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DETERMINANTS OF TRADE FLOW OF SOME SELECTED NON-TRADITIONAL AGRICULTURAL EXPORT COMMODITIES IN NIGERIA

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ABSTRACT

This study analysed the determinants of trade flow of some selected non-traditional agricultural export commodities in Nigeria, for the period 2007 to 2017. The objective of the study was to analyse the factors that determine the export of these commodities. The study used trade data of thirty-six importing countries of these commodities around the world. The secondary data used was sourced from various institutions' databases. A balanced panel data from 36 countries for the years 2007-2017 were used with one dependent variable and ten explanatory variables (a total of n=396, N=36, and T=11); all variables were expressed in natural logarithm. The gravity estimation model was used in data analysis. The Hausman test was used in model selection and the test rejected the null hypothesis (random effects were efficient). Therefore, the fixed effects model was used in the gravity model results' interpretation. The gravity model results indicate that Nigeria's export of non-traditional commodities (classified as HS12 in the United Nations International Trade Statistics) follows the basic gravity model *apriori* expectations, implying that bilateral trade flows will increase in proportion to the trading partner's Gross Domestic Product (GDP) and decrease in proportion to the distance involved.The level of openness of Nigeria's economy and that of the importing countries were major determinants of trade flow of Nigeria's HS12 commodity exports. This variable carried the expected positive sign for both Nigeria and its trading Partners and was also statistically significant at the 5% level. However, the real exchange rate variable was not a major determinant of HS12 commodity trade. The distance variable was statistically significant indicating the need for regional trade expansion. The dummy variable of the trading partner being an African country was positive and a significant factor in the determinants of the HS12 commodities. However, colonial or official language ties were negatively signed and significant, implying that this was not a major contributor to trade in these commodities. The study recommends that favorable import and export promotion policies and trade openness to boost growth in the quantity of non-traditional exports should form part of government trade policies; and Nigeria should also take advantage of the proposed African Free Trade Area considering the gains she stands to make through proximity in distance.

Key words: Nigeria, Agricultural exports, Gravity model, Openness, HS12 commodities

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INTRODUCTION

Agriculture has continually become a major item on the Agenda for Economic Growth in Nigeria. So much emphasis is being placed on increasing agricultural production as a means of achieving national food sufficiency and security and also increasing export activities to increase foreign exchange earnings [1,2]. Prior to Nigeria's independence and up to the initial stage of crude oil discovery, agricultural goods dominated the export market in Nigeria. Petroleum products, however, took over the market with the oil boom that occurred in the 1970s [3]. Export of Agricultural crops like Cocoa, Rubber and Palm oil declined from an average of 72 % during 1955 and 1969 period to 35 % in the early 1970's [4]. During this period, the Nigerian economy experienced macro-economic instability due to the neglect of the non-oil sectors particularly the agricultural sector [5].

Considering the current rate of agricultural sector contribution to GDP, estimates from the National Bureau of Statistics [6] show that from April to May 2018, agriculture accounted for 22.86% of Nigeria's GDP, 21% industries and 45.41% services while the oil sector accounted for 8.55% of GDP. The volatility of crude oil prices makes it an unreliable means of foreign exchange earnings for the economy [7]. Apart from focus on mono-commodity (crude oil) export, the loss of market share of agricultural products from Nigeria to both emerging and developing countries also poses a big challenge to Nigeria's agricultural export expansion. The increased domestic demand for agricultural produce also reduced export potential.

The demand situation between the period 2011 and 2016 was of great significance to the sector. Between this period, agro-processed exports reduced by 41%. Nigeria lost US$ 10 billion in yearly exports of agriculture and agro-processed commodities including cash crops such as groundnut, palm oil, cocoa and cotton due to decrease in production [8]. It is worth noting here that due to the decline in agricultural production and export competitiveness [9], agriculture contributed an average of 21% to total exports between the periods 2012 – 2016 [4]. Currently, the trend in the Nigeria's export activities is worth observing. In December 2017, Nigeria export appreciated by 23.9% year-on-year to NGN 1733.1 billion ($4.8million USD) [10]. This was due to increased sales of certain commodities such as agricultural goods (108.9%), crude oil (22%), raw material (15.5%), manufactured goods (5.9%) and energy goods (4.9%). The major export associates for Nigeria were: India (17.3%), Spain (12.1%), France (8.7%), South Africa (7.7%) and the US (6.5%). Upon completion of 2017, shipments rose 40.5% over a year ago to NGN 19099.5 billion ($53.2 million USD), according to National Bureau of statistics. The increased agricultural commodity exports were largely driven by the exports of "non-traditional" commodities such as sesame seeds and cashew nuts [6]. Non-traditional export crop refers to crops that were produced for domestic consumption but are now being exported [11]. However, between 1970 and 1974 agricultural exports as a percentage of total exports declined from about 43% to slightly over 7% [12]. From the mid-1970s to the mid1980s, the average annual growth rate of agricultural exports declined by 17% [13]. By 1996, agriculture accounted for only 2% of exports. As agricultural exports shrank from the traditional 12-15

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commodities of the 1960s, Nigeria became a net importer of basic food stuff she formerly exported [6,12].

Therefore, the contribution of non-traditional crops to Nigeria's agricultural export resurgence cannot be overemphasised. However, there is paucity of information on the export determinants of these non-traditional commodities. It is on this premise that this study analysed the determinants of Nigeria's agricultural exports of non–traditional commodities classified under the United Nations Harmonized System classification code (HS12) using the gravity model. The Harmonized System is an international nomenclature for the classification of products. It allows participating countries to classify traded goods on a common basis for customs purposes. At the international level, the Harmonized System (HS) for classifying goods is a six-digit code system. Commodities classified here include: oil seeds (seeds from cultivated crops yielding oil for example cotton and peanut), Oleaginous fruits (plant foods that produce oil – for example, seeds like sesame and sunflower, nuts like almond and walnuts, fruits like olives, etcetera). Miscellaneous grains like rice, oat, popcorn, cornmeal and any food made from wheat, seeds and fruit, industrial or medicinal plants, straw and fodder are also under this classification [14].

The Gravity Model

The Gravity model developed by Tinbergen [15] which is important in explaining bilateral trade, was used for this research work. The standard gravity derivation simply states that "trade between two countries is determined positively by each country's GDP and negatively by the distance between them." Similarly, trade flow between countries is a function of the product of each country's 'economic mass' and inversely associated with the separation between the countries' respective "economic centres of gravity." This relationship can generally be represented as:

$$X_{ij} = \beta_o Y_i^{\beta 1} Y_j^{\beta 2} D_{ij}^{\beta 3} \text{ ---------- (1)}$$

Where X_{ij} = flow of exports into the different country
Y_i and Y_j = GDPs of exporting and importing countries
D_{ij} = separation between countries' capitals.

In its translational form, the function becomes:

$$\text{Ln}(X_{ij}) = a + \beta_1 \text{Ln}(Y_i) + B_2 \text{Ln}(Y_j) + B_3 \text{Ln}(Y_{ij}) \text{---------- (2)}$$

The generally accepted gravity model of trade states that the quantity of exports between two countries, Xij is related to their incomes (GDPs), populations, and a set of dummies [14,16,17]. This implies that:

$$X_{ij} = \beta_o Y_i^{\beta 1} Y_j^{\beta 2} L_i^{\beta 3} L_j^{\beta 4} D_{ij}^{\beta 5} A_{ij}^{\beta 6} eu^{ij} \text{---------- (3)}$$

Where; Y_i (Y_j) = GDP of the country *i(j),*
$L_i(L_j)$ = populations,
D_{ij} = separation between the countries' capitals

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A_{ij} = dummy variables,
eu_{ij} = disturbance term
β's = parameters of the model.

The Gravity Model looks at the economic mass of each country and the distance between the trading partners. This model of trade has been a success from the empirical point of view. The representation of this model following Tinbergen [15]in an equation is as follows:-

$$Fij = G*Mi * Mj / Dij \quad \text{---------- (4)}$$

Where G is constant, F is trade flow, D is distance and M is economic dimensions. However, due to the presence of large proportions of differences in trade which the traditional variables cannot explain, the fundamental gravity model is usually augmented with other choice variables.

Extra variables can be added to regulate for differences in location factors, factual ties, economic factors and exchange rate risk [16]. However, the gravity equation performs better at describing trade (size of economies and their separation). Distance is a proxy for various factors that can influence trade such as transportation costs, time elapsed during shipment, synchronization costs, communication costs, transaction costs or cultural distance [18].

Research in this area had limited theoretical backup in the early stage. The theory saw several developments in the second half of 1970s. This was observed by Anderson [19] who gave the gravity model a theoretical legitimacy. Bergstrand [20,21] stated that "a gravity model is a reduced form of the equation of a general equilibrium of demand and supply systems and in such a model the equation of trade demand for each country is derived by maximizing a constant elasticity of substitution (CES) utility function subject to income constraints in importing countries." The gravity equations have been obtained from different framework. These include: Ricardian framework [22], imperfect competition model [23], differentiated product framework [24] and Heckscher-Ohlin model [25]. Traditional trade theories fail to describe the degree of trade unlike the gravity model. This limitation makes gravity model globally accepted and an imperative tool to ascertain bilateral trade patterns and flows.

METHODOLOGY

Study area

The study area is Nigeria. It has a total land area of 923,768sq km and occupies about 14% of the total land area in West Africa. The country shares land borders with the Republic of Benin in the west, Chad and Cameroon in the east, and Niger in the north. Its coast lies on the Gulf of Guinea in the south and it borders Lake Chad to the northeast [26]. Nigeria has an average maximum temperature ranging from 32 degrees centigrade to 41 degrees centigrade along the coast and the far north. The climate varies from a very wet coastal area with annual rainfall greater than 3,500mm to the Sahel region in the North-Western and North-Eastern parts, with annual rainfall greater than

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600mm. Considering the geographic coordinates of Nigeria, it is located at latitude 10^0 North and longitude 8^0 East.

The area had a population of over 201 million people in 2019, made up of 200 ethnic groups and 500 indigenous languages [27]. Agriculture employed 34.97% of total labour force and contributed 26.9% of GDP in 2019 [28]. The country has a highly diverse eco-system capable to grow a wide range of crops throughout the year. Its major export commodities include crude petroleum, petroleum gas products, rubber, cocoa bean, palm-oil, cashew nuts, sesame seeds, soya bean, cassava, rice, and maize.

Sources of data and sample size

Trade data for thirty-six importing countries of Nigeria's HS12 commodities around the world spanning from 2007-2017 were used. Agricultural exports to these thirty-six countries comprised about 65% of its total agricultural export worldwide, and imports from these countries together constituted more than 90% of its total agricultural imports [29]. These aforementioned reasons contributed to the choice of these countries for this study. Also, the consistent availability of data for at least ten years was also a major consideration. Data were sourced from ten countries in Africa, nine-Asia, twelve-Europe, three- America (1North America and 2 South America), the Russian Federation and Australia.

This panel data obtained was for 2007-2017. All observations are annual. Data on Nigeria's export of HS12 commodities; country i exports (exports from Nigeria) to all other countries (country j) were sourced from United Nations Comtrade database (UN Comtrade). Trade data on these commodities are based on HS 2017 classification and selected data number HS12. Gross Domestic Products, Real Effective Exchange Rate, Openness and Population were obtained from United Nations Conference on Trade and Development website (UNCTAD) [30] and World Bank Integrated Trade Solution (WITS) databases [31]. Data for distance (km) between Nigeria and all the other capital cities of the world were obtained using distance calculator [32]. In summary, the dataset is a balanced panel covering 36 countries for the years 2007-2017 with one dependent variable and 10 independent variables (n= 396,N=36 and T=11).

Data estimation techniques

The Fixed Effect Model (FEM)

In this model, the intercept is permitted to vary among single units. The model assumes that variation amongst factors may be reflected in the constant term. The a_i represents random factors that bring in unseen diversity. The model permits each cross-sectional unit to exhibit a distinct intercept term while all gradients are equal.

$$y_{it} = x_{it}\beta + a_i + u_{it} \quad \text{----------(5a)}$$

Where u_{it} is iid over i and t (that is independent and identically distributed).
Gujarati [33] posits that "the subscript i to the intercept term suggest that the intercepts across the individuals are different, but that each individual intercept does not vary over time and the FEM is appropriate in situations where the individual specific effect might be correlated with one or more regressors".

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Random Effect Model (REM)

The model considers that the unseen single effect is arbitrary, obtained from a huge population with an unchanged average [33]. The single intercept is described as a shift from this unchanged average value. The REM has the advantage of greater efficiency relative to the FEM leading to smaller standard errors of coefficients and higher statistical power to detect effects [34]. It is better in areas where arbitrary intercept of the cross-sectional unit is not related with the explanatory variables. The intercept for single entity is described as:

$a_i = a + \varepsilon_i$ where i=1, 2,3,...,n ----------(5b)

Substituting (5b) into (5a), we obtain:

$y_i = x_{it}\beta + a + \varepsilon_i + u_{it}$

$y_{it} = x_{it}\beta + a + \acute{\omega}_i$----------(5c)

The composite error term w_{it} consists of two components: ε_i, which is the individual cross-section, or individual specific, error component, and u_{it}, which is combined time series and cross-section error component. The composite error term w_{it} consists of two (or more) error components, given that $\varepsilon_i \sim N(O, \sigma_\varepsilon^2)$; $u_{it} \sim N(O, \sigma_u^2)$ where the individual error components are not correlated with each other and are not autocorrelated across both cross-section and time series units [33].

The FEM is seen to be a successful technique of determining gravity equation but it faces the limitation of inability to ascertain time-invariant effects. Egger [35] and Ozdeser and Ertac [36] concluded that, "for the panel projection of potential bilateral trade, researchers have often concentrated on the REM, which requires that the explanatory variables be independent of the ε_{it} and the u_{it} for all cross-sections (i, j) and all time periods but if the intention is to estimate the impact of both time-variant and invariant variables in trade potential across different countries, then the REM is preferable to the FEM".

Method of data analysis

Gravity Model

The gravity model describes bilateral trade (T_{ij}) as a function of the product of GDP_i and GDP_j and inversely associated with the separation (distance) [37]. The static gravity model used in this study has the following log linear form:

$T_{it} = \beta_0 + \beta_1 LGDP_{it} + \beta_2 LGDP_{jt} + \beta_3 LDist + \varepsilon_{it}$---------- (6)

To take into consideration the effect of other variables such as population, location, distance between trading partners, language and membership of international trade organisation on trade activities, these variables were combined to that in equation 6 to obtain the augmented gravity function.

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Augmented gravity model

Augmented gravity model was used to assess the determinants of trade. The fundamental elasticity which was used to estimate the trade potential is given thus;

$$Log(X_{ijt}) = \beta_0 + \beta Log(GDP_{it}) + \beta_2 Log(GDP_{jt}) + \beta_3 Log(D_{ijt}) + \beta_4 Log(OP_{ijt}) + \beta_5 Log(Pop_{ijt}) + \beta_6 (REr_i) + \beta_7 AFRI + \beta_8 LANG_t + \beta_9 WTO \text{ ---------- } (7)$$

whereX_{ij} is value of selected commodities exports from Nigeria to its major trading partners j at time t measured in years; GDP_{it} and $(GDP_{jt}$ represent GDP of Nigeria and GDP's of trading partners measured in US dollars (constant, 2010), D_{ijt} is the distance between capital cities of trading partners and is measured in kilometres, REr_i is real exchange rate and OP_{ijt} is the openness index of country i (j),Pop_{ijt} is the population of country ij. The dummy variables AFRI, LANG, and WTO takes the value of 1 or otherwise depending on if the trading partner is an African country, uses the same official language, and belongs to the World Trade Organisation, respectively.

Model Estimation Approaches

Estimation of Panel data involves different models such as: pooled, fixed effects and random effects models. The main problem of the pooled model is that it does not allow for heterogeneity of countries, does not estimate country specific effects and assumes that all countries are homogenous [38]. A random effects model is well suited in estimating the flows of trade between randomly selected samples of trading partners from a large population. It is a better model when estimating the flows of trade between ex ante predetermined selection of countries [39]. For this study, the fixed effect model was adopted. The superiority of this model over REM was tested using Hausman test by considering the test hypothesis of no association between the single effects and the explanatory factors are rejected [40] . The major setback of the fixed effects model is that variables remain constant over time and variables that cannot be determined directly are wiped out. To eliminate this issue, these variables can be determined in another way by estimating a different regression stating the single effects as the explained variable and separation and dummy variables as explanatory variables. This is shown as follows:

$$E_{ij} = \eta_0 + \eta_1 D_{ij} + \eta_2 (AFRI_{ij}) + \eta_3 (LANG_{ij}) + \eta_4 (WTO_{ij}) + eu_{ij} \text{ ---------- } (8)$$

Where E_{ij}individual effects, and other variables are as previously defined.
The estimations were handled using Stata software using the xtreg, and fixed effects option.

Variable Description and A priori expectations

The GDP is proxy for economic size. Gross Domestic Product is anticipated to be positively associated with selected export commodities. The distance variable which is sometimes used as a proxy to capture trade cost in the basic gravity model is expected to have a negative effect on selected export commodities trade as with distance increase between countries, transaction cost also increases. Openness is the ratio of agricultural imports to overall agricultural trade. The more open a country, the greater its involvement in trade [41]. It is anticipated to be positive or negative. The inclusion of

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Nigeria's population and that of its trading partners is justified based on its effect on the market size dynamics. The number of people living in a country at a particular time period may reflect the market size [42]. This variable is expected to be positive or negative. Real exchange rate is a proxy for prices and an adjustment for domestic and foreign inflation [43]. It is anticipated to be negative. Language (LANG), World Trade Organisation (WTO) and Africa (AFRI) represent dummy variables. Language is a proxy for colonial ties. World Trade Organisation (WTO) membership is added to ascertain whether being a member of an organization may have an effect on the bilateral trade between countries or not. It is anticipated to be positive. Africa (AFRI) is used to capture trade patterns between two countries. It takes a value of 1(if country i and country j are situated in the African Continent) and 0 (otherwise). It is also anticipated to be positive.

RESULTS AND DISCUSSION

Factors that Determine Nigeria Exports Selected HS12 Commodities

This research utilised two panel unit root test methodology, namely: the Levin-Lin-Chu (LLC) [44], and Im-Persan-Shin (IPS) [45] methods. The null hypothesis for the LLC test is that the series contain a unit root and the alternative hypothesis is that the series is stationary and the LLC test assumes a common autoregressive parameter for all panels [44]. The second test IPS is based on the Dickey fuller procedure and it permits the autoregressive parameter to change across countries and also for single unit root process. It is derived by adding each country's unit root tests to obtain a value peculiar to a panel. The test hypothesis is that every series has a unit root.

The unit root test estimates are shown in Table 1. The result indicates the rejection of the test hypothesis for all variables for both LLC and IPS. This implies that cointegration procedure can be avoided without risk of running a spurious estimation. Since all variables are stationary, equation *8* can be estimated using the ordinary least square procedure. The estimated gravity trade models are shown in Table 2.

The major drawback of the result is that it does not permit for heterogeneity of countries. Therefore, it does not allow the determination of country peculiar effects. The result of the F-test statistic on the pooled regression model rejects the test hypothesis of equality of individual. By implication, model with individual effect performs better compared to pooled model. The LM test revealed the rejection of test hypothesis (Table 2).

In order to determine the best fit model for our study, the Hausman statistic was used to determine the test hypothesis. The results revealed the rejection of the test hypothesis and show that the country specific effects are related with explanatory variables (Table 2). This signifies that fixed effects model is the most suited model. Therefore, the fixed effects model was discussed. The fixed effect and random effect model were both estimated with importers time effect to gather for unseen multilateral setback, and possibly for any other seen or unseen properties that change over time for the importer.

As shown in Table 2, the traditional gravity variables, GDPs and distance had the expected sign. Specifically, importers GDP and openness are statistically significant (5%) determinants of Nigeria's selected commodity export based on the estimated fixed

effect model. From the model, a unit percent (%) rise in Nigeria GDP, causes the revenue generated through export to appreciate by 0.46 %. The finding agrees with the assumption of gravity model that trade volume is directly related with economic size.

The coefficient of GDP of importer countries (GDPe) is positive and significant suggesting that Nigeria's export flow for the selected commodities was influenced by the economy size of importing countries. Specifically, if the GDP of importing countries rise by 1%, trade flow will rise by 0.49%. Trade between countries is inversely related to their distance apart. A unit percentage appreciation in distance will result to 0.52% decline in trade flow between Nigeria and her trading partners. Relatively, the result suggests that trade flow is highly influenced by size of the economy compared to distance. The level of openness of Nigeria's economy and that of the importing countries is another major determinant of trade flow among the selected commodities. This variable carries the expected positive sign for both Nigeria and its trading partners and is also statistically significant at the 5% and 10% level. This implies that there is an increase in export trade of Nigeria's HS12 commodities as a result of favourable government policies. These results support the reasoning that the more open the economies of trading countries, the more the trade between them. The real exchange rate is not a significant variable in explaining Nigeria's trade in HS12 commodities. Population as a determinant of Nigeria's export was significant at the 5% level. This finding is supported by Nuroglu [46] who posits that "it is gainful to note that the impact of population on bilateral trade flows is positive for the exporting country as against importing country."

The second stage regression results obtained using Equation (*8*) are presented in Table 3. Countries located in the African continent imported more of Nigeria's HS12 commodities. However, countries sharing the same official language with Nigeria import less of Nigeria's HS12 commodities. Whether a country belongs to the World Trade Organisation (WTO) or not, did not significantly determine trade in Nigeria's HS12 commodities.

CONCLUSION

In conclusion, the study shows that traditional gravity model variable (GDP's) are significant determinants of Nigeria's HS12 commodities export. Similarly, the distance variable is also a significant determinant of the trade in these commodities. Openness of Nigeria's economy and that of its trading partner countries were found to be significant determinants of trade, population was also a major determinant of trade while the real exchange rate was found not to affect trade in the HS12 commodities. The dummy variable for the official language and African countries were statistically significant. Based on these findings, it is recommended that policies that encourage import and export promotion should be pursued, thus ensuring openness. Trade openness will boost growth in export quantity of non-traditional exports such as the HS12 commodities. Nigeria needs to take advantage of the African Continental Free Trade Area (AfCFTA) by promoting intra-African trade considering the favourable gains accruable through proximity in distance.

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Table 1: Panel unit root test for variables

Variables / tests	LLC	IPS
Oil seeds exports value(trade)	-6.3586 (0.0000)**	-5.2753(0.0000)**
Distance (distw) importers GDP	-12.0536(0.0000)**	-2.3849(0.0085)**
Gross domestic product(Nigeria) (GDPi)	-2.6e+02(0.000)**	-5.1865(0.000)**
Other countries GDP (GPPCj)	-63.1909 (0.000)**	-5.716(0.000)**
Openness (Nigeria) (openi)	-11.3515(0.000)**	-4.3469(0.0000)**
Openness (importer) (openj)	--4.4476 (0.000)**	-5.0177(0.0000)**
Real exchange rate (Nigeria) (reeri)	-12.6249(0.0000)**	-4.2464(0.000)**
Importers' population (popi)	-1.3e+02(0.000)**	-6.0433(0.000)**
Nigeria's population (popj)	-2.5e+03(0.000)**	-6.9280(0.0000)**

**= significant at 0.05 level. Values in parenthesis are probabilities

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Table 2: Estimation of gravity trade model for selected commodities with different panel methods

Variable	Methods		
	Pooled regression	Fixed effect model	Random effect models
In gdp	0.0828	0.467**	0.220
	(0.110)	(0.188)	(0.137)
In gdpe	0.210***	0.492***	0.276**
	(0.0717)	(0.180)	(0.107)
In distw	-0.728***	-0.528*	-0.582***
	(0.247)	(0.303)	(0.276)
In Openi	1.1123*	1.143**	1.126**
	(0.580)	(0.552)	(0.544)
In Openj	0.178***	0.238***	0.196***
	(0.0605)	(0.0903)	(0.0749)
In reeri	1.666	1.382	1.435
	(1.461)	(1.384)	(1.583)
In Popi	40576***	3.693**	0.458
	(0.264)	(1.627)	(0.309)
ln_popj	0.725***	0.140	0.458
	(0.264)	(0.353)	(0.309)
Afri	0.775***		0.466
	(0.290)		(0.468)
Lang	-0.809***		-0.801*
	(0.267)		(0.468)
WTO	-0.305		-0.0199
	(0.559)		(1884)
Constant	-49.98**	-40.87**	-45.62**
	(21.7)	(20.55)	(20.02)
No of observations	360	360	360
Adj R^2	0.59		
F-test		46.16***	
LM			32.51***
Hauseman Test		36.85***	
Time Effect	No	Yes	Yes

Values in parentheses = standard error***, **, * = p-value at 0.01, 0.05 and 0.1

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Table 3: Fixed effects regressed on dummies

Variables	Coefficients
Afri	0.440*
	(0.232)
Lang	-1.599***
	(0.217)
WTO	0.220
	(0.468)
F-stat	18.72***

***, **, * = p-value at 0.01, 0.05 and 0.1

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