TRADE OF THE EU WITH EASTERN EUROPEAN COUNTRIES (CASE OF UKRAINE AND TURKEY)

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Abstract

Trade security issues involve customs control and trade facilitation, sustaining competitiveness of domestic producers under open economy, optimization of foreign trade structure, stability of trade flows, and dependency on markets and suppliers.

We analyze the structure and trends in exports of the EU-28 Member States, Ukraine and Turkey, as well as their bilateral trade in goods and services. Nowadays both these countries have trade preferences in bilateral trade with the EU. Considering goods export structures, Turkey is much more competitor for the EU than Ukraine. Ukraine is rather a complementary economy to the EU and no Member State is vulnerable to competitive pressure from Ukrainian exports of goods. Despite both Turkey and Ukraine have similar levels of services export structure similarity with the EU, Ukrainian services exports are 6 times lower than the ones of Turkey, therefore threat of competition with Ukraine is minor. Competition with Ukrainian services exports is relatively higher in Central Europe, but since transport is a major type of services, competition can be balanced by cooperation benefits based on route connectivity under geographical proximity. Turkey is a major competitor to Southern Europe (especially Greece) and some other Member States. Turkey is larger trade partner for the EU because of higher income per capita than in Ukraine and longer period of free trade regime with the EU. Economic recovery of Ukraine after the crisis in 2014-15, free trade regime and approximation of customs legislation of Ukraine under the Association Agreement can also help to facilitate bilateral trade and improve trade security. Economic development of Ukraine based on foreign direct investment of companies from European and other countries in the Ukrainian economy and the opening of the EU market for Ukrainian goods can replace exports of some industrial products from Turkey. The economic crisis in Ukraine in 2014-15 led to a negative growth of exports from the EU to Ukraine, while exports rose to Turkey. Provision of EU export growth in Ukraine will largely depend on the pace of economic recovery. However, several Member States have higher rates of export growth (especially in Greece) or import growth from Ukraine than from Turkey. But the overall level of trade dependence on Turkey and Ukraine is quite low. EU trade balance is positive with Ukraine in goods and services. The positive balance of foreign trade with Turkey is not compensated by the trade deficit in services. Greece has a trade balance in surplus with Turkey and Ukraine both in goods and in services.

Keywords: EU, Turkey, Ukraine, bilateral trade, foreign trade structure

JEL Classification: F1, F13, F150

Introduction. Most of the Eastern European Countries are at the frontier of the EU, which is interested in developing efficient trade links with these countries. Turkey and Ukraine are the second and the third most populated countries in Eastern Europe. Turkey has established a customs union with the EU in 1996 and is a candidate for accession since 1999, while Ukraine has recently established an Association Agreement with the EU. Both countries benefit from mutual trade preferences with the EU and are either involved or have large potential for increasing involvement in value chains with the EU companies.

Increasing interconnectivity and interdependency of countries is seen as one of the main challenges for customs and trade policy (Aigner 2017). Securing trade links with the EU partners involves many issues including avoiding illegal transactions or tax evasion, protecting interests of national producers and avoiding excessive barriers to trade for the benefits of domestic consumers and exporters.

At the customs service’s level trade facilitation and security issues should be balanced in order to minimize risks and costs. The topical issues include mutual recognition of controls, security standards and authorized economic operators through international agreements, which should facilitate trade without questioning security (Aigner 2017).

In case of Ukraine Chapter 5 of Title IV of the Association Agreement between the EU and Ukraine is devoted to customs and trade facilitation issues. E.g. Article 75 encourages balanced approach for trade facilitation, security and prevention of fraud, while article 76 envisages application several international instruments including Framework of Standards to Secure and Facilitate Global Trade of 2005 developed by World Customs Organization. According to the Annex XV Ukraine is to approximate its legislation to most of the articles of the Regulation (EC) No 450/2008 of the European Parliament and the Council of 23 April 2008 laying down the Community Customs Code (Modernized Customs Code).

The EU−Ukraine Association Council noted that the volume of trade between Ukraine and the EU increased by 7.5% in the period from October 2015 to September 2016 in comparison with the previous period. Ukraine has established a program for authorized economic operators in accordance with the World Customs Organization recommendations, applied for accession to the Regional Convention on pan-Euro-Mediterranean Preferential Rules of Origin, approved the draft Comprehensive Strategy of Reforming Sanitary and Phytosanitary Supervision System in Ukraine and the Roadmap for the system of public procurement reforms. A dialogue was initiated on the conclusion of the Agreement on Conformity Assessment and Acceptance of Industrial Products (Ministry of Economic Development and Trade of Ukraine 2016).

But trade security issues at the macro-level or the level of industries also involve sustaining competitiveness of domestic producers under open economy, optimization of foreign trade structure, stability of trade flows, and dependency on markets and suppliers. In our study we concentrate on these issues of trade security.

1. **Recent literature.** Trade links of the EU with Ukraine and Turkey were discussed in several studies. Bayar and Ozekicioglu (2014) stated that customs union between Turkey and the EU resulted in trade creation effect and no trade diversion effect with third countries. Trade deficit of Turkey increased, but as a result of trade with non-EU countries. Turkey increased its competitive advantage in 50 groups of goods (some manufacturing industrial products) and lost in 17 groups (mainly some agricultural and textile products), while 188 groups remained unaffected.

Seymen and Gümüştekin (2012) found that only 5% of Turkish exports to the EU were R&D intensive goods, while the share in imports was 15%. Togan (2011) claimed that the customs union provided additional benefits for the EU exporters in the third countries, because Turkey was able to establish free trade areas with third countries after the EU, which put exporters in Turkey into disadvantageous position.

Dabrowski and Taran (2012) described Ukrainian exports as concentrated on steel, fertilizers and agriculture. Konchyn (2016) found that Ukraine has traditionally high Revealed Comparative Advantage indices for iron ore and concentrates, some iron products, vegetable oils, electricity, coal, raw wood, fertilizers etc. New comparative advantages appeared in recent years in case of maize, oil seeds, feeding staff for animals etc. Didkovska (2013) stated that Ukraine exports to Western Europe had some seasonality, while import form the EU was more stable across a year.

But there is a lack of comparative studies for bilateral trade with several countries, including comparing Turkey and Ukraine as trade partners of the EU.

2. Methodology. We analyze structure and trends of exports of the EU-28 Member States, Ukraine and Turkey as well as their bilateral trade. We use mostly the UNCTAD (2016) data. Eurostat (2016) data is used to analyze bilateral trade in services.

First, we analyze the product structures of goods export of the EU, Ukraine and Turkey in order to find out, whether they are competitors to the existing Members States. We use the Pearson correlation formula:

$$r = \frac{\sum_{i=1}^{n}(x-\overline{x})(y-\bar{y})}{\sqrt{\sum_{i=1}^{n}(x-\overline{x})^2(y-\bar{y})^2}}$$

In our case x_i is the share of good i in the total exports of country X and y_i is the share of good i in the total exports of country Y. Correlation close to 1 mean that two countries are close competitors. Correlation close to 0 means that competition between countries is likely to be somewhat lower. And in most cases correlation close to -1 would mean low competition between countries. A similar approach is used to analyze similarity of structure of services exports. But we should note that correlations for structure of exports of goods and services are not comparable, considering different number of types of goods (255) and services (12).

The next step is to find out for what products Turkey or Ukraine are more important markets and suppliers and which of the EU Member States depend more on exports to Ukraine and Turkey and import from them. We also consider export and import growth trends and bilateral trade balances for specific Member States. Trade in goods and trade in services are analyzed separately for two reasons. In most cases the data for 2015 is available, except for bilateral trade in services (data for 2014 is used in this case). Also there is some missing data for structure of services exports (Finland) and bilateral trade in services (Germany, Spain and Finland).

3. Results.

3.1. Structural similarity of exports.

The correlation between the structure of goods exports of Turkey and the EU is high enough (0.51), while the correlation between the structure of exports of Ukraine and the EU is low (0.0) – see figure 1. Therefore Ukrainian exports compete much less with the EU's exports than the exports of Turkey. There is also low correlation between export structures of Ukraine and Turkey (0.05).

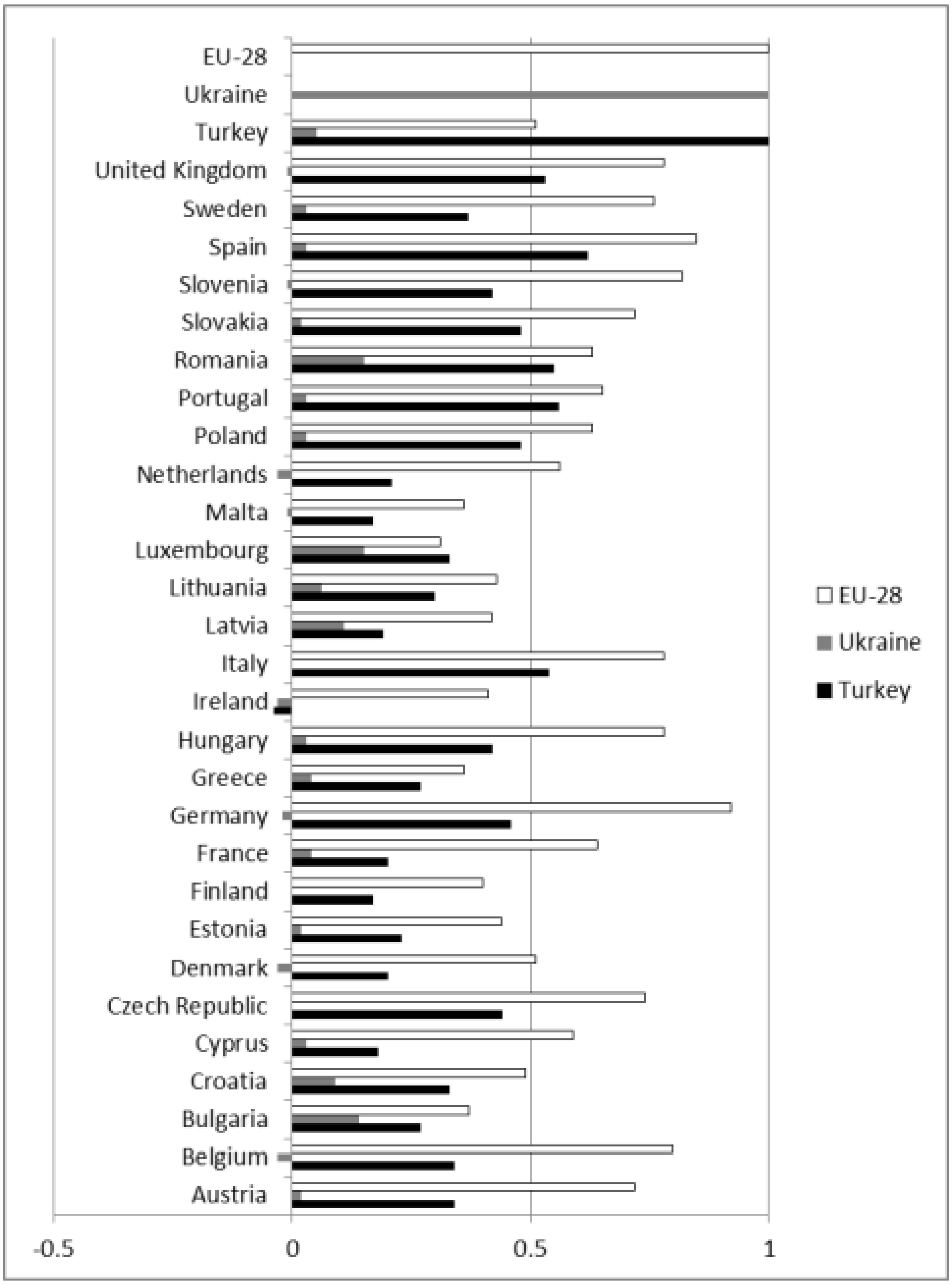

Figure 1. Correlation of product structure of exports of the EU Member States, Turkey and Ukraine.

Source: calculations based on UNCTAD data.

We also consider competition with exports of particular EU Member States. There is almost equally low competition between Ukraine and every EU Member State. The highest correlation is with Luxemburg and Romania, and still it is very low (0.15). These countries are followed by Bulgaria and Latvia. In some cases correlation is slightly negative, e.g. -0.03 in case of Belgium, Denmark and the Netherlands. Therefore goods exporters of Ukraine are rather complementary to the EU trade than competitors.

As for structure of goods exports of Turkey, the highest correlation is with Spain (0.62) followed by Portugal, Romania, Italy, United Kingdom, Poland, Slovakia, Germany, the Czech Republic, Hungary and Slovenia. These countries are relatively more vulnerable to competition with Turkey. Substantial correlation is also in case of Sweden, Austria, Belgium, Croatia, Luxemburg, Lithuania, Bulgaria, Greece, Estonia and the Netherland. The lowest correlation is with Denmark and France, Latvia, Cyprus, Finland, Malta and especially Ireland (-0.04). Therefore all the EU Member States except Ireland experience higher structural export competition with Turkey than Ukraine. The main competitors of Turkey are several Southern European countries, United Kingdom and some Central European countries. The level of structural competition between Turkey and the EU is similar to competition between the EU Member States themselves. E.g. the correlations with the EU-28 product structure of exports range from 0.31(Luxemburg) and 0.36 (Greece) to 0.85 (Spain) and 0.92 (Germany).

The correlations between the structure of services exports of both Turkey and Ukraine with the EU are similar (0.52 and 0.60). There is also a positive correlation between services export structures of Ukraine and Turkey (0.40). We also consider competition with exports of the particular EU Member States.

Correlations with structure of Ukrainian services exports vary substantially. There are several groups of countries with:

- high correlation (more than 0.75): Denmark, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia;
- substantial correlation (0.50-0.75): Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, France, Germany, Greece, the Netherlands, Slovenia, Sweden;
- weak correlation (0.25-0.50): Italy, Portugal, Spain, United Kingdom;
- low correlation (below 0.25): Croatia, Ireland, Luxemburg, Malta.

We see that the highest competition in services is with Central European countries (the highest correlation 0.94 is with Romania), while the lowest one is with Southern Europe, the smallest Member States (especially negative correlation -0.08 with Luxemburg) and British islands.

The groups of countries by correlation with structure of services exports of Turkey are:

- high correlation (more than 0.75): Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Greece, Italy, Portugal, Slovakia, Slovenia, Spain;

- substantial correlation (0.50-0.75): Cyprus, Denmark, Hungary, Latvia, Lithuania, Poland;
- weak correlation (0.25-0.50): France, Germany, Romania, Sweden;
- low correlation (below 0.25): Belgium, Ireland, Luxemburg, Malta, the Netherlands, United Kingdom.

The highest competition in services is with Southern Europe (the highest correlation 0.98 is with Greece), while the lowest is with Benelux countries and British Islands (especially negative correlation -0.31 with Ireland).

3.2 Bilateral trade links

In 2015 the EU traded in goods 5 times more with Turkey than with Ukraine, although before the crisis of 2014-15 in Ukraine the difference was only 3-4 times. In 2014 Turkey was 2.6 times more important market for the EU services exports than Ukraine. The difference was even 6 times for the EU services imports.

But there are some industries where Ukraine is more important market for the EU exporters (see table 1) including insecticides and similar products, coal industry, natural gas, worn clothing, coffee, fishing industry, eggs and fruits. Ukraine is a more important supplier especially in case of cereals, iron and steel industry, vegetable oil and seeds, feeding staff for animals, wood and wood manufacture, electric current, coal industry etc. (see table 2). E.g. 10% of iron ore and concentrates imported by the EU originate in Ukraine.

Table 1. Industries / products where Ukraine is larger market for the EU exports than Turkey, 2015.

EU export products	Exports to Ukraine minus exports to Turkey, $ mln	Exports to Ukraine, times exports to Turkey
Insecticides and similar products	164	1.7
Coal industry	142	5.8
Natural gas	116	6.7
Worn clothing	78	3.3
Coffee	59	2.3
Fishing industry	38	2.9
Eggs	18	1.9
Fruits	12	1.1

Source: calculations based on UNCTAD data.

Table 2. Industries/products where Ukraine is a larger supplier to the EU than Turkey, 2015.

EU import products	Imports from Ukraine minus imports from Turkey, $ mln	Imports from Ukraine, times imports from Turkey
Cereals	1661	8.5
Iron and steel	1395	1.89
Iron ore and concentrates	992	517
Fixed vegetable oils	707	48
Oil seeds	643	12
Feeding staff for animals	556	987
Wood	529	98
Wood manufacture	240	4.2
Electric current	167	6.9
Coal industry	154	5.8
Fertilizers	113	2.6
Meat	75	7.9
Sugar, molasses and honey	25	1.4
Baby carriages, toys, games & sporting goods	21	1.47
Railway vehicles	16	1.6

Source: calculations based on UNCTAD data.

The majority of the EU Member States trade more with Turkey. But four countries export more goods to Ukraine: Lithuania (4.0 times), Cyprus (1.6), Estonia (1.1) and Poland (1.1); and nine countries export more services to Ukraine: Cyprus (37), Poland (15.3), Slovakia (3.9), Lithuania (2.6), Hungary (2.6), Croatia (2.5), Estonia (2.3), Czech Republic (2.1) and Latvia (1.2). Four countries import more goods from Ukraine: Cyprus (1.3), Hungary (1.4), Latvia (1.2) and Lithuania (1.4); and five countries import more services from Ukraine: Cyprus (15), Hungary (1.8), Lithuania (1.5), Slovenia (1.1) and Poland (1.0).

But export and import dependency of the EU is low in both cases. Export dependency of only two countries on Turkey is relatively high (8.6% – Bulgaria and 6.7% – Greece). In case of Ukraine the mostly dependent country is Lithuania, but still the share of exports to Ukraine is low (2.8%). Bulgaria has the largest import dependency, but it is rather low (5.7% imports originate in Turkey and 1.8% in Ukraine).

The economic crisis of 2014-15, the related devaluation, territorial disintegration and actions of Russia resulted in downward trend in bilateral trade between the EU and Ukraine, especially in the EU exports.

In comparison to 2010 in 2015 the EU exports of goods to Ukraine decreased by 31%, while exports to Turkey increased by 8%. Export growth was better with Turkey, except in case of Greece (increase of export to Ukraine by 75%, while to Turkey by 14%), Malta, Luxemburg and Sweden. In comparison to 2010 in 2014 the EU exports of services to Ukraine increased by 13% (and by 32% to Turkey). Export change was better with Turkey, except in case of Luxemburg, Greece, Belgium, Denmark, Croatia, Italy, Cyprus, Lithuania, Hungary, the Netherlands and Slovenia.

The EU imports of goods from Ukraine decreased by 10%, while imports from Turkey increased by 21%. Import change was better with Turkey, except in case of Ireland, Portugal, Spain, the Netherlands, Croatia, France, Luxemburg and Slovenia. The EU imports of services from Ukraine increased by 1%, while imports from Turkey increased by 10%. Import growth was better with Turkey, except in case of Slovenia, Denmark, Bulgaria, Greece, Croatia, Lithuania, Luxemburg, the Netherlands and Poland.

The trade balance in goods of the EU with Turkey ($14.8 bln) in 2015 was better than with Ukraine ($1.2 bln), but both were in surplus. In 2014 trade balance in services was in surplus with Ukraine ($1.6 bln) and in deficit with Turkey ($-4.7 bln). There are four groups of the EU Member States by trade balance with Turkey and Ukraine (see tables 3 for trade in goods and 4 for trade in services).

Table 3. Bilateral trade balance in goods of the EU Member states, 2015.

	Trade deficit with Ukraine	Trade surplus with Ukraine
Trade surplus with Turkey	Bulgaria, the Czech Republic, Ireland, Italy, Latvia, the Netherlands, Slovakia, Spain	Belgium, Estonia, Finland, France, Germany, Greece, Hungary, Lithuania, Luxemburg, Poland, Sweden
Trade deficit with Turkey	Croatia, Cyprus, Malta, Portugal, Romania	Austria, Denmark, Slovenia, United Kingdom

Source: calculations based on UNCTAD data.

Table 4. Bilateral trade balance in services of the EU Member states, 2014.

	Trade deficit with Ukraine	Trade surplus with Ukraine
Trade surplus with Turkey	Austria, Romania	Bulgaria, Czech Republic, Ireland, Greece, Croatia, Latvia, Luxemburg, Hungary, Netherlands
Trade deficit with Turkey	France, Italy, Cyprus, Lithuania, Slovenia	Belgium, Denmark, Estonia, Poland, Portugal, Slovakia, Sweden, United Kingdom

Source: calculations based on UNCTAD data.

Conclusion

Considering goods export structures, Turkey is much more competitor for the EU than Ukraine. Ukraine is rather a complementary economy to the EU and no Member State is vulnerable to competitive pressure from Ukrainian exports of goods. As for structure services exports, both Turkey and Ukraine have similar levels of competition with the EU. But Ukrainian services exports are 6 times lower than the ones of Turkey, therefore threat of competition with Ukraine is minor in this case too.

Competition with Ukrainian services exports is relatively higher in Central Europe, but since transport is a major type of services, competition can be balanced by cooperation benefits based on route connectivity under geographical proximity. Turkey is a major competitor to Southern Europe and some other Member States. The highest competition in services is with Greece (both Greece and Turkey are tourism oriented and neighbor economies).

Turkey is larger trade partner for the EU. It is natural because of higher income per capita than in Ukraine and longer period of free trade regime with the EU. Bulgaria and Greece are relatively more dependent on exports to Turkey considering geographical proximity. But Ukraine is larger market for the EU for some chemical, energy, food products and worn clothes. Ukraine is also larger supplier of some agricultural products, iron and steel, wood, energy products etc.

Economic recovery of Ukraine after the crisis in 2014-15 can secure the EU exports to that country. Besides establishing free trade regime, customs cooperation and approximation of customs legislation of Ukraine under the Association Agreement can also help to facilitate bilateral trade and improve trade security. Economic development of Ukraine based on foreign-direct investment by enterprises of European and other countries in the Ukrainian economy and the opening of the EU market for Ukrainian goods can replace some of the exports of industrial products from Turkey.

Several EU new Member States rely more on trade with Ukraine than with Turkey, especially Cyprus. But the overall level of trade dependency on Turkey and Ukraine is low enough. Economic crisis in Ukraine in 2014-15 led to negative growth of EU exports to Ukraine, while exports to Turkey grew. Securing growth of the EU exports to Ukraine will largely depend on the pace of economic recovery. But several Member States had better growth of exports (especially Greece) to or imports from Ukraine than to / from Turkey.

Trade balance of the EU is positive with Ukraine both in goods and services. Trade surplus in goods with Turkey is not offset by trade deficit in services. As for regional pattern, most Southern European countries have trade deficit with Ukraine in goods. But Greece is an exception with trade surplus with Turkey and Ukraine both in goods and services. Central European and Benelux countries tend to have trade surplus with Turkey in goods and with Ukraine in services. Northern European countries have trade surplus with Ukraine.

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