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## TRADE FACILITATION AND BLACK SEA ECONOMIC COOPERATION ORGANIZATION: ANALYSIS OF TURKEY WITH THE GRAVITY MODEL APPROACH

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### Abstract

*The term trade facilitation is defined as every kind of modernization, harmonization, and simplification of international trade procedures, which will reduce the cost and time of custom procedures. The aim of this study was to evaluate the possible effects and gains of Trade Facilitation Agreement (TFA) on the Black Sea Economic Cooperation (BSEC). For this purpose, a gravity model was used, based on the panel data for the period of 2007-2013, to examine the relationship between bilateral trade flows and trade facilitation, measured through the Logistics Performance Index (LPI) of the World Bank. Empirical results indicate that trade flows are positively affected by the LPIs of importer and exporter countries.*

Keywords: BSEC, Trade Facilitation, Gravity Model, Panel Data Analysis, Export

### 1. Introduction

After the 8<sup>th</sup> multilateral trade negotiation of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), which was the hardest and the most prolonged session, the World Trade Organization (WTO) was established as a continuity of GATT. The WTO replaced the GATT based on the Marrakech Agreement, signed on January 1995, to meet the goal of the liberalization of the world trade of more groups of goods and countries. Nine Ministerial Conferences within the WTO have been organized since its first establishment. There were 12 titles to be discussed at the 4th Ministerial Conference of the WTO (November 9-13, 2001). The trade facilitation title, one of these 12 titles, aimed to start the negotiations as part of the Doha Development Agenda, and this title was determined as one of the three main negotiation issues of the 9th Ministerial Conference of the WTO (Bali, December, 03-06, 2013).

Behind this narrow negotiation frame created with the negotiation title of agriculture and development, a long convalescence period following the success attained by GATT (and in particular as part of the Uruguay Round) was a determinative issue. Essentially unsatisfactory results obtained in the Doha Ministerial Conference and the lack of progress in the four

intervening Ministerial Conferences caused a decrease in the trust attributed to WTO, or in general terms, in multilateral trade negotiations.

Besides increasing the importance and the place of the regional trade blocks in the world production and trade, this trade facilitation agreement, the majority of which matured in the previous Ministerial Conference, was signed in response to decreasing the trust devoted to multilateral trade system and the developments, and also it was seen as a solution for renewing the prestige of the WTO in a manner. This agreement, signed by WTO, is the first comprehensive trade reform since its establishment. While this agreement, as signed by the ministers of the member countries in Bali, was planned to enter into force on July 31, 2015, a protocol of amendment was adopted at a meeting of the General Council of the WTO on November 27, 2014.

By this protocol, which allowed the agreement to be approved and implemented in member countries, to facilitate the ratification process of the TFA, the July 31, 2015 deadline was removed for the WTO members to ratify the TFA leaving open the ratification process indefinitely. Then, it was agreed that the agreement enters into force once the 2/3 of the WTO members have completed their domestic ratification process.

The main aim of this study was to define and evaluate the effects of TFA on BSEC, specifically in terms of Turkey, using the Logistics Performance Index (LPI) as a proxy variable of the components of the trade facilitation.

This study begins with a brief introduction to the concept of trade facilitation and continues with the second part, in which the Black Sea Economic Cooperation Organisation (BSEC) is analysed, aiming to establish free trade area in the region, and it is followed by the last part, in which possible gain and effects that TFA will probably create in the BSEC, specifically in terms of Turkey, are analysed using the gravity model with the panel data estimation method.

## **2. Trade Facilitation and The BSEC**

Although the term trade facilitation has gained popularity after the 9th Ministerial Conference of the WTO (Bali, December, 03-06, 2013), in terms of its conceptual framework, it is based on the GATT 1974. The three articles of the agreement (articles 5, 8, and 10) are from the GATT 1947 and they served as a basis of the TFA.

The Kyoto Convention, aiming at simplifying and harmonizing the custom procedures as part of the World Customs Organization, has entered into force in 1974 and was signed by 91 countries. The convention has been revised according to the needs of the international trade and demands of governments in 2006. In addition, the history of the contribution of the United States Conference on Trade and Development (UNCTAD) in this field dates back to 1964, when the first Ministerial Conference was held. Moreover, the Facilitation Special Program of UNCTAD was initiated 20 years ago. In this context, the Columbus Ministerial Declaration about 1994 Trade Efficiency is the major instrument that also includes the trade facilitation calendar in 1996 WTO Singapore Ministerial Conference (Saeed, 2014, p. 440).

The term trade facilitation is defined as every kind of modernization, harmonization, and simplification of international trade procedures, which will reduce the cost and time of custom procedures.

Trade facilitation is one of the key topics in multilateral trade negotiations. A combination of factors has led to increased focus on trade facilitation. First, conventional trade barriers, such as tariffs and quotas, have been significantly lowered or abolished in many countries through WTO negotiations and other regional, bilateral, and unilateral efforts. Therefore, the cost of non-tariff barriers has become more apparent. Second, there has been a shift in production patterns. Companies today often produce components in different countries. This has put more pressure on countries to reduce non-tariff barriers to stay competitive and to integrate international supply chains. Third, the technological development enables new and more efficient ways to exchange information and to lower trade costs (Hammar, 2008, p. 6).

The efforts of the WTO concerning this issue have resulted in several studies related to the effects of trade facilitation on mainly international organizations and institutions, and World Trade, especially in developing countries. Quantitative studies carried out about trade facilitation have increased progressively in recent years. Studies aiming the measurement of the effects of the concept of trade facilitation on foreign trade used the General Equilibrium Analysis Approach or the Gravity Model. The number of studies carried out using the mentioned methods has risen increasingly in the last 10 years.

Among the studies evaluating the effects of trade facilitation activities on trade flows, there exist some analyses in which trade facilitation is represented as proxy variables, such as import prices, transportation costs or the productivity of the transport sector.

In addition to the Freedom to Trade Internationally (FTI) Index published by the Fraser Institute, the Logistics Performance Index (LPI) of the World Bank and the Enabling Trade Index (ETI) of the World Economic Forum are used as a proxy for aggregated measurement of the trade facilitation.

The FTI is based on 9 measures, containing various trade related barriers. While the LPI is an average of 6 basic dimensions of the logistics activities, the ETI is an index of 54 variables to measure the market access, border administration, transport and communications infrastructure, and the size of business environment (Yadav, 2014, p. 292).

The LPI aiming at measuring the performance of approximately 160 countries by reducing the size of the data sets obtained from countries through questionnaires to six basic variables using the Principal Component Analysis has been issued by the World Bank since 2007.

Considering the fact that an effective logistics will reduce the trade costs and thereby it will increase the positive effects on the competitive competitiveness of the companies/countries and improve the economic growth, the LPI analyses the following variables:

- The efficiency of the customs and the customs clearance process,
- The quality of trade and transport infrastructure,

- The ease of adjustment of a competitive shipping prices,
- The quality of logistics services,
- The quality of monitoring and tracking of delivery,
- The frequency of the arrival of the shipments to buyers on time and the performances of the countries.

After the cold war, Turkey proposed the establishment of the Black Sea Economic Cooperation Organization (BSEC) to strengthen economic, political and cultural cooperation. The BSEC aimed stronger economic relations, and has the following member countries: Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russia, Turkey, Ukraine, and Serbia (Baran, 2008, p. 88).

BSEC, as a regional economic organization, gained international legal identity on May 1, 1999. Under the BSEC umbrella, some of the interrelated and mutual goals, such as establishing cooperations and supporting regionalism as well as globalization, were aimed. In addition, economic cooperation in the area and the integration of the national economies were aimed in the BSEC, which emphasized the adoption of macroeconomic reforms, adaptation of economic institution to the market economies, and deregulating of product and service markets among the member states. A collaboration between customs and other border authorities was considered as one of the organization's priorities in the BSEC Charter. A free trade area among the BSEC members was established (Aydın, 2005, p. 62).

### 3. Literature Review

The term trade facilitation has been discussed by researchers and multilateral organizations in the past decade. Therefore, the effects of trade facilitation on international trade have been investigated in recent studies. These studies generally suggest a positive and significant effect on bilateral trade flows. However, there is no standard or homogenous definition.

The limited empirical literature on trade facilitation can be divided into two groups, the ones using their own definition and the others using measurement and specific indicators. Wilson, Mann and Otsuki (2003, 2005) define trade facilitation using four indicators: port efficiency, customs, regulations, and use of e-commerce. Wilson, Luo and Broadman (2006), Soloaga, Wilson and Mejia (2006), and Iwanow and Kirkpatrick (2009) use the same definition. Shepherd and Wilson (2008), similar to Wilson, Mann and Otsuki (2005), use the quality of maritime port infrastructure, air transport infrastructure, the extent of irregular payments, and Internet Service Provider (ISP) sector competition index. Portugal-Perez and Wilson (2012) define four new aggregate indicators for trade facilitation: physical infrastructure, information and communications technology (ICT), border and transport efficiency, and the business and regulatory environment. Other studies have used one specific indicator measuring trade facilitation. ("World Economic Forum, Enabling Trade", 2013) and Ferrantino and Tsigas (2013) use ETI. Korinek and Sourdin (2011) also use both ETI and LPI.

As LPI analyses differences between countries in terms of custom procedures, logistics costs, and the quality of the infrastructure for land and sea transport, an assessment of trade facilitation

measures, representing an attempt to overcome the set of non-tariff barriers, can be approached through the LPI, published by the World Bank in 2007, 2010, and 2012.

The LPI is used as a proxy variable in studies estimating the effects of trade facilitation on liberal trade and can be divided into two groups, the ones using cross section analysis, such as Hertel and Mirza (2009), Korinek and Sourdin (2011), and Hoekman and Nicita (2011), and those using comparative analysis, such as Puertas, Marti and Garcia (2014), and Marti, Puertas and Garcia (2014a, 2014b). Studies in both groups conclude that infrastructure is the most important component in comparison to custom efficiency (Marti, Puertas & Garcia, 2014a).

#### 4. Model and Methodology

The Gravity Model, in which countries' export is explained by their economic size (GNP or GDP), populations, direct geographical distance and set of dummies, incorporating some kind of institutional characteristics common to specific flows, has become a popular instrument in empirical foreign trade analysis since Tinbergen (1962) and Pöyhönen (1963) have pioneered the use of the gravity model in international trade.

We use basically three models: i) gravity model (Model 1), ii) augmented gravity model (Model 2), and iii) augmented gravity model with country or time, or with both of them (Model 3, 4, and 5).

First Model: According to the gravity model of trade, the volume of exports between pairs of countries  $X_{ij}$  is a function of their incomes (GDPs), their populations, and their geographical distance, as shown by the equation

$$X_{ij} = \beta_0 GDP_i^{\beta_1} GDP_j^{\beta_2} POP_i^{\beta_3} POP_j^{\beta_4} DIST_{ij}^{\beta_5} u_{ij} \quad (1)$$

where  $GDP_i$  ( $GDP_j$ ) indicates the GDPs of exporter (importer),  $POP_i$  ( $POP_j$ ) are exporter (importer) populations,  $DIST_{ij}$  measures the distances between the two countries' capital (or economic centres), and  $u_{ij}$  is the error term.

Second model: In this augmented gravity model where LPIs are added, we specify an extended version of Model 1 (equation 1) in a log-linear form, which is given by:

$$\begin{aligned} \ln X_{ij} = & \beta_0 + \beta_1 \ln GDP_i + \beta_2 \ln GDP_j + \beta_3 \ln POP_i + \beta_4 \ln POP_j + \beta_5 \ln DIST_{ij} \\ & + \beta_6 \ln LPI_i + \beta_7 \ln LPI_j + v_{ij} \end{aligned} \quad (2)$$

where  $LPI_i$  ( $LPI_j$ ) indicates the LPIs of exporter (importer) and "ln" denotes variables in natural logs.

We also control individual effects and time effects. Therefore, in equation 3 (Model 3), we first add country dummies, and then in equation 4 (Model 4), we add time dummies on Model 2. Finally, we add both country and time dummies on Model 2 to obtain equation 5 (Model 5). The equations (models) are:

$$\begin{aligned} \ln X_{ijt} = & \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln POP_{it} + \beta_4 \ln POP_{jt} + \beta_5 \ln DIST_{ij} \\ & + \beta_6 LPI_{it} + \beta_7 LPI_{jt} + \sum_n \beta_{8i} + v_{ijt} \end{aligned} \quad (3)$$

$$\begin{aligned} \ln X_{ijt} = & \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln POP_{it} + \beta_4 \ln POP_{jt} + \beta_5 \ln DIST_{ij} \\ & + \beta_6 LPI_{it} + \beta_7 LPI_{jt} + \sum_t \beta_{9i} + v_{ijt} \end{aligned} \quad (4)$$

$$\begin{aligned} \ln X_{ijt} = & \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln POP_{it} + \beta_4 \ln POP_{jt} + \beta_5 \ln DIST_{ij} \\ & + \beta_6 LPI_{it} + \beta_7 LPI_{jt} + \sum_n \beta_{8i} + \sum_t \beta_{9t} + v_{ijt} \end{aligned} \quad (5)$$

A high level income in the exporting country indicates a high level of production, which increases the availability of goods for export. Therefore, we expect  $\beta_1$  to be positive. The coefficient of  $GDP_{jt}$  ( $\beta_2$ ) is also expected to be positive since a high level of income in the importing country suggests higher imports. The coefficient estimate for population of the exporters and the importers ( $\beta_3$  and  $\beta_4$ , respectively) may be negative or positive (Martinez-Zarzoso, Felicitas and Horsewood, 2009, p. 50). The distance coefficient is expected to be negative since it is a proxy of all possible trade costs.

With respect to objective of this study, exporter and importer LPIs, which have coefficients  $\beta_6$  and  $\beta_7$ , respectively, representing the importance of trade facilitation on export flows, are included in the Gravity Model, in which a positive sign is expected for both cases.

A key issue in estimation with gravity models is how to deal with zero bilateral trade. Theoretically, zero trade does not indicate missing information, but it actually reflects the absence of any trade between country pairs. That's why, the logarithmic value of the export values was obtained using  $\ln(x+1)$  formula to avoid problems caused by missing values. Regarding this situation, if  $x=0$ , in other words, when we have the export value available,  $\ln(0+1)$  was considered as  $\ln(0+1)=0$ .

For all models, we use balanced panel data set, and the fixed effects model is used as shown in Models 3-5, due to the fact that a specific group of country is considered. These models are estimated using the Least Square Dummy Variable (LSDV) method.

## 5. Variables and Data

The gravity model was used for estimation for ten countries in the BSEC: Albania, Armenia, Azerbaijan, Bulgaria, Greece, Moldova, Romania, Russian Federation, Turkey, and Ukraine<sup>1</sup>. The World Bank has published LPI for 2007, 2010, and 2012. However, in this study, the LPI values belonging to 2007, 2010, 2012 were taken into consideration for the years 2008 and 2009, 2011, and 2013, respectively. Thus, we estimated aggregated bilateral exports of the ten countries over the period from 2007 through 2013. Consequently, our data set is a balanced panel with 630 observations.

<sup>1</sup> Georgia and Serbia were excluded because several data were missing for these countries.

The data belonging to export, Gross Domestic Product (GDP), and population were taken from the World Integrated Trade Solution (WITS) software, belonging to the World Bank. As regards the explanatory variables, the distance between countries, expressed in kilometres, was calculated as the straight line distance between capitals from Centre d' Etudes Prospectives et d'Informations Internationales 4 (CEPII).

## 6. Results

We estimated the models for the influence of logistics on trade flows using the pooled ordinary least squares (OLS) for the first and second models, but using the LSDV method for the other models. The results are shown in Table 1.

**Table 1: Regression Results**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Exporter GDP</b>	0.5983 (0.1442)***	0.2024 (0.2570)	-0.3856 (1.0740)	0.0906 (0.2696)	-0.4121 (1.5431)
<b>Importer GDP</b>	1.0481 (0.1781)***	0.6551 (0.2573)**	0.5576 (0.2596)**	0.5434 (0.2646)**	0.4657 (0.2648)*
<b>Exporter population</b>	1.3008 (0.2027)***	1.6463 (0.3218)***	-19.1944 (13.6237)	1.7243 (0.335)***	-18.6660 (14.7694)
<b>Importer population</b>	0.3327 (0.2275)	0.6757 (0.2908)**	0.7400 (0.2915)**	0.7537 (0.2971)**	0.8133 (0.2966)***
<b>Distance</b>	-1.7139 (0.2877)***	-1.3278 (0.3909)***	-0.9029 (0.4826)*	-1.1703 (0.4068)***	-0.8261 (0.4868)*
<b>Exporter LPI</b>	---	3.7439 (2.1372)*	1.5968 (2.8888)	5.2706 (2.2723)**	4.3610 (2.8889)
<b>Importer LPI</b>	---	3.7142 (1.8664)**	4.9600 (1.9403)**	5.2409 (1.9363)***	6.0141 (2.011)***
<b>Constant</b>	-38.9437 (4.2713)***	-40.4266 (4.5455)***	279.6349 (201.6165)	-41.0969 (4.6295)***	269.7942 (209.0572)
<b>R<sup>2</sup></b>	0.4139	0.4221	0.5543	0.4272	0.5579
<b>Adjusted R<sup>2</sup></b>	0.4092	0.4155	0.5426	0.4151	0.5418
<b>Wald t. for LPIs</b>	---	2.36*	3.35**	4.16**	5.18***
<b>Wald t. for dummies</b>	---	---	18.78***	1.17	11.28***
<b>N</b>	630	630	630	630	630

Notes: Country-pair dummies and time dummies are not reported. All variables are expressed in natural logarithms. Robust standard errors are in parentheses. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% level, respectively.

In Models 1, 2, and 4, all the coefficients present the expected sign. The magnitude of the LPI coefficients is similar to that found in other studies cited above.

We performed a Wald test to check for both LPIs and the individual and time dummies. The restricted models are the pooled model given by equations 1-2, with the restrictive assumption of a single intercept ( $\alpha_{ijt} = \alpha$ ) and the same parameters over time and across trading partners, as shown in Table 1. The unrestricted models, however, are the same behavioural equations; however they allow the intercept to vary across trading partners, over time, or both. The test results are also reported in Table 1. It shows that we cannot accept the hypothesis of equality of individual effects, time effects, or both of them. This indicates that we have to select a model with individual effects, time effects, or both them. In all augmented models, we test the null hypothesis, which is the LPI explanatory variables are equal to zero. The results of the test show that we cannot accept it. That is to say LPI is an important explanatory variable. In addition, the coefficients of LPI present the expected sign. Nevertheless, the coefficients of the exporter LPI are not statistically significant in models with individual effects. Moreover, we notice that the coefficients on exporter GDP and population variables present the wrong sign and they are not statistically significant, but the other coefficients of the variables are statistically significant. We believe that it is because the country-pair individual effects cause insignificant exporter individual effects.

Comparing the results of all models, including the countries' individual effect in the model makes the effects of exporter countries become insignificant. That's why, it can be said that Models 2 and 4 are the models that show the effects of LPI clearly.

## 7. Conclusion

In this study, the effects of trade facilitation on BSEC are investigated with panel data methods, based on the Gravity Model. The LPI is used as an indicator of trade facilitation.

When the estimations of Augmented Gravity Models were analysed, the signs of the coefficients of the LPIs of the countries, both exporting and importing, were found to be in line with expectations. Therefore, increasing the LPIs of the countries results in an increase in their mutual (bilateral) exports. However, the coefficient of the LPIs of exporting countries were not found statistically significant in the Models 3 and 5, where the country effects are included. For Models 2 and 4, the coefficients of the LPIs of both exporter and importer countries were found to be close to each other.

The signs of the coefficients of the LPIs of both exporter and importer countries were found positive, which is in line with expectations. Therefore, increasing the logistics performances of the countries yields an increase in their mutual exports. The results of the Models 2 and 4 suggest that the effect that a development in the LPI of the exporter and importer will make on export is about the same level. Considering the fact that an effective logistics will reduce the trade costs and thereby it will increase the positive effects on the competitiveness strength of the companies/countries and the economic growth, there is no doubt that all subcomponents of the LPI analysing the variables of the efficiency of the customs and the customs clearance process, the quality of trade and transport infrastructure, the ease of adjustment of a competitive shipping prices, the quality of logistics services, the quality of monitoring and tracking of delivery, the frequency of the arrival of the shipments to buyers on time, and the performances of the countries, have a decisive importance on exports. However, with reference to the possibility that both LPI values and the development levels of the countries in the discussed country group and the discussed

commodity group are the main exponents of this condition, there is a need for more detailed studies containing these variables.

It is an important fact that multilateral trading system (WTO-TFA) needs the efforts of regional economic integration about supporting the facilitating trade efforts among countries. In this respect, in addition to acceding to the TFA-WTO agreement of the BSEC for the purpose of increasing trade in economies in the region, regional efforts also gain importance. Two-thirds of the WTO members must complete their domestic ratification process for the WTO-TFA to have a legally binding force. TFA-WTO agreement was ratified 49 WTO member, of which 28 countries are EU members, which is around 45% of the total number of countries needed to bring the TFA into force. Although the completion of the ratification process of the agreement is of vital importance for the region, there are unfortunately no BSEC member countries yet among the countries that have completed the process of ratification of TFA.

In addition to the multilateral efforts, due to the importance of regional efforts in the field of trade facilitation, one of the areas of cooperation under the umbrella of the BSEC is trade facilitation. For this purpose, cooperations and regulations were established in the BSEC region regarding various matters, such as quota and licenses, laws and regulations, and customs and visa procedures. Increasing the efforts of the countries to adopt international standards in the field of trade facilitation of the BSEC member countries will probably increase the trade volume in the region. Thus, it will probably also lead to a success in BSEC, which has gained limited success so far.

## References

- Aydin, M. (2005). Regional cooperation in the Black Sea and the role of institutions. *Perceptions Perceptions, Autumn*.
- Baran, Z. (2008). Turkey and the wider Black Sea region. *The Wider Black Sea region in the 21st century: Strategic, Economic and Energy Perspectives. Washington DC: Center for Transatlantic relations*.
- Ferrantino, M., & Tsigas, M. (2013). Enabling Trade in Ukraine. *USITC Research Note*.
- Hammar, T. (2009). *Trade Facilitation in Vietnam: Recent Progress and Impact*. Department of Economics, University of Lund.
- Hertel, T. W., & Mirza, T. (2009). The role of trade facilitation in South Asian economic integration. *Study on Intraregional Trade and Investment in South Asia, 2*.
- Hoekman, B., & Nicita, A. (2011). Trade policy, trade costs, and developing country trade. *World Development, 39*(12), 2069-2079.
- Iwanow, T., & Kirkpatrick, C. (2009). Trade facilitation and manufactured exports: Is Africa different?. *World Development, 37*(6), 1039-1050.
- Korinek, J., & Sourdin, P. (2011). To what extent are high-quality logistics services trade facilitating?. *OECD Trade Policy Working Papers 108*.

- Martí, L., Puertas, R., & García, L. (2014a). The importance of the Logistics Performance Index in international trade. *Applied Economics*, 46(24), 2982-2992.
- Marti, L., Puertas, R., & García, L. (2014b). Relevance of trade facilitation in emerging countries' exports. *The Journal of International Trade & Economic Development*, 23(2), 202-222.
- Martínez-Zarzoso, I., Felicitas, N. L. D., & Horsewood, N. (2009). Are regional trading agreements beneficial?: Static and dynamic panel gravity models. *The North American Journal of Economics and Finance*, 20(1), 46-65.
- Portugal-Perez, A., & Wilson, J. S. (2012). Export performance and trade facilitation reform: hard and soft infrastructure. *World Development*, 40(7), 1295-1307.
- Pöyhönen, P. (1963). A tentative model for the volume of trade between countries. *Weltwirtschaftliches Archiv*, 93-100.
- Puertas, R., Martí, L., & García, L. (2014). Logistics performance and export competitiveness: European experience. *Empirica*, 41(3), 467-480.
- Saeed, M. (2014). The WTO Trade Facilitation Agreement: Implications for Pakistan's Domestic Trade Policy Formulation. *The Lahore Journal of Economics*, 19, 439.
- Shepherd, B., & Wilson, J. S. (2008). Trade facilitation in ASEAN member countries: measuring progress and assessing priorities. *World Bank Policy Research Working Paper Series 4615*.
- Soloaga, I., Wilson, J. S. & Mejía, A. (2006). Trade facilitation reform and Mexican competitiveness. *World Bank Policy Research Working Paper Series 3953*.
- Tinbergen, J. (1962). *Shaping the World Economy; Suggestions for an International Economic Policy. Books (Jan Tinbergen)*. Twentieth Century Fund, New York. Retrieved from <http://hdl.handle.net/1765/16826>
- Wilson, J. S., Luo, X., & Broadman, H. G. (2006). Entering the Union: European accession and capacity-building priorities. *World Bank Policy Research Working Paper*, (3832).
- Wilson, J.S., Mann, C. & Otsuki, T. (2003). Trade facilitation and economic development. *World Bank Policy Research Working Paper*, (2988).
- Wilson, J. S., Mann, C. & Otsuki, T. (2005). Assessing the benefits of trade facilitation: A global perspective. *The World Economy*, 28, 841-871. [http://artnet.unescap.org/tid/artnet/mtg/gravity10\\_reading2.pdf](http://artnet.unescap.org/tid/artnet/mtg/gravity10_reading2.pdf)
- World Economic Forum, enabling trade: Valuing growth opportunities*. (2013). Retrieved from [http://www3.weforum.org/docs/WEF\\_SCT\\_EnablingTrade\\_OnlineAppendix\\_2013.pdf](http://www3.weforum.org/docs/WEF_SCT_EnablingTrade_OnlineAppendix_2013.pdf)
- Yadav, N. (2014). Impact of Trade Facilitation on Parts and Components Trade. *The International Trade Journal*, 28(4), 287-310.