties on returns to investment. The important inference that can be made from the foregoing is that OIC Members especially the African countries have had trade outcomes that are below expectations as well as FDI.

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 2007 is characterised by some features (Zoellick, 2010). These include the crash in world stock markets, the capitulation of some large financial institutions, laying-off workers, among several others. The crisis is having far-reaching effects on countries across the world especially in Africa in many facets including trade (Dirk, 2008; Abdoulie, 2009; World Bank, 2009; German Government, 2010, Jimoh, 2010).

Thurlow et al (2010) in a recent study using a dynamic computable general equilibrium model to decompose impacts and estimate distributional outcomes observed that in Vietnam; the 2008 commodity crisis increased employment and reduced poverty by favouring labour-intensive

exports, especially in agriculture. The authors equally found that the financial crisis reversed these gains where it plunged more than a million workers into unemployment and about 3 million people below the US$2-a-day poverty line. In a related study, Chor and Manova (2009) investigated the link between credit conditions and export performance using data that incorporates the global economic 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 are financially vulnerable in terms of their dependence on credit (Bricongne et al, 2010).

Furthermore, Macias and Massa (2009) studied the effect of global economic crisis on selected countries, using a panel cointegration approach and found out that the global economic crisis is likely to have an important effect on the SSA growth, 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 economic crisis have an effect on African countries. United Nations Conference on Trade and Development - UNCTAD (2009) relates this effect to the fact that during the global economic crisis, the level of FDI reduced due to two major factors, namely: falls in access to financial resources in the form of poor credit facility, high cost of finance as well as decline in profit, and poor propensity to invest across the world. This however would have affected trade outcome (Dirk, 2008).

Some other significant experiences of the foreign exchange market have also characterised the crisis. For example, the exchange rates of most African countries have experienced depreciation in their values. These include: Comoros (45%), Democratic Republic of Congo (2%), Ghana (21%), Nigeria (27%), Seychelles (84%), South Africa (27%), Uganda (22%), Zambia (43%), among others (Economic Commission for Africa- ECA, 2009). These depreciations will have some impacts on trade with regards to the pricing of the products. Thus, it becomes crucial to investigate the influence of such indicators on trade outcome of African countries within the context of OIC membership, which this paper addresses.

4 Formulation of Empirical Model

This paper hinges its empirical model on international trade theory that has the basic maxim that key factors that influence international trade include: exchange rate, the level of growth of the

domestic economies, among others (Aluko, 2003). Thus, the formulated model engaged exchange rate, real per capita GDP and incorporates other explanatory variables especially indicators of global economic crisis to examine their influence on trade outcomes in selected OIC Members that are in Africa. This is related in a functional form below:

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

Equation (1) is stated in an explicit form thus:

$$trdout^{k}_{\ it} = \beta_{0i} + \beta_{1}\, rpgdr_{\ it} + \beta_{2} exch_{\ ti} + \beta_{3}\, lendr_{\ it} + \beta_{4}\, fores_{\ it} + \beta_{5}\, fdi_{it} + \beta_{6} globdum + \varepsilon_{it} \quad (2)$$

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

$$lntrdout^{k}_{\ it} = \beta_{0i} + \beta_{1}\, lnrpgdr_{\ it} + \beta_{2} lnexch_{\ ti} + \beta_{3}\, lnlendr_{\ it} + \beta_{4} lnfores_{\ it} + \beta_{5} lnfdi_{it} + \beta_{6} globdum + \varepsilon_{it} \quad (3)$$

where:

$trdout^{k}$: trade outcomes. Superscript '*k*' signifies the three indicators of trade outcomes, namely: trade share in the world market (*trdsh*); trade per capita (*trdpc*), and real growth rate in trade (*trdgrot*). These imply three equations with each indicator as dependent variable with a view to obtaining more robust estimates and arrive at more informed conclusions. (The logarithm of real growth in trade was not taken given the fact that some of the OIC Members in the study had negative values).

rpgdr: per capita GDP. This is calculated as the real GDP divided by population. This measures the productivity of the country. This will indicate ability to engage more in trading as what will be traded (exported) will stem from production. So it is expected to have positive relationship with trade outcomes.

exch: official exchange rate of domestic currency to the United States Dollars (USD). As the exchange rate depreciates, it will make international demand for a country's export higher, which connotes better trading at the global market. However, this is dependent on whether the countries involved have satisfied the Marshal-Lerner condition with regards the elasticities of import and export (Appleyard, Field and Cobb, 2010).

lendr: official lending rate. This is the cost of capital, so a higher lending rate will denote less propensity to borrow and invest, which will have effect on engagement in trading activities. Lending rate is expected to have negative relationship with trade outcomes.

fores: foreign reserve of the countries in USD which 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 outcomes.

fdi: measure of foreign direct investment inflow. Most FDI inflows are made by multinationals, which engage in intensive productive activities including trade. Hence, an increase in FDI will lead to increase in trade outcomes, *ceteris paribus*.

globdum: global economic crisis dummy defined as the indicator of global economic crisis. Year 2007 and 2008 are represented as 1, 0 otherwise. This is given the fact that the *heat* of the current global economic crisis set with full-swing in 2007 (Zoellick, 2010).

β_{0i}: intercept of the model.

$\beta_{1...6}$: coefficients of the independent variables, expected to reflect the sign and magnitude of influence of the individual independent variables on the respective indicators of trade outcomes.

it: individual country and the period identifier.

The model formulated was estimated using panel data econometric technique. Panel data has several advantages which include that it helps to obtain efficient estimates by possibly controlling for unobserved fixed effects and also providing sufficient degree of freedom. The Pooled Ordinary Least Squares (OLS) estimation was first examined. Due to the problem of heteroscedasticity and autocorrelation popularly encountered when using the panel data analysis approach, a choice can be made between Fixed Effects (FE) and Random Effects (RE). Hausman test is usually carried out to select the efficiency between FE and RE. However, the RE can be selected over FE for two reasons. These include the relationship that exist between trade variables and the global economic crisis which potentially suffers from omitted variables due to differences occurring across countries but which are constant over time (FE) and those which are fixed across countries but vary over time (Leyaro and Morrissey, 2010). Secondly, variables like the dummy for global economic crisis (*globdum*) do not vary much over time and when FE is utilised, these were dropped.

5 Results and Discussions

This section presents empirical results obtained when the formulated model was fitted to data using STATA 10.1 and E-views 5.1 Softwares. It starts with summary statistics. 25 out of the 27 OIC African countries were selected in the study based essentially on availability of relevant data. The selected countries represent 92.59% of the OIC Members in Africa, which is a good representation. The selected OIC Members in Africa used in the estimation process include: Algeria, Benin, Burkina Faso, Cameroon, Chad, Djibouti, Egypt, Gabon, Gambia, Guinea, Guinea Bissau, Libya, Mali, Mauritania, Morocco, Mozambique, Niger, Nigeria, Senegal, Sierra Leone, Sudan, Uganda, Togo, and Tunisia.

5.1 Summary Statistics

As reported in Table 2, trade share in world market *(trdsh)* has a mean value of 0.06% for OIC African members with a minimum value of 0.00% and a maximum value of 0.40%. This is an indication that during the period of study, the average share of trade in world market was as low as 0.06%. This corroborates Perdiy and Abedini (2008) who noted that most developing countries performed below capacity in trade. The maximum value of 0.40% is traceable to some of OIC Members in North Africa.

Table 2 Summary Statistics of OIC Members in Africa

	Trdsh	*Trdgrot*	*Trdcap*	*Rpgdp*	*Lendr*	*Foresrv*	*Fdi*	*Exch*
Mean	0.06	6.44	507.815	1207.75	17.48	4324.41	5.24E+08	480.81
Minimum	0.00	-58.10	58.48	105.16	6.00	0.31	-4.89E+08	0.58
Maximum	0.40	62.27	8751.05	9922.30	51.75	110180.00	1.16E+10	3644.33

Source: Authors' computation using STATA 10.1

The average real trade growth *(Trdgrot)* and mean value of trade per capita *(Trdcap)* were 6.44% and USD 507.81, respectively. The minimum and maximum values of the real growth in trade rate were -58.10% and 62.27%, while that of trade per capita were USD 59.48 and USD 8751.05. the negative minimum value of real growth in trade indicate that some of the OIC Members in Africa had deterioration on real growth in trade within the period studied, while that of trade per capita was quite low.

The average real per capita GDP (*Rpgdp*) and lending rate (*Lendr*), for the OIC Members were USD 1207.75 and 17.47%. The minimum and maximum values were USD 105.16 and USD

8751.05 for *Rpgdp* and 6.00% and 51.75% for *Lendr*. The average lending rate of the OIC Members of 17.48% appears very high, which denotes high cost of capital as also reflected by the maximum value that was above 50%. This will have the effect on trade outcomes especially trade share in the world market. [Table 2 also reports other summary statistics on other explanatory variables such as mean and range values of foreign reserve (*Foresrv*), foreign direct investment *(FDI)* and exchange rate *(Exch)*. However, attention was not made on them to keep the focus of the study].

5.2 Correlation matrix

As preliminary estimation process, the paper carried out correlation matrix amongst the variables of interest. The correlation matrix in Table 3 indicates that the respective measures of trade outcomes (namely: *Lntadsh*, *Lntrdpc*, and *trdgrot*) are positively correlated with indicators of global economic crisis (namely: foreign reserve, and FDI). This implies that trade outcome tends to move towards the same direction with the indicators of global economic crisis, which means that adverse effect of global economic crisis will negatively influence trade outcomes of OIC Members in Africa.

Table 3: Correlation Matrix among Chosen Variables

	lntrdsh	*Lntrdpc*	*Trdgrot*	*lnrpgdp*	*Lnlendr*	*lnfores*	*lnfdi*	*Lnexch*
Lntrdsh	1.000							
Lntrdpc	0.639	1.000						
Trdgrot	0.070	0.005	1.000					
Lnrpgdp	0.678	0.921	-0.061	1.000				
Lnlendr	-0.421	-0.696	0.018	-0.246	1.000			
Lnfores	0.805	0.546	0.010	0.294	-0.150	1.000		
Lnfdi	0.702	0.290	0.261	0.293	-0.231	0.246	1.000	
Lnexch	-0.673	-0.577	-0.007	-0.143	0.129	-0.240	-0.161	1.000

Source: Author's Computation using E-views 5.1

Contrariwise, exchange rate exhibits negative relationship with trade outcome indicators, which is in line with the basic international trade theory. This denotes that exchange rate depreciation will improve trade especially export component by making a country's export product relatively cheaper at the world market. Table 3 also shows that the value of real per capita GDP has positive correlation with trade outcomes, which implies that improvement in domestic productivity has the potential of enhancing trade outcomes. In line with *apriori* expectation,

lending rate had negative correlation with the respective indicators of trade outcome, which means that higher lending rate will adversely affect trade outcomes. By and large, the coefficients of correlation among the explanatory variables, which were lower than 0.5 point out that there is no issue of multicollinearity in the estimation.

5.4 Regression Results of Estimated Model

To obtain the magnitude of the impacts of the chosen explanatory variables on the indicators of trade outcomes, the study carried out regression analysis using the pooled Ordinary Least Squares (OLS), Fixed Effect (FE) and Random Effect (RE) estimators. The results for each of the indicators of trade outcomes namely; trade share, trade per capita and real growth in trade as reported in Tables 5a-c, respectively, as formulated equation 3. The tables report estimates obtained using the 25 selected OIC African Members without and with the inclusion of global economic crisis dummy for the period 1995-2008.

Table 5a-c also report some test statistics at the lower segment such as the coefficient of determination (R^2), F-stat, Wald test and Hausman test. The test statistics in the tables indicate that the respective models had good fit and do not suffer misspecification bias and as a result can be relied on for useful inference. However, the Hausman test points out that the estimates from Random Effects (RE) techniques are more efficient than others. Hence, discussions on the results were focused on the RE estimates. This is in line with the observation made by Leyaro and Morrisey (2010) that models with variables that have limited time variation will usually have RE estimates more efficient than FE.

As can be seen in Table 5a, the variables came out with the expected signs but with varying degrees of significance. Lending rate though had the expected negative sign, but was not significant at the usual levels. This might have resulted from lopsided nature of the financial systems in most African economies.

Table 5a: Regression Result for OIC Members in Africa (Trade Share)

	Dependent Variable: Lntrdsh				
	Without globdum			*With globdum*	
Estimators	*OLS*	*FE*	*RE*	*FE*	*RE*
Lnlendr	1.933 (0.000)[a]	-0.145 (0.260)	-0.067 (0.651)	-0.148 (0.251)	-0.041 (0.794)
Lnforesrv	0.303 (0.000)[a]	0.012 (0.471)	0.004 (0.837)	0.010 (0.540)	0.010 (0.598)
Lnfdi	0.221 (0.000)[a]	-0.000 (0.970)	0.011 (0.372)	0.000 (0.985)	0.015 (0.239)
Lnexch	-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]
Lnrpgdp	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]
Globdum				-0.044 (0.093)[c]	-0.035 (0.053)[c]
Constant	7.075 (0.000)[a]	7.745 (0.000)[a]	7.273 (0.000)[a]	7.905 (0.000)[a]	7.198 (0.000)[a]
R^2	0.818	0.552	0.543	0.554	0.536
F-stat	120.58 (0.000)[a]	29.86 (0.000)[a]		24.86 (0.000)[a]	
Wald-test			147.76 (0.000)[a]		145.23 (0.000)[a]
Hausman Test			21.031 (0.021)[b]		24.302 (0.021)[b]
Observations (N)	350	350	350	350	350

Notes: 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. R^2 in OLS is adjusted, while in FE and RE, it is overall.
Source: Authors' computation using STATA 10.1.

Looking at foreign reserve, the variable was not significant at the usual level, while FDI had the expected positive sign, but not significant at 10%. This denotes that FDI in OIC members has potential to improve their trade share but such potential is yet to be realised. Exchange rate had the expected negative sign and was significant, which implies that exchange rate depreciation can induce trade share for OIC African members. Real per capita GDP was statistically significant with the expected positive sign, indicating that domestic productivity in OIC African members will boost their trade outcome, notably trade share in world market.

The global economic crisis dummy had a negative sign and significant at 10% indicating that the effect of the global economic crisis had adverse effect on the trade share of selected OIC economies in Africa. Another point worthy of note is the significant constant which is positive, which could mean that the internal mechanism of the selected countries will have significant influence on their trade outcomes especially trade share. The role of internal security of life and property in this regard is crucial.

Table 5b: Regression Result for OIC Members in Africa (Trade Per Capita)

	Dependent Variable: Lntrdpc				
	Without Globdum			*With Globdum*	
Estimators	*OLS*	*FE*	*RE*	*FE*	*RE*
	-0.126	-0.027	-0.032	-0.022	-0.026
Lnlendr	(0.321)	(0.766)	(0.722)	(0.805)	(0.773)
	0.045	0.009	0.006	0.011	0.009
Lnforesrv	(0.018)[b]	(0.430)	(0.586)	(0.321)	(0.424)
	0.016	0.021	0.023	0.020	0.022
Lnfdi	(0.211)	(0.007)[a]	(0.002)[a]	(0.009)[a]	(0.003)[a]
	-0.068	-0.049	-0.055	-0.053	-0.053
Lnexch	(0.000)[a]	(0.157)	(0.044)[b]	(0.127)	(0.050)[b]
	0.958	1.410	1.304	1.373	1.281
Lnrpgdp	(0.000)[a]	(0.000)[a]	(0.000)[a]	(0.000)[a]	(0.000)[a]
				-0.066	-0.076
Globdum				(0.050)[c]	(0.089)[c]
	0.358	3.730	3.160	3.492	2.988
Constant	(0.612)	(0.000)[a]	(0.000)[a]	(0.000)[a]	(0.000)[a]
R^2	0.915	0.755	0.754	0.759	0.758
	87.33	74.53		63.02	
F-stat	(0.000)[a]	(0.000)[a]		(0.000)[a]	
			171.440		183.230
Wald-test			(0.000)[a]		(0.000)[a]
			16.970		15.820
Hausman Test			(0.023)[b]		(0.044)[b]
Observations (N)	350	350	350	350	350

Note and Source: Same as Table 5a

Using trade per capita as indicator of trade outcome, Table 5b reports that per capita GDP *(Lnrpgdp),* foreign reserve *(Lnforesrv) and* FDI inflow *(Lnfdi)* had the expected positive relationship with trade per capita while lending and exchange rates had expected negative association. However, at a closer look, one will observe that real per capita GDP was significant at 1%, foreign reserve was not significant in its influence of trade per capita. The inflow of FDI was significant at 1%. This may be the fact that most OIC Members are rich in resource endowment, which attracts FDI and which will translate in better trading activities as most of the multinational companies that come with the FDI usually engaging in large scale trading. The implication of this is that an improvement on FDI attractiveness will significantly increase trade outcomes, notable trade per capita. Contrariwise, foreign reserve was not significant.

Be that as it may, lending rate variable was not significant while exchange rate was found significant at 10%. This implies non-resilience of financial sector in influencing trade outcome (trade per capita) while exchange rate depreciation will improve trade per capita but with minimal a magnitude. Again focusing on global economic crisis dummy, it can be observed that

there is a significant and adverse effect on trade per capita. This underscores the adverse effects of the crises especially on trade per capita.

A look at Table 5c shows that real per capita GDP, FDI and foreign reserves, like in other previous discussed trade outcomes, had the expected positive influence on real growth in trade for OIC Members. At any rate, only FDI inflow and foreign reserves were significant. 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.

Table 5c: Regression Result for OIC Members in Africa (Real Growth in Trade)

	Dependent Variable: trdgrot				
	Without Globdum			*With Globdum*	
Estimators	*OLS*	*FE*	*RE*	*FE*	*RE*
	-5.202	10.262	-5.202	-10.097	-5.418
Lnlendr	(0.359)	(0.330)	(0.357)	(0.340)	(0.343)
	1.688	1.463	1.688	1.393	1.665
Lnforesrv	(0.051)[c]	(0.265)	(0.049)[b]	(0.195)	(0.054)[c]
	2.258	2.601	2.258	2.622	2.276
Lnfdi	(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
Lnexch	(0.721)	(0.595)	(0.721)	(0.616)	(0.759)
	-2.368	2.956	-2.368	4.073	-2.429
Lnrpgdp	(0.353)	(0.804)	(0.351)	(0.741)	(0.342)
				-2.009	1.505
Globdum				(0.214)	(0.261)
	8.414	9.663	8.414	9.426	8.841
Constant	(0.086)[c]	(0.065)[c]	(0.086)[c]	(0.045)[b]	(0.076)[c]
R^2	0.119	0.095	0.069	0.096	0.070
	3.430	2.410		2.010	
F-stat	(0.006)[c]	(0.041)[b]		(0.069)[c]	
			17.130		17.100
Wald-test			(0.004)[a]		(0.009)[a]
			14.510		14.570
Hausman Test			(0.079)[c]		(0.060)[c]
Observations (N)	350	350	350	350	350

Note and Source: Same as Table 5a

The results in Table 5c appear somewhat different in terms of the level of significance from those in the previous trade outcomes, namely: per capita trade and trade share. The reason may be that 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 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 to examine the period of global economic crises on real growth in trade

in OIC members in Africa, which can be extended to African countries that are not OIC members.

6 Conclusion

Several debates have stemmed both within and outside the academic circles from global economic crisis. However, it was observed that not much empirical studies have been done in Africa with regards to trade outcomes of OIC African members. This was what motivated this paper with a view to filling the observed gap by empirically relating the issue of global economic crisis to trade outcomes in OIC Members in Africa. The paper achieved its objective using secondary data from World Development Indicators and World Trade Indicators for the period 1995-2008. The data were analysed using both descriptive and econometric analyses. The econometric techniques involved panel data framework, which was analysed using correlation matrix and regression techniques based on Ordinary Least Squares, Fixed Effects and Random Effects. The RE estimates were statistically observed to be more efficient than other estimators and as a result analyses were focussed on it. The paper had international trade theory as its foundation for the empirical model.

The results obtained from the estimation process denote that the global economic crises markedly exerted adverse effect on the indicators of trade outcomes except real growth in trade, which was interpreted to mean that the effect on real growth in trade may require more time compared to other trade outcomes such trade share in world market and trade per capita. Thus, the regression estimates help to conclude that the *heat* of global economic crisis had significant implication for trade share and trade per capita for OIC Members in Africa. However, for real growth in trade such effect is yet to be established.

The implications of the above findings is that for Africa especially the OIC Members to avoid deterioration in their trade share as well as trade per capita in the face of the current global economic crisis, there is the need for more inward-looking strategies. This can be achieved, *inter alia,* by building internal mechanism through enhancement in their productive capacity as well as promotion of tranquillity in their domestic economies. Another policy measure that can be recommended will be the pursuance of stable exchange rate as well as conducive lending rate

that will be in tandem with resilient financial system, which will play active role in trading activities. This will go a long way in improving trade outcomes and realise some of the aims of OIC establishment, which among others, is to foster better economic and trade relations and co-operations.

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