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Shall Polish export be affected by trade diversion resulting from Transatlantic Trade and Investment Partnership?

ABSTRACT

In this paper we analyze possible impact of the Transatlantic Trade and Investment Partnership (TTIP) between the European Union and the United States on Polish export. We analyze potential trade diversion effect and disadvantage of Polish goods on the EU market in favour of the American ones. To achieve this goal we analyze shares of Poland and US in supplies on the tariff protected EU markets. We compare as well revealed comparative advantages of both analyzed countries in supplies of these protected groups of goods imported to the EU and the export positions of both countries on the markets outside of the EU. We add to this analysis a comparison of the positions of Poland and the US in the supplies of goods having the largest share in Polish export. We use the HS2 classification. Our analysis concentrates on the year 2013, however we supplement it with the comparative analysis of data concerning the year 2011. We use data from the database www.trademap.org and wits.worldbank.org.

Introduction

In this study¹ we analyze potential impact of the currently negotiated US and EU Transatlantic Trade and Investment Partnership (TTIP) on export of Polish goods. It is the agreement on economic preferences beyond discriminatory liberalization of trade in goods. The trade diversion effect and the loss of Poland's position on the EU market in favour of American goods is analyzed. It is believed that the diversion effect will be limited to a few groups of commodities, as the structure of Polish and American export to the EU differs significantly.

As the trade diversion effect is analysed, potential substitution of Polish products with American equivalences imported to the free trade area, is examined. The analysis is based on disaggregated statistics. For that purpose the HS2 classification is used, coding 99 products

¹ The project was financed by Narodowe Centrum Nauki, decision no. DEC-2013/09/B/HS4/01488.

and commodities. Twenty two commodity groups most protected with the EU tariffs are analyzed. That makes the basis for further analysis comparing respective revealed comparative advantages of Polish and US export of those products to the EU, and their market shares in non-EU export of both countries. The study is supplemented with comparison of Polish and US top fifteen goods exported to the EU market.

The basic survey accounts for the year 2013, however we supplement it with the comparative analysis of data concerning the year 2011. Examination of data concerning 2013 and 2011 allows us to avoid long term analysis that would account for historical information regarding, for example, changes resulting from the global economic crisis started in the fall of 2008, and to focus on the recent years. Database www.trademap.org and wits.worldbank.org are used.

1. Polish and American export of the EU most protected product groups

This section examines HS2 commodity groups most duties protected on the EU market in 2013. For that purpose, groups of more than 15% (average) duties are listed. Next, Polish and the US shares in those groups supplies in the EU is examined (jointly in internal and external import among the EU Member States) in the years 2011-2013, and the groups significance for Polish and the US trade with the EU² (table 1) is analyzed. That may prove, that TTIP entry into force shall result in EU and US trade liberalization negatively affecting competitive position of Polish products, previously protected by tariffs.

Table 1. Product groups most tariff protected on the EU market in the year 2013, their share in the EU import in %, changes in shares in years 2011-2013 in p.p. and dynamics as 2013 import value quotient and import value in 2011.

HS	Category	Average tariff	Share in 2013	Share change 13-11	Dynamics 13/11
18	Cocoa and cocoa preparations.	59.50	0.39	0.00	94
16	Prep of meat, fish or crustaceans, molluscs et	50.00	0.37	0.03	104
19	Prep.of cereal, flour, starch/milk; pastrycook	50.00	0.46	0.06	109
24	Tobacco and manufactured tobacco substitutes	40.38	0.30	-0.03	87
4	Dairy prod; birds' eggs; natural honey; edible	40.00	0.77	0.08	106
7	Edible vegetables and certain roots and tubers	28.61	0.51	0.06	108
20	Prep of vegetable, fruit, nuts or other parts	28.00	0.48	0.03	101
2	Meat and edible meat offal	25.83	0.82	0.04	100

² In this study the EU, as the trade partner of Poland, is composed of 26 member states (the EU-of 27 minus Poland), Chile the EU as the US trade partner lists all 27 Member States.

11	Prod.mill.indust; malt; starches; inulin; wheat	25.00	0.10	0.01	109
57	Carpets and other textile floor coverings.	24.83	0.09	-0.01	90
61	Art of apparel & clothing access, knitted or c	23.25	1.40	-0.02	94
62	Art of apparel & clothing access, not knitted/	22.02	1.42	-0.05	92
17	Sugars and sugar confectionery.	21.00	0.28	0.02	103
64	Footwear, gaiters and the like; parts of such	20.21	0.86	0.04	100
9	Coffee, tea, mati and spices.	18.89	0.32	-0.04	84
21	Miscellaneous edible preparations	18.75	0.42	0.04	104
51	Wool, fine/coarse animal hair, horsehair yarn	17.54	0.09	-0.01	85
52	Cotton	17.20	0.14	-0.03	79
58	Special woven fab; tufted tex fab; lace; tapes	16.80	0.05	0.00	91
63	Knitted or crocheted fabrics.	16.64	0.31	-0.01	93
56	Wadding, felt & nonwoven; yarns; twine, cordage	16.27	0.14	0.00	95
10	Cereals	16.00	0.42	0.04	103

Source: <http://www.trademap.org>, <http://wits.worldbank.org>. Access: 14 June 2014

Table 1 data shows that twenty two product groups are most heavily EU tariff protected, and they are mainly agro-food, textile and clothing goods. The highest duties (exceeding 40%) are imposed on agri-food products of the groups 18, 16, 19, 24 and 4 (cocoa, meat and cereals, tobacco and dairy products). Less (but still markably) protected are textiles, clothing and shoes of the groups 57, 61, 62 and 64 (i.a. carpets, cloth and knitted accessories, as well as shoes), chargeable with duties amounting to 20-25%.

In the above mentioned groups of products there was a slight increase in EU import in years 2011-13 (growth rate slightly exceeding 109) in majority of agri-food products (exceptions provide groups 18, 24 and 9, showing a decreasing tendency of EU import value: growth rate below 100). On the other hand, import of all listed textile and clothing products has been falling. Not only their EU import value decreases, but predominantly, their shares in EU imports. That seems to confirm high efficiency of the EU protection, preventing the Single European Market against any import of third party products.

Table 2. Most EU tariff protected groups of products in 2013 in export from Poland and the US in %, changes in 2011-2013 in pp and dynamics as a percentage of import value quotient in 2013 and 2011 import value

HS2	Shares in Polish export to the EU			Shares in the US export to the EU		
	2013	change 13-11	dynamics	2013	change 13-11	Dynamics
18	0.67	0.12	123	0.02	0.01	127
16	0.73	0.10	116	0.06	-0.01	90
19	0.75	0.09	115	0.05	0.01	115
24	1.25	0.14	114	0.16	0.00	96
4	1.24	0.14	114	0.03	-0.01	76
7	0.55	0.06	113	0.12	0.04	142

20	0.77	0.11	118	0.16	-0.02	88
2	2.19	0.42	125	0.10	0.02	119
11	0.09	0.02	137	0.02	0.00	116
57	0.14	-0.01	95	0.02	0.00	93
61	0.91	-0.04	97	0.11	0.02	119
62	1.26	-0.04	98	0.11	0.01	109
17	0.39	0.08	126	0.03	0.01	131
64	0.37	0.10	140	0.03	0.01	121
9	0.31	0.01	104	0.01	0.00	86
21	0.90	0.14	119	0.28	0.05	120
51	0.08	-0.03	77	0.00	0.00	90
52	0.02	0.00	86	0.02	-0.02	50
58	0.03	0.00	108	0.01	0.00	93
63	0.43	-0.03	95	0.06	0.00	104
56	0.13	0.03	135	0.16	0.01	107
10	0.55	0.27	198	0.19	-0.15	54

<http://www.trademap.org>, <http://wits.worldbank.org>. Access: 14 June 2014.

Of these twenty two, most tariff protected groups of products, meat and offal have the biggest and increasing share in Polish export to the EU (group 2; 2,19% in 2013) – see table 2. Shares exceeding 1% have been recorded in groups 24, 4 and 62 (i.e. tobacco, dairy products and not knitted clothing), still shares of the first two groups show increasing trend. Four groups of commodities exceeding 1% share in Polish export to the EU are the most EU protected. Two other groups (24 and 4) are protected by over 40% tariffs, the next two groups (2 and 62) by over 22%. The US export shares in all those products does not exceed 0,16% and only some groups show minor share increase, not exceeding 0.05 pp.

The combined market share of twenty two groups of the most EU tariff protected products in Polish export to the EU in 2013 accounted for 13,76%, significantly exceeding the respective share in American export to the EU (1,75%). Moreover, export of products protected with particularly high tariffs from Poland to the EU not only accounts for major share of export from Poland, but also is more dynamic than export from the US to the EU. Reasons of so small share of protected products in US export to the EU can be both the EU market efficient protection and relatively weak position of those groups in the US export.

So, if the US goods competing against Polish on the EU market, tariffs lifting would give an advantage to US commodities over the Polish ones. The following formulas for revealed comparative advantage (RCA) analysis verify such a possibility:

$$RCA_{HS2}^{PLUE} = \frac{\frac{X_{HS2}^{PLUE}}{X^{PLUE}}}{\frac{M_{HS2}^{UE}}{M^{UE}}}$$

$$RCA_{HS2}^{USAUE} = \frac{\frac{X_{HS2}^{USAUE}}{X^{USAUE}}}{\frac{M_{HS2}^{UE}}{M^{UE}}}$$

As a part of the RCA analysis, share of the product group in total export from Poland/USA to the EU is compared with this group share in total EU import. The RCA indicator higher than 1 reveals product groups in which export to the EU has relatively higher share in export of the respective country than this group share in total EU import (table 3).

Table 3. Revealed comparative advantage of Poland and the US in export of most tariff protected goods to the EU in 2013.

HS2	RCA PL	RCA USA	difference
18	1.72	0.06	-1.66
16	1.96	0.15	-1.80
19	1.61	0.10	-1.52
24	4.10	0.51	-3.59
4	1.61	0.04	-1.57
7	1.08	0.24	-0.84
20	1.62	0.35	-1.27
2	2.66	0.12	-2.54
11	0.94	0.19	-0.75
57	1.55	0.21	-1.34
61	0.65	0.08	-0.57
62	0.88	0.08	-0.81
17	1.42	0.12	-1.30
64	0.43	0.04	-0.40
9	0.96	0.04	-0.92
21	2.13	0.65	-1.48
51	0.89	0.03	-0.86
52	0.12	0.16	0.04
58	0.58	0.20	-0.38
63	1.37	0.20	-1.17
56	0.93	1.12	0.19
10	1.29	0.44	-0.85

<http://www.trademap.org>, <http://wits.worldbank.org>. Access: 14 June 2014.

The data of Table 3 indicates that Poland has comparative advantage in export of thirteen of the twenty two of the EU most protected groups of goods, including the three of the four groups of those exceeding 1% of Polish export to the UE. Still, the US have comparative advantage in exporting wool, felt and nonwoven fabric (group 56) to the EU. Furthermore, the US show significant comparative disadvantages in trading with majority of these products. In the case of seven groups, US RCA indicators are below 0.1, and the

subsequent eight groups have RCA indexes in the range of 0.1-0.2. The US RCA of only three groups exceed 0.51. That leads to conclusion that Poland and the US are complementary trade partners of the UE. Moreover, the difference in Poland's and the US RCA is so big that it is practically impossible that it shall disappear after tariff elimination in the framework of TTIP.

Table 4. Share of most tariff protected product groups in Polish and US export to the non-EU markets in 2013

	PL	USA
18	0.8	0.1
16	0.3	0.2
19	0.7	0.3
24	0.3	0.8
4	1.2	0.4
7	0.7	0.3
20	0.6	0.4
2	2.0	1.3
11	0.2	0.1
57	0.2	0.2
61	0.1	0.1
62	0.5	0.2
17	0.4	0.2
64	0.4	0.2
9	0.2	0.1
21	0.7	0.6
51	0.0	0.0
52	0.0	0.0
58	0.0	0.1
63	0.4	0.2
56	0.1	0.2
10	0.5	1.5

<http://www.trademap.org>, <http://wits.worldbank.org>. Access: 14 June 2014.

To confirm the previous conclusion, shares of those twenty two product groups in Polish and American export to non-EU partners are analyzed. That will identify, firstly, Polish potential in export of the groups of goods having comparative advantage on the EU market, to non-EU partners, not granting them the free entry on their markets. Secondly, those products US export to non-EU partners will be examined (see table 4)³.

³ These export shares refer to total export of a country and not to the shares of these goods from both countries in the world export. Of course we are aware of a substantial difference of

Shares of Polish export of fourteen out of twenty two of EU tariff most protected product groups to non-EU markets are bigger than the US ones. The shares of two groups (18 and 4) are several times higher. A relatively better than US position of group 4 in Polish export is important, as this is the group of over 1 percent share in the EU market. In the case of the most protected product group 18 (cocoa) Polish export is relatively dynamically growing (127 – see Table 2), however because of the product characteristics it may not be perceived as the prospectus Polish top export. The other two product groups exported by Poland, 2 and 62, have over 1,26-percent share in the EU market, while the US share is smaller even in non-EU markets. In case of agri-food products (Groups 4, 18, and 2) some degree of EU protection can be expected even after TTIP becomes operational. As many of these products are perishable or have relatively low value per weight unit (especially not processed ones) that makes their transport difficult, thus giving advantage to Polish products over the American ones.

Tough competition is expected in export of Group 24 products (tobacco), as their share in the US export is twice as big as in Polish export (0.8 against 0.3), implying a relatively high competitiveness of this product in the world market. Customs duties removal in trade with the EU may threaten Polish tobacco position in that market.

2. Tariff protection of Polish top export products, their position in the EU import and the US export

The last part of the study refers to product groups with the largest share in Polish export to the EU. It covers the groups whose share accounts for at least 1% of Polish export. We analyze their protection with the EU tariffs, their shares in the EU and world export (see Table 5) as well as the US position as their exporter to the EU and to the whole world (Table 6). That enables to scrutinize the situation of Polish products in the EU market after TTIP implementation and lifting up EU tariffs. It allows to examine substitution of these goods with US products.

Table 5. Product groups with the largest share in Polish export to the EU (in %) and their share in Polish export (in %) to the world, changes to those shares in the years 2011-2013 in

export values of both countries due to big differences between Polish and American economic potential.

p.p. and dynamics as a percentage of quotient of export value in 2013 and export value in 2011.

HS2	Item	Average tariff	Polish export to the UE			Polish export to the world		
			Share 2013	Change 13-11	Dynamics	Share 2013	Change 13-11	Dynamics
87	Vehicles o/t railw/tramw roll-stock, pts & acc	7.35	11.75	-1.90	87	10.88	-1.84	91
84	Nuclear reactors, boilers, mchy & mech applian	5.21	11.63	-0.36	98	12.58	0.27	108
85	Electrical mchy equip parts thereof; sound rec	6.28	11.51	-0.22	99	11.14	-0.16	105
94	Furniture; bedding, mattress, matt support, cu	8.06	5.84	0.03	102	5.21	-0.08	105
27	Miscellaneous chemical products.	8.63	5.01	-0.29	96	4.77	-0.14	103
39	Plastics and articles thereof.	10.31	4.87	0.41	111	4.56	0.25	112
73	Articles of iron or steel.	10.38	3.35	-0.26	94	3.25	-0.17	101
40	Rubber and articles thereof	9.26	2.86	0.01	102	2.63	-0.08	103
72	Iron and steel	3.73	2.82	-0.40	89	2.38	-0.50	88
74	Copper and articles thereof	7.20	2.27	-0.32	89	2.28	-0.36	92
44	Wood and articles of wood; wood charcoal.	8.39	2.21	0.18	110	1.92	0.08	111
2	Meat and edible meat offal	25.83	2.19	0.42	125	2.14	0.26	121
48	Paper & paperboard; art of paper pulp, paper/p	9.48	2.15	-0.25	91	2.07	-0.52	85
30	Pharmaceutical products	0.88	1.44	0.30	128	1.55	0.33	135
76	Aluminium and articles thereof.	10.55	1.38	0.00	101	1.20	-0.04	103
62	Art of apparel & clothing access, not knitted/	22.02	1.26	-0.04	98	1.05	-0.05	101
24	Tobacco and manufactured tobacco substitutes	40.38	1.25	0.14	114	1.02	0.06	113
4	Dairy prod; birds' eggs; natural honey; edible	40.00	1.24	0.14	114	1.22	0.12	117
33	Essential oils & resinoids; perf, cosmetic/toi	13.32	1.20	0.08	108	1.42	0.01	107

<http://www.trademap.org>, <http://wits.worldbank.org>. Access: 14 June 2014.

Processed goods are the most important item in Polish export to the EU (groups 87, 84, 85 and 94, i.e. vehicles, nuclear reactors and boilers, electrical machines and equipment as well as furniture). They are followed by less processed commodities (e.g. mineral fuels, iron, steel etc).

On majority of Polish top export products onto the EU market relatively high tariffs are imposed. Additionally to the already mentioned most protected groups 2, 62, 24 and 4. This category includes also groups 73, 40, 48, 76, 33 and 39 (relatively low processed goods), whose import is tariffed with 9% up to 13%. Also three top Polish export groups onto EU market (87, 84 and 85), with over 11% stake, are relatively less protected (duties not

exceeding 7,35% are charged on them). Among Polish top export goods close to zero are duties imposed solely on pharmaceutical products (group 30; tariff rate 0,88%).

It is disturbing that Poland notes declines in the shares of three major product groups exported to the EU (87, 84 and 85) and in case of groups 84 and 85 Poland shall face tough competition of American products after TTIP entering into force. This is the case resulting from their relatively large share in American export not only to the EU (respectively: 17,76% and 7,3%), but also to other markets (respectively: 13,5% and 10,49%). This confrontation does not deprive Poland of its chance, as these products have even greater stake in Polish export to third countries (respectively: 12,58% and 11,14%).

Table 6. Product groups with largest share in Polish export to the EU in total EU import (in %) and in export from the US to the EU and to all world countries (share in %), changes to those shares in the years 2011-2013 in p.p. and dynamics as a percentage of quotient of import/export value in 2013 and import/export value in 2011.

HS2	UE import from the world			US export to UE			US export to the world		
	2013 share	change 13-11	dynamics	2013 share	change 13-11	dynamics	2013 share	change 13-11	dynamics
87	8.13	-0.09	94	3.65	-0.19	94	8.47	0.38	112
84	11.07	0.05	95	17.76	0.90	104	13.50	-0.36	104
85	9.43	-0.44	91	7.30	-0.58	91	10.49	-0.24	104
94	1.29	0.02	96	0.34	0.01	101	0.70	0.06	116
27	17.09	0.99	101	8.82	0.56	105	9.41	0.65	115
39	3.71	0.15	99	3.07	0.18	105	3.86	-0.11	104
73	1.69	-0.06	91	0.88	0.05	105	1.39	0.15	119
40	1.25	-0.12	87	0.83	-0.11	87	0.93	-0.07	99
72	2.50	-0.55	78	0.43	-0.17	70	1.25	-0.46	78
74	0.85	-0.13	82	0.30	-0.02	93	0.58	-0.07	96
44	0.80	-0.01	94	0.41	0.06	115	0.57	0.03	114
2	0.82	0.04	100	0.10	0.02	119	1.03	-0.01	106
48	1.31	-0.12	87	0.61	-0.06	90	1.04	-0.11	97
30	4.19	0.30	102	11.41	0.55	104	2.52	-0.10	102
76	1.16	-0.10	87	0.42	0.08	121	0.83	-0.05	101
62	1.42	-0.05	92	0.11	0.01	109	0.15	0.01	113
24	0.30	-0.03	87	0.16	0.00	96	0.12	0.00	110
4	0.77	0.08	106	0.03	-0.01	76	0.37	0.09	140
33	0.72	0.07	105	0.89	0.12	113	0.70	0.05	115

<http://www.trademap.org>, <http://wits.worldbank.org>. Access: 14 June 2014.

Summary

The analysis shows that the strongest EU tariff protection covers twenty two product groups. They belong to agri-food and textile and clothing (T&C) sectors. The highest tariffs (at least 40%) are levied on agri-food products (eg. cocoa, meat and cereals, dairy products and tobacco). The less protected are T&C products (carpets, knitted clothing and accessories, as well as shoes) burdened with 20-25% tariffs. Among twenty two most tariff protected products, the largest and growing shares in Polish export to the EU have meat and offal products (group 2: 2,19% in 2013). Tobacco, dairy products and not knitted apparel shares account for over 1%. Only the first two groups show the growing trend in Polish export. The US shares in those products export to the EU does not exceed 0,16% and only some groups show minor share increase, below 0.05 p.p. Total share of the EU most protected product groups in Polish export to the EU, in 2013 accounted for 13,76%, and was almost eight times the size of those groups share in the US export to the EU.

Poland enjoys comparative advantage in export of thirteen of the twenty two groups of the most EU tariff protected goods, including three of the four groups exceeding 1% share in Polish export to the EU. Among analyzed groups the US have comparative advantage solely in the export of wadding, felt and nonwoven (group 56) proving substantial comparative disadvantages in trade with majority of those products. In the case of seven strongly protected product groups, the US RCA indicators are below 0.1 and with other 8 groups are in the range between 0.1-0.2. That leads to the conclusion that Poland and the US are complementary EU trade partners.

Poland has bigger than the US share in export of fourteen of twenty two EU tariffs most protected product groups to non-EU markets. Moreover the shares in export of two product groups (18 and 2) are several times bigger. Four among the most EU protected product groups have bigger than the US share (exceeding 1%) in Polish export (4, 18, 2 and 62). Additionally, the most protected agri-food products are expected to enjoy further EU protection after TTIP implementation, and Poland is advantageous to the US in terms of location near to the other EU Member States.

Competition of American goods can be expected in the export of group 24 products (tobacco), as their share in the US export doubles its share in Polish export, implying a relative high competitiveness of the American products. Lifting EU tariffs may threaten Polish tobacco position on the EU market.

Processed goods have the biggest share in Polish export to the EU (groups 87, 84, 85 and 94, i.e. vehicles, nuclear reactors and boilers, electrical appliances and furniture). Less

processed products (e.g. mineral fuels, iron and steel articles) follow. In the analyzed years the most of Polish export hits is heavily protected. Additionally to the already mentioned groups 2, 62, 24 and 4, that concerns also groups 73, 40, 48, 76, 33 and 39 (with a relatively low level of processing), whose import from non-EU countries is burdened with tariffs ranging from 9% to 13%. Three vital Polish top export goods (87, 84 and 85), with over 11% share in Polish export to the EU are burdened with tariffs below 7,35%. Close to zero tariffs are levied on pharmaceutical products (group 30, duties 0,88%).

Poland observes decline in shares of three major product groups exported to the EU and shares in groups 87 and 85 in export to the non-EU countries. In the case of groups 84 and 85 an intensive competition of American goods is expected after TTIP implementation. This has been the case due to their relatively large market share in the US export to the EU and on the other markets. In this confrontation however, Polish share in those products export to non-EU markets is of considerable volume.

The analysis supports the initial hypothesis. Since Poland and the US export to the EU and to the non-EU countries differs, and there are also different comparative advantages the diversion effect is to be expected only to the extent limited to the product groups important for both states export.