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# The Eurasian Economic Union in Search of Strategic Partners: The Gravity Effects of Integration Blocs

**Summary:** The present contribution aims at researching the new Eurasian project on the post-Soviet area, the Eurasian Economic Union, by analyzing the legal aspects of both its institutional and economic frameworks. Because of its relatively small size, not only should the Eurasian Economic Union increase bilateral trade with its member states but also promote commerce outside the Union. In this regard, the crucial objective for success is the development of long-term relationships with its strategic partners based on mutual economic benefits and shared values. We applied the gravity model and identified not only which factors influence bilateral foreign trade, including the differences in partners' values based on a neo-institutional approach, but also analyzed those integration blocs and groups of countries to determine with which partners the Eurasian Economic Union should develop strategic partnerships.

**Keywords:** Eurasian Economic Union, Strategic partnership, Strategic partners, Bilateral trade, Gravity model.

**JEL:** F02, F15, F53, F55.

After several failed attempts at integration during the post-Soviet era, in 2007 Belarus, Kazakhstan and Russia finally reached an agreement to create a customs union. Following the establishment of the Eurasian Customs Union, the Eurasian Economic Union (EAEU) came into operation in 2015 expanded by the further accession of Armenia and Kyrgyzstan in the same year.

However, the EAEU is a young organization for which data are scarce, thus limiting the use of practical research methods. Due to this scarcity of empirical evidence, most authors that study Eurasian integration have been guided by references to absolute historicism and ideological statements and declarations. Thus, for instance, Alexander Libman (2012, p. 239) highlighted that relevant Russian studies have weak theoretical foundations and are often “full of descriptive statistics, but almost never contain original research (e.g. interviews, detailed case studies, or econometric analysis)”. In this regard, the present research aims to fill that gap with an econometric analysis using the gravity model. Therefore, the following intermediate objectives have been proposed:

1. Estimate the impact of standard variables such as *GDP per capita* and geographical distance between the EAEU and its trade partners on bilateral trade;

2. Estimate the impact of geopolitical factors such as the price of oil and sanctions on bilateral trade;

3. Analyze, from a neo-institutional approach, the difference in values with its trade partners, which is important for building strategic alliances. It is worth mentioning that this variable has not been previously tested by other authors and has been introduced with the goal of contributing to the model;

4. Determine which groups of countries and regional organizations the EAEU should maintain relationships and develop strategic partnership with, including those that are currently of little commercial interest but hold future trade potential.

Briefly, the gravity model enables: (i) estimating the impact of standard variables such as GDP *per capita* and distance between the EAEU and its trade partners on bilateral trade; (ii) measuring the effect of geopolitical factors such as oil prices and sanctions on bilateral trade; (iii) based on a neo-institutional approach, taking into consideration the differences in common values with its partners, which is important for building strategic partnerships; and (iv), determining which regional blocs and groups of countries the EAEU trades with the most and with which they should therefore develop strategic partnerships.

The article is structured as follows. In the theoretical part of our research, we provide a review of the relevant literature in Section 1, analyze the EAEU's legal and institutional framework in Section 2 and its economic context in Section 3. In the empirical section, we describe the data and methodology in Section 4 and provide the results of the gravity model in Section 5. Finally, in Section 6 we measure the partners' trade potential by applying a method to reflect on the speed of convergence. Section 7 concludes.

## 1. Literature Review

Since the collapse of the Soviet Union, Russia, with its anti-democratic regime and imperialistic ambitions, has continued to be considered as potentially dangerous to Western countries (Zbigniew Brzezinski 1994). Consequently, the EAEU is seen as a manifestation of the “post-imperial syndrome” (Marcel H. Van Herpen 2014, p. 56) or as a neo-imperialist function of the Russian Federation (Lilia Shevtsova 2009; Dmitri Trenin 2011; Andrei P. Tsygankov 2014). As Iana Dreyer and Nicu Popescu (2014) stated, the EAEU is viewed as an attempt by the Kremlin to develop a rival project to the EU's Eastern Partnership, while Libman (2007) argued that Russia is not sufficiently strong to entice other states to join regional organizations. According to David R. Cameron and Mitchell A. Orenstein (2012), Inna Melnykovska, Hedwig Plamper, and Rainer Schweickert (2012) and Rachel Vanderhill (2013), Russia uses regionalism as a tool to support fellow regimes. Sergey Borodkin (2011) argued that the EAEU project is criticized for being very costly and weak in its conceptual dimension, which makes some authors hesitant about its viability and longevity.

Despite being criticized, the EAEU is nonetheless considered the most ambitious and most successful model for regional integration in the post-Soviet arena (Christopher A. Hartwell 2013; Elena Kuzmina 2015; Andrey Zagorski 2015). Evgeny Vinokurov (2017) pointed out that the EAEU is best viewed not as an exception to the

general rules, but rather as a functioning regional integration bloc with its own successes and problems. In a similar line, Rilka Dragneva and Kataryna Wolczuk (2013, p. 1) noted that the EAEU cannot be viewed solely through the prism of Russia's hegemonic ambition in the region and that Eurasian regionalism is not a product of Russian hegemonic ambitions but rather a setting that exhibits a "tendency for states to form regional groupings" in order to receive protection from the negative impacts of globalization by institutionalizing relationships. According to Jeffrey Mankoff (2012), the aim of this integration is to conduct domestic reforms and strengthen the region's role in the global, political, and economic arena with no ambition to overthrow the existing international world order by undermining the West. Authors such as Natalia Vasilyeva and Maria Lagutina (2011) and Sergey Tkachuk (2014) contend that the Eurasian region has acquired "global" features, with integration as not solely a linear interaction between the states but an attempt to achieve a qualitatively new level of cooperation.

Nevertheless, the lack of empirical evidence due to the fact that the EAEU is an incipient project seems to be the main shortcoming affecting recent research. Although Konstantin Borodin and Anton Stokov (2015) have provided empirical evidence using the gravity model to assess the existing trends in trade between the member states, their analysis dates prior to the establishment of Eurasian Customs Union within the Eurasian Economic Community, which is why they did not consider the Union as a coherent whole.

Gravity models have been used as a workhorse for analyzing the determinants of bilateral trade flows for more than 50 years (Keith Head and Thierry Mayer 2013) since being introduced by Jan Tinbergen (1962). According to Edward Leamer and James Levinsohn (1995), the gravity model has provided some of the clearest and most robust findings in empirical economics. Moreover, the gravity model is no longer applied only to trade in goods but has recently been tested with success for trade in services (Fukunari Kimura and Hyun-Hoon Lee 2006). Paul R. Krugman and Maurice Obstfeld (2005) also applied the gravity model to trade flows, and have described the model in the following manner:

$$T_{ij} = \frac{Y_i Y_j}{D_{ij}}, \quad (1)$$

where:  $T_{ij}$  is the trade flow from the country of origin  $i$  toward the country of destination  $j$ .  $Y_i$ ,  $Y_j$  are the economics size of two countries (countries' GDPs).  $D$  is the distance between countries  $i$  and  $j$  in physical terms.

The traditional gravity model is analogous with Newton's Law of Gravitation such that a mass of goods or labor or other factors of production supplied at origin  $i$ ,  $Y_i$ , is attracted to a mass of demand for goods or labor at destination  $j$ ,  $E_j$ , but the potential flow is reduced by the distance between them,  $d_{ij}$  (James E. Anderson 2010).

Subsequently, researchers began to include other dummy variables in the traditional model interpretation, such as a common language, common borders, regional agreements and sanctions, among others, to better explain the trade flow of different countries, unions and organizations in particular economic and political contexts. For example, Rose's model (Andrew K. Rose 2004) included dummy variables such as common language and regional trade agreements, while Gary C. Hufbauer and Barbara

Oegg (2003) included a set of dummy variables to indicate current or previous economic sanctions between two countries with a view to estimating the impact of economic sanctions on US trade.

Gravity models have also been frequently used to estimate the effects of integration groupings and multilateral international agreements in international trade (Rose 2004; Tiiu Paas and Egle Tafenau 2005). In this regard, Inmaculada Martínez-Zarzoso and Felicitas Nowak-Lehmann D. (2004) applied the model to analyze trade between MERCOSUR and the EU with the prospect of signing a potential free trade agreement, while Nikita Chernov (2017) applied the model to examine Russia's trade flow with different integration groupings.

It is noteworthy that gravity models now routinely include variables far beyond those such as tariffs, which are imposed at the border, to cover behind-the-border barriers as well. Regulatory policies, as well as countries' deep political, economic and institutional characteristics, have been shown to influence trade as modelled in the gravity framework (Ben Shepherd, Hrisyana Doytchinova, and Alexey Kravchenko 2019). The authors also point out that, traditionally, gravity models have been based largely on intuitive ideas as to which variables are likely to influence trade. Shiu-Sheng Chen and Kai-Wei Hsu (2013) examined whether oil price volatility affects bilateral trade between two countries around the world by using the gravity econometric model. Dinh Thi Thanh Binh, Nguyen Viet Duong, and Hoang Manh Cuong (2014) analyzed Vietnam's trade flows and included the currency exchange rate of Vietnam with its trade partners.

In addition to the standard variables used in gravity models (*GDP per capita* and geographical distance), variables that reflect the geopolitical situation (sanctions and oil prices) and affiliation to integration groupings, as well as a variable related to common values was also added to the model. This variable represents the difference between the EAEU and its trade partners' Freedom in the World Index provided by Freedom House, which measures the presence and degree of civil liberties and political rights. It is worth mentioning that this variable has not been previously tested by other authors and seeks to contribute to the model based on the logic that the incompatibility of political regimes and values in the long-term can affect trade relationships and even destroy commercial agreements and trade projects, which was precisely what happened to the EU-Russia strategic partnership. The incorporation of this new variable also derives from the neo-institutional approach described below.

During the theoretical neo-institutional debate, as well as acknowledging the types of institutions and their construction, a knowledge base was generated for understanding the institutional mechanism in the neoliberal context in which the regional integrations are also immersed. Within the contextual confines of regionalism, neo-institutional theory is concerned with the regulation of organizations' participation within a legal framework, the legitimization of new formal and informal rules and/or the adjustment to a new impetus within regional structures with new requirements for adaptation (Carlos Riojas 2004).

In this regard, neo-institutionalism is attractive for explaining the degree of institutional and organizational interaction in order to enhance the functioning of

regional integration, which in turn is illustrated by the degree of legitimization in the organizations that make up the institutional structures of such integrations.

Moreover, regionalism or the process of regional integration leads, among others, to institutional changes. Any institutional change is complicated due to the alterations that may have already occurred and can be a consequence of changes in norms, informal limitations and different kinds of effectiveness and coercive observance (Douglas North 1990).

Meanwhile, the process of regionalization is further supported by the capacity of governance. In this regard, the neo-institutional theory has contributed to the concept of governability that has to do with its application to democracies. International organizations make use of this concept to refer to the process and rules which governments enact and supposedly abide by when they are elected, re-elected or replaced, at least according to the EU's notion of governability as a structure of decisions for the application of public policies at supra-national level (Joan Oriol Prats 2003). In this regard, we argue that the different level of civil liberties and political rights between partners can become an obstacle for developing trade relationships and diminish trade flows in the future.

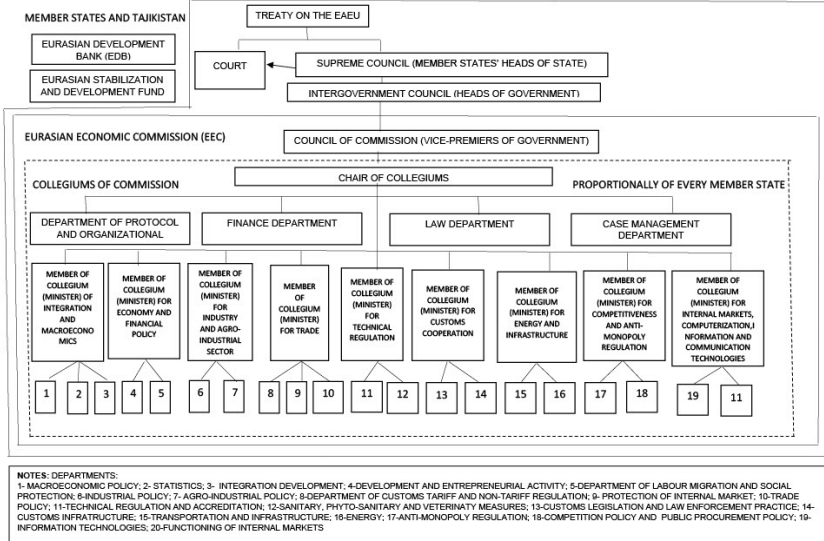
In addition, it is important to underline that institutions play a vital role in the formation of regional organizations, and that the future success of the EAEU and its further development of trade relationships with the rest of the world will strongly depend on the efficacy and efficiency of its institutions, especially taking into account that the present geopolitical situation does not promote its development. The description and analysis of the EAEU institutions are presented below.

## 2. Legal and Institutional Framework

The Eurasian Economic Union Treaty entered into force on January 1, 2015. If we focus on the economic objectives, the Agreement aims at creating conditions for the economic development of member countries and strives for the creation of a common market of goods, services, capital and human resources in the framework of a proper Union and for the sake of contributing to the multilateral modernization, cooperation and competitiveness growth of national economies in the global economy (see Agreement on the Eurasian Union Economic, Article 4).

The EAEU's institutional bodies were modelled using the example of the EU (Ksenia Kirkham 2016; Pablo Podadera Rivera and Anna Garashchuk 2016) owing to the fact that, despite its deficiencies, the EU was seen as the only successfully functioning model for deep integration (Tatyana Valovaya 2012; Borodin and Stokov 2015). However, Aliaksei Kazharski (2012) maintains that while copying the institutional framework does not seem to be difficult, the ultimate challenge will reside in its actual content.

As of today, the "family" of EAEU institutions is made up of the Supreme Council, the Intergovernmental Council, the Eurasian Economic Commission (EEC) and the Court (see Figure 1).



Source: Own elaboration based official data of the EEC.

Figure 1 EAEU Institutions

Although the EAEU leaders have been regularly negotiating the creation of the Eurasian parliament, looking at Figure 1, the absence of a parliament remains noteworthy. Arseniy Sivickiy (2015) argues that Belarus and Kazakhstan continue to block Russia's suggestions of forming a Eurasian parliament because they do not want politicization and see it as a direct threat to their national sovereignty.

The Supreme Council is the main body of the EAEU and is made up of the heads (presidents) of the member states. This institution is in charge of the strategy, prospects and directions for achieving integration. The Supreme Council holds meetings no less than once a year.

The Intergovernmental Council, which comprises the heads of government of the member states, is convened no less than twice a year. The main functions of this institution include monitoring the implementation of the Treaty on the EAEU and decisions made by the EEC and approving project budgets. Moreover, the Intergovernmental Council is empowered to veto the decisions made by the Collegiums and the Council of the EEC.

The EEC has been working since February of 2012 and constitutes a permanent supranational institute by being a regulatory body of the EAEU. The main objective of the EEC is to ensure conditions for developing economic integration within the EAEU. The EEC is a bicameral body. All competencies of the Commission comprise over 140 functions. The EEC's main executive body is the Council, which provides overall guidance to the EEC and regulation of the integration processes. The Council is supported by work of Collegiums. The Collegiums is an executive body of the EEC composed of representatives on the basis of equal representation by every EAEU's member state. The representatives are referred to as ministers, and, since they are appointed by

the Supreme Council, they lead the work of departments of the EEC. The Collegium chair is appointed for four years in alphabetical order and at present the representative from Armenia occupies this post. In the opinion of Vinokurov (2017), such a representation scheme diminishes Russia's role as the region's leading state in Eurasian Economic Union affairs. Dragneva (2016) highlighted that the supranational nature of the Collegium has been best exemplified by its power to decide certain issues by qualified majority and, in this regard, the EAEU's mode of decision-making remains strongly intergovernmental as well as centered on the highest level of state authority.

In addition, it is worth mentioning that the EEC is actively engaged not only with the EAEU member states but also with third countries in order to attract new partners for collaboration and possible participation in Eurasian integration projects. The EEC interacts within the EAEU at two levels: the intergovernmental level (by working with national authorities) and the business sector level.

The Court, composed of two judges from each member state, is a judicial body of the EAEU. Although the Court acts in accordance with the Treaty on the EAEU, the Statute of EAEU's Court (Annex 2 to the Treaty on the EAEU) and the Regulation of the Union's Court, it should not be considered as a totally independent institution due to the fact that the Supreme Council appoints the judges. As set out in paragraph 49 of Chapter IV of the Statute, the Court is empowered to deal with cases related to the implementation of EAEU law on application by both the member states and the economic entities.

With regard to the Eurasian Development Bank (EDB) and Eurasian Stabilization and Development Fund (ESDF), first of all it is worth mentioning that they are not directly affiliated to the EAEU institutions. The EDB and the ESDF are independent institutions composed by the EAEU states plus Tajikistan with their own membership and administration. The EDB and the ESDF, being key elements of the financial infrastructure of Eurasian integration, aim at ensuring the financial support for integration between member states and its economic development and stability.

It is noteworthy that the EDB is not limited by the participants from the post-Soviet space. The bank is also open for collaboration with all interested shareholders from all over the world. Thus, for instance, in 2013-2014 the idea of creating the Shanghai Cooperation Organization's (SCO) Development Bank on the basis of the EDB was discussed. However, this project was eventually abandoned due to a conflict of interest among the partners and the start of a new and more attractive and ambitious project: the creation of the BRICS Development Bank.

To sum up, it should be said that despite the trend toward high institutionalization with signs of supranationality that characterize "deep" integration, the EAEU bodies with their predominance of vertical powers and a weak delegation of authority are nevertheless flexible and respectful toward the member states' sovereignty through egalitarian decision-making processes limited to economic issues. In this regard, Kirkham (2016) recommends that the EAEU members develop democratic practices alongside their institutional base to avoid institutional paralysis.

However, it should not be forgotten that a deeper integration does not always mean a more effective and beneficial project for all members and, based on this point of view, it might be more convenient for the EAEU to adapt the practices of regional

groupings with a lower level of integration which presupposes less institutionalization, such as the North American Free Trade Agreement (NAFTA), the Southern Common Market (MERCOSUR) or the Association of Southeast Asian Nations (ASEAN), rather than to pursue the implementation of the EU's model with its higher level of supranationality and consolidation of economic and political policies. Even so, in spite of the EAEU institutions being an already functioning entity, its formation has not yet been completed. Indeed, the success and development of the EAEU will depend first and foremost on its contribution to the economic prosperity of the Union and the well-being of its member states. The economic framework of the EAEU is accordingly analyzed in what follows.

### 3. Economic Context

Unquestionably, the EAEU is today a new regional project of integration in the post-Soviet space with a GDP of almost 2 trillion dollars and a population of about 182 million people (World Bank 2019)<sup>1</sup>.

Although many authors call attention to the weak economic element of Russian hegemony due to the EAEU members' insufficient economic diversification, technological retardation, low internal trade turnover and limited access to external financing (Libman 2007; Paul Kubicek 2009; Dossym Satpayev 2015; Sivickiy 2015; Zagorski 2015; Kirkham 2016; Podadera Rivera and Garashchuk 2016). Kirkham (2016, p. 125) argues that its "weaknesses", such as homogeneity, when combined with the monopolistic nature of capitalism, could be transformed into the hegemonic project's driving force: the EAEU member states led by Russia can merge their efforts to proceed with "reindustrialization", to create transnational sectorial holdings and develop joint technological and professional bases.

However, it is obvious that the growth of mutual trade, mutual investments and civilized labor migration are the crucial factors for Eurasian integration to be successful. In this regard, one of the primary objectives in the long-term (until 2025) must be to increase the common market. Nonetheless, it seems that the fundamental move toward a truly "common" market has been postponed. Although no issues related to a single central bank or single currency have been officially raised by the EAEU, the member states have begun consultations concerning the creation of a financial regulator through a supranational financial institution to enforce common standards in the Union's financial markets. A single electricity market was also planned. The formation of a single oil and gas market is expected by 2025.

It is worth mentioning that the EAEU started operating in a disadvantaged economic and political situation for its member states. Thus, the geopolitical crises between Russia and Western nations together with the oil price collapse negatively influenced the economic element of Eurasian integration. Sanctions applied by the West against Russia due to the situation in Ukraine and the oil price shock led to currency devaluation and economic stagnation in Russia.

Nevertheless, in such a situation the EAEU member states did not participate in the policy of contra sanctions applied by Russia against the West that, on the one hand,

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<sup>1</sup> **World Bank.** 2019. World Bank Open Data. <https://data.worldbank.org/> (accessed May 12, 2019).



can be seen as a lack of solidarity and a common economic policy within the EAEU, but on the other hand, it demonstrates that Russia, being a hegemon, did not want less powerful members of the Union to be involved in its “Sanctions War” by force.

The fact that Russia never issued official recommendations to adopt the sanctions (nor was the issue escalated to the level of the EAEU) may be a “bridge” toward improving and developing future relations between the EU and the EAEU. Moreover, it can be said that the sanctions even had a somewhat positive impact on the growth of mutual trade within the EAEU. Thus, for instance, agricultural imports from Belarus, Armenia and Kyrgyzstan to Russia have increased significantly. According to the Eurasian Economic Commission, despite the stagnation of the Russian economy and low oil prices between EAEU member states as a percentage of their total foreign trade increased from 12.3% in 2014 to 13.5% in 2015 (Eurasian Economic Commission - EEC 2016).

According to Vinokurov (2017) the establishment and evolution of the common Eurasian Union market for goods and services helps absorb shocks affecting mutual investments, thereby mitigating the negative impact of economic contraction over the past two years. However, the author argues that it is not a panacea and in this regard it is crucial for member states of the EAEU to secure full-scale coordination of macroeconomic policies, primarily monetary policy.

Nevertheless, even though the EAEU will pursue coordinated macroeconomic policies, the EEU is too small to become a self-sufficient market or to grow into a regional power comparable to the EU, taking into consideration that the majority of the EAEU’s trade turnover occurs in commerce with the rest of the world.

In this regard, Vinokurov (2017, p. 66) argues that any attempts to erect a “Eurasian fortress” are suicidal. In our view, for such a young regional organization as the EAEU, the solution in this situation should be to select truly strategic partners on the international stage and establish strong, long-term partnerships with them.

However, nowadays the selection of the partners can be limited by the sanctions that the West has imposed against Russia (and to some degree *vice versa*). As the result of this ongoing confrontation, Russia was expelled from the G8 and the negotiations regarding Russia’s membership in the Organisation for Economic Co-operation and Development (OECD) were temporarily suspended. Moreover, Federica Mogherini (2016) declared that Russia is no longer EU’s strategic partner. Nevertheless, Vadim Voynikov (2015, p. 21) argued that, in spite of the current situation, neither Russia nor the EU is in a position to suspend the strategic partnership, defining their relationships as “a forced strategic partnership”.

Despite the geopolitical crisis between Russia and the West, the EU continues to be Russia’s largest trade partner. The EU is also Kazakhstan’s largest trade partner and plays a leading role in the modernization of the economies of the member states involved the Eurasian integration project. For this reason, deep integration with the EU is extremely important for the EAEU and the EU should be regarded as a key strategic partner (Vinokurov 2014; Podadera Rivera and Garashchuk 2016).

According to Libman and Vinokurov (2012), the long-term sustainable development of the EAEU will only possible if it relies on close cooperation with both the EU and China. The EAEU and China have signed a Trade and Economic Cooperation

Agreement together with China's new strategic concept that also involves the EAEU: the Silk Road Economic Belt. In this regard, Segey Karaganov (2015) are of the opinion that cooperation between the EAEU and China most certainly provides a powerful impetus to regional development and ongoing interaction with respect to transport, energy and finance in Central Asia, Siberia and the Far East. As Vasily Erokhin (2015) has pointed out, today BRICS (Brazil, Russia, India, China and South Africa) seem to be the only alternative to the USA-EU alliance. Taking into account that the Western financial market is now limited for Russia because of the sanctions, BRICS have become the largest source of investment. According to Vinokurov (2017), given that any rapid progress in relations with the EU is not expected until the current profound crisis is defused, the solution could be to build a network of free trade areas with large trade partners.

It is significant that there has already been some progress in that direction, and the EAEU is actively working on creating a network of free trade areas (FTAs). The first agreement was signed with Vietnam in 2015, while negotiations with Iran were started in 2015 and the Interim Agreement was signed in 2018. A Trade and Economic Cooperation Agreement with China was also formalized in 2018. Agreements with Israel<sup>2</sup> (Euroasian Economic Commission 2019), Egypt, Thailand, Serbia, Singapore, India and Mongolia are under negotiation. Hungary, Cambodia, Laos, Peru, South Korea, Tunis, Japan and Chile, among other countries, have expressed their interest in collaborating with the EAEU. According to the Minister of Foreign Affairs, Sergey Lavrov, about 50 countries are interested in collaborating with the EAEU (Marija Grisina 2017). Unfortunately, the FTA project with New Zealand was abandoned due to the sanctions against Russia.

To provide empirical evidence of our research, the methodology and data are described below.

#### 4. Data and Methodology

Our data represent economic variables of 76 countries through the seven-year-duration from 2010 (the year when The Common Customs Tariff went into force) to 2016 (total panel observations 532) divided into 10 main groups:

- Group I: Association of Southeast Asian Nations (ASEAN);
- Group II: Southern Common Market<sup>3</sup> (MERCOSUR);
- Group III: South Asian Association for Regional Cooperation (SAARC);
- Group IV: North American Free Trade Agreement (NAFTA);
- Group V: European Union (EU);
- Group VI: Emerging power countries: BRICS;
- Group VII: The most developed countries: Group of Seven (G7);
- Group VIII: Countries in the post-Soviet space (former USSR);
- Group IX: Eurasian Economic Union (EAEU).

<sup>2</sup> The first round of negotiations between the EAEU and Israel took place in April 2018.

**Euroasian Economic Commission.** 2019. News and Events. <http://www.eurasiancommission.org/ru/nae/news/Pages/27-04-2018-2.aspx> (accessed March 19, 2019).

<sup>3</sup> Spanish: Mercado Común del Sur; Portuguese: Mercado Comum do Sul.

Our research also included countries which do not belong to any of the groups listed above, but they are either important commercial partners for the EAEU or countries which express (or have expressed in the past) a strong interest in building a network of free trade areas with the EAEU (Group X).

For our model, we used the standard variables for gravity models such as partners' GDPs *per capita* (in order to measure economic stature) and distance between EAEU capitals and partners' capitals. We also added variables related to the geopolitical situation, such as oil prices and current sanctions between Russia and the West, which could affect the EAEU's economy; variables related to common values with a partner taking into consideration a neo-institutional approach and a negative experience of strategic partnership between Russia and the EU which from the beginning had a significant gap in shared in values. Moreover, dummy variables related to partners' affiliation with the integration blocs or specific groups of countries were included in the model. The variables are described in more detail in Table 1.

**Table 1** Variables

Abbreviations	Description	Data Base
Trade	Dependent variable, logarithm. Trade turnover (export and import) between the EAEU and partner	Trade Map
DIST	Independent variable, logarithm. Distance between capitals of the EAEU member states (the median) and partner's capital in km	World Distance Calculator <sup>4</sup>
GDP_U	Independent variable, logarithm. EAEU's GDP, constant to 2010.	World Bank
GDP_P	Independent variable, logarithm. Partner's GDP, constant to 2010.	World Bank
POP_U	Independent variable, logarithm. EAEU's population	World Bank
POP_P	Independent variable, logarithm. Partner's population	World Bank
PETRPRICE	Independent variable. Brent crude oil price per barrel.	Statista <sup>5</sup>
FREEDOMEDIF	Independent variable. Freedom in the World Index of partner divided by Freedom in the World Index of the EAEU (member states' average)	Freedom House <sup>6</sup> Reports
SANC	Independent dummy variable. Sanctions between Russia and the West. Takes the value of 1 if there are sanctions, 0 otherwise.	Official Information
EU	Independent dummy variable. Affiliation to the EU. Takes the value of 1 if the partner is a member state of the EU, 0 otherwise.	Official Information
ASEAN	Independent dummy variable. Affiliation to ASEAN. Takes the value of 1 if the partner is a member state of ASEAN, 0 otherwise.	Official Information
MERCOSUR	Independent dummy variable. Affiliation to MERCOSUR. Takes the value of 1 if the partner is a member state of MERCOSUR, 0 otherwise.	Official Information
USSR	Independent dummy variable. Takes the value of 1 if the partner was one of the Soviet Republics, 0 otherwise.	Official Information
NAFTA	Independent dummy variable. Affiliation to NAFTA. Takes the value of 1 if the partner is a member state of NAFTA, 0 otherwise.	Official Information
G7	Independent dummy variable. Affiliation to the G7. Takes the value of 1 if the partner is a member state of G7 0 otherwise.	Official Information
SAARS	Independent dummy variable. Affiliation to SAARC. Takes the value of 1 if the partner is a member state of SAARC, 0 otherwise.	Official Information

<sup>4</sup> **World Distance Calculator.** 2019.

[https://distancecalculator.globefeed.com/World\\_Distance\\_Calculator.asp](https://distancecalculator.globefeed.com/World_Distance_Calculator.asp) (accessed February 25, 2019).

<sup>5</sup> **Statista.** 2019. <https://es.statista.com/> (accessed February 22, 2019).

<sup>6</sup> Non-governmental organization that measures the degree of civil liberties and political rights.

BRICS	Independent dummy variable. Affiliation to BRICS. Takes the value of 1 if the partner is a member state of BRICS, 0 otherwise.	Official Information
EAEU	Independent dummy variable. Affiliation to the EAEU. Takes the value of 1 if the partner is a member state of the EAEU, 0 otherwise.	Official Information

Source: Own elaboration.

Based on the literature review, we have formulated the following hypotheses:

- Hypothesis 1: An increase in both the partner's and the EAEU's GDPs *per capita* exerts a positive effect on bilateral trade.
- Hypothesis 2: Geographical distance exerts a negative effect on bilateral trade.
- Hypothesis 3: Sanctions exert a negative effect on bilateral trade.
- Hypothesis 4: An increase in oil prices exerts a positive effect on bilateral trade.
- Hypothesis 5: Differences in values exerts a negative effect on bilateral trade.
- Hypothesis 6: The partner's affiliation to some integration blocs and groups of countries exerts a positive effect on bilateral trade with the EAEU.

Regarding the last hypothesis related to the partner's affiliation with integration blocs and groups of countries, the present research using the gravity model and potential trade estimation aims to determine which blocs or groups of countries the EAEU trades with more and should therefore develop strategic partnerships with them. In other words, it would probably be more profitable to conclude the strategic partnership agreement with those integration blocs and groups of countries rather than to continue developing trade relations with every member individually.

The results of the gravity model are presented in what follows.

## 5. Results

In this article we used a static panel as it is assumed to estimate the long-term relations between the variables, provided that the autocorrelation in the model is admissible and the stationarity of the residues is ensured in order to rule out spurious regression (William H. Greene 2003). The specification of the static panel (see, for instance, Badi Hani Baltagi 2008; Jeffrey M. Wooldridge 2010) can be written as follows:

$$y_{it} = \alpha + X'_{it}\beta_x + Z'_i\beta_z + \mu_{it}, \quad (2)$$

where  $\mu_{it} = \delta_i + \gamma_t + \varepsilon_{it}$ ,  $y_{it}$  refers to  $it$ -th of the endogenous variable;  $X'_{it}$  refers to observation  $it$ -th in  $k_x$  explanatory variables, which are considered exogenous,  $Z'_i$  refers to observation  $i$ -th in the  $k_z$  variables, which take the same value in time;  $\delta_i$  takes the specific unobservable effects in the cross section units and  $\gamma_t$  takes the specific unobservable effects in the temporal units. The variable  $\varepsilon_{it}$  represents the term of idiosyncratic shocks which should fulfil the usual basic assumptions in a regression model. Finally,  $\beta_x$  and  $\beta_z$  are the parametric vectors to be estimated.

In our application,  $X'_{it}$  is defined by the following variables:  $\text{Log}(\text{GDP\_P}_{it}/\text{POP\_P}_{it})$ ,  $\text{Log}(\text{GDP\_U}_{it}/\text{POP\_U}_{it})$ ,  $\text{Log}(\text{DIST}_{it})$ ,  $\text{FREEDOMEDIF}_{it}$ ,  $\text{PETRPRICE}_{it}$ ,

EAEU<sub>it</sub> and SANCT<sub>it</sub>. Regarding the dichotomous variables  $Z_i'$ , they are defined by EU<sub>i</sub>, G7<sub>i</sub>, USSR<sub>i</sub> and BRICS<sub>i</sub>.

Table A3 of Appendix provides a summary test performed to verify if  $\delta_i = 0$ ,  $\gamma_t = 0$  and  $\delta_i = \gamma_t = 0$ . The tests indicate that the null hypothesis of “no unobservable heterogeneity between units”, known as the “pooled” model (see, for example, Carter H. Hill, William E. Griffiths, and Guay C. Lim 2011), has been rejected. In particular, the heterogeneity between cross-sectional units (countries) has been detected while excluding its presence in the case of temporary units.

The problem with a fixed effects model (FEM) is that the parameters related to the dichotomous variables are already controlled for and taken within the fixed effects, so it is impossible to identify them (see Damodar N. Gujarati and Dawn C. Porter 2009, p. 601). Assuming that the heterogeneity detected between countries is not correlated with the explanatory variables, we decided to apply a random effects model (REM) (see Table 2). Appendix (Table A4) shows the result of the Hausman test for REM (Jerry A. Hausman 1978), which admits the application of the model.

**Table 2** Estimation Results (REM)

Independent variable	Coefficient	t-statistic	Dependent variable: log(Trade <sub>it</sub> )
			p-value
Log(GDP_P <sub>it</sub> /POP_P <sub>it</sub> )	0.655	5.66	0.0000
Log(GDP_U <sub>it</sub> /POP_U <sub>it</sub> )	2.108	5.33	0.0000
Log(DIST <sub>it</sub> )	-0.470	-6.60	0.0000
FREEDOMEDIF <sub>it</sub>	-0.100	-4.73	0.0000
PETRPRICE <sub>it</sub>	0.006	7.49	0.0000
SANCT <sub>it</sub>	-0.121	-2.81	0.0050
EU <sub>i</sub>	0.285	2.28	0.0230
G7 <sub>i</sub>	1.617	8.17	0.0000
USSR <sub>i</sub>	0.877	3.60	0.0003
EAEU <sub>i</sub>	0.282	2.04	0.0410
BRICS <sub>i</sub>	2.064	7.49	0.0000

**Notes:** Cluster-robust standard errors: White cross-section standard errors and covariance (d.f. corrected).

**Source:** Own elaboration.

The model specification does not reveal major problems of multicollinearity (see Tables A1 and A2 in the Appendix). In regard to its efficiency, the REM has problems of correlation between cross-sectional units (see Table A5 in the Appendix), which hamper the efficiency of the random effects estimator. Another indication of inefficiency is the heterogeneity in  $u_{it}$  for cross-sectional and temporal units (see Appendix, Tables A6 and A7). In this case, the homoscedasticity in the temporary units and the heteroscedasticity in the cross-sectional units are recognized. In order to counteract this inefficiency, the cluster-robust standard errors for countries in the random effects estimator have been applied, which have allowed the majority of the coefficients to be significantly different from zero to 1%. Thus, the unit root tests in the REM residuals panel data have been applied (see Appendix, Table A7). The unit root was not recognized in any of the cases (it is either common or specific to every country), thereby ruling out that the results of Table 3 are spurious regression.

As can be observed in Table 3, both the partner and the EAEU experienced a significant increase in GDP *per capita*, with the EAEU showing the highest coefficient. Thus, we can confirm the first hypothesis.

Regarding the second hypothesis, it can be observed that distance is a significant factor in EAEU trade and its member states trade more with countries that are geographically closer to them. As for the third hypothesis, although the EAEU member states did not support Russia in its sanctions war with the “West”, the sanctions had a negative impact on bilateral trade. Concerning the fourth hypothesis, an increase in oil prices has a positive effect due to the fact that the largest economies of the Union, Russia and Kazakhstan, are very sensitive to oil price changes.

As for differences in values, there is a negative effect on bilateral trade. Thus, the EAEU trades more with partners with similar values and, consequently, common values will be significant in choosing its strategic partners (Hypothesis 5 is confirmed).

Regarding the variables related to the partner’s affiliation with integration blocs, only the partner’s affiliation to the EU was significant, whereas affiliation to the other regional integration organizations, such as ASEAN, SAARC, MERCOSUR and NAFTA were insignificant. Hence, those variables were omitted from the model. As for the affiliation with groups of countries, the partner’s affiliations with BRICS, G7 and, surprisingly, also if countries share a common Soviet past – in spite of the fact than many authors argued that common Soviet ties would disappear with time – have a positive effect on bilateral trade. Moreover, it is worth mentioning that the partner’s affiliation with the EAEU has a positive effect on bilateral trade despite many authors’ criticisms regarding the Union’s economic background.

To sum up, the EAEU should develop strategic partnerships based on its common economic interest with the EU, BRICS, G7 and with countries sharing a common Soviet past. However, the common values with the above-mentioned regional organizations and groups of countries should not be overlooked in the selection of strategic partners.

Finally, it should be recalled that the EAEU is a nascent economic union that has not yet concluded these strategic partnership agreements with other regional organizations and groups of countries. In this regard, not only does our research seek to propose the further development of strategic partnerships with the integration blocs that already exist based on the coefficients obtained by the gravity model but also aims to calculate the trade potential (see below) with partners that may not currently constitute a commercial interest but have promise and are solid bets for rapid trade development in the foreseeable future. Moreover, based on the results of the gravity model and potential trade calculated in this article, further research could propose the creation of new integration blocs and groups of counties to develop a trade relationship with the EAEU.

## 6. EAEU’s Potential Strategic Partners

Although with time, the focus of the partnerships can expand to include horizontal, multilateral, and foreign policy issues, the economics and mutual economic benefits continue to be the basis for strategic partnerships. In this regard, it is important to measure the partners’ trade potential.

Zoltán Jakab, Mihály A. Kovács, and András Oszlay (2001) recommend a method of speed of convergence (SC) as follows:

$$SC = \frac{\text{Average growth rate of potential trade}}{\text{Average growth rate of actual trade}} \times 100 - 100. \quad (3)$$

The method of speed of convergence acknowledges this convergence if the growth rate of potential trade is smaller than that of actual trade, and, as a result the speed of convergence is negative. In the opposite case, we have the issue of divergence. This method is more accurate than the point estimates method.

However, Thanh Binh, Viet Duong, and Manh Cuong (2014) argue that the negative speed of convergence cannot reflect the convergence of potential and actual trade, so the difference between potential trade value and actual trade value should also be considered. In particular:

$$\Delta T = \text{potential trade value} - \text{actual trade value}. \quad (4)$$

According to Binh, Duong, and Cuong (2014), if  $SC$  and  $\Delta T$  are unlike signs, the potential trade value and the actual trade value will converge, and if  $SC$  and  $\Delta T$  having like signs, the result will be a divergence. In other words, countries with the result of convergence will have a high potential for developing bilateral trade with the EAEU.

For countries with a convergence condition, the most likely potential partners are countries with a larger magnitude of  $SC$  and a smaller magnitude of  $\Delta T$ . The result of dividing  $\Delta T/SC$  provides a value reflecting the time of convergence. Countries with a smaller period of convergence will be potential partners of the EAEU in developing bilateral trade. As for countries with a divergence condition, it should be determined whether they overtrade or have a low trade potential by reviewing  $\Delta T$ : if  $\Delta T < 0$ , the result will be overtrade and if  $\Delta T > 0$ , the result will be restrictive potential (see the complete list of countries with divergence in the Appendix, Table B1).

To estimate  $\Delta T$  and  $SC$  in bilateral trade between the EAEU and partner countries, we use the results obtained from the regression of our gravity model.

For our case, we found that the EAEU had convergence in trade with 33 out of the 76 countries included in the study. This result demonstrates that the EAEU still has untapped potential for trade with many countries, namely 13 member states of the EU, six states with a common Soviet past, four ASEAN member states, three G7 countries, three SAARC member states, two NAFTA states, one MERCOSUR member state and one BRICS country.

As for Vietnam, with which the FTA agreement has been signed, we can also observe a situation of convergence, as well as with Israel, with which the FTA agreement is under negotiations. Within the EAEU there is convergence with Armenia and Kirgizstan. Meanwhile, with the rest of member states we observe a situation of overtrade.

The results of ten countries which have the shortest convergence time in the convergence condition are shown in Table 3 (the complete list of countries with convergence is provided in the Appendix, Table B2).

**Table 3** Top 10: EAEU's Potential Trade Partners

Rank	Country	Time of convergence	Group
1	Sri Lanka	194.53	III
2	Portugal	356.50	V
3	Cambodia	429.45	I
4	Uzbekistan	769.64	VIII
5	Croatia	949.53	V
6	Romania	980.24	V
7	Kyrgyz Republic	1158.85	IX
8	Israel	1677.75	X
9	Armenia	2097.73	IX
10	New Zealand	2140.57	X

Source: Own calculations.

To summarize, the EU will remain the major partner. Although the gravity model indicated that the partner's affiliation to BRICS has a positive effect on bilateral trade, South Africa is the only country with a situation of convergence. Despite the results of the model, at this time the partner's affiliation to the ASEAN is not significant, although it may be attractive in the future given that its four member states have a situation of convergence with the EAEU. Many ex-Soviet Republics have potential to develop bilateral trade with the EAEU. In this regard, their membership in the EAEU can also be beneficial for all parties.

## 7. Conclusions

It is obvious that the EAEU is too small at present to become a self-sufficient market. Thus, its future development and success will depend not only on its coordinated macroeconomic politics and the efficiency of its institutions, but also on developing its relationship with other countries and regional blocs. In this regard, the key objective for the EAEU will be to correctly choose its strategic partners and build long-term relationships of trust with them.

Despite the trend toward high institutionalization with signs of supranationality, the EAEU bodies are flexible and respectful toward the member states' sovereignty, accompanied by egalitarian decision-making and limited by economic issues. Moreover, the EEC is actively engaged not only with EAEU member states but also with the non-member countries in order to attract new partners for collaboration and possible participation in Eurasian integration projects.

To carry out our research, the REM was chosen. To test for homoscedasticity in the temporal units and the heteroscedasticity in the cross-sectional units, we applied cluster-robust standard errors.

The gravity model has shown, first, that an increase in both the EAEU's and its trade partners' GDPs *per capita* have a positive effect on bilateral trade (in particular, the EAEU's GDP *per capita* with the highest coefficient); second, the EAEU trades more with geographically closer partners that share similar values; third, sanctions have a negative impact on bilateral trade and, fourth, an increase in oil prices has a positive effect on bilateral trade. It is also important to note that the variable



“differences in values” was confirmed to have a positive effect on bilateral trade; a variable that has been incorporated in the gravity model for the first time.

Regarding the variables related to partners’ affiliation with integration blocs and different groups of countries, partners’ affiliations with the EU, BRICS, the G7, with countries that have a common Soviet past and with its member states within the EAEU have a positive effect on bilateral trade. However, the partners that belong to the blocs of countries such as G7 and BRICS increase the trade flow with the EAEU to a greater degree than with the EU and with countries that have a common Soviet past.

To sum up, the strategic partnership with the above-mentioned regional blocs and groups of countries based on common commercial interests would be beneficial for the EAEU, but the EAEU should also take into account geographical proximity and shared values in selecting its strategic partners.

According to the results of the partners’ potential trade estimation, the EAEU had a convergence in trade with 33 countries. The EU will remain the major trade partner with 13 member states of convergence in trade. Moreover, the fact that the issue of the sanction war between Russia and the West has never escalated to the level of the EAEU and can therefore become some kind of “bridge” to improve and develop future relations between the EU and the EAEU. It is worth mentioning that the EAEU has converged in trade with many nascent post-Soviet countries and also with countries that have expressed interest in building a network of free trade areas. In this regard, the FTA agreements and even the accession of some of these partners to the EAEU can be interesting projects for all parties concerned. Within the EAEU, there is convergence in trade with Armenia and Kyrgyzstan, thus demonstrating a capacity for increasing insider trading with these two, recently incorporated member states.

Finally, as regards further research lines, it would be interesting to analyze the possibility of proposing a strategic partnership with new blocs of countries based on the significant increase in the bilateral actual trade flow, which can be verified through the modification of the initially proposed model. For instance, based on the calculated ranking of potential trade partners (see Appendix, Table B2), new blocs of countries can be proposed for a potential strategic partnership. To carry out this analysis, we would need to expand the model with dummy variables and interaction terms that not only reflect the mere fact of having significant bilateral trade differences but also consider other factors such as differences in values with the partner and investment flows between countries. If such a possibility of proposing new blocs is confirmed, their creation would surely enhance the already existing trade flows. On the other hand, it would be of interest to perform a detailed sectoral analysis (either trade creation or trade diversion) with the proposed regional blocs and groups of countries.

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## Appendix

**Table A1** Correlations in the Dataset

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)	1.00	0.39	0.12	-0.42	0.19	0.15	0.12	0.25
(2)	0.39	1.00	0.01	-0.09	0.80	-0.02	0.37	-0.06
(3)	0.12	0.01	1.00	-0.03	0.02	0.60	0.02	-0.02
(4)	-0.42	-0.09	-0.03	1.00	-0.11	-0.08	-0.15	-0.17
(5)	0.19	0.80	0.02	-0.11	1.00	0.03	0.37	-0.26
(6)	0.15	-0.02	0.60	-0.08	0.03	1.00	-0.42	-0.05
(7)	0.12	0.37	0.02	-0.15	0.37	-0.42	1.00	-0.11
(8)	0.25	-0.06	-0.02	-0.17	-0.26	-0.05	-0.11	1.00

Notes: where:

- (1) LOG(TRADE)
- (2) LOG(GDP\_P/POP\_P)
- (3) LOG(GDP\_U/POP\_U)
- (4) LOG(DIST)
- (5) REEDOMEDIF
- (6) REEDOMEDIF
- (7) SANCT
- (8) EAEU

Source: Own construction.

**Table A2** Variance Inflation Factor (VIF) of Independent Variables

Variable	VIF
Log(GDP <sub>it</sub> )	3.20
Log(POP <sub>it</sub> )	1.92
Log(DIST <sub>it</sub> )	2.21
FREEDOMEDIF <sub>it</sub>	4.05
PETRPRICE <sub>it</sub>	2.53
SANCT <sub>it</sub>	2.79
EAEU <sub>it</sub>	2.01
EU <sub>it</sub>	1.17
G7 <sub>it</sub>	1.93
USSR <sub>it</sub>	1.41
BRICS <sub>it</sub>	1.08

Notes: Least squares panel data.

Source: Own calculation.

**Table A3** Lagrangian Multiplier Test for the Random Effects Model

Null hypothesis: There is no significant difference across time and both units.

Test	Cross-section ( $\delta_i = 0$ )	Time ( $\gamma_t = 0$ )	Both ( $\delta_i = \gamma_t = 0$ )
Breusch-Pagan (Trevor S. Breusch and Adrián Pagan 1980)	1315.318*** (0.0000)	3.002 (0.0831)	1318.320*** (0.0000)
Honda (Yozo Honda 1985)	36.267*** (0.0000)	-1.732 (0.9584)	24.419*** (0.0000)
King-Wu (Maxwell King and Ping Wu 1997)	36.267*** (0.0000)	-1.732 (0.9584)	8.203*** (0.0000)

Notes: \*\*\* is statistically significant at the 1% level. Chi-square statistics. *p*-value in parentheses.

Source: Own calculation.

**Table A4** Hausman Test for the Random Effects Model

Null hypothesis: Cross-sectional random effects.

Model	Chi-square	p-value
Random effects model	0.000000	1.0000

Notes: The estimated coefficient covariance matrix is of reduced rank.

Source: Own calculation.

**Table A5** Breusch-Pagan's Test and Pesaran's Test for Cross-Sectional Dependence

Null hypothesis: No cross-sectional dependence (correlation).

Model	Test	Statistic	p-value
REM	Breusch-Pagan LM	5088.486	0.0000
	Pesaran scaled LM (M. Hashem Pesaran 2004)	29.64947	0.0000

Notes: REM = random effects model.

Source: Own calculation.

**Table A6** Heteroscedasticity: Likelihood Ratio Test for Heteroscedasticity

Null hypothesis: Residuals are homoscedastic (cross-section test).

Model	Statistic	p-value
Pooled (least squares)	534.9193	0.0000

Source: Own calculation.

**Table A7** Heteroscedasticity: Likelihood Ratio Test for Heteroscedasticity

Null hypothesis: Residuals are homoscedastic (period test).

Model	Statistic	p-value
Pooled (least squares)	0.355017	1.0000

Source: Own calculation.

**Table A8** Panel Unit Root Test (Summary)

Null hypothesis: Unit root (assumes common unit root process).

Model	Test	Statistic	p-value	Cross-sections	Obs.
REM	Levin, Lin & Chu t*	-3.44980	0.0003	76	433

Null hypothesis: Unit root (assumes individual unit root process)

Model	Test	Statistic	p-value	Cross-sections	Obs.
REM	ADF - Fisher	206.474	0.0022	76	433
REM	PP - Fisher	230.535	0.0000	76	433

Notes: Probabilities for Fisher tests are computed using an asymptotic chi-square distribution.

Source: Own calculation.

All other tests assume asymptotic normality.

**Table B1** Countries with Divergence

N	Country	Situation OT/LP
1	Argentina	OT
2	Australia	OT
3	Austria	OT
4	Azerbaijan	OT
5	Bulgaria	OT
6	Brazil	OT
7	Canada	OT
8	China	OT
9	Cyprus	OT
10	Germany	OT
11	Spain	OT
12	Finland	LP
13	France	OT
14	Greece	OT
15	Hungary	OT
16	Indonesia	OT
17	India	LP
18	Iran, Islamic Rep.	OT
19	Japan	OT
20	Lithuania	OT
21	Moldova	OT
22	Myanmar	OT
23	Mongolia	OT
24	Netherlands	OT
25	Pakistan	OT
26	Peru	OT
27	Philippines	OT
28	Poland	OT
29	Serbia	OT
30	Slovak Republic	OT
31	Slovenia	LP
32	Thailand	OT
33	Tajikistan	LP
34	Turkmenistan	OT
35	Tunisia	OT
36	Turkey	OT
37	Ukraine	OT
38	Uruguay	OT
39	Norway	OT
40	Iceland	LP
41	Belarus	OT
42	Kazakhstan	OT
43	Russian Federation	OT
OT	OVERTRADE	
LP	LOW POTENTIAL	

Source: Own calculation.



**Table B2** Countries with Convergence

Rank	Country	Time of convergence	Group
1	Sri Lanka	194.53	III
2	Portugal	356.50	V
3	Cambodia	429.45	I
4	Uzbekistan	769.64	VIII
5	Croatia	949.53	V
6	Romania	980.24	V
7	Kyrgyz Republic	1158.85	IX
8	Israel	1677.75	X
9	Armenia	2097.73	IX
10	New Zealand	2140.57	X
11	Chile	2144.19	X
12	Ireland	2182.99	V
13	Czech Republic	2315.33	V
14	South Africa	2441.71	VI
15	Estonia	2941.40	V
16	Malaysia	3009.52	I
17	Mexico	3199.53	IV
18	Bangladesh	3244.81	III
19	Afghanistan	3797.82	III
20	Paraguay	4266.64	II
21	Singapore	5896.29	I
22	Georgia	7095.80	VIII
23	United States	7521.36	IV, VII
24	Belgium	8841.81	V
25	Latvia	9546.48	V
26	Malta	11081.16	V
27	Vietnam	11605.96	X
28	Egypt, Arab Rep.	14857.50	X
29	Denmark	15384.63	V
30	Sweden	33227.46	V
31	United Kingdom	81835.65	V, VII
32	Switzerland	132908.12	X
33	Italy	548671.08	V, VII

**Source:** Own calculation.

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