POLICY OPTIONS FOR AVERTING TRADE DISPLACEMENT EFFECTS AMONG ECOWAS BY THE EU: THE CASE OF COTE D'IVOIRE AND NIGERIA

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ABSTRACT

This paper examined a total of 4,313 HS 10-digits product imports by Nigeria and Cote d'Ivoire from the EU, the ECOWAS sub-region, and the rest of the world (ROW). The initial volumes of imports at various tariff levels as well EPA scenario imports at zero tariff from the three sources were identified and compared to infer possible trade displacement effects in face of a trade agreement of tariff removal on regionally traded products. Policies for institutional reforms to sustain regionally traded products and markets and for reallocation of resources from contracting to expanding product sections given the regional endowments are advocated. The paper suggests that Nigeria and Cote d'Ivoire should exempt those products imported from the EU when ECOWAS regional members are suppliers from tariff removal, especially if the share of regional imports is at least between 2 - 5% of the total world import trade of the product. And *that arbitrary liberalizations across all products as implied in the current ECOWAS-EU trade deal on 24th March 2014, of 75% market access opening over a 20 year span would likely lead to EU exports depressing national and regional supply from ECOWAS countries and intra-ECOWAS trade being minimized. Huge revenue and net welfare losses will likely be experienced at an EPA scenario of zero tariffs on traded products.*

Key Words: Cote d'Ivoire - Nigeria, EPAs, EU, Intra-ECOWAS Trade, Welfare Effects.

1.0 Introduction

The identification of regionally traded products and markets in a bid to sustaining them through joint and diversified action plan by the sub region is very necessary to boost intra-ECO WAS trade. It is pertinent to identify the product imported from the EU where ECOWAS regional partners are suppliers. Referring to these products as sensitive and exempting them from tariff removal in an EPA would likely sustain and improve intra-ECOWAS trade through trade creation. Consequently, in the light version of the original Economic Partnership Agreements (EPAs), about 20 countries concluded interim trade agreements, but this has not put an end to the negotiations as some of these countries would like to see the terms of the trade agreement revised, or their scope extended, and concluded at regional levels, to preserve their regional integration process **(**ECDPM, 2012). As of Friday 24th, March 2014, the West Africa Economic Partnership Agreements (EPAs) negotiating region became the first African block to reach a deal at the level of senior officials on EPAs, more than a decade after negotiations began. A final meeting to officially endorse the deal as it stands is foreseen in Brussels for early February. It will then have to be endorsed by West African Heads of State. The negotiating session came after ECOWAS had approved its Common External Tariff (CET) and revised its market access offer upwards to 75% from the 70% it had stuck to previously (Hamid, A., 2013). The new position on market access was crafted by the ECOWAS Commission and approved by West African Heads of States in Dakar late last year. The move was at the time seen as an attempt to meet European negotiators halfway on the controversial topic of market access, which had bogged down negotiations up until last week. While the technical details have not been revealed, the outlines of the deal are as follows. On market access, the European Union (EU) accepted the

West African position of 75% market access opening over a 20 year span. On the development financing component of the EPA, the text pledges to mobilize US€6.5 billion in order to help West Africa cope with the agreement's implementation costs. From the information available, it seems the region backed down from its demand of having the text spell out that resources provided would be "additional". The text of the most favored nation (MFN) clause is at first glance more elaborate, reflecting its controversial nature. The EU has committed to grant West Africa any additional market access it would provide other parties in subsequent agreements. Since the EU already grants West Africa Duty Free and Quota Free (DFQF) access, and since the clause is limited to tariffs only, it is not immediately clear what the implications were. West Africa, on its side, commits to do the same on certain conditions: the clause does not cover other African, Caribbean and Pacific (ACP) or African states, or countries that have a share of world trade below 1.5%. Further, only agreements with countries having a ratio of manufactures to GDP higher than 10% will be covered. If the deal is concluded with "a group of countries", then the share of world trade considered shall be 2%. It is unclear at present what countries or group of countries are covered by the clause. The aim of West African negotiators had been to minimize the number of countries under its reach, so as to retain flexibility during future negotiations. The symbolic nature of the clause, which seeks to extend additional concessions to the EU should ECOWAS go ahead and negotiate further Free Trade Agreements in the future, had also greatly contributed to the controversial nature of EPA talks. Less controversial but still previously unresolved aspects, such as EU domestic support to agriculture and the so-called "Turkey clause" were overcome. The EU has agreed to refrain from using export subsidies on agricultural goods exported to the region, and agreed to provide ECOWAS with information regarding the nature and amount of support it provides to its farmers. On future negotiations with countries part of a Customs Union with the EU, such as Turkey and Andorra, the two parties will issue a declaration inviting West Africa to consider the prospects of future negotiations.

Most issues were solved by senior officials immediately after a first round of talks amongst experts did not manage to overcome the hurdles on which negotiations broke down in 2011. The two points on which the European Commission (EC) made significant concessions, namely the level of market access opening and time frame for liberalization, came after ministerial pressures from EU member states on these issues (see above).

The implications of the deal are far reaching. The ECOWAS grouping has in all likelihood succeeded in avoiding the prospect of seeing two of its members, Cote d'Ivoire and Ghana, break regional ranks and conclude an EPA individually in order to safeguard market access on crucial tariff lines. Secondly, the EU has lowered the threshold of 80% liberalization over 15 years it had stuck to for more than a decade. Other ACP regions might seek to argue for a similar level of ambition, although talks in other regions are already quite advanced. Finally, the agreement comes a few months before the EU-Africa Summit, where EPAs are expected to be an important topic.

The research carried out by McKay, Milner and Morrissey (2005) analyzed the welfare impacts on the EAC; and Milner, Morrissey and Zgovu (2008) considered aspects of impact and adjustment costs for the EAC and Mauritius. These were silent over traded product sections details and on the listing of products traded among the ECOWAS member nations for which EU are suppliers. Besides, these studies have not explored in many details the associated implications of EPAs on Nigeria and Cote d'Ivoire trade and or means for identifying traded products.

1.2 Problem Statement

In spite of the trade portfolio of Cote d'Ivoire and Ghana with the ECOWAS, EU, and the rest of the world given the initial and possible EPA scenario induced imports, one wonders how Cote d'Ivoire and Ghana each could have a bilateral free trade agreement with the EU. This is because opening their domestic market to European products, while their West African partners, with whom they form a customs union keep protecting their market from the EU, would very logical lead to EU goods flooding the whole regional markets via these two countries. In this way, the West African customs union and further integration process would be rendered totally ineffective. Are Cote d'Ivoire and Nigeria likely to benefit from EPAs that do not respect regional trade development? Which regionally traded products will really benefit? Are Nigeria and or Cote d'Ivoire ready for such wide-ranging negotiations and conclusions? Will the EPAs be sufficiently flexible in their design to enable these countries to adapt? Is it reasonable to expect that these objectives can be achieved? Will they be compatible with trade development needs in the ECOWAS sub-region? Will all traded products in ECOWAS be regarded as sensitive and such exempted from tariff removal? Which method will be used for identifying the sensitive product and as such exempted from tariff removal? What will be the likely trade and welfare implications of EPAs?

1.3 Objectives of the Study

The objectives of the study include to :-

(1) Identify initial and EPA scenario induced product imports (at zero tariffs) of Cote d'Ivoire and Nigeria from three sources – (the EU, ECOWAS and the rest of the world (ROW);

(2) Estimate the likely revenue and welfare impacts of free trade on the products under an Economic Partnership Agreement of zero tariffs.

(3) Enumerate the sensitive products based on volume of import and source criteria.

1.4 Significance of the Study

The analyses of any established free trade area to determine its impact on trade, revenue and welfare are interesting case study for evaluating international trade theory. Estimates of the trade impact of free trade agreements are necessary for evaluating the merits of trade integration. Earlier studies on the trade impact of free trade areas have produced surprisingly wide range of estimates. Baier and Bergstrand (2007) and Ghosh and Yamarik (2004) conclude that the empirical evidence on the trade-creating effects of regional trade agreements is fragile. In particular, ECOWAS estimation results are typically absent.

2.0 Data and Analytical Techniques

The import data were obtained from UNCOMTRADE statistics at the ten-digit level of the Harmonized System (HS). Data were disaggregated by source (EU, ECOWAS and ROW) according to product classification sections and economy to obtain import values from the EU, ECOWAS and ROW, i.e. M_EU; M_ECOWAS; & M_ROW, respectively. All the data are in units of 1000 of US $. Tariff data were sourced from the Trade Analysis and Information System (TRAINS), United Nations Conference on Trade and Development (UNCTAD) online source at the ten-digit level of the HS. The Most Favored Nation (MFN) Tariff data at ten-digit level of HS and import demand Elasticities were sourced from TRAINS. Other data sources included ECOWAS Social and Economic Indicators cum ECOWAS Statistical Bulletin; African Statistical Yearbook, International Monetary Fund (IMF), and the World Bank among others.The overall estimates of the value of trade effects due to consumption, trade creation and trade diversion, and the corresponding overall welfare effects were obtained for each of the 13 product section studied.

The partial equilibrium analytical framework used by Morrissey and Zgovu (2011) was being adopted. According to them, “trade diversion imposes a welfare loss where an import from more efficient extra-regional suppliers (the Rest of the World, ROW) is diverted to less efficient intra-regional supplier (now the EU)”. The implication of which is that for the ECOWAS region in general and Cote d’Ivoire and Nigeria in particular, welfare will increase if trade creation would be greater than trade diversion. In this regard, trade creation which arises as a result of an inefficient production by domestic firms in ECOWAS sub-region is displaced by free tariff imports by more efficient producers in another new member country (the EU). This increases welfare in total through a more efficient allocation of production within a region (Morrissey and Zgovu (2011).

Cote d’Ivoire and Nigeria’s supply curves are assumed to be upward sloping and the supply of two initial outside suppliers (the EU and the rest of the world - ROW) is assumed to be infinitely elastic. The analysis which is partial equilibrium in nature had the markets assumed to be perfectly competitive, and there is perfect substitutability between imported and domestically produced import substitutes.

2.1 Consumption Effects

The consumption effects estimated were for those products where the EU is the dominant supplier relative to the existing EU import levels as shown below. The global efficiency of the EU is said to be predicated in those products where the EU is the dominant supplier to any of the markets prior to the formation of the EPAs, and here only consumption effects are assumed to follow from the EPAs.

$$\Delta C^{M} = \left(\frac{t}{1+t}\right).\eta_{M}^{d}.M_{0}^{EU} \tag{1}$$

Where t is the MFN tariff rate imposed on imports from the EU in the present period n?

η_M^d Is price elasticity of demand for imports, and M_O^{EU} are imports from EU.

The tariff revenue loss on imports were estimated with equation 2; while the welfare effects were estimated by equation 3, given that EPA entails elimination of tariffs on imports from the EU,

$$\Delta R^C = -t.M_0^{EU} \qquad (2)$$

$$\Delta W^C = (1/2)t.\Delta C^M \qquad (3)$$

2.2 Trade Creation with Consumption Effects

For those Products where Cote d'Ivoire and Nigeria provides up to 2 - 5% of imports the effects of trade creation with consumption just were estimated as the trade diversion case. Here, the assumption is that the EU is a more efficient supplier than the rest of the world. If the duty free supply price from the ECOWAS lies over the relevant range, then all of the current imports from the ECOWAS will be replaced by more efficient production from the EU. Thus the maximum value of the trade created ΔM^{TC} for the EU by this deflection from ECOWAS sources will be estimated by:

$$\Delta M^{TC} = 1/2.(\frac{t}{1+t}).\eta^d M.M_0^{ECOWAS} \qquad (4)$$

Where M_0^{ECOWAS} is the current value of imports from ECOWAS?

Welfare effects of trade creation with consumption effects were estimated as the combination of the maximum value of trade created by the displacement of ECOWAS exports to partner country *j* and consumption effects of trade creation defined in equation (4) above as follows:

$$\Delta W_{TC}^{M} = \left(M_0^{ACP}\right)t + (1/2)\left(t.\Delta TC_M^C\right) \qquad (5)$$

2.3 Trade diversion' with consumption effects

All imports were diverted from ROW, and we assumed that the EU must initially be supplying a reasonable share of imports of a product (at least 10-12%) to have a capacity for trade diversion. Trade diversion were considered where when more efficiently produced imports from the ROW are displaced by relatively less efficiently produced commodities from the EU due to zero tariff. Product sections for which the ROW is a dominant supplier before zero tariff agreement in an EPA were taken to indicate that the ROW is more efficient than the EU, but as EPAs lead to lower prices in EU markets, under the prevailing constant production cost conditions the EU becomes the sole supplier to Cote d'Ivoire and Nigeria, and total import diversion became the upper limit of trade diversion. The consumption effects due to trade diversion (ΔM^{TD}) were estimated thus:

$$\Delta TD_M^C = (1/2)\left(\frac{t}{1+t}\right).\eta_M^d.M_0^{ROW} \qquad (6)$$

Where $M_O{}^{ROW}$ $=$ Current quantity of imports from ROW

2.4 Tariff revenue

The tariff revenue loss due to trade diversion (with consumption effects) was estimated by the relationship:

$$\Delta R_{TD}^{C} = -t.M_0^{ROW} \qquad (7)$$

2.5 Welfare impact of trade

The welfare impact of trade diversion with consumption effects (TD & CE) were estimated as the combination of consumption effects (from equation 6) and tariff revenue effects (from equation (7) thus:

$$\Delta W_{TD}^{M} = (1/2)\left[\left((1/2)t.\Delta TD_{M}^{C}\right) - \left(t.M_{0}^{ROW}\right)\right] \qquad (8)$$

2.6 Imports from EU of Various product Sections by Cote d'Ivoire and Nigeria (%)

The products considered were those in which ECOWAS, EU, and ROW have the potentials to supply under EPAs. Specifically, import trade in machinery and mechanical appliances; electrical equipment and vehicles, aircraft, vessels and associated transport equipment (TDC 16) is relatively significant, accounting for about 23.65% of these economies imports from the EU. ECOWAS member nations are not supplies. So, tariff removal may be considered for these products where the EU and or ROW have higher potential cum endowment for production and supplies (TDC 14-21, corresponding to HS chapters 71-97) to improve total consumption and welfare driven there from.

Table 2.6: Summary of Imports from EU of Various product Sections by Cote d'Ivoire and Nigeria (%)

TDC Sections	HS Description	Cote d' Ivoire	Nigeria	Percent Average
TDC 01	Animal Products	8.3	3.7	6
TDC 02	Veg. Products	11	0.8	5.9
TDC 03	Animal/Veg Products	0.5	0.2	0.35
TDC 04	Prep foodstuffs etc.	11.2	3.9	7.55
TDC 05	Mineral Products	3.1	41.3	22.2
TDC 06	Prod. of Chemicals	15.7	7	11.35
TDC 07	Plastics and Articles	3.8	2.2	3
TDC 08	Raw hides and Skins	0.1	0	0.05
TDC 09	Wood & Articles of	0.1	0.1	0.1
TDC 10	Pulp of Wood etc.	3.2	1.8	2.5
TDC 11	Textiles & Articles	2.3	0.9	1.6
TDC 12	Footwear, Headgear	0.3	0.2	0.25
TDC 13	Articles of Stone etc	1.1	0.6	0.85
TDC 14	Natural pearls etc.	0.3	0.2	0.25
TDC 15	Base Metals Articles	5.4	4.3	4.85
TDC 16	Electrical Equipt etc	22	25.3	23.65
TDC 17	Transport Equipt.	6.5	4.8	5.65
TDC 18	Optical/Photogphic.	1.6	1.2	1.4
TDC 19	Arms/Ammunition	0.1	0	0.05
TDC 20	Miscellaneous	1.3	0.7	1
TDC 21	Works of Art etc.	0	0	0

Source: EUROSTAT (Comet, Statistical regime 4), 2011

2.7 Revenue Effects

Cote d'Iviore and Nigeria are likely going to lose a big amount of revenue when tariff is removed from extra-regionally traded products. The likely relative amounts of tariff revenue losses that will be experienced in the major products are as shown below.

Table 2.7 Revenue Effects: Product Sections Change in Revenue as % of Total Initial Tariff Revenue)

Country:		**Cote d'Ivoire**		**Nigeria**		
		Change in Revenue as % of		*Change in Revenue as % of*		
HS Description		*Total Sections Initial Revenue*		*Total Sections Initial Revenue*		
Animal Products	-21.74%			-1.91%		
Veg. Products	-17.33%			-4.59%		
Animal/Veg Product	-0.19%			0%		
Prep foodstuffs etc.	-23.11%			-0.57%		
Mineral Products	-8.04%			-2.04%		
Prod. of Chemicals	-12.34%			-2.70%		
Plastics and Articles	-5.99%			-27.35%		
Raw hides and Skins	-0.09%			-0.15%		
Wood & Articles of	-0.09%			-0.04%		
Pulp of Wood etc.	-5.78%			-0.52%		
Textiles & Articles	-3.56%			-27.15%		
Footwear, Headgear	-0.04%			-13.77%		
Articles of Stone etc	-1.69%			-0.72%		

Source: Authors' Computation: Change in tariff revenue as a percentage of total initial tariff revenue

2.8 Welfare Impacts of EPA

The welfare estimates distinguished consumption effects (CE), TD & CE, and TC & CE of the major product sections traded. The value of TD & CE is notional (not felt by the importing Cote d'Ivoire or Nigeria), but is normally negative in welfare terms. However, both CE and TC & CE induced by reduction in price are normally felt in welfare terms and positively welfare enhancing. Besides, the sign of the overall welfare effects are dependent on the relative magnitude of TD & CE. Net welfare effect is a function of the product sections’ structure of imports. It reflects the conditions of each product classification sections with respect to the responsiveness of their respective imports to prevailing tariff value (zero in this case).

Table 2.8: Welfare Impacts of EPA on Major Product sections Traded by Cote d'Ivoire and Nigeria

TDC Sections	HS Chapters	HS Description			Cote d' Ivoire	Nigeria	
TDC 01	Ch.01-05	Animal Products			0.1771	-0.5409	
TDC 02	Ch.06-14	Veg. Products			0.2814	-0.003	
TDC 03	Ch.15	Animal/Veg Products			0	0.1095	
TDC 04	Ch.16-24	Prep foodstuffs etc.			2.6509	0.4207	
TDC 05	Ch.25-27	Mineral Products			0.0698	0.1063	
TDC 06	Ch.28-38	Prod. of Chemicals			0.01	0.1664	
TDC 07	Ch.39-40	Plastics and Articles			-0.1599	0.2463	
TDC 08	Ch.41-43	Raw hides and Skins			0.006	0.011	
TDC 09	Ch.44-46	Wood & Articles of			0.0028	0.0308	
TDC 10	Ch.47-49	Pulp of Wood etc.			0.2232	-0.0148	
TDC 11	Ch.50-63	Textiles & Articles			-0.0146	0.0189	
TDC 12	Ch.64-67	Footwear, Headgear			0.00052	0.00022	
TDC 13	Ch.68-70	Articles of Stone etc			0.0215	0.1868	
Total					**3.27%**	**0.74%**	

Source: Authors' estimation: Sector Welfare Effects as % of Total Initial Trade Value 2010

3.0 Conclusions and Policy Implications

The major product codes evident of Nigeria's importation from ECOWAS and the EU include:- mineral products, products of chemical or allied industries, prepared food stuffs; beverages, spirits and vinegar; tobacco, live animals and animal products, plastics and articles thereof, pulp of wood or other fibrous cellulosic material; paper or paperboard Textiles and articles. The ECOWAS and EU countries that supply these products to Nigeria market are for: - (I) Product of Chemical and allied industries (TDC 05) – Cote d'Ivoire, Ghana, Senegal; and Spain, France, Latvia, United Kingdom, Greece; (ii) product of chemical (TDC 06) – Cote d'Ivoire, Ghana; and Ireland, France, United Kingdom, Belgium, Spain; (iii) prepared foodstuffs (TDC 04) – Cote d'Ivoire, Senegal, Ghana; and Ireland, Poland, Spain, France, Italy among others.

Furthermore, evidence of the product codes supplied by ECOWAS economies and EU member countries to Cote d'Ivoire are made explicit in appendix 1.2. The ECOWAS economies and EU countries that supply the products of these codes and in order of volume of importation include for: - (I) TDC 06: - Ghana, Nigeria, Senegal; and France, Italy, Germany, Spain, Netherlands, respectively; (ii) TDC 04: - Nigeria, Senegal, Ghana; and France, Germany, United

Kingdom, Spain, Bulgaria, among others; (iii) TDC 02: - Ghana, Senegal, Nigeria; and France, Denmark, Italy, Germany, Netherlands, etc.

In an attempt to overcome trade displacement, it would be best for Cote d'Ivoire and Nigeria to import these identified products of trade from regional members, rather than extra-regional members e.g. importing product of chemicals and allied industries from regional suppliers such as Ghana, Nigeria and or Senegal, would improve intra-ECOWAS trade more than, importing at little or zero tariffs from extra-regional members. This will lead to improvement and sustenance of regionally traded products and will culminate to deepened intra –ECOWAS trade cum regional integration. The products whose imports are outstanding such as machinery and mechanical appliances; electrical equipment and vehicles, aircraft, vessels and associated transport equipment interestingly are products among others (evident in table 2.6) should considered for tariff reduction or removal to maximize regional consumption and welfare there from. Notably, these are product in which most ECOWAS economies have low potential to develop competitive production to meet regional demand and forge ahead for extra-regional exports. Besides, tariff should be placed on those products for which ECOWAS economies have potentials to supply within the sub-region to improve intra-regional trade development and growth. Put differently, the regionally traded products should be exempted from tariff removal, especially those that satisfy the volume of import and source criteria of (2-5%) imports from regional members as evident in the product supplies to ECOWAS markets by her regional partners (appendix 2.1 and 2.2).

As was modified from Morrissey and Zgovu, (2011), the products in which displacement effects occurred include those where Nigeria or Cote d'Ivoire's import shares from the EU are up to 17-20%, and the regional import share is at least 2-5%. In which case only consumption effects are assumed, where import from the EU dominated. Stemming from this, it suffices to state that the product sections which satisfy these conditions are simultaneously supplied from ECOWAS sub-region and the EU. This therefore possesses trade displacement threat to the ECOWAS suppliers within the sub-region. Checking this trend will no doubt improve intra-ECOWAS trade and deepen her regional integration efforts in face of EPAs. Based on these import conditions (appendixes 2.1 and 2.2), the products that would be exempted from tariff removal due to likely displacement effects include for: -

(i) **Cote d'Ivoire: -**Animal products, prepared foodstuffs; beverages, spirits and vinegar; tobacco, products of chemical, plastics and articles of plastics, woods and articles of wood among others.

(ii) (ii) **Nigeria: -** animal products, products of chemical or allied products, footwear; headgear, etc. In this regards import shares from the EU and ECOWAS are set at 18 percent and 2%, respectively.

Also, modified from Morrissey and Zgovu, (2008, 2011), trade diversion effects occurred where Cote d'Ivoire, Nigeria, and any ECOWAS member nation's import shares from EU were within 8-10 percent points of the rest of the World (ROW). There will likely be trade diversion effects in (1) Cote d'Ivoire of product of chemical or allied industries, and pulp of wood or other fibrous cellulosic material; paper or paperboard; while Nigeria will not likely have any trade diversion effects based on the criteria discussed.

Huge tariff revenue losses will likely be experienced in all products of trade between the EU and Cote d'Ivoire, while in Nigeria, there will likely be an exception in Vegetable and animal fats and oil that will likely experience zero tariff revenue lose. Introduction of value added tax could serve to cushion the effect of the revenue losses.

There will likely be net welfare losses for Cote d'Iviore and Nigeria in Plastics/articles of plastics, Textiles/articles of textile and Animal products, Vegetable products, pulp of wood, respectively. Welfare losses occur when trade diversions with consumption effects outweigh trade creation with consumption effects in any of the economies or product sections. One way of addressing any net welfare losses related to employment displacement is to facilitate relocation of labour into expanding production sectors by undertake production and employment adjustment programmes, as well as skill development and productivity enhancement programmes.

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UN COMTRADE Result Available online at https://www.wits.worldbank.org

UNCTAD TRAINS Tariff & Import Demand Elasticities; Result Available online at https://www.wits.worldbank.org

Appendix 1.1: Product Codes of the First Twenty Major Product Imports of Nigeria from both ECOWAS and EU

Mineral Products	Product of Chemical	Prepared Foodstuff	Animal Products	Plastic & Articles	Pulp of Wood	Textiles & Articles of	Vegetable Products
252329	330210	190190	30379	401691	480300	590110	91099
271019	300490	230120	40221	401699	490290	550130	100190
271320	350691	220410	30374	401019	480257	631010	100110
271011	350699	170199	40210	390210	480419	621790	110710
271490	282300	200290	40291	401693	480511	550630	110720
252020	380290	190110	30510	391530	481092	540769	130213
271091	292910	210690	40690	391690	490199	530500	90240
271500	330290	170230	30351	392020	490510	611780	91091
271390	382490	200990	40590	390110	480524	590110	100640
252010	381400	240120	30371	390720	481190	551211	90230
252330	381121	190590	40390	400942	470321	630510	100630
252310	310520	240220	40299	401120	481159	550390	121020
252390	330210	230910	40410	390230	490700	630790	130220
260200	291421	240220	30374	390690	480100	540331	110900
252220	382460	230990	30559	390760	480258	540339	110812
251512	281512	220421	40900	401039	481390	590190	130213
271210	283650	220210	10190	400211	481019	591132	110520
250300	292910	170290	30549	392690	480220	560121	110412
250100	293040	190110	40520	391239	490290	560490	110313
252329	382000	170111	40490	391710	480525	630699	120991

Source: UNCOMTRADE Data: Pre EPA 2010 Gross Imports, Nigeria from ECOWAS and EU

Appendix 1.2: Product Codes of the First Twenty Major Product Imports of Cote d'Ivoire from both the ECOWAS and EU

Products of Chemi	Prepared Foodstuff:	Veg. Products	Animal Products	Plastics & Articles of	Pulp of Wood	Mineral Products	Textiles & Articles
382550	240290	140490	51110	401700	491199	271290	631090
382490	240220	130239	50400	401699	491191	271220	631010
382460	240210	130232	40900	401695	491110	271210	630900
382450	240130	130220	40819	401694	491000	271113	630790
382440	240120	130219	40811	401693	490900	271099	630720
382200	230990	130213	40700	401691	490890	271019	630710
382100	230910	121220	40690	401610	490599	271011	630622
382000	220900	121190	40640	401519	490290	270750	630619
381900	220890	121020	40630	401511	490210	270730	630612
382000	220870	120999	40620	401490	490199	270500	630590
381900	220860	120991	40610	401410	490191	261800	630533
381600	220850	120810	40590	401390	490110	261510	630532
381590	220840	110900	40520	401310	482390	261400	630493
381519	220830	110813	40510	401290	482370	253020	630491
381511	220820	110812	40490	401220	482369	252620	630419
381400	220720	110811	40410	401219	482340	252620	630399
381300	220710	110710	40390	401212	482320	252390	630392
381230	220600	110630	40310	401211	482290	252330	630299

Source: UNCOMTRADE Data 2010 Gross Imports, Cote d'Ivoire from ECOWAS and EU

Appendix 2.1 Nigeria's Likely Patterns of Imports from Three sources at Zero Tariff (% Shares)

Nigeria		TDC	% Share	% Share	% Share	World
HS Description		Sections	from EU	ECOWAS	ROW	Total
Animal Products		TDC 01	18.23	0.33	81.44	1198516
Veg. Products		TDC 02	9.37	0.25	90.38	1783164
Animal/Veg Product		TDC 03	7.9	2.48	89.62	235755.6
Prep foodstuffs etc.		TDC 04	16.26	0.59	83.14	1557578
Mineral Products		TDC 05	25.19	0.71	74.09	1174956
Prod. of Chemicals		TDC 06	18.41	2.11	79.48	3143320
Plastics and Articles		TDC 07	10.11	0.05	89.84	7990211
Raw hides and Skins		TDC 08	1.32	0.007	98.67	146362.1
Wood & Articles of		TDC 09	18.15	0.69	81.15	355730.1
Pulp of Wood etc.		TDC 10	21.74	0.6	77.66	1104143
Textiles & Articles		TDC 11	8.57	0.09	91.34	1295635
Footwear, Headgear		TDC 12	14.77	18.36	66.88	180633
Articles of Stone etc		TDC 13	33.16	0.01	66.83	1342643

Source: Computed by the Authors from UNCOMTRADE: EPA Scenario induced Import Data 2010

Appendix 2.2: Cote d'Ivoire's Likely Patterns of Imports from Three Sources at Zero Tariffs (% shares)

Cote d'Ivoire	TDC	% Share	% Share	% Share	World Total
HS Description	Sections	from EU	ECOWAS	ROW	Millions US $
Animal Products	TDC 01	33.71	8.36	57.93	458714
Veg. Products	TDC 02	30.58	0.15	69.26	710904
Animal/Veg Products	TDC 03	1.79	0.57	97.64	79388.2
Prep foodstuffs etc.	TDC 04	65.82	10.45	23.73	307425
Mineral Products	TDC 05	5.11	73.75	21.14	2026277
Prod. of Chemicals	TDC 06	43.28	2.28	54.44	678141
Plastics and Articles	TDC 07	19.86	4.68	75.46	351134
Raw hides and Skins	TDC 08	19.76	0.35	79.89	6932.53
Wood & Articles of	TDC 09	27.25	2.15	70.6	4945.89
Pulp of Wood etc.	TDC 10	54.7	0.48	44.82	148185
Textiles & Articles	TDC 11	13.06	1.05	85.89	199805
Footwear, Headgear	TDC 12	10.49	1.18	88.83	18819.6
Articles of Stone etc	TDC 13	39.47	0.14	60.39	43299.7

Source: Computed by the Authors from UNCOMTRADE: EPA Scenario induced Import Data 2010

Appendix 2.3Nigeria Sector Welfare Effect: Product Sections Welfare Effects as % of Total Sector Initial Imports

Country: Nigeria	Welfare Effect	Welfare Effect	Welfare Effect	Total Welf
HS Description	from CE	from TC &CE	from TD & CE	Effect (%)
Animal Products	0.0438	0.0011	-0.5858	-0.5409
Veg. Products	0.0112	0.0028	-0.017	-0.003
Animal/Veg Product	0.0549	0.0578	-0.0032	0.1095
Prep foodstuffs etc.	0.5114	0.0362	-0.1269	0.4207
Mineral Products	0.1358	0.0058	-0.0353	0.1063
Prod. of Chemicals	0.2411	0.0035	-0.0782	0.1664
Plastics and Articles	0.359	0.00047	-0.1131	0.2463
Raw hides and Skins	0.0117	0	-0.00063	0.011
Wood & Articles of	0.0349	0	-0.0041	0.0308
Pulp of Wood etc.	0.0238	0.000025	-0.0387	-0.0148
Textiles & Articles	0.0269	0	-0.008	0.0189
Footwear, Headgear	0.00058	0	-0.00081	0.00022
Articles of Stone etc	0.3542	0	-0.1674	0.1868
Total	**1.81%**	**0.12%**	**-1.18%**	**0.74%**

Source: Authors' estimation: Sector Welfare Effects as % of Total Initial Trade Value 2010

Appendix 2.4 Cote d'Ivoire Sector Welfare Effects: Product Sections Welfare Effects as % of Total Sector Initial Imports

Country: Cote d'Ivoi	**Welfare Effect**	**Welfare Effect**	**Welfare Effect**	**Total Welf**
HS Description	**from CE**	**from TC &CE**	**from TD & CE**	**Effect (%)**
Animal Products	0.3248	0.0021	-0.1498	0.1771
Veg. Products	0.27	0.016	-0.0046	0.2814
Animal/Veg Product	0.0019	0.000015	-0.0019	0
Prep foodstuffs etc.	0.454	2.4595	-0.2626	2.6509
Mineral Products	0.129	0.0588	-0.118	0.0698
Prod. of Chemicals	0.1782	0.0115	-0.1799	0.01
Plastics and Articles	0.0585	0.0238	-0.2422	-0.1599
Raw hides and Skins	0.0073	0.0002	-0.0015	0.006
Wood & Articles of	0.0035	0.000076	-0.00077	0.0028
Pulp of Wood etc.	0.2191	0.0041	0	0.2232
Textiles & Articles	0.0934	0.0068	-0.1148	-0.0146
Footwear, Headgear	0.0025	0.00012	-0.0021	0.00052
Articles of Stone etc	0.0382	0.00028	-0.0167	0.0215
Total	**1.78%**	**2.58%**	**-1.09%**	**3.27%**

Source: Authors' estimation: Sector Welfare Effects as % of Total Initial Trade Value 2010