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Analysis Of The EU Anti-dumping Policy In Terms Of The Revealed Comparative Advantages

Abstract

Anti-dumping policy is an important instrument of trade policy as far as protecting markets against dishonest practices of foreign suppliers is concerned and it is compliant with international regulations such as e.g. these set by the World Trade Organisation. Generally, dumping concerns exporting commodities at lower prices than a selling price of commodities (so-called normal value). Anti-dumping policy uses appropriate preventive means against dishonest practices in a situation when:

- *commodity was brought to customs territory of an importing country at dumping prices,*
- *import inflicted damage (or threatens to do it) to importing country's industry.*

The first principles of anti-dumping policy were formulated in 1964 at the United Nations Conference and Development UNCTAD. The agreement was signed by 194 countries, including Poland. A similar agreement was also signed by the European Union countries. One of the types of agreements is tariff agreements in which a tool used as a system of cataloguing commodities in international trade is so-called Combined Nomenclature (CN). The system is used in customs proceedings and for registration needs. Anti-dumping proceedings also use HS classification system formulated by the World Customs Organization.

The aim of the paper is to determine the proportion of goods covered by anti-dumping proceedings in the value of import conducted by the European

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Union between 1995–2012. In the empirical research the eight-digit commodity codes CN8 were used as well as HS2 codes that allow grouping imported commodities covered by anti-dumping proceedings by their manufacturing divisions. In that way a determined classification of commodities was used to describe a comparative advantage. To conduct assessment the modified Ballasa index (Bi) and Grupp/Legler index were used. The result of conducted analysis is determination of groups of commodities that are crucial for export of a given country.

Keywords: *antidumping, trade policy, revealed comparative advantages, chattiness*

1. Introduction

The Uruguay Round led to the creation of the World Trade Organization (WTO), which replaced the General Agreement on Tariffs and Trade (GATT) on 1 January 1995. The main objective of the World Trade Organization is the liberalization of international trade through the elimination of restrictions hindering the development of trade, the reduction of customs tariffs and settlement of disputes between its members. During the operation period of the GATT and the activities of the World Trade Organization, significant progress has been achieved in the reduction and consolidation of customs tariffs as well as the prohibition of applying non-tariff barriers, which in turn increased international trade, deepening the process of the integration of the world economy and increasing the economic interdependence between countries. All of this was supposed to contribute to a full freedom of international trade in goods and services. However, when observing international trade, one can see that new restrictions are replacing the reduced ones. Anti-dumping is one of these new forms of protection.

According to the WTO, dumping occurs when the goods or services are sold abroad for a price lower than that set for them in similar conditions in the domestic market, where the sales are performed in the ordinary course of trade. From the legal point of view, dumping is considered a form of unfair trade and the affected businesses may apply for protection against these trade practices. From the economic point of view, however, dumping should be treated as an element of business strategy, adapting to the conditions and environment in which a particular company competes. Trade barriers existing between countries and separating the domestic markets are among the factors conducive to the use of the dumping strategy. Another reason for dumping is due to the state tolerating monopolistic

structures where the monopoly sells goods abroad at dumping prices in order to maximise profits.

Anti-dumping policy is a deliberate action taken by the state against unfair trade in situations where an imported commodity (or a similar one) is sold on the market of the importing country at a price lower than that on the market of the exporter (Kuna-Marszałek 2007, pp. 57–58). From the economic point of view, anti-dumping is a form of protection, while from the legal point of view it prevents unfair competition in international trade.

The European Union is a major player in world trade. Excluding intra-EU trade, it accounts for almost one-fifth of world trade in goods. The European Union is also at the forefront of countries using anti-dumping for additional protection of its own market and domestic producers. Between 1995–2013, the EU initiated 450 new anti-dumping proceedings.

This paper has two goals. The first is to calculate the value of imports covered by the EU anti-dumping proceedings and to describe its structure in terms of production sections. The second goal consists of verifying the hypothesis that the EU anti-dumping proceedings concern those commodity groups in which the EU has either failed to get a comparative advantage or is losing it. The relevant research covered the years 1995–2013.

2. The share of goods covered by anti-dumping proceedings in the value of the imports

The value of EU imports covered by anti-dumping proceedings was calculated on the basis of the eight-digit commodity codes for the subheadings of the Combined Nomenclature (CN8). This was justified by the fact that the EU conducts most of its anti-dumping investigations at this particular level. However, this approach has a weakness, as the value of an import under a given CN8 commodity code does not have to be identical with the value of an import covered by the anti-dumping proceedings concerning this code. Due to the selective nature of the anti-dumping proceedings (the proceedings may cover only some countries exporting a given product to the EU and not all entities in those countries), the latter figure is probably lower than the value of the entire commodity code.

The value of an import under particular commodity codes was then referenced to total imports, imports under sections of goods (at the two-digit subdivision level HS2) and imports of product groups (at the four-digit subdivision level HS4) respectively. The purpose of comparing the value of the imports covered by anti-dumping proceedings with the value of imports on the HS2 and

HS4 levels is to understand the importance of anti-dumping proceedings not only with regards to total sales, but also on the levels corresponding to particular segments and groupings of goods. It may turn out that anti-dumping, with its marginal share in the total extra EU import, could become a crucial instrument used for the protection of specific commodity markets.

Table 1 shows the number of commodity codes covered by the EU anti-dumping proceedings in the years 1995–2013 as well as the percentage share of the value of imports under these codes in total EU imports, imports on the HS2 level and imports on the HS4 level. For each subdivision, average percentage share as well as the minimum and maximum shares in a given year were taken into account. The calculations were based on 758[1] eight-digit commodity codes used during the research period in anti-dumping proceedings initiated by the EU. This number results from a single consideration of each code in a given year, regardless of the number of countries against which the anti-dumping proceedings were initiated (in the case of a multiple use of commodity codes resulting from the number of countries in the analysed period, the number would be 1697). The number of countries covered by the anti-dumping proceedings in a given year does not affect the annual value of particular commodity codes. The import values, which were used to calculate the data on Table 1, include changes caused by the two enlargements (2004 and 2007) of the European Union during the research period.[2] The number of CN8 commodity codes covered by the anti-dumping proceedings initiated by the EU varied in different years of the research period. It ranged from only five in 2003 to 74 in 2005. The value of the commodity codes, i.e. the value of the imports into the EU, is much more important than the number of commodity codes. Compared to the total value of extra EU imports, the imports covered by anti-dumping proceedings on the CN8 level amounted on average to 0.86% in individual years of the research period. This ratio is relatively low, but in absolute terms it translates into almost EUR 10 billion (annual average) of imports covered by anti-dumping proceedings. The share of imports covered by anti-dumping proceedings was smallest in 2013 (rate of 0.05%) and largest in 2012 (rate of 2.83%). The share of the value of commodity codes covered by anti-dumping proceedings in the total value of imports may be slightly underestimated due to the fact that the research focused on initiated anti-dumping proceedings only, rather than on the final measures in force.[3]

[1] The number of commodity codes covered by anti-dumping proceedings is not the same as the number of these proceedings, as the one proceeding may cover a greater number of commodity codes.

[2] The enlargement with Croatia was eliminated due to a too-short research period.

[3] Research into anti-dumping measures still in force was performed by C.P. Bown. He assessed a share of the EU import covered by final measures on the HS6 level in total extra imports (with no crude oil) at the level 0.8% –3.1% in the years 1990–2009. See C.P. Bown, "Taking Stock of Antidumping, Safeguards and Countervailing Duties, 1990–2009", *The World Economy*, Vol. 34, Issue 12, Dec. 2010, pp. 1955–1998.

Table 1. Number of commodity codes covered by anti-dumping proceedings initiated by the EU and their share in the total value of imports, imports on the HS2 level and imports on the HS4 level in the years 1995–2013

Year	Number of CN codes	Share of codes in value of imports (w %)						
		Total	HS2 (avr.)	HS2 (min.)	HS2 (max.)	HS4 (avr.)	HS4 (min.)	HS4 (max.)
1995	37	1.07	10.02	0.30	65.80	43.21	2.24	97.44
1996	36	0.58	11.37	1.35	34.77	26.96	2.47	60.25
1997	51	0.62	4.01	0.02	17.54	37.59	1.22	100.00
1998	15	0.10	3.77	1.06	8.70	33.52	14.80	63.58
1999	50	1.16	4.52	0.01	15.01	33.95	0.94	90.42
2000	24	0.39	3.52	0.18	17.74	34.83	4.66	100.00
2001	29	0.28	3.71	0.09	9.91	37.91	3.95	100.00
2002	33	0.34	5.62	0.27	21.75	27.04	1.00	65.52
2003	5	0.08	4.35	0.10	14.87	39.38	7.69	64.14
2004	55	0.46	5.75	0.20	33.93	27.42	1.02	100.00
2005	74	1.12	9.31	0.21	71.95	58.35	6.18	100.00
2006	51	1.42	3.48	0.07	18.27	36.15	1.02	97.83
2007	31	0.34	4.76	0.49	10.89	24.05	1.07	60.57
2008	69	1.35	2.69	0.05	8.63	50.71	11.43	100.00
2009	22	0.24	3.09	0.46	8.11	22.46	0.77	63.87
2010	64	1.13	4.85	0.21	20.78	45.25	0.67	100.00
2011	62	1.13	8.06	0.03	40.14	38.70	0.10	100.00
2012	36	2.83	12.26	1.04	34.51	66.95	15.82	100.00
2013	14	0.05	4.50	0.07	11.80	51.72	1.04	99.33
1995–2013	**758**	**0.86**	**5.83**	**0.01**	**71.95**	**38.50**	**0.10**	**100.00**

Note: the codes were verified and adjusted according to the changes occurring in the Combined Nomenclature in particular years. Some codes for 1996-1997 are missing, as they were given at the HS6 level.

Source: own calculations based on: C.P. Bown, *Global antidumping database*, (www.worldbank.org), supplemented by Reports of the European Commission Anti-dumping anti-subsidy safeguard, Statistics covering 1996-2013; data from relevant regulations of the European Commission ec.europa.eu; Eurostat http://epp.eurostat.ec.europa.eu/newxtweb/mainxtnet.do

In relation to the extra EU imports on the HS2 subdivision level (production sections), the share of imports covered by the anti-dumping proceedings is growing. The average annual share in the research period amounted to 5.83% and was over six times higher compared to the previous index. As expected, the importance of anti-dumping on the level of particular production sections is therefore correspondingly higher. The given average shows the existence of huge disparities: in the research period, the index ranged from 0.01% in 1999 to 71.95% in 2005. The given maximum value of the index means that over two-thirds of external imports on the level of one of the HS2 sections were covered by anti-dumping proceedings initiated by the EU.

In a similar way, one can show the scope of imports covered by anti-dumping proceedings in relation to external imports on the HS4 subdivision level (product groupings). On that level of product groupings, the annual average index was as much as 38.50% during the research period. It should be noted that the minimum and maximum values were very distant from each other and ranged from 0.10% (2011) to 100%, with the maximum value occurring on many occasions. The latter index means that in certain years of the research period all commodity groups on the HS4 level were covered by EU anti-dumping proceedings.

3. Structure of imports covered by anti-dumping proceedings by production sections

The purpose of the analysis performed in this chapter is to identify production sections covered by the EU's anti-dumping policy and to determine their absolute and relative importance in the total number of commodity codes covered by anti-dumping proceedings and in their value. The analysis covers production sections on the HS2 subdivision level, chosen on the basis of a list of 758 CN8 codes covered by anti-dumping proceedings initiated between 1995–2013. The number of CN8 commodity codes covered by the anti-dumping proceedings in each separate HS2 segment and their values were taken into account and then compared with the total number of analysed commodity codes in the extra EU imports and the total value of these codes. Table 2 shows the results of this analysis.

Table 2. Share of CN8 commodity codes covered by anti-dumping proceedings initiated by the European Union in the total number of the analysed codes and their values according to the HS2 production sections, 1995–2013

Chapter		**Codes covered by anti-dumping**			
Short title	Id	Number	in %	Value	in %
Fish and crustaceans. molluscs and other aquatic invertebrates	03	18	2.37	3071230695	1.62
Edible fruit and nuts; peel of citrus fruit or melons	08	3	0.40	64936314	0.03
Animal or vegetable fats and oils	15	7	0.92	327844305	0.17
Preparations of vegetables. fruit. nuts or other parts of plants	20	5	0.66	103480259	0.05
Miscellaneous edible preparations	21	2	0.26	941762527	0.50
Beverages. spirits and vinegar	22	5	0.66	577082218	0.30
Residues and waste from the food industries	23	2	0.26	65459238	0.03
Mineral fuels	27	21	2.77	58622608602	30.97
Inorganic chemicals	28	14	1.85	897944775	0.47
Organic chemicals	29	29	3.83	1768701007	0.93

Fertilisers	31	5	0.66	580523121	0.31
Soap, organic surface-active agents, washing preparations	34	3	0.40	367541382	0.19
Albuminoidal substances; modified starches; glues; enzymes	35	1	0.13	207196296	0.11
Miscellaneous chemical products	38	13	1.72	9172801350	4.85
Plastics and articles thereof	39	18	2.37	5113976360	2.70
Rubber and articles thereof	40	7	0.92	777672318	0.41
Raw hides and skins (other than furskins) and leather	41	2	0.26	10624706	0.01
Articles of leather; saddlery and harness;	42	9	1.19	1465781815	0.77
Wood and articles of wood; wood charcoal	44	5	0.66	1118698556	0.59
Paper and paperboard	48	16	2.11	925475798	0.49
Cotton	52	15	1.98	857721301	0.45
Man-made filaments	54	17	2.24	1814209339	0.96
Man-made staple fibres	55	3	0.40	969243342	0.51
Wadding, felt and nonwovens	56	9	1.19	44220766	0.02
Other made-up textile articles;	63	12	1.58	1650559494	0.87
Footwear, gaiters and the like; parts of such articles	64	55	7.26	10505579247	5.55
Articles of stone, plaster, cement, asbestos	68	11	1.45	599904746	0.32
Ceramic products	69	22	2.90	1839271855	0.97
Glass and glassware	70	19	2.51	1312721331	0.69
Iron and steel	72	123	16.23	10944061470	5.78
Articles of iron or steel	73	163	21.50	9636425908	5.09
Aluminium and articles thereof	76	8	1.06	1904385163	1.01
Zinc and articles thereof	79	3	0.40	234254572	0.12
Other base metals; cermets; articles thereof	81	5	0.66	314958072	0.17
Miscellaneous articles of base metal	83	5	0.66	198691069	0.10
Nuclear reactors, boilers, machinery and mechanical appliances;	84	11	1.45	3474193797	1.84
Electrical machinery and equipment and parts thereof	85	66	8.71	52071312196	27.51
Wehicles other than railway or tramway rolling stock	87	15	1.98	3299225081	1.74
Optical, photographic, cinematographic;	90	5	0.66	822171131	0.43
Toys, games and sports requisites; parts and accessories	95	1	0.13	447799671	0.24
Miscellaneous manufactured articles	96	5	0.66	186790682	0.10

Note: the total number of CN8 codes is 758 and their total value in the research period was EUR 189.3 billion.

Source: own calculations based on: C.P. Bown, *Global antidumping database*, (www.worldbank.org), supplemented by reports from the European Commission Anti-dumping anti-subsidy safeguard statistics covering 1996–2013; data from relevant regulations of the European Commission ec.europa.eu; Eurostat http://epp.eurostat.ec.europa.eu/newxtweb/ mainxtnet.do; Combined Nomenclature, European Union Journal of Laws, 31.10.2013.

Table 2 shows that the initiated anti-dumping proceedings covered 41 HS2 segments. Taking into account the total number of 99 sections in the Combined Nomenclature, it can be noticed that almost every second section was covered by anti-dumping proceedings. In particular sections, the number of CN8 commodity codes varied and ranged from 1 (0.13% of the total number of codes) to 163 (21.5%). Segments in which a relatively high number of codes were covered by the anti-dumping proceedings included 73 (iron or steel articles), 72 (iron and steel), 85 (electrical machinery and equipment and parts thereof) and 64 (footwear, gaiters and the like). In total, these four sections accounted for 54% of the total number of CN8 commodity codes. At the other extreme, there were two branches (35 – albuminoidal substances and 95 – toys, games and sports requisites) in which only one CN8 code was covered by the anti-dumping proceedings.

Apart from the number of codes in particular production sections, Table 2 also includes information about the values of particular codes and their share in the total value of all codes covered by the proceedings. The number of codes in anti-dumping proceedings does not have to be proportional to the value of the imports covered by these codes. In terms of the value of imports covered by the proceedings, two sections can be distinguished: 27 (mineral fuels) and 85 (electrical machinery and equipment and parts thereof). In total, the codes from these two sections accounted for nearly 59% of the value of imports covered by EU anti-dumping proceedings. The most important sections in terms of the number of codes (72 and 73) accounted for less than 11% of the value of the commodity codes covered by anti-dumping proceedings. The obtained result differs substantially from the structure above, resulting from the consideration of the commodity codes in particular production sections. Moreover, the dominant share of mineral fuels in the value of imports covered by anti-dumping proceedings is surprising. Analysis of specific proceedings covering codes from Section 27 allows this paradox to be explained, at least partially. Almost all commodity codes from Section 27 relate to bioethanol (i.e. ethyl alcohol made of agricultural products) and biodiesel (i.e. fatty acid esters and/or paraffinic diesel fuels of non-fossil origin).[4] It can therefore be assumed that the anti-dumping proceedings in this particular case are an instrument protecting EU agricultural markets that provide the raw materials for bioethanol and biodiesel.

[4] Procedures related to the implementation of a common trade policy. Notification of the initiation of anti-dumping proceedings concerning import of biodiesel coming from the USA Journal of Lows C 147 of 13.06.2008; Procedures related to the implementation of a common trade policy. Notification of the initiation of anti-dumping proceedings concerning import of biodiesel coming from the USA Journal of Lows C 345 of 25.11.2011; Procedures related to the implementation of a common trade policy. Notification of the initiation of anti-dumping proceedings concerning import of biodiesel coming from the USA Journal of Lows C 260 of 29.08.2012.

4. The structure of EU imports covered by anti-dumping proceedings in terms of revealed comparative advantages

The aim of this study is to answer the question of whether the EU had a comparative advantage in particular commodity codes during the analysed period and, if so, what the trend of those changes was – i.e. whether the advantage increased or decreased. In this study, one-by-one two indices of the revealed comparative advantage were used: the Balassa Index (RCA_i, *revealed comparative advantage*) and the Grupp/Legler Index (RCA_i). Each study was conducted for several years, which allowed changes to be observed.

B. Balassa noted that comparative advantages could be "revealed" based on observing trade flows, which reflect differences in the possession of resources by particular countries. Thus, he developed an index measuring a country's revealed comparative advantage. The Balassa Index determines the competitive advantage of a country, the measure of which is the share of the export of the i^{th} product from the j^{th} country in the total world export of that product as well as its comparative advantage, the measure of which is the ratio of the above share to a share of the j^{th} country in world exports. This index belongs to a group of measures analysing the performance of particular countries in international trade flows and as such is sometimes used to study the international competitiveness of countries. Its advantage consists of its simplicity of construction and application in empirical research. On the other hand, because the Balassa Index is calculated on the basis of the observed trade flows, it takes into account all elements that affect these flows, not just specific factors of production which are the source of a comparative advantage on the basis of the traditional theory of trade (Leromain, Orefice 2013, p. 3). Therefore, the estimated values of this index may be characterised by a certain instability over time, while comparative advantages should be characterised by a relative stability over time.

In this study, a modified version of the Balassa Index better suited for the purposes of the study was applied. Two types of changes were introduced. Firstly, the values of the imports should be compared because anti-dumping proceedings concern imports. Secondly, as anti-dumping proceedings apply only to extra-EU imports, total EU imports were divided into intra-EU and extra-EU groups.[5] The modified index takes into account the intra-EU import, i.e. imports of member states from other member states, as well as total EU imports, which

[5] Research into the EU's revealed comparative advantage on the basis of imports and separated internal imports appeared in the literature in the publication A. Khatibi, *The trade effects of European antidumping policy*, ECIPE working paper, 2009, pp. 1–13.

cover both intra-and extra-EU imports (i.e. import from third countries). The formula of the index used in this chapter is as follows:

$$\mathrm{RCA}^{UE}{}_{i} = (m^{UE}_{i-intra} / M_{i\text{-}total}) / (m^{UE}_{intra} / M_{total}) \quad (1)$$

where:

$m^{UE}_{i-intra}$ – intra-EU imports of the i[th] product (i=1,…, 569),

$M_{i-total}$ – total import (*intra*+*extra*) of the –th product (i=1,…, 569) into the EU market,

m^{UE}_{intra} – intra EU imports,

M_{total} – total imports (*intra*+*extra*) into the EU market.

The first expression of the above formula means a share of internal imports from the ith product in the total import of that product, thus indicating which part of EU imports of the ith product is covered by intra-EU imports. The second expression means the share of intra-EU imports in total EU imports. The relation of the first expression to the second one indicates the possible comparative advantage of the EU in importing the ith product. The interpretation of the results is as follows: the value of the RCAUE index in the range of 0–1 suggests the EU's lack of comparative advantage with regards to the ith product, while the value of 1 above suggests the presence of a comparative advantage of the EU in the i[th] product; the higher the value the greater the advantage.

The RCA_i Grupp/Legler (G/L) Index expresses a slightly different approach towards the revealed comparative advantage, taking into account the relationship between exports and imports on the world market level. As opposed to the modified Balassa Index, which compares the competitiveness of EU entities with entities outside the EU only on the EU import market, where EU entities are relatively privileged, the G/L Index compares competitiveness on the global market level, where all entities operate in similar conditions. Considering the Grupp/Legler Index beside the Balassa Index allows a more comprehensive analysis of the EU's comparative advantages to be performed. The Grupp/Legler Index, referring to a different version of the Balassa Index (Faustino 1991, pp. 203–212), is a natural logarithm of a quotient in which the ratio between the export of the i[th] product into the j[th] country and the import of the –th product into that country is the dividend, while the ratio between a country's total exports and its total imports is the divisor. Both the dividend and the divisor are interpreted in terms of the coverage of imports by exports, but in relation to a different range of products. If this coverage is higher for the i[th] product than in the case of all products

covered by a country's foreign trade, one can speak of the comparative advantage of that country with respect to the ith product. The logarithmisation of the above-mentioned quotient makes interpreting the results easier because positive results suggest the existence of a comparative advantage for a country with respect to the ith product, while negative results suggest a lack of an advantage.

In this paper, the authors will use the Grupp/Legler Index taking into account extra-EU exports and extra-EU imports only. Intra-EU trade was omitted because internal and external trading activities are pursued in substantially different conditions and, depending on the goods, the ratio between them can differ substantially, possibly distorting the results. Additional, anti-dumping proceedings refer only to imports from outside the EU. The formula for the G/L Index for the European Union, the interpretation of which is the same as that of the above Balassa index, is as follows:

$$RCA_i^{UE} = \ln\left[\frac{(X_{i-extra}^{UE} / M_{i-extra}^{UE})}{X_{extra}^{UE} / M_{extra}^{UE}}\right] \tag{2}$$

where:

$X_{i-extra}^{UE}$ – extra-EU exports of the ith product (i=1,…, 569),

$M_{i-extra}^{UE}$ – extra-EU imports of the ith product (i=1,…, 569),

X_{extra}^{UE} – extra-EU exports,

M_{extra}^{UE} – extra-EU imports.

Analysis of both $RCA^{UE}{}_i$ indices was performed using the CN8 commodity codes covered by EU anti-dumping proceedings between 1995–2013. The statistical data was collected from Eurostat. The scope of the created statistical database was adapted to the EU makeup over time: in the period 1995–2003 for the EU-15, in the period 2004–2006 for the EU-25 and in the period 2007–2013 for the EU-27. Both indices were estimated for successive years of the period 2000–2013, in which a total of 569 CN8 commodity codes in the initiated anti-dumping proceedings were used (out of a total of 758 codes included in Table 1). In each successive year, commodity codes covered by the proceedings initiated in a given year were taken into account. Due to the fact that comparative advantages (or the lack thereof) are a relatively permanent phenomenon and in order to eliminate the impact of random factors (fluctuations in the economic situation, changes in the membership of the EU, etc.) on the value of the analysed indices, these indices were calculated for each commodity code for a period of five years preceding the year in which the proceedings were initiated. The initiation year was omitted so as not to distort the results with possible anti-dumping effects. For example, for commodity codes covered by proceedings initiated in 2000, the Balassa and Grupp/Legler indices were calculated for the years 1995–1999.

The analysis of the CN8 commodity codes covered by anti-dumping proceedings initiated by the EU using the modified Balassa Index of the revealed comparative advantage was performed in two stages. In the first stage, the indices estimated for the successive years, covering particular CN8 commodity codes, reflecting the state of affairs of the five years preceding the implementation of the proceedings, were divided into three groups: commodity codes where the EU had a comparative advantage, commodity codes where the EU did not have a comparative advantage, and commodity codes for which there was no comparable data. A given code was included in the first group if the estimated indices for most of the analysed five-year period suggested the existence of a comparative advantage for the EU. Similarly, the second group included those commodity codes for which the results for the majority of years indicated a lack of comparative advantage. The second stage of the analysis covered only commodity codes for which a comparative advantage had been revealed. The purpose of this stage was to answer the question of whether the revealed comparative advantage of the EU was increasing or decreasing. To answer this question, a linear trend line from the five-year periods was used.

Table 3. Structure of the CN8 commodity codes covered by EU anti-dumping proceedings according to the revealed comparative advantage (measured by the modified Balassa Index), 2000–2013

Years	Number of CN8 codes	Comparative advantage			Comparative advantage in %	
		Yes	No	No data	Yes	No
2000	24	18	6		75.00	25.00
2001	29	22	7		75.86	24.14
2002	33	17	16		51.52	48.48
2003	5	4	1		80.00	20.00
2004	55	25	30		45.45	54.55
2005	74	45	29		60.81	39.19
2006	51	19	28	4	40.43	59.57
2007	31	20	7	4	74.07	25.93
2008	69	43	4	22	91.49	8.51
2009	22	15	7		68.18	31.82
2010	64	58	4	2	93.55	6.45
2011	62	46	14	2	76.67	23.33
2012	36	17	9	10	65.38	34.62
2013	14	8	4	2	66.67	33.3
2000–2013	**569**	**357**	**166**	**46**	**68.26**	**31.74**

* The percentages were calculated excluding commodity codes for which no data was available.

Source: see Table 2.

Table 3 shows the quantity and percentage structure of the revealed comparative advantages relating to the commodity codes analysed in particular years. Out of the total 569 CN8 commodity codes covered by EU anti-dumping proceedings initiated between 2000–2013, 357 codes showed a comparative advantage for the EU, no advantage was revealed in the case of 166 codes and no reliable data was available for 46 codes due to the annual changes introduced to the Combined Nomenclature. Having disregarded the commodity codes for which there was no data available, the percentage structure of the revealed comparative advantages in relation to the 523 codes was calculated. The last two columns of Table 3 show that the EU had a comparative advantage in 68.26% of the commodity codes covered by anti-dumping proceedings and there was no advantage in the other cases during the analysed period. Depending on the year, the percentage of commodity codes with a revealed comparative advantage ranged from 40% in 2006 to almost 94% in 2010. In the analysed period, there were only two years (2004 and 2006) in which commodity codes without this advantage slightly prevailed.

Table 4. Structure of the CN8 commodity codes with a revealed (based on the modified Balassa Index) comparative advantage for the European Union covered by anti-dumping proceedings initiated by the EU, taking into account the direction of the trend of the comparative advantage, 2000–2013

Years	Number of CN8 codes	Linear trend		Linear trend in %	
		Increasing	Decreasing	Increasing	Decreasing
2000	18	5	13	27.78	72.22
2001	22	12	10	54.55	45.45
2002	17	11	6	64.71	35.29
2003	4	3	1	75.00	25.00
2004	25	10	15	40.00	60.00
2005	45	15	30	33.33	66.67
2006	19	10	9	52.63	47.37
2007	20	11	9	55.00	45.00
2008	43	15	28	34.88	65.12
2009	15	3	12	20.00	80.00
2010	58	20	38	34.48	65.52
2011	46	30	16	65.22	34.78
2012	17	6	11	35.29	64.71
2013	8	7	1	87.5	12.5
2000–2013	**357**	**158**	**199**	**44.26**	**55.74**

Source: See Table 2.

Determining the structure of the commodity codes according to the revealed comparative advantage is only the first stage of the analysis, the aim of which is to verify the presented hypothesis. For now, it is clear that the majority of the commodity codes covered by EU anti-dumping proceedings were revealed to have a comparative advantage when measured by the modified Balassa Index. In the second step, we will try to answer the question of whether this comparative advantage was increasing or decreasing. For this purpose, The direction of the changes in the revealed comparative advantage for particular commodity codes in the analysed period were determined based on the linear trends from the index over a five-year period. The results are shown in Table 4.

In the analysed period, 357 CN8 commodity codes revealed a comparative advantage for the EU. Of this number, 199 codes (55.74%) were characterised by a descending trend for the EU's comparative advantage, while the trend grew in the case of 158 codes (44.26%).

Summing up the results included in Tables 3 and 4, it can be concluded that out of the 523 total analysed CN8 commodity codes covered by EU anti-dumping proceedings between 2000–2013, almost 70% of the EU codes did not have a comparative advantage when measured by the modified Balassa Index (31.74% of the analysed codes) or have lost it (38.05% of codes). In other cases (30.21%), a comparative advantage of the EU with a growing trend was determined. Therefore, the results of the study using the modified Balassa Index indicate a positive verification of the presented hypothesis.

As in the case using the modified Balassa Index. The analysis of the CN8 commodity codes covered by anti-dumping proceedings initiated by the EU using the G/L Index of revealed comparative advantages was performed in two stages. First. The G/L indices referring to particular CN8 commodity codes in terms of the presence or a lack of comparative advantage was estimated. In the second stage. The question of whether the EU's revealed comparative advantage was increasing or decreasing was examined. Table 5 shows the results of the calculations relating to the first stage of the study. The results of the second phase of the study are given in Table 6.

Table 5. Structure of the CN8 commodity codes covered by anti-dumping proceedings initiated by the EU according to a revealed comparative advantage measured by the Grupp/ Legler Index, 2000–2013

Years	Number of CN8 codes	Comparative advantage			Comparative advantage in %	
		Yes	No	No data	Yes	No
2000	24	13	11		54.17	45.83
2001	29	15	14		51.72	48.28
2002	33	18	15		54.55	45.45
2003	5	3	2		60.00	40.00
2004	55	25	30		45.45	54.55
2005	74	38	36		51.35	48.65
2006	51	18	29	4	38.30	61.70
2007	31	10	17	4	37.04	62.96
2008	69	35	12	22	74.47	25.53
2009	22	9	13		40.91	59.09
2010	64	50	12	2	80.65	19.35
2011	62	41	19	2	68.33	31.67
2012	36	11	15	10	42.31	57.69
2013	14	9	3	2	75.0	25.0
2000–2013	**569**	**295**	**228**	**46**	**56.4**	**43.6**

*The percentages were calculated excluding commodity codes for which there was no data available.

Source: See Table 2.

Table 5 shows that out of the 569 analysed CN8 commodity codes covered by EU anti-dumping proceedings initiated between 2000–2013. 295 codes revealed a comparative advantage for the EU. In the case of 228 codes. no such advantage was found. and in the case of 46 codes there was no reliable data. The last two columns of Table 5 show that 56.4% of the commodity codes covered by EU anti-dumping proceedings revealed a comparative advantage. while the remaining 43.6% revealed no such advantage in the analysed period. Depending on the year. the percentage of commodity codes with a revealed comparative advantage ranged from 37% in 2007 to almost 81% in 2010. Five years of the analysed period (2004, 2006, 2007, 2009 and 2012) were characterised by the dominance of a percentage of commodity codes with no revealed comparative advantage for the EU. In the case of both studies (using the modified Balassa Index and the G/L Index). it was observed that codes with a revealed comparative advantage for the EU dominated. However. in the case of the G/L Index. the percentage of these codes was lower. while the share of the commodity codes with no revealed comparative advantage for the EU increased by nearly 12 percentage points.

Table 6. Structure of the CN8 commodity codes with revealed comparative advantage for the European Union (based on the Grupp / Legler Index) covered by the initiated EU anti-dumping proceedings according to the direction of the trend of the comparative advantage, 2000–2013

Years	Number of CN8 codes	Linear trend		Linear trend in %	
		Increasing	Decreasing	Increasing	Decreasing
2000	13	5	8	38.46	61.54
2001	15	10	5	66.67	33.33
2002	18	7	11	38.89	61.11
2003	3	1	2	33.33	66.67
2004	25	12	13	48.00	52.00
2005	38	12	26	31.58	68.42
2006	18	13	5	72.22	27.78
2007	10	4	6	40.00	60.00
2008	35	8	27	22.86	77.14
2009	9	4	5	44.44	55.56
2010	50	14	36	28.00	72.00
2011	41	25	16	60.98	39.02
2012	11	3	8	27.27	72.73
2013	9	5	4	55.56	44.44
2000–2013	**295**	**123**	**172**	**41.7**	**58.3**

Source: See Table 2.

Table 6 contains the results of the analysis of the linear trend line of the Grupp/Legler Index for 295 CN8 commodity codes with a revealed comparative advantage for the EU. Out of this number. 172 codes (58.3%. a slightly higher percentage than in the corresponding study based on the Balassa Index) were characterised by a descending trend in comparative advantage and 123 (41.7%) by a growing trend. Declining trends in comparative advantage for the EU could be seen in the majority of years of the analysed period. ranging from 52% to 77.14% of the analysed codes.

Summing up the results presented in Tables 5 and 6. it can be said that out of the total 523 available CN8 commodity codes covered by EU anti-dumping proceedings between 2000–2013. 76.5% of the codes showed that the European Union either did not reveal any comparative advantage as measured b the Grupp/Legler Index (43.6% of the analysed codes) or lost it (32.9% codes). Growing trends in the revealed comparative advantage for the EU could be observed in the remaining 23.5% of cases. The results of the study with the application of this index also indicate a positive verification of the presented hypothesis.

5. Conclusions

In relation to the value of extra-EU imports. the total imports covered by anti-dumping proceedings analysed on the CN8 level amounted on average to 0.86% between 1995–2013. However. this share translated in absolute terms to nearly EUR 10 billion (annual average) of imports covered by anti-dumping proceedings. The scope of imports covered by anti-dumping proceedings. though relatively small when compared to the total EU import. Rises substantially when considered in terms of particular production sections. especially in terms of product groupings. Thus on the level of the two-digit subdivision the share of the relevant CN8 commodity codes in the value of imports from HS2 production segments amounted on average to 5.83%. with a maximum value of 72%; on the four-digit subdivision level (HS4 commodity groupings). It amounted on average to 38.5%. reaching 100% in certain commodity groups.

An analysis of the number of commodity codes on the CN8 subdivision level per production sections (HS2) confirmed the dominance of the "iron and steel" branch (sections 72 and 73 which also dominated the anti-dumping proceedings initiated by the EU during the analysed period). As it accounted for almost 38% of all commodity codes covered by the initiated proceedings. In terms of the value of imports covered by the proceedings. distinguish two sections can be distinguished: 27 (mineral fuels) and 85 (electrical machinery and equipment and parts thereof). In total. these two sections accounted for nearly 59% of the value of imports covered by EU anti-dumping proceedings. The surprising thing was the dominant share of mineral fuels in the value of imports covered by EU anti-dumping proceedings. When looking at particular proceedings covering the codes from Section 27 (which accounted for over 30% of the value of the proceedings). the paradox can be at least partly explained. Almost all of the Section 27 commodity codes relate to bioethanol and biodiesel. It can therefore be assumed that anti-dumping proceedings in this case are an instrument protecting the European Union's agricultural markets that supply raw materials for biofuels.

Referring to the verified hypothesis. it can be stated that in the analysed period 70% of the anti-dumping proceedings initiated by the EU related to imports with commodity codes in which the EU either no longer demonstrated a comparative advantage or was losing it. This conclusion is based on the study of two indices of revealed comparative advantage: the modified Balassa Index and the Grupp/Legler Index. No comparative advantage for the EU in the CN8 commodity codes covered by these proceedings was seen more clearly in the case of the Grupp/Legler Index. This is understandable due to the fact that the

G/L Index compares the competitiveness of EU businesses on the global market level. while the Balassa Index compares this exclusively on the EU import market, where the status of the EU entities is relatively privileged.

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Streszczenie

ANALIZA POLITYKI ANTYDUMPINGOWEJ UE POD KĄTEM UJAWNIONYCH PRZEWAG KOMPARATYWNYCH

Artykuł jest poświęcony postępowaniom antydumpingowym wszczętym w latach 1995–2012 przez UE. Została w nim krótko opisana zasada stosowania antydumpingu przez UE. Przedstawiona na poziomie ośmiocyfrowej dezagregacji (kody towarowe CN8) udział towarów objętych postępowaniami antydumpingowymi w wartości importu. Struktura tych kodów towarowych importu objętych postępowaniami antydumpingowymi. z uwagi na zasobochłonność oraz w pogrupowaniu na działy produkcji (HS2). Przedstawiono analizę ujawnionej przewagi komparatywnej dla tych kodów towarowych na podstawie zmodyfikowanego wskaźnika Ballasy oraz wskaźnika Grupp/Leglera dla których wszczęte zostały postępowania antydumpingowe przez UE.

Słowa kluczowe*: postępowanie antydumpingowe, przewaga komparatywna, zasobochłonność*