

Martin Grancay

Faculty of International Relations,
University of Economics in Bratislava,
Slovakia

✉ martin.grancay@euba.sk

Nora Szikorova

Faculty of International Relations,
University of Economics in Bratislava,
Slovakia

✉ nora.szikorova@euba.sk

This paper was supported by the Slovak Scientific Grant Agency as part of the research project VEGA 1/0911/11 "Štyri slobody pohybu v EU" ("Four freedoms in the EU") coordinated by prof. Ludmila Lipkova; research goal no. 6. The authors would like to thank participants of the "International Relations 2012" conference in Smolenice, for providing comments on an earlier version of this paper. We also thank two anonymous referees for valuable suggestions and to Sena Frey-Stiles for English language editing.

Liberalism in Foreign Trade versus Liberalism in Air Transportation - Is there a Link?

Summary: The aim of this paper is to determine whether there is a statistically significant link between regulation of international civil aviation and protectionism against foreign trade. We use weighted air liberalization index (WALI) as a proxy for the level of regulation in a country's foreign aviation relations; trade tariff restrictiveness index (TTRI) and overall trade restrictiveness index (OTRI) as proxies for the level of protectionism in a country's foreign trade. Correlation analysis shows that there is no statistically significant link between the indicators. Hence, our research confirms the view that air transportation is a specific sector and it is subject to a different kind of policies than trade in goods. We also demonstrate that large high-income countries tend to have a more liberal approach to international civil aviation than small low-income countries.

Key words: Liberalism, Protectionism, Foreign trade, Air transportation.

JEL: F13, L93.

International civil aviation is undoubtedly one of the key components of the world economy. It employs more than 32 million people (Air Transport Action Group (ATAG) 2008), transports over 2.3 billion passengers and 45 million tons of cargo annually (International Air Transport Association (IATA) 2012) and contributes 7.5 *per cent* to the global GDP (ATAG 2008). Scheduled air services connect all countries in the world and enable movement of people and goods between any two points on Earth within 48 hours. Air transportation also has significant impact on regional development and on inter-regional convergence (Lukasz Olipra 2010). As a result of its importance for economy, national governments tend to treat international civil aviation as a strategic sector. Hence it counts as one of the most regulated sectors of the world economy.

The aim of this paper is to determine whether there is a statistically significant link between regulation of international civil aviation and protectionism against foreign trade. We expect to find that countries that enforce a high level of protectionism on imports will also enforce a high level of protectionism in bilateral Air Service Agreements (ASAs), and *vice versa*, countries with a liberal attitude towards foreign trade will also have a liberal attitude towards international civil aviation.

The rest of the paper is organized as follows. Section 1 provides a short review of relevant literature. Section 2 discusses existing indices of air transport liberalization and their mutual relations. Section 3 describes research methods used and sources of data. Results of the statistical analysis are presented in Section 4, along

with a discussion about their implications. Final section offers some concluding remarks and comments on shortcomings of our research.

1. Short Literature Review

The debate about *pros* and *cons* of strict protectionism in civil aviation has been present in scientific literature for some time. Mainstream scientists usually agree with the neo-classical conclusion that liberalization of air services has a positive impact on global economy. Since 1978 when the USA deregulated domestic market and started a policy of liberalization of bilateral air services, numerous studies have researched this topic. Among others, Robert W. Poole Jr. and Viggo Butler (1998), Andrew Stober (2003) and Rigas Doganis (2010) found evidence that deregulation and liberalization led to lower prices, higher consumer welfare, increased traffic and consolidation of USA carriers. InterVISTAS (2006), Anton Richman and Chris Lyle (2006) came to similar conclusions while studying the European experience. Other relevant studies of the topic include works of Rauf Gönenç and Giuseppe Nicoletti (2000), Samantha Doove et al. (2001), Alejandro Micco and Tomas Serebrisky (2006), Roberta Piermartini and Linda Rousová (2008), Xiaowen Fu, Tae Hoon Oum, and Anming Zhang (2010) or Massimo Geloso Grosso (2010). Almost all major studies conclude liberalization of air transportation brings significant benefits; however, their results are not robust. Common methodological problems include collinearity and omitted variable bias.

While economists clearly favor liberalization, the majority of governments take a protectionist stance toward aviation. In fact, as Piermartini and Rousová (2008) noted, only 15 *per cent* of bilateral ASAs are highly liberal and if intra-European Union agreements are excluded, the share is even lower. Moreover, as civil aviation is not subject to the rules of General Agreement on Trade in Services (GATS), the situation is unlikely to change (Tomas Dudas 2008; Ludmila Lipkova 2011). Ivana Prica and Jelica Petrović Vujačić (2010) have shown that most OECD countries exclude air transportation from GATS liberalization based on Article II exemptions.

There is a broad literature on why governments choose to protect their aviation markets. The usual arguments include the role of air transportation as a public utility, concerns of “wasteful competition” if left unprotected (Doganis 2010), national security, economic security and safety concerns (Martin Grancay 2009). All of these arguments paint a picture of civil aviation as a specific sector that requires a special regulatory environment based on differential treatment of foreign airlines and their services. To assess how “special” this environment really is, one would need to compare it with governments’ stance toward foreign goods in other industries, i.e. compare protectionism in international civil aviation with protectionism in a country’s foreign trade. To our best knowledge, no research has been conducted in this area to date.

2. Indices of Air Transport Liberalization

International civil aviation is based on a broad network of bilateral ASAs. ASA is an agreement signed between governments of two countries which sets the rules for op-

eration of international civil air transport services between their territories. Each ASA includes seven features (Piermartini and Rousová 2008): (1) grant of rights; (2) capacity clause; (3) tariff approval regime; (4) foreign ownership; (5) designation clause; (6) exchange of statistics and (7) cooperative arrangements. Specific provisions of these features indicate the level of openness of scheduled air passenger services between signatory countries. For example, liberal ASAs usually allow airlines to set prices freely, while protectionist ones require government approval; liberal ASAs let airlines make their own decisions regarding capacity and frequency of flights, while protectionist ones fix them, etc.

A measure of the degree of liberalization of ASAs has been devised by the World Trade Organization (WTO 2006). The *air liberalization index* (ALI) assigns a weight to each of the seven features of ASAs and scores them according to their level of protectionism. It ranges between 0 and 50, where 0 denotes the most restrictive and 50 the most liberal ASA. (See WTO's Air Services Agreement Projector for complete methodology, WTO 2012a.) Out of 2299 ASAs included in the WTO's study, the most liberal one was the agreement between New Zealand and Brunei (50 pts), followed by numerous agreements between European countries. The vast majority of other ASAs (almost 80 *per cent* of the total) had ALI of less than 20 - obviously, governments are not very keen on liberalizing the sector.

The ALI was specifically designed to enable comparison of the level of openness of individual bilateral ASAs. It shows that countries tend to treat ASAs on a case-by-case basis, rather than pursuing a coherent policy. For example, New Zealand has signed a very liberal ASA with Brunei, but it also has strictly protectionist ASAs in force with Indonesia, Nauru and Germany. ALI of USA's bilateral agreements range from 1 to 42; those of Australia are anywhere between 6 and 43. In fact, no country applies a uniform model of ASA to all partners. This is understandable, because each bilateral aviation market has its own specific characteristics - distances between countries, number of airlines, size of the demand and other factors all differ. As a result, each ASA is a unique document formed by interests of both signatory parties.

Still, some countries evidently apply a more liberal foreign aviation policy than others: every country in the world has at least one protectionist ASA with ALI of less than 20; however, not many countries have liberal ASAs with ALI of more than 30. To reflect these differences between countries, WTO (2006) has developed *weighted air liberalization index* (WALI). It is calculated as a weighted average of ALI of all ASAs of a country:

$$WALI = \frac{\sum t_i \cdot ALI_i}{\sum t_i} \quad (1)$$

where i ranges from 1 to n , depending on total number of a country's ASAs and t stands for the traffic covered by the ASA in question.

Similarly to simple ALI, values of WALI range between 0 (the most restrictive) and 50 (the most liberal). Out of 183 countries in our database, only five have a WALI of more than 30 and mere fifteen reach a WALI of more than 20. The majority of these are small countries of Central America and the Caribbean. Each of them has a relatively low number of bilateral ASAs, on average less than ten. Taking into

account their specific geographic location implying challenges for terrestrial modes of transport and the fact that these countries either do not have their own national airlines or their airlines serve only a limited number of destinations, it is logical that their ASAs tend to be liberal. The only notable exceptions in the group with the highest value of WALI are USA and Canada. The rest of the countries have a low value of WALI and therefore their average bilateral ASAs are restrictive (Figure 1).

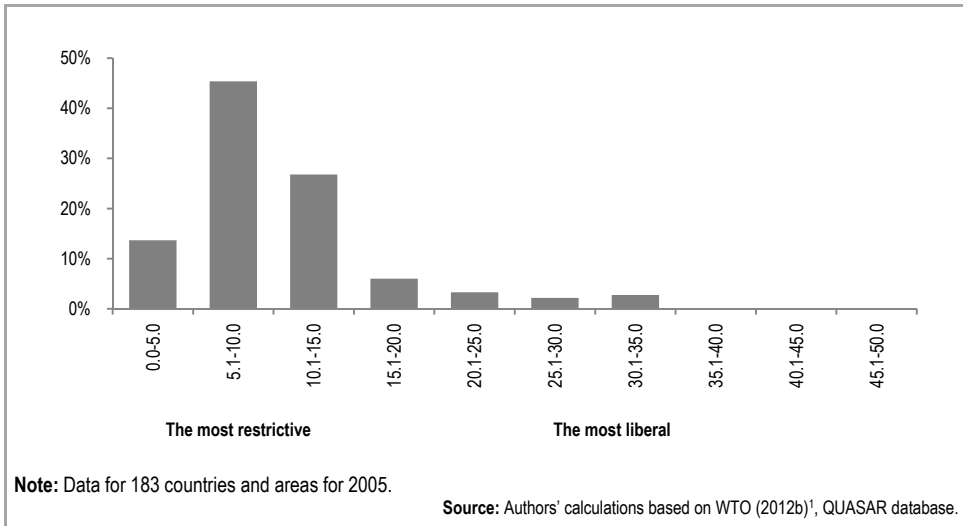


Figure 1 Distribution Chart of WALI

In addition to standard WALI, three additional indices were proposed. They are calculated in a manner similar to WALI, but they assign different weights to each of the seven components of bilateral ASAs (see discussion in the beginning of this section). WALI 5+ assigns a disproportionately large weight to the grant of rights section of ASAs. International civil aviation is based on a legal system of nine freedoms of the air, where higher number of freedom stands for higher level of openness. Freedoms 1 to 4 are basic and almost every ASA includes them. The fifth freedom indicates airlines not only have a right to carry passengers, cargo and mail between signatory countries, but are also allowed to continue the flight to a third country. Hence, ASAs allowing the fifth freedom are considered liberal and WALI 5+ allocates a high number of points to them.

WALI O+ assigns a disproportionately large weight to rules of foreign ownership. As a general rule, only airlines substantially owned and effectively controlled by nationals of designating countries are allowed to operate scheduled flights between signatory countries of an ASA. Any other arrangement is considered liberal. WALI D+ assigns a large weight to the designation clause of ASAs; multiple designation being the preferred arrangement.

¹ **World Trade Organization (WTO)**. 2012b. http://www.wto.org/english/tratop_e/serv_e/transport_e/review2_e.htm#quasar (accessed September 21, 2012).

“The reason for introducing these alternative indices is to account for specific geographical and economic factors that may in some circumstances render these provisions more relevant to improve market access” (Piermartini and Rousová 2008, p. 7). While their weighting schemes are slightly different, all four weighted air liberalization indices are highly correlated among themselves (Table 1).

Table 1 Correlation among Four Different WALI Indices

	WALI St	WALI 5+	WALI O+	WALI D+
WALI St	1	-	-	-
WALI 5+	0.9575 (0.9325)	1	-	-
WALI O+	0.9817 (0.9850)	0.9211 (0.8961)	1	-
WALI D+	0.9873 (0.9776)	0.9371 (0.8841)	0.9719 (0.9711)	1

Note: Pearson's and Spearman's correlation coefficients; data for 2005.

Source: Authors' calculations based on WTO (2012b), QUASAR database.

Other indices of air transport liberalization were designed by Gönenç and Nicoletti (2000) and Piermartini and Rousová (2008). Gönenç and Nicoletti proposed a *bilateral restrictiveness index* (BRI) based on the methods of factor analysis. Piermartini and Rousová followed the same approach to construct a *factor analysis index* (FAI). Although BRI and FAI use a different calculation technique, they are broadly consistent with WALI and are highly correlated among themselves. Therefore, for the sake of simplicity, we will only use WALI in our research.

3. Methodology and Data

The aim of this paper is to determine whether there is a statistically significant link between regulation of international civil aviation and protectionism against foreign trade. The paper tries to answer a simple question: do countries with the most liberal stance toward foreign trade also follow the most liberal approach in their foreign aviation relations?

The first step is to select variables we will then use in statistical analysis. As we already explained, we have chosen WALI as a proxy for the level of regulation in a country's foreign aviation relations. The data on WALI can be found in WTO QUASAR database and it includes 183 countries and areas of the world. Given the broad network of ASAs and their high level of complexity, the last available full year in the data set is 2005.

The level of protectionism in a country's foreign trade is approximated by *trade restrictiveness indices* (TRI). The theoretical framework of these indices is based on works of Robert C. Feenstra (1995), James E. Anderson and Peter J. Neary (1996) and was later developed by Hiau Looi Kee, Alessandro Nicita, and Marcelo Olarreaga (2009). The *trade tariff restrictiveness index* (TTRI) and the *overall trade restrictiveness index* (OTRI) both capture trade distortions that each country imposes on its imports. The TTRI calculates “the uniform tariff that will keep country's imports at the current level when the country in fact has different tariffs for different

goods” (Kee, Cristina Neagu, and Nicita 2010, p. 1). The OTRI goes even further and in addition to tariffs it takes into account also non-tariff measures.

Both TRI are calculated for overall trade (TTRI and OTRI), trade with agricultural goods (TTRI A and OTRI A) and trade with manufactured goods (TTRI M and OTRI M). Data on TTRI is available for 100 countries and areas; data on OTRI for 66 countries and areas. We also use data on GNI *per capita* which are available for 174 countries and areas of the world (Table 2).

Table 2 Characteristics of the Data Set

Variable	Year	Source	No.*
WALI	2005	WTO (2012b), QUASAR database	183
Share in global aviation	2005	WTO (2012b), QUASAR database	183
TTRI	2004-2006	Kee, Neagu, and Nicita (2010); World Bank (2012) ²	100
OTRI	2004-2006	Kee, Neagu, and Nicita (2010); World Bank (2012)	66
GNI / per capita (Atlas method)	2005	World Bank (2012)	174

Note: * number of countries.

Source: The authors.

To determine whether there is a statistically significant link between regulation of international civil aviation and protectionism against foreign trade, we use simple correlation analysis. We calculate Pearson’s, Spearman’s and Kendall Tau coefficients for correlation between proxies for the level of regulation in a country’s foreign aviation relations (WALI St, WALI 5+, WALI O+, WALI D+) and proxies for the level of protectionism in a country’s foreign trade (TTRI, TTRI A, TTRI M, OTRI, OTRI A, OTRI M). To further test the results, we apply regression analysis with WALI St as the dependent variable.

4. Results and Discussion

Whereas values of weighted ALI increase with the level of liberalization, high values of TRI indicate high degree of protectionism. Therefore, should there be the expected statistically significant link between the variables correlation coefficients must take negative values.

Table 3 presents results of the correlation analysis. All Pearson’s correlation coefficients as well as Spearman’s rank correlation coefficients are negative. Due to low values of Spearman’s correlation coefficients indicating that the null hypothesis should be rejected, we verified the results by calculating Kendall Tau rank correlation coefficients.

The outcome of the correlation analysis is straightforward: it appears that there is no statistically significant link between regulation of international civil aviation and protectionism against foreign trade. Countries with the most liberal stance toward foreign trade do not follow the most liberal approach in their foreign aviation relations. Actually, some of the countries with the lowest uniform tariff belong to the most protectionist nations in aviation. For example, Papua New Guinea’s TTRI is a

² **World Bank (WB)**. 2012. <http://data.worldbank.org/> (accessed September 21, 2012).

mere 1.7 *per cent* - a value comparable to Norway, Iceland or the USA. However, it has the most protectionist bilateral ASAs from our sample of 100 countries and areas with WALI St of 1.5. Mauritius, Kazakhstan and Moldova are in a similar situation. In the same way, Mexico belongs to the top 20 countries with the most liberal stance toward international aviation, but has one of the highest uniform tariffs in the world.

Table 3 Results of the Correlation Analysis

	WALI St	WALI 5+	WALI O+	WALI D+
TTRI	-0.2546 (-0.3478) -0.2347	-0.1982 (-0.2452) -0.1503	-0.2870 (-0.3638) -0.2453	-0.2800 (-0.3663) -0.2436
TTRI A	-0.1067 (-0.1519) -0.1010	-0.0224 (-0.0215) -0.0109	-0.1293 (-0.1634) -0.1107	-0.1122 (-0.1794) -0.1212
TTRI M	-0.2509 (-0.3323) -0.2242	-0.2090 (-0.2475) -0.1592	-0.2802 (-0.3505) -0.2364	-0.2719 (-0.3468) -0.2331
OTRI	-0.2699 (-0.3368) -0.2242	-0.2396 (-0.2592) -0.1647	-0.2992 (-0.3364) -0.2192	-0.2817 (-0.3316) -0.2153
OTRI A	-0.1855 (-0.1387) -0.0883	-0.1008 (-0.0499) -0.0347	-0.1990 (-0.1303) -0.0853	-0.1716 (-0.1289) -0.0794
OTRI M	-0.2573 (-0.3169) -0.2073	-0.2367 (-0.2477) -0.1558	-0.2831 (-0.3188) -0.2024	-0.2689 (-0.3138) -0.1964

Note: Pearson's, Spearman's and Kendall Tau correlation coefficient. Data for 100 (TTRI) or 64 (OTRI) countries and other areas for 2005; 27 EU countries are considered 1 area.

Source: Authors' calculations based on WB (2012) and WTO (2012b), QUASAR database.

The results of the statistical analysis are not entirely surprising. They imply that governments do not have a coherent single foreign trade policy, but instead follow a set of policies which differ depending on the industry. Hence our research confirms the view that air transportation is a specific sector and it is subject to a different kind of policies than trade in goods. Taking into account the well-established reasons for increased levels of protectionism in international civil aviation, such as questions of safety, national and economic security or air transportation's role as a public utility, it is easy to see why traditionally liberal countries enforce protectionist rules in aviation. What the quantitative research does not give a clear answer to, though, is the counter-intuitive fact that some traditionally protectionist countries apply a liberal regime in international civil aviation.

Geographical factors might help us explain this paradox. Some of the countries with the most liberal civil aviation policy are small countries of Central America. El Salvador, Honduras, Guatemala and Nicaragua occupy the top four positions in the ranking. However, none of these countries are a haven of liberalism. Their values of OTRI and TTRI indicate their foreign trade policy is similar to the world average. This should not be surprising, as there is no advanced integration project in Central America. On the other hand, road and rail infrastructures of these countries are

desolate. Air transport is an important mode connecting the region with the world. Moreover, a specific ownership structure of the regional airline TACA consisting of a few independently-owned airlines requires relatively liberal rules of international air transportation.

The conclusion that liberalism in a country's foreign trade and liberalism in a country's foreign aviation relations do not come in a pair, opens up a new question: why are some countries more willing to sign liberal bilateral ASAs than others? We have just suggested geographical factors might be one of the factors. Indeed, they seem to explain why Central American states have some of the most liberal foreign aviation policies. But why do other countries with challenging geographical conditions, such as Solomon Islands, Seychelles or Nepal, follow some of the most protectionist foreign aviation policies in the world? Clearly, the answer to this question is more complex than just identifying a single factor. We believe the reasons are a combination of multiple geographical, political and economic factors. However, a thorough robust analysis of determinants would be far beyond the scope of this paper. Let us therefore briefly focus only on those two of them which seem to be the most obvious ones: average income and a country's share in global air traffic.

The World Bank classifies economies as low-income, lower-middle-income, upper-middle-income and high-income based on gross national income *per capita*. It seems that on average, countries with a high level of income follow a more liberal civil aviation policy than countries with low income (Figure 2). This observation is valid for all four forms of WALI. Also, countries that have the largest share in global air traffic tend to have more liberal ASAs than countries with low share in global air traffic (Figure 3).

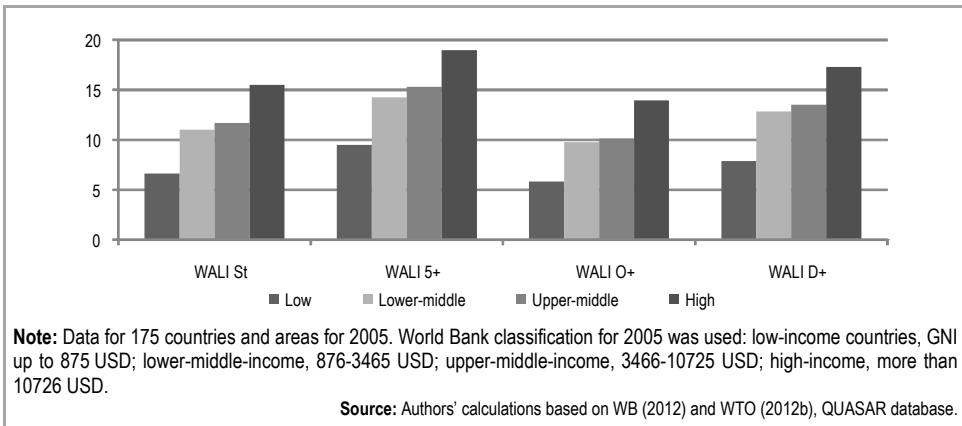


Figure 2 WALI and Average GNI / per capita

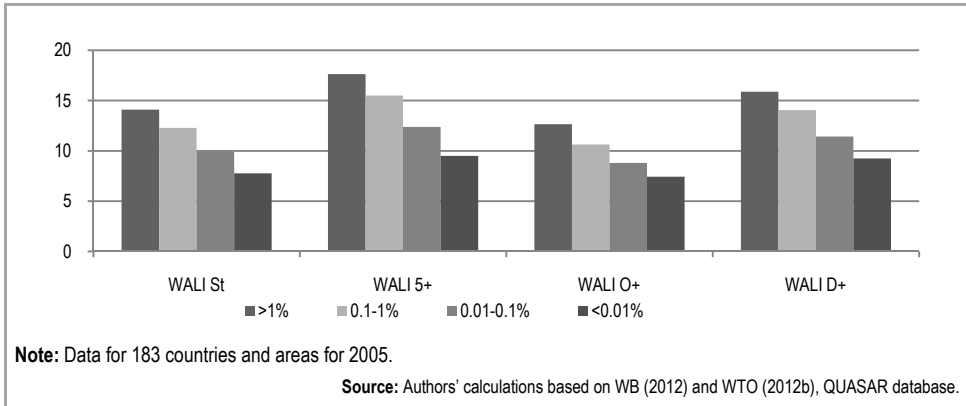


Figure 3 WALI and Share in Global Air Traffic

Figures 2 and 3 demonstrate that high-income countries with a large aviation market tend to have a more liberal approach to international civil aviation than low-income countries with a small aviation market. The level of liberalism a country applies in its foreign aviation relations increases with rising income and rising share in global air traffic. An exception from this rule are countries with middle-income and medium share in global air traffic (Table 4). This group covers a wide variety of developing countries from all continents and values of WALI within the group range from 3 to 35, without any visible regularity.

Table 4 GNI per capita and Share in Global Air Traffic - Average WALI

	> 1%	0.1 - 1%	0.01 - 0.1%	< 0.01%
Low-income countries	7.9	7.7	6.6	7.2
Lower-middle-income countries	9.1	14.5	11.8	9.4
Upper-middle-income countries	11.3	12.7	9.3	9.9
High-income countries	16.0	11.3	11.3	5.0

Note: Weighted averages of WALI St. Data for 174 countries and areas for 2005.

Source: Authors' calculations based on WB (2012) and WTO (2012b), QUASAR database.

The validity and significance of our conclusions can be tested using regression analysis (Table 5).

Table 5 Regression Results - WALI as Dependent Variable

	(1) TTRI	(2) OTRI	(3) None	(4) EU adj.
TTRI	-5.040 (11.817)	-	-	-
OTRI	-	-6,921 (6,946)	-	-
ln GNI per capita	0.773* (0.395)	0.435 (0.445)	0.882*** (0.300)	1.094*** (0.394)
Share in global air traffic	0.678** (0.306)	0.688** (0.337)	0.678** (0.305)	0.646* (0.347)
Number of bilateral ASAs	-0.017* (0.009)	-0.017* (0.010)	-0.017* (0.009)	-0.018* (0.010)
Constant	4.501 (3.824)	8.308* (4.310)	3.261 (2.476)	1.925 (3.054)
Number of observations	124	97	124	99
R ²	0.13	0.10	0.13	0.15

Note: Standard error in parentheses. Results significant at * 10% level, ** 5% level, *** 1% level. EU countries constitute separate observations with the exception of (4), where they are one observation.

Source: Authors' calculations based on WB (2012) and WTO (2012b), QUASAR database.

Regression results confirm that foreign trade policy indeed is not a significant factor shaping governments' civil aviation policies - neither TTRI nor OTRI are statistically significant. Conversely, both average income and a country's share in global air traffic are statistically significant and the parameters have the expected signs. Holding other factors constant, rich countries tend to have more liberal bilateral ASAs than poor countries, and countries with large aviation markets have more liberal bilateral ASAs than countries with smaller aviation markets. Perhaps surprisingly, another factor, number of bilateral ASAs a country has signed, was found to have slightly negative impact on the country's WALI. However, the economic importance of this is negligible - a difference of 10 ASAs accounts for a minor difference of 0.17 in WALI. Moreover, it might easily be explained by multicollinearity with the indicator of share in global air traffic (correlation coefficient is 0.79).

We performed additional analyses using GDP instead of GNI and dividing countries by region with essentially the same outcome; hence the results seem to be robust.

5. Concluding Remarks

The contributions of this paper are threefold. First, we determined that there is no statistically significant link between regulation of international civil aviation and protectionism against foreign trade. This result implies that governments do not have a coherent single international trade policy, but instead follow a set of policies which differ depending on the industry. Second, our research confirms the view that air transportation is a specific sector and it is subject to a different kind of policies than trade in goods. This confirms the view of major air transportation economists (Ste-

phen Holloway 2008 or Doganis 2010) and offers statistical evidence to support their claims. Finally, we demonstrated that large high-income countries tend to have a more liberal approach to international civil aviation than small low-income countries.

These results have some interesting implications. On the broadest level it appears that willingness of governments to sign liberal bilateral ASAs has no connection to their general trade policy. In most countries, civil aviation is considerably less liberalized than foreign trade. Importantly, there is a number of strongly protectionist countries with liberal civil aviation policies, as well as a number of liberal countries with surprisingly protectionist civil aviation policies. As we have demonstrated, this can be explained by geographical (terrain), political (safety, national and economic security, air transportation's role as a public utility) and economic (GNI, share in global traffic) factors. While from the policy perspective it seems obvious that liberalization leads to higher consumer welfare (see for example Doganis 2010), the mentioned factors play a crucial role in determining a country's civil aviation policy and usually lead to high level of protection.

Undoubtedly, our research has some important limitations. First, WALI is an expert-based measure and therefore its values might be slightly biased. Each ASA is a unique document, which leads to interpretation problems regarding its level of liberalism. For example, the grant-of-rights section of an ASA determines the extent to which airlines of signatory parties are allowed to operate connecting flights to third countries. The fifth freedom indicates airlines not only have a right to carry passengers, cargo and mail between signatory countries, but also are allowed to provide connecting services to non-signatory countries. All ASAs allowing this freedom are considered to be relatively liberal. However, while some agreements include a general clause granting the fifth freedom on a universal basis other ASAs set a number of exceptions. The WALI does not account for these differences.

Second, the TRI, although methodically sound, suffer from data constraints. As a result of poor data availability, the World Bank does not issue TRI rankings on a regular basis. Moreover, they are only available for a relatively small sample of countries, which in case of OTRI is less than 70. This means our regression analyses are based on limited datasets and the results should therefore be interpreted with caution.

In future research more attention should be paid to identifying links between civil aviation and trade liberalization on a regional level. Journals abound with literature about regional integration (see for example Ljiljana Pjerotić 2008 or Lipkova 2013), but they tend to neglect air transportation. Taking into account the enormous role of the sector for the regional economy, we believe it deserves much more of our scientific attention.

References

- Air Transport Action Group (ATAG).** 2008. "The Economic and Social Benefits of Air Transport 2008." <http://www.atag.org/our-publications/archived-publications.html>.
- Anderson, James E., and Peter J. Neary.** 1996. "A New Approach to Evaluating Trade Policy." *Review of Economic Studies*, 63(1): 107-125.
- Doganis, Rigas.** 2010. *Flying off Course: Airline Economics and Marketing*. 4th ed. Abingdon: Routledge.
- Doove, Samantha, Owen Gabbitas, Duc Nguyen-Hong, and Joe Owen.** 2001. "Price Effects of Regulation: Telecommunications, Air Passenger Transport and Electricity Supply." Productivity Commission Working Paper 1682.
- Dudas, Tomas.** 2008. "Contemporary Trends in Liberalization of Services." *Journal of International Relations*, 6(1): 40-51.
- Feenstra, Robert C.** 1995. "Estimating the Effects of Trade Policy." In *Handbook of International Economics. Vol. 3*, ed. Gene Grossman and Kenneth S. Rogoff, 1553-1595. Amsterdam: Elsevier.
- Fu, Xiaowen, Tae Hoon Oum, and Anming Zhang.** 2010. "Air Transport Liberalization and Its Impacts on Airline Competition and Air Passenger Traffic." *Transportation Journal*, 49(4): 24-41.
- Geloso Grosso, Massimo.** 2010. "Air Passenger Transport in APEC: Regulation and Impact on Passenger Traffic." <http://www.oecd.org/tad/services-trade/46329349.pdf>.
- Gönenç, Rauf, and Giuseppe Nicoletti.** 2000. "Regulation, Market Structure and Performance in Air Passenger Transportation." Organization for Economic Co-operation and Development, Economics Department Working Paper 254.
- Grancay, Martin.** 2009. "International Civil Aviation - All Together or All against All?" Munich Personal RePEc Archive Paper 14091.
- Holloway, Stephen.** 2008. *Straight and Level: Practical Airline Economics*. Aldershot: Ashgate Publishing.
- International Air Transport Association (IATA).** 2012. "IATA Facts & Figures." <http://www.iata.org/about/Pages/index.aspx> (accessed September 18, 2012).
- InterVISTAS.** 2006. *The Economic Impact of Air Service Liberalization*. Washington, DC: InterVISTAS-ga2 Consulting.
- Kee, Hiau Looi, Alessandro Nicita, and Marcelo Olarreaga.** 2009. "Estimating Trade Restrictiveness Indices." *Economic Journal*, 119(534): 172-199.
- Kee, Hiau Looi, Cristina Neagu, and Alessandro Nicita.** 2010. "Is Protectionism on the Rise? Assessing National Trade Policies during the Crisis of 2008." World Bank Policy Research Working Paper Series 5274.
- Lipkova, Ludmila.** 2011. *Medzinárodné hospodárske vťahy*. Bratislava: Vydavateľstvo ekonóm.
- Lipkova, Ludmila.** 2013. "Budúcnosť obchodných vzťahov medzi Európskou úniou a USA." *Journal of International Relations*, 11(4): 34-47.
- Micco, Alejandro, and Tomas Serebrisky.** 2006. "Competition Regimes and Air Transport Costs: The Effects of Open Skies Agreements." *Journal of International Economics*, 70(1): 25-51.
- Olipra, Lukasz.** 2010. "Impact of Air Transportation on Economic Development and Coherence of the EU Regions." In *Coherence and Regional Development in Poland*, ed. Miroslawa Klamut, 261-275. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.

- Piermartini, Roberta, and Linda Rousová.** 2008. "Liberalization of Air Transport Services and Passenger Traffic." World Trade Organization, Economic Research and Statistics Division Staff Working Paper 2008-06.
- Pjerotić, Ljiljana.** 2008. "Trade Liberalization in the South East Europe - Effects and Controversial Issues." *Panoeconomicus*, 55(4): 497-522.
- Poole Jr., Robert W., and Viggo Butler.** 1998. "Airline Deregulation: The Unfinished Revolution." <http://cei.org/sites/default/files/Robert%20Poole%2C%20Jr%20-%20Airline%20Deregulation%20The%20Unfinished%20Revolution.pdf>.
- Prica, Ivana, and Jelica Petrović Vujačić.** 2010. "Financial Services Liberalization in Transition Countries and the Role of the WTO." *Panoeconomicus*, 57(4): 487-501.
- Richman, Anton, and Chris Lyle.** 2006. "The Economic Benefits of Liberalising Regional Air Transport - A Review of Global Experience." International Civil Aviation Organization Information Paper 16/08/06.
- Stober, Andrew.** 2003. "Who Soars in Open Skies? A Review of the Impacts of Anti-Trust Immunity, and International Market Deregulation on Global Alliances, Consumers, and Policy Makers." *Journal of Air Transportation*, 8(1): 111-133.
- World Trade Organization (WTO).** 2006. *Second Review of the Air Transport Annex: Developments in the Air Transport Sector*. Geneva: WTO.
- World Trade Organization (WTO).** 2012a. "Air Services Agreements Projector." http://www.wto.org/english/tratop_e/serv_e/transport_e/transport_air_e.htm#asap (accessed September 21, 2012).

THIS PAGE INTENTIONALLY LEFT BLANK