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The trade liberalization impact on Kazakhstani economy

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Abstract

Kazakhstan is a young country with one of the fastest growing economy but also it is a country with an exceptional history behind. It was important to highlight how the past affects present and even the future because Kazakhstan was an important transit point between the East and the West in the past, and now we wanted to analyze how reviving its past role would be beneficial for the future periods. This research examines impacts of trade liberalization on the economy of Kazakhstan, particularly export and import statistics within the period of 2000 to 2019. The purpose of this study is to see positive effects of liberalizing trade on export and import, and to see how having FTAs and being a part of unions affects it. For analyzing this question, we use linear regression equation, and calculate it with many different variables to make this research more complex and accurate. Our main findings are impressive because it showed us how small distance between two partner countries is important for both export and import, also justified how all figures are higher when there is a common border with a trading country. Moreover, having FTAs between countries showed significant results, which also proves that trade openness is beneficial. Some of other variables were not so significant, however, analysis of all received data showed that trade liberalization has a positive impact of economy of the country. In conclusion, this research has an interesting topic that could be analyzed further in the future.

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Introduction

Kazakhstan is the largest country in Central Asia and the ninth biggest country in the world, that is simply covering the territory of Western Europe. Even though Kazakhstan is a very young country, it is the country with a rich historical and cultural past. Its location always was very important, it served the role of transit corridor between the West and the East. If we look back to the history, we can understand that the Great Silk Road, that covers the period from 130 BCE to 15th century, was very important in the history of Kazakhstan. Chinese merchants started carrying rice, spices, silk and other exotic goods to the West, Kazakhstan earned its taxes and duties for the services of keeping the merchants and their goods safe, while they were on the road. Archeologists found many examples of terracotta and ceramic objects, which tells us about mutual enrichment in arts, religions, architecture between Eastern and Western cultures, The Great Silk Road was the instrument for transmitting economic, political, and cultural values at that time. However, location cannot be considered only beneficial because Kazakhstan is a landlocked country, which means that there is no access to the seas. One of the reasons why the Great Silk Road was shut down is the discovery of new sea routes. Since new sea trade routes were discovered in the late 15th century, it became easier to transfer goods via sea. Sea transportation became a faster and safer option to transfer goods to the West and the use of the Great Silk Road was brought to the end.

An economical analyst Vladimir Fedorenko (2013) suggests that Kazakhstan should use its strategy from the past and focus more on being a transit country between China and Europe. As an immediate neighbor of China, Kazakhstan should revive its role from the past and it will create trade routes between East and West again, which will attract new investments to the economy of the country, and it is for sure will be beneficial for the economy of our country. Presidents of both China and Kazakhstan highlighted the importance of bringing back the concept of the Great Silk Road. The CASI analyst Rafis Abazov (2017) stated how both countries invested into infrastructure to prepare Kazakhstan to become the transit hub in Central Asia. Investing into Kazakhstan's infrastructure is a part of the "Silk Road One Belt" strategy of China, that was announced in 2013. Improving infrastructure, creating better trade conditions is part of this strategy and it is clear how both sides are interested in developing Kazakhstan's future of being the transit point as it is beneficial for both countries.

Geographical location always was an important factor for Kazakhstan, as it took key role in trade in the past, however, its unique location is also a huge advantage due to all the deposits of mineral resources. A considerably young country with those enormous deposits of resources, Kazakhstan focuses on exporting petroleum, gas, ferroalloys, radioactive chemicals, refined copper. Mostly, our country exports to China, Russia, Italy, Netherlands, and Turkey, so these countries are our main export partners. Thus, Regarding the import of our country, Kazakhstan is importing into Russia, China, South Korea, Germany, and Turkey. Heating machineries, medicaments, cars, and other technical equipment are the

main products that we are importing. Kazakhstan is an export-oriented economy that is very dependent on oil and oil related products shipments.

Source: https://wits.worldbank.org
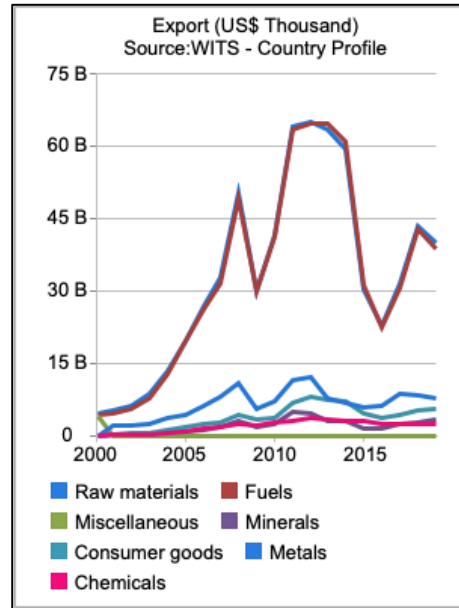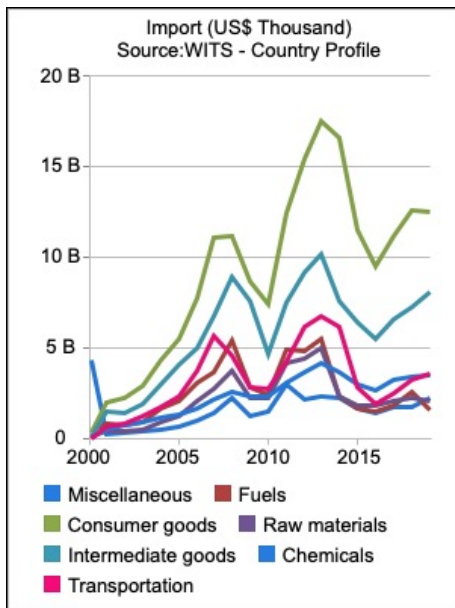
To understand all the concepts of trade, we looked through all trade theories that ever existed, and we highlighted some of them. Adam Smith explained his new trade theory of Absolute Advantage in 1776, where he basically says that countries should not regulate trade by policies and restrictions. His theory is based on the assumption of one country being more suitable for producing one particular good, in other words, one country can focus on producing the good if it has the advantage to produce it faster or cheaper. Moreover, he also adds that countries should have specializations to produce that good in order to increase production levels in general. Increased efficiency in the market will benefit all the countries and increase livings standards of all people. Hecksher-Ohlin theory suggests that countries should export goods that are in greater supply or basically have cheaper production costs, and countries should import goods that have a higher demand and shorter supply. This theory is based on country's variables like land, labor and capital. For instance, in 2017 Netherlands exported 506 million of U.S. dollars, and imported 450 million of U.S dollars, it is an example of balanced trade model, where export and import figures are almost the same. It allowed Netherlands to focus on productions and to import from Germany, a neighbor country, in order to pay less for transportation costs (Kopp, 2017). Reading about trade and trade theories helped us to understand what this research will be focused on. Trade was always an essential part of our history and now our country should use it to achieve economic growth. Economic growth is the goal of every country to increase its citizens standards of living. International trade is known to be one of the few forces to boost economy. Trade is a simple exchange of goods and services between two or more people, international trade is the exchange between two different countries.

According to Oxford Reference, trade liberalization is identified as a process of removing and reducing restrictions on international trade. It's a common practice to use trade liberalization and benefit from increasing figures of export and import. Chandrashekar Raghutla (2020) explained how trade openness affects the economy and export and import in particular.

This research looked through advantages and disadvantages of trade liberalization. Starting with advantages, trade liberalization provides many opportunities to have a comparative advantage in producing goods or services, which is known to be beneficial for country's economy. Removing tariffs and additional costs provides a chance for foreign producers to enter the market and it leads to lowering prices of goods, which is a good thing for customers. Although, government spending is usually reduced because funding used in the past to provide some subsidies for trade stimulation and for purchasing goods from foreign countries are not necessary anymore. Countries that practice liberalized trade usually are more attractive for investors, capital inflows are very beneficial for any economy. On the other hand, trade liberalization has some disadvantages like lack of support of local industries due to high competitiveness on the market. Trade liberalization can help some industries to grow but some of them could decline due to high competitiveness. There are also some environmental disadvantages regarding lack of protection for natural resources and increased levels of pollution due to greater exploration of resources and increased production. Whether country should start implying trade liberalization or not is a very important decision because there are both advantages, and disadvantages (Hufbauer&Kotschwar,1998). Many examples of developed countries showed us how effective it could be to remove the barriers and use all the benefits of trade liberalization. It is important to highlight the fact that impacts of trade liberalization are very individual and depends on country's economy, that is why this research will provide information, that includes different variables to understand if trade liberalization in Kazakhstan will increase export and import figures.

To regulate all trade relationships between countries, government can enter into trade agreements with different countries, or be a part of union. Kazakhstan has many agreements with many different countries, however there is also another way to regulate trade among countries and it is union establishing. The Eurasian Economic Union (EAEU), European Free Trade Association (EFTA), European Union (EU) and other examples of those agreement between 2 and more countries are established to increase import and export figures and economic growth of each country. Our research will focus on analyzing how all these factors like having trade agreements, or being a part of union, affects the trade and the economy of our country.

Purpose of the Study

This research is about impacts of trade liberalization on economy of Kazakhstan, and although this paper would provide all necessary information about trade, trade theories, importance of trade and

trade liberalization. The main research question is to identify how trade liberalization impacts economy of Kazakhstan. Kazakhstan is a country that has a great potential of economic growth and making a decision regarding trade policies in country is important for economy.

Our hypothesis is tested whether implying the trade liberalization policy will increase export and import figures of Kazakhstan. For answering the main question of this research, firstly, it's necessary to find out how the fact of having trade agreements affects export and import figures among countries. To fully understand situation with trade liberalization it would be necessary to collect data regarding figures of import and export of Kazakhstan and some other countries for comparison. To make this research more accurate it's necessary to understand how being a part of trade unions affect trade turnover and it is considered to be one of main questions of this paper. Analyzing what trade relationships Kazakhstan has with different countries, how distance between countries plays its role, whether being a part of trade union affects any industry in Kazakhstan is very important to provide answers for this research. Using all necessary data and making calculations will also help this research to see if trade liberalization is beneficial or not for the economy.

Literature review

The gravity model is the main international model for world trade. The main point of "Eurasian Economic Union, Regional Integration and the Gravity Model" by Maryam Sugaipova's research is related to the gravity model as in our research. Her main purpose is to analyze how the gravity model of international trade helps to find out the effects of economic integration agreements (EIAs) on Eurasian Economic Unions members (Russian Federation, Republic of Kazakhstan, and Republic of Belarus (2015)) trade flow. The theory of gravity model was studied theoretically, also econometrical methodologically based on the theoretical application of the gravity model by Anderson & Wincoop (2003). The traditional gravity equation was introduced by Jan Tinbergen in 1962. According to Jan Tinbergen (1962), "trade flows between exporters and importers GDPs and trade resistance in terms of geographical distance between the countries".

Moreover, in Sugaipova's work, regionalism is one of the factors in improving world trade. Therefore, international economic integration agreements started growing their number. Treaties between countries in order to lessen policy-controlled barriers to movements of goods and services, capital, and labor between both countries. Most EIAs are RTAs, which are regional trade agreements, and FTAs are free trade agreements. The World Trade Organization (WTO) recognizes it as 3 types of regional economic integration: customs union, free trade area and economic integration agreement. Along with WTO, the Organization for Economic Cooperation and Development (OECD) recognizes it as free trade area, customs union, common market and economic union. Examples of free trade areas are the North American Free Trade Area (NAFTA) and the European Free Trade Association (EFTA)(Sugaipova,

2015). They got rid of tariffs and non-tariffs for members and have no common external tariffs (CET) towards non-members. Customs unions duty is to accept free trade on goods and services within the customs union, furthermore agreeing to a common external tariff (CET). When it comes to common markets – European Common Market is the best example. The main goal of the European Common Market is to liberalize the movement of goods and services, capital and labor within the European Union. And last, an example of an economic union is the European Union, which includes 27 countries in Europe.

The author mentioned how the change in the tariffs, as a member of the Eurasian Economic Union, affected Kazakhstan's economy. Our country takes second place, in Purchasing power parity (PPP), after Russia, with a GDP of 8% and a population of 10% among union members. Changes in tariffs of the Customs Union is decreasing the real income of Kazakhstan because imports of the country were displaced from Europe, and under common external tariffs (CET), they would've shifted to Russia. It shows us, how Kazakhstan's potential income transferred to Russia. According to Tarr (2012), Kazakhstan has benefited from exporting and was deprived of importing from Europe, because of tariffs. Krugman (1989) mentioned, that in this particular Customs union the external tariffs were set by Russia, and other members were forced to adjust to it, with following losses. Despite that, the country is attracting new foreign investors/investments to all economic sectors, especially agriculture. Furthermore, Krugman (1989) says that any project with the point of liberalization can be both trade creating or trade diverting, it will affect the economy of the country differently.

In the paper "The Economics of Customs Union in the Commonwealth of Independent States" by Michalopoulos & Tarr (1997), they pointed out how the joining of CIS members to Customs Union after the fall the Soviet Union will bring a negative influence on dynamic effect, the growth output rate of the country. Because it will probably keep the old Soviet Union's philosophy and the tech area too. One of the conditions, when joining the Customs Union should be setting common external tariffs (CET), therefore it should be higher than initial tariffs, and adopting CET will lead to higher import tariffs. By using the gravity model, it was found negative dynamic effect, and in our research, we will try to use the same variable with the same - gravity model.

The second resource we got information from is a research project by Roman Vakulchuk, Farrukh Irnazarov, and Alexander Libman called "Liberalization of Trade in Services in Kazakhstan and Uzbekistan: Analysis of Formal and Informal Barriers". Nowadays importance of Central Asian countries, such as Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, and Tajikistan gradually growing. They have the great economic potential, strategic geopolitical location and have a lot of natural moreover energy recourses. Starting from 1991, after getting its independence, Central Asian countries, especially Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan, implemented liberal forms.

Central Asian countries all have different political, economic, and institutional reform models. For that, chances for effective regional cooperation and trade relations are very low. They all follow the

principle of market economy and different reform paths, that have some common features: for foreign investment attraction – liberal reform principle; new incentives for the development of small and medium businesses; trade over increase between regions; World Trade Organization.

Mainly this research project studies "the liberalization of barriers to trade in services in a systematic transition context" and analyzes its formal and informal barriers. When it comes to Central Asia, most of the trade-related issues came from the Soviet Union's collapse – cross-border movements between countries (Pomfret, 2006). Next, its geographic location – being landlocked. Kazakhstan is the largest landlocked country in the world. It faced a lot of economic challeges lendlocked developing countries tend to have. Therefore, smuggling and under-invoicing – illegal trade, which is very common both in Kazakhstan and Uzbekistan. Factors, such as transportation cost, low trade volume and trade deficit causes low trade level between Central Asia and European Union (Raballand, G. et al., 2005). In the chapter "Studies on barriers to trade in other regions", the authors analyzed currently existing informal barriers. They are corruption, political competition, wealth gap, absence of infrastructure, social and cultural differences. As an example, they took a study conducted by Sustainable Development Policy Institute for World Bank related to Pakistan and India's informal barrier issue. The higher transaction cost leads to trading through informal channels. Transaction cost of formal sector is much higher than in the informal, moreover, difference is over in the tariff rate (Rafi Khan et al., 2005).

Next, the article was written by experts from the website "Globalization, World Trade Organization, Newly Independent States". All the information was collected before joining WTO, experts gave their opinions, analyzed possibilities and discussed the advantages and disadvantages of Kazakhstan's membership.

Until 2015, Kazakhstan's main goal was to ensure sustainable development of the country, which will be done by diversification and modernization of the economy. The change from the raw material development model to the innovative development was the right way.

Kazakhstan is one of the top exporters when it comes to agricultural goods - wheat, barley, cotton, sunflowers, rice, cattle, sheep, horses, chicken, pigs, goats. The main suppliers of agricultural products are The Commonwealth of Independent States (CIS) countries. Import, for the most part, consists of poultry meat, black tea and cane sugar. Kazakhstan's main importer in this field is the USA, around 96%. The level of tariff protection in Kazakhstan is relatively lower than in developed countries. It means regulation on tariffs of imports is liberal. "The presence of low customs duties on import does not lead not only to the aggression of imports but even to its slight increase". Starting in 1993, the liberalization of foreign economic activity in Kazakhstan took lead. Now, non-tariff regulations are reduced, because of the protection of public health and social protection, for trading with more countries in the future.

Being a member of WTO gives the opportunity for effective integration of the world economy and international trade. Accession to the WTO does not mean only signing the agreements, following the rules

and coming to trade liberalization, it also means changing the whole structure of the trade-in the country, and being ready to open a local market to the international goods and services. The purpose of the WTO agreement is to carry out trade reform in the agriculture sector and to create a market-oriented mechanism. Rules and obligations in the agreement on agriculture:

- Opening the domestic market to the agricultural goods;
- Domestic support (subsidies and other agricultural support programs);
- Obligations in the service sector (veterinary services, services in the field of forestry, fisheries, etc.);
- Export subsidies;
- Application of sanitary and phytosanitary norms and rules (Agreement on Sanitary and Phytosanitary Measures);

The agreements on protection of domestic agriculture with high tariffs of the market in basic types of food will lead to modernization for local agro-industrial complexes, therefore, increasing export. WTO can be used as a door for a world food market. "In general, the WTO implies the liberalization and transparency of trade". Within the framework of WTO tariffs are reduced, in addition to, the volume of Kazakhstani trade with other WTO member states will increase.

Joining a trade organization has a lot of advantages: providing access to the international market for domestic goods and services, reducing tariff and non-tariff barriers in industrial besides agricultural trade, forming a trade and investing environment, strengthening its integration into the world economy, international trade liberalization and building environment for free and decent rivalry. One of the most important things is opportunities and opening to the country. For example, the influence of importers on Kazakhstan's production process: clean technologies, greening, resource-saving, storage organization, the recycling. It all affects the competitiveness of local production in the international market.

Methodology

This research paper explains correlation between effects of trade liberalization and changes of export and import. To test our hypothesis, that implying the trade liberalization policy will increase export and import figures of Kazakhstan, we use the qualitative approach, that is focused on describing how all the data and statistics that we could gather affect figures of export and import for 40 countries (Appendix I), starting from 2000 to 2019.

Firstly, we use gravity model approach as a base of this research because it is one the most useful econometric model, that is applied for analyzing international trade and sensitivity of trade flows to different factors. Moreover, this model is commonly used to discover how different policies affect the trade and its volumes. Tinbergen (1962) used the gravity model to analyze how FTA variable affect trade turnover and discover how its effect was insignificant. However, our approach was changed since we use

more variables to make this research more complex and get more accurate results. Our team investigated many different sources to gather all necessary information. This research is based on analyzing three independent variables like GDP, population, distance between Kazakhstan and partners countries, five dummy variables like language, border, WTO, FTA and EAEU, and two dependent variables like export and import. Gathering all statistics about chosen variables of 40 countries took some time, but it was a primary step to find answers to how chosen independent variables will affect dependent variables. To get results from all collected data, our team used the equation of liner regression. To review of effects on export and import, we use linear regression equation for both export and import changes from 2000 to 2019 in Kazakhstan.

Using our data set, we estimated 2 gravity model equations of Kazakhstan's trade: (a) the gravity model of Kazakhstan's exports, (b) the gravity model of Kazakhstan's imports. Whereas export and import are the gravity model's dependent variables, GDP, Population, and Distance have been used as independent variables. In our model, we've included several dummy variables. They are WTO, EAEU, and FTA, as well as a common language and border. As an outcome, in this study, the gravity model of export is:

$$lnX_{ij} = \beta_0 + \beta_1 lnGDP_i + \beta_2 lnGDP_j + \beta_3 lndist + \beta_4 border + \beta_5 language + \beta_6 pop_i + \beta_7 pop_j + \beta_8 WTO + \beta_9 FTA + \beta_{10} EAEU \quad (a)$$

Where:

- X = the value of export from Kazakhstan to country j,
- GDP_i = Kazakhstan's GDP,
- GDP_j = Kazakhstan's partner's GDP,
- distance = distance between Kazakhstan and partner country,
- pop_i = Kazakhstan's population,
- pop_j = partner country's population,
- border = Kazakhstan and partner country have or not common border
- language = Kazakhstan and partner country have or not common language
- WTO, FTA, EAEU = Kazakhstan and Kazakhstan's partner are members or not

The following model is used to calculate the gravity of Kazakhstan's imports:

$$lnM_{ij} = \beta_0 + \beta_1 lnGDP_i + \beta_2 lnGDP_j + \beta_3 lndist + \beta_4 border + \beta_5 language + \beta_6 pop_i + \beta_7 pop_j + \beta_8 WTO + \beta_9 FTA + \beta_{10} EAEU \quad (b)$$

Where, M = the value of import from Kazakhstan to country j, and the rest of the variables are the same as in the Export model.

It's necessary to describe our choice of variables:

1. Dependent Variables

Export and import are the key variables of this research because maintaining trade balance is very important to the growth of countries' economies. Each country is individual due its resources, some of them are rich with minerals, like Kazakhstan, but some are not and are rich with different goods. Now international trade between countries gives an opportunity to expand markets. Moreover, analyzing how other variables affect these chosen variables, export and import, would help to see trade liberalization impacts in the scope of the research.

2. Independent Variables

Starting with GDP, that is an independent variable, and this research used GDP of Kazakhstan (GDPi) and GDP of 40 partners (GDPj) because relationships between export and import directly affect GDP. If country exports goods, it sells it to another country and those exports bring money to the country. When country's exports exceed imports, it means that net export is positive, and more money was brought to the country. Population is also a relevant variable to analyze because changes of population over years affect the economy, import and export figures too. Changes in population mean direct changes in number of consumers, employers, and employees. Distance between Kazakhstan and partners is a variable that could possibly prove that trade turnover is higher when countries are located not so far from each other.

3. Dummy Variables

Regarding dummy variables, our team analyzed it using 0 and 1 system. For example, if Kazakhstan has the same language with the partner-country, it identifies as 1 and if there is no common language between countries, it identifies as 0. Analysis of having the border line between countries is done in the same way, if country is bordered with Kazakhstan, then it is expressed as 1. One of our research questions was to analyze how having FTAs with different countries and being part of unions could affect import and export figures. That is why if Kazakhstan had an FTA with that country at that year, it is expressed as 1. Those variables that analyzed FTAs and unions are more complicated because there were many changes throughout the years. Some years countries had an agreement, some years they did not and the same thing happened with being part of trade unions. Dummy variables like being a part of WTO, EAEU and having FTA with country-partners are analyzed through years to see how it affects import and export in Kazakhstan.

Results

The gravity model of Kazakhstan's exports has been estimated taking all variables for 800 observations of 40 countries. The results revealed that half of variables are found out to be either not significant or had negative signs. Only GDP_i, GDP_j, common language and border, and FTA were shown to be significant throughout the model selection process. $Population_i$, $Population_j$ and EAEU are significant, but they have negative relationship. The results shown in Table 1.

Number of obs = 800
F(10, 789) = 62.03
Prob > F = 0.0000
R-squared = 0.4402
Adj R-squared = 0.4331
Root MSE = 1.8675

lnexpi	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
lngdpi	.5889007	.148675	3.96	0.000	.2970553	.8807461
lngdpj	.9395118	.06801	13.81	0.000	.8060099	1.073014
lnpopi	-1.361839	1.617322	-0.84	0.400	-4.536601	1.812923
lnpopj	-3.949861	.0692719	-5.70	0.000	-.5309651	-.259007
lndist	-.5878126	.2584228	-2.27	0.023	-1.09509	-.080535
language	.8447904	.2379163	3.55	0.000	.3777666	1.311814
border	1.865132	.2884407	6.47	0.000	1.29903	2.431434
WTO	.1826587	.198414	0.92	0.358	-.2068231	.5721405
FTA	.5467931	.2151229	2.54	0.011	.1245123	.9690739
EAEU	-1.214758	.4657754	-2.61	0.009	-2.129063	-.3004521
_cons	5.906949	23.99311	0.25	0.806	-41.19093	53.00483

Table1

The gravity model of Kazakhstan's imports has been estimated taking all variables both independent and dummy variables. The model includes all 800 observations from all countries in our sample. Only GDP_i, GDP_j, common language and border, WTO, FTA are shown to be significant in the estimating process. All other variables are either not significant or have negative signs. $Population_i$, $Population_j$ are significant, but they have negative relationship. Table 2 shows the results.

Number of obs = 800
F(10, 789) = 221.05
Prob > F = 0.0000
R-squared = 0.7370
Adj R-squared = 0.7336
Root MSE = 1.0634

lnimpi	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
lngdpi	.5806068	.0846633	6.86	0.000	.4144148	.7467987
lngdpj	.9159481	.0387284	23.65	0.000	.8399252	.991971
lnpopi	-3.381771	.9209871	-3.67	0.000	-5.189645	-1.573896
lnpopj	-.1853761	.039447	-4.70	0.000	-.2628097	-.1079426
lndist	-.0465438	.1471594	-0.32	0.752	-.3354141	.2423264
language	1.536176	.1354819	11.34	0.000	1.270229	1.802124
border	1.738085	.1642531	10.58	0.000	1.41566	2.06051
WTO	.3173736	.1129873	2.81	0.005	.0955824	.5391648
FTA	.4610741	.1225022	3.76	0.000	.2206054	.7015428
EAEU	-.0087238	.2652367	-0.03	0.974	-.529377	.5119293

_cons	31.74812	13.66293	2.32	0.020	4.928133	58.5681

Table 2

In our export model (Table 1), only the independent variable GDP, and language, border and EAEU dummy variables are significant, but EAEU dummy has negative sign. If GDP_i goes up by 1% then the export goes up by 58.9%.

Even though population variable is significant, but it has negative sign which shows that if the population of Kazakhstan is growing, then we import less. And when the population of partners grows, their exports become less.

The WTO dummy variable is insignificant not as excepted. This shows that the country is a member or not a member, does not affect exports.

The distance variable is not significant and has negative sign which means that Kazakhstan prefers to trade more often with its neighbor countries. The further the distance, the less exports.

Border dummy is highly significant with positive sign which shows if we border a country, then we constantly trade well. Kazakhstan borders with China, Turkmenistan, Kyrgyz Republic, Russian Federation and Uzbekistan.

Language dummy is also significant and has positive sign which means when two countries speak the same language, communication is simplified, and transaction costs are reduced between them.

The model has R-squared = 0.4402, and F (10, 789) = 62.03. Where 44.02 percent r-squared indicates that the regression model accounts for 44.02 percent of the variability in the target variable. The R-squared is the amount of variance explained by the independent variable in the dependent variable. In export case, r-squared has a weak size effect. This variable explained 44.02 percent of the variation in the dependent variable in this case. This indicates that it was a significant but only a partial determinant, with other factors effecting for 55.98 percent of the observed variability.

In the import model (Table 2), as in export model GDP variable and, language and border dummy variables are significant, but here WTO and FTA dummy variables are also significant and have positive signs. With 1% increase of GDP variable, imports of Kazakhstan grow up by 58%. Kazakhstani imports are also positively correlated with language, border, WTO, and FTA dummies and negatively correlated with population in country j. The results show that if Kazakhstan and Kazakhstan's partner country has FTAs then it has positive influence on Kazakhstan's import as if they are members of WTO.

As in export model, language, and border dummies favorably responsive with Kazakhstan's import. If Kazakhstan and country j have common border which indicates that the imports will be higher for 1.73.

The model has R-squared = 0.7370, and F (10, 789) = 221.05. Where 73.7 percent r-squared indicates that the regression model accounts for 73.7 percent of the variability in the target variable. A

higher r-squared means that the model can explain more variability. This tells us that 73.7% of the variation in the dependent variable can be explained by independent variables.

Recommendations

Writing any research paper could be stressful and difficult at some point. Before starting – take your time. First, find theoretical basis, that is related to your study. For our research, we took bases from websites, like world bank, international monetary fund to find the most accurate statistics and also used information from past researches. Nowadays it is easier to collect information because it can be done with one click but we suggest filtering what you've been looking through to be sure that information you found on one page can be contradict in another. Second, focus on planning process. Force yourself to read more works, do deadlines and try to summarize what you read and write it down. It will be helpful when you start writing your paper.

While writing our research paper, we came across some issues related to data collection. It was complicated to find specific articles related to Kazakhstan. Trade liberalization and the gravity model were studied separately, and all the researches were focused on examples of other developed countries. Our challenge was correlating the main topic with our country, and countries economic situation. Even though we faced lack of information, specifically related to our country, we read a lot of papers of foreign authors, that helped to understand information more and use it in the case of Kazakhstan.

Moreover, collecting data for equation was time consuming because we took 40 countries with 10 variables. It is recommended to choose your variables wisely because we analyzed some variables, which did not have any impact on our main dependent variables.

All things considered, it was not our first time working with quantitative type of research, which means that there is a lot of work with big numbers, but it still was complicated. However, many discipline that we took, while studying in our university, helped us to be more familiar with the topic and all experience that we gained in research paper writing in the past was helpful.

Conclusion

The objectives of research paper were to analyze the effect of trade liberalization on Kazakhstan's economy, therefore results of applying trade liberalization policy on country's export and import. To fully understand the situation, the gravity model was used to consider Kazakhstan's trade with countries all over the world, despite boarders, geographic location, language, cultural and political differences. In general, the gravity model is the leading model when it comes to forecasting the impact on changes in trade policy of the country on trade cost. We took export and import as our dependent variables; GDP, population, and distance as independent ones; therefore, having common border, language, trade agreements, like WTO, FTA, EAEU as our dummy variables. Our results show that implying the trade liberalization policy would possibly increase Kazakhstan's export and import figures. But by using linear

regression equation, we found out that half of the variables we took were not important or had negative signs at all. If we take each one separately, population has negative sign, because if Kazakhstan's population will grow, import will go down; whether Kazakhstan is part of the World Trade Organization (WTO) or not, it does not affect our export; when it comes to distance between partners, Kazakhstan trades with neighbors, because further the partner country, it requires effort to export; common boarder and language as a dummy variable take significant role and have positive sign – it simplifies trading process.

We came to results as we expected, our hypothesis was correct, but some data was not as important as we thought. Only GDP has great influence, and it does not matter if we have FTA with the partner country, or being member of the trade organization, because it will not affect Kazakhstan's export and import.

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Appendix

Appendix I

Armenia	Uzbekistan	UK	UAE
Russian Federation	Serbia	Poland	Malaysia
Rep. Belarus	Iran	Netherlands	Sweden
Vietnam	Turkey	India	Lithuania
Azerbaijan	China	Switzerland	Belgium
Pakistan	Italy	Spain	Canada
Ukraine	Germany	South Korea	Czech Rep.
Moldova	USA	Israel	Egypt
Georgia	France	Mongolia	Latvia
Kyrgyz Rep.	Japan	Turkmenistan	Bulgaria