
EUROPEAN UNION -WEST AFRICA ECONOMIC PARTNERSHIP AGREEMENT (EU-WAEP): CRITICAL EXAMINATION

FRIDAY EYO UKO

Department of Economics, University of Uyo, Uyo

Email: friday_uko@yahoo.com

&

KUFRE AMOS PAUL

Department of Economics, Ignatius Ajuru University, Port-Harcourt,
Rivers State

Abstract

The study examined the readiness of West Africa countries particularly Nigeria for economic partnership agreement with European Union. The assessment was done on the basis of the impact of the agreement on GDP growth and welfare, poverty reduction and government revenue. The dynamic multi-country multi-sector Computable General Equilibrium (CGE) model was adopted to evaluate the impact of policy shocks on macroeconomic variables. The CGE model used for this study was MIRAGRODEP (Modelling International Relationships under Applied General Equilibrium for the African Growth and Development Policy Modeling Consortium), developed for the AGRODEP (African Growth and Development Policy Modeling Consortium) initiative. A dynamic baseline was simulated to mimic the economic conditions of these countries within a specific timeframe. The baseline reflected current EU and West Africa's Free Trade Agreements in force as well as those for which negotiations have been concluded, including the Common External Tariff (CET) that has been implemented in ECOWAS since January 2015. A scenario simulation was carried out on the assumption of various policy scenario and the results compared to the baseline. Specifically, the economic effect of the EPA was quantified based on the tariff dismantling schedule in the EPA (gradual and partial dismantling for EU products exported to West Africa, immediate and full liberalisation for West African products exported to the EU). Both the baseline and the EPA scenario were simulated for 20 years from 2015 up to the year 2035. Trade data in MIRAGRODEP based on GTAP 10 and the Global Trade Analysis Project (GTAP) Data Base provided time series of snapshots of the global economy for each of four reference years: 2004, 2007, 2011, and 2014. The GTAP Data Base relied on country-based Input- Output-Tables (IOTs), and was supplemented by country specific data from African Statistical Yearbook, 2020. Findings showed that the agreement will have little or no effect on the growth of West Africa Economies, but negative welfare on Nigeria. Consequently, will be very little variation in poverty reduction in Nigeria and

Ghana while it will have negative impact on government revenue. In view of the findings, it is recommended that for Nigeria and other West Africa countries to build growth, they should build capacity to engage in intra-Africa trade or multilateral trade and not be restricted to EU countries.

Keywords: Simulation, Trade, Economic Growth, Poverty, Welfare, Trade Agreement.

1. INTRODUCTION

The Economic Partnership Agreement (EPA) between the European Union (EU) and the Economic Community of West African States (ECOWAS) is just one of the Economic Partnership Agreements being introduced by the EU to control its trading with regional blocs that are part of the African, Caribbean and Pacific Group of States (ACP) (Isaac and Bellonwu-Okafor, 2016). The EPAs are legally binding contracts that are part of the scheme to create a Free Trade Area (FTA) between the EU and the ACP groups, such as ECOWAS (Umuteme, 2013). Once signed, EPAs warrant that within a decade, about 80% of the African countries' market is opened to European goods and services (McDonald and Matanda, 2013) The key objectives of the EPA between the EU and ECOWAS, as spelt out in Article 1(1) of the 'Agreement' include:

- a) to establish an economic and trade partnership to achieve rapid and sustained economic growth that creates employment; to reduce and then eradicate poverty; to raise living standards; to achieve full employment, diversify economies and raise real income and output in a way that is compatible with the needs of the West African region while taking account of the Parties' different levels of economic development;
- b) to promote regional integration, economic cooperation and good economic governance in the West African region;
- c) to increase intra-regional trade and encourage the formation of a unified and efficient regional market in West Africa;
- d) to contribute to the harmonious and progressive integration of the West African region into the world economy, in accordance with its political choices, its priorities and its development strategies; and
- e) to strengthen economic and trade relations between the Parties on a basis of solidarity and mutual interest in accordance with World Trade Organisation (WTO) obligations, in a way that takes account of the significant difference in competitiveness between the two regions.

Article 2(1) of the Agreement emphasizes the fundamental principles on which the EPA is based which include equality of partners, global participation (states and non-states actors), dialogue and regionalization.

Before now, there was similar agreement called The Lome Convention which was signed in 1975 and sets out the principles and objectives of the EU corporation with ACP countries. Under the Lome Convention most of the ACP agricultural and mineral exports enter into the then European Economic Community free of duty without similar obligation on the part of the West African Countries. The Lome Conventions served as the primary legal and institutional framework which governed trade and economic relations between the EU countries and their former colonies grouped together as African, Caribbean and Pacific (ACP) states (Le Monde Diplomatique, 2015).

Although the Lomé partnership was hailed as “the most comprehensive North South partnership” it has clearly not met its objective development. Africa has lagged behind the rest of the developing world, both in terms of its integration in World trade, ACP countries' share of the EU market declined from 6.7% in 1976 to 3% in 1998, and still about 60% of total exports are concentrated in only 10 products. but also, and more importantly in terms of poverty reduction and socio-economic development (Karingi, Lang, Oulmane, Perez, Jallab and Hammouda, 2005).

Despite a few exceptions - such as the case of Mauritius in textile and apparel – unilateral preferences granted under the successive Lomé conventions showed a very limited positive impact for Africa, and did not trigger the expected take off in industrial exports. Thus, ACP countries' exports saw their share of the EU market diminish from eight percent in 1975 to 2.8 percent in 2000. Moreover, the composition of ACP's export has - with a few exceptions- showed little sign of diversification since 1975. Along the same lines, per capita GDP in sub-Saharan Africa grew by an average of only 0.4 percent over the 1960-1992 period, compared with 2.3 percent for developing countries as a whole. The Lome convention was renewed 4 times, until 2000 to pave way for a set of new trade agreements conceived to create a free trade area (FTA) between its regional group and the ACP group.

In June 2000 the Cotonou Agreement was introduced to push for progressive removal of trade barriers. The current EPA developed in the framework of the Cotonou Agreement and is designed to replace the non-reciprocal trade preferences which the EU has granted to the ACP since 1975. The EPAs, therefore is a reciprocal trade agreement, meaning that not only the EU provides duty-free access to its markets for ACP exports, but ACP countries would provide duty-free access to their own markets for EU exports. As an element of the Cotonou Agreement, the EPA is designed to be compatible with the World Trade Organization (WTO) rules by progressively removing trade barrier between ACP and EU and enhance cooperation in all areas relevant to trade.

The new Cotonou agreement will run for a duration of twenty years, with possible revisions every five years and renegotiations of the financial protocol at the same intervals. The new agreement rests on five interdependent pillars:

- i. a comprehensive political dimension consisting in an enhanced dialogue, and a special focus on conflict prevention and resolution, as well as on governance issues and the respect of human rights and the rule of law,
- ii. a set of participatory approaches, including greater emphasis on the role of civil society,
- iii. a focus on poverty reduction, and a central role for the private sector and regional integration in development strategies,
- iv. a new framework for trade and economic cooperation that would put regional integration at the fore-front, and extended cooperation to non-trade areas,
- v. a reform of fiscal cooperation, through the simplification and enhanced flexibility of the financial instruments of the partnership as well as the introduction of a performance criteria in the allocation of aid. As far as trade is concerned, the Cotonou agreement does not really detail the provisions for the future (Karingi, Lang, Oulmane, Perez, Jallab and Hammouda, 2005).

The proponents of the EPA, the EU has asserted that developing countries such as Nigeria would benefit from the EPA's development priorities, paving way for sustainable development and facilitating the countries' integration into the global economy. By establishing duty free imports through trade liberalization, the EPA it holds, will reduce cost of import from the EU, stimulate the structure of competitive production and thus, improve access to EU markets. These all appear very good on the surface. However, Nigerians and Africans need to analyse and understand how the EPA would affect the national economy, considering our specific context.

As earlier stated, the Agreement involves the gradual opening of the country's market access to the EU markets with the EU opening up of its markets in similar gesture. In breakdown, Nigeria would be required to open 60% of its markets in the first five years and another 25% in the following five years. In other words, it would liberalize over 80% of its markets to the EU within the first 10 years of the Agreement coming into force (Isaac and Bellonwu-Okafor, 2016)).

As harmless as this may sound, pertinent questions abound;

- I. Is the Nigerian economy strong or prepared enough to take advantage of the European markets?
- ii. Do Nigeria have a readily available comparative advantage to explore the EU markets?

- i. What finished goods can African countries and in particular, Nigeria sell to Europe to harness the EU market?
- ii. Considering the mismatch of the two regions in term of technological advancement and manufacturing experience and prowess, is Nigeria advantageously placed in this Agreement?

In the political context, the EPA negotiation exists within a framework of two distinct political groups of vastly unequal powers. It is a partnership between donors and debtors, between former colonial empire and their former colonies. It pitches a group of the world's most advanced economies against a group of world's least developed, mono-cultural and raw material exporting economies; between technologically advanced countries with dominating strength in comparatively advantaged mass production and the relatively primitive world with comparative strength in exporting of crude products and the consumption of foreign made products. This implied that African countries including Nigeria would bear more burden of the agreement than the intending benefits. For various reasons, European Commission and ACP negotiators had in most cases not been able to reach a common understanding and approach on the cornerstones of the new trading arrangement, notably, and quite surprisingly, on the development component and regionalism. The lack of institutional and technical capacity on the ACP side, as well as insufficient political leadership in many regions, had also taken its toll on a smooth progress in the negotiations. In view of the perceived strengths and criticisms of EPA in West Africa, this study seeks to;

- i. Examine the potential impact of EPA on West Africa growth with particular reference to Nigeria.
- ii. Examine the potential impact of the agreement on job creation and poverty reduction.
- iii. Examine the extent to which the partnership will impact on government revenue.

Discussions concerning the economic impact of a potential EPA with the EU have to date tended to center on the preferential trade liberalization that ACP countries will have to implement. According to economic theory, the overall welfare impact of such discriminatory trade reform is ambiguous so that careful empirical analysis is required to identify potential outcomes and highlight policy options for ameliorating negative effects. While on the one hand, the reduction of tariffs against a particular trading partner may lead to lower import prices and higher consumption, the resulting discrimination amongst trading partners may shift demand away from more efficient non-preferential to less efficient preferential producers, resulting in a more than proportional loss of tariff revenues (Andriamananjara, Brenton, Uexküll and Walkenhorst, 2009).

This study updates and builds on previous analyses by using more recent and relevant trade and protection data, especially with respect to Nigeria's applied tariff by taking into account exemptions granted. The aim is not to produce a precise quantification of the likely impact of the policy changes, but rather to provide orders of magnitude of the different short-term effects and the chain of causation producing them. The paper is organized as follows. Following the introduction, section two dwells on literature review. Section three is concerned with methodology adopted for the study. Section four presents the findings from the analysis carried out with a view to estimating the potential effects of preferential import liberalization with respect to the EU. Finally, section five concludes by discussing the issue of how an EPA could be leveraged to address key constraints to integration into regional and global markets. It also discusses potential complementary measures for boosting “supply response” and making the resulting EPA a tool for development.

2. LITERATURE REVIEW

2.1 Conceptual Clarifications

In this section, some an attempt is made at explaining some of the components of the economic partnership agreement.

2.1.1 Generalized Scheme of Preferences

- a. **Standard Generalized Scheme of Preferences (GSP):** This offers generous tariff reductions to developing countries. Practically, this means partial or entire removal of tariffs on 66% of all product categories.
- b. **Generalized Scheme of Preferences Plus (GSP+):** The GSP+ provides for duty-free treatment of all products falling under the normal GSP. These are granted to countries which ratify and implement international conventions relating to human and labour rights, environment and good governance. However, for products on which both ad valorem and specific tariffs are applied, the ad valorem but not the specific tariffs are eliminated. The GSP+ is designed to encourage countries to meet certain human and labour rights, environment and good governance standards.
- c. **Everything But Arms (EBA) scheme:** Applicable to least developed countries (LDCs), it grants duty-free quota-free access to all products, except arms and ammunitions. Benin, Burkina Faso, Gambia, Guinea, Guinea Bissau, Liberia, Niger, Senegal, Sierra Leone, Togo and Mali all fall under this scheme.

2.1.2 EPAs/iEPAs

The EPA is modelled on the concept of Free Trade Area (FTA) as defined by guidelines of international trade. The underlying principle of any Free Trade Area is that of reciprocity and the lowering of all barriers to trade therefore fundamentally, trade liberalization cannot be avoided in an FTA. With the exception of the 11 LDCs from the ECOWAS region which can trade under the EBA scheme, Cote d'Ivoire, Ghana and Nigeria, due to their status as lower middle-income countries and to a large extent the regional economic giants, have their trade terms covered under the GSP/GSP+ or the EPAs/iEPAs.

2.1.3 Most Favoured Nation clause ("MFN clause")

The most favoured nation (MFN) clause stipulates that the EU shall grant West Africa any more favourable tariff treatment that it grants to a third party. In a similar way, West Africa shall grant the EU any more favourable treatment that it would grant to a large industrial country (or group of countries). However, the MFN clause does not apply to preferential treatment granted by West Africa to countries of Africa or the ACP states, leaving the possibility, for instance, for further integration between African regions without any obligation to extend these preferences to the EU.

2.1.4 Rules of origin

Rules of origin are part of any free trade agreement leading to a preferential reduction of tariffs. In today's global economy, many sectors are characterised by successive steps of production organised in international value chains. As a result, final products are composed of components and inputs of various country origins. It is important, therefore, to distinguish the goods which qualify for the preferences agreed under the EPA (because they "originate" from the EU or West Africa), from those goods which do not. Rules of origin distinguish between "wholly obtained" products and "substantially transformed" products and those which are considered not to originate from the country. For that purpose, the agreement defines:

- i. The conditions for products to be considered as wholly obtained in West Africa or in the EU (e.g., mineral products extracted from their soil, live animals born and raised there, etc.);
- ii. The types of working or processing operations considered as insufficient to confer the status of originating product (e.g., removal of coverings, affixing of labels, etc.)
- iii. The types of working or processing operations considered as sufficient to confer the status of originating products ("substantial transformation").

Cumulation of origin, which is a derogation from the basic principle that a product should obtain originating status in a single country, means that

producers in more than one country may jointly meet the requirements for a "substantial transformation". Under the Agreement, cumulation of origin is extended to the parties (the EU or West Africa), to other ACP States which apply an EPA, and to the Overseas Countries and Territories associated with the EU (OCTs).

Furthermore, new cumulation possibilities are allowed under certain conditions with the EU's GSP and FTA partners. This provision takes account of the fact that value chains extend from different zones:

inputs can therefore be sourced from various countries without the risk of losing preferential treatment when exported to the EU. In the long term, the geographical extension will contribute to a better integration of ACP countries in global value chains as well as the creation of value chains across ACP countries.

- a. "Regional origin": the EPA introduces "West Africa" as a valid origin, as a way to encourage regional value chains, regardless of the West African countries in which the product was produced.
- b. Conditions for establishing the proof of origin and framework for cooperation in the field of rules of origin between West Africa and the EU.
- c. Asymmetrical tolerance rule: the agreement defines a ceiling under which "non-originating materials" can still be used in the manufacture of an "originating" product. That ceiling is 10% for products from the EU and 15% for products from West Africa (i.e., a product manufactured in West Africa, which uses less than 15% of non-originating materials, would still be considered as originating from West Africa)

2.1.5 Trade Defence Instruments

The agreement sets out conditions for the use of trade defence instruments. Antidumping and compensatory measures are defined by way of reference to the relevant WTO Agreements. This is also the case for multilateral safeguard measures. Bilateral safeguard measures are allowed for a limited duration when a product originating from the other party is imported in such quantities and in conditions as to cause or threaten to cause serious injury to the domestic industry, or disruption in a sector of the economy or in a market. In such a case, safeguard measures may consist in the suspension of the reduction incustoms duties, an increase in the customs duty (not above MFN rate), or the introduction of tariff quotas for the product concerned. Those measures shall be temporary, proportionate, and subject to a consultation mechanism between the parties.

West Africa also is also allowed to implement safeguard measures to protect infant industries. If a product, following the reduction in the rate of customs duty, is imported in quantities increased to such an amount that it poses a threat to the establishment of a "fledgling industry" or causes or threatens to cause disruption in a fledgling industry producing similar products, West Africa may temporarily suspend the reduction in the rate of customs duty or raise the rate of customs duty (again, not above MFN). Those asymmetric safeguard measures (i.e., available to West Africa but not to the EU) are exceptional in comparison with other FTAs negotiated by the EU.

2.1.6 Sanitary and phytosanitary measures

Product groups such as raw or processed products of animal or plant origin (e.g. meat, fruits, etc.) are sensitive to human, animal and plant life and health. As a means of protection, most jurisdictions in the world put special measures in place. Whilst legitimate, those measures can become an additional challenge to trade, as it requires certain production capacities, but also a quality infrastructure which is able to certify their conformity with relevant standards and norms. The agreement defines the relevant authorities and obligations in that field, in particular by reference to the relevant WTO agreements. It also foresees enhanced transparency, exchange of information and cooperation.

The EPA between the EU and West Africa has its foundations in the ACP-EU Partnership Agreement signed in Cotonou in 2000. The EPA has a strong pro-development approach and is backed by significant development cooperation funds to ensure that West Africa can fully benefit from trade. The EPA is expected to aid in the integration of West Africa economies as a prelude for her integration with the global trading system in support of investment and economic growth (European Commission, 2017).

The proposed economic partnership arrangement between Europe and Africa and in particular West Africa has been fashioned out of the desire for development and trade. Launched in 2000, the negotiation for Economic Partnership Agreements (EPAs) aimed at creating seven free trade areas between the European Union (EU) and African, Caribbean, and Pacific (ACP) countries. Five of these were to be in Africa, one in the Caribbean and one in the Pacific. The EPAs were supposed to take effect in 2008, but the negotiations took much longer than expected, in part because several elements of the reforms were criticized by ACP governments, particularly those of West Africa (WA).

In October 2003, negotiations between West Africa (including Mauritania) and the EU were officially launched in Cotonou. On the West African side, the negotiating mandate was granted to the regional organisations (ECOWAS and

West African Economic and Monetary Union-WAEMU). After several rounds of negotiations that spanned over more than 10 years, the negotiations were formally concluded on 6 February 2014 in Brussels and the agreement was initialed on 30 June 2014 in Ouagadougou, Burkina Faso by the Chief Negotiators. Prior to the initialing process, on 3 April 2014, Heads of State and Governments of Africa and of the European Union gathered at the Fourth EU Africa Summit and declared:

Our economies remain closely linked, and we will work to ensure that the growth of one will help the other. We are also convinced that trade and investment and closer economic integration on each of our continents will accelerate that growth." While we acknowledge the "valuable role" of development assistance, we call for "a fundamental shift from aid to trade and investment as agents of growth, jobs and poverty reduction.

The ECOWAS Summit in Accra on 10 July 2014 fully endorsed the EPA and decided that it should be signed and ratified. On the EU side, the Council Decision to sign and provisionally apply the EPA was adopted on 12 December 2014. Following the endorsement of the negotiated deal by both parties to the Agreement, it was presented for signature and will subsequently be submitted to the European Parliament for consent and to national Parliaments of signatory states for ratification. It would be recalled that, following earlier all-ACP-EU negotiations, the West African Summit of Heads of States and Governments adopted a negotiating mandate for the negotiation of the Economic Partnership Agreement between West Africa and the European Commission.

This new partnership agreement was hatched as a result of the failure of previous conventions to promote trade, competitiveness, diversification and growth. The Cotonou agreement of 2000 identified Economic Partnership Agreement (EPA) as a new bilateral reciprocal partnership for trade and development asymmetric in favour of ACP countries. Germane in the Cotonou agreement was sustainable development which is explicitly based on essential and fundamental elements of human right, democratic principles, rule of law and good governance. On this premise, EPA is considered better in comparison to other Free Trade Agreement (FTAs) currently negotiated between the EU and other trading partners. While the agreement remains a bilateral partnership, it is assumed or believed that it weighs in favour of West Africa with the proviso that:

- i. there is asymmetric market access in favour of West Africa. That is, the EU has committed itself to open its market to all West African products as soon as the agreement enters into force.
- ii. Under the terms of the agreement, West Africa continues to be able to

- protect its sensitive products from European competition either by keeping tariffs in place or, if necessary, by imposing safeguard measures.
- iii. West African companies also have more flexibility to use foreign components while still benefitting from free access to the EU market (flexible rule of origin).
 - iv. The EU complements the market opening effort of the West African partners with a substantial development assistance package (Schimieg, 2015).

It should be noted that, instructively, out of those earlier negotiations resulted a report jointly adopted by ACP Council of Ministers and the European Commission Commissioners for Trade and Development. This Joint Report was intended as a guide and reference point for subsequent negotiations at regional levels. Instructively, the Cotonou Agreement, the joint report of the ACP-EC joint Ministerial Meeting on the EPAs and the joint West Africa-EU Road map outlined three general objectives and guidelines upon which the West Africa-EU EPA negotiations should base on:

- i. The EPA negotiations must be aimed at eradicating poverty in a manner consistent with the sustainable development of the region,
- ii. The EPA negotiations should seek to establish in accordance with WTO rules, an FTA between the region and the EU, and
- iii. The EPA should strengthen regional integration initiatives in West Africa, based on priorities determined by the region.

Very unfortunately, the EPAs negotiations prior to 2008 did not reflect any of the afore stated principles nor contemplated indeed, a development dimension for the developing ACP countries. Up until then, the EPA negotiations were wholly mercantilists in approach (NANTS, 2010). This development resulted in stiff criticism of the arrangement.

The first criticism was that this trade reform would not provide West African countries with significantly better access to foreign markets. Among 16 countries in western Africa (Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo.) 12 (Only Cape Verde, Côte d'Ivoire, Ghana, and Nigeria are not LDCs.) are considered least developed countries (LDCs) and, as such, are granted access to the EU through the Everything But Arms (EBA) initiative, which gives them duty-free, quota-free access for all goods except arms. In 2015, other WA countries benefited from other specific trade regimes: Ghana and Côte d'Ivoire had duty-free access under an interim EPA agreement and Cape Verde was phasing out of its LDC status; these countries would lose these benefits if they did not sign and ratify the EPA. In this case, their exports would fall under the Generalized System of Preferences

(GSP) system, which is significantly less beneficial. This system has already been applied to Nigeria.

The second criticism focused on the potential loss of public revenues associated with imports, free of any charge, of European products into West African countries. Import tariffs are an important source of public revenues in these countries, and for many, the EU is the main source of imported goods. According to the Global Trade Analysis Project (GTAP) database (Aguiar, Narayanan, and McDougall 2016), the EU represented 38.3 percent of Senegal's imports in 2015, 21.1 percent of Benin's, 33.5 percent of Burkina Faso's, and 33.8 percent of Côte d'Ivoire's. African countries are well known for having a restricted domestic fiscal space (Jacquemot, 2005 and OECD, 2010). So, decreased public revenues due to the EPA could endanger their governments' ability to provide public goods (Bouët, Laborde and Traoré, 2017).

In response to these fears, the EU has granted several concessions. The tariff agreement is now asymmetric, using most of the policy space provided by General Agreement on Tariffs and Trade Article XXIV regarding regional agreements: the EU implements free trade for WA countries' products, while WA countries only partially open their borders to European products. Moreover, the time granted to implement this reform is gradual for the African countries. Finally, the EU has promised to include a development package. These concessions were accepted and the negotiations were concluded on February 6, 2014, in Brussels.

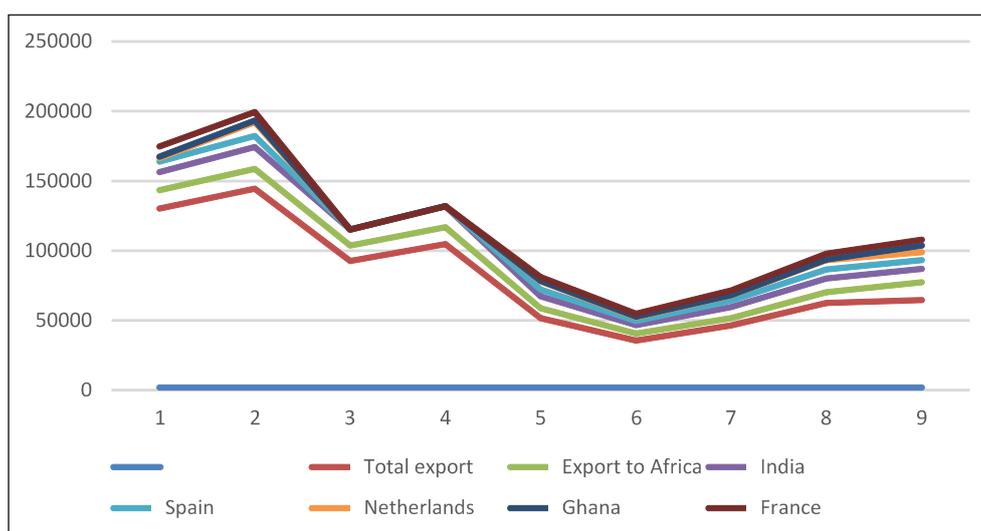


Figure 1: Nigeria Exports in Goods (US\$M & Key Trading Partners (2011-2019))

Source: Africa Statistical Yearbook, 2020

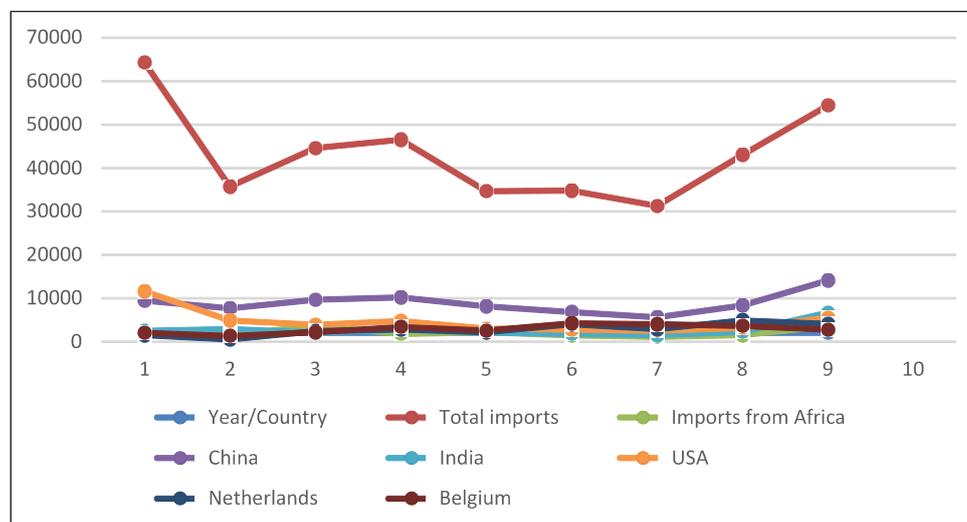


Figure 2: Nigeria Imports in Goods (US\$M) & Key Trading Partners (2011-2019)

Source: Africa Statistical Yearbook, 2020

Nigeria trade partners are largely dominated by countries outside the African region. Major export destinations are India, United States, Spain, Netherlands and France while import destinations are China, Belgium, United States, Netherlands and France. These export and import destinations contribute 56.74% and 53.63% of Nigerian export and imports markets. In terms of African trade, total Nigerian import from SSA countries \$873,738.42 thousand in 2017 which represents 2.79% of total import and entire North Africa contributes about 0.07% to Nigerian imports and summarily, Africa as a whole contributed 2.86% of Nigerian import during this period out of which South African share alone is almost 50%. On the other side, Nigeria has substantially exported to African markets. Nigerian total export to SSA markets stood at \$5,048,181.03 thousand in 2017 and accounted for 11.35 % of Nigerian total export and this almost represents the total value of entire exports to SSA countries as there was no substantial export to North African countries.

In more recent time, Nigeria's world exports raised by 30% precisely between 2017 and 2018. This has also impacted on the volume of intra-Africa exports by 41% increment. The increase in exports can largely be associated with a 50% increment in exports of crude petroleum oils and a 101% increment in exports of floating structures for breaking up. Exports to South Africa raised by 84%, while exports to the Ivory Coast raised by 81%. Between 2017 and 2018 world imports raised by 26%, while intra-Africa imports raised by 25% – imports of petroleum raised by 187%; imports from South Africa and Egypt raised by 24% and 73% respectively. Considering Nigeria's total intra-Africa trade (exports + imports), Nigeria largely trades with South Africa (46% of

total intra-Africa trade), Ivory Coast (15%), Togo (12%) and Senegal (7%). Intra-ECOWAS exports account for 45% of Nigeria's intra-Africa exports and for only 16% of intra-Africa imports. (Africa Trade Statistic Yearbook, 2020).

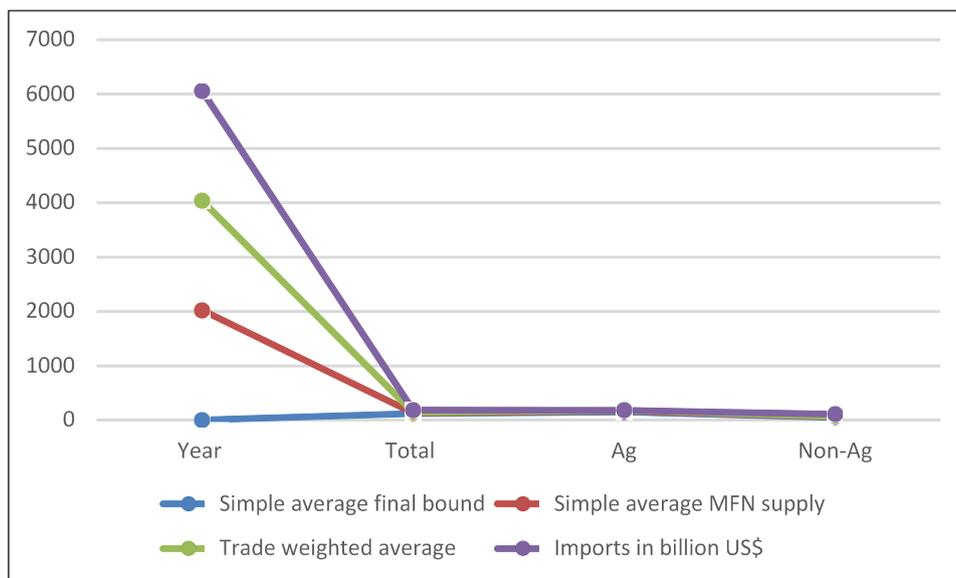


Figure 3: Tariff and Imports - Summary and Duty Charges

Source: Custom Tariff Service

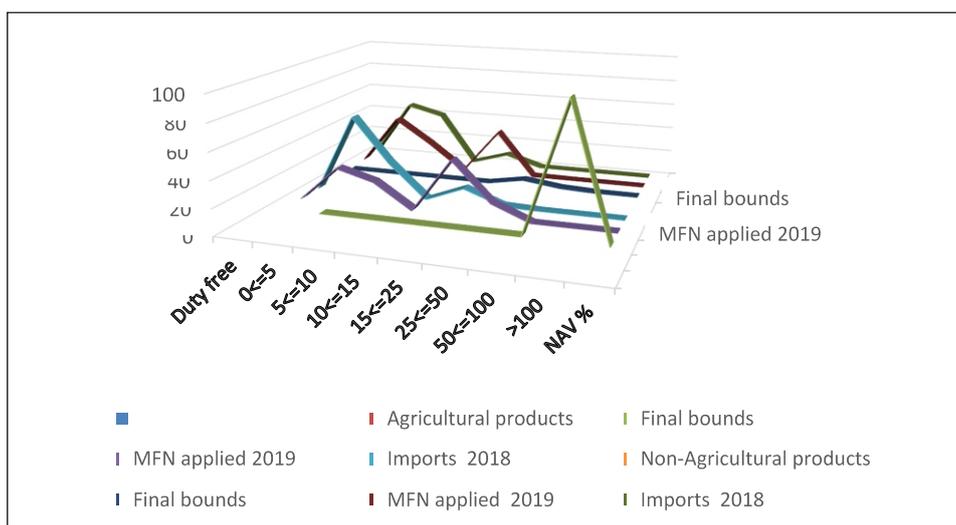


Figure 4: Tariff and Imports- Summary & Duty Charges

Source: custom tariff service

Before the EPA trade reform starts in 2020, Nigeria is obligated to align its trade policy with the regional Common External Tariff (CET) that was agreed upon in 2013. While the current tariff structure is already similar to the CET, Nigeria still maintains a number of additional trade policy instruments – namely import bans and special levies on certain products – that would have to be dismantled in order to fully harmonize its trade policy to the region.

As a member of ECOWAS, Nigeria has applied the five-band (zero, 5%, 10%, 20%, and 35%) Common External Tariff (CET) since April 2015, albeit with a certain flexibility. In 2017, Nigeria's average applied MFN tariff rate is 12.7%, up from 11.9% in 2011. Its final bound tariff rates average 117.3% and the tariff binding coverage remains low at 19.2% of total lines. Low binding coverage and high average bound rates leave ample margins for tariff changes, thus rendering the tariff regime less predictable. Under ECOWAS, Nigeria also applies the Import Adjustment Tax (IAT) available to member States that consider flexible application of the CET (higher or lower protection of selected products) to be necessary during the five-year transition period; and a 0.5% community fee. The IAT applied by Nigeria ranges from 5-60%, with the highest rate charged on cereals (60%). A Supplementary Protection Tax is also available under ECOWAS as a safeguard measure; Nigeria has not used it. Moreover, a myriad of additional taxes and levies are unilaterally collected by Nigeria on imports and exports.

2.2 Theoretical framework

This study is guided by international cooperation theory (ICT) and Theory of endogenous protection.

2.2.1 International Cooperation Theory

Spearheaded by Axelrod (1981) and Taylor (1984), cooperation is seen as the coordinated behavior of independent and possibly selfish actors that benefits them all, where one individual's welfare depends on others' behavior. The theory asserts that Cooperation occurs not only among individuals but also among collective entities, including firms, political parties, ethnic organizations, terrorist groups, and nation-states. Although the phenomenon of international cooperation is broad, the rationalist approach to international cooperation shares common analytic elements. It usually takes the actors and their objectives as given to focus on their strategic interactions. (Dai, Snidal and Sampson, 2017).

There are major assumptions underlying ICT. First, the international system is anarchic, meaning that there is no central enforcement (Milner, 1991; Powell, 1994). However, ICT avoids the all-too-common fallacy of equating anarchy with conflict and instead leaves the question of whether and when anarchy

results in conflict or cooperation as something to be demonstrated in the theory. Second, ICT began with a focus on states as unitary actors. While non-state actors and domestic politics undoubtedly matter, they are initially black-boxed in the interest of parsimony. This simplification is advantageous for uncovering a number of fundamental insights but, it obscures how those insights may relate to other actors and domestic mechanisms. Third, ICT assumes that states act according to a more general conception of rationality—meaning only that they are consistent in pursuing their goals.

The content of state goals is left open. Perhaps overreacting to realism and drawing too naïvely on the economism of game theory, early ICT focused on selfish, material interests, such as national security and prosperity, even though the approach can equally encompass ideational and other-regarding considerations (Elster, 1984; Ferejohn, 1991), such as human rights and justice. Fourth, ICT takes the preferences of actors as given and explains outcomes in terms of changes in the environment rather than changes in preferences (Lake and Powell, 1999). This is a methodological rather than a substantive assumption driven by the need to avoid empty tautologies through revealed preference. Often criticized as a weakness of the approach, it is actually a strength that increases the falsifiability of its predictions (Snidal, 2002). Furthermore, only preferences over outcomes are taken as given in ICT, whereas preferences over action (viewed in terms of strategies) may evolve (Powell, 1994). This more general rationality assumption means that ICT can incorporate ideas that help to explain the sometimes seemingly irrational behavior of international actors with reference to their psychological and environmental constraints.

Building on Waltz (1979), Grieco (1988) argues that states do not seek absolute gains (as ICT presumes) but pursue relative gains defined as maximizing their advantage over others. The underlying logic is based on the zero-sum game—where what one gains the other must lose—so that even if there are absolute cooperative gains among actors, there are no relative gains. This position was widely endorsed by realists as critically undermining the ICT project. However, Snidal (1991) exploited the fundamental flaw in the relative gains logic that zero-sum games only apply to two-actor worlds; with more than two actors, there are cooperative incentives for every pair of actors to cooperate in order to achieve relative gains over the other actors. As the overall number of actors becomes moderately large, these cooperative incentives dominate so that cooperation is not significantly impeded by relative gains considerations. Powell (1991) takes alternative tack of denying that relative gains seeking makes sense and, instead, reworked the relative gains logic into a concern that current gains may enable one opponent to threaten the other security in the future. Whichever approach one takes, the concern over relative

gains provides at most a minor modification to ICT and does not undermine it in any significant way. The relative gains debate also provides a good example in which the precision of mathematical theory clarifies and shows the limits of verbal theory.

ICT disproves the realist assertion that cooperation under anarchy is impossible without hegemony. Theorizing around this question relies heavily on a depiction of anarchy as a prisoner's dilemma game where everyone's incentive is not to cooperate even though all would gain from mutual cooperation. Using a prisoner's dilemma (PD) that repeats over time, however, Taylor (1976) overturns this dismal conclusion by showing that the long-term benefit of cooperation—the shadow of the future—creates incentives for rational actors to cooperate in anarchy. Axelrod (1984) provides a parallel evolutionary account of cooperation, which has inspired further related work in agent-based modeling in international politics (Cederman, 1997). The folk theorem generalizes these results to establish the possibility of cooperation in *any* recurring situation where there are joint gains to be made from cooperation. But cooperation is not easy. It is *never* the only equilibrium in a repeated PD game and some of the multiple equilibria do not involve cooperation. Whether cooperation emerges depends on the circumstances and strategic choices of the actors. Much scholarly effort has gone into specifying the conditions under which cooperation is likely and how international regimes and institutions may facilitate cooperation.

Cooperation is supported in repeated settings because of the possibility of reciprocity: if you cooperate with me, then I will cooperate with you in the future; but if you do not cooperate, then neither will I. If both actors take this position—as in the famous tit-for-tat strategy pairing—then ongoing cooperation is supported against current defection incentives by actors' interest in maintaining cooperation into the future. This analysis opens up the possibility of cooperation and raises interesting questions regarding the conditions under which strategies of reciprocity promote cooperation.

2.2.2 Theory of Endogenous Protection

Akin to international cooperation theory is the theory of endogenous protection (Trefler, 1993). This theory states that, equilibrium level of protection is determined by supply and demand. Consequently, protection is demanded by interest groups that rationally weigh the costs and benefits of lobbying for protection and is supplied by politicians seeking to maximize self-interested objectives.

Where coordinating an effective lobby is costly, the level of protection is low. Greater seller concentration and smaller number of firms alleviate the free rider

problem in coordinating a lobby, thus increasing the level of protection. Greater buyer concentration and a smaller buyer number of firms alleviate free-rider problem faced by consumers and downstream groups, thus strengthening the lobby against protection. Barriers to entry have two effects; if entry barriers restrict both domestic and foreign rivals, then the barriers eliminate the need for protection, thus reducing the level of protection. If the entry barriers restrict only domestic entry, then the barriers increase the level of protection by making protection valuable as a way of excluding foreign rivals. The theory predicts that protection will be progressive in aiding the disadvantaged group since such group has the lower opportunity cost of lobbying. An industry is disadvantaged if industry growth is slow or unemployment rate is high. It is also disadvantaged if a large share of its workers are in less skilled occupations.

Weighing the impulse of these two theories against Nigeria trade relationship with European Union, there is possibility of hidden strategies known only to the contending players. Consequently, EPA does not commit the parties to providing specific levels of financial support, nor do they contain sanctions for not providing support or engaging in cooperation. The specific provisions contained in the EPAs are therefore largely of the 'best endeavour' variety. Furthermore, given that there are a number of factors that are likely to determine whether and how development cooperation support provisions contained in the EPAs lead to actual support and cooperation relevant for these value chains and whether or not such support and cooperation leads to beneficial outcomes for the actors in these value chains, it is difficult to assess how much of an indirect impact the EPAs are likely to have on these value chains.

2.3 Empirical Review

Busse and GroBmann (2004) empirically assessed the impact of the EPAs on trade flows and government revenue for 14 West African countries. A partial equilibrium model based on Armington assumption was used in analyzing the expected outcome of the partnership on the ECOWAS. The results indicated that the decline in import duties due to the preferential tariff elimination might be of some cause for concern and that complementary fiscal and economic policies have to be implemented before or at the time the EPAs come into force.

Friedrich Ebert Foundation (2004) commissioned a regional workshop in Benin Republic to diagnose and brainstorm on the likelihood of some effects of the Economic Partnership Agreement (EPA) on ECOWAS countries and Mauritania. The study used Computable Partial Equilibrium Model worked out by the Hamburg Institute of International Economics (HWWA) to examine trade and budget effects which might occur should ECOWAS countries

including Mauritania, open up their domestic markets to products coming from the EU as part of EPA implementation. With regards to trade effects, the study concluded that effects of trade creation would be much more considerable than trade diversion, for the States of the region on the whole, except only the case of Ghana, for which both situations were relatively similar. Watching from that angle, the EPA between EU and ECOWAS countries and Mauritania is likely to improve the overall levels of welfare in countries of the sub-region.

Regarding the budget effects, the study asserted that the abolition of customs duties consecutive to the implementation of the EPA would bring about a decline in customs revenue and by way of consequence, a decline in budget incomes in most States, some of these being much more affected than others when it comes to import duties, especially Cape Verde (79.9%) and the Gambia (65%) whereas Niger is less affected (29.6%). Besides, the study also looked into the reflections on the options being offered to countries of the region in the negotiations. In this respect, it suggested that ECOWAS Countries could accept or abstain from the EPA offer and rather have recourse to non-reciprocal trade preferences as provided by the EU within the context of "Everything But Arms" (EBA) initiative for LDCs or improved Generalized System of Preference (GSP) for non-LDCs.

Karingi *et al.* (2005) examined the economic and social impacts of the trade liberalization aspects of the proposed Economic Partnership Agreements (EPAs) between the European Union (EU) and African countries using partial equilibrium of the WITS/SMARTS model. The study provided a quantitative assessment of the likely implications of EPAs establishing Free Trade Areas (FTAs) between the EU and the various African Regional Economic Communities (RECs). The focus of the empirical analysis was on the trade liberalization component of the EPAs. The main conclusions drawn from the results and the discussions are that full reciprocity will be very costly for Africa irrespective of how the issue is looked at. A focus on deepening integration with a view to enhancing intra-African trade would provide positive results. But it is the scenario that offers unrestricted market access for Africa, which deals effectively with barriers associated with sensitive European products, that portends the largest gain for the continent. Even with reciprocity, a free trade area that includes sectors of export interest to Africa and one that deals with non-tariff barriers promises positive results for African countries.

Bilal, Dalleau and Lui (2012) provided a comprehensive and comparative overview of the possible fiscal impact of EPA across the whole of Africa, highlighting key factors that influence the likely loss of revenues due to trade liberalisation in the context of EPAs and identifying possible remedies/support options that may be considered by both developed and developing countries

alike. The study approached the question using a meta-analysis of existing regional and country-level studies to provide an aggregate assessment of the overall fiscal impact of EPAs. This allowed a broad ranking of countries by the estimated scale of the fiscal impact, thus assisting policy-makers in identifying where most concern should be focused by an EPA. Findings showed that the fiscal impact of an EPA depends on the implications of the agreement for trade and production and in particular, the degree to which domestic production is import competing or import reliant. In turn, this will depend on the existing level of demand for EU imports, the effective rate at which tariffs are levied on those imports (i.e., taking into account exemptions and smuggling), and the price elasticities of demand and substitution for those imports. As such, the base on which to estimate fiscal impacts is itself complex and subject to numerous factors and assumptions.

Von Uexkull *et al.* (2014) analysed the impact of an Economic Partnership Agreement (EPA) on Nigeria against a baselinescenario where Nigeria has already fully aligned itself to the ECOWAS Common External Tariff. The methodology applied in the study combined a simple and partial equilibrium approach with household and firm level data, thus minimizing assumptions but deriving intuitive and policy relevant results. Working at the detailed product and firm level, the analytical framework adds precision to the assessment of the potential short-term effects of the EPA. A simple dynamic extension of the model illustrated potential adjustment effects across firms. The study found that, at its final stage, implementing the EPA would lead to a moderate reduction in overall tariff protection from 11.3 to 9.2 percent and thus a limited increase in imports between 0.8 and 1.8 percent. This moderate reaction is explained by the EU's relatively low share in imports (23 percent) and protection being maintained on an important number of sensitive tariff lines. However, some trade diversion is likely to occur in favor of the EU at the expense of other trading partners. Fiscal losses, as far as they could be assessed in the absence of actual tax collection information, could be expected in the magnitude of 0.8 percent of total fiscal revenue, equivalent to 3.3 percent of non-oil revenue, once the EPA is fully implemented. Households can expect to benefit from a small reduction in the price of the average consumption bundle in the magnitude of up to 0.3 percent. The net effect is slightly progressive, favoring higher income households more than low-income ones. A simple assessment of the potential impact of the EPA on competitiveness suggests that two thirds of manufacturing firms (and workers) are likely to experience a net increase in profitability due to the EPA, mainly due to lower input prices. The remaining one third of firms may lose some profit because of increased competition from imports, but only very few (0.5 percent) become unprofitable as losses are small compared to actual profit levels. Losses are concentrated in four sectors (Wood products, Nonmetallic mineral products,

Basic Metals, and Metal products other than machinery), but most firms in these sectors currently have above average profitability and will continue to do so with the EPA.

The estimated effects of the EPA on firms are small compared to the potential impact of an accompanying competitiveness agenda that would boost productivity growth, for example by reducing the number of power outages or the cost of transportation. Such measures could help firms negatively affected cope with the EPA, but would have the added benefit of strengthening all Nigerian firms. Though not a long-term solution, EPA Trade Defense Measures can be effective in temporarily mitigating negative impacts on a limited number of domestic industries if needed. However, unlike an accompanying competitiveness agenda, this policy option would not promote productivity growth of affected firms, and would impose a burden on consumers through higher prices.

Woolfrey and Bilal (2017) examined the EU's EPAs with the East African Community (EAC) and with the Southern African Development Community (SADC) to assess the likely *direct* and *indirect impacts* of these EPAs on three domestic African value chains: the Kenyan dairy value chain and the Namibian fisheries and horticulture value chains. The analysis showed that the two EPAs will not have significant direct impacts on the Kenyan dairy and Namibian horticulture value chains, while the likely direct impacts on the Namibian fisheries value are mostly positive, but could also include some negative impacts in terms of increased competition.

For the Kenyan dairy value chain, the EU-EAC EPA will not lead to greater imports of EU dairy products into Kenya (or the EAC), as dairy products are excluded from tariff liberalisation by the EAC. Neither will the EPA have a direct impact on market access conditions within the EAC, as tariffs on intra-EAC trade have already been eliminated through the establishment of the EAC Customs Union. Furthermore, while the EPA will preserve DFQF access to the EU market for Kenyan dairy producers, numerous constraints in the Kenyan dairy value chain mean that it lacks the capacity to take advantage of such market access. For the Namibian horticulture value chain, the EU-SADC EPA does not significantly alter market access conditions between Namibia and the EU or between the SADC EPA Group states themselves. Overall, this analysis suggests that while EPAs provide some opportunities and pose some challenges, their direct impacts, both positive and negative, on many African value chains are likely to be limited and should not be overstated. Olney (2020) examined how different types of trade agreements (i.e., non-reciprocal, preferential, and customs unions) affect bilateral exports to African and non-

African countries. The results showed that exports to African countries increase with preferential trade agreements, but export to Non-African countries do not. This indicates that trade agreements between African countries may be an effective way of promoting intra-continental trade.

Poor infrastructure can impede trade especially in Africa. Underdeveloped communication and transportation infrastructure linking African countries may explain why distance is a larger impediment to intra-African trade. The findings confirmed that exports to African countries increase with infrastructure improvements. Specifically, one of the strongest results to emerge from the analysis was the large positive relationship between the network of roads and exports to other African countries. Exports to both African and non-African countries also increase with cell-phones.

2.4 Evaluation of Literature

From the reviewed studies, it can be said that there is no conformity in findings either due to the period of study or data used or perhaps methodology. While some studies report positive effect of the agreement on output growth, others report negative effect. However, what is consistent in all the studies is the loss in government import tax revenue due to dismantling of tariff as a result of liberalization. Several arguments have been made for and against the EPA especially regarding its implications for West Africa's socioeconomic development. There have been major disagreements in the run-up to signing the EPA mainly over whether or not it would contribute to development in the West African region. The EU approach has been primarily from the philosophical perspective that far-reaching trade liberalization reforms trigger economic development. On the other hand, West African countries maintained that protectionism and aid-for-trade are still necessary to address existing supply-side constraints.

The arguments against the EPAs have been on the fear of West African nations losing fiscal revenues from import duties—an important source of government revenues, unfair competition from subsidized European products especially agricultural ones and crowding out of small businesses from an already weak manufacturing sector due to competition from European products. Signing the EPA has major implications for many ECOWAS economies through the channels of competition with EU imports in the domestic market, and declines in government revenue. Perhaps the biggest criticism of the EPAs has been that while its goals, intermediate targets and policy instruments are broadly consistent with ECOWAS countries' economic plans, the major problem has to do with the EPA strategy.

It has been argued that the strategy of enforcing substantial trade liberalization within ECOWAS countries before adequate supply response and adjustment mechanisms have been built or sufficiently strengthened is wrongly placed. Furthermore, the interests of ECOWAS member countries would have been better reflected in the context of a strategy which prioritises supply response capacity building and enhanced market access ahead of import liberalization. Since the EPA is yet to commence fully, a critical examination of its potential impact especially on welfare is worth considering. Hence the rationale for this present study.

Consequently, EPA is not a win-win situation neither is it a loose-loose situation. As a reciprocal arrangement, it does not force parties neither does it place sanction on party for non-participation. Despite the liberal nature of the agreement, it is vital that each party to the agreement weigh her strength as well as weaknesses against the contending party so as to assent fully to the agreement. In looking at competitiveness as the basis of the agreement, it is worth examining from both end the likely mismatch in terms of infrastructure, technology and ease of doing business besides the products for exchange. Nigeria should therefore weigh the cost against the benefits of the agreement before venturing into its full implementation. After all, even without EPA, Nigeria could still enjoy duty free quota free access with European union.

3. METHODOLOGY

3.1 Research Design

The objective of this section is to simulate the likely effects of the EU-West Africa EPA, primarily on West African countries, especially Nigeria in terms of welfare, production, government revenue and poverty. The examination is based on a dynamic multi-country multi-sector Computable General Equilibrium (CGE) model. In general, CGE models evaluate the impact of policy shocks on macroeconomic variables such as income, prices, production and employment. The CGE model used for this study is MIRAGRODEP (Modelling International Relationships under Applied General Equilibrium for the African Growth and Development Policy Modeling Consortium), developed for the AGRODEP (African Growth and Development Policy modeling consortium) initiative. Since the EPA involves many countries, it is important to use a multi-country model so as to represent in detail and consistently the economic and trade relations with the rest of the world. The gradual implementation of the agreement, i.e., gradual tariff reductions, necessitates the use of a dynamic version of the model under which the model is being solved sequentially and the equilibrium is moved from one year to another.

3.2 Estimation Technique

Initially, the structure of the examined economies - with all the associated transactions among the economic agents (households, government, firms) – is reproduced. A dynamic baseline is then simulated so as to project the economic situation of these countries within a specific timeframe. The baseline reflects current EU and West Africa's Free Trade Agreements in force as well as those for which negotiations have been concluded, including the Common External Tariff (CET) that is in force in ECOWAS countries since January 2015.

A scenario simulation is then performed under the assumption that a specific policy change takes place and the result is compared to the baseline.

Specifically, the economic effects of the EPA are quantified based on the tariff dismantling schedule set out in the EPA (gradual and partial dismantling for EU products exported to West Africa, immediate and full liberalisation for West African products exported to the EU) by comparison to the baseline.

Both the baseline and the EPA scenario are projected for 20 years from 2015 up to the year 2035. The specific characteristics of the African continent are taken into due consideration with cutting-edge specifications that are introduced in the model and the overall analysis:

i. Fiscal revenues of West African countries: The effect of the agreement on public revenues is projected based on actual revenues instead of nominal import duties and accounting for fiscal inefficiencies.

ii. Impact of the agreement on poverty and inequality: The CGE model is complemented by a top down micro-simulation approach. With the use of a micro-macro distributional toolbox, the impact at the macroeconomic level (change in relative prices of goods, impact on labour market, change in relative factor remuneration, change in government revenue, change in consumption pattern by households etc.) are linked to microeconomic data (e.g. household budget surveys) to account for impacts at the household level and to analyse the effects on income distribution. Due to data availability constraints, the micro-simulation exercise was conducted for two countries; Nigeria and Ghana. The household surveys that were used were the General Household Survey carried out in 2010/11 for Nigeria and the Ghana Living Standards Survey carried out in 2006/07. These were the only household surveys that were publicly available and included an income module (households' income sources, apart from the expenditure/ consumption component). These two countries account for 74% of the region's GDP and 60% of its population.

iii. Additional sensitivity analysis was carried out in order to address the specificities of the region and of the agreement (weight of informal sector, EPADP).

To verify the robustness of the results, I checked whether the dual-dual modeling and the implementation of the development package have significantly influenced the results.

I conducted three sensitivity analyses: the same scenario without the dual-dual modeling (called NDD-DP), the same scenario without the development package (called DD-NDP), and the same scenario without dual-dual modeling and without the development package (called NDD-NDP). I compared these three scenarios with the central scenario, called in this section DD-DP. Because all of the results would be too long to show here, we show only the results concerning the impact of the reform on trade, on GDP and welfare, and on the collection of import duties.

3.3 Model Specification

The MIRAGRODEP model distinguishes multiple sectors (activities or industries), each producing one single commodity (good or product). Sectors and commodities are referred to using index i or j , both representing the exact same elements. Each variable is thus indexed in time (index t) and by region using indexes r (origin country), s (destination country), and rr and ss , corresponding, respectively, to the same elements. The purpose of this class of GE simulations is to determine the effects of a change in trade policy on the endogenous variables of the model – prices, production, consumption, exports, imports and welfare. The simulation represents what the economy would look like if the policy change or shock had occurred. A general equilibrium model captures the fact that markets are linked and that events that take place in one market have effects on other markets that need to be taken into account, since they can feed back into the original market. These linkages work through a number of channels. One channel is the consumer. The indicator for assessing the efficiency of an economic system is consumer welfare. This is because the material resources of any economy are there to satisfy human needs. The role of firms or producers is to transform these resources as efficiently as possible into those goods and services that households desire. In other words, the role of firms and the role of the assumption of profit maximization are to ensure that society produces all that it is capable of producing (i.e., it is on its production possibility frontier and not within).

Model for trade components were computed thus:

$$SP_{\text{Aft}} = \frac{AV_{\text{MFN}}}{N_{\text{YAL}}} (\Delta AR_{\text{TD}} + \Delta C^{TC} + \Delta D^{TD}) \dots \dots \dots (1)$$

Where;

SP_{Aft} = Scheduled Annual Aid for Trade Provision

AV_{MFN} = Average MFN tariff on Product j for the present period n

N_{YAL} = Number of years for full Liberalization to come into effect

$\Delta ARTD = -tMEU$ = The tariff revenue loss by Nigeria on imports from the EU

$\Delta CTC = 0.5 \left(\frac{\eta \delta}{1+tmO} \right) MECOWAS$ = Estimated trade creation effect

$\Delta DTD = 0.5 \left(\frac{\eta \delta}{1+tmO} \right) MROW$ = Estimated trade diversion effect

Other data Analytical approaches adopted the methodology of McKay and Morrissey (2005) in addition to Morrissey and Zgovu, (2008) as modified to estimate trade, revenue and welfare impacts of EPAs on Nigeria's economy on elimination of tariff. The study estimated the consumption impact alone (ΔCTC) relative to the existing Nigerian import levels of agricultural products where the EU is a supplier; by the relationship:

$$\Delta M = \left[\frac{C}{1+t} \right] \eta \delta \cdot MEU \dots \dots \dots (2)$$

Where t, is the most favoured nations' (MFN) tariff rate imposed by Nigeria on imports from the EU in the present period n. nd_m is price elasticity of demand for imports, and MEU_0 is Nigeria's import from EU.

Since EPAs entail elimination of tariffs on imports from the EU, the tariff revenue loss by Nigeria on imports from the EU were estimated with equation 3, thus:

$$\Delta RTD = -tM^{EU} \dots \dots \dots (3)$$

Trade creation is estimated with the relationship in equation 4 as shown below:

$$\Delta CTC = 0.5 \left(\frac{\eta \delta}{1+tmO} \right) MECOWAS \dots \dots \dots (4)$$

MECOWSAS = Imports from ECOWAS now displaced by available high-tech substitutes from EU.

Trade diversion is estimated thus:

$$\Delta DTD = 0.5 \left(\frac{\eta \delta}{1+tmO} \right) MROW \dots \dots \dots (5)$$

Where; MROW = Imports from the rest of the world (ROW), now diverted to EU due to tariff elimination

The welfare impacts were estimated using the relationship as shown below:

$$\Delta W^C = (0.5 \cdot t \cdot \Delta Mc) \dots\dots\dots (6)$$

The welfare impacts of trade creation with consumption impacts were estimated as the combination of the maximum value of trade created by the displacement of Nigeria exports to EU and consumption impacts of trade creation defined in equation (7) as shown below:

$$\Delta W^M = \frac{(MECOWAS) \cdot t + [0.5(\eta\delta \cdot MROW)]}{1 + t} \dots\dots\dots (7)$$

The welfare impacts of trade diversion with consumption impact (TD & CI) was estimated as the combination of consumption impacts and tariff revenue effects $\Delta RTD = -tMROW$ thus:

$$\Delta W^M = \frac{[0.5(0.5 \cdot tTDC) - (t \cdot MEU)]}{TC \quad M \quad O} \dots\dots\dots (8)$$

3.4 The Data

Trade data in MIRAGRODEP are based on GTAP 10 (Aguiar, Chepeliev, Corong, Mcdougall & Van Der Mensbruggea. 2019). The Global Trade Analysis Project (GTAP) Data Base provides a time series of snapshots of the global economy for each of four reference years: 2004, 2007, 2011, and 2014, with 2014 being the latest year added to GTAP 10. The GTAP Data Base relies on country-based Input Output Tables (IOTs), and was supplemented by data from African Statistical Yearbook, (2020). In its tenth edition, the GTAP Data Base covers 121 countries and 20 aggregate regions of the world for each reference year. GTAP 10 includes updated IOTs for 50 countries, reflecting new cost structures and sales dispositions for each Sector (Aguiar, Chepeliev, Corong, Mcdougall & Van Der Mensbruggea. 2019). The GTAP 9 database contains the SAMs for eight WA countries (Benin, Burkina Faso, Côte d'Ivoire, Ghana, Guinea, Nigeria, Senegal, and Togo). The findings of this study is based on these eight countries of West Africa. Though, my principal focus is on Nigeria.

4. FINDINGS

First, we present the estimated impact of this reform at the macroeconomic level—that is, on GDP, welfare, and poverty. Second, I look for an explanation of these shocks by examining protection, trade, public revenues, production, remunerations of productive factors.

Table 4.1: Rate of variation of gross domestic product and real income, 2035, scenario/baseline (in percentages)

Table 4.1: Rate of variation of gross domestic product and real income, 2035, scenario/baseline (in percentages)

Country/Region	GDP	Welfare
European Union	0.0	0.0
Benin	0.2	-0.4
Burkina Faso	0.2	0.1
Cote de' Ivoire	0.3	0.3
Ghana	0.0	-0.2
Nigeria	0.0	-0.1
Senegal	0.4	-0.2
Togo	0.2	-0.5

Source: Author's Computation from GTAP 9 Database

The table above presents the macroeconomic results, particularly how GDP and welfare are affected by the reform. For all countries within western Africa, the reform has almost no impact on GDP and welfare. Welfare is here defined as an equivalent variation, that is to say, the monetary amount the representative agent would be indifferent about accepting in place of the implementation of the EPA reform. The welfare results are negative for Benin, Nigeria, Ghana, Senegal and Togo, and positive for Burkina Faso and Côte d'Ivoire. In all WA countries, households are positively affected by a decreasing consumption price index but negatively affected by the lump-sum tax needed to maintain public expenses and the public budget balance constant. In all countries, the net change in welfare is small. This indicates an increase in GDP in Senegal, Burkina Faso, and Côte d'Ivoire and a decrease in Benin and Togo. This again reflects contrasting forces. If local production is negatively affected by more imports from the EU, there are several mechanisms that have a positive impact on economic activity in these countries. As already stated, for non-LDCs, the implementation of the EPA improves access to European markets for local exporters. The liberalization of imports from Europe in these countries may also have several positive impacts on local production, because a depreciation of the real exchange rate associated with the deterioration of the current account improves competitiveness and exports. The competitiveness of local producers can also be improved through importation of cheaper inputs

(intermediate consumption and capital goods). Finally, European goods are cheaper for local consumers and thus improve their purchasing power; as a result, local consumers may increase their consumption of and demand for local products. In all WA countries, however, these effects are small. The impact on welfare differs from the impact on GDP for Benin, Senegal and Togo but the two impacts are very close for Burkina Faso, Côte d'Ivoire, and Nigeria.

Table 4.2: Rate of variation of gross domestic product components, national accounts, by volume, 2035, scenario/baseline (in percentages)

Country/Region	Final private consumption	Capital goods
Benin	-0.4	0.0
Burkina Faso	0.1	0.4
Cote de' Ivoire	0.3	1.0
Ghana	-0.2	0.3
Nigeria	-0.1	-0.1
Senegal	-0.1	0.9
Togo	-0.5	-0.1

Source: Author's computation from GTAP 9 Database

The table above indicates the rate of variation of two GDP components in 2035 by volume, in the scenario compared with the baseline. In terms of national accounts, GDP may be decomposed as the sum of final private consumption demand, final public consumption demand, capital goods demand, and net foreign demand. By assumption, final public consumption demand and net foreign demand are constant in percentage of GDP in this model. So, variation in GDP is driven by a variation in final private consumption demand, a variation in capital goods demand, or both.

If Table 4.1 is compared with Table 4.2, it is clear that the variation in the final private consumption component of GDP and the variation in welfare are close. Thus, most of the difference between the variation in GDP and welfare in Table 4.1 is explained by the second column of Table 4.2. The EPA implies a change in the demand for capital goods through different mechanisms. First, the

reform implies variation in production in each sector, which is due to (1) more imports competing with national production, (2) more exports worldwide, and (3) more demand addressed to the construction sector due to the development package. With changes in production come changes in the demand for productive factors, particularly the demand for capital goods. Second, when national income is augmented, private saving increases, and with constant foreign and public savings, investment is increased.

It is worth noting that all variations in demand for capital goods are greater than or equal to variations in private final consumption demand. This explains why in Table 4.1, variations in GDP are systematically greater than variations in welfare. It is also worth noting that the magnitude of this effect depends on the importance of the capital goods demand component in GDP. In Senegal, this share is so important that the significant increase in the demand for capital goods implies a substantial difference between welfare and GDP. In Côte d'Ivoire, on the other hand, the capital goods demand component represents a small share of GDP (the smallest amongst all ECOWAS countries) such that the significant increase in the demand for capital goods (+1.0 percent) is not translated into a variation in GDP significantly greater than the variation in welfare.

Table 4.3: Impact of trade reform on percentage of population in poverty, 2035

Percentage of population in poverty						
Poverty threshold/day	Nigeria			Ghana		
	Base year	2035 baseline	2035 scenario	Base year	2035 baseline	2035 scenario
US\$1.00	51.57	44.37	44.41	29.99	21.65	21.75
US\$1.25	55.67	47.45	47.52	31.66	23.64	23.59

Source: Author's computation from GTAP database

Table 4.3 presents the impact of the EPA reform on the poverty head count in Nigeria and Ghana. The poverty head count at \$ x per day is the percentage of the population living on less than \$ x per day at 2005 international prices (x is either 1.00 or 1.25). The base year refers to the year in which the household survey was conducted, that is, 2010/2011 for Nigeria and 2006/2007 for Ghana. All other figures are for 2035. It is worth noting that changes in poverty head counts due to the reform are marginal. As previously noted, this trade reform does not have a substantial impact on the economies of WA countries, particularly when it comes to factor remuneration or the consumer price index

used to update the poverty line between the baseline and the scenario. For example, in Nigeria, the trade reform results in an augmentation of the poverty head count at \$1.00 per day or \$1.25 per day, but these changes are so small that it is hard to conclude on their significance. Moreover, there is a significant diminution in poverty from the base year to 2035. In Nigeria, the poverty head count at \$1.25 will decrease from 55.61 percent in 2010/2011 to 47.45 percent in 2035, and in Ghana, the poverty head count at \$1.25 will decrease from 31.66 percent in 2006/2007 to 23.64 percent in 2035.

Table 4.4: Protection applied on all imports from all origins, baseline and scenario, 2015 and 2035 (in percentages)

Country/Region	2015			2035		
	B	S	VARIATION	B	S	VARIATION
Benin	16.7	16.7	0.0	16.7	15.7	-0.1
Burkina Faso	6.2	6.2	0.0	6.2	4.5	-1.7
Cote d'Ivoire	8.1	8.1	0.0	8.1	6.4	-1.7
European Union	0.6	0.6	0.0	0.6	0.6	0.0
Ghana	10.7	10.7	0.0	10.7	9.1	-1.6
Nigeria	8.8	8.8	0.0	8.8	7.4	-1.4
Senegal	9.2	9.2	0.0	9.2	7.0	-2.2
Togo	12.5	12.5	0.0	12.5	11.4	-1.1

Source: Author's computation from GTAP 9 Database

Table 4.5: Protection faced by all exports, baseline and scenario, 2015 and 2035 (in percentages)

Country/Region	2015			2035		
	B	S	VARIATION	B	S	VARIATION
Benin	2.46	2.46	0.0	2.46	2.46	0.0
Burkina Faso	0.32	0.32	0.0	0.32	0.32	0.0
Cote d'Ivoire	2.91	1.59	-1.32	2.91	1.59	-1.32
European Union	1.85	1.85	0.0	1.85	1.82	-0.03
Ghana	1.47	0.81	-0.67	1.47	0.81	-0.67
Nigeria	0.26	0.23	-0.03	0.26	0.23	-0.03
Senegal	3.27	3.27	0.0	3.27	3.27	0.0
Togo	1.33	1.33	0.0	1.33	1.33	0.0

Source: Author's computation from GTAP 9 Database

We do not adopt bilateral imports as weights to calculate an average duty applied on imports or an average duty faced by exports because these are endogenous weights; bilateral imports depend directly on tariffs, and thus the higher the tariff, the lower the imports. When a tariff is so high that it prohibits imports, the weight would be 0. Consequently, for each average, we weigh a tariff imposed by country s on product i coming from country r with imports of product i by country s from all countries in the world.

The average protection applied by the EU on goods, already low in the baseline (0.600 percent from 2012 until 2035), is only marginally affected by the reform (from 0.643 percent to 0.639 percent in 2035). This is because the EU has already given free trade access to LDCs from ECOWAS. Import duties conceded to non-LDCs from ECOWAS by the EU were relatively low under the previous preferential regime. In the baseline—that is, if ECOWAS countries do not sign the agreement—the EU will give GSP preferences to non-LDC ECOWAS countries; however, this should imply only a minor augmentation of average protection between 2013 and 2014. Even if ECOWAS countries implement a reduction of import duties on a limited range of goods coming from the EU, the decrease in average protection is more significant: from 9.2 percent to 7.0 percent for Senegal in 2035, implying a reduction by 220 basis points (bp) of average protection for this country. This is the largest reduction in average protection. The smallest reduction, 100 bp, occurs for Benin. Most of the decrease in average protection comes from a partial liberalization of imports originating in the EU. The reform also changes access to foreign markets for the countries studied, as illustrated in Table 4.5. Access to foreign markets is slightly improved for the EU, from 1.85 percent to 1.82 percent in 2035. It is not changed for Benin, Burkina Faso, Togo, or Senegal (the ECOWAS LDCs), but it is improved for Côte d'Ivoire (by 132 bp, from 2.91 percent to 1.59 percent), Ghana (by 67 bp, from 1.47 percent to 0.81 percent) and Nigeria (by 3 bp, from 0.26 percent to 0.23 percent). For ECOWAS countries, the decrease in protection faced by all exports takes place as soon as 2015; for the EU, this decrease is delayed.

Consequently, this trade agreement entails an asymmetric opening of trade borders. WA countries open their borders to European products more than the EU opens its borders to WA countries. Concerning LDCs from ECOWAS (Benin, Burkina Faso, Senegal, and Togo), the trade agreement does not imply any improvement in access to foreign markets because these countries already benefit from the EBA preference and the free trade area with other ECOWAS countries; under the EPA, these countries open their borders to European goods. For the non-LDC ECOWAS countries (Côte d'Ivoire, Ghana, and Nigeria), the EPA results in more WA openness to European products than EU openness to WA products. The reduction of the EU's protection on imports is

close to 0, while the EU gets a small but significant improvement in access to foreign markets, at 3 bp.

Table 4.6: Rate of variation in collected import duties, 2035, scenario/baseline (in percentages)

Country/Region	Variation
European Union	-0.3
Benin	-7.5
Burkina Faso	-25.8
Cote d'Ivoire	-17.0
Ghana	-14.1
Nigeria	-13.1
Senegal	-22.3
Togo	-10.9

Source: Author's computation from GTAP 9 Database

Customs duties make up a nontrivial element of public revenues in Africa. As shown in Table 4.6, public revenues coming from the collection of import duties are negatively affected by the reform, from -7.5 percent in Benin to -25.8 percent in Burkina Faso. This is a key implication of the trade agreement because reduced customs duties can potentially affect the ability of Africa's public sectors to finance public services. The results are driven by the direct losses linked to the liberalization of EU imports, mitigated by the sensitive products provision, as well as the indirect loss of tariffs coming from trade diversion. The drivers of this loss are the share of products originating in the EU in ECOWAS total imports, the common external tariff applied on these products, the effective rate of duty collection, the distribution of sensitive products, and how these products affect each country's import basket.

Table 4.7: Rate of variation in factors' real remuneration, scenario/baseline (percentage)

Country/Region	Sk lab	capital	unsklab	Nat.Res.	land	PIndC
European Union	0.0	0.0	0.0	0.1	0.1	0.0
Benin	0.3	0.7	0.4	1.0	-0.4	-0.5
Burkina Faso	-0.2	0.3	0.2	0.7	0.1	-0.5
Cote d'Ivoire	0.5	-0.4	0.8	-0.9	1.0	-0.1
Ghana	0.4	0.3	0.5	0.6	0.6	-0.4
Nigeria	-0.1	0.6	-0.2	1.3	-0.2	-0.7
Senegal	0.8	0.3	0.5	-0.8	0.2	-0.9
Togo	0.9	0.5	0.6	0.8	0.4	-0.6

Source: Author's computation from GTAP 9 Database

Table 4.7 presents the rates of variation implied by the trade reform in 2035 as percentages, by country, in the consumption price index and in productive factors' real remuneration. The impact of the EPA reform on factors' real remuneration in the EU is close to nil. For the WA countries, it is worth noting that the reform is positive for unskilled labor and land (except in Nigeria) and is either positive or negative for other production factors. An augmentation of the remuneration of unskilled labor is important for the reform's potential impact on poverty. The implementation of the EPA leads to a reduction of border protection that directly reduces the consumption prices of imported goods and indirectly reduces the consumption prices of domestic goods due to a competition effect. This effect leads to an improvement of purchasing power for domestic agents, ranging from 0.1 percent in Côte d'Ivoire to 0.9 percent in Senegal.

Table 4.8: Impact of reform on trade, sensitivity analysis, 2035 (in percentages)

Country/Region	Total Export Volume				Total Import Volume			
	DD-DP	NDD-DP	DD-NDP	NDD-NDP	DD-DP	NDD-DP	DD-NDP	NDD-NDP
Benin	2.5	2.5	2.4	2.4	0.7	0.7	0.7	0.7
Burkina Faso	2.6	2.7	2.7	2.7	3.2	3.2	3.2	3.3
Cote d'Ivoire	2.5	2.4	2.4	2.4	3.3	3.3	3.3	3.2
European Union	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ghana	2.9	2.9	2.9	2.9	1.6	1.6	1.6	1.6
Nigeria	1.3	1.3	1.5	1.4	1.1	1.0	1.2	1.1
Senegal	3.7	3.6	3.6	3.6	1.5	1.4	1.4	1.4
Togo	1.3	1.2	1.2	1.2	0.4	0.4	0.4	0.4

Source: Author's computation from GTAP 9 Database

This sensitivity analysis shows that the results obtained with dual-dual modeling and the development package are not significantly dependent on these two assumptions. Table 4.8 shows how the impact on trade—more precisely the total exports and total imports by region/country in volume—is affected by these scenarios. For each variable, exports and imports, the first column recalls the results obtained in the previous section (that is, with dual-dual modeling and with the development package); the rest of the table then indicates the results obtained under the three alternative assumptions. Table 4.8 clearly demonstrates that neither assumption has a significant impact on how trade is affected by the reform.

Table 4.9: Impact of reform on gross domestic product and welfare, sensitivity analysis, 2035 (in percentages)

Country/Region	GDP (constant US\$)				Welfare (Equivalent Variation)			
	DD-DP	NDD-DP	DD-NDP	NDD-NDP	DD-DP	NDD-DP	DD-NDP	NDD-NDP
Benin	0.2	-0.2	-0.2	-0.2	0.4	-0.4	-0.3	-0.3
Burkina Faso	0.2	0.2	0.3	0.3	0.1	0.1	0.2	0.2
Cote d'Ivoire	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
European Union	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ghana	0.0	0.0	0.0	0.0	0.2	-0.2	-0.2	-0.2
Nigeria	0.0	0.0	0.0	0.0	0.1	-0.2	-0.1	-0.1
Senegal	0.4	0.3	0.4	0.3	0.2	-0.2	-0.1	-0.1
Togo	0.2	-0.2	-0.2	-0.2	0.5	-0.5	-0.5	-0.5

Source: Author's computation from GTAP 9 Database

Table 4.10: Impact of reform on collection of import duties, sensitivity analysis (in percentages)

Country/Region	DD-DP	NDD-DP	DD-NDP	NDD-NDP
European Union	-0.3	-0.3	-0.3	-0.3
Benin	-7.5	-7.5	-7.5	-7.5
Burkina Faso	-25.8	-25.8	-25.8	-25.8
Cote d'Ivoire	-17.0	-16.9	-17.0	-16.9
Ghana	-14.1	-14.1	-14.1	-14.1
Nigeria	-13.1	-13.1	-13.1	-13.0
Senegal	-22.3	-22.3	-22.3	-22.3
Togo	-10.9	-10.8	-10.9	-10.8

Source: Author's computation from GTAP 9 Database

In Tables 4.9 and 4.10, we verify that neither the impact of the EPA on welfare and GDP nor its impact on the collection of import duties is significantly modified if dual-dual modeling, the EPADP, or both are removed from this modeling exercise. Identically, concerning dual-dual modeling, the impact on trade and the impact on GDP, welfare, and collection of import duties are not significantly affected by this hypothesis. Overall, these countries do not improve their access to foreign markets, with the exception of non-LDC countries (Côte d'Ivoire and Nigeria, for instance); however, even in these latter countries, the gain in market access is small. If these countries open their borders, it is only for products coming from the EU, and the EPA includes many exceptions concerning this liberalization. Finally, as demonstrated earlier, the EPADP has only a marginal effect.

5. CONCLUSION And RECOMMENDATIONS

The objective of this study was to critically examine the potential impact of EU-WA EPA on West African countries especially Nigeria. The examination was done on the impact of the proposed agreement on GDP and welfare, poverty and government revenues. This agreement consists of a free trade area between the signatory countries, complemented by a development package. The evaluation was based on a dynamic, multi-country, multisector general equilibrium model, MIRAGRODEP, and a micro-simulation focused on Nigeria and Ghana in terms of poverty impact using the final text of the agreement. From the evaluation, it can be asserted that: the EPA's impact is either positive or negative for ECOWAS countries; although trade is increased overall, the impact on GDP and welfare in these countries is either positive or negative. If consumption prices are reduced due to the reform, the loss of customs duties requires implementation of a new tax, which reduces welfare.

The empirical analysis of the budget effects shows that tariff revenue is a significant source of financing government expenditures in most of the West African countries. Therefore, the most urgent task for West African governments will be to take measures to offset the decline in tariff revenue resulting from trade liberalisation. In theory, a replacement of foreign trade taxes by domestic taxes can easily be made. An import duty, for instance, is conceptually equivalent to an ad valorem tax on the domestic consumption and an ad valorem subsidy on the domestic production of that product.

In practice, however, it may be extremely difficult to collect domestic taxes for financing public expenditure programmes, as the ability of developing countries to collect domestic taxes will depend not only on the enactment of an appropriate tax legislation but, more important, on the enforcement of compliance. Given the serious problems of tax evasion and avoidance, the costs of tax administration have to be taken into account when countries are forced to modify their tax structure.

Granted a lump-sum tax is raised to compensate for the loss of public revenue in order to maintain constant public expenses per capita, it is obvious that the EPA could affect households' income and welfare by affecting the public revenues of ECOWAS countries. If fiscal closure rule is invoked, in which no alternative tax is raised to offset the loss of customs duties, and public expenses adjust to maintain the public budget balance as a constant percentage of GDP, it then implies that the provision of public services is altered under the EPA; thus, the measurement of welfare is uncertain.

From the foregoing, three issues of importance are worth noting; First, the effects of this agreement are small, if not tiny. This is not a surprise: due to both the characteristics of current trade policies and the characteristics of the agreement, the reduction in trade barriers is not large. Moreover, the magnitude of the development package is limited. Second, there is a substantial difference in the economic mechanisms at play between ECOWAS LDCs and non-LDCs. For the latter group, increased exports come from a reduction in trade restrictions implemented by the EU, along with a simultaneous reduction of their own trade barriers on European products. For the former group, the immediate impact of the agreement is only a reduction of their protection on European products. More imports lead to a deterioration of LDCs' trade balance, which brings real depreciation through a reduction in domestic prices. This internal devaluation helps restore these countries' competitiveness and positively impacts their exports. Third, the EPA agreement raises the issue of a fiscal adjustment. Customs tariffs represent an important part of public revenues in ECOWAS countries. However, the EPA entails a significant reduction in customs duties because the EU is an important and significant trading partner in the region. To maintain public expenses and the provision of public goods constant, ECOWAS governments will have to find an alternative source of public revenues.

In conclusion, the benefits of the EPA between the EU and WA countries appear small, if not negative, for WA countries. WA countries should find a source of increased growth from other trade agreements, either multilateral or regional. For example, the implementation of a continental free trade area could create more economic expansion. Importantly, the projected trade effects of EPAs will occur only if EU exporters reduce their export prices due to the tariff elimination. However, that will not necessarily be true if the dismantling of trade barriers puts large European firms in a position to exercise market power in West African countries, either individually or collectively. If European firms leave market prices unchanged and increase their profits instead, ECOWAS countries will merely lose customs revenue and, hence, economic welfare will certainly decline. Such anti-competitive behaviour will be less likely, of course, if European exporters have to compete on equal terms with exporters

from other industrial countries. In this respect, a better course of action for West African countries would be not to discriminate between European and other foreign suppliers. For instance, to minimise trade diversion and to increase competition from non-EU firms, ECOWAS may consider reducing tariff rates for non-EU imports as an appropriate policy option.

However, the opening up of domestic markets not only increases the gains from trade but also entails higher adjustment costs. Workers who are displaced from import-competing sectors and thus forced to move to other sectors of the economy may have to forego income and incur other costs while they search for employment elsewhere and/or undergo retraining. Moreover, trade liberalisation may lead to the destruction of much of the productive capacity, as investments of capital may have been sunk into certain economic activities and cannot easily be transferred to other activities. If adjustment costs of reallocating resources from import competing industries to other domestic industries are taken into account, the presence of a negative income effect which reduces consumer surplus will be more likely, at least in the short to medium run.

There is also a need for establishing social welfare nets that compensate displaced workers and provide the poor with a minimal level of subsistence below which they should not fall. As the role of governments is certainly not diminished by the need to mainstream trade into the national development strategy, it is important to ensure that participating in an EPA does not lead to a significant loss of government revenue.

To sum up, negotiations on EPAs pose a major challenge to West African countries. While there is little doubt that West African countries would benefit from improved or more secured access to EU markets, it is not clear whether it is in the interest of West African countries to eliminate customs duties for almost all EU products. The empirical analysis shows that the West African countries' concerns about the trade and fiscal effects of EPAs are quite plausible. In order to help the economy to adjust to increased competition from the EU with a minimum of economic and social unrest, the opening up of domestic markets needs to be well designed, with special attention given to country specifics and capabilities. Moreover, complementary reforms beyond the reduction of tariff and non-tariff barriers must be tackled domestically before trade is liberalised. However, it will not be an easy task for West African countries to balance their need for government revenue with efficiency consideration.

REFERENCES

African Statistical Yearbook (2020)

Aguiar, A., Narayanan, B. & McDougall, R. (2016). An Overview of the GTAP 9 Data Base. *Journal of Global Economic Analysis*, 1 (1), 181–208.

Aguiar, A., Chepeliev, M., Corong, E., Mcdougall, R. & Mensbrugghe, D. Van Der (2019). The GTAP Data Base: Version 10. *Journal of Global Economic Analysis*, 4 (1), 1-27.

Andriamananjara, S., P. Brenton, E. von Uexkull, J. E. & Walkenhorst, P. (2009). Assessing the Economic Impacts of an Economic Partnership Agreement on Nigeria, *World Bank Policy Research Working Paper* No. 4920.

Axelrod, R. (1981). The emergence of cooperation among egoists. *American Political Science Review*, 75, 306–318.

Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.

Bilal, S. and Stevens, C. (2009). The Interim Economic Partnership Agreements between the EU and African States: Contents, challenges and prospects. *European Centre for Development Policy Management (ECDPM) Policy Management Report* 17.

Bilal, S., Dalleau, M., Lui, D. (2012). Trade Liberalisation and Fiscal Adjustments: The Case of EPAs in Africa. *European Centre for Development Policy Management (ECDPM) Discussion Paper* No.137.

Bouët, A., Laborde, D., and Traoré, F. (2017). The European Union–West Africa Economic Partnership Agreement- Small Impacts and New Questions. *International Food Policy Research Institute (IFPRI) Discussion Paper* 01612

Busse, M. and Großmann, H. (2004). Assessing the Impact of ACP/ EU Economic Partnership Agreement on West African Countries, HWWA Discussion Paper, No. 294, *Hamburg Institute of International Economics (HWWA)*, Hamburg

- Cederman, L. E. (1997). *Emergent actors in world politics*. Princeton, NJ: Princeton University Press.
- Dai, X., Snidal, D. and Sampson, M. (2017). *International Cooperation Theory and International Institutions*.
- Elster, J. (Ed.). (1984). *Ulysses and the sirens: Studies in rationality and irrationality*. New York: Cambridge University Press.
- European Commission (2016). *The Economic Impact of the West Africa –EU Economic Partnership Agreement: An analysis prepared by the European Commission's Directorate-General for Trade*
- European Commission (2017). *Economic Partnership Agreement with West Africa- Facts and figures*.
- Ferejohn, J. (1991). Rationality and interpretation: Parliamentary elections in early Stuart England. In K. Monroe (Ed.), *The economic approach to politics: A critical reassessment of the theory of rational action*. New York: HarperCollins.
- Friedrich Ebert Foundation (2004). *Regional Workshop on the Impact of ACP-EU Economic Partnership Agreements on ECOWAS Countries*. Benin Marina Hotel, Cotonou (Benin), 13 – 17 September 2004; 1-6.
- Grieco, J. (1988). Anarchy and the limits of cooperation: A realist critique of the newest liberal institutionalism. *International Organization*, 42(3), 485–507.
- Issac, B., and Bellonwu-Okafor, V. (2016). Nigeria and EU's Economic Partnership Agreement (EPA): Economic Cooperation or Economic Slavery? *Social Development Integrated Centre (Social Action) Briefing*. www.saction.org
- Karingi, S., Lang, R., Oulmane, N., Perez, R., Sadni, J.M. and Hammouda, H.B. (2005). Economic and Welfare Impacts of the EU-Africa Economic Partnership Agreements. *African Trade Policy Centre (ATPC) Work in Progress No. 10*.
- Lake, D. A. (1993). Leadership, hegemony, and the international economy: Naked emperor or tattered monarch with potential? *International Studies Quarterly*, 37(4), 459–489.

- Le Monde Diplomatique (2015). The Lomé Convention under threat. <http://mondediplo.com>
- McDonald, L., and Matanda, J. (2013). Why Economic Partnership Agreements Undermine Africa's Integration. A Wilson Centre and Manchester Trade Collaboration.
- Milner, H. V. (1991). The assumption of anarchy in international relations theory: A critique. *Review of International Studies*, 17(1), 67–85.
- National Associations of Nigerian traders (NANT)(2010). The EU-West Africa Economic Partnership Agreement (EPA) Negotiations - The Position of NANTS.
- Olney, W.W. (2020). *Intra-African Trade*.
- Powell, R. (1994). Anarchy in international relations theory. *International Organization*, 48(2), 313-344.
- Schiemieg, E. (2015). A Short Assessment of the ECOWAS – EU Economic Partnership Agreement. Research Division EU/Europe, Stiftung Wissenschaft und Politik, *German Institute for International and Security Affairs*, Working Paper.
- Snidal, D. (1991). Relative gains and the pattern of international cooperation. *American Political Science Review*, 85(3), 701–726.
- Snidal, D. (2002). Rational choice and international relations. In W. Carlsnaes, T. Risse, & B. A. Simmons (Eds.), *Handbook of international relations* (pp. 73–94). London: SAGE.
- Taylor, M. (1976). *Anarchy and cooperation*. London: Wiley.
- Taylor, M. (1987). *The possibility of cooperation*. New York: Cambridge University Press.
- Trefler, D. (1993). Trade Liberalization and the Theory of Endogenous Protection: An Econometric Study of U.S Import Policy. *Journal of Political Economy*, 101(1): 138-160.
- Umuteme, B. (2013). Economic Partnership Agreement: Death Knell for Nigeria's Economic Growth. <http://www.frontiersnews.com/economic-partnership-agreementdeath>

Von Uexkull, E., Njinkeu, D., Maur, J-C., Coste, A. and Shui, L. (2014). ECOWAS Economic Partnership Agreement with the EU and Nigerian Trade and Development.

Waltz, K. (1979). *Theory of international politics*. New York: McGraw-Hill.

Woolfrey, S. and Bilal, S. (2017). The Impact of Economic Partnership Agreements on the Development of African Value Chains: Case studies of the Kenyan dairy value chain and Namibian fisheries and horticulture value chains. *European Centre for Development Policy Management (ECDMP) Discussion Paper No. 213*.