IMPACT OF CHINA-PAKISTAN REGIONAL TRADE AGREEMENT ON PAKISTAN'S EXPORTS: An Analysis Using Gravity Trade Model

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Abstract

This study aims to analyze the impact of the China-Pakistan Regional Trade Agreement on Pakistan's exports. We applied the gravity trade model using the Poisson Pseudo Maximum Likelihood (PPML) estimator for export data for a period of 16 years from 2003 to 2018. For the sake of a comprehensive analysis, ten products at the HS-4 level are studied. The estimates show expected signs for all traditional variables of the gravity equation, including GDP, bilateral distance, colonial relationship, language commonality and landlocked importing countries. The results show a consistent and significant positive impact of the RTA on Pakistan exports.

Keywords: Regional Trade Agreements, Gravity Trade Model, PPML, Exports, Pakistan. *JEL Classification:* F14, F15, O1.

I. Introduction

A regional trade agreement (RTA) is an arrangement among two or more nations to reduce tariff and import duty barriers that influence their trade [Balu and Ismail (2011)]. Over the past 20 years, regional trade agreements have been proliferating rapidly as a tool to increase trade among member countries. Under an RTA, tariff rates are reduced to gain benefits from trade creation and trade diversion. Therefore; RTA has become a crucial component of the contemporary global economy [De Silva and Lee (2018)]. In July 2019; there is a total of 295 RTAs in force globally to support international trade in goods and services [WTO (2019)]. Lowering tariff does not only reduce the trade barriers and consequently enhance the circulation of capital, labour, and migration. In this way, RTAs help to grow and deepen the integration process of the countries [Kahouli (2016)].

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Pakistan has signed trade agreements with several countries, including China, Sri Lanka, Malaysia and Belarus. However, rapid economic progress and the significance of China's global political economy have increased the importance of China as a trade partner. The RTA between China and Pakistan was signed on November 24, 2006, and subsequently implemented from July 1, 2007 [WTO (2019)]. The agreement covers more than 7000 tariff lines at the eight-digit level of Harmonized Commodity Description and Coding Systems – commonly called the HS [MOF (2019)]. As common in RTAs, there is a varying degree of tariff reduction on various tariff lines. According to the program, the tariff is lower to a certain extent for some products while completely removed for some other products. Yet, some tariff lines are not covered in the RTA. As a first step of the tariff reduction program, 20 to 50 per cent tariff is reduced on Pakistan's exports to China for almost 70 per cent of the tariff lines.¹

Currently, the economy of Pakistan is facing a relatively low growth rate. According to Pakistan Economic Survey 2018-19, the provisional GDP growth rate for the financial year 2019 is estimated at 3.3 per cent. One of the major economic problems is the current account deficit of 11.5 million US dollars. Contrary to the government's target of increasing exports to 28 billion US dollars, exports declined 1.9 per cent growth during July-April of FY2019 [MOF (2019)]. Pakistan's exports were at the highest level of 5.1 billion US dollars in 2013-14 and are declining constantly in subsequent years, mostly due to energy shortages, high input costs and an overvalued exchange rate. Another factor in this regard is that Global trade has been at a historic low since the recession in 2008, partly due to trade tension between China and United Stated [UNCTAD (2019)].

There is a strong need to improve exports; the bilateral trade between China and Pakistan has increased from 4 billion US dollars in 2006-07 to 17.48 billion US dollars in 2017-18. Similarly, Pakistan's exports to China have enhanced from 0.6 to 1.7 billion US dollars over the same period. The major exports of Pakistan to China include rice, textile, wearing apparels, medical appliances, and sports products. Several activities are currently being carried out for economic integration between the two countries, including developments related to the China Pakistan Economic Corridor (CPEC). Motivated by this background, the current study takes the RTA between Pakistan and China to analyze its impact on Pakistan's exports. The second phase of negotiations on the RTA is being carried out as the last round of negotiation held in Islamabad in April 2018. Some memorandums of understandings are signed by various companies from both countries recently in Shanghai [MOF (2019)]. In this situation, the current study is of particular relevance and significance.

The remainder of the paper is organized as follows. Literature Review is discussed in Section II. A brief description of the gravity trade model, empirical model specification and data sources are given under Section III. In Section IV, results are tabulated and discussed, and lastly, in Section V the study is concluded.

¹ Further details on the RTA can be found on Regional Trade Agreement Database of the WTO at http://rtais.wto.org/UI/PublicShowMemberRTAIDCard.aspx?rtaid=153.

II. Review of Literature

Several studies offer insights into the relationship between RTAs and bilateral trade. The gravity trade model has been the workhorse for the analysis of trade agreements. There are a relatively small number of studies which applied cross-sectional data to estimate the impact of an RTA. For example, Dembatapitiya and Weerahewa (2015) applied gravity trade model to analyze various trade agreements, including the South Asian Free Trade Area (SAFTA), North American Free Trade Agreement (NAFTA), Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), and Association of Southeast Asian Nations (ASEAN). They used cross-sectional data for 2012 and found a significant positive impact of trade agreements on exports.

As compared to cross-sectional data, panel data is more informative as it consists of time-series observations of many individuals. In this way, panel analysis covers unobserved heterogeneity and time-specific bias; therefore, most of the gravity trade literature involves a panel of longitudinal data to obtain more rigorous estimates. Some studies applied the gravity trade model to analyze the impact of regional trade agreements on agricultural products. Lambert and McKoy (2009) analyzed preferential trade agreements (PTAs) for their impact on food trade between member countries using the gravity trade model. The results showed a positive impact of the PTAs on exports.

Similarly, Mujahid and Kalkuhl (2016) applied a PPML estimator for a gravity model to analyze the impact of RTAs. They used data of all RTAs in the food sector involving 180 countries; their results support the positive impact of RTAs on the food trade.

Gul and Yasin (2011) applied the gravity model to estimate the trade potential of Pakistan using the penal data of 42 countries. Their study showed that Pakistan had significant potential for trade with Asian, Middle East and European countries. China has signed several regional trade agreements with various countries. Sen, et al. (2015) applied the log-log approach of gravity model estimation to analyze preferential trade agreement between China and India using a dataset for 1984 to 2009. The results showed that there was trade creation for Chinese exports and trade diversion for Indian exports.

In trade policy analysis so far, there has been an emphasis on tariffs. However, some recent studies are now extending the arena to non-tariff barriers (NTBs). For instance, Hayakawa, Ito and Kimura (2016) analyzed the impact of tariffs and NTBs using a panel of 174 exporting countries for years to 2007–2011. They find that removing tariffs increase trade. However, an RTA would be more effective if it involves lowering of NTBs in addition to tariffs.

Still, other studies analyzed the impact of RTAs on other phenomena such as migration and foreign direct investment (FDI). In this regard, Figueiredo, Lima and Orefice (2016) investigated the role of regional trade agreements on bilateral international migration using data for 200 countries bilateral migration stocks for every ten years ranging from 1960 to 2010. They indicated that the inclusion of factors such as easing bureaucratic procedures for visa and asylum could magnify the pro-migration role of trade agreements. Similarly, Cherif and Dreger (2018) analyzed the relationship between RTAs and FDI. The study found South-South trade agreements as an important instrument for regional integration as they help to attract foreign investors.

While most of the literature shows a positive impact of RTAs on exports, Vicard (2012) argues that a rigorous analysis may show the impact of various RTAs rather ambiguous due to the heterogeneity of regional trade agreements. Soloaga and Winters (2001) argued that gravity analysis based on cross-sectional specification without country-specific effects results in bias coefficients values. Conversely, it turns out that this panel specification with country and time three fix effects more rigorous estimation of the gravity equation [Egger and Pfaffermayr (2003)]. Therefore, an appropriate model specification is required to obtain a reliable estimate of the impact of an RTA on exports.

III. Methodology

1. Gravity Trade Model

The gravity trade model is developed analogical to the Newtonian law of gravitation and initially applied in trade analysis by Ravenstein (1885) and Tinbergen (1962). However, their model was empirically valuable but lacked a theoretical foundation. Armington (1969) estimated the elasticity of substitution based on the assumption that goods are differentiated by place of origin. Anderson (1979) is the first work which provides the theoretical foundation for the gravity equation by using the assumptions of product differentiation by place of origin and constant elasticity of substitution (CES) expenditures.

Following Anderson, work on the theoretical foundation of the gravity trade model proliferated. Bergstrand (1985) explained the gravity trade model based on the Heckscher-Ohlin framework. In contrast, Eaton and Kortum (2002) derived the gravity equation on the supply side as a Ricardian structure with intermediate goods, and Chaney (2008) introduced a gravity model with firm heterogeneity. Arguably, it was Anderson van Wincoop (2003) who popularized the Armington-CES approach based equation of the gravity model. Recently, Allen, et al. (2014) further strengthened the theoretical basis of the gravity equation by deriving sufficient conditions for equilibrium across various types of general equilibrium trade models. Analogical to gravitational law, the basic gravity trade model can be expressed as in Equation 1.

$$X_{ij} = G \frac{Y_i E_j}{T_{ij}^{\theta}} \tag{1}$$

In this equation, X_{ij} is exported from country *i* to *j*; *G* is the inverse of worlds total production *Y*, that is G=1/Y; Y_i is the domestic production of country *i*; E_j is the aggregate expenditure of country *j*; T_{ij} is total trade cost between country *i* and *j*. According to Anderson and van Wincoop (2003), the trade cost term consisted of multilateral resistance terms as follows in Equation 2.

$$T^{\theta}_{ij} = \left[\frac{t_{ij}}{\prod_i P_j}\right]^{\sigma-1}$$
(2)

 Π_{ij} is the outward multilateral resistance term which mean the relative resistance an exporting country *i* faces when it exports to an importing country *j* proportional to the overall resistance by all importing countries. On the other hand, P_{ij} is the inward resistance term which means the relative resistance faced by an importing country *j* when it imports from an exporting country *i* proportional to the overall resistance of importing from all other countries as follows in Equation 3 and 4.

$$\Pi_{i}^{\sigma-l} = \sum_{j} \left[\frac{t_{ij}}{P_{j}} \right]^{\sigma-l} \frac{E_{j}}{Y}$$
(3)

$$P_{j}^{\sigma-l} = \sum_{i} \left[\frac{t_{ij}}{P_{j}} \right]^{\sigma-l} \frac{Y_{j}}{Y}$$

$$\tag{4}$$

The terms E_j/Y and Y_i/Y denote the hypothetical magnitude of trade between the partners in case of zero trade costs. The term t_{ij} demotes trade cost between trade partners, which depends on trade policy variables such as tariffs, regional trade agreements, and other geographic variables. As the theoretical multilateral resistance terms are not observable so the empirical gravity equation using typical economic, historical and geographic variables can be expressed as follows in Equation 5.

$$Exports_{ij} = \frac{GDP_i^{\beta_1} \ GDP_j^{\beta_2} \ Language_{ij}^{\beta_3} \ Coloy_{ij}^{\beta_4}}{GDP_{ij}^{\beta_5} \ Landlocked_i^{\beta_6} \ Landlocked_j^{\beta_6}}$$
(5)

This equation states that bilateral trade between exporter *i* and importer *j* is positively related to the economic size of the partner countries as well as the existence of language commonality and colonial relationships between the trading partners. On the other hand, trade is hindered by the bilateral distance between the two countries. Similarly, exporter or importer being a landlocked country, also negatively affect the bilateral trade flow.

2. Empirical Model Specification

Although ordinary least square (OLS) is the most common estimator for regression analysis, it is often not suitable for bilateral trade analysis because of two reasons. First, trade data very often include zero trade. As the OLS required log-transformation, but the log of zero is infinite. In this way, we have to drop observations involving

103

zero trade or censor with some value, typically replacing each zero with a one. However, these ad hoc approaches involve data loss of information in one way or the other—secondly, the existence of heteroscedasticity in trade data which is also against the assumptions of the OLS.

In such a situation, an appropriate estimator is the Poison Pseudo Maximum Likelihood (PPML) estimator. The PPML was introduced by Gourieroux, et al. (1984) as an estimator for count data models. In a salient paper, Silva and Tenreyro (2006) argued that the log-linear transformation results in an inconsistent bias in the presence of heteroscedasticity. So the results from the PPML estimator will provide better results by including the zero trade values rather than OLS. Subsequent research by Silva and Tenreyro (2011) showed that the PPML model was consistent and outperformed the typical OLS estimation. Currently, the PPML estimator is commonly used for estimating the gravity trade equation. Using the PPML estimator, we specify our empirical model as follows in Equation 6.

$$Exports_{ijkt} = exp\{\beta_0 + \beta_1 \ln_GDP_{jt} + \beta_2 \ln_Distance_{ij} + \beta_3 Colony_{ij} + \beta_4 Language_{ij} + \beta_5 Landlocked_i + \beta_6 RTA_{ii} + \gamma_i + \delta_k + \lambda_i\} + \varepsilon_{iikt}$$
(6)

As our data panel involves exports of multiple products over multiple years from exporting country to importing countries, the subscript *i*, *j*, *k*, and *t* denote exporting country, importing country, product and year, respectively. The dependent variable is bilateral exports. Note that the dependent variable is taken in absolute form as required by the PPM estimation. There are two importer specific variables, including GDP_j which denotes, the GDP of the importing country, whereas Landlocked_j is a binary variable that is equal to one of the importers in a landlocked country and zeroes otherwise.

There are four county pair variables, namely $Distance_{ij}$, $Lanaguae_{ij}$, $Colony_{ij}$ and RTA_{ij} which denote the bilateral distance between the trading partners, the existence of language commonality, and a common colonizer, and regional trade agreement. In this way, we can isolate the impact of the RTA on exports while controlling for all other factors as there is only one exporter, i.e. Pakistan, which makes it a so-called one-sided gravity equation. Note that the two continuous variables, i.e. GDP and bilateral distance, are taken in logarithmic form while the other four variables are dummy variables.

As evident by literature, we include importer, product, and time-specific effects in the equation to obtain a robust analysis. The term γ_j captures importer specific fixed effects while δ_k and λ_i capture product specific and time-specific effects. β 's are parameters of the equation to be estimated, and ε is the error term.

We estimate the equation for exports of ten products, including rice, various products of the textile sector and sports goods which are major exports of Pakistan. Taking only one product would restrict the analysis specific to that product only. While in the case of a single product, the results can be biased due to peculiarities associated with the trade of that product. Conversely, with multiple products, the results are more reliable and can be generalized to a reasonable extent. The export value in US dollars is taken at the disaggregated level of HS-4 of the Harmonized Commodity Description and Coding Systems². One difficulty of analysis at the disaggregated level is the occurrence of zero exports. However, opting for the PPML estimator can deal with zero exports without any information loss. The ten products we analyze include rice (HS-1006), apparel and clothing accessories (HS-4203), cotton yarn (HS-5205), woven fabrics of cotton (HS-5208), woven fabrics of cotton mixed with man-made fibres (HS-5210), carpets and floorings (HS-5701), T-shirts and other vests (HS-6109), bed linens (HS-6302), surgical appliances and electro-medical apparatus (HS-9018), and sports articles (HS-9506).

3. Variables and Data Sources

We use a panel dataset of various variables taken over a period of time from 2003 to 2018. Export data is sourced from the United Nations Comtrade database. Values of bilateral exports are taken in US dollars. The GDP data in current US dollars is sourced from the World Development Indicators (WDI). Frankel and Romer (1999) showed that as countries develop economically, they trade more. In gravity trade models, GDP is typical taken as a proxy for the economic size of an economy which is expected to positively affect bilateral trade.

The French Centre d' Etudes Prospectives et d' Informations Internationales (CEPII) is the database for traditional variables of gravity equation including bilateral distance, language commonality and colonial relationship, and landlocked countries. The distance is measured in kilometers and the other three are binary variables. The variable language takes the value equal to one if there exists a common official language between the trading partners and zero otherwise. Similarly, the variable Colony id equal to one in case the trading partners had a common colonizer and zero otherwise. In the case of a landlocked importing country, the variable Landlocked is one, and zero otherwise. It is intuitive that country pairs with a common language and common colonial past trade more, which has been empirically proved by trade literature. On the other hand, distance resists trade clearly; the longer the distance, the higher the trade cost.

Similarly, Landlocked means a country is surrounded by other countries and is not directly connected with the outer world through any sea routes. Such geographic conditions increase transportation problems making it difficult to trade with the world. Literature shows that landlocked countries trade relatively less, ceteris paribus.

² Harmonized Commodity Description and Coding Systems is an international system which organize all globally traded products into 100 chapters from HS-01 through HS-100 where each chapter is further divided and subdivided into subcategories. More information on the Harmonized System is available at https://unstats.un.org/unsd/tradekb/ Knowledgebase/50018/Harmonized-Commodity-Description-and-Coding-Systems-HS.

The data on regional trade agreements (RTA) is available at the RTA database of the World Trade Organization (WTO). RTA is taken as a binary variable which takes the value of one for observation of exports from Pakistan to China for years the agreement is implemented, i.e. from 2008 to 2018, and zero otherwise. This approach is following other studies, including Vicard (2012) and Cherif and Dreger (2018). Ideally, the impact of an RTA on exports is expected to be positive. Apart from distance, tariffs, non-tariff barriers (NTBs), and other bureaucratic procedures restrict trade. A lowering of tariff rate under an RTA is expected to facilitate exports.

IV. Results and Discussion

1. Descriptive Statistics

Descriptive statistics in terms of its number of observations, mean, standard deviation, maximum and minimum values are presented in Table 1. The number of observations shows the full sample including zero export values for country pairs: 169 countries with an import value of 10 products over 16 years from 2003 to 2018 make the total sample size equal to 20640. The data shows that there is a high variation in the values of variables. For instance, the minimum value for export is zero while it goes as high as 1.543e+09 US dollars, which China imported for HS-5205 in 2013. Similarly, the GDP of importing countries show a standard deviation equal to 1.682e+12.where the minimum value of 2.044e+07 US dollars is of Nauru in 2007 while the maximum value of 2.049e+13 US dollars is the GDP of the United States in 2018. Colony, Language, Landlocked and RTA are binary variables, so naturally, the minimum value is zero, and the maximum value is one. The table shows that around 5 percent of the importers share a colonial background and language with Pakistan.

Descriptive Statistics							
Variables	Ν	Mean	SD	Minimum	Maximum		
Exports	20640	6457000	40900000	0	1.543e+09		
GDP	20640	4.93e+11	1.682e+12	20440000	2.049e+13		
Distance	20640	7210	4092	374.7	16695		
Colony	20640	0.364	0.481	0	1		
Language	20640	0.364	0.481	0	1		
Landlocked	20640	0.14	0.347	0	1		
RTA	20640	0.00581	0.076	0	1		
G 0000000							

TABLE 1 Descriptive Statistics

Source: ???????

2. Regression Analysis

Regression estimation of the gravity equation using four different models is presented in Table 2. As discussed in the methodology section, the PPML estimator is preferred over the OLS. However, we applied fixed effect (FE) and random effect (RE) models in addition to PPML estimation. It is noteworthy that the dependent variable is taken in logarithmic form in the FE and RE estimations. Out of the total 20,640 observations, 1,850 observations involve zero exports. As the logarithm for zero is infinite, therefore, while taking the logarithm, we add one to zero export values so that the log of one turns to be zero. Results of the FE model are given under column 1, while column 2 presents RE estimations. Time invariant variables

Regression Analysis						
Variables	(1) FE ln_Exports	(2) RE ln_Exports	(3) PPML Exports	(4) PPML Exports >0		
ln_GDP	0.821*** -0.218	0.999*** -0.092	0.343* -0.178	0.320* -0.178		
ln_Distance		-0.582** -0.295	-0.983*** -0.03	-0.943*** -0.035		
Colony		0.956*** -0.368	-0.735 -0.54	-0.777 -0.568		
Language		0.961*** -0.358	1.026*** -0.116	1.006*** -0.09		
Landlocked		-1.140*** -0.409	-2.600** -1.034	-2.485** -1.084		
RTA	1.465*** -0.203	1.154*** -0.146	1.041*** -0.166	1.042*** -0.167		
Constant	-9.065* -5.462	-8.599** -3.67	15.297*** -5.201	15.182*** -5.013		
Year effects	Yes	Yes	Yes	Yes		
Product effects	Yes	Yes	Yes	Yes		
Importer effects	Yes	Yes	Yes	Yes		
N	20640	20640	20640	18790		
R ²	0.216	0.374	0.45	0.447		

TABLE 2

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Source: ???????

Note: Robust standard errors are given in parentheses. Errors are clustered over importing countries. Coefficient values for Year effects, Product effects and Importer effects are not tabulated to save space. Degree of significance is denoted by asterisks as *** p<0.01, ** p<0.05, * p<0.1.

including Distance, Colony, Language, and Landlocked are dropped by the model, for Hausman test showed that the FE model is not preferred as χ^2 is 15.36 with Probability > χ^2 equal to 0.5697³. Although our analysis mainly relies on PPML estimation, however, the FE and RE models give appropriate supporting ground.

The last two columns of the table show coefficients values using the PPML estimator, where the dependent variable is taken in levels. Full sample estimation is given under column 3, while column 4 presents PPML estimation as a robustness check, where zero export value are dropped reduced to 18,790 values. The value of the R-squared is around 45 per cent. There are 16 years, so 16-1= 15 dummy variable to capture year effects are included. Similarly, 9 dummy variables for product effects and 128 dummy variables for importer effects are included in the equation. Inclusion of year effects, products effects, and importer effects and estimating robust standard errors makes the estimation statistically rigorous.

Results are consistent across the different model specifications. However, we discuss the estimates of PPML estimators with the full sample given under column 3. The signs of coefficients of the variable taken in the study are as expected. The signs for GDP and language commonality are positive. Our estimation finds no statistically significant impact of common colonial background on exports.

On the other hand, two other variables, namely Distance and Landlocked, are export restricting, as shown by the negative values of the corresponding coefficients. These findings align with the gravity theory, e.g. Figueiredo, Lima and Orefice (2016) and Cherif and Dreger (2018). RTA, the variable of interest here, has a positive coefficient value which is statistically significant across all the four models. This shows that China Pakistan Regional Trade Agreement has helped to increase Pakistan's exports to China. This finding is under other studies on regional trade agreements such as Vicard (2012) and Kimura (2016).

Continuous variables including GDP and Distance enter the model in logarithmic form; hence, the coefficients are interpreted as elasticities. The results show that a one per cent increase in GDP would increase 0.34 per cent exports. On the other hand, a one per cent increase in the distance reduces exports by 0.98 per cent. However, binary variables are interpreted differently. For example, the reference group for variable language is the trading partners with language commonality have a higher probability of trade than those with no common language. Similarly, landlocked countries imported in lesser magnitude than importing countries that are not landlocked.

³ Hausman test is commonly applied to opt between fixed effect (FE) and random effect (RE) models. In case, the test statistic is significant, it is recommendable to prefer FE over the RE estimates, otherwise RE is preferable model as in the current case. As we argued that we prefer PPML estimation in the presence of zero exports and heteroscedasticity, nevertheless, the estimates of the FE and RE models are additionally presented for a comparison.

V. Conclusion

Regional trade agreements are proliferating rapidly as a policy to enhance trade between the member countries. The gravity trade model is the most common use tool in the analysis of bilateral trade. Using the PPML (Poisson Pseudo Maximum Likelihood) estimator makes it possible to include zero exports as the estimator does not require the dependent variable to be in logarithmic form. Secondly, PPML estimation is also reliable in the presence of heteroscedasticity, which is commonly prevalent in trade data. Therefore, estimations obtained through this approach are statistically sound. This study used the gravity trade model for analysis export of 10 products to 129 importing countries for 16 years from 2003 to 2018. The results show a significantly positive impact of the regional trade agreement on exports.

The finding of this study in terms of the positive impact of the RTA on exports is important in the current situation where several economic activities are being carried out. There have been phase II of the RTA negotiations. Recently, a trade and investment conference is held in Shanghai, where almost 30 memorandums of understanding were signed by various companies from both countries (MOF, 2019). In addition to further developments on the RTA, an enormous economic integration in the form of the China Pakistan Economic Corridor (CPEC) is taking place currently. In this regards, the coefficient of the distance variable is of great importance in the given context. This is a measure of the elasticity of exports concerning change in the distance. This gives insight into the potential impact of the CPEC in terms of reduction in trading distance and improving exports between the two countries. Collectively, it is expected the trade between the two countries is increased substantially in the future.

The inclusion of more tariff lines in Phase II of the trade agreement is expected to enhance trade further. In this regard, the inclusion of lowing non-tariff barriers (NTBs) and simplifying bureaucratic procedures should also be included and tariff reduction. More products of strategic importance must be included to enrich intraindustry trade between the two countries.

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Appendix 1

List of the ISO Alpha-3 codes of Importing Countries included in the Estimation

BHS	GMB	MMR	SYC
BLZ	GRC	MOZ	TCA
BRA	GRD	MUS	TGO
BRB	GTM	MWI	THA
BRN	GUY	MYS	TTO
BWA	HKG	NAM	TUN
CAN	HRV	NGA	TUR
CHE	HUN	NLD	TZA
CHL	IDN	NOR	UGA
CHN	IND	NRU	UKR
CIV	IRL	NZL	URY
CMR	IRN	OMN	USA
COL	ITA	PAN	VCT
CRI	JAM	PER	VEN
CYP	JOR	PHL	VNM
CZE	JPN	PNG	YEM
DEU	KAZ	POL	ZAF
DJI	KEN	PRT	ZMB
DNK	KNA	PRY	ZWE
DOM	KOR	QAT	
DZA	KWT	RUS	
ECU	LBN	RWA	