THE IMPORT EFFECTS ON INTRA-COMMUNITY AGRICULTURAL EXPORT TRADE DEVELOPMENT BY ECOWAS MEMBERS

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Abstract: ECOWAS policy of liberalizing trade has culminated to increase in demand and supply of made in community products within the sub-region. In this study, intra-ECOWAS trade in the four major agricultural products (animal products; the vegetable products; the animal or vegetable fats and oils and other cleavage products; and the prepared foodstuffs) were identified. Through this, the volumes of imports within and by the sub-regional members were captured. Subsequently, by the use of Ordinary Least Squares (OLS), the study ascertained how each national import influenced intra-regional exports. The regression analysis reveals that every increase in ECOWAS sub-regional exports were as a result of increases in Benin, Cote d'Ivoire, Ghana, Guinea, Senegal and Sierra-Leone's intra-community imports of agricultural products by 4.899, 1.06, 5.53, 74.988, 7.34, and 2385.044 units, respectively, all things being equal, while Burkina Faso and Gambia have negative influences (-3.324 and -10497.67, respectively. Therefore, to ensure animproved and sustained sub-regional integration through trade, much of the ECOWAS fifteen member nations need to have significant patronage of the regional products.

Keywords: Agricultural products, ECOWAS integration, exports, imports, members import effects

Introduction

The Economic Community of West African State (ECOWAS) Trade Liberalization Scheme (ETLS) is an operational tool for promoting the West Africa region as a Free Trade Area. This lays in tandem with one of the objectives of the community, which is the establishment of a common market through "the liberalization of trade by the abolition, among Member States, of customs duties levied on imports and exports, and the abolition of non-tariff barriers…." – Article 3 of ECOWAS Treaty. The Scheme has undergone a series of transformation in respect of the categories of goods that are covered. The first category was defined when the scheme first came into existence in 1979. At that time, agreement was reached on only agricultural, artisanal handicrafts and unprocessed products to benefit from the scheme. Following this, in 1990, further agreement was reached and industrial products could be approved to take part in the scheme (http://www.etls.ecowas.int/, 2016).

Besides, with industrial products being accepted, it became imperative to define what products were "originating" from the ETLS region. The rules of origin which guide this concept are defined in the ECOWAS protocol A/P1/1/03 of 31st January 2003. It defines out originating products as follows:

- Wholly produced goods; goods whose raw materials completely originate from the region.
- Goods which are not wholly produced but their production requires the exclusive use of materials which are to be classified under a different tariff sub-heading from that of the product.
- Goods which are not wholly produced but their production requires the use of materials which have received a value added of at least 30% of the ex-factory price of the finished goods (http://www.etls.ecowas.int/etls/about-etls/, 2016).

It is evidentin the UNCOMTRADE data of large volumes of intra-ECOWAS trade in Trade Division and classification (TDC) 01-04 (agricultural products), corresponding to HS chapters 1-24 (UNCOMTRADE, 2011; NBS, 2013). Total ECOWAS tradehas increased by an average of 18 percent per year between 2005 and 2014 (http://www.ecowas.int/ecowas-sectors/agriculture/, 2016). Between 1999 and 2006, the total intra-ECOWAS trade was12% of the total ECOWAS trade (intra and inter-ECOWAS trade) (ECOWAS Statistical Bulletin, 2008); compared to the European intra-regional trade whichis about 63.7% of the total trade (Eurostat, 2013). Nigeria, Côte d'Ivoire, Ghana and Senegal concentrate 87 percent of this trade, with 79 percent of regional imports ($55,520 million per year) and 94 percent of exports and re-exports ($77,792 million per year) (http://www.ecowas.int/ecowas-sectors/agriculture/, 2016). It is dominated by mining commodities (oil resources, iron, bauxite, manganese, gold, etc.) and agriculture (coffee, cocoa, cotton, rubber, fruits and vegetables and other products rather marketed within the region (dry cereals, roots and tubers, livestock products), etc.

Moreover, ECOWAS is working towards monetary union and the extent of community integration through trade development which is a prelude left much to be desired. That is, the extents to which individual members' imports from the sub-region as a key factor to the regional trade, growth and development, and how it influences the sub-regional exports in varied agricultural products are not known and as such have given rise to the following research questions:

- Which member nations have currently made significant imports to ensure ECOWAS trade development cum sustenance?
- Which regional member has made the most significant efforts in deriving the increased export needs of the sub-region that will engender regional integration through trade?
- How can import competitiveness of members lead to export prioritization efforts?
- Hopefully, will these engender a regional investment in the sectors where import is evident, thereby promoting and sustaining the evolving regional markets?

The broad objective of the study is to find out the extent to which the volumes of the members imports effect ECOWAS sub-regional exports; while the specific objectives include identifying:

(i) The major products trade damong ECOWAS sub-regional members
(ii) The exporting and importing nations of the products; and to
(iii) Determine the effects of members' imports on sub-regional exports of the traded products.

The null hypothesis tested is that:

H_0: b = 0 (ECOWAS member nations' imports of agricultural products do not significantly influence the intra-regional exports of the products), **against the alternative hypothesis;**

H_A: b ≠ 0 (ECOWAS member nations' imports of agricultural products have significant influence on intra-regional exports of the products).

Major products traded among ECOWAS members

In export and import list of the United Nations Harmonized System (HS) classification scheme codes, sections and chapter headings, there are 22 product sections; four among which deal with agricultural products NBS, (2014). These include, live animals and animal products of HS code 01, chapters 1-5; the vegetable products category consisting of HS code 02, chapters 6-14; the Animal and Vegetable fats and oils and other cleavage products that come under HS Code 03, Chapter 15; the prepared food stuff category comprising HS Code 04, Chapters 16-24 (NBS, 2014; ECOWAS, 2008). Therefore, the significance of ECOWAS member nations importing from and exporting to others in the light of growing emphasis for regional integration and at a stage when most ECOWAS countries are opening up their markets under the pressure of International Monetary Fund (IMF) and World Bank (WB) cannot be over emphasized. More so, producing a greater variety of agricultural goods increases the general knowledge about its technology and implies smaller costs of knowledge accumulation. For instance, Nigeria's importation from and exportation of products of prepared foodstuffsto Benin, Cote d'Ivoire, Ghana, Togo, etc.; will likely lead to improvements in these countries' products. ECWAShas many agro-industries producing different varieties of products in the agricultural sub-sectors of the economies, thereby making it reasonably concentrated industry with the features that are prerequisites for integration through trade. Therefore, the study of impact of ECOWAS member nation's imports on intra-community exports is necessary.

Besides, the ECOWAS trade liberalization programme involves three groups of products viz. unprocessed goods, traditional handicraft products, and industrial products. The programme is meant to give several advantages to member States and their citizens as they trade among themselves. An example of the advantages accruing to unprocessed goods imported from a member state as contained in Decision C/DEC.8/11/79 of the Council of Ministers is total exemption from import duties and taxes, free movement without any quantitative restriction as well as non-payment of compensation for loss of revenue as a result of their importation. Provided that unprocessed products among other conditions, originate from member states of the Community and must appear on the list of products annexed to the decisions liberalizing trade in these products.

There are also conditions which apply to the other categories of traditional handcraft and industrial products. In effect, this also means that the Member States shall not impose new duties and taxes of equivalent effect or increase existing ones. The rates of these duties and taxes which serve as the starting point for the elimination of tariffs are listed in the ECOWAS Customs Tariff for each member state. It is a rule binding on states that there shall be no non-tariff barriers and those in existence shall not be increased (www.ecowas.int; ECOWAS Statistical Bulletin, 2014).

Exporting and importing nations of the product

ECOWAS common market is an association of nations pledged to abolish all trade restrictions among themselves in the sense that free trade in locally produced goods exist among the member nations. It is an association of nations with common tariff wall between them and other nations outside the union, but free trade within the member states. Unlike the customs union, common markets allow free movement of goods and/or factors of production among countries that make up the market areas. A major characteristic of a common market is the non-existence of fiscal or other administrative barriers to the movement of goods or factors of production within the common market nations. The vital condition for the states of the common market is the prevention of common barrier to import from countries outside the common market, otherwise if member nations charge different rates of customs duties on import from economies outside the common market areas, foreign goods would move into low-tariff member nations of the group and flow freely from them into those charging high customs duties and have advantage over goods produced in those area in the sense that they will sell at lower and more competitive prices in those parts of the common market. Examples of common markets include the ECOWAS- consisting of Benin, Burkina Faso, Cape Verde, the Gambia, Ghana, Guinea, Guinea-Bissau, Cote d'Ivoire, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo. Another example of a common market is the ECM- European Common Market originally formed by six European Economic Community (EEC) members in the 1950's consisting of France, Germany, Italy, The Netherlands, Belgium, and Luxembourg. The number rose to twelve in 1987 with the joining of Britain, Ireland, Greece, Denmark, Spain, and Turkey (www.businessdictionary.com/definition, 2016).

The trade liberalization process was expected to be implemented through such interventions like free international trade, common external tariff wall, consolidation or freezing of custom duties, and non-tariff barriers to intra-trade. Others include gradual phasing out of duties on industrial products from community projects over a period of 6-10 years at 10-16.6% annual rates of reduction depending on the classification of member states based on the level of development, location and importance of customs revenue. In the short-term, this would be achieved through greater use of national currencies. The medium-long-term objectives are to issue a common convertible currency and to create a single monetary zone (ECOWAS, 1994).

Materials and Methods

The study area is ECOWAS. ECOWAS was formed in the year 1975 by the countries in West Africa for the purpose of economic integration and development. ECOWAS are located between Latitudes 0˚ 26' and 20˚ 31' North; and Longitudes 10˚ 36' East and 20˚ 19' West. The northern border of West Africa is the Sahara desert. This is a sparsely populated region that is difficult to live in or travel through due to extreme heat and minimal food and water. Thus people tend to live and travel above (North

Africa) or below (West Africa) the Sahara. This creates a natural divide between the two regions. To the west and south of West Africa sits the ocean whic serves as another natural border. And in the southeastern corner of West Africa are the Cameroonian Mountains and highlands that lie along the border between Cameroon and Nigeria. The nations within ECOWAS sub-region include; Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra-Leon, and Togo.

The study purposefully selected the 15 ECOWAS members to illustrate the volumes of imports by each member of different products under review from the sub-region. More so, increased imports of agricultural products by member nations will lead to sustained and improved intra-community trade through expansion of exports. That is, Nigeria's importation from and exportation of products of prepared foodstuffs to Benin, Cote d'Ivoire, Ghana, Togo, etc. will likely lead to improvements in these countries' products. Given that Economic Community of West African States has many agro-industries producing different varieties of products in the agricultural sub-sectors of the economies, itis reasonably concentrated industry with the features that are prerequisites for integration through trade. This in turn will lead to improvement in the manufacturing capacity of the region by ensuring the extension of value chain of most of the intra-regional agricultural product exports, from primary to secondary and tertiary products; leading to realization of maximum benefits of globalization in the light of diversified agricultural products. The findings are useful information to ministries of agriculture, consultants, and ECOWAS member nations on the import competitiveness and export prioritization efforts required by each to satisfy demand and production in the various lagging agricultural sub-sectors. These will assist in the improvement and sustenance of market shares of members' in particular agricultural products within the sub-region.

Data for this study were collected from secondary sources. All import data were retrieved from UNCOMTRADE statistics at the 10-digits level of the Harmonized System (H4). The data were import and export values for eachof the ECOWAS countries for four major agricultural products under review. The independent variables were streams of imports of different agricultural products (animal products, vegetable products, animal or vegetable products and prepared foodstuffs) of the 15 members of ECOWAS in the period of review. The imports value where a given country is the supplier is coded as one given all imports of other 14 members. The data for all the countries are in units of 1000 of US dollars. Other data source is the ECOWAS Statistical Bulletin. The values of intra-regional exports and imports by the regional members which were used in the regression are as presented in Table 1. The intra-regional import values formed the independent variables, while the intra-community exports formed the dependent variable. All the values of the variables were sourced from the UNCOMTRADE data (UNCOMTRADE, 2011).

Table 1: Values of imports by ECOWAS sub-regional members ($'000)

ECOWAS Exports	Sub-regional Members Import Values														
	Benin	B.Faso	C.verde	Cote D'Ivoire	Gam	Ghana	Guinea	G.Biss	Liberia	Mali	Niger	Nigeria	Sene	S.Loe	Togo
67858.692	620.331	1	0	57360.99	0	4472.038	0	0	0	817.185	27.675	28.802	0	0	4531.668
3.591	0	0	1	0	0	0.722	0	0.389	0	0	0	0	2.48	0	0
311.514	30.329	11.128	0	1	0	81.312	1.071	0	0	31.177	0	29.189	77.896	0	49.412
47061.998	261.514	849.273	0	7324.233	0	1167.192	0.065	0	0	65.575	1	31077.44	5558.216	0	769.379
11396.448	0	0	0	5187.724	0	218.896	0	0	0	0	0	1	583.208	0	0
21584.645	230.319	0	0	18588.18	8.427	1056.227	1136.167	0	0	4.16	0	243.312	0	0	317.857
14238.82	3.891	1	0	14169.36	0	20.011	0	0	0	26.001	0	0	0	0	19.564
0.254	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
24.278	0	0	0	1	0	10.088	0	0	0	0	0	0	4.074	0	0.028
5431.822	16.402	35.621	0	4998.237	0	15.337	0	0	0	92.427	1	1.054	202.782	0	69.962
5857.005	0	0	0	5416.431	0	440.574	0	0	0	0	0	1	0	0	0
15172.37	0.267	1.329	0	15170.78	0	0	0	0	0	0	0	0	1	0	0
20205.28	174.801	1	0	18646.97	0	103.366	0	0	0	384	102.017	2.533	778.556	0	13.018
4.762	0	0	1	0.186	0	0	0	1.091	0	0	0	0	2.208	0	0
100.77	0	16.414	0	1	0	34.548	0	0	0	1.214	7.787	1.492	12.652		26.665
34972.77	11043.49	3350.785	0	975.726	0	2941.71	0.061	0	0	3041.849	1	10576.7	0	0	3042.453
4410.366	0	1945.234	0	350.453	0	2016.749	0	0	0	0	0	1	0	0	0
8402.895	14.535	0.208	0.606	8344.198	0	17.732	0	0	0	0	0	1.343	1	0	0
3503	4.48	1	0	357	0	393.52	2.24	0	0	196.18	3.23	0	1097.11	0	1450
66.8	0	0	1	0	0	0	0	0	0	0	0	0	66.8	0	0
198.66	0	13.98	0	1	0	34.55	0	0	0	1.21	10.89	9.05	102.3	0	26.67
1183.12	8.395	74.276	0	0	0	0	0	0	0	94.167	1	152.757	440.558	0	412.969
3869.11	0	3825.149	0	36.762	0	0	0	0	0	0	0	1	0	7.2	0
6696.77	0	0	1.025	0	2.871	6690.491	1.209	0	0	0	0	0.149	1	0	0

Source: UNCOMTRADE Data (2011)

Descriptive information was used to achieve objectives (i) and (ii). Objective (iii) was achieved by employing the

Ordinary Least Squares (OLS) Estimates to underscore the significant levels of the members' import on regional exports of the traded agricultural products.
The implicit model form is thus:
Members' import effects on intra-ECOWAS export volume

$$TE_E = f(x_1, x_2, x_3, \ldots\ldots, x_n) + \varepsilon_i$$

Where;

$TE_E =$ Total ECOWAS Exports
$X_1 =$ Import by Benin
$X_2 =$ Import by Burkina Faso
$X_3 =$ Import by Cape Verde
$X_4 =$ Import by Cote d'Ivoire
$X_5 =$ Import by Gambia
$X_6 =$ Import by Ghana
$x_7 =$ Import by Guinea
$x_8 =$ Import by Guinea Bissau
$x_9 =$ Import by Liberia
$x_{10} =$ Import by Mali
$x_{11} =$ Import by Niger
$x_{12} =$ Import by Nigeria
$x_{13} =$ Import by Senegal
$x_{14} =$ Import by Sierra-Leone
$x_{15} =$ Import by Togo
$\varepsilon_i =$ (Error term)

Results and Discussions

The ECOWAS countries are involved in trade with countries within and outside the region. Fig. 1 shows the structure of the community trade within, between 2006-2010. ECOWAS intra-trade accounts for an average of 14.08 percent of the total exports, and 10.54 per cent of the value of total imports (2006 to 2010). Their largest trading partners outside the region are the European Union (EU), NAFTA, ASEAN; COMESA trade blocks. The EU, NAFTA, ASEAN, and COMESA account for an average of 17.02, 24.74, 10.98, and 4.98 per cent within the same period, respectively of the value of total exports; while for imports the EU, NAFTA, ASEAN, and COMESA account for 24.28 per cent, 11.94 per cent, 17.84 per cent and 4.42 per cent, respectively (Fig. 2).

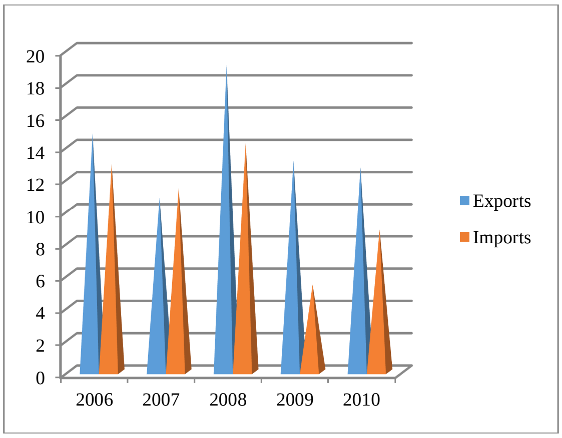

Fig. 1: Structure of intra-ECOWAS trade (million dollars)

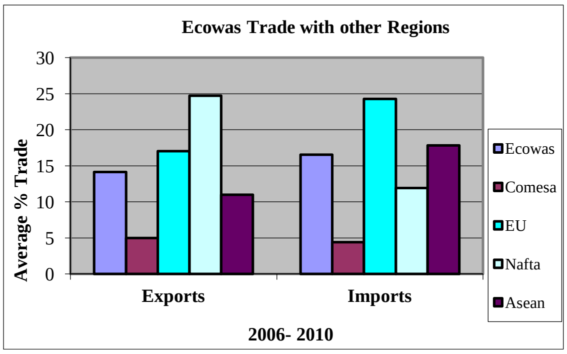

Fig. 2: ECOWAS trade with other regions (% shares of exports and imports)

Table 2 x-rays the first twenty traded products by the sub-regional members. The traded products by ECOWAS members from the sub-regional markets, include: Prepared foodstuffs, mineral products, footwear, headgear, vegetable products, articles of stone, animal products, products of chemical, plastics and articles of plastics, wood and articles of wood, textile products, raw hides and skins, textiles and articles of textiles. However, according to the harmonized system of trade classification, agricultural products among these include prepared foodstuff, vegetable products and animal products. Other products belong to different trade classification codes than agriculture.

Table 2: Product codes of the first twenty major product traded

Mineral Products	Prdcts of Chemical	Prepared Foodstuffs	Vegetable Products	Plastic & Articles	Animal Products	Pulp of Wood	Textiles & Articles
271019	300490	170199	100190	392330	40221	490199	630900
271113	381121	190190	70310	392690	40690	481930	610910
271011	300220	210690	70190	390720	40120	490900	630510
252310	330290	220429	100110	401220	30343	490210	520839
250300	330300	190110	91091	401011	40310	480411	630533
271113	330499	230990	121190	390422	40510	490290	560819
271320	310590	220421	81050	390110	40130	480421	630790
252010	310520	220300	100620	390410	40700	481092	631090
261900	382200	240120	60290	401012	30349	481910	560811
271210	380300	220410	121299	392350	40630	480511	560790
271500	360500	210390	90412	392020	40210	481920	520829
252620	292910	220110	70990	392310	30342	481320	560312
252220	310290	190590	80240	392620	40291	481820	560311
252210	321519	190531	110100	392190	30344	482010	620199
252321	360200	210210	81090	401693	30379	480255	620799
250810	310520	220830	120799	390230	20230	480920	520839
250900	330210	210220	130212	390750	40210	481019	520511
271490	292219	210330	130220	392490	40510	480100	560750
250100	380891	170290	120991	392010	20230	482390	620329
250840	281512	220290	120600	390210	30729	491199	630532

Source: UNCOMTRADE Data (2011)

The effects of the variable imports by the sub-regional members on ECOWAS agricultural product exports (Table 1) shows that:

Benin (X_1): The coefficient of effect of Benin's import on the intra-regional exports of agricultural products is 4.899, while the standard error is 2.395. This is positive and highly significant at 5% level of significance. The implication of this scenario is that Benin will import more than Cote d'Ivoire for every increase in export of the product within ECOWAS sub-region, i.e. for every increase in exports, Benin's intra-regional imports will increase by 4.899 units, all things being equal as against 1.06 units for Cote d'Ivoire.

Burkina Faso (X_2): The coefficient of effect of Burkina Faso's import on the intra-regional exports of agricultural products is -3.324, while the standard error is 1.312. This is negative and highly significant at 5% level of significance. The implication of this scenario is that Burkina Faso will import less than either Benin or Cote d'Ivoire for every increase in export of the product within ECOWAS sub-region, i.e. for every increase in exports, Burkina Faso's intra-regional imports will decrease by -3.324 units, all things being equal as against an increase of 1.06 units and 4.899 units for Cote d'Ivoire and Benin, respectively.

Cote d'Ivoire (X_4): As shown in Table 1, the coefficient is1.056, while the t* equal to 22.322, which is positive and highly significant at 1% level of significance. This implies that every increase in regional export will lead to an increase to Cote d'Ivoire's intra-community imports of agricultural products by 1.06 units all things being equal. This is healthy, considering the regional clamor for integration.

Ghana (X_6): The coefficient of effect of Ghana's import on the intra-regional exports of agricultural products is 5. 525, while the standard error is 1.205. This is positive and highly significant at 1% level of significance. The implication of this scenario is that Ghana will import more than Cote d'Ivoire for every increase in export of the product within ECOWAS sub-region, i.e. for every increase in exports, Ghana's intra-regional imports will increase by 5.53 units, all things being equal.

Guinea (X_7): The coefficient of effect of Guinea's import on the intra-regional exports of agricultural products is 74.988, while the standard error is 20.77. This is positive and highly significant at 5% level of significance. The implication of this scenario is that Guinea will import more than either Benin or Cote d'Ivoire for every increase in export of the product within ECOWAS sub-region, i.e. for every increase in exports, Guinea's intra-regional imports will increase by 74.988 units, all things being equal as against an increase of 1.06 units and 4.899 units for Cote d'Ivoire and Benin, respectively.

Senegal (X_{13}): The coefficient of Senegal's import effect on intra-ECOWAS exports of agricultural products is 7.343, while the t* equal to 4.847, which is positive and highly significant at 1% level of significance. This implies that every increase in intra-regional export of agricultural products is as a result of an increase in Senegal's intra-community imports by 7.34 units all things being equal. This will lead to sustained regional integration.

Other Countries with positive import influence on intra-regional trade, but at 5% level of significance that are not included in the estimated equation are Guinea and Sierra Leone import volume coefficients (74.988 and 2385.044 units, respectively), while that with negative influence at 5% level of significance is Gambia imports coefficient (-10497.690 units).

Considering the estimated regression equation, we find that all parameter estimates are not zero hence:

$$E_E = -626316 + 4.899X_1 + 1.056X_4 + 5.525X_6 + 74.988X_7 + 7.343X_{13} + \mu$$

Where;

X_E = Estimated EOWAS Exports

X_1 = Import by Benin

X_4 = Imports by Cote d'Ivoire

X_6 = Imports by Ghana

X_7 = Import from Guinea

X_{13} = Imports by Senegal

The two-tail test of the null hypothesis (at 5 per cent level of significance) reduces to two statements thus:

If the observed t* is greater than 2 (or less than -2), we reject the null hypothesis.

If, on the other hand, the observed t* is smaller than 2 (but greater than -2), we accept the null hypothesis. So, given that $t^* = \dfrac{\hat{b}_i}{s\left(\hat{b}_i\right)}$, t the sample value of t* would be greater than 2 if the relevant estimate ($\hat{bo}$ or $\hat{b}_i$) is at least twice its standard deviation (Koutsoyiannis, 2001)

Therefore, in our explicit linear regression model $Y = bo + b_1 + b_2 + ...+ b_n + \mu_i$, regression constant $bo = -626.316$ represents anexport threshold requiredto improve meaningfully the current import status of the regional member nations. This is abundantly negative and requires sustained and improved import streams to be positive given that all stake holders import goods supplied by member states. Summarily, we reject the null hypothesis $H_O : b_1 = b_2 = b_{15} = 0;$ (i.e. ECOWAS member nations' imports of agricultural products do not significantly influence the intra-regional export volumes of the product), and accept the alternative one that $H_A : b_1 = b_2 = b_{15} \neq 0;$ ECOWAS member nations' imports of agricultural products have significant influence on intra-regional export volumes of the product (Table 1).

Table 3: Ordinary least squires regression model output

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-626.316	444.916		-1.408	.197
	Benin	4.899	2.395	.655	2.045	.075
	Burkina Faso	-3.324	1.312	-.210	-2.534	.035
	Cape Verde	392.664	663.700	.010	.592	.570
	Cote d'Ivoire	1.056	.047	.781	22.322	.000
	Gambia	-10497.670	2844.762	-1.120	-3.690	.006
	Ghana	5.525	1.205	.547	4.587	.002
1	Guinea	74.988	20.770	1.035	3.610	.007
	Guinea Bissau	242.888	925.749	.003	.262	.800
	Mali	-4.397	9.795	-.165	-.449	.665
	Niger	-40.944	33.292	-.052	-1.230	.254
	Nigeria	-.092	.219	-.036	-.418	.687
	Senegal	7.343	1.256	.498	5.847	.000
	Sierra-Loene	2385.044	704.347	.209	3.386	.010
	Togo	-3.372	1.743	-.221	-1.934	.089

a. Dependent Variable: ECOWAS Exports

Table 4: ANOVA table for testing the hypothesis

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	6474032031.169	14	462430859.369	648.683	.000[b]
1	Residual	5703010.714	8	712876.339		
	Total	6479735041.882	22			

a. Dependent Variable: ECOWAS Exports; b. Predictors: (Constant), Togo, Guinea, Senegal, Sierra-Loene, Niger, Guinea Bissau, Ghana, Benin, Cape Verde, Cote d'Ivoire, Burkina Faso, Nigeria, Gambia, Mali

From Table 4, F*cal = 648.683 >F tab = 2.7; meaning that the Null hypothesis is truely rejected. This is because, the model is significant at 1% level of significance, implying that not all b* are zero. Five explanatory variables $X_1, X_4, X_6, X_7 + X_{13}$; i.e. intra-community imports by Benin, Cote d'Ivoire, Ghana, Guinea and Senegal have significant effects on the intra-ECOWAS exports.

Conclusion

The number of ECOWAS countries driving the sub-regional integration efforts by importing significantly from regional member-suppliers leaves much to be desired. Only five countries namely Benin, Cote d'Ivoire, Ghana, Guinea, Senegal and Sierra-Leoneof the fifteen sub-regional members have imports that positively and significantly influence intra-regional agricultural product exports at 1 and 5% levels. With Burkina Faso and Gambia having negative effects on intra-regional exports, the remaining eight countries account for zero imports. Therefore, to ensure a sustained integration through trade, members need to improve on their patronage of made in the region agricultural products. Moreover, all ECOWAS member nations need to redouble their efforts to enhance regional economic integration through patronizing sub-regional products of trade to engender growth in a sustainable manner.

It is crucial to build on the trade achievements that have been made and strive for sustained integration and economic growth. Therefore, the significance of ECOWAS member nations importing from and exporting to others in the light of growing emphasis for regional integration and at a stage when most ECOWAS countries are opening up their markets under the pressure of International Monetary Fund (IMF) and World Bank (WB) cannot be over emphasized. Moreso, producing a greater variety of goods increases the general knowledge about its technology and implies smaller costs of knowledge accumulation. This in turn will lead to improvement in the manufacturing capacity of the region by ensuring the extension of value chain of most of the intra-regional agricultural product exports, from primary to secondary and tertiary products; leading to realization of maximum benefits of globalization in the light of diversified agricultural products. Nigeria's importation from and exportation of products of prepared foodstuffs to Benin, Cote d'Ivoire, Ghana, Togo, etc. will likely lead to improvements in these countries' products. These will assist in the improvement and sustenance of market shares of members' in particular agricultural products within the sub-region.

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