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Regional Integration in West Africa

Are Countries Diverging?

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Abstract

The author examines reasons for divergence of GDP per capita among the members of ECOWAS, a RIA in West Africa of 15 members. Also, WAEMU, another RIA in West Africa, is analyzed although to a smaller extent than ECOWAS. Mainly consequences of trade diversion and agglomeration effects are considered. An analysis of the dispersion of GDP per capita between the members is carried out to find evidence for the predicted divergence among the members. The author concludes that there are reasons to believe that regional integration in West Africa is causing divergence of GDP per capita. However, since intra-community trade constitutes only a minor share of total trade of the members of ECOWAS, it is difficult to assess the effects of regional integration.

Key words: ECOWAS, regional integration, divergence, trade diversion, comparative advantage, agglomeration effects.

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Abbreviations

AU	African Union
BCEAO	Banque Centrale des Etats de l’Afrique du l’Ouest
CEMAC	Communauté Economique et Monétaire de l’Afrique Centrale
CET	Common External Tariff
CU	Customs Union
ECOWAS	Economic Community of West African States
ETLS	ECOWAS Trade Liberalization Scheme
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
LDC	Least Developed Country
RCA	Revealed Comparative Advantage
RIA	Regional Integration Agreement
SD	Standard Deviation
UEMOA	Union Economique et Monétaire Ouest Africaine
WAEMU	West African Economic and Monetary Union
WAMI	West African Monetary Institute
WAMZ	West African Monetary Zone

1 Introduction¹

1.1 Overview

There are many economic reasons why countries choose to integrate. One of the main is that the resulting trade creation is believed to increase the welfare of the participating countries. Many times economic integration has indeed led to increased welfare. However, it is important to remember that different members of an integration agreement might not benefit equally from it; this leads to the question if countries within an integration agreement are converging or diverging as a result of it.

The Economic Community of West African States (ECOWAS) is an agreement between 15 countries of West Africa. Officially, the integration process started in 1975 and it is still going on. Further steps of integration are planned; most importantly, a common external tariff (CET) and a common currency. However, economic integration and the implementation of the CET may increase the inequality of welfare of the members of ECOWAS. Explicitly, integration can lead to trade diversion which could benefit the members which possess most of the industrial capability of the community. On the other hand, the members which do not have industries to the same extent may simply lose from integration. Also, integration could create larger clusters of industries which might be spread unequally among members.

It is difficult to predict what the consequences of further integration will be. However, some issues are raised in order to understand what integration has meant this far and what the outcome of increased integration will be. In broad, the paper is divided in three parts. Firstly, the process of regional integration of West Africa will be examined. Here, facts about the member states of ECOWAS are

¹ The author is grateful to the valuable comments and the supervising he has received during the process of writing from Yves Bourdet at Lund University.

presented as well. Secondly, the theory of economic integration is discussed and especially in the context of developing countries. There are two main issues that will be dealt with: comparative advantages and agglomeration effects. Also, the theory of convergence and divergence is presented. The third part of the essay includes an analysis based on the discussion of the theories of part two. Moreover, the analysis of convergence and divergence of the member states is provided here. According to theory, it is plausible that countries will diverge. Also, there is evidence of divergence of GDP per capita between the members of ECOWAS.

1.1.1 Research Questions

Is regional integration causing divergence of GDP per capita between member states of ECOWAS? If it does, why do countries diverge?

1.1.2 Methods

Different materials have been reviewed to study the process of economic integration of West Africa. Also, a literature review of theories connected to economic integration and convergence and divergence has been made. In order to study changes of internal and external comparative advantages, the measure of revealed comparative advantage is used. To look for agglomeration effects, the development over time of the value added of the manufacturing sector is examined. To investigate if theory is correct, convergence will be studied among the members of ECOWAS by measuring the dispersion of income per capita among the member states, normally known as analyzing sigma convergence. This will be done by using the standard deviation but also by weighting the standard deviation by population size, both will be presented in graphs. Also, previous research is used in order to find out whether countries are converging or diverging in terms of GDP per capita.

1.1.3 Delimitations

The essay is about regional agreements in West Africa. Focus will be on ECOWAS; however, the West African Economic and Monetary Union

(WAEMU) will be discussed as well. The reason why most of the focus is put on ECOWAS is that this community is the only regional integration agreement (RIA) in West Africa that is recognized by the African Union (AU) (UNECA, 2012, p xi).

Furthermore, consequences of economic integration will be considered. Non-economic goals will not be included in the study even though security issues, for instance, are widespread in West Africa and have been of concern to ECOWAS. However, in this paper, the consequences of conflicts and other political issues will not be addressed although these are still assumed to have significant impact on the process, results and prospects of regional integration.

2 Regional Integration in West Africa

2.1 Review of the Integration Process

Economic integration is not new to Africa. Many attempts have been made all over the continent; some of them have been successful while others have been less successful. Today, there are eight regional economic communities recognized by the AU. The intention of the AU is to strengthen these economic communities and create one continental economic union which incorporates all of Africa's economies in 2028 (UNECA, 2012, p 14).

Currently, there are mainly two regional agreements of economic integration in West Africa: ECOWAS and WAEMU (or UEMOA in French). ECOWAS is on its way to become a customs union (CU), while WAEMU already is one; WAEMU's common external tariff was established in 2000. All of the eight members of WAEMU² are also members of ECOWAS³; in total, ECOWAS consists of 15 members. The countries of the two regional agreements are different in many ways; for instance concerning size, GDP per capita and structure of trade.

Except for ECOWAS and WAEMU there are several other agreements in the region such as the Mano River Union (Schiff and Winters, 2003, p 76), the "Conseil de l'Entente" (Encyclopædia Britannica, 2014) and the Permanent Interstates Committee for Drought Control in the Sahel (CILSS, 2013). Some of the members of ECOWAS are also members of these intergovernmental organizations; additionally, there are states outside of ECOWAS which are members as well.

² The members of WAEMU are Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo.

³ The members of ECOWAS are those of WAEMU and Cape Verde, Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone.

In this introductory part, the process of economic integration of West Africa will be presented. The main focus is on the development of ECOWAS since the main objective of the paper is to understand what effects ECOWAS has and will have on the economies of the region. However, WAEMU will be examined shortly as well. Also, a brief description of the economies of the region follows subsequently.

2.1.1 ECOWAS

ECOWAS has existed for more than thirty years. The community was established by the treaty of Lagos which was signed in 1975 (ECOWAS, 1993). The treaty was first signed by 15 states and two years later Cape Verde joined the community (Ogbeidi, 2010, p 482). However, Mauritania withdrew in 1999, making it a community consisting of 15 members (Aryeetey, 2001, p 14).

The main intention of ECOWAS is to “promote economic integration in all fields of economic activity, particularly industry, transport, telecommunications, energy, agriculture, natural resources, commerce, monetary and financial questions, [and] social and cultural matters” (ECOWAS, 2007b). It is stated in the treaty of ECOWAS that in order to promote economic integration, national policies are going to be harmonized, a common market shall be established by the removal of tariffs as well as non-tariff barriers between members, a CET shall be introduced, and, finally, there shall be free movement of persons, goods, services and capital among the members. Some of these measures have already been adopted and established, mainly the free movement of goods and people. Moreover, an economic union is anticipated to be finalized by having common economic, financial, social and cultural policies and finally by the introduction of a common currency among all members (ECOWAS, 1993). Today, the members of ECOWAS which are also members of WAEMU have a common currency (the CFA). The members that do not have the CFA plan to create another currency union with an alternative common currency, the ECO. Later, the two monetary unions are expected to merge.

The top institution of the community is the Authority of Heads of State and Government of Member States (in short: the Authority) which is responsible for the general direction of ECOWAS. Under the Authority, there are several other

institutions. In Aryeteey's words, the Council of Ministers "put[s] flesh on the directives that the Heads of state issue to the Secretariat" (2001, p 15). However, nowadays, the Secretariat has become the Commission. The other institutions are the Community Parliament, the Economic and Social Council, the Community Court of Justice; the Fund for Cooperation, Compensation and Development; and Specialized Technical Commissions. The Authority may also establish additional institutions when it is considered to be needed (ECOWAS, 1993).

Chapter VIII of the Revised Treaty is dedicated to issues regarding economic integration. Intra-community tariffs or other charges with equivalent effects and quantitative restrictions shall be removed according to the ECOWAS Trade Liberalization Scheme (ETLS). In accordance with article 37 of the treaty, a CET shall be set up on goods originating from countries outside of ECOWAS; this is also one of the main objectives of the community. The Authority may, whenever it is recommended by the Commission, increase the speed of the integration process concerning trade (ECOWAS, 1993).

The decision to set up the ETLs was taken by the Authority in 1983. The objective of the ETLs was to achieve free trade within the community (ECOWAS, 1993). Specifically, it is stated that the intention of the ETLs is to encourage business, increase intra-regional trade and competitiveness of the region towards the rest of the world and increase GDP growth. Agricultural, artisan and unprocessed products had been subject to free trade since 1979; however, industrial goods were included in the free trade regime in 1990 as a consequence of the ETLs. In order to control which goods that come from the members of ECOWAS, a protocol was established in 2003 where rules of origin are defined. To be allowed free trade, goods shall be entirely produced within ECOWAS, produced by the use of material that is categorized under a different heading than the final product or produced of materials which have a value added of minimum 30 percent from producers within the community (ECOWAS).

In 1979, in Dakar, Senegal, the Protocol on Free Movement of Persons, Residence and Establishment was adopted by the member states. Citizens of all member states are since then formally allowed to live in other ECOWAS members to work or establish economic activities. According to the Economic Commission for Africa, the implementation of the Protocol on free movement of persons is on its way to be fully implemented (UNECA, 2012, p 17). However,

Aryeetey claims there are still numerous obstacles to the free movement of people. He also points out that most of the members of ECOWAS believe that immigration is problematic (Aryeetey, 2001, p 24).

The treaty of ECOWAS was revised in 1993. The objective was to increase the speed of integration. In order to fasten the integration process, the application of decisions became supra-national; consequently, the court of justice, the parliament and the economic and social council were created for monitoring. Moreover, the community programs were extended to more areas; for instance, the harmonization of fiscal and monetary policies started. A community levy was also implemented to support the independent financing of the community. Finally, the cooperation in political matters increased due to the revision of the treaty (ECOWAS, 1993). According to Aryeetey, the revision was also meant to turn ECOWAS into the only regional entity of economic integration in West Africa. Also, one wanted to make it more democratic instead of a bureaucratic state-driven organization (2001, p 16).

As indicated above, the community also has the intention to set up a common currency. It is stated in article 55 of the revised treaty that a central bank of ECOWAS shall be created in order to form a monetary union (ECOWAS, 1993). In 2000, the Authority decided to set up the West African Monetary Institute (WAMI).⁴ The objectives of the WAMI are mainly the establishment of the West African Central Bank and the preparation of the West African Monetary Zone (WAMZ); that is, the zone for the common currency – the ECO. This far, the macro-economic convergence of members has been difficult to achieve according to WAMI and the implementation of the ECO has therefore been postponed a number of times (WAMI, 2010). Currently, the planned year for the ECO to be launched is in 2015. Moreover, the monetary zones of ECOWAS and WAEMU are scheduled to merge in 2020 (ECOWAS, 2013b).

In 2006, the Secretariat of ECOWAS became the Commission of ECOWAS. The reason was to increase the effectiveness of the community and strengthen the principle of supra-nationality. At the time when the Secretariat became the Commission a new legal regime was adopted as well. Before the change, the

⁴ All non-WAEMU members except for Cape Verde chose to participate.

obligations of member states were mainly covered in the conventions and the protocols but now so called Community Acts can be passed which facilitate integration (ECOWAS, 2007a).

In 2006, an important decision was taken at the 29th summit of the Authority. It was decided that a four band CET will be set up by the community. The four bands are different duty levels spanning between zero percent to 20 percent where zero percent apply to basic social goods, five percent to capital goods and specific inputs, 10 percent to intermediate goods, and 20 percent to final goods. The CET was at the time, and is today, already implemented among the member states of ECOWAS which are also members of WAEMU. A joint ECOWAS/WAEMU committee was established in order to manage the negotiations about which goods that will be put in which tariff band and about the implementation of the CET among all member states (Ukaoha and Ukpe, 2012, p 2).

It was decided that the CET would come into full effect from the first of January 2008; still, this has not happened. The reason why it is not in place is, partly, because the largest member of ECOWAS in terms of GDP and population size, Nigeria, wanted to add an extra category. Nigeria wants to include a tariff band at a level of 35 percent.⁵ The intention of having a tariff band of 35 percent is to protect industries of particular importance for economic development (Ukaoha and Ukpe, 2012, p 8). It was later agreed that the CET of five categories shall be implemented; it has been decided to be put in place on 1st January 2015 (ECOWAS, 2013c).

2.1.2 WAEMU

It is difficult to study regional integration in West Africa without considering WAEMU. WAEMU was established as an economic and monetary union in 1994 after the Dakar treaty had been signed by seven of its eight current members. Guinea-Bissau joined the community in 1997 (UEMOA). In 1999, WAEMU agreed to establish a CET which was realized in 2000. The establishment of the CET is one of five objectives mentioned in article 76 of the treaty of WAEMU

⁵ At first Nigeria wanted the highest tariff band to be at a level of 50 percent (Ukaoha and Ukpe, 2012, p. 4).

about the creation of a common market in the community. The other objectives are to remove trade barriers such as tariff and quotas between members, to have common rules of competition, to realize the free movement of people and capital and to have common technical regulations (UEMOA, 2002).

The institutions of WAEMU are similar to those of ECOWAS. There is a Conference of Heads of State and Government which is responsible for the broad directives of the union. Secondly, the Council of Ministers is supposed to follow the directives of the Conference of Heads of states. Thirdly, the Commission represents the general interests of the union and not the interests of any government. It is composed of commissioners coming from the member states. Fourthly, there is a parliament which takes part in the decision process. Also, there is a Court of Justice and a Court of Audit. Moreover, there is a consultative organ. Lastly, the “Banque Centrale des Etats de l’Afrique du l’Ouest” (BCEAO) is an independent institution of the Union in charge of the common currency, the CFA (UEMOA, 2002).

The currency in use, the CFA, is also used in several other countries outside of WAEMU. However, the members of WAEMU have their own central bank, BCEAO, which issues the currency while the “Banque des Etats de l’Afrique Central” is the central bank for the countries which are members of the other community using the currency, CEMAC. The currency was established in 1945 by France and is today guaranteed by the French treasury. Since 1999 it is pegged to the Euro (BCEAO, 2012).

Thus, in some areas the members of WAEMU have integrated their economies more than the countries that are only members of ECOWAS. Although both of the communities have established free trade among the members, WAEMU is the only one which has become a functional CU. However, as noted, a CU with a CET for all ECOWAS members is projected and is planned to be realized in 2015. The members of WAEMU already have a common currency while the rest of the members of ECOWAS all have their proper currency. The ECO is planned to be established in 2015 among non-WAEMU members and is going to be merged with the CFA of WAEMU.

2.2 Characteristics of the Economies of West Africa

Economic indicators from the World Development Indicators in 2012 are provided in table 1. Nigeria is the largest country, both in terms of GDP and population size. Alone it makes up 67.2 percent of the total GDP of the community. Nigeria along with the second and third largest economies of the community, Ghana and Côte d'Ivoire, make up 81.4 percent of the total GDP of the community. In total, 318.5 million people live in ECOWAS. Nigeria's share is 53 percent and together with Ghana and Côte d'Ivoire these three countries amount to 67.2 percent of the total population. The three smallest countries are Cape Verde, Guinea-Bissau and the Gambia, all having less than two million inhabitants, Cape Verde has less than a half million inhabitants. Thus, the size, both in terms of GDP and of population size, of Nigeria and Ghana is one important reason why ECOWAS is considered the most central regional integration agreement for the AU; neither Nigeria, nor Ghana are members of WAEMU.

Table 1: Various Indicators 2012									
Country	GDP¹, share of ECOWAS (%)	GDP¹	Pop, share of ECOWAS (%)	Population	GDP¹/capita	GDP²/capita, PPP	<Average GDP²/capita, PPP	Weighted Average GDP²/capita, PPP	Poverty Headcount³ (%)
Benin	2.2	5 707 932 120.8	3.2	10 050 702	567.9	1 429.5	N		33.3
Burkina Faso	3.1	8 147 597 249.1	5.2	16 460 141	495.0	1 149.6	Y		46.7
Cape Verde	0.6	1 476 615 062.5	0.2	494 401	2 986.7	3 615.8	N		26.6
Côte d'Ivoire	7.2	19 004 181 835.3	6.2	19 839 750	957.9	1 580.1	N		42.7
ECOWAS	100.0	264 193 785 830.2	100.0	318 500 013	707.2	1 410.7	N	1 775.7	
Gambia, The	0.3	795 710 666.2	0.6	1 791 225	444.2	1 597.3	N		48.4
Ghana	7.0	18 374 187 876.3	8.0	25 366 462	724.3	1 652.3	N		28.5
Guinea	1.3	3 529 248 118.2	3.6	11 451 273	308.2	992.8	Y		55.2
Guinea Bissau	0.3	704 318 242.1	0.5	1 663 558	423.4	1 121.9	Y		69.3
Liberia	0.4	1 164 691 332.6	1.3	4 190 435	277.9	516.8	Y		63.8
Mali	2.7	7 076 905 333.4	4.7	14 853 572	476.4	963.5	Y		43.6
Niger	1.6	4 224 609 341.6	5.4	17 157 042	246.2	642.1	Y		59.5
Nigeria	67.2	177 670 009 383.1	53.0	168 833 776	1 052.3	2 236.8	N		46
Senegal	4.2	10 972 446 158.5	4.3	13 726 021	799.4	1 737.1	N		46.7
Sierra Leone	1.0	2 603 171 446.5	1.9	5 978 727	435.4	998.4	Y		52.9
Togo	1.0	2 742 161 664.0	2.1	6 642 928	412.8	926.6	Y		58.7

Source: World Bank Development Indicators.

¹: Constant 2005 US\$.

²: Constant 2005 International \$, PPP, data from 2011 for all countries.

³: Poverty headcount ratio at national poverty line. Data are from various years during the period 2006-2012.

3 Theory

Why do countries integrate their markets with other countries? Schiff and Winters identify several reasons why states enter regional agreements. Firstly, the increased understanding that openness to trade will contribute to development is one major reason. Secondly, globalization puts pressure on countries to seek larger markets. Thirdly, countries have the will to help neighboring countries for altruistic reasons. Fourthly, countries need to integrate their economies with other countries just because there are many other regional or preferential agreements around the world, to not be in one is too costly (2003, p 6-9). These are just few of the reasons why countries integrate. Moreover, states may seek regional agreements for political or security reasons as well.

In general, one can say that the ultimate objective of economic integration is to increase economic welfare through trade and economic growth. There are at least four factors that will affect welfare: the quantity of goods produced after and before integration, the discrimination of goods from outside the regional agreement, the distribution of income between different member states of a community and how income is distributed within different countries (Balassa, 1961, p 11). Increased welfare for one can mean decreased welfare for another. In fact, all of these factors will be indirectly considered in this text except for the last one, how income is distributed within countries. They are central to convergence and divergence.

Generally, one denotes five stages of economic integration: free trade area (FTA), customs union (CU), common market, economic union and total economic integration. However, agreements do not always follow these specific steps chronologically. Below, some consequences of economic integration will be discussed.

3.1 Consequences of Economic Integration

One main issue of economic integration, and specifically the implementation of a common external tariff, is to figure out whether *trade creation* or *trade diversion* follows as a consequence. These concepts originate from Jacob Viner (1950, p 44). Trade creation and trade diversion concern the change of the direction of trade as a result of the creation of an economic integration agreement. Trade creation allows consumers to buy goods that are more efficiently produced than they were at the time before economic integration and thus increases welfare. Trade diversion is the opposite of trade creation; consumers will, after integration has occurred, “be forced” to buy products that have been produced in an inefficient manner compared to the products they consumed before integration. The reason is that the goods that are produced efficiently are after integration more expensive due to trade barriers, such as tariffs. Trade diversion decreases welfare for some but increases welfare for others.

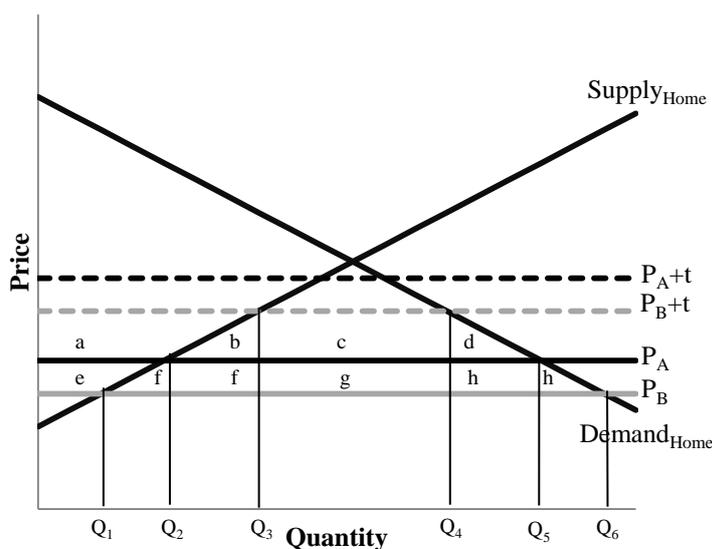
If one assumes that three countries produce the same commodity and sell it at different price levels, the situation could look like the one in diagram 1. Home is a small country and an importer of the commodity but has imposed ad valorem tariffs on imports from country A and country B. The price lines (P_A and P_B) of country A and B are indicated along with their levels when tariffs are imposed (P_{A+t} and P_{B+t}). Initially, Home chooses to import its excess demand from country B since country B’s goods are produced more efficiently and thus its goods are cheaper.

Assume then that Home has the alternative to enter a FTA with one of the two other countries. If Home would enter a FTA with country B, trade creation would follow. The reason is that consumers turn to more goods that are produced in country B, away from domestic goods. Its domestic production would decrease from Q_3 to Q_1 but consumption would increase from Q_4 to Q_6 . On the other hand, if Home would enter a FTA with country A, trade diversion would be the consequence.⁶ Now, all of Home’s imports come from Country A; however, these

⁶ There is still some trade creation since Home’s production is less efficient than country A’s. However, the trade creation effect is smaller compared to the case of the creation of a FTA with B.

goods are produced less efficiently than those of country B. Consumers in Home would then consume at Q_5 . In the case of a FTA with country B the net welfare gain would be the sum of areas b , d , f and h . In the case of a FTA with A the welfare gain would be the sum of areas b and d but a loss of the government revenue represented by area g since the border price increases.

Diagram 1: Trade Creation and Trade Diversion



Source: Author's illustration.

If Home creates a FTA with country A it can still choose to have a low tariff on imports from B, making it possible to avoid trade diversion. Instead, if Home would enter a CU with A, it would not have the possibility to lower its tariff on imports from country B. In the latter case, trade diversion is certainly the result.

Schiff and Winters claim that trade diversion will most likely occur when small developing countries integrate their economies and set up a CET. When small developing countries integrate their markets, there is most likely still a need for members to import goods from outside the regional agreement. The reason is that developing countries will seldom be able to supply all of the imports demanded of other members within the regional agreement. When members still have to import from outside the community, the price will be equal to the world price plus the import tariff. Thus, there is a partial shift to consumption of goods that are produced within the regional agreement; however, these are produced inefficiently and consumers will therefore lose from integration. On the other hand, producers within the community will benefit from integration since they can

profit from increased consumption due to protection from the tariff (Schiff and Winters, 2003, p 35).

Moreover, there are *pro-competitive effects* coming from economic integration. When countries integrate their markets, the total number of firms will increase; this leads to increased competition. Due to increased competition only the most efficient firms will stay in the market and some firms will be forced to go out of business. However, as Schiff and Winters argue, even though this phenomenon has occurred elsewhere, there is not enough evidence to say that the pro-competitive effects have been prominent among regional agreements of developing countries (2003, p 14).

There are at least two potential effects of economic integration that are important to consider and requires specific attention: the change of relative comparative advantages and agglomeration forces. Also, other dynamic effects will be discussed.

3.1.1 Comparative Advantages

Regional economic integration gives members the opportunity to utilize their comparative advantages. One way to describe it is that the comparative advantage of a country might change relatively to other members of the community when there is integration; namely, there are internal and external comparative advantages.

According to Venables, a member of a regional agreement which has a comparative advantage similar to the world average will gain from integration while a member which has a comparative advantage which differs greatly from the world average will lose from integration. The reason is that the comparative advantages between members might change after integration has occurred. The member that has a comparative advantage close to the world average will be the supplier of the goods which previously were bought at the world market. However, these goods are not expected to be produced as efficiently and are thus more expensive; consequently, there is trade diversion. Consumers will lose and producers will gain from integration. Moreover, the countries which have the producers within their borders will most likely increase their GDP more compared to other countries within the RIA. Venables claims that for this reason it is likely

that the change of relative comparative advantages caused by economic integration will lead to divergence in a RIA of least developed countries (LDCs) (1999, p 4-12).

3.1.2 Agglomeration Effects

Agglomeration forces might have diverse effects on economies of a community, some countries benefit, others do not. Firms may benefit from a larger market, which is the direct effect of economic integration. Firms that can benefit from internal economies of scale will be able to produce a larger amount of output at a lower price when the market grows larger. Thus, after integration it is probable that smaller firms will contract and there will be some large firms concentrated in fewer locations than before integration (Krugman et al., 2012, p 204).

There are centripetal powers, agglomeration forces, which will concentrate industries in the same location. There are several reasons why industries tend to go to the same location. Namely, there are knowledge spillovers to benefit from, the pool of qualified workers is beneficial and specific machinery is available where other firms of the same sector are situated. Moreover, when consumers are close to the suppliers, it is easier and less costly to buy goods for them (Marshall, 1920, p 271-273). The latter is denoted by Hirschman as forward and backward linkages between demanders (customers) and suppliers (Hirschman, 1958). Moreover, these reasons are normally referred to as external economies of scale.

More specifically, according to Krugman, the reason for geographical clustering is the relationship between increasing returns to scale, transport costs and, as already mentioned, demand. A producer which can benefit from increasing returns to scale and provide a whole integrated market will choose to set up its production in one location in order to avoid paying the fixed costs of establishing industries in more than one location. The producer also chooses a location where it can supply as many customers as possible (where demand is high) in order to have low transport costs. However, the demand is high where other producers already are situated; therefore, there is a circular relationship of industrial clustering (Krugman, 1996, p 23). One can thus assume that industries will be located in large cities and from there supply the whole community.

Concerning economic growth, the agglomeration forces might benefit countries which have agglomeration poles within their borders while countries which do not have such poles might lose from increased integration. Firms will go away from countries which do not have attractive locations; as a consequence, these countries will lose from integration. The opposite effects, the centrifugal forces, cause firms to spread geographically. The centrifugal effects are due to matters such as pollution, overcrowding or where agglomeration forces are not strong enough (Schiff and Winters, 2003, p 138).

When firms can supply more customers from fewer locations it is most likely that a whole sector, such as the manufacturing sector, might concentrate in one or a few locations. If such concentration happens, the areas where firms are less efficient will suffer from deindustrialization. Venables states that this is the most likely outcome if the manufacturing sector constitutes a small share of an economy. Moreover, he notes that deindustrialization is also a plausible outcome for developing countries. Furthermore, this type of concentration occurs if sectors are not so narrow. On the other hand, as Venables states, knowledge spill-overs might only be beneficial for narrowly defined industries (1999, p 16).

Thus, industries might concentrate in the richest countries which already have the most efficient industries. Also, the agglomeration effects are expected to concentrate industries in certain regions within countries as well (Schiff and Winters, 2003, p 141); however, this will not be addressed here.

3.1.3 Other Dynamic Effects

One objective of increasing trade through economic integration is to increase the GDP. Schiff and Winters state that there is little evidence that regional agreements of LDCs stimulate economic growth. On the other hand, it is more plausible that north-south agreements, between developed and least-developed countries will increase economic growth; partly due to knowledge spill-overs from developed to developing countries as emphasized as one important factor in modern growth theories (2003, p 123). Thus, integration of LDCs might decrease the likelihood of economic growth compared to the scenario of north-south agreements. For this reason, developing countries should have north-south agreements instead of south-south agreements.

On the other hand, regional agreements may increase FDI. Foreign firms will be willing to invest within a community as a result of a larger market. Moreover, firms cannot export the same amount to the community once a CET is set up. FDI may also cause technical spill-overs that are beneficial for developing countries. Also, a country within a regional agreement which attracts more FDI than other countries may grow at a different speed than other members of an agreement, a scenario which would cause divergence.

Baumol states that investments in one country might cause growth in another country (1986, p 1078). Basically, due to specialization in different goods, investments will have spill-over effects on other countries. Let us assume that country A produces motorcycles, and has a comparative advantage in the production of motorcycles, while country B has a comparative advantage in the production of cotton. In Baumol's example, an investment in country A of motorcycle production would increase the demand for workers. When the demand for workers increases, the wage level in that sector also increases. However, the increase in wages of country A's workers could at the same time increase the demand for country B's cotton, leading to higher demand for workers in the cotton sector and therefore higher wages in that sector. Increased investment in one country of a regional agreement might therefore increase growth in more than one country and could lead to convergence.

3.2 Convergence and Divergence

When different units approach the level of a certain variable of other units, there is convergence. The opposite of convergence is when different units diverge. In this paper, only convergence and divergence of GDP per capita will be considered. Thus, a case of convergence is when low-income countries catch up with relatively high-income countries in terms of GDP per capita. In other words, when the dispersion of income per capita between countries decreases there is convergence. When the dispersion increases, there is divergence. Also, as Tegoum et al. indicate, "perverse" convergence can be detected; that is, countries with previously high income per capita may approach the levels of low-income countries (2013, p 49). Also, it is plausible that there are groups of countries

within a community which converge while other groups diverge; it is thus important to consider the growth rates of different countries.

A general idea why LDCs may converge with more developed countries is that less developed countries may take use of technology developed countries already have come up with. Technology does not need to be reinvented and countries which are less developed may therefore achieve higher growth rates than already developed ones, normally called the *advantage of backwardness* (Todaro and Smith, 2011, p 78). Also, Baumol states that the technological progress of one country will serve as public goods for other countries (1986, p 1077). In a regional agreement where factors of production can move freely, technology is also expected to spread among members.

Another reason that convergence may occur is that in less developed countries, capital will experience a higher level of return. The capital-to-labor ratio is in general low in LDCs; investments will thus yield high returns to capital (Todaro and Smith, 2011, p 78). For this reason it is probable that investors will be attracted to LDCs. Again, the investment will cause growth levels to be higher in LDCs than in developed countries; consequently, developed and less developed countries will converge. However, there is more needed than just high returns to capital in order for investments to be made; for instance, well-functioning legal systems and infrastructure are required. Still, FDI may be attracted due to a larger integrated market.

However, members might converge after the creation of a CU as well. Namely, if the high-income country, in relative terms, has a higher tariff on a certain type of commodities than the low-income country before the implementation of the CU, the low-income country will gain, given that the low-income country produces the goods. The low-income country will be the supplier of the goods after the CU is implemented and it will gain from integration. The higher-income country will lose from integration; thus, countries will converge (Schiff and Winters, 2003, p 71).

4 Are Countries Diverging?

It is difficult to predict if members of ECOWAS will converge in the future; however, one can speculate about if the trend of divergence which has been found is going to continue. How serious divergence is depends on what type of divergence there is. If one country lags behind, but the rest are increasing their income per capita, it is not as serious as if all of the countries decrease their income per capita except for one which increases it. Unfortunately, no previous research on effects of comparative advantages and agglomeration forces has been found for the case of West Africa.

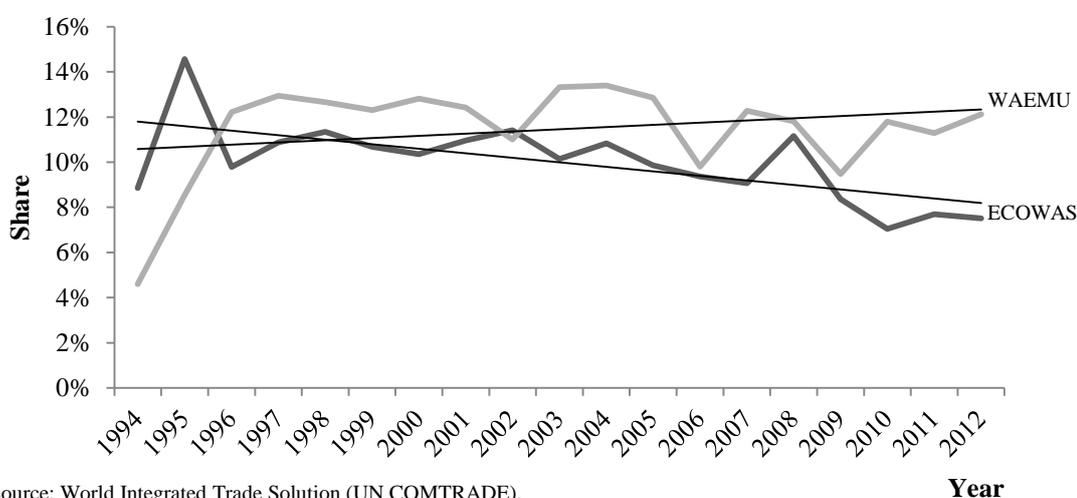
In this part, an analysis based on the theories of part three is presented; however, firstly, the type and the amount of trade that occur in ECOWAS are surveyed. Afterwards, there are two issues that shall be addressed, how the comparative advantages might be affected by integration, and *if* and *where* agglomeration forces are increasing. In order to understand if the members of ECOWAS are diverging as a result these effects, the analysis of the dispersion of income per capita is presented in part 4.4. Finally, one of the main issues of increased integration is the anticipated CET of ECOWAS; therefore, the effects of a CET will be discussed as well.

4.1 Trade

In general, countries of West Africa do not trade substantially with each other. However, as some indicate, one must remember that there is a significant amount of informal trade occurring in the region (Masson and Pattillo, 2001, p 2) (Aryeetey, 2001, p 10). Thus, all of the trade is not visible in the data. In diagram 2, one can see that the intra-community trade is around 7.5 percent of total trade for all members of ECOWAS while the same figure is around 12 percent for WAEMU in 2012. The volume of intra-community trade is small and is decreasing for ECOWAS; thus, trade is obviously not increasing in the region due

to regional integration. However, there might be numerous other factors affecting the trade of members. On the other hand, WAEMU, where members are more integrated, has a somewhat higher share and a slightly positive trend of intra-community trade as share of total trade. Perhaps, ECOWAS might increase its share of intra-community trade to the levels of WAEMU when the planned CET is put in place. However, it is assumed that the effects of trade diversion and agglomeration forces are stronger when countries trade significantly with each other.

Diagram 2: Intra-community Trade as Share of Total Trade

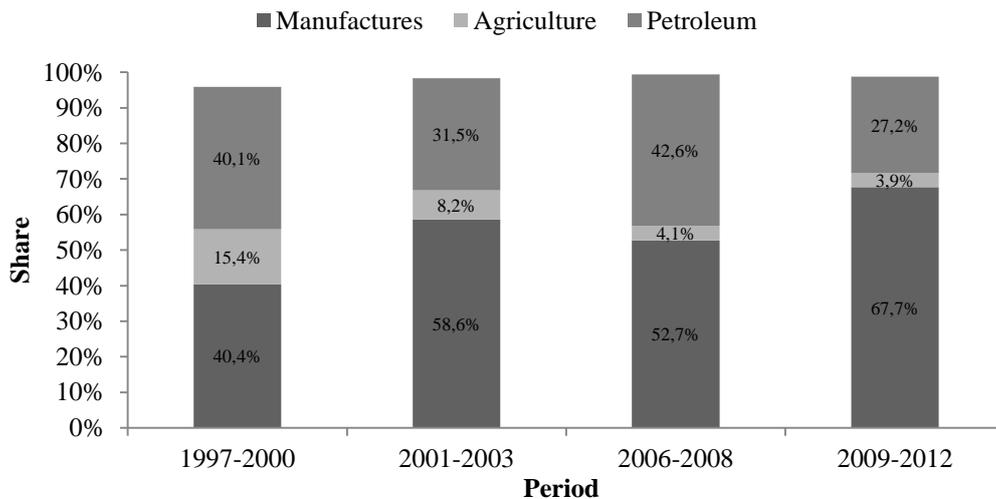


Source: World Integrated Trade Solution (UN COMTRADE).

Note: The sum of exports imports to and from other community members as a share of total trade.

Within ECOWAS, Nigeria and Côte d’Ivoire are the largest exporters to other countries within the community. During the last decade they have accounted for about two thirds of the exports within the community. The major importers of the community are land-locked Mali, Ghana and Côte d’Ivoire. However, Ghana’s share of total imports within the community is declining while those of Mali and Côte d’Ivoire are increasing (WITS, 2014). In diagram 3, the shares of different goods of intra-community exports are presented. Manufactures increase as share of intra-community exports while agriculture decreases. Even though members of ECOWAS are trading less and less with each other, exports of manufactures are becoming more important within the community. According to Venables, this might be a reason for divergence due to trade diversion, especially if the high-income countries export manufactures within the community (1999, p 7).

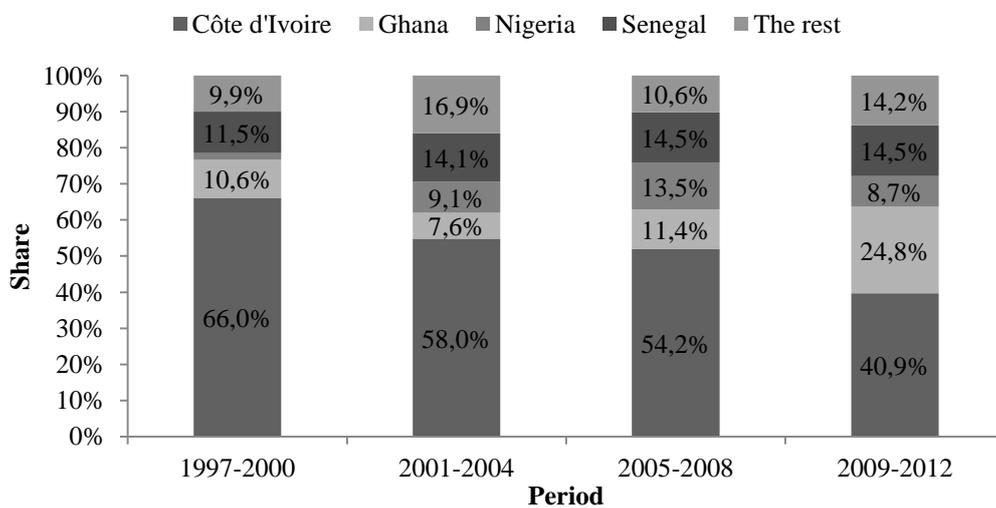
Diagram 3: Share of Intra-ECOWAS Exports



Source: World Integrated Trade Solution (UN COMTRADE).

In diagram 4, the members which export the largest shares of manufactures are presented. The share of Côte d'Ivoire clearly decreases, while that of Ghana increases. Ghana should therefore gain more from integration relatively to Côte d'Ivoire. However, different types of manufactures are exported by the countries but this will not be addressed here.

Diagram 4: Share of Intra-ECOWAS Exports of Manufactures



Source: World Integrated Trade Solution (UN COMTRADE).

4.1.1 Why So Little Trade?

Participants will benefit more from an economic community with a CET and a shared currency if they trade substantially with each other. However, there are many barriers to trade among the members of ECOWAS. The World Bank report

on doing business explains part of why there is so little (formal) intra-regional trade in West Africa. Concerning trade across borders, the number of required documents, the time it takes to export and import goods and the cost of trade are considered in the report. It is important to have in mind that these factors may affect the integration process and, particularly, trade data. Additionally, it is assumed that difficulties to trade in both the exporting country and the importing country impede trade among members of ECOWAS even more.

Cape Verde, Senegal and The Gambia are the members of ECOWAS where it is easiest to trade across borders. On the other hand, Burkina Faso, Niger and Côte d'Ivoire are ranked as the members where it is most difficult to trade. The whole community is ranked as number 121 in the world. Regarding the time to trade, it takes 11 days to export goods and 14 days to import goods in Senegal, for instance. However, Senegal's performance is different from the other members. In Niger it takes 59 days to export goods and 64 days to import goods. Also, it is most expensive to export goods in Niger (The World Bank, 2012, p 59-66).

Difficulties to trade might hamper the potentials of economic integration. Also, economic growth might be biased towards the countries where it is easier to trade. Trade facilitation might be needed in accordance with economic integration to spread the benefits to all of the members. A country such as Senegal might benefit more from increased integration than a country as Niger. This could be a reason for divergence.

4.2 Comparative Advantages

The internal⁷ revealed comparative advantages⁸ of manufactures, agriculture and petroleum have been calculated for the countries which data are available for in 1998 and 2010, see table 2. The comparative advantages of agriculture in land-locked Mali, Burkina Faso and Niger have increased significantly from 1998 to

⁷ Values of export flows between members of ECOWAS are used.

⁸ The measure of Revealed Comparative Advantage is used to estimate the relative advantages of different types of goods between a set of countries (Balassa 1965, p 107). Here it is calculated as: $RCA = (E_{ig}/E_{ij}) / (E_{ng}/E_{nj})$ where i is country i , n is the set of countries, g is the type of goods g and j is the set of goods. If the value is equal to or greater than 1, the country is assumed to have a comparative advantage in that type of goods.

2010. Concerning manufactures, Côte d'Ivoire, Ghana, Senegal and Togo have comparative advantages in both 1998 and 2010 but do not have comparative advantages in agriculture in any of the years. It is therefore assumed that these countries have stronger comparative advantages in manufactures than countries which have comparative advantages in both manufactures and agriculture. According to Venables, the countries which have a comparative advantage close to the world average will benefit from integration since these countries may increase their exports to other members of the community, especially when a CET is set up. It is presumed that the countries having a comparative advantage in manufactures may benefit most from integration.

Table 2: Internal Revealed Comparative Advantages						
Country	Agriculture		Manufactures		Petroleum	
	1998	2010	1998	2010	1998	2010
Benin	1.1	1.0	1.6	1.4		
Burkina Faso	4.2	13.9	0.6	0.6		0.0
Côte d'Ivoire	0.1	0.2	2.0	1.5	0.1	
Cape Verde			2.0	1.4		
Ghana	0.4	0.7	1.3	1.4	0.0	0.0
Gambia, The	0.4	3.0	1.9	1.2		
Guinea	0.6		1.8			
Mali	5.7	15.6	0.1	0.5	0.0	
Niger	1.9	19.7	0.0	0.2		
Nigeria	0.0	0.0	0.1	0.1	3.6	3.4
Senegal	0.0	0.1	2.0	1.4		
Togo	0.0	0.3	2.0	1.4		

Source: World Integrated Trade Solution (UN COMTRADE).

Note: Agriculture include group 1, 2 and 5, manufactures include group 15-37 and petroleum group 11 of the ISIC revision 3.

Côte d'Ivoire, Ghana and Senegal have relatively high levels of GDP per capita; however, Togo has a low level of GDP per capita. It is therefore difficult to predict if there will be an overall tendency to convergence or divergence. It is, however, important to consider that the value added of manufactures in Togo is small compared to the other countries, see section 4.3. Assuming that the manufacturing sector is insignificant in Togo one would see divergence of GDP per capita between the members of ECOWAS, in line with Venables.

On the other hand, one must remember that the sector of agriculture might generate growth and thus the countries with comparative advantages in this sector may benefit more from integration. These countries are the land-locked countries

Burkina Faso, Mali and Niger in 2010.⁹ However, as seen in diagram 3, the share of agriculture in trade is low and decreasing.

When one examines the external¹⁰ comparative advantages, the picture looks different, see table 3. Fewer members have comparative advantages in manufactures. However, the comparative advantages in agriculture are not as strong for most of the countries in 2010 compared to 1998. Ghana is close to have a comparative advantage in manufactures in 2010 but does not have it. Mali has a comparative advantage in manufactures in 2010; however, within the community Mali does not have it, indicating that it is not an exporter of manufactures within the community.¹¹ Senegal and Togo both have external comparative advantages in manufactures in 2010.

Country	Agriculture		Manufactures		Petroleum	
	1998	2010	1998	2010	1998	2010
Benin	26.9	10.9	0.1	0.8	0.4	
Burkina Faso	24.0	8.5	0.2	0.9	0.4	0.0
Côte d'Ivoire	15.3	12.6	0.5	0.6		1.3
Cape Verde	2.0	0.3	1.0	1.2		
ECOWAS	7.1	2.7	0.3	0.4	14.3	7.2
Ghana	13.0	5.9	0.6	0.9	0.0	0.0
Gambia, The	24.4	11.3	0.2	0.6		
Guinea	1.1		0.3			
Mali	15.9	2.1	0.5	1.1	0.0	
Niger	9.2	4.3	0.0	0.4		0.0
Nigeria	0.1	1.2	0.0	0.3	30.0	8.9
Senegal	2.1	2.4	0.9	1.1		0.0
Togo	10.4	2.6	0.3	1.0		

Source: World Integrated Trade Solution (UN COMTRADE).

Note: Agriculture include group 1, 2 and 5, manufactures include group 15-37 and petroleum group 11 of the ISIC revision 3.

The whole community also has comparative advantages in agriculture and petroleum and a comparative disadvantage in manufactures. Thus, as Venables predicts, one can assume that regional integration leads to trade diversion and therefore divergence among the members of ECOWAS. The countries which have internal comparative advantages in manufactures and not agriculture are assumed

⁹ The Gambia and Benin also have comparative advantages in agriculture. However, at the same time they have comparative advantages in manufactures.

¹⁰ Values of export flows towards the world are used.

¹¹ It is also assumed that the data might be incorrectly collected for Mali since it is not expected to have a significant manufacturing sector.

to be the winners of integration; these are: Côte d'Ivoire, Ghana, Senegal and Togo although it is plausible that Togo will not gain equally as the others.

4.3 Agglomeration Effects

To know where clusters of industries will grow larger in the future, it is important to consider where most of the industries within ECOWAS are situated today and have been the last decades. Potentially, agglomeration forces will make industries relocate to locations where industries already are present according to Krugman. Depending on in which countries these are situated, member states may converge or diverge.

Country	1990	1995	2000	2005	2010
Benin	7.4	8.1	8.2	7.8	7.7
Burkina Faso	15.4	15.2	16.3	11.7	7.8
Cape Verde	9.0	10.1	-	-	-
Côte d'Ivoire	20.9	15.0	21.7	19.3	19.1
Gambia, The	5.5	8.2	6.8	6.6	4.7
Ghana	9.8	10.3	10.1	9.5	6.8
Guinea	4.6	4.0	4.0	6.6	7.3
Guinea-Bissau	8.4	7.9	10.5	-	-
Liberia	-	2.7	4.1	7.2	4.0
Mali	8.5	8.0	3.8	3.2	-
Niger	6.6	6.4	6.8	-	-
Nigeria	-	-	-	2.8	-
Senegal	15.3	16.6	14.7	15.2	13.3
Sierra Leone	4.6	9.3	3.5	2.6	2.3
Togo	9.9	9.9	8.6	8.5	7.8

Source: World Bank, Africa Development Indicators.

In table 4, the share of the value added of the manufacturing sector of each country is presented. First, the development of the members of WAEMU is observed in diagram 5 and 6. In 2010, Côte d'Ivoire had the largest manufacturing sector as value added of its GDP compared to the rest of the members, Senegal followed thereafter. Both of the members have larger manufacturing sectors than the average of WAEMU. The value added of the manufacturing sector increases in Côte d'Ivoire but decreases slightly in Senegal. On the other hand, the manufacturing sector clearly decreases in Burkina Faso. This could be a sign of stronger agglomeration forces in Côte d'Ivoire and Senegal than in other countries, especially in Côte d'Ivoire. As both Côte d'Ivoire and Senegal have

higher levels of GDP per capita, the likelihood of divergence increases, at least among the members of WAEMU. However, as seen in section 4.1, Côte d'Ivoire's share of intra-community exports of manufactures decreases. Still, according to Krugman's theory of agglomeration effects, the manufacturing firms of Côte d'Ivoire and Senegal are assumed to benefit from internal economies of scale and a larger integrated market. The firms in these countries might grow as a CET is implemented (given that these industries are under tariff protection) while manufacturing firms of other countries contract. Thus, Côte d'Ivoire and Senegal could gain most from integration. Again, this indicates that divergence should be observed.

Diagram 5: Value added of Manufacturing (% of GDP), WAEMU-members With Highest Income

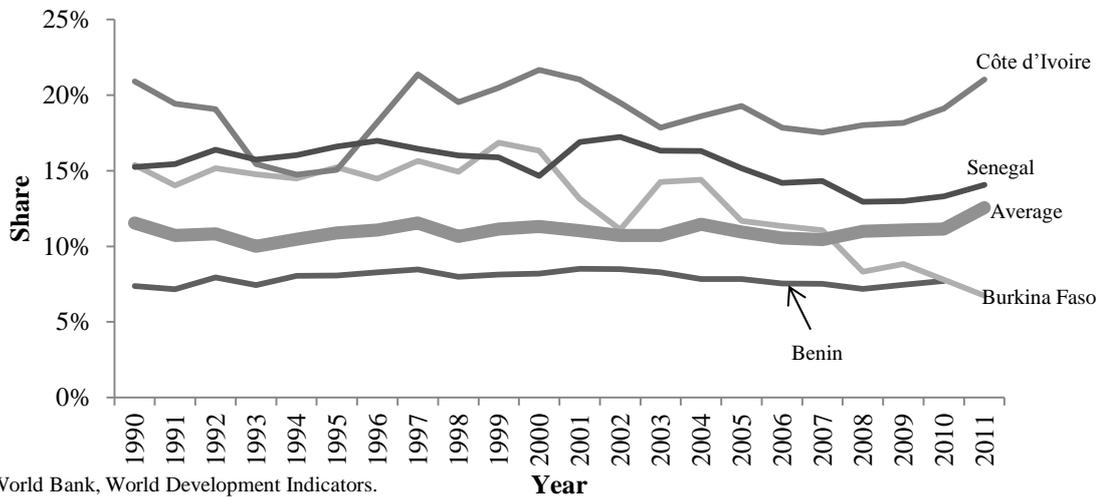
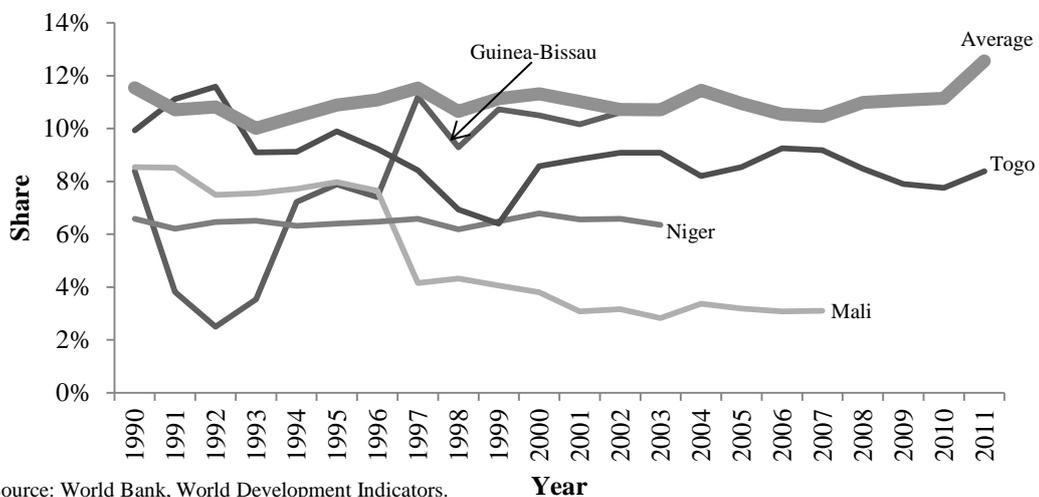


Diagram 6: Value added of Manufacturing (% of GDP), WAEMU-members With Lowest Income

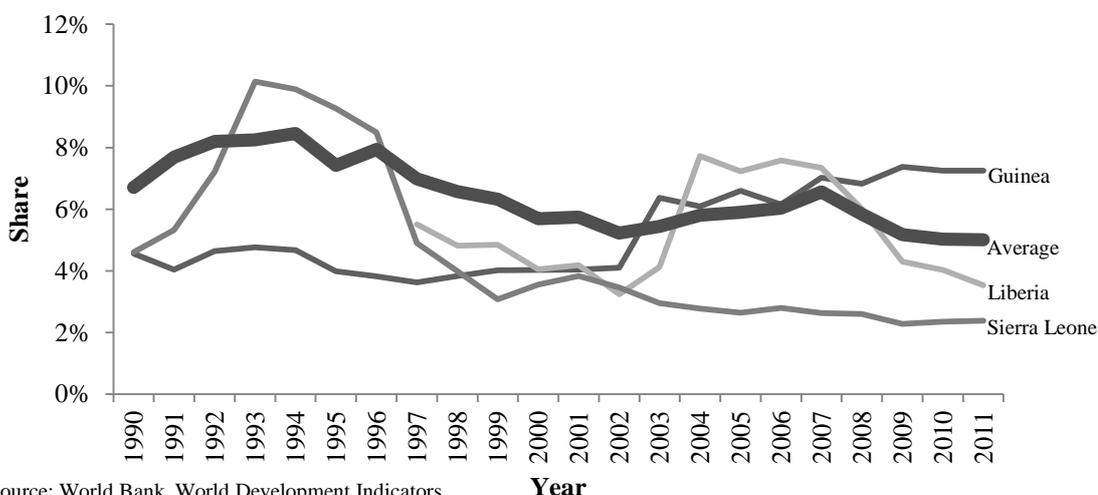


Among the members with lowest income of WAEMU, Mali and Togo have experienced negative trends of the value added of manufacturing as a share of their GDP during the considered period. One can assume that the agglomeration forces are weaker here compared to other countries. It is also important to note that for basically the entire period, the poorest members are below the average of WAEMU.

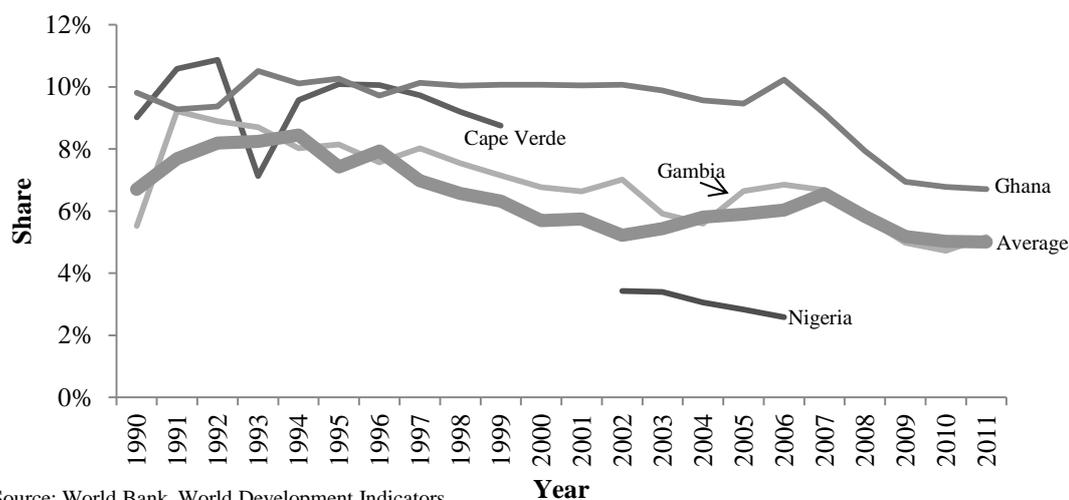
In diagram 7 and 8 the non-WAEMU countries are presented. One can see that the value added of manufacturing is in general lower for the non-WAEMU members than for the members of WAEMU. It is increasing in Guinea, although its share is quite small, but decreasing in Ghana, Gambia and Sierra Leone. Thus, the agglomeration forces are most likely to be weaker in the non-members of WAEMU. Perhaps, the CET of WAEMU has increased the centripetal forces. Moreover, according to Schiff and Winters, Abidjan and Dakar, the capitals of Côte d'Ivoire and Senegal, respectively, are examples of cities where industries have concentrated (2003, p 142).

As in the case of the members of WAEMU, one can again see that the poorest countries are under the average of the value added of manufacturing of the non-WAEMU members, the only outlier is Nigeria. This indicates that there is some correlation between a high value added of manufacturing and a high level of GDP per capita.

Diagram 7: Value Added of Manufacturing (% of GDP), non-WAEMU-members With Lowest Income



**Diagram 8: Value Added of Manufacturing (% of GDP),
WAEMU-members With Highest Income**



Source: World Bank, World Development Indicators.

The share for each member state of the total value added of manufactures of ECOWAS is presented in table 5. As is visible, Côte d'Ivoire, Ghana, Nigeria and Senegal make up about 80 percent of the value added of manufactures of ECOWAS in 2005¹²; however, remember that Nigeria is considerably larger in terms of GDP and population size. In all of these countries, the GDP per capita is higher than the average of ECOWAS. However, the value added of manufacturing is higher in the countries of WAEMU in general. Again, one can see that there are negative trends in Burkina Faso and Mali; also, Niger has experienced a decrease.

Table 5: Share (%) of Value Added, Manufactures, ECOWAS					
Country	1990	1995	2000	2005	2010
Benin	2.9	4.1	4.3	3.4	5.1
Burkina Faso	9.2	7.9	9.0	5.8	6.7
Cape Verde	0.6	1.2	-	-	-
Côte d'Ivoire	45.5	38.7	50.7	31.8	44.4
Gambia, The	0.4	1.5	1.2	0.4	0.5
Ghana	11.6	14.1	10.1	9.4	20.8
Guinea	2.5	3.3	2.5	1.8	3.2
Guinea-Bissau	0.4	0.4	0.5	-	-
Liberia	-	0.1	0.5	0.4	0.5
Mali	4.0	4.1	1.9	1.6	-
Niger	3.3	2.8	2.7	-	-
Nigeria	-	-	-	31.7	-
Senegal	15.8	17.1	13.6	11.5	15.7
Sierra Leone	0.6	1.8	0.5	0.4	0.6
Togo	3.3	3.0	2.5	1.8	2.5

Source: World Bank, Africa Development Indicators.

¹² Data is not available for Nigeria in other years.

A larger integrated market and stronger protection from outside competition could lead to increased agglomeration forces and an expansion of the manufacturing industries in some countries while deindustrialization in other countries. The members which have high levels of GDP per capita in general also have important manufacturing sectors. This leads to the conclusion that divergence is a potential outcome of regional integration in West Africa.

The data of the value added of manufactures in the member states enforce the argument that the members with comparative advantages in manufactures benefit more from integration. Namely, Côte d'Ivoire and Senegal are found among the countries which have comparative advantages in manufactures and among those where the manufacturing sector constitutes an important share of the economy. In order to see if this has led to divergence, the dispersion of GDP per capita will be examined during the same period.

4.4 Empirical Findings of Divergence

In order to understand if the internal comparative advantages and the agglomeration effects have significant impact on the members' increase or decrease of GDP per capita, the dispersion of GDP per capita between the countries has been measured. This is normally denoted as testing for sigma convergence. As will be seen below, the effects examined in part 4.2 and 4.3 may contribute to divergence. It is also plausible that other factors which have not been considered here have affected the divergence between members. However, the evidence of sigma divergence makes the analysis above more robust.

4.4.1 Method

Analyzing sigma convergence is about examining if the dispersion of a variable between a set of units is increasing or decreasing over time. When the dispersion is decreasing, there is convergence. In this case, the variable is income per capita and the set of units are the member states of ECOWAS. Welsch and Bonn present

several measures one can use to test for sigma convergence. In order to test for absolute convergence, the standard deviation is appropriate (2007, p 184).

As Jones indicates, one can measure convergence between countries or among individuals of countries. In order to do the latter, and in other words to make the individual as the unit of observation, one can weight every member state by its number of inhabitants (1997, p 22).

Often, studies which look for convergence among countries also look for beta convergence; this will not be done in this paper. Chassem notes that beta and sigma convergence do not oppose each other, rather work as complements (2013, p 71). However, according to Tegoum et al., sigma convergence implies beta-convergence while the opposite is not true (2013, p 49). The purpose of testing for sigma convergence in this study is to see in which direction the members of ECOWAS are heading and find evidence for what theory predicts.

4.4.2 Previous Research

A literature review has been made in order to see if there is evidence of convergence or divergence in previous research. A summary of a number of studies concerning real sigma convergence (convergence of GDP per capita) of states in West Africa is presented in table 6. In general, there seems to be convergence among the members of WAEMU while the opposite seems to be true when including all of the members of ECOWAS. However, the convergence of WAEMU is most likely due to the decrease of GDP per capita of Côte d'Ivoire.

Table 6: Previous Research			
Study	Period	Countries	Conclusion
Hammouda et al. (2009)	1980-2003	ECOWAS	Divergence.
Hammouda et al. (2009)	1980-2003	WAEMU	Convergence.
Chassem (2013)	1970-2005	WAEMU	Overall convergence in 1975-2005, divergence in 1970-1974. However, divergence in 1992-2005 if Côte d'Ivoire is excluded.
Combey, Mally (2013)	1997-2008	WAEMU, except Guinea-Bissau.	Convergence.
Jones (2002)	1960-1990	ECOWAS, including Mauritania.	Convergence.
Lamine (2002)	-	ECOWAS	Divergence.
Lamine (2002)	-	WAEMU	Convergence. However, convergence to the bottom.
Tegoum et al. (2013)	1985-2005	ECOWAS, except Liberia.	Divergence.
Tegoum et al. (2013)	1985-2005	WAEMU	Convergence. However, convergence is due to decrease in GDP per capita of Côte d'Ivoire.
Wetta, Yerbanga (2013)	1980-2008	WAEMU	Convergence in 1980-1994 and in 2000-2008, otherwise divergence.

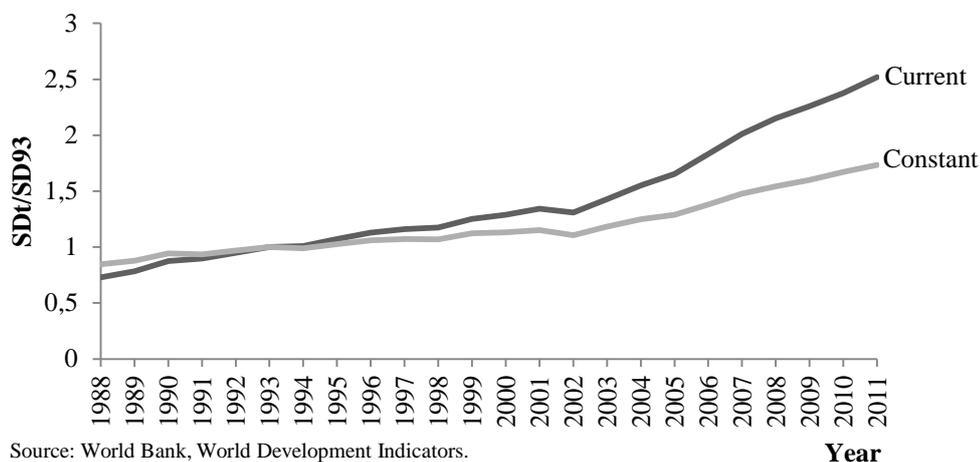
4.4.3 Divergence of GDP per Capita in ECOWAS

As one can see in diagram 9, the dispersion of income per capita between all of the members of ECOWAS increases and has been increasing during the last 25 years. Thus, according to these data there is absolute divergence between the members of ECOWAS. 1993 has been selected as base year; the standard deviation is divided by the standard deviation of 1993. The reason for this is that the revised treaty was adopted at this time and it was decided to increase the speed of integration. However, the increased speed of integration seems to have generated higher inequality in GDP per capita in absolute terms among the members. The dispersion is increasing less when constant GDP per capita is used. The standard deviation was about 2.5 times larger in 2011 than in 1993 in current GDP per capita and 1.75 times larger in constant GDP per capita.

Thus, absolute divergence is clearly occurring. However, as mentioned in section 4.1, the trade volumes between members of, particularly, ECOWAS are low. If the intra-regional trade volume would be larger, the consequences of trade

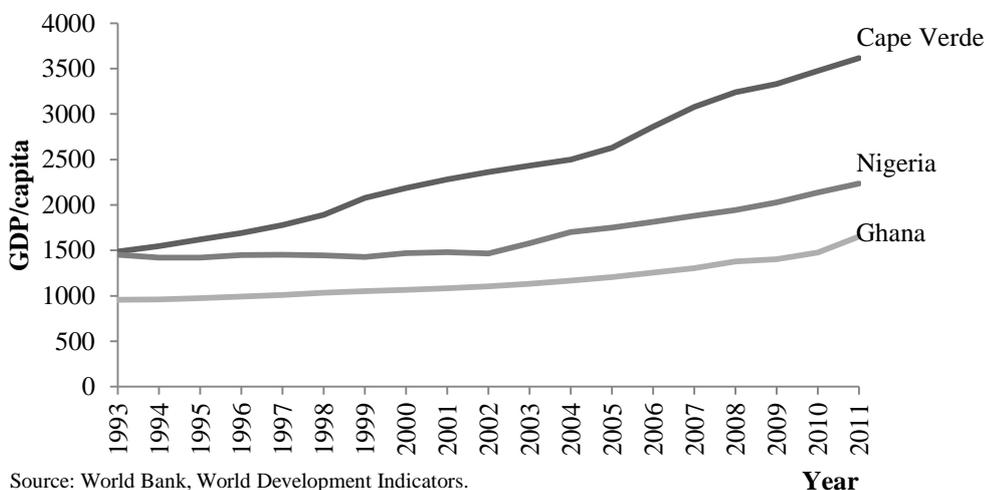
diversion and agglomeration forces would plausibly be more significant. In other words, if members of ECOWAS would trade more with each other, divergence could increase even more.

Diagram 9: Dispersion of GDP/capita, Not Weighted



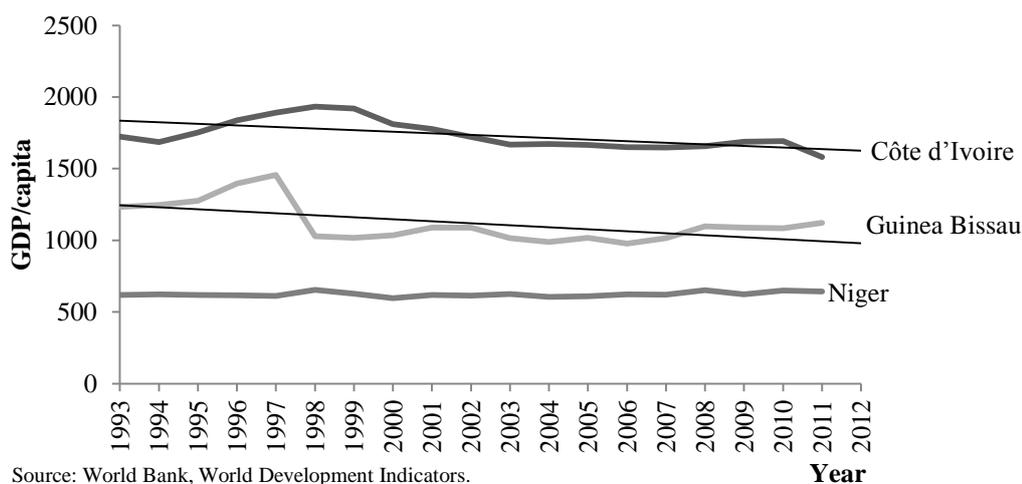
One of the reasons why this increased dispersion is observed is that the GDP per capita of Cape Verde has increased significantly over the whole period compared to the other members. All of the other countries but three had positive growth rates. Except for Cape Verde, Ghana and Nigeria had the highest growth rates as one can see in diagram 10. Ghana's increase is not unexpected since it has an internal comparative advantage in manufactures; however, its GDP per capita might grow even more when the CET of ECOWAS is implemented. Nigeria's growth is most likely due to its comparative advantage in petroleum.

Diagram 10: Highest Growth



The countries which have negative trends in constant GDP per capita are, most importantly, Côte d'Ivoire but also Guinea Bissau. Niger had basically a constant level of constant GDP per capita during the period, see diagram 11. It is unexpected that Côte d'Ivoire has experienced a negative trend of GDP per capita; this weakens the arguments made above. However, it might be due to the low trade volumes between countries.

Diagram 11: Lowest Growth



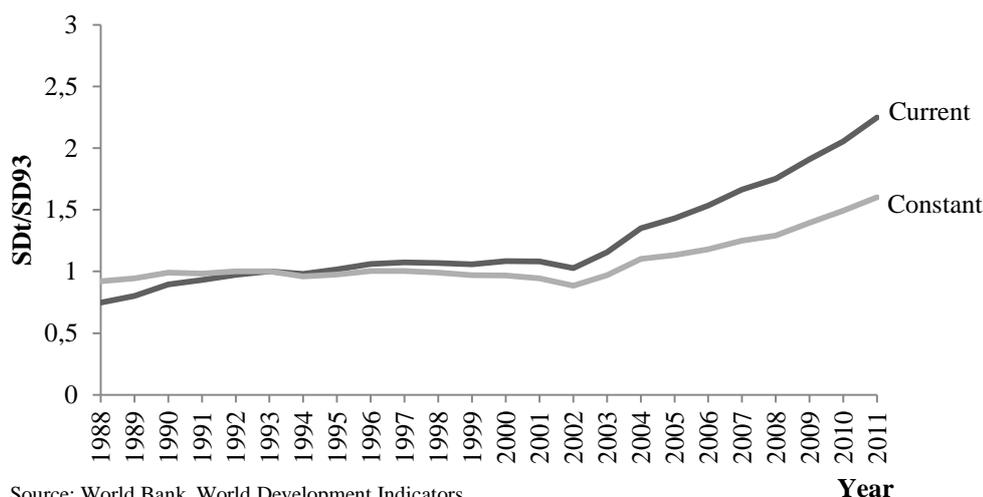
Source: World Bank, World Development Indicators.
 Note: Values are in constant PPP 2005 International \$.

Another reason that Côte d'Ivoire has experienced a negative trend over the last decades while its manufacturing sector has, at the same time, experienced a slight increase as share of the value added of GDP is that there are other countries which have comparative advantages in manufactures. Senegal, for instance, has an *external* comparative advantage in manufactures in 2010 while Côte d'Ivoire is far from having it in the same year. Simply, Senegal might have gained more from integration than Côte d'Ivoire since it has a stronger comparative advantage in manufactures. Moreover, as seen in section 4.1, Côte d'Ivoire's share of intra-regional exports of manufactures decreases, indicating that other members' manufactures are attractive. However, it is believed that if trade volumes would be higher within the community, the exporters of manufactures would gain more, leading to increased divergence.

In diagram 12, population size is taken into consideration and again the trend of increasing dispersion of GDP per capita is clearly visible. Thus, member states which have a relatively high number of inhabitants are given more weight, notably

Nigeria. Cape Verde, on the other hand, is given very little weight since its population size is insignificant in comparison. This leads to results that are not as dramatic as when the standard deviation is not weighted by population size. Still, the dispersion increased by 2.25 and 1.5 times of current and constant GDP per capita respectively from 1993 to 2011. So, until today, one can draw the conclusion that the absolute difference of GDP per capita among the members of ECOWAS has increased.

Diagram 12: Dispersion in GDP/capita, Weighted



Source: World Bank, World Development Indicators.
 Note: Values are in constant and current PPP international \$ (constant 2005).

4.5 The CET

One final point to consider is the planned CET and if it may cause the members of ECOWAS to converge or diverge in the future. It is important to know which country produces which goods. Also, it is important to know the tariff level of different goods, specifically of those that will fall under the fifth band of 35 percent. As already mentioned, the goods that will be in the fifth band of the CET are, so called, specific goods for economic development. In order to be classified in the 35 percent tariff band, goods must fulfill the following criteria of eligibility: product vulnerability, economic diversification, integration, sector promotion and high potential for production (ECOWAS Aid for Trade). The tariff levels are presented in table 7 along with the number of products that are going to be included in each tariff band.

Type of Products	Tariff Rate (%)	Product Lines
Specific goods that contribute to the promotion of the region's economic development.	35	130
Final consumer products.	20	2165
Intermediate products.	10	1373
Basic raw materials and capital goods.	5	2146
Other.	0	85

Source: ECOWAS 2013a.

Depending on which goods receive 35 percent tariff protection, the effects on the member states of ECOWAS will be different. However, trade diversion is most likely a possible consequence and might cause even more divergence between countries than observed in section 4.4. Member states which have producers of goods that are under 35 percent tariff protection might enjoy faster growth while the countries which do not have such industries might not grow as fast. The obvious questions are which goods that will be included in the fifth tariff band and which countries that produce these goods.

Unfortunately, a list of tariff levels for different goods was not available at the time this paper was written. However, Nigeria has implemented a five band tariff schedule similar to the one that is planned for ECOWAS where 164 of the product lines apply to the 35 percent tariff band out of 5685 tariff lines in total. Since Nigeria demanded the fifth band and has a similar tariff structure, its 35 percent tariff band that it currently uses will be examined.

Each country's share of total imports of the goods that Nigeria has put in the 35 percent tariff band is presented in table 8.¹³ In 2010, 11.4 percent of Benin's total imports are of goods that Nigeria has put in the 35 percent band; however, Benin does not necessarily import these goods from Nigeria. Togo's rate is also high, 10.9 percent of its imports are included in Nigeria's band of 35 percent. One can also see that of Togo's imports only 1.1 percent came from Nigeria when petroleum and petroleum products are excluded. These shares should be considered significant since they concern 164 out of 5685 tariff lines.

¹³ Only 115 of the 164 product lines could be included since the tariff schedule of Nigeria is disaggregated to 10 digits, data only provided disaggregation to six digits.

Table 8: Nigeria's Current Tariff, 2010			
	Share (%) of imports of goods that are included in Nigeria's 35 percent tariff band.	Share (%) of imports from Nigeria of total imports, except petroleum and petroleum products.	Share (%) of Nigeria's exports to country of intra-community trade.
Benin	11.4		3.7
Togo	10.9	1.1	0.1 ¹
Burkina Faso	7.1	1.3	2.5
Gambia, The	6.8	0.1	0.1
Niger	5.8	2.8	1.6 ²
Ghana	5.4	0.4	21.6
Senegal	4.9	0.9	9.4
Cape Verde	4.6	0.0	0.0
Mali	3.5	0.2	0.1
Côte d'Ivoire	3.1	10.3	62.1
Nigeria	0.8		

Source: World Integrated Trade Solution (UN COMTRADE) and Nigeria Customs Service (2014).

¹: Data from 2009

²: Data from 2008

This scenario would most likely lead to divergence if the CET is implemented and would look similar to the tariff structure Nigeria has in place today. Togo has a low level of GDP per capita while Nigeria is one of the members of ECOWAS that has the highest level of GDP per capita. Trade diversion would occur since members of ECOWAS would import inefficiently produced commodities from Nigeria. As a consequence, Nigeria is assumed to grow faster than Togo.¹⁴ Still, one cannot say that the CET of ECOWAS will look like the one of Nigeria; however, it might become similar to it. Thus, this is highly speculative.

¹⁴ Other members may also benefit from the CET.

5 Conclusion

In this paper, regional integration of West Africa has been discussed. 15 countries which are members of two different regional integration agreements, ECOWAS and WAEMU, have been included in the study. The research problem was to investigate if regional economic integration makes, or has made, members to diverge economically. In order to study this, comparative advantages of members and agglomeration forces within the community have been considered. Also, an analysis of sigma convergence has been made. The results points towards divergence among the members of ECOWAS, both when examining the issue theoretically and when testing for sigma convergence.

The members which export manufactures and have relatively high GDP per capita levels are assumed to benefit more from integration than the members with lower levels of GDP per capita; however, Côte d'Ivoire seems to be an exception. The decreasing trend of GDP per capita of Côte d'Ivoire weakens Venables' theory that exporters of manufactures will gain most from integration. However, effects of trade diversion and agglomeration forces would most likely have been more significant if trade volumes between members would have been larger.

It is important to remember that the issue of convergence and divergence is not straightforward. Sometimes countries converge to the bottom, which seems to be the case of WAEMU and sometimes there are one or a few countries which have higher growth rates than other countries. The latter seems to be present in ECOWAS. The GDP per capita level of Cape Verde has grown faster than for most of the other countries. Nevertheless, even when controlling for population size, there is evidence of sigma divergence among the members of ECOWAS.

Moreover, convergence and divergence between countries tell us nothing about how the situation is within the borders of different countries. Most likely, there are small regions, or cities, which benefit more from economic integration than for instance rural parts of countries. One can see that some countries attract more of the manufacturing industries. According to theory, these industries are almost certainly concentrated in industrial clusters. These agglomeration effects

are central to convergence and divergence of GDP per capita between countries but also between regions. It is obvious that the manufacturing sector has decreased in Burkina Faso and Mali while it has experienced a slight increase in Côte d'Ivoire; the agglomeration forces might therefore be stronger in Côte d'Ivoire. The manufacturing sector in Côte d'Ivoire is plausibly highly concentrated in a few regions within the country. This is something which future research should address since it is crucial to know if redistribution policies shall be used.

Another issue to come back to concerns the CET of ECOWAS and the goods that will be included in the fifth band. It is important to understand which countries that have internal comparative advantages in these commodities since they are assumed to be the winners of integration according to theory. Unfortunately, this could not be examined thoroughly in this paper.

Also, the comparative advantages in this thesis are calculated at an aggregated level. If one would study the comparative advantages of different countries in ECOWAS at a more disaggregated level the picture could be different. It is important to understand which specific manufacturing industries that benefit most.

Another question which this paper did not address is why divergence between members of regional integration agreements is undesirable. The short answer is that it is unfair to the individuals that live in countries which lose from integration. Also, regional powers may gain more influence in other sectors due to increased economic power. However, at the same time, the total number of people that benefit from integration might be higher if Nigeria, Côte d'Ivoire and Ghana are winners of integration since there is a significant share of the total population of ECOWAS living in these countries.

As already mentioned, divergence is not a straightforward issue; however, since the gains from trade are said to benefit all, regional integration should likewise benefit all participants. If this is not the case, an intervention of ECOWAS might be necessary to redistribute the gains to all of the member states and their citizens.

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