




# “Bilateral trade and tourism relations between the EU and BSEC countries”

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# BILATERAL TRADE AND TOURISM RELATIONS BETWEEN THE EU AND BSEC COUNTRIES

## Abstract

The European Union and the Black Sea Economics Cooperation countries are geographical neighbors and important trade partners. Greece, Bulgaria and Romania have a cross-membership in both organizations. The paper analyzes trends and structure of trade relations of the EU and BSEC countries. The EU trade with the 12 BSEC countries is about 640 billion dollars. The BSEC countries with the EU membership or a custom union with the EU have more intra-industry trade with the EU than other BSEC countries. International tourism is an important component of the trade in services between the regions. Following the review of the factors of international tourism demand, a gravity model for tourism arrivals is presented. The model considers demand in the country of origin, international tourism capacities in destination countries and distance. The analysis helps to determine under-traded and competitive destinations in the BSEC countries for the EU travelers. Greece is the most efficient in attracting the EU tourists. Finally, country-specific differences in demand factors are considered.

## Keywords

international trade, international tourism, gravity model,  
EU, BSEC countries, Greece

## JEL Classification

F10, F15, Z32

## INTRODUCTION

The EU (European Union) and BSEC (Black Sea Economic Cooperation) countries are geographical neighbors. Three countries have a cross-membership in both organizations (Greece, Bulgaria and Romania). Many other countries have other types of institutional anchor to the EU: customs union (Turkey), new Association Agreements (Georgia, Moldova, Ukraine), Stabilization and Association Agreements (Serbia, Albania), candidates for membership, European Neighborhood Policy and Eastern Partnership Policy, Partnership and Cooperation Agreements. Simultaneously, the geopolitical tension because of hybrid war of Russia with Ukraine resulted in sanctions and other restrictive measures between Russia and the EU.

The paper is devoted to the analysis of trade relations of the EU and BSEC countries, their role, structure and trends. The particular interest is to determine trends and factors of bilateral tourism relations. The paper starts with analysis of trade in goods and services in general and continues by modelling arrivals of the EU tourists to several BSEC countries.

The current research of the EU-BSEC relations largely concentrates on geopolitical issues, while empirical studies largely consider past periods. Foreign trade issues and especially tourism relations are considered often in country-specific research. In this paper, there is an attempt to treat the BSEC as a regional bloc and to consider its diversity. Despite geographical proximity, the BSEC countries have various structures of foreign trade and economy and various dependence on

the exports to the EU. Tourism sector is an important economic sector for some of the BSEC countries. But still other countries also manage to find their niche tourism markets oriented to specific EU countries. Estimation of efficiency and underexploited potential for specific bilateral travel relations can contribute to further development of bilateral economic and cultural relations between the regions.

## 1. LITERATURE REVIEW

Liargovas and Papazoglou (1999) mentioned that besides size of the market, population and distance, also liberalization and privatization affected the level of trade integration between the BSEC and the EU countries.

Astrov and Havlik (2008) analyzed trends and structure of trade in the region. For example, most of the BSEC countries had trade deficits. Germany, Italy and the Netherlands were important trade partners for them. Azerbaijan and Russia exported mostly fuels and other mineral products. Ukraine, Armenia and Georgia supplied largely metals and other low-processed goods. Bulgaria and Romania exported mainly manufactured goods.

Manoli (2010) stated that despite tensions between the EU and Russia, the EU's role as a trade partner for the BSEC countries increased. The EU was the main trading partner for many countries of the region. At the same time, intra-regional trade between the BSEC countries was only 20% of their total international trade.

Hajizada and Marciacq (2013) noted the shift from the BSEC-driven regionalism to the EU-driven regionalism in international trade of the Wider Black Sea Area.

There are also numerous studies of trade of particular countries, for example, Arghyrou (2000), Koukouritakis (2003), Marinescu and Szeles (2010) for Greece.

As for research of international tourism, Song and Li (2008) published a review (meta-study) of 121 research papers modelling tourism demand. In most cases, these were one-country studies. Multi-country research studies are obviously less frequent. In another meta-research work, Peng, Song, Crouch and Witt (2014) stated that in 2/3-3/4 cases researchers analyze tourism demand in the destination country. The most frequently analyzed host

countries are in Asia and Europe (in total 60%) and the most frequently analyzed countries of origin are located in Europe (40%).

Stepchenkova and Eales (2011) wrote that early models of tourism included gravitational models, where tourist flows between countries were positively affected by output in the countries and inversely depended on the distance between them. Various models were also provided by González and Moral (1995), Papatheodorou (1999) and other researchers.

Researchers often face the problem of the choice of an indicator to measure tourist demand as a dependent variable in modeling. The most popular tourist demand indicator was the number of tourist arrivals, as it is easier to find data about bilateral tourism relations in this case (Song & Li, 2008). The following indicators of tourist demand are the most frequently used: tourist arrivals (in 65-67% of research works), tourism expenditures or receipts (19-21%), length of stay (Peng, Song, Crouch, & Witt, 2014).

In most cases, researchers analyze the aggregate travel demand in a country, but sometimes it is decomposed according to the purposes of trip, country of origin, etc., and can be summarized afterwards (indirect prediction of aggregate demand) (Song & Li, 2008). Cortés-Jiménez and Blake (2011) use the case of the UK to prove that analyzing only the aggregate demand ignores significant differences between different segments of the market. In particular, income elasticity of demand for tourism was significantly different depending on the country of origin of tourists.

The most important factors analyzed in tourism demand research are income of potential consumers of tourism services, prices, and exchange rates. The remaining factors are less popular among researchers. The income of potential tourists is proxied by nominal or real GDP or GNP (total or per capita), real consumption per capita, superfluous income (less expenditure on food, housing, fu-

el and power), foreign travel budgets, industrial production indices, and real household disposable income. Private consumption and individual disposable income are considered to be the most appropriate in case of recreation tourism and visiting relatives or friends, while indicators of total income are more relevant for the analysis of business tourism. The average income elasticity was 2.526 (Peng, Song, Crouch, & Witt, 2014).

Prices are usually measured by consumer price index in a host country in relation to the index in the country of origin of tourists. Alternative indicators are price index for services; hotel price index; weighted average of prices for food, accommodation, transportation, entertainment and other services; prices for air transport; distance; fuel prices. Exchange rates are also used to indicate the effect of prices (Peng, Song, Crouch, & Witt, 2014).

As for distance, Papatheodorou (1999) noted that there are two opposing effects of geographical proximity of competing destination countries on the price elasticity of demand. The first effect (the characteristics effect) means that neighboring destination countries are close substitutes, as they are likely to have similar consumer characteristics. Therefore, in case of a rising prices in one country, tourists prefer visiting similar neighboring countries. The second effect (the voyage effect) means that neighboring destinations are complements considering saving transport costs. Before prices increase in one country, those tourists who visit it also tend to visit a neighboring country. But after the price rise, they avoid visiting both countries. E.g. Spain and Portugal are considered to be substitutes (because they have similar characteristics), while Greece and Turkey are complements (since there are more distant from the countries of origin of tourists and are less similar).

Other factors include total population in the country of origin of tourists, promotional expenditure to improve a country's image for tourists, time trends reflecting changes in tourists' tastes, climate change, political instability, foreign direct investment as a determinant of business tourism, educational level of tourists, age of tourists, unemployment, income inequality (Peng, Song, Crouch, & Witt, 2014). For example, Neumayer (2004) has explicitly examined the impact of the various

types of political violence or human rights violations. Besides traditional factors, Rosselló, Guiló, and Riera (2005) analyzed also dissemination of information to consumers.

## 2. METHODS

Structural analysis of the UNCTAD statistical data is used to assess the trends in the merchandise trade between the two regional blocs. The data are analyzed across the time by individual BSEC members and groups of products. Structures of the total trade of the EU and its trade with the BSEC countries are compared. Another issue is balance of trade.

A similar approach is used for international trade in services, although the data are provided by the Eurostat and are less comprehensive. Also, structural analysis of bilateral trade in services is limited by travel services.

Correlation and regression analysis are used to assess determinants of bilateral tourism relations of the EU and BSEC countries within a gravity model approach. The dependent variable is the number of trips of the residents of the EU member states to some of the BSEC countries (A). The source of data is the Eurostat, although it provides data for only 6 destination countries: Bulgaria, Greece, Romania (the EU member states) and Russia, Turkey and Ukraine (non-members of the EU), including two countries with special relations with the EU (Turkey – customs union, Ukraine – deep and comprehensive free trade area). The period considered is 2006–2016.

The independent variables are:

- GDP – GDP of countries of origin (prices in 2010, million euro) as an indicator of demand (source: Eurostat);
- TA – international tourism (total number of arrivals to destination countries from all over the world) as an indicator of tourism sector capacities (source: World Bank World Development Indicators);
- D – distance between capitals, km (source: DistanceFromTo: <https://www.distancefrom-to.net/>).

The multi-country model is complemented by country-specific models. The actual number of trips and the number estimated with the multi-country regression model are compared to assess which tourism locations are overtraded or undertraded. Overtrading means specialization on particular countries of origin, while undertrading means potential for strengthening international tourism relations. A particular attention should be paid to the cases where the difference is less than  $-1$  (in logarithms) for undertraded locations (actual number is less than 2.718 times than a predicted one) and more than  $+1$  for overtraded locations (actual number is more than 2.718 times than a predicted one). For each destination and origin country, the latest year with available data (in the period 2012–2016) is considered.

Finally, correlations are calculated for each country of origin to assess specific features of their demand for travels to the BSEC countries.

### 3. RESULTS

#### 3.1. Trade relations between the EU and BSEC

Tables 1 and 2 show the bilateral merchandise trade trends in the period 2006–2016. The EU trade with the 12 BSEC countries is about 640 billion dollars. It accounts for 6% of the total interna-

tional trade of the EU countries. The share for the EU exports peaked two times. The first peak was in 2008. It was followed by the crisis, which was especially severe for some of the BSEC countries. The second peak was in the period 2012–2013. Then, the hybrid war of Russia with Ukraine and the sanctions against Russia, as well as falling fuel prices, affected their market size. Falling energy prices also resulted in decrease of the BSEC countries' share in the EU imports after 2013.

In the period 2006–2016, the fastest growth of the EU exports was to Georgia, Romania, Bulgaria, Albania and Moldova. Meanwhile, the exports to Greece, Ukraine, Azerbaijan and Russia decreased. The EU imports from Albania, Moldova, Romania and Bulgaria grew the most. Imports from Russia and Armenia decreased.

In 2016, Turkey was the largest market for the EU exports of goods among the BSEC countries. It was followed by Russia and Romania. The three countries were also the main suppliers from the BSEC region. The EU has a trade surplus in most cases except with fuel exporting countries (Russia and Azerbaijan), but the deficit has decreased since 2011 following the fuel price trends.

Table 3 provides the data about the structure of the EU exports and imports of goods to the BSEC countries. The EU exports mostly manufactured goods, including machinery and transport equipment, to the BSEC countries, and imports mostly

**Table 1.** The EU exports of goods to the BSEC, billion euros

Source: UNCTAD and authors' calculations.

Partner	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Albania	2.0	2.5	3.2	2.9	2.9	3.2	3.1	3.0	3.3	2.8	3.0
Armenia	0.6	0.8	1.0	0.7	0.7	0.9	0.9	1.0	1.0	0.7	0.7
Azerbaijan	2.4	2.2	3.0	2.2	3.1	3.9	3.8	5.0	4.6	3.8	2.1
Bulgaria	12.0	15.2	19.7	13.7	14.7	18.5	18.5	20.1	21.7	19.2	19.3
Georgia	1.2	1.5	1.9	1.3	1.6	2.3	2.7	2.7	2.6	2.1	2.3
Greece	40.3	48.7	54.7	42.3	36.4	35.6	29.2	30.1	31.4	26.1	26.9
Moldova	1.5	2.0	2.5	1.7	2.1	2.6	2.6	3.0	3.2	2.3	2.2
Romania	34.6	44.3	54.6	38.4	42.8	53.8	50.2	54.0	57.3	52.4	55.9
Russia	89.2	119.6	151.8	90.9	113.1	150.5	158.0	159.5	136.8	80.9	78.8
Serbia	–	–	14.5	10.4	11.0	13.2	12.9	13.9	14.4	12.8	13.6
Turkey	62.1	71.2	79.3	61.1	80.6	100.8	95.7	102.5	97.7	86.2	85.6
Ukraine	22.6	30.3	36.9	19.4	22.9	29.7	30.9	32.1	22.7	15.7	18.4
Total for BSEC	268.5	338.4	423.2	285.1	331.7	415.0	408.4	426.8	396.6	304.9	308.9
Share of merchandise trade with BSEC countries	5.8	6.3	7.1	6.2	6.4	6.8	7.0	7.0	6.5	5.7	5.8

**Table 2.** The EU imports of goods from the BSEC, billion euros

Source: UNCTAD and authors' calculations.

Partner	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Albania	0.7	0.9	1.0	1.0	1.2	1.4	1.5	1.8	1.8	1.4	1.6
Armenia	0.5	0.5	0.5	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.4
Azerbaijan	6.5	9.9	16.1	10.5	13.3	21.6	18.3	18.9	17.4	11.8	8.6
Bulgaria	9.4	10.4	12.6	10.4	12.7	16.8	15.5	17.4	17.9	16.1	17.1
Georgia	0.6	0.7	0.9	0.6	0.8	0.9	0.8	0.9	0.9	0.8	0.6
Greece	13.7	16.1	16.8	13.2	14.5	16.7	15.0	15.8	15.5	14.0	14.1
Moldova	0.7	1.1	1.2	0.8	0.8	1.2	1.3	1.3	1.6	1.4	1.5
Romania	23.4	25.7	30.7	27.5	34.2	42.4	38.0	42.7	47.5	42.6	45.3
Russia	185.9	207.2	271.8	177.1	230.3	295.7	296.0	292.9	262.9	165.2	139.6
Serbia	–	–	6.5	4.9	5.8	7.1	6.5	8.9	9.6	8.8	9.9
Turkey	55.1	67.7	71.8	54.2	60.0	71.5	66.1	71.4	76.4	72.1	78.8
Ukraine	13.0	16.0	20.9	11.1	16.1	22.4	18.8	18.6	18.6	14.6	15.2
Total for BSEC	309.5	356.1	450.8	311.5	390.2	498.2	478.1	491.1	470.6	349.2	332.7
Share of merchandise trade with BSEC countries	6.5	6.4	7.2	6.6	7.3	8.0	8.2	8.3	7.8	6.7	6.4

fuels, machinery and transport equipment. The BSEC countries are an important source of fuels, ores and metals, and textile and clothes for the EU.

Structures of trade vary across the countries. The EU countries export relatively more food to Greece (20.3% of the EU exports to it in 2016), Albania (13.6%) and Bulgaria (13.1%); ores, metals, iron and steel to Azerbaijan (8.3%), Bulgaria (7.8%) and Turkey (6.7%); fuels to Georgia (17.0%) and Moldova (15.9%); chemical products to Greece (21.9%), Russia (21.6%) and Ukraine (21.0%); machinery and transport equipment to Turkey (48.0%), Russia (43.7%) and Azerbaijan (43.5%); textile and clothing to Albania (13.7%) and Armenia (12.2%). But there is a greater com-

modity concentration of imports. The EU countries import relatively more food from Moldova (36.1%) and Greece (32.2%); agricultural raw materials from Ukraine (4.4%); ores, metals, iron and steel from Armenia (73.4%), Georgia (35.5%) and Ukraine (29.0%); fuels from Azerbaijan (98.0%) and Russia (67.2%); chemical products from Greece (14.8%); machinery and transport equipment from Romania (49.6%) and Turkey (39.3%); textile and clothing from Albania (26.3%), Turkey (24.0%), Moldova (20.1%). The EU export and import structures with Azerbaijan and Russia are the most different, because the latter countries are mainly fuel exporters. Armenia, Georgia and Ukraine also have different structures of exports and imports. Other countries especially Romania,

**Table 3.** Structure of the EU merchandise trade with the BSEC countries (2016)

Source: UNCTAD and authors' calculations.

Type of goods	EU exports to BSEC, billion euros	Commodity structure of exports, % of EU exports to BSEC	EU exports to BSEC, % total of EU exports	EU imports to BSEC, billion euros	Commodity structure of imports, % of EU imports to BSEC	EU imports to BSEC, % total of EU imports
All products	308.9	100.0	5.8	332.7	100.0	6.4
Food	25.6	8.3	4.9	26.5	8.0	5.2
Agricultural raw materials	4.0	1.3	5.3	4.1	1.2	5.5
Ores and metals	4.2	1.3	3.1	19.4	5.8	11.8
Fuels	9.5	3.1	4.2	107.1	32.2	23.6
Manufactured goods	253.0	81.9	6.1	153.4	46.1	4.1
Chemical products	54.9	17.8	6.4	15.4	4.6	2.1
Machinery and transport equipment	124.3	40.2	6.0	66.1	19.9	3.6
Iron and steel	8.1	2.6	6.3	11.6	3.5	9.3
Textile fibers, yarn, fabrics and clothing	15.4	5.0	8.1	28.1	8.5	10.9

**Table 4.** Geographical structure of the EU trade in services and travel services with the BSEC countries (2016), million euros

Source: Eurostat and authors' calculations.

Partner	EU exports of services	EU import of services	EU exports of travel services	EU import of travel services	Travels, % of the EU bilateral services exports	Travels, % of the EU bilateral services imports
Bulgaria	4,003	5,671	1,336	1,467	33.4	25.9
Greece	6,301	15,316	1,466	8,789	23.3	57.4
Romania	8,824	11,113	3,206	1,507	36.3	13.6
Turkey	11,768	13,913	2,690	6,306	22.9	45.3
Russia	24,719	11,250	7,046	1,956	28.5	17.4
Armenia	164	111	–	–	–	–
Azerbaijan	1,059	338	–	–	–	–
Total for 7 BSEC countries	56,839	57,716	15,744	20,025	27.7	34.7

Serbia and Bulgaria, tend to have more intra-industry trade with the rest of the EU countries.

The Eurostat provides comparable and regular bilateral services trade data for 7 BSEC countries. Since the BSEC countries vary in GDP, trade openness and trade structure, there is various importance of the BSEC partners for the EU trade in services (see Table 4). Russia and Turkey as large markets are important importers of the EU services. But the EU countries import almost equally

large value of services from Greece, Turkey, Russia and Romania. Except for Russia, Azerbaijan and Armenia, the EU countries have deficit in services trade with the BSEC countries. Russia, Romania and Turkey are important countries of origin for travelers coming to the EU. But the EU residents prefer traveling to Greece and Turkey. Travels account for about a quarter of services exports of the EU to the region. But they are more important for services imports. Thus, 5 BSEC countries are net travel services providers for the EU.

**Table 5.** Trends in the EU trade in services and travel services with the BSEC countries, million euros

Source: Eurostat and authors' calculations.

Indicator	2010	2011	2012	2013	2014	2015	2016
EU exports of services to 7 BSEC countries, million euros	46,124	50,760	54,947	58,820	61,062	57,882	56,839
EU imports of services from 7 BSEC countries, million euros	49,775	52,064	53,066	54,984	56,483	59,585	57,712
EU balance of trade in services with 7 BSEC countries, million euros	-3,652	-1,304	1,881	3,836	4,580	-1,703	-873
Extra-EU-28 exports of services, million euros	566,713	616,129	687,172	723,376	768,522	847,501	844,894
Extra-EU-28 imports of services, million euros	462,046	480,504	519,808	543,660	604,268	705,102	711,841
EU exports of services to 7 BSEC countries, % of extra-EU-28 exports of services	8.1	8.2	8.0	8.1	7.9	6.8	6.7
EU imports of services to 7 BSEC countries, % of extra-EU-28 imports of services	10.8	10.8	10.2	10.1	9.3	8.5	8.1
EU exports of travel services to 5 BSEC countries, million euros	11,717	13,809	15,900	17,709	17,409	15,078	15,744
EU imports of travel services from 5 BSEC countries, million euros	18,754	20,481	19,463	20,262	20,852	21,367	20,025
EU balance of trade in travel services with 5 BSEC countries, million euros	-7,037	-6,672	-3,563	-2,553	-3,443	-6,289	-4,281
Extra-EU-28 exports of travel services, million euros	81,510	86,320	96,683	105,034	110,395	114,743	112,269
Extra-EU-28 imports of travel services, million euros	85,416	86,930	89,813	90,847	100,036	103,618	99,140
EU exports of travel services to 5 BSEC countries, % of extra-EU-28 exports of services	14.4	16.0	16.4	16.9	15.8	13.1	14.0
EU imports of travel services to 5 BSEC countries, % of extra-EU-28 imports of services	22.0	23.6	21.7	22.3	20.8	20.6	20.2

In Table 5, there are time series for trade in services between the regions. The ratio of the EU trade with the BSEC countries to the extra-EU trade is about 7-8% for services and 14-20% for travel services. But it is necessary to note that the BSEC countries contribute both to the intra-EU trade (Bulgaria, Greece and Romania) and extra-EU trade.

### 3.2. Modeling of bilateral tourism relations

The formula of the gravity model for the EU citizens' travels to the BSEC countries is:

$$\ln(A) = -5.37 + 0.739 \ln(GPD) + 0.849 \ln(TA) - 0.890 \ln(D) \quad (1)$$

Or in non-logarithmic form:

$$A = 0.004656 \cdot GDP^{0.739} \cdot TA^{0.849} \cdot D^{-0.890} \quad (2)$$

Also, country-specific models are used to assess how different is the EU demand for international tourism services provided in each of the destination countries (see Table 6).

All the models confirm that GDP of countries of origin is an important factor of bilateral tourism relations. It is more important for Turkey and Greece and less important for Ukraine. But the data for Ukraine as a destination country are largely missing for the majority of countries of origin in the Eurostat. The data was available mostly for arrivals from Central European countries, which can lead to biased results.

The total number of arrivals of international tourists is more useful for the multi-country model to distinguish between countries with different tourism sector capacities. For example, Russia is a larger economy and larger country than Bulgaria, therefore, Russia would attract more tourists. The GDP of the destination country would be less useful, because Russia has a fuel export specialization. Bulgaria relies more on tourism under better climate conditions and has more tourism sector capacities per capita or per dollar of its GDP.

The correlation between trips from each country of origin and total arrivals of international tourists in a destination country is 0.24, which is definitely less than the correlation between bilateral travels and the GDP of countries of origin (0.62). Therefore, demand is a more important factor than supply for bilateral travels.

As for regression models for each destination country, the tourism sector capacities are a significant factor only for Romania, Russia and Turkey. Thus, development of tourism capacities resulted in more tourists coming to them from the EU. Another possible explanation is tourists' origin diversification in Bulgaria, Greece and Ukraine.

Distance in most cases is a barrier for international tourism, especially in Russia and Romania. There are two exceptions: Turkey and Ukraine. In Ukraine, the factor is insignificant, but again a possible explanation is missing data for most of the EU countries of origin. In Turkey, more tourists come from distant European countries. Possible explanation is the development of air

**Table 6.** Regression results for number of trips of the EU residents to the 6 BSEC countries

Sources: Authors' calculations according to the data of Eurostat, World Bank and DistanceFromTo.

Regression coefficients	6 BSEC countries	Bulgaria	Greece	Romania	Russia	Turkey	Ukraine
Intercept	-5.370*** (1.096)	7.206*** (1.107)	7.816*** (1.189)	-10.384 (12.528)	-12.204 (8.439)	-23.902*** (5.357)	7.757*** (1.622)
GDP	0.739*** (0.025)	0.660*** (0.053)	0.835*** (0.047)	0.782*** (0.064)	0.541*** (0.045)	0.890*** (0.042)	0.282** (0.134)
TA	0.849*** (0.066)	-	-	1.594** (0.782)	1.887*** (0.483)	1.283*** (0.306)	-
D	-0.890*** (0.091)	-0.659*** (0.47)	-0.807*** (0.176)	-1.952*** (0.241)	-2.115*** (0.165)	0.332** (0.156)	-
R <sup>2</sup>	0.505	0.537	0.620	0.600	0.619	0.737	0.189
F-statistics	293.0***	80.1***	165.4***	59.8***	87.4***	191.5***	4.4**
N	866	141	206	124	165	209	21

Notes: Standard errors in parenthesis, t-test and F-test: \*\*\*-p < 0.01, \*\*-p < 0.05, \*-p < 0.1.



**Table 7.** International tourism specialization and underexploited tourism potential in BSEC countries

Sources: Authors' calculations according to the data of Eurostat, World Bank and DistanceFromTo.

The EU countries of origin of travelers	$\ln(A_{\text{actual}}) - \ln(A_{\text{predicted}})$ for the BSEC destination countries					
	Bulgaria	Greece	Romania	Russia	Turkey	Ukraine
Belgium	-0.34	1.08	-0.23	-1.69	0.11	-
Bulgaria	-	0.98	-	-	0.43	-
Czech Republic	1.19	1.02	-	-	0.27	0.11
Denmark	-	1.06	-	-	0.67	-
Germany	1.07	1.30	0.55	0.11	1.53	-
Estonia	-	1.16	-	1.52	0.39	-
Ireland	0.17	-0.49	-	-	-0.86	-
Greece	-1.08	-	-1.49	-	-2.15	-
Spain	-0.40	-0.82	0.67	-0.74	-1.02	-1.66
France	-1.03	0.57	-1.11	-0.95	-1.51	-
Croatia	-	-	-	-	-0.25	-
Italy	-	-0.64	0.34	-	-0.77	-
Cyprus	1.30	2.89	1.28	1.50	-	-
Latvia	-	-	-	1.23	0.90	0.30
Lithuania	0.58	0.59	-	0.32	0.96	-0.95
Luxembourg	-0.59	-0.19	-	-1.61	-1.04	-
Hungary	-1.45	0.58	2.31	-1.77	-0.80	0.92
Malta	-0.32	-0.86	-1.20	-1.12	-1.09	-
Netherlands	-	0.98	-0.81	-1.38	0.79	-
Austria	-0.50	0.71	-0.25	-1.08	-0.01	-
Poland	0.74	1.19	-1.17	-1.67	-0.14	-0.40
Portugal	-	-	-	-	-	-
Romania	-0.01	0.05	-	-	-1.54	-
Slovenia	-	-0.42	-	-	-0.65	-
Slovakia	1.07	0.13	-	-	0.00	-
Finland	-	0.97	-	0.84	0.10	-
Sweden	-	1.22	-	-	0.38	-
United Kingdom	0.68	1.76	0.30	-1.27	0.96	-2.03

transport, higher income of tourists coming from distant countries and different climate. The matter is that neighbors of Turkey often have similar climate conditions to it, which hinders demand for sun and beach tourism from neighbor countries.

The results of cross-country analysis of undertraded and successful travel routes are shown in Table 7.

Bulgaria turned out to be particularly attractive for tourists from Cyprus, Czech Republic, Germany and Slovakia. But it has an underexploited potential for attracting tourists from Hungary, Greece and France. There are several other underdeveloped links and missing data for several countries of origin.

Greece has particularly many arrivals from Cyprus (considering cultural and ethnical links) and the United Kingdom. Other well developed

relations are with Germany, Sweden, Poland, Estonia, Belgium, Denmark and Czech Republic. In general, Greece is very efficient in attracting tourists from the EU. The prominent exceptions are only Malta, Spain and Italy, which have their own resources for sun and beach tourism. Slightly underdeveloped relations with countries having different climate include smaller than expected arrivals from Ireland and Slovenia.

Romania has largely underexploited potential, including for tourist arrivals from Greece, Malta, Poland and France. There are also cases with missing data for several countries of origin. But Romania is particularly attractive for travelers from Hungary (ethnical and cultural links with minorities) and Cyprus.

Russia has many undertraded tourism relations, especially with such countries of origin as Hungary,

**Table 8.** Correlations between trips to the 6 BSEC countries and their factors, by country of origin of travelers

Sources: Authors' calculations according to the data of Eurostat, World Bank and DistanceFromTo.

The EU countries of origin of travelers	Correlations of $\ln(A)$ with factors		
	$\ln(GDP)$	$\ln(TA)$	$\ln(D)$
Austria	0.01	0.49	0.38
Belgium	0.22	0.61	0.59
Bulgaria	0.25	-0.48	-0.72
Croatia	-0.03	0.37	0.15
Cyprus	-0.11	0.03	0.28
Czech Republic	-0.28	0.54	0.66
Denmark	0.26	0.63	0.91
Estonia	-0.28	0.14	-0.92
Finland	-0.32	0.69	-0.36
France	0.00	0.53	0.38
Germany	-0.23	0.65	0.91
Greece	0.09	-0.01	-0.52
Hungary	0.14	-0.33	-0.52
Ireland	0.19	0.27	0.47
Italy	-0.21	0.15	-0.34
Latvia	0.22	0.74	-0.64
Lithuania	-0.29	0.69	-0.10
Luxembourg	0.43	0.51	0.34
Malta	0.58	0.28	-0.51
Netherlands	0.00	0.34	0.66
Poland	0.26	0.44	0.25
Portugal	0.33	0.58	0.17
Romania	0.54	-0.11	-0.28
Slovakia	0.26	0.25	0.23
Slovenia	-0.11	-0.68	-0.76
Spain	0.30	-0.38	-0.34
Sweden	0.26	0.44	0.76
United Kingdom	-0.03	0.32	0.54

Belgium, Poland, the Netherlands, United Kingdom, Malta and Austria. There are also a number of countries with missing data. Russia mainly specializes in hosting tourists from such EU countries as Estonia, Cyprus, Latvia and Finland. As it was noted earlier, distance is an important barrier for tourists coming to Russia. Besides distance cultural and ethnic relations with minorities in the Baltic states can be a possible explanation.

Turkey specializes in providing tourism services for Germany (with large Turkish minority), United Kingdom, Lithuania and Latvia. There are several underexploited links (especially with Greece, Romania, France, Malta, Luxemburg, Spain), but there are little missing data for Turkey unlike in case of such destinations as Ukraine, Romania, Bulgaria and Russia.

Ukraine's tourism potential is largely underexploited, including relations with United Kingdom, Spain, Lithuania. There are missing data for the majority of countries of origin, but it is assumed that the number of trips is too small in those cases. But there is a prominent exception as Ukraine hosts much more Hungarian residents than it is predicted according to the gravity model. Again, besides geographical proximity the explanation is cultural and ethnical links.

Next, it is necessary to consider the country-specific correlation patterns for each country of origin (see Table 8). Here, the GDP is country specific and varies across time. The most procyclical demand for trips to the 6 BSEC countries is in Malta, Romania and Luxemburg. But some countries have slightly anti-cyclical demand. The largest tourist destinations (by tourism industry capacities) are preferred by residents of Latvia, Lithuania, Finland, Germany,

Denmark, Belgium, etc. Residents of Slovenia, Bulgaria, Spain and Hungary travel mostly to smaller destinations. Travelers from Denmark, Germany, Sweden, Czech Republic, the Netherlands, Belgium and the United Kingdom prefer distant destinations, while tourists from Estonia, Slovenia, Bulgaria, Latvia, Greece, Hungary and Malta travel more to the neighbor countries.

There are several clusters of the EU countries of origin by the determinants of foreign travels. The first group prefers large and distant destinations (Belgium, Czech Republic, Denmark and Germany).

The second group also likes travelling to larger destinations, but regardless the distance (Austria, Finland, France, Lithuania, Poland, Portugal and Luxemburg). The third cluster prefers distant travels (Ireland, the Netherlands, Sweden and the United Kingdom). In the fourth cluster, travelers visit usually neighbor countries (Estonia, Greece, Hungary and Malta). The fifth group usually has preference for small neighbor destinations (Bulgaria, Slovenia). Finally, several countries have little dependence of their tourist demand on distance and size of destination (Croatia, Cyprus, Italy, Romania, Slovakia and Spain).

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## CONCLUSION

The BSEC countries account roughly for 6% of the international trade of the EU countries. The share depends on economic cycles, fuel price trends and geopolitical situation. Fuel exports allow some of the BSEC countries to have trade surplus with the EU. But most of the BSEC member states import more from the EU than they export. The BSEC countries with the EU membership or a custom union with the EU have more intra-industry trade with the EU than other BSEC countries. Trade in services between the EU and BSEC countries depend more on travel services than trade with the rest of the world.

Demand proxied by GDP in countries of origin is the most important factor for bilateral tourism relations between the EU and BSEC. Most BSEC destination countries attract more tourists from their neighbors with Turkey being a prominent exception. In many cases, cultural and ethnic relations between origin and destination countries seem to explain the difference between the actual number of tourist arrivals and the number predicted by the gravity model. Countries with sunny climate seem to have underdeveloped bilateral tourism relations.

Greece is the most efficient in attracting the EU tourists. It benefits from its location and good resources, especially for sun and beach tourism. The other two EU destination countries (Romania and Bulgaria) have many underexploited relations with the EU countries of origin. Low efficiency of attracting tourists from the EU by Russia can be explained by a particular sensitivity to distance and possibly to geopolitical tensions. Ukraine seems to have the most underexploited tourism potential, its tourism industry is currently undertraded with the EU. On average, the non-EU BSEC countries are less efficient in attracting the EU tourists. Institutional factor and geographical diversification can be other explanations for that.

There is little dependence of the EU travels on GDP volatility in the countries of origin. The preferences for size of tourism industries and distance of travel largely vary across the countries of origin.

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