



## **Adjusting Liberalization due to Trade, Revenue, and Welfare Effects: An Economic Partnership Agreement Scenario between Cape Verde and the EU**

**G.O. Onogwu<sup>1</sup> and C.J Arene<sup>2</sup>**

<sup>1</sup>Department of Agricultural Economics and Extension Services, Federal University, Wukari, Taraba State, Nigeria

<sup>2</sup>Department of Agricultural Economics, University of Nigeria, Nsukka

Corresponding author: **G.O. Onogwu**, Department of Agricultural Economics and Extension Services, Federal University, Wukari, Taraba State, Nigeria

---

**Abstract:** The paper identifies intra and extra-regional import trade in 1868 HS 6-digits products by Cape Verde at the single country and 13 trade classification section levels, from the EU, the ECOWAS sub-region, and the ROW. Sensitive products enumeration was based on “Cape Verde’s imports of products from the different trade classification (TDC) sections- from ECOWAS, the EU and the rest of the world (ROW), of which ECOWAS member nations were suppliers at the single country level”. It investigates the likely trade, revenue and welfare consequences of Cape Verde of embarking on free trade under economic partnership agreements (EPAs) with the EU, using the partial equilibrium analysis and suggesting how EPAs can facilitate intra-regional trade. Cape Verde and indeed most other ECOWAS member nations would likely benefit from EPAs by adjusting to and treating all products of trade classification sections currently imported from the region as sensitive for EPAs, hence postponing any reductions or removal of tariffs on imports of such products from the EU. This measure would likely deepen regional integration and sustain markets and traded products within the regional markets. The EU could therefore support measures that enhance the productivity and competitiveness of domestic producers to ensure improved supply-side capacity. Cape Verde entering into such agreements should consider liberalization of products of the trade classification sections that are not produced and marketed among members of the region. Liberalizing substantially across all products of all trade classification sections, even considering 20% as sensitive products across board would have adverse trade, revenue and welfare impacts. Policies should be geared towards careful adjusting to liberalization patterns and reforms that would sustain regional markets and reallocate resources from contracting to expanding products of various trade classification sections. This will go a long way to improving, sustaining and deepening regional integration through trade on TDC sections 01-13 products.

**Key Words:** EPAs, Cape Verde, EU, Liberalization, Revenue, Trade, Welfare Effects.

---

## 1.0 Introduction

The purpose of international trade policy is to help a nation's international trade run more smoothly, by setting clear standards and goals which can be understood by potential trading partners. Trade patterns might be altered in several ways that might result in trade creation and trade diversion. The former relates to increased trade between the FTA members, while the latter concerns trade between members and non-members. Trade creation will be welfare enhancing, but trade diversion could distort total welfare benefits and even make them negative (Viner, 1950; Morrissey and Zgovu (2007). Hence, estimates on the trade impact of free trade agreements are necessary for evaluating the merits of trade integration.

The EPAs are set out to help West African countries integrate into the world economy and share in the opportunities offered by globalization. Provision of scope for wide-ranging trade co-operation on areas such as services, and standards acting as drivers of change are meant to kick-start reform and help strengthen rule of law in the economic field, thereby attracting foreign direct investment (FDI), and helping to create a "virtuous circle" of growth (<http://ec.europa.eu/trade/wider-agenda/development/economic-partner...>). To preserve their access to the EU market after 2007, about 20 ACP countries concluded interim trade agreements. This light version of the original EPAs 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 conclude the agreements at a regional level, to preserve their regional integration process (ECDPM, 2012). In this regards, one wonders how Ivory Coast and Ghana each could have a bilateral free trade agreement with the EU, since 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, rendering the West African customs union and further integration process totally ineffective. Recently, Europe threatened to withdraw the special trade preferences by 2014 to countries not showing commitment to proceed with their interim EPA. Europe's objective hopefully is to press for the conclusion of broader trade deals at regional level that would replace these awkward and controversial interim EPAs. In an apparently generous move, the European parliament's trade committee called on decision-makers to extend this deadline to 2016.

The identification of these effects and regionally traded products/markets in a bid to sustaining them is necessary in aiding Cape Verde among other ECOWAS member nations in the negotiations by listing of sensitive products (products where trade already exist among ECOWAS regional partners). The issue of reciprocity is not welcome under an EPA since it will tend to threaten Cape Verde trade as well as intra-regional trade in ECOWAS region as a whole for a number of reasons. There is a direct displacement threat to the traded products existing among

regional suppliers by the elimination of the external tariff protection vis-à-vis European exporters. There is also an indirect threat associated with the displacement of domestic production by European exporters in domestic markets, which may thereby reduce regional production capacity and future prospects for intra-regional exporting. These threats to Cape Verde's and indeed the entire ECOWAS regional trade development can be offset in a number of ways. Most obviously, as negotiations allow for the exclusion of sensitive products and for phased introduction of the tariff reductions, Cape Verde and ECOWAS region in general may benefit by treating products currently traded within the region as sensitive for EPAs, hence avoiding or postponing any reductions on tariffs on imports from the EU. More so, from the trade data, (TRAINS, 2010), there is no evidence of supplies from ECOWAS member nations of products from trade sections (TDC14-21) corresponding to HS Chapters 71-97. Put differently, the EU could provide 'aid for regional trade' and support for measures that enhance the productivity and competitiveness of domestic producers, for export capacity (both intra- and extra-regional) to improve. If EPAs promote increased exports by ECOWAS member nations to the EU and liberalization limited to non sensitive products imported from the EU, there may be potential to benefit from spillovers (Chris Milner, Oliver Morrissey and Evious Zgovu, 2009).

The results reported and discussed here are based on a number of *ex ante* studies of the trade effects of EPAs on various ACP groupings or countries undertaken by the authors. McKay, Milner and Morrissey (2005) analyzed the welfare impacts on the EAC; Greenaway and Milner (2006) covered CARICOM and Milner, Morrissey and Zgovu (2008) considered aspects of impact and adjustment costs for the EAC and Mauritius. Morrissey and Zgovu (2007) focus on agriculture and total imports respectively for a large sample of ACP countries to compare the welfare effects of a full liberalization with a scenario that excluded products traded intra-regionally. They have not, however, explored in much detail the associated trade, welfare, tariff revenue, cum policy options for Cape Verde, nor have they explicitly considered necessary adjustments given the trade, revenue and welfare effects, vis-à-vis the products to be regarded as sensitive to reduce Cape Verde's trade development effects given ECOWAS as a sub region for embarking on free trade area with the EU. This paper aims at filling these gaps. The remainder of the paper is organized as follows. Section 2 reviews the progress of EPA negotiations and 3 discuss some of the existing theoretical and empirical literatures. Section 4 presents the Analytical frameworks, while section 5 x-rays the partial equilibrium model used to estimate trade, revenue and welfare effects of introducing an EPA on imports to ECOWAS countries from EU. Finally, section 6 sets out the conclusions and policy implications.

### **1.1 Structure of Trade between Cape Verde and the EU by Products**

Table 1 presents the structure of trade between Cape Verde and the EU by products. It shows the Cape Verde's exports and imports to and from the EU, as well as the percentage share of total export to and imports from the EU of Cape Verde.

**Table 1: Structure of Trade between Cape Verde and the EU by Products (% of Exports and Imports from EU of Various products 2011; € million)**

TDC Sections	Exports to EU(€)	Share of Total Export to Eu(%)	TDC Sections	Import from EU(€)	Share of Total Import from EU(%)	TDC Sections	EU Trade Balance w
TDC 04	21	46.4	TDC 05	178	31	TDC 05	178
TDC 01	14	30.7	TDC 16	108	18.7	TDC 16	106
TDC 11	4	8.8	TDC 04	81	8.8	TDC 15	38
TDC 12	4	7.8	TDC 15	38	6.6	TDC 04	29
TDC 16	1	3.2	TDC 01	30	5.3	TDC 06	25
TDC 15	0	1.1	TDC 17	25	4.4	TDC 17	25
TDC 17	0	1	TDC 06	25	4.4	TDC 07	18
TDC 18	0	0.4	TDC 07	18	3.1	TDC 03	17
TDC 07	0	0.1	TDC 03	17	2.9	TDC 20	16
TDC 06	0	0.1	TDC 20	16	2.8	TDC 01	16
TDC 20	0	0	TDC 02	16	2.7	TDC 02	16
TDC 14	0	0	TDC 11	11	2	TDC 10	11
TDC 10	0	0	TDC 10	11	1.9	TDC 13	11
TDC 03	0	0	TDC 13	11	1.8	TDC 11	7
TDC 09	0	0	TDC 09	6	1	TDC 09	6
TDC 08	0	0	TDC 18	5	0.8	TDC 18	4
TDC 13	0	0	TDC 08	2	0.3	TDC 08	2
TDC 05	0	0	TDC 12	1	0.2	TDC 21	0
TDC 02	0	0	TDC 21	0	0	TDC 14	0
TDC 19	0	0	TDC 14	0	0	TDC 19	0
			TDC 19	0	0	TDC 12	-2

Source: EUROSTAT (Comext, Statistical regime 4) World excluding Intra-EU trade and EU27

Table 1 reveals that the major exports of Cape Verde to EU include prepared food stuffs; beverages, spirits and vinegar; tobacco, live animal/animal products, textiles and textile articles. The EU share of total imports of these products from Cape Verde stands at 46.4%, 30.7% and 8.8 per cent, respectively. These major exports correspond to trade classification sections 04, 01, and 11, comprising of HS chapters 25-27, 01-05, and 50-63 products. Other trade classification sections where Cape Verde have zero exports to EU include TDC 14- Natural or cultured pearls, precious or semi precious metals; TDC 19- Arms and ammunitions , parts or accessories thereof, and TDC 20- Miscellaneous manufacturing articles etc., corresponding to HS chapters 71, 93 and 94-96, respectively. Also from the table Cape Verde have no evidence of importation of natural or cultured pearls and arms and ammunitions from the EU. It is evident from our COMTRADE data that products where Cape Verde simultaneously imported from other ECOWAS member nations, the EU and the ROW ranged from HS chapters 01-70, corresponding to trade classification section 01-13. Therefore, sensitive products listing would consist of products drawn

from these chapters with given evidence of regional trade as specified in the trade classification sections and products of trade within ECOWAS sub-region (UNCOMTRADE data, 2010)

## 1.2 Cape Verde Patterns of Imports from Three Regions (\$' Millions)

Table2 presents the pattern of Cape Verde's imports from three different sources namely, ECOWAS, the EU and the rest of the world (ROW) and the corresponding percentage shares.

**Table 2: Cape Verde Patterns of Imports from Three Regions (\$' Millions)**

Cape Verde	TDC	From EU	% Share	From	% Share	From	% Share	World
HS Description	Sections	(\$)		ECOWAS		ROW		Total
Animal Products	TDC 01	34136.29	74.28	35.107	0.08	11782.69	25.64	45954.08
Veg. Products	TDC 02	24910.52	40.83	832.234	1.36	35265.86	<b>57.81</b>	61008.59
Animal/Veg Product	TDC 03	15104.25	94.19	3.367	0.02	928.858	5.79	16036.48
Prep foodstuffs etc.	TDC 04	63134.05	75.72	2615.712	<b>3.02</b>	17633.16	21.15	83382.92
Mineral Products	TDC 05	113182.8	95.05	2511.601	2.11	3420.733	2.87	119115.1
Prod. of Chemicals	TDC 06	31897.33	86.81	264.252	0.72	4580.84	12.47	36742.42
Plastics and Articles	TDC 07	26191.8	94.05	69.113	0.25	1588.782	5.7	27849.7
Raw hides and Skins	TDC 08	557.833	69.26	20.197	<b>2.51</b>	227.375	28.23	805.405
Wood & Articles of	TDC 09	8929.435	74.3	2734.608	<b>22.75</b>	354.582	2.95	12018.62
Pulp of Wood etc.	TDC 10	11977.47	84.92	54.356	0.38	2072.889	14.7	14104.72
Textiles & Articles	TDC 11	4987.774	50.7	254.695	<b>2.59</b>	4596.292	<b>46.72</b>	9838.761
Footwear, Headgear	TDC 12	1401.793	57	129.592	<b>5.27</b>	928.007	37.73	2459.392
Articles of Stone etc	TDC 13	14818.42	87.22	10.752	0.06	2161.244	12.72	16990.42

Source: Computed by the Authors from UNCOMTRADE Import Data 2010

According to the contemporary assumptions, the products in which Cape Verde will likely experience displacement effects include those where her imports are up to 25% share from the EU and the ECOWAS regional import share is at least 5%. Table 2 shows that Cape Verde's imports from ECOWAS sub-region were up to 5% shares in Wood and articles of wood and Footwear and Headgear, but about 3% in a few other product sections such as prepared foodstuffs, Raw hides and skins, and Textile and textile products. The later is lower than the contemporary scholars' percentage assumptions for ECOWAS regional imports (i.e. 5%) that may qualify for trade displacement, but for the fact of deepening and sustaining ECOWAS regional integration and markets, 1% share could be considered(see Table 2 above). Based on the contemporary percentage assumptions, displacement effects will not be possible in products such as Animal products, Vegetable products, Animal and vegetable products, Mineral products, products of chemicals, plastics and articles, pulp of wood etc., and articles of stone etc in which regional import shares were not up to 5% of the total product imports of the respective trade classification sections. This may not the best policy option for the sub region since products that have evidence of trade would likely increase in volume on the long run if sustained from the 1% share.

Besides, and for the contemporary scholars, trade diversion effects would occur where the Cape Verde import shares from EU were within 10 percent points of the rest of the World (ROW) share as in Vegetable products and textiles and articles of. Hitherto, even if the import shares of the products are less than 10%, trade diversion away from ROW to EU would result in loss of tariff revenue, which is not welfare enhancing and should be guard against during ECOWAS EPAs negotiations with the EU.

The EPAs are both based on and aimed at the process of integration and regional cooperation already embarked upon by the ECOWAS countries, thus promoting intra-ECOWAS trade with a view to stimulating their integration into the world economy. The expectation that these objectives can be achieved is a major problem. Will they be compatible with development needs in Burkina Faso and other ECOWAS countries? Will the EPAs be sufficiently flexible in their design to enable Burkina Faso and other ECOWAS countries to adapt? Are the countries themselves ready for such wide-ranging negotiations? Who, which products will really benefit from the EPAs? Will all traded products within the ECOWAS markets be regarded as sensitive and as such exempted from tariff removal?

This paper investigates the likely trade, welfare and revenue consequences on Cape Verde of embarking on free trade under an economic partnership agreements between ECOWAS and the EU, focusing on static effects.

The specific objectives of the study include to: -

- (1) describe the patterns of imports of trade classification (TDC) sections 01-13 by Cape Verde
- (2) estimate the likely trade, welfare and revenue, among other associated effects on Cape Verde of embarking on free trade under an economic partnership agreements.
- (3) enumerate the sensitive products based on trade classification (TDC) sections.

One of the major reasons for economic integration is to enhance welfare of the participating countries, and the major channel for achieving welfare benefits is through trade integration as in free trade areas. In many regions, groups of nations work together to create mutually beneficial trade policies (for an instance, tariff elimination) and accurate estimation of the impact of trade policy on trade flows are important for evaluating economic policy, as in deciding whether to join a free trade area or not. Secondly, establishing a free trade area and analyzing its impact on trade is an interesting case study for evaluating international trade theory, which typically predicts a negative correlation between trade and trade costs. In a recent article Anderson and Van Wincoop (2004) gave an extensive overview of trade costs, which entail transportation costs, tariff and non-tariff barriers, and information and transaction costs. Free trade areas obviously decrease tariff and non tariff barriers as well as transaction costs. Thirdly, earlier studies on the trade impact of free trade areas have produced surprisingly wide range of estimates. Baier and Bergstrand (2002) and Glick and Rose (2002) reported large and positive trade creation effects indicating a doubling of trade or even more. However, using extreme bounds analysis, Ghosh and Yamarik (2004) conclude that the empirical evidence on the trade-

creating effects of regional trade agreements is fragile. In addition, case studies on particular free trade areas show mixed results. In particular, Cape Verde estimation results are typically absent.

## 2.0 Main Issues in EPA Negotiations

On West African side, EPAs negotiations were led by commissions of ECOWAS and UEMOA. ECOWAS is an organization of 15 countries seeking to promote regional economic integration and establish a functioning customs union. On the other hand, UEMOA is a monetary union of 8 ECOWAS members (Benin, Burkina Faso, Ivory Coast, Mali, Niger, Senegal, Togo and Guinea-Bissau). Its currency, the CFA-Franc, is issued by the UEMOA central bank (BCEAO), which is supported by the French Treasury and is fixed against the euro. Their EPAs negotiations are focused on:

- strengthening regional integration
- prioritizing development and enhancing the region's development program (PAPED)
- enhancing competitiveness (e.g. capacity-building for West African companies and exporters)
- integrity of agricultural sector
- alternative funding for net transitional and tax offsetting costs
- inclusion of a regional list for sensitive West African products

The Interim EPAs which were signed with Ivory Coast (Côte d'Ivoire) and initialed with Ghana cover the following:

- duty and quota-free EU market access
- gradual liberalization (removal of duties and quotas) over 15 years for 81% of EU imports to Ivory Coast (Côte d'Ivoire) and 80% to Ghana
- EU exports are mainly industrial goods, vehicles and chemicals which do not compete with domestic production
- safeguard provisions enabling both countries to protect fragile economic sectors by re-introducing quotas or duties
- agreement to foster cross-border trade within the region (e.g. more efficient customs procedures)
- EU support to help local companies become more competitive and meet EU import standards

At a regional level the focus of the €235M regional indicative programme is regional integration and trade with €118 million to support related programmes including building an ECOWAS customs union and common market and €82M for transport facilitation. The €65M PARI (Programme d'Appui à l'intégration) support for UEMOA customs union is ongoing. Other

relevant regional programmes include €15M support to accreditation, standardization and promotion of quality under the PARI private sector programmes. Ongoing or planned projects include:

- €3.7 million to support EPA negotiations in Mali
- €2 million for EPA preparation and € 15M private sector support in Nigeria and
- €3 million to support for capacity building in trade policy and regulation, Senegal

### 3.0 Theoretical and Empirical Literature

David Ricardo's (1817) standard trade theory hinges on balance of exports for imports; while Heckscher-Ohlin (1933) theorem conceptualized international trade as a phenomenon consisting of each country exporting goods and /or services in order to improve growth through comparative advantage, technology and competitiveness. This framework, otherwise referred to as inter-industry trade, was considered by economists as the most relevant for predicting the pattern of trade existing among nations. As well, it has been considered by many as the most logical way of embodying the links between factors of production, specialization, and patterns of trade among countries.

The welfare gains from free international trade are several. First, it enjoys the static gains from trade, which increases economic well-being of a region by holding resources and technology constant. This leads to consumption and production gains. Even though production may remain fixed, the opportunity to trade at world prices leads the consumption point to a higher consumption indifference curve. These gains come about because productive resources are channeled into the region's comparative advantage industries; and because of this redistribution of resources, overall output (GDP) rises, leading to the static production well-being from trade. Besides, dynamic welfare gains from trade bring about increases in the economic well-being that accrue to a region because trade induces increases in the productivity of existing resources. This is because the economy of a region grows over time either due to increases in its stock of productive factors or because a technological innovation helps a region's existing stock of factors to become more efficient, culminating to a shift in a region's production possibility frontiers. The relationship between international trade and economic growth are in terms of non restrictions of trade in both raw materials, intermediate products and capital goods, such that there would be increases in stock of these categories of goods in either of the regions at any point in time. In this way, the international trade will enhance the international diffusion of all products to ensure faster economic growth through greater competition that will encourage more efficient production, as the discrepancy between price and marginal cost is closed. In addition, as competitions destroy industry rents, fewer resources are devoted to wasteful rent-seeking behaviors. Moreover, given economy of scale, dynamic gains from free international trade accrue because trade expands the size of the market. As the market expands, industries are able to move further down their



average-cost curves, bringing down prices in the process. Again, expanding the size of the market may encourage industries to step up investments in research and development, as a way of spreading the costs of these investments over larger levels of output. These investments could, in turn, raise the overall level of technology of the region. Besides dynamic gains from international trade would accrue to the region by enlarging the pool of savings that is available to fund investment purchases, through the raising of the real income of the region above the level that would exist in autarky (Husted and Melvin, 1993).

Recent empirical analyses are found in Laird and Yeats (1986), Panagariya (1998), Greenaway and Milner (2000), and Milner, Morrissey and McKay (2005), among others. McKay, et al (2005) presented a relatively simple method, requiring moderate data to measure the likely short-run welfare consequences, static effects on trade flows, and tariff revenue, of EPAs for ACP countries. The partial equilibrium method was illustrated for the case of East African Cooperation (Kenya, Tanzania, and Uganda). The results suggested that the welfare effects (excluding revenue effects) from a reciprocal agreement with the EU will be small whether positive or negative, but ACP countries will experience short-run adjustment costs especially in the form of revenue losses.

On the issue of welfare gains, Morrissey and Zgovu (2007) estimated the impact on a sample of 36 ACP countries of eliminating tariffs on agricultural imports from the EU under EPAs, considering trade, welfare and revenue effects. In their results, even assuming 'immediate' complete elimination of all tariffs on agriculture imports from the EU, and when excluding up to 20% of imports as sensitive products, over half of ACP countries are likely to experience welfare gains. However, although most LDCs gain (10 out of 13), most non-LDCs (about 60%) lose. The overall welfare effect relative to GDP tends to be very small, whether positive or negative. While potential tariff revenue losses are no negligible, given that countries have at least ten years in which to implement the tariff reductions, there is scope for tax substitution. They opined that an important issue is identifying the sensitive products (SPs) to be excluded, and that excluding SPs reduced the welfare gain (or increased the welfare loss) compared to estimates where no products are excluded.

#### **4.0 Analytical Frameworks**

We apply the partial equilibrium analytical framework used by McKay *et al* (2005) and Morrissey and Zgovu (2011). This we extended to the established theoretical framework for analyzing the economic (welfare) effect of regional integration (e.g., Balassa, 1974; Lyakurwa *et al.*, 1997; Schiff and Winters, 2003) as applied by Panagariya (1998) to consider when small country like Cape Verde integrate with large countries (the EU in this case).

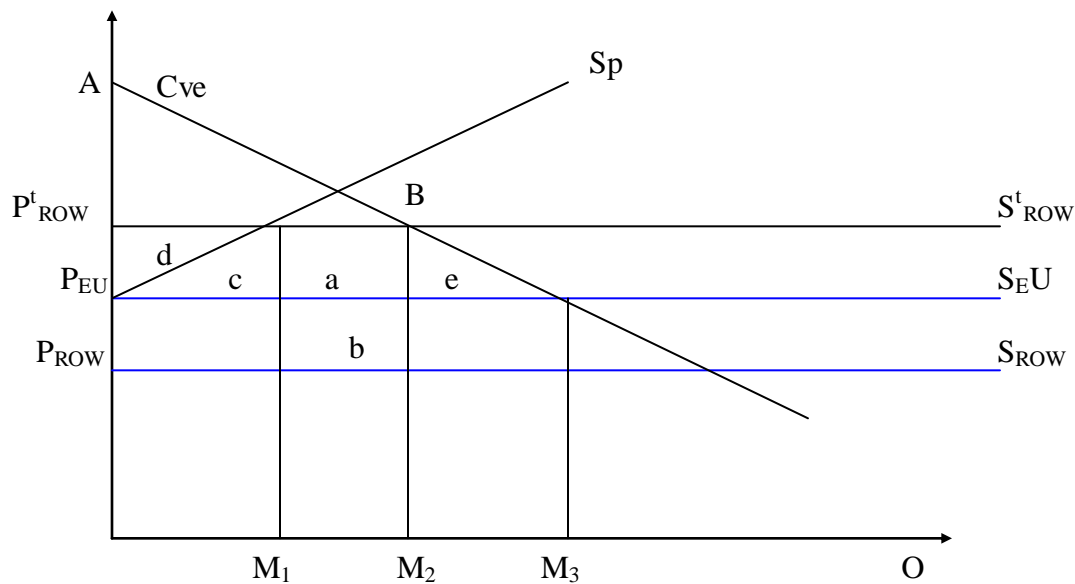
The partial equilibrium approach did estimate the likely first order effects on imports and in principle these could form a basis for more detailed CGE country studies where feasible. Our estimates were considered to be indicative of the potential impact of EPAs on different trade

classification (TDC) sections imports in ECOWAS countries, highlighting sections where individual ECOWAS countries are suppliers and which should be considered as sensitive products and excluded from tariff removal. The effects of particular importance in this analysis include the welfare effect of an EPA as well as the beneficial trade creation which arises when inefficient production by domestic firms in Cape Verde is displaced by reduction or 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 in Cape Verde and within the ECOWAS region as a whole. On the other hand, trade diversion imposes a welfare loss where imports from more efficient extra-regional suppliers from the Rest of the World (ROW) are diverted to less efficient intra-regional suppliers (the EU). For Cape Verde and the ECOWAS region as a whole, welfare increases if trade creation is greater than trade diversion. Although there is the assumption that the EU benefits, but we did not estimate this, rather we focused on the effects on Cape Verde and the products from trade classification sections in which ECOWAS country are suppliers as well as the EU and Rest of the World.

We estimated and reported results for three effects. Consumption effects arise from increased imports at reduced prices; if the EU is initially the dominant supplier, the EPA results in pure consumption effects only, and this is clearly beneficial. Trade creation (TC) arises in this context when imports from the EU displace imports from other ECOWAS countries; assuming the EU is the more efficient producer, this increases welfare in the importing country (although producers in the exporting ECOWAS country lose). Trade diversion refers to a situation where the elimination of tariffs allows EU suppliers to displace more efficient producers in the ROW; this is likely to arise if pre-EPA the ROW is the dominant supplier.

Figure 1 illustrates the welfare effects of Free Trade Area arrangements for the case of Cape Verde (CV) of an initial regional group, ECOWAS. The partner country's (P) supply curve is upward sloping and the supply for two (initial) outside suppliers (here the EU and the rest of the world - ROW) is assumed to be infinitely elastic. The analysis is partial equilibrium in nature, markets are assumed to be perfectly competitive, and there is perfect substitutability between imported and domestically produced import substitutes. Assume that CV and P have already formed a PTA, and as small developing countries can be viewed jointly as being small relative to the EU and ROW who supply at constant cost ( $P_{EU}$  and  $P_{ROW}$  respectively). In the case of figure 1 we assume for expositional convenience that  $P_{EU} > P_{ROW}$ , therefore subsequent discriminatory trade policies by the FTA towards the outside countries can have both trade creating and diverting effects.

**Figure 1: Effect of Free Trade Area between Cape Verde and EU under EPAs**



$CV_e$  represents Cape Verde's demand for imports,  $S_p$  the partners' supply of exports, and  $S_{EU}$  and  $S_{ROW}$  are the respective export supply functions for the two outside country groupings, the EU and the rest of the world (ROW). We start with a FTA and a non-discriminatory (*ad valorem*) tariff ( $t$ ) on extra-regional imports (where  $P'_{ROWt} = P_{ROW} (1 + t)$  but  $P'_{EU}$  is not shown in the case of the higher cost EU supplier). The home country imports  $OM_2$  in total, with  $OM_1$  coming from the partner country and  $M_1M_2$  from the rest of the world (ROW). By ruling out domestic production capability we can define welfare ( $W$ ) by reference to consumer surplus with respect to the import demand function, "Cve". The  $W_{FTA}$  for each home country is given by the triangle  $ABP^t_{ROW}$  plus the tariff revenue on extra-regional imports (area  $a + b$ ). Now assume that the FTA introduces a discriminatory tariff policy towards extra-regional countries, and as a result of EPAs with the EU continues to impose tariff  $t$  on imports from ROW but allows imports from the EU in duty free. The relevant supply price is now  $PEU$ , with the total quantity of imports expanding from  $OM_2$  to  $OM_3$  and imports coming now wholly from the EU. There are strictly three components of this trade-effect of the EPAs; a consumption expansion effect  $M_2M_3$ , a 'trade diversion' effect  $M_1M_2$ , and a 'trade creation' effect  $OM_1$ . The last two of these effects need more careful explanation, however. In the case of standard PTA analysis trade diversion usually relates to diverting trade from more efficient extra-regional suppliers to less efficient intra-regional suppliers. The EPAs, however, diverts between extra-regional suppliers;  $M_1M_2$  is imported from the less efficient EU rather than the ROW. The resource cost of this is represented by the area  $b$ , with total tariff revenue lost by the home country being area  $(a + b)$ . Similarly, in

terms of standard FTA analysis, trade creation usually describes the displacement of less efficient home production by globally efficient extra-regional production. In this case, however, the EPAs involves the replacement of intra-regional imports by more (but here not globally) efficient extra-regional imports from the EU. The global resource-saving on this ‘trade-creation’ (or trade source substitution) effect is shown by area  $c$  in Figure 1. This and the loss in producer surplus for partner country exporters (area  $d$ ) allow consumer surplus on this component of the trade effect of the EPAs to increase by area  $(c + d)$ . Thus, the welfare implications for the home country of shifting from the FTA to the EPAs are ambiguous, the consumption and trade-creation effects increasing welfare and the trade-diverting effect reducing welfare i.e.  $W = (c+d+e) - b$ . Clearly the more efficient is the EU the smaller the costs of trade-diversion and the greater the probability of a welfare-improving EPA. Indeed in the extreme as  $S_{EU} \rightarrow S_{ROW}$  then the EPAs tends toward the free trade outcome (McKay et al 2005).

### 5.0 Model Specification

In estimating the effects, we began with the trade data and allocated imports by products of the trade classification (TDC) sections into one of three cases (EU, ECOWAS, and ROW). In those sections where the EU is globally efficient and therefore the dominant supplier to a particular ECOWAS market prior to the formation of the EPAs, we assume that only consumption effects would follow from the EPAs. In terms of Figure 1 this is equivalent to assuming that  $S_{ROW}$  lies above  $S_{EU}$  and that there is no competitive regional supply capability.

### *Consumption Effects*

Thus, for those products where the EU is the dominant supplier we estimated the consumption effect alone  $\Delta C^M$  relative to the existing EU import levels as follows:

$$\Delta C^M = \left( \frac{t}{1+t} \right) \cdot \ell^d_M \cdot M_0^{EU} \quad (1)$$

where  $t$  is the MFN tariff rate imposed on imports from the EU in the present period  $n$ ,

$\ell^d_M$  is elasticity of demand for imports, and  $M_0^{EU}$  is imports from EU.

### *'Trade diversion' with consumption effects*

All the cases of trade diversion were considered, especially when more efficiently produced imports from the ROW are displaced by relatively less efficiently produced commodities from the EU due to EPAs – reduction or total elimination of tariffs on the products in view. Product sections for which the ROW is a dominant supplier pre-EPA can be taken to indicate that the

ROW is more efficient than the EU, but as EPAs lead to  $P_{EU} < P'_{ROW}$  under the prevailing constant production cost conditions the EU becomes the sole supplier to country  $j$ , and total import diversion will be the upper limit of trade diversion. The contemporary scholars assumed that logically, not all imports will be diverted from ROW, and that the EU must initially be supplying a reasonable share of imports of a product (at least 20%) to have a capacity for trade diversion. The consumption effects due to trade diversion ( $\Delta M^{TD}$ ) were estimated in a similar way by assuming that on average the post-EPA price of imports from the EU would lie midway between  $P_{ROW}$  and  $P'_{ROW}$ . This is by:

$$\Delta M^{TD} = \left(\frac{1}{2}\right) \cdot \left(\frac{t}{1+t}\right) \cdot \eta^d \cdot M_o^{ROW} \quad (2)$$

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

### ***Trade Creation with Consumption Effects***

For those Products where Cape Verde provide smaller or greater than 25% of imports we estimated the effects of trade creation with consumption just 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 Cape Verde lies over the relevant range between  $P'_{ROW}$  and  $P_{EU}$ , then all of the current imports from the ECOWAS to the home country will be replaced by more efficient production from the EU. Thus the maximum value of the trade created  $\Delta M^{TC}$  for the EU by this deflection from ECOWAS sources were estimated by:

$$\Delta M^{TC} = \frac{1}{2} \cdot \left(\frac{t}{1+t}\right) \cdot \eta^d \cdot M_o^{ECOWAS} \quad (3)$$

Where  $M_o^{ECOWAS}$  is the current value of imports from ECOWAS

Tariff revenue losses by Cape Verde that are associated with trade diversion were estimated by the relationship:

$$\Delta R^{TD} = -t \cdot M_o^{ROW} \quad (4)$$

Besides, the tariff revenue loss on imports from EU and Welfare effects were estimated thus:

$$\Delta R^C = -t \cdot M_o^{EU} \quad (5)$$

$$\Delta W^c = \left(\frac{1}{2}\right)t.\Delta M^c \quad (6)$$

## 6.0 Estimating Trade, Revenue and Welfare Effects.

We employed the methodology set out in Section 4.0 to estimate trade, revenue and welfare effects of an ECOWAS-EU proposed EPAs on Cape Verde and ECOWAS member nations in general. Given data availability, detailed analyses were possible for Cape Verde. The import data were obtained from UNCOMTRADE statistics data base at the Six-digit level of the Harmonized System (HS). We aggregated across categories and economies to obtain ECOWAS-ECOWAS, ECOWAS-EU and ECOWAS-ROW import values at the same six digit level of the HS. All the data are in units 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 six-digit level of the HS. The Most Favored Nation (MFN) Tariff data at six-digit level of HS and import demand elasticities were taken from TRAINS. Other data sources include ECOWAS Social and Economic Indicators cum ECOWAS Statistical Bulletin; Statistical Offices of ECOWAS member nations, African Statistical Yearbook, International Monetary Fund (IMF), and the World Bank among others.

### *The Trade Effects*

The overall estimates of the value of trade effects due to consumption, trade diversion, trade creation and the corresponding revenue and welfare effects were obtained for a move to EPAs for Cape Verde. It is evident from the trade data for Cape Verde and other ECOWAS countries that Cote d'Ivoire, Senegal and Burkina Faso dominated intra-ECOWAS suppliers. Generally, Cote d'Ivoire, Senegal and Burkina Faso accounted for 51.06, 20.02, and 16.57 percents, respectively of all the intra-regional imports, while Niger, Nigeria and Cape Verde accounted for less, 7.41, 4.64 and 0.03 percents, respectively.

### *Trade Classification Sections Effects*

Below is a detailed Trade classification (TDC) sections estimates for Cape Verde. The product sections where major potential trade effects occur were indicated by these relatively detailed sections results.

From table 3, it is clear given the contemporary assumptions, that only in trade section of Wood and articles of wood that great market opportunities for EU suppliers to displace any of the other suppliers from ECOWAS and /or ROW. In this section, trade creation outweighs trade diversion and EPAs effects will be concentrated here only, implying that local producers will

anticipate greater import competition and/or increased competition from EU suppliers, meaning that the current imports from the ECOWAS sub-region to Cape Verde (the home country) will be displaced by more efficient production from the EU. This trade section only accounted for about 23% of the total imports (table 2) hence the trade creation out weighing trade diversion. But in all other trade sections where trade diversions outweigh trade creation, EU imports were above 20% meaning that ROW product imports will be displaced by EU which would culminate to revenue losses by Cape Verde and or any ECOWAS member nation given tariff removal during EPAs negotiations.

Therefore, to sustain and deepen the existing trade in Cape Verde and for ECOWAS, contemporary assumptions on the levels of imports from ECOWAS sub-region to be considered before diversions are computed has to be lower than 20% and for Cape Verde to 3 percent irrespective of any level of imports from EU. In this regard, the products to be exempted from tariff elimination for Cape Verde should include: (i) Prepared Foodstuff; (ii) Raw hides and Skin; (iii) Wood and Articles of Wood; (iv) Textiles and Articles of; (v) Footwear, Headgears among others.

**Table 3: Cape Verde: Trade Effects (in millions of Dollars)**

Country: Cape Verde		CE	TD & CE	TC & CE	Revenue	Rev. Loss	Welfare
	TDC				Effect	due to TD	Effect
HS Description	Sections						
Animal Products	TDC 01	108.46	281.7	0.65	-127.5	-0.54	10.8
Veg. Products	TDC 02	1011.05	0.84	0.68	-960.22	-0.05	<b>147.34</b>
Animal/Veg Product	TDC 03	564.34	5.32	0.29	-558.79	-5.75	14.11
Prep foodstuffs etc.	TDC 04	1360.36	601.32	8.15	<b>-1225.25</b>	<b>-588.01</b>	136.04
Mineral Products	TDC 05	2.34	0.07	0.03	-4.26	-0.08	0.06
Prod. of Chemicals	TDC 06	0	0	0	0	0	0
Plastics and Articles	TDC 07	0	0	0	0	0	0
Raw hides and Skins	TDC 08	74.11	43.1	4.99	-67.58	-36.56	11.05
Wood & Articles of	TDC 09	226.41	9.72	<b>923.34</b>	-108.03	-2.7	5.66
Pulp of Wood etc.	TDC 10	0	0	0	0	0	0
Textiles & Articles	TDC 11	3.63	0.74	0.86	-3.7	-0.32	0.48
Footwear, Headgear	TDC 12	154.48	190.8	5.93	-95.16	-168.96	5.95
Articles of Stone etc	TDC 13	625.53	280.13	0.48	-271.23	-18.77	31.21

Source: Authors' estimation using UNCOMTRADE & UNCTAD TRAINS Tariff Data, 2010

### *Tariff Revenue and Welfare Effects*

The potential distributional effects of the net effects within the country studied are not balanced given that consumers tend to gain significantly as a result of trade creation and consumption effects, but at the expense of local producers and as well government tax revenue dwindles. The potential tariff revenue losses associated with a shift from the most favored nation tariff

structure to a total elimination of tariff as envisaged by EPAs are much given revenue effects of different trade classification sections (table 3). Even when much of the products sections considered were within the trade classification sections 01-13 corresponding to HS chapters 01-70, being the areas of great potential for Cape Verde that would lead improved regional integration, trade diversion and consumption effect were most pronounced in prepared foodstuffs. This gives a total of 43% of the entire trade diversion and consumption effects of the various product sections, culminating to 35% of the total revenue loss due to elimination of tariff on imports from EU and 72% of the total revenue loss due to trade diversion. Imports from the EU are expected to increase remarkably for Cape Verde mainly due to trade creation, diversion and consumption effects, while tariff revenue would fall as a result of the increase in duty-free access for her EU imports. The consumer as well as national welfare would increase as a result of trade creation and consumption effects, but the net welfare in the country is likely going to fall as a result of the static trade effects of an ECOWAS-EU EPAs and potentially large costs of trade diverted and displaced from efficient ROW and inefficient ECOWAS sources, respectively. From table 3 above, the highest revenue effect would be observed in prepared food stuffs, while the highest welfare loss would be in vegetable products. Besides, the highest trade creation effect would be observed in woods and articles of wood.

### ***Assessing the Effects on Cape Verde***

Import trade data were available and enabled the application of the empirical method for the study of Cape Verde case. The pattern of Cape Verde imports from the EU, ECOWAS and ROW varies in term of values. However, the levels for the expansion of imports from the EU following EPAs culminated to consumption and trade diversion effects from the rest of the world, with corresponding net welfare losses were evident. Trade diversion with consumption effects dominated positive trade creation with consumption effects in Cape Verde. This implies that there would be minimal scope for 'trade creation' and displacement of ECOWAS imports by EU imports for Cape Verde would be possible, because there is limited existence or low penetration of other regional markets by Cape Verde suppliers, especially for products where displacement by EU suppliers is eminent. Besides, producers in Cape Verde would likely lose import share in ECOWAS region. This would be offset by sound EPAs negotiations that would consider possible adjustments in the bilateral trade liberalization policy that would favor sustenance of existing trade and markets within the ECOWAS sub-region.

## **7. Conclusions and Policy Implications**

Partial Equilibrium Methodology was employed in this study to estimate the potential trade, tariff revenue and welfare implications for Cape Verde of accepting to liberalize substantially on a wide range of products imports from the EU in an EPA. The analyses were conducted at six-digit HS level of disaggregation. The results at this level of aggregation will provide useful



information to the on-going negotiations between ECOWAS and the EU in determining the products to be exempted from tariff removal during EPAs based on the stated severity of the effects on product sections, among other considerations.

The study's major conclusions are that Cape Verde is likely to record increases in total imports over the existing levels, and there will be significant import substitution away from the relatively least cost producers in the rest of the world to EU producers leading to trade diversion. The EPA induced import increases will likely add to the pressure in the ECOWAS member nation industries, which have already been subjected to prolonged episodes of unilateral liberalization (under the structural Adjustment Programme) and regionalization (regional integration). Interestingly there are many product sections in which Cape Verde have low potential to develop competitive production to meet regional demand and forge ahead for extra-regional exports. Unless these product sections traded among Cape Verde and other ECOWAS member nations are guarded to sustain and improve production and realize increasing exports, the potentials may be undermined subsequently by strong competition when EPAs becomes operational. So, measures to include this should be spelt out in EPAs. The need to postpone tariff removal on those product sections where Cape Verde is a supplier is therefore, very necessary irrespective of the trade volumes recorded. There is the need to adopt this during the EPAs negotiations.

Furthermore, the study finds that EPAs will lead to loss of tariff revenues, which contribute a significant of fiscal resources within for Cape Verde. Fiscal reforms to replace a EPAs induced tariff revenue losses are needed. The fiscal reforms should entail shifting revenue from trade to non-trade tax sources and improving the efficiency of fiscal revenue collecting machinery. Examples of non-tariff instruments that may assume greater importance in revenue generation include value-added tax (VAT) and excise taxes charged on imports from the EU.

Welfare gains are likely to decline as trade diversion outweighs trade creation. One way of addressing net welfare losses related to employment displacement is to undertake production and employment adjustment programmes, as well as skill development and productivity enhancement programmes. These would facilitate relocation of labour into expanding production sectors. Support for such programmes should be negotiated with the EU.

To sustain the regional traded products and markets, all the traded products among countries of the sub-region that result to greater trade diversion as opposed to trade creation should be excluded from tariff removal during EPAs negotiations. More so, to deepen the existing trade in Cape Verde and for ECOWAS, contemporary assumptions on the levels of imports from ECOWAS sub-region to be considered before diversions are computed has to be lower than 20% and for Cape Verde to 3 percent irrespective of any level of imports from EU. In this regard, the products to be exempted from tariff elimination for Cape Verde should include: (i) Prepared Foodstuff; (ii) Raw hides and Skin; (iii) Wood and Articles of Wood; (iv) Textiles and Articles of; (v) Footwear, Headgears among others.

Finally, in the meantime, Africa has become one of the fastest growing regions in the world, prompting the US secretary of state, Hillary Clinton, to claim that "Africa offers the highest rate of return on foreign direct investment of any developing region in the world". Investors from emerging powers are also convinced of the continent's attractiveness. So, what Europe and Africa both need, however, are stronger relations based on a more equal footing, where legitimate economic and political interests are openly acknowledged, not couched in benevolent, somewhat paternalistic, rhetoric on "development" (<http://www.state.gov/secretary/rm/2012/06/192327.htm>);

(<http://www.ey.com/ZA/en/Issues/Business-environment/2012-Africa-attractiveness-secretary>).

### **Acknowledgement**

This paper forms part of the on-going research work with the African Economic Research Consortium (AERC) Nairobi, Kenya. The authors are grateful to the consortium for providing financial and technical support during data sourcing and analysis for the 6 countries studied in West Africa, including Cape Verde, and for the useful comments of the participants during presentation.

### **References**

ACP Secretariat (2002) "ACP Guidelines for the negotiations of Economic Partnership Agreements". ACP/61/056/02 [Final]. Brussels, 5 July, available online at <http://www.acpsec.org/en/epa/index.htm> Retrieved on December 2011

African Trade Policy Centre at <http://www.uneca.org/atpc/work%20in%20progress/75.pdf>

Arene, C. J. (2002) "Theoretical and Procedural Framework for measuring the Extent of Intra-industry Trade within the Economic Community of West African States (ECOWAS)" Modeling, Measurement and Control, D, Vol. 23, No. 4, Pp. 29-46.

Baier, S.L. and J.H.Bergstrand (2002) "On the endogeneity of international trade flows and free trade agreements" American Economic Association Annual Meeting

Busse, M. A., Bormann, and H. GroBmann (2004) "The impact of ACP/EU Economic Partnership Agreements on ECOWAS Countries: An Empirical Analysis of the Trade and Budget Effects". *Financial Report*, Hamburg Institute of International Economics, Hamburg, Germany

Christ Milner, Oliver Morrissey and Evious Zgovu. (2009). *EU-ACP Economic Partnership Agreements and ACP Integration*. University of Nottingham, School of Economics: CREDIT Research Paper 09/05. Downloadable Under Research Papers. Available at: <http://www.nottingham.ac.uk/economics/credit> { Accessed December 2011}

Dion, D.P. (2004), "Regional Integration and Economic Development: A Theoretical Approach", Mimeo, Mannheim University.

ECDPM. (2012). European Commission Directorate- General for Trade. Online Information Available at (<http://ec.europa.eu/trade/wider-agenda/development/economic-partner...>). Accessed on December 2011

ECOWAS Statistical Bulletin (2010) *A Publication of The Executive Secretariat*, Abuja, Nigeria. Statistical Annex 67-71.

ECOWAS Handbook on international Trade (2010) *A Publication of The Executive Secretariat*, Abuja, Nigeria.

EUROSTAT (2011), (Comext, Statistical regime 4) World excluding Intra-EU trade and EU27 members

EUROSTEP (2004), *New ACP-EU Trade Arrangements: New Barriers to Eradicating Poverty?* EUROSTEP, Brussels, Belgium.

Francois, J., and W. Martin. (2007). "Great Expectations: Ex-Ante Assessment of the Welfare Impacts of Trade Reforms", World bank, Washington, DC. Processed

Glick, R and A. Rose 2002). "Does a currency union affect trade? The time-series evidence". *European Economic Review*, 46(6): 1125-51

Heckscher, E. F. and B. Ohlin. (1933). *Factor-Endowment and Factor Proportion Theory* Harvard University Press

Husted S. and M. Melvin .(1993). *International Economics, Second Edition*. Harper Collins College Publishers, Newyork. 70-72

Karingi, S., R. Lang, N. Oulmane, R. Perez, M. S. Jallab, and H. B. Hammouda. (2005). "Economic and Welfare Impacts of the EU-Africa Economic Partnership Agreements". *Final Report* Submitted to United Nations Economic Commission for Africa (UNICA) ECA/TRID/06/05.

Laird S. and A. Yeats, 1986, "The UNCTAD Trade Policy Simulation Model: A Note on the Methodology, Data and Uses", UNCTAD Discussion Paper No. 19, Geneva.

Milner, C., O. Morrissey, and A. McKay. (2002) "Some Simple Analytics of the Trade and Welfare Effects of Economic Partnership Agreements: The Case of the EU-EAC", mimeo, CREDIT, University of Nottingham. Morrissey, O., C. Milner, and A. McKay, A Critical Assessment of Proposed EU-ACP Economic Partnership Agreements, CREDIT Research Paper, University of Nottingham

Milner C., Morrissey O., and Zgou E. (2008). Welfare and Adjustment implications of EU-ACP EPAs: Some Evidence for Africa. In H. Asche U. Engel (eds), *Economic Partnership Agreements: Devilish Undertaking or just the Devil in the Details*. Leipzig: University of Leipzig Press, 41-60.

Morrissey O. and Zgou, E. (2007). *The Impact of Economic Partnership Agreements on ACP Agriculture Imports and Welfare*. University of Nottingham, School of Economics: CREDIT Research Paper 07/09. Downloadable Under Research Papers. Available at: <http://www.nottingham.ac.uk/economics/credit> { Accessed December 2011}

Morrissey O. and Zgou, E. (2011) The impact of EPAs on ACP imports and welfare. In O. Morrissey (ed), *Assessing Prospective Trade Policy Reforms: The Case of Economic Partnership Agreements*, Chapter 3. London: Routledge, 60-82

McKay, A., C. Milner, and O. Morrissey (2005). "Some Simple Analytics of the trade and welfare effects of Economic Partnership Agreements". *Journal of African Economies*, 14(3): 327-58

Panagariya, A. (1998). Rethinking the new Regionalism. In J. Nash and W. Takacs (eds), *Trade Policy Reform. Lessons and Implications*. Washington, D.C: World Bank, 87-145.

Panagariya, A. (2002), "EU preferential Trade Agreements and Developing Countries, *World Economy*, 25(10), pp 1415-32

Onogwu, G. O. C. J. Arene, and A. N. Chidebelu (2011) "An Analysis of Trend and Determinants of Intra-ECOWAS Trade in Agricultural Products" *Indian Journal of Economics and Business*, Vol. 10, No. 4, Pp. 553-570.

Ricardo, D. (1817) *the political Economy and Taxation*: J. M. Dent: London

Schiff, M. and Winters, L. A. (2003). *Regional Integration and Development*, Washington, DC: World Bank

Sevens, C. And J. Kennan (2005) "Preparing for Economic Partnership Agreements" Institute of Development Studies (March).

Tekere, M. and D. Ndllela.(2003). *Impact Assessment of Economic Partnership Agreements on Southern African Development Community and Preliminary Adjustment Scenarios*. Final Report, Trade and Development Studies Centre, Harare, Zimbabwe.

Trade Information and Analysis System. Tariffs and Import Demand Elasticity Data . Available online at <https://www.wits.worldbank.org>. Retrieved on December 2010

UN COMTRADE Trade Data. Result Available online at <https://www.wits.worldbank.org> Retrieved on December 2011.

Viner,J. (1950) *The customs union issue*. New York: Carnegie Endowment for International Paace.

World Bank.World trade indicators 2010 Database.

<<http://info.worldbank.org/etools/wti2010/3a.asp>>