ECOWAS TRADE RELATIONS WITH THE EUROPEAN UNION: IS THERE ANY EVIDENCE OF INTRA-INDUSTRY TRADE?

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Abstract:
The Economic Community of West African States, as the community bringing together 15 states, is very important trading partner of the European Union. They liberalize their trade relations under the Economic Partnership Agreement signed in February 2014. Level of the structural adjustment costs connected with this Agreement will be dependent, inter alia, on the level of their intra-industry trade. Because of existing economic differences, we assume that their intra-industry trade will be low. Therefore, information that is more valuable can give us evaluation of its development in time. This paper examines the ECOWAS-EU trade flows within 20-year period between years 1995 and 2015 with the aim to identify and assess the level of intra-industry trade between them. We deal with the concept of intra-industry trade introduced by Grubel and Lloyd; and apply standard methods of the measurement of intra-industry trade introduced in the 1990s in this paper.

1   Introduction

The concept of intra-industry trade has been popular research topic since the 1980s. Economists published first empirical studies revealing the phenomenon of intra-industry trade already in the 1960s. Pioneer works were introduced by Balassa (1966) and Verdoorn (1960). However, its theoretical framework was formed in the 1980s and 1990s. Nowadays, economists considerconcept of intra-industry tradeas astandard part of the economics of international trade, but first models explaining phenomenon of a trade in horizontally and vertically differentiated goods between countries with similar factors' endowments emerged as "new" trade theories.

Analytical methods concerning measurement of intra-industry trade are applied especially in analyses of trade flows existing between developed countries. Economists argue that developed countries with high per capita income specialize in high quality products in great differentiation, which enable them intra-industry trade. These methods are applied less in analyses of trade relations between developed and developing countries. Although it was found out already in the 1990s, that the intra-industry trade between some developed and developing countries was not so marginal, as it was supposed in theoretical models.

In February 2014, the Economic Community of West African States (ECOWAS) and the European Union (EU) signed their Economic Partnership Agreement focused on, inter alia, liberalization of their trade relations. Such agreement usually changes existing patterns of trade and volume of trade; and can cause some adjustment costs. Knowledge of the level of intra-industry trade can indicate whether they are high or low. Therefore, analysis of trade flows realized between the ECOWAS and the EU is actual and can bring important revelations.

This paper examines the ECOWAS-EU trade flows within the 20-year period between years 1995 and 2015 with the aim to identify and assess the level of intra-industry trade between them. In this paper, we try to discuss applicability of the standard concept of intra-industry trade on the analysis oftrade flows between the European Union and the Economic Community of West African States. We are going to look for any evidence of the trade of an intra-industry type with the use of standard methods applied in analyses of intra-industry trade. We assume that, because of existing economic differences, ECOWAS-EU intra-industry trade will be low. However, evaluation of its development in time can give us more detail information about trade flows between these two economic groups and opens us space for deeper analysis of them. We structure the following text as follows:

Chapter 2 - Theoretical framework for the analysis of intra-industry trade is mapped.
Chapter 3 - Overview of relevant and inspiriting literature is introduced.
Chapter 4 - Methods applied in the paper and the aim of the paper are explained.
Chapter 5 - Results of empirical analysis are displayed and reported.
Chapter 6 - Conclusion and link to our further research is indicated.

2 Theoretical Framework

Traditional trade theories are based on David Ricardo's concept working with the comparative advantages, which he introduced in 1817 with the aim to explain determinants of international trade. Ricardo's thoughts were extended further throughout the 19th and 20th century. Since the 1920s, model designed by Eli Heckescher and Bertil Ohlin started to prevail in explanations of the framework of international trade. The main principle of these two models can be expressed simply like this: international trade is generated by differences existing in supply side of every country. It was assumed that trade would be realized between countries with different factors' endowment.

In the 1960s, empirical studies analysing trade flows between countries with similar factors' endowment showed that these countries realized also so-called intra-industry (or two-way) trade, it means simultaneous exports and imports within one product group. Petrus Verdoorn (1960) and Béla Balassa (1966) introduced pioneer analyses indicating this new phenomenon. In the 1970s, great attention to the concept of intra-industry trade was attracted by the work of Herbert Grubel and Peter Lloyd who confirmed that intra-industry was real phenomenon and its levels grew faster within trade realized between developed countries. Grubel and Lloyd also introduced simple methods for the measurement of the level of this intra-industry trade.

Traditional theories, based on Ricardian and Hecker-Ohlin models, failed in interpretation of the phenomenon of intra-industry trade. In response to this empirical founding, traditional theories based on comparative advantage were rejected and economists called for the establishment of new trade theories. In 1980s, theories introduced by Paul Krugman (1979, 1980, 1981), Kelvin Lancaster (1980) and Elhanan Helpman (1981) were the most influential. They dealt with economies of scale and product differentiation in order to explain determinants of intra-industry trade. They dealt with trade realized within categories of horizontally differentiated products (e.g. close, but imperfect substitutes), and saw increasing returns to scale and consumers' preferences for greater product differentiation as the main engines for intra-industry trade.

However, empirical analyses showed also phenomenon of the intra-industry trade within product categories with different prices. Therefore, economists tried to incorporate also vertical product differentiation into the concept of intra-industry trade. Best known is the concept of vertical intra-industry trade introduced by Harry Flam and Elhanan Helpman in 1987. As the vertical intra-industry trade is considered trade, which unit value of export differs significantly from the unit value of import. As the horizontal intra-industry trade is considered trade, which unit value of export is relatively close to its unit value of import.It is obvious that vertical product differentiation is related more to traditional trade theories and its modified versions, while horizontal product differentiation is related to the new trade theories. In many studies, it was observed that the share of vertical intra-industry trade in total trade was

larger than the share of horizontal intra-industry trade. Soon, economists call for synthesis of traditional and new trade theories.

Since then, concept of intra-industry tradehas been reviewed in many ways. In the 1990s, economists introduced two important extensions of the concept of intra-industry trade. First, several studies showed methods how to separate horizontal and vertical intra-industry trade, most cited is the work of Lionel Fontagné and Michael Freudenberg (1997).Next, former tools applied for the measurement of intra-industry trade were redefined with the aim to remove its shortcomings, inter alia, its static character.Clive Hamilton and Paul Kniest (1991) suggested framework of marginal intra-industry for the first time. Later, Marius Brülhart (1994) designed the most inspiriting concept of marginal intra-industry trade. He offerednew perspectives for the analysis of existing patterns of trade, in terms of the structure of a change in trade flows between two points in time.

The concept of intra-industry trade ismeaningful concept in several terms. Economists say that:

- Intra-industry trade can serve as an indicator of the similarity of industrial structures between countries (Brülhart, 1995).

- Intra-industry trade can assess the degree of structural adjustment required by trade expansion (Erlat and Erlat, 2003).

- Marginal intra-industry trade can be used for calculation of the adjustment costs associated with changing trade patterns.
  - Effects of trade liberalization depends, inter alia, on whether trade is of an inter-industry or intra-industry nature (Fertö and Soós, 2008). Referred to the smooth adjustment hypothesis, trade flow changes of the intra-industry type are considered to cause lower adjustment costs (Kaitila, 2008). It means, they lead to lower costs of factor markets' adjustments, particularly in terms of labour market (movements in the labour market caused by trade expansion will take place within industries if the share of intra-industry trade is high).

3 Overview of Relevant Literature

Numerous papers and publications dealing with the topic of West African trade relations with the European Union can be found, when we look at foreign publications' sources. Economists deal with this issue in various circumstances. Hardly any serious publication can be found in the Czech research space. Formal framework of the EU-Africa trade relations is described in publications of Cihelková (2003) or Fojtíková (2014), but they do not deal with the topic in details and from an African perspective. In addition, no serious complexstudy concerning this topic has been published yet. Intra-industry trade is very popular research topic discussed in Czech as well as foreign literature. Economists usually analyse trade flows between countries of the same or similar stage of development when they deal with the concept of intra-industry trade. As inspirational for our analysis, we consider papers published by Grančay et al. (2016), Grančay (2013), Rojíček (2012),Rasekhi and Shotaee (2012) or earlier works ofČernoša (2002, 2007), Kollár (2007) and Fertö and Soós (2008), Kaitila (2008), Erlat and Erlat (2003). From the methodological point of view, influential studies were published by Brülhart (1994, 1995); Fontagné and Freudenberg (1997); Greenaway, Milner and Elliott (1999), and Nilsson (1999).

4   Methods and Formulation of the Paper's Aim

Various methods how to measure intra-industry trade (IIT) are suggested in relevant foreign literature. In this paper, we are going to apply standard statistical indexes that are commonly used in foreign literature. They are based on simple formula of intra-industry trade introduced by Grubel and Lloyd in 1975.

Grubel and Lloyd defined intra-industry trade within product group i between two countries as total trade within group i, etc. sum of exports of product group $i (X_i)$ and imports of product group $i (M_i)$, mines absolute value of inter-industry trade of the product group i, etc.

$$IIT_i = (x_i + m_i) - |x_i - m_i|. \tag{1}$$

In accordance to Nilsson (1999) recommendations, the total volume of intra-industry trade between two entities j and k should be divided with the total number of products they trade with each other in order to yield a measure of the average level of intra-industry trade per product group (IIT_p), etc.:

$$IITp = \frac{Level\ of\ IIT_{jk}}{Number\ of\ products\ traded} = \frac{\sum_{i=1}^{n} IIT_i}{Number\ of\ products\ traded}. \tag{2}$$

Economists usually normalize Equation (1) by dividing it with total trade. Then the Grubel-Lloyd index of intra-industry trade (GL) for the product group i is formalized as follows:

$$GL_i = 1 - \frac{|X_i - M_i|}{(X_i + M_i)}. \tag{3}$$

GL index takes values between 0 and 1. Value 1 means that all trade is of an intra-industry type. Value 0 means that all trade is of an inter-industry type. Fontagné and Freudenberg (1997) note that if the overall trade is imbalanced, then trade can be never completely of an intra-industry nature. Therefore, this indicator was later reviewed with aim to be corrected for overall trade imbalances. Because of several shortcomings connected with so-called adjusted indicators, most economists prefer the unadjusted GL indicator formalized in Equation (3).

Index GL is usually summed across all product groups by applying following mathematical formula for the weighted average:

$$GL = \sum_{i=1}^{n} w_i GL_i \ ; where\ w_i = \frac{X_i + M_i}{\sum_{i=1}^{n} X_i + \sum_{i=1}^{n} M_i}. \tag{4}$$

GL index contains some shortcomings. They are categorized under two headings: geographical bias and product bias (Seecharan and Hosein, 2013). It means that an important part of recognized intra-industry trade can be explained by insufficient disaggregation, in geographic or sectoral terms (Fontagné and Freudenberg, 1997).

- The first bias occurs when various partner countries are grouped together for the computation of a group or regional GL and when a particular country's trade relations with the rest of the world (or loosely defined group of countries) is analysed. Fontagné and Freudenberg (1997) highlight that only a bilateral analysis is a methodologically robust way of defining intra-industry trade.

- The second bias is related to the fact that if more species of products are grouped together in one product group i, then with the greater likelihood trade will be characterized as intra-industry in its nature.

Economists point out also critically on the static character of the GL index, because it refers to the patterns of trade in one year. They suggest various approaches to its dynamisation. As the most inspirational approach is considered the concept of marginal intra-industry trade (MIIT) introduced by Brülhart (1994). It shows how large a share of the change in total trade flows is of an intra-industry type. MIIT deals with changes in exports and imports between two points in time.

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Brülhart (1994) suggests formulation of the marginal intra-industry trade index, based on unadjusted *GL* (3), as follows:

$$MIIT_i = A_i = 1 - \frac{|\Delta X_i - \Delta M_i|}{|\Delta X_i| + |\Delta M_i|}; where \; \Delta X_i = X_{i_t} - X_{i_{t-1}} \; and \; \Delta M_i = M_{i_t} - M_{i_{t-1}}. \quad (5)$$

This index *A*, like *GL* measure, varies between 0 and 1, where 0 indicates marginal trade in the particular industry to be completely of an inter-industry type and 1 represents marginal trade to be entirely of an intra-industry type. Brülhart (1994) construes index *A*in such way that it reveals structure of the change in import and export flows.

He also sums index *A* across all product groups of the same level of statistical disaggregation by applying the following formula:

$$A = \sum_{i=1}^{n} w_i A_i; \quad where \; w_i = \frac{|\Delta X|_i + |\Delta M|_i}{\sum_{i=1}^{n}(|\Delta X_i| + |\Delta M_i|)} . \quad (6)$$

Economists consider developed and newly industrialized developing countries as those realizing larger share of their trade as the trade of an intra-industry type. Such countries have capacities for greater product differentiation. Poor developing countries, especially those resource-rich, tend to have relatively low intra-industry trade. While less developed countries with low per capita income specialize in primary commodities and low quality products, developed countries with high per capita income specialize in high quality products. Therefore, economists assume that mutual trade between developed and developing countries will be very little of an intra-industry type. However, Nilsson (1999) shows that this assumption is not correct in some cases.

This paper e*xamines trade flows between the Economic Community of West African States and the European Union within the 20-year period between years 1995 and 2015 with the aim to identify and assess the level of intra-industry trade between them*. In order to achieve this aim, we are going to describe formal framework of the ECOWAS-EU trade relations and their main patterns first. Then, we are going to calculate average level of the intra-industry trade, Grubel-Lloyd index and Brülhart's index *A* for each year of the set period.

In our analysis, we consider ECOWAS-EU trade relations simply as bilateral, because each of these two economic groups is the trading block with Common External Tariff. The European Union is also common market and the Economic Community of West African States make important progress in establishing it. Our analysis of intra-industry trade is carried out at the 3-digit level of the United Nation's Standard International Trade Classification (SITC, revision 3). It means we are going to work with 255 product groups *i*. We are going to use data concerning ECOWAS-EU trade flows available in the online statistical database of the United Nations Conference on Trade and Development (UNCTAD),downloaded in January 2017.

5 Empirical Analysis of ECOWAS-EU Trade Relations

The Economic Community of West African States is an integration organization founded in one of the world's poorest regions in 1975.Primary objective of the Community was to eliminate all tariffs and non-tariff barriers between its members. In the first years, efficiency of integration cooperation and its benefits were limited. Integration cooperation hasintensified since the 1990s when the founding Treaty of Lagos was reviewed. It reaffirmed Trade Liberalization Scheme (created in 1983) and introduced important changes in structure and character of cooperation . Community's Common External Tariff is one of themost important instruments harmonising the ECOWAS Member States and strengthening its Common Market. It came into effect on 1st February 2016.

Nowadays, the ECOWAS has 15 Member States - Benin, Burkina Faso, Cabo Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. It covers nearly the whole region of West Africa because only one West African country is not

actually member of the ECOWAS.Mauritania was the founding member but it withdrew in 2002. The ECOWAS brings together more than 380 million African inhabitants, however with very low standard of living. Guinea-Bissau and Liberia are the poorest countries, 68 percent of their population lived with less than USD 1,9 per day in 2015. They were followed by Mali, Burkina Faso, Niger, Benin and Nigeria with 50percentage prevalence of absolute income poverty (World Bank, 2017). Majority of the ECOWAS Member States are highly indebted, very susceptible to coup d'états and they suffer from endemic corruption. Nigeria and Senegal are the most affected countries by corruption, in terms of Transparency International's Global Corruption Barometer. Countries' long-term development shows typical symptoms of the curse of natural resources. Nigeria is the economic hegemon of the Community (it creates 76 percent of the Community's GDP) and the most attractive destination for foreign investment. In 2015, the highest GDP per capita was reached in Cabo Verde (USD 3 035), while the lowest one in Niger (USD 358).

Patterns of the ECOWAS inter-regional trade show weaknesses typical for all poor developing countries rich in natural resources: low commodity diversification, significant share of primary commodities in total exports and dependence on the demand generated by more developed countries. Because of their resources' endowment, ECOWAS Member States are dependent on exports of primary commodities (agricultural products, minerals and fuels) for the bulk of their foreign exchange earnings. Opportunities for export diversification are limited. Therefore, majority of West African countries are very vulnerable to fluctuations of global commodity prices that cause them sever economic problems.

5.1 Fundamental Aspects of the ECOWAS-EU Trade Relations

West Africa, home region of the ECOWAS, is one of seven defined European Union's African, Caribbean and Pacific regions (ACP regions). In February 2014, after ten years of negotiations, West Africa and the EU signed their Economic Partnership Agreement. It is the Free Trade Agreement designed with the aim to create free trade area between the EU and West African countries.This Agreement brings together the EU, 16 countries from West Africa, and two regional organizations – the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (WAEMU). Agreement contains seven parts, focused on various aspects of mutual relations. The deal takes account on the current differences in the level of development between West Africa and the EU. The EU opened its market completely from day one, while West Africa, as a partner with lower level of economic and social development, has the obligation to remove import tariffs only partially over a 20-year transition period.

West Africa isthe largest EU trading partner in Sub-Saharan Africa and the EU is the largest trading partner for West Africa. In 2015, 31 percent of all West Africa's imports came from the European Union and 25 percent of its exports went to the EU market. Low commodity diversification of ECOWAS exports to the EU is significant weakness in their mutual trade relations. Primary commodities, including fuels, account for 85-95 percent of total exports of the ECOWAS to the EU within years1995-2015. See export and import product groups with the largest share in total exports and imports in Table 1.

Table 1: Most important export/import product groups for ECOWAS in 2015
(Percentage share in total export/import)

Export		Import	
Food and live animals	30, 19 %	Food and live animals	1 2,37%
Crude materials, except fuels	13, 66 %	Mineral fuels, lubricants and related materials	2 3,67 %
Mineral fuels, lubricants and related materials	36, 90 %	Machinery and transport equipment	3 2,72 %

Source: Own analysis based on UNCTAD data

Mineral fuels have been the most important ECOWAS export product group because of the economic dominance of oil-rich countries Nigeria and Ghana. Together with Ivory Coast, they account for 80 % of all West Africa's exports to the EU. EU market is also the main export destination for West African agricultural and fisheries products. The ECOWAS imports of machinery and transport equipment from the EU contributes to economic growth a development of West African region. Since 2009, the ECOWAS has had positive balance of merchandise trade with the EU, with the highest surplus in 2012 (USD 21 477 799 thousand). Trade flows between the ECOWAS and the European Union started to be more extensivein 2004. The highest volume of ECOWAS exports to the EU was realized in 2012, while the highest volume of imports from the EU in 2013 (see Figure 1).

Figure 1: ECOWAS-EU balance of merchandise trade (Thousands of USD)
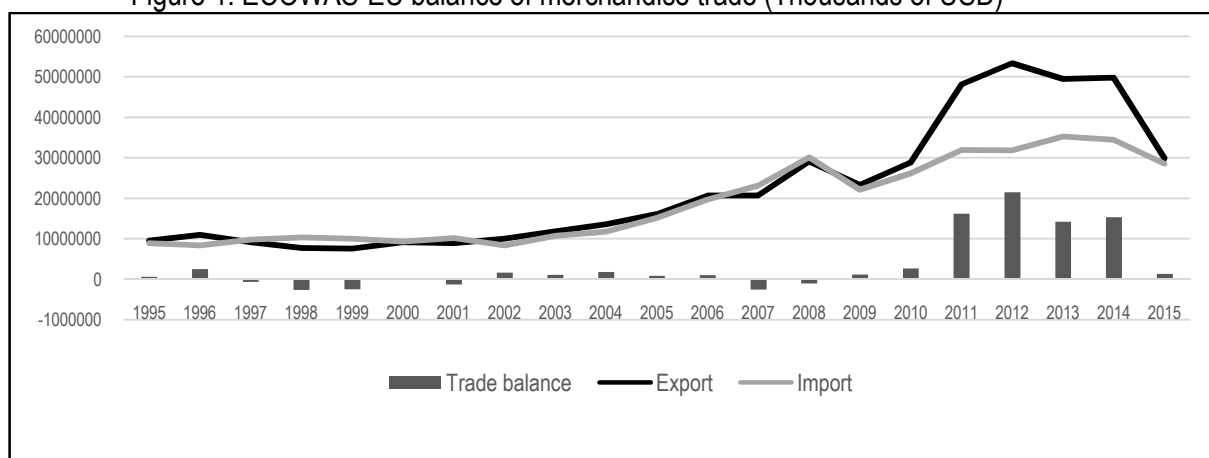
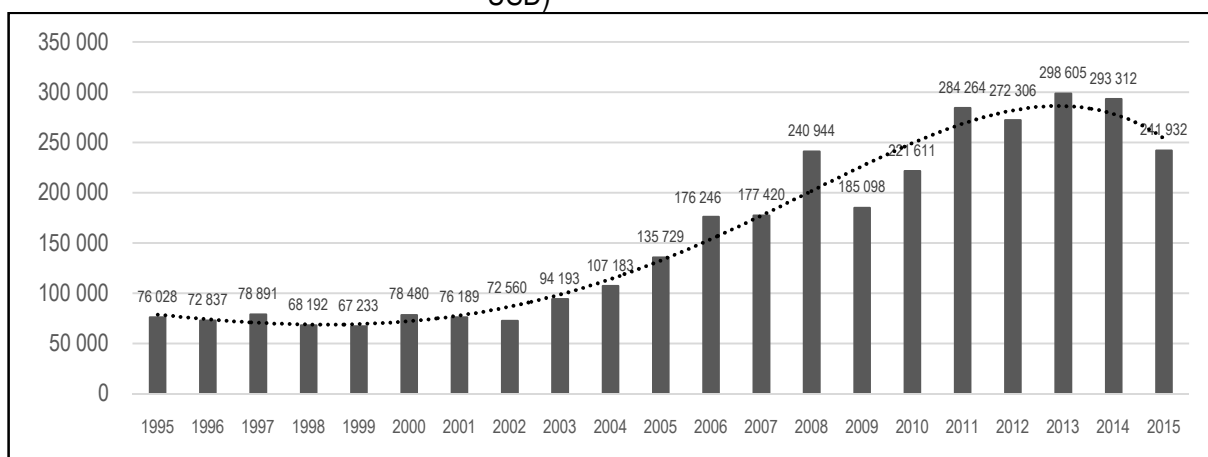Source: Own analysis based on UNCTAD data

Long-term, the ECOWAS has realized the highest trade surplus within product group SITC [3] Mineral fuels, lubricants and related materials and the deepest trade deficit in product group SITC [7] Machinery and transport equipment.

5.2 ECOWAS-EU Intra-Industry Trade

The European Union is one of the largest trading blocks in the world, considered as one of the centres of the world economy. It creates large internal market with more than 500 million inhabitants with high standard of living and strong demand. The European Union's average GDP per capita was USD 32 000 in 2015. The EU is the world's biggest trader of manufactured goods and services. It is the top trading partner for 80 countries and it is the most opened one to developing countries. About 60 percent of EU imports come from developing countries. Fuels excluded, the EU imports more from developing countries than the United States, Canada, Japan and China put together (European Commission, 2017).

Because of existing economic differences, many economists say that ECOWAS-EU trade relations are formed on unequal basis but partnership offered by the EU is a good precondition for further development of West African countries. The EU as more developed partner usually imports primary commodities from West African developing countries and exports there manufactures. Knowing this, we assume that the level of intra-industry trade between the ECOWAS and the EU will be low.Wemeasure the level of intra-industry trade by IIT_p defined in Equation (2). Results of our analysis are shown in Figure 2.

Figure 2: Average level of IIT for one product group for ECOWAS-EU trade (Thousands of USD)
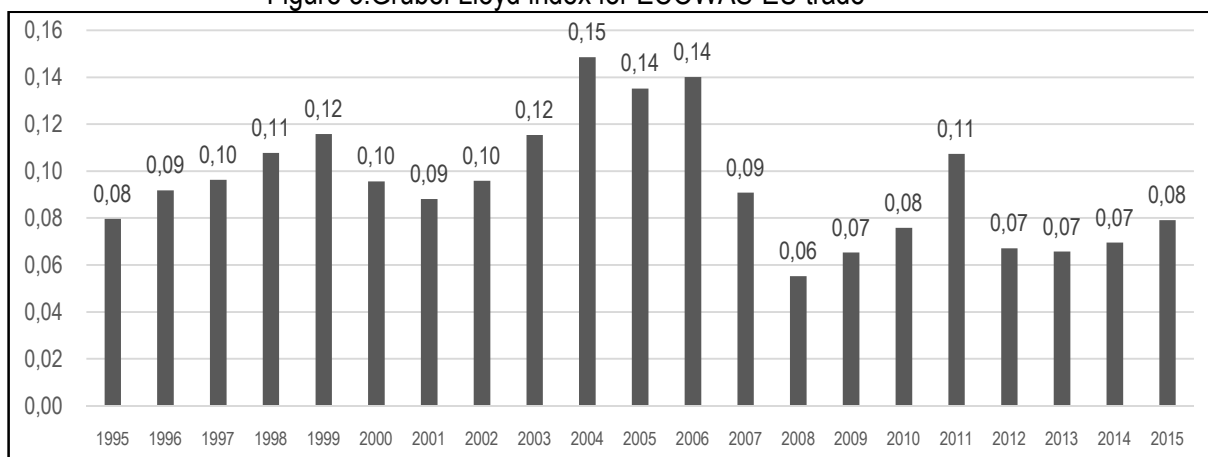

Source: Own analysis based on UNCTAD data

In 1995 and 2015, the highest level of IIT was reached within the product group [334] Petroleum oil and bituminous minerals, while in 2005 the highest level was reached within the product group [891] Arms and ammunition. Although long-term trend of the IIT_p development (see dashed line in Figure 2) indicates growing IIT, this fact is not confirmed with the further analysis focused on calculation of Grubel-Lloyd index defined in Equation (4) and Brülhart's index A defined in Equation (6).

With the use of founded levels of IIT_i, we calculate the Grubel-Lloyd index for each product group and average index for all product groups. See results in Figure 3. Within several product groups, we observe relatively high values *of GL* index, etc. values around 1. Product group [054] Vegetables reaches values of about 0,80-0,90 within the whole 20-year period. However, value of average *GL* index is very low every year.It increaseswithin several partial periods 1995-1999, 2002-2004 and 2008-2011.Highest values arereached in the years 2004, 2005 and 2006 but they are still very low, of about 0,15.

Figure 3:Grubel-Lloyd index for ECOWAS-EU trade
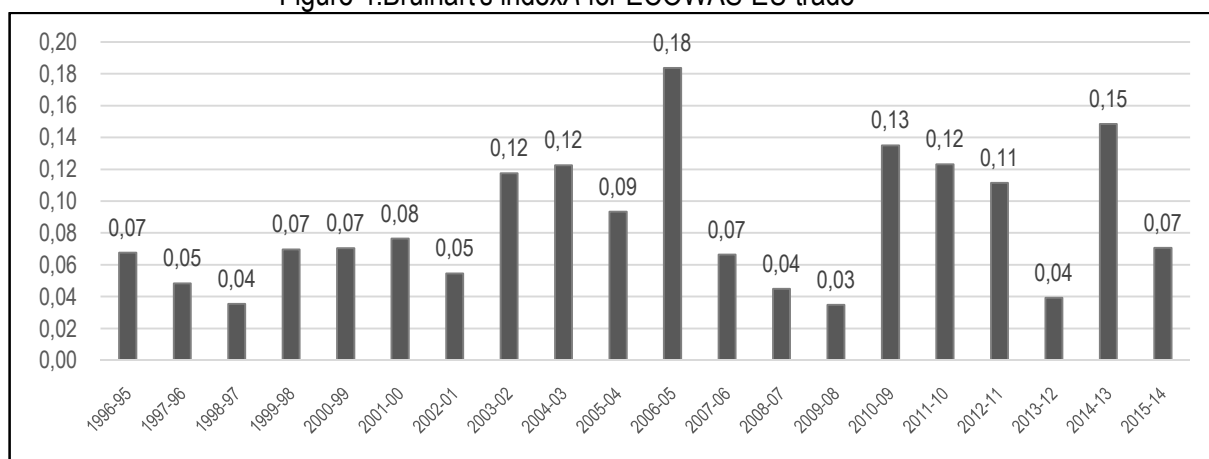

Source: Own analysis based on UNCTAD data

GL index refers to the patterns of trade in only one year. Index is static in its nature and quantifies level of intra-industry trade at a specific point in time. If we compare values of *GL* index reached within the set period, we can say that the structure of trade flows in different years is similar in terms of intra-industry and inter-industry trade.

The extent of intra-industry trade is typically much higher within product groups of manufactured goods than within product groups of non-manufactured goods, and it is the highest for more sophisticated manufactured products (OECD, 2002). We do not confirm this fact in our analysis because the ECOWAS and the EU are not equal partners in terms of technological and production development. Only some product groups of manufactured goods have reached significantly higher values of *GL* index within the set period. These are: [634] Veneers, plywood, and other wood, worked (value of *GL* index is 0,64 for the year 2015); [635] Wood manufacture (*GL* 0,64); [642] Paper & paperboard, cut to shape or size, articles (*GL* 0,41); [651] Textile yarn (*GL* 0,61); [684] Aluminium (*GL* 0,75); [685] Lead (*GL* 0,59); [689] Miscellaneous no-ferrous base metals for metallurgy (*GL* 0,37).

Expansion ofECOWAS-EU trade flows has been evident since 2004. The highest growth rates of exportare reached in 2008 (YoY 41percentage change) and in 2011 (YoY 67percentage change) and highest growth rates of importare reached in 2006 and 2008 (YoY 29percentage change in both cases). For the analysis of the structure of export and import changes, we apply Brülhart's index *A*defined in Equation (6). We analysechanges of export and import flows year over year. First,we measure values of index *A* for each product group *i*. Then, we usethem for the measurement of theaverage index *A* for all product groups. Results aredisplayed in Figure 4.

Figure 4:Brülhart's index*A* for ECOWAS-EU trade

Source: Own analysis based on UNCTAD data

On average, observed values of index *A*are low for each product group*i,*as well as the average index *A* for all product groups within the whole period. This fact indicates us that the share of intra-industry trade within changes of trade flows islower than the share of inter-industry trade. The highest value isobserved when we comperetrade flows of the year 2006with those of the year 2005. However, reached value of index *A*is again low, of about 0,18. Low values of index *A*indicate that the changes of a trade can be marked as inter-industrial and can be probably connected with relatively higher factors' adjustment costs.High marginal intra-industry trade is concomitant with low adjustment costs because it indicates that trade-induced factor relocation occurs within rather than between sectors (Brülhart, 1994).

6 Conclusion

In our paper, we focused on trade flows between the Economic Community of West African States and the European Union with the aim to identify and assess the level of the trade of an intra-industry type.In February 2014, after ten years of negotiations, theECOWAS and the EU signed their Economic Partnership Agreement.It is the Free Trade Agreement designed with the aim to create free trade area between the EU, and 16 West African countries and two regional integration organizations – ECOWAS and WAEMU.

In the theoretical part of our paper, we offered comprehensive overview of the concept of intra-industry trade and explained standard methods used for the measurement of its level based on the Grubel-Lloyd approach. Then, we applied these methods for the analysis of ECOWAS-EU trade flows within the 20-year period between years 1995 and 2015. Our empirical analysis confirmed our hypothesis that, because of existing differences in economic development, the level of intra-industry trade would below. Within some product groups, the Grubel-Lloyd index indicated us quite high level of intra-industry trade, however the value of average GL for all product groups was really low and did not exceed value of 0,15. When we looked at long-term development of intra-industry trade, with application of the concept of marginal intra-industry trade and Brülhart's index A, we did not observe any significant progress or long-term trend.On average, observed value of index $A$was low for all product groups within the whole period. Low values of index A indicate that the changes of trade can be marked as inter-industrial and can be probably connected with relatively higher factors' adjustment costs.

Our research, which results are presented in this paper, provides us basic understanding of the concept of intra-industry and enables us to assess its level within ECOWAS-EU trade flows. Founded values of GL index indicate us that the level of adjustment costs connected with the Economic Partnership Agreement signed by the ECOWAS and the European Union can be high. Presented empirical analysis revealed us information valuable for our further research. First, we can compare level of ECOWAS-EU intra-industry trade with levels achieved within trade flows between other ACP regions and the European Union. We can also use founded results in further analysis of ECOWAS-EU trade relations. Economists (e.g. Nilsson, 1999) dealing with the topic of intra-industry trade between developed and developing countries usually analyse its relation tosome economic characteristics of trading partners - GDP per capita, economic performance, market size and differences in factors' endowment. Economists (e.g. Erlat and Erlat, 2003, or Fertö and Soós, 2008) also calculate level of adjustment costs connected with trade expansion and changes of trade patterns. Therefore, this paper introduced only one ofinitial steps for our detail analysis of ECOWAS-EU trade relations.

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