

THE EURASIAN ECONOMIC UNION IN THE ERA OF
PANDEMIC, WAR, AND SANCTIONS:
CRISIS OR OPPORTUNITY?

by

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ABSTRACT

The COVID pandemic and the war in Ukraine have had major implications on trade relations within the Eurasian Economic Union. Due to the recency of both events, previous research has primarily explored the overall benefits and drawbacks that membership within the EaEU has provided its members. Within my research, I develop a gravity model of trade based on the normal period of 2010-2019 to determine a predicted value of trade for each EaEU member country over the years 2020-2022, in which both major international events occur. The predicted values are measured against the actual values to measure the level of integration that occurs within the EaEU during the COVID pandemic and the war in Ukraine. Smaller economies within the EaEU experience significant levels of integration, while larger economies are more negatively impacted by COVID pandemic and war in Ukraine.

INTRODUCTION

Both the COVID pandemic in 2020 and the start of the war in Ukraine shortly after, are two of the most impactful international events in recent memory. With my interest in international economics, I became vastly interested in how such horrific and tragic events would impact trade relations within a relatively new, Eurasian Economic Union (EaEU). Specifically, I grew fascinated in identifying whether the Ukrainian conflict resulted in avenues that allowed for parallel imports in response to war-related sanctions from Western nations. I ultimately chose to take on this research to determine the viability of the new EaEU and its ability to weather massive global events such as pandemics and wars.

At the outset of my research, there seemed to be two different, yet reasonable, responses regarding the EaEU's viability in the face of these historical international events. Firstly, the events could lead to greater unity within the EaEU, allowing for increased economic cooperation. Alternatively, countries within the EaEU could become frustrated and grow apart in response to the repercussions of the Ukrainian war from Western nations. It is feasible that unsanctioned EaEU countries could be unwilling to trade with Western sanctioned countries of the EaEU, namely Russia and Belarus, due to the fear of harming their relationships with Western nations, like the United States. So, how did the global shocks of the pandemic and the war in Ukraine affect the integration within the EaEU?

The rest of the paper is organized as follows. The remainder of the "introduction" explores the chronology of economic unions in Eurasia followed by a look at the economies of each member of the EaEU. The next section provides an overview of previous research completed on the EaEU. Section 3 reports the methodology used in my research. Section 4

describes the data used in the research. presents. Section 5 highlights the results of my research. Finally, Section 6 draws conclusions.

Chronology of Economic Unions in Eurasia

The collapse of the Soviet Union dismantled economies of countries previously associated with the Soviet Union. These countries were forced to overhaul their longtime, planned economies and transition to market-based economies. Such a seismic shift in economic structure presented immense challenges to previous drivers of the economy. Large companies went bankrupt, chains of production crashed, and economic production dipped (Verdiyeva, 2018). To combat these negative consequences, Eurasian countries have since attempted to construct regionally integrated organizations centered around increased economic or political cooperation.

The first notable attempt at Eurasian integration was the Commonwealth of Independent States (CIS) in 1991, which was largely created for political, humanitarian, and security purposes (Libman & Vinokurov, 2018; Kot et al., 2023). In 1995, the Customs Union was formed between Russia, Belarus, and Kazakhstan (with Kyrgyzstan and Tajikistan joining in 1998). This Customs Union was implemented to encourage large-scale economic cooperation. The Union hoped to establish common external tariffs, allow for free movement of capital and labor, get rid of internal custom controls, and allow for free trade of services. While these were the desired goals of the Customs Union, the countries never came to an agreement on a common customs tariff, which ultimately led to the Custom Union's dissolution and the creation of the Eurasian Economic Community (EurAsEC) in 2000 (Libman & Vinokurov, 2018; Roberts & Moshes, 2016). The EurAsEC contained all five members of the previous Customs Union, with the inclusion of Uzbekistan from 2006 to 2008. Like the 1995 Customs Union, the EurAsEC hoped

to establish common markets, a customs union, and free movement of capital across the member countries. However, after synchronizing just 2% of additional customs tariffs between member countries, the EurAsEC failed to establish a successful customs union (Libman & Vinokurov, 2018).

These integration failures are likely attributed to a variety of factors. The most influential reason for their demise likely stemmed from the uneven benefits that more powerful members (i.e. Russia) received in relation to other member countries. Access to Russian goods were often prioritized over goods of other countries on the Russian market. Additionally, seemingly agreed upon economic decisions were rarely carried out in unison. Member countries would often only apply a common external tariff if it served their own personal interest rather than considering the interest of the union (Verdiyeva, 2018). It became clear that future integration attempts would likely only be successful if the involved countries shared relatively similar political and economic goals.

The Eurasian Economic Union (EaEU) established in 2015 between Russia, Kazakhstan, Belarus, Armenia, and Kyrgyzstan had similar goals as previous union attempts at increased economic growth and cooperation (Dragneva & Hartwell, 2021). However, not only was the EaEU designed to mitigate some of the economic fallout caused by the fall of the Soviet Union, but the 2008 global economic crisis further incentivized Eurasian countries to come together (Roberts & Moshes, 2016). Specifically, Russia found benefit in joining the EaEU to expand their control and influence across Eurasia. In recent years, China's international influence was beginning to increase, especially as a trading partner in Central Asia (Gast, 2021). Through creating mutually exclusive economic projects between Asian and European countries, Russia believes the EaEU strengthens their international influence, and with the loose design of

institutions, allows for an institutionalized sphere of influence that benefits Russian economic and political objectives, while limiting China's impact in the region. Other members desired to join the EaEU, in part, to improve political and economic relationships with Russia, a large and globally strong country, along with other countries in the region (Verdiyeva, 2018).

Within the EaEU, the Eurasian Economic Commission (EEC), located in Moscow, serves as the union's main regulatory and executive body. The EEC is split into two further bodies, the Commission Board and the Commission Council (Roberts & Moshes, 2016). Within the Commission Board, there is equal representation amongst all member countries. There are 10 total ministers, with two ministers representing each member country (Vinokurov, 2017). Therefore, while accounting for 87% of the EaEU's GDP, Russia maintains just 20% of the Board's voting authority. The Commission Council is the more authoritative of the two bodies and is made up of one deputy prime minister from each country within the EaEU. Ministers are assigned equally amongst 23 different departments within the Board that are aimed to promote integration and economic success with the governments of the member states (Roberts & Moshes, 2016). Overall decision-making is designed to limit the overwhelming influence of Russia with unanimous approval being commonplace involving most decisions.

While the EEC is the center for much of the discussion around decision-making, the Supreme Council is the highest body in the hierarchical structure of the EaEU and consists of presidents of the member countries. Any decision made by the EEC must be approved by the Supreme Council, which can make achieving economic and political integration difficult. Therefore, even if the Commission Council and the Commission Board decide on common policies for the purpose of increased economic cooperation amongst members countries, the Supreme Council, as top of the hierarchical structure of the EaEU, can veto the proposed action.

Agreement within the Supreme Council to approve economic decisions is often unfeasible, as member countries have starkly different economic sizes, models, and strengths.

Economic Profiles of EaEU Member Countries

Table 1: GDP and GDP per capita of EaEU Member Countries

GDP (bil. current I\$)	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
2005	16.3	93.2	211.2	12.3	1,696.7
2010	21.6	145.7	313.8	16.8	2,927.0
2015	29.2	171.2	407.4	25.1	3,526.2

GDP per capita (current I\$)	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
2005	5,339	9,647	13,941	2,385	11,822
2010	7,331	15,361	19,227	3,085	20,490
2015	10,132	18,095	23,224	4,214	24,085

Source: World Development Indicators

Table 1 measures the GDP and GDP per capita in current international dollars of each member country within the EaEU during the years preceding the official establishment of the current EaEU in 2015. Rather than comparing the GDP and GDP per capita of the member countries as measured in US dollars using exchange rates, Purchasing Power Parity (PPP), as measured using the international dollar, measures the sizes of each country's economy with regards to what individuals can purchase. PPP calculates the goods and services that a typical household can consume. While it can be difficult to standardize market baskets through PPP across countries, because of different preferences in consumption across cultures, doing so allows for a more accurate depiction of the purchasing power within the EaEU economies.

Table 2: Economic Activities of Armenia (% of GDP)

	2005	2010	2015
Agriculture, forestry, and fishing, value added (% of GDP)	N/A	N/A	17.22
Industry, value added (% of GDP)	N/A	N/A	25.71
Services, value added (% of GDP)	N/A	N/A	48.21
Trade (% of GDP)	70.14	64.64	71.68
Source: World Development Indicators			

At the start of the Eurasian Economic Union in 2015, Armenia's economy was one of the smallest of the five member countries. However, Armenia's economy had been growing at an increasing rate, as measured by GDP and GDP per capita over the 10 years preceding the formation of the EaEU. In comparison to the agricultural and industrial industries in Armenia in 2015, the services sector makes up the largest portion of the country's GDP. The services sector contributes 48% of the country's GDP. While agriculture does not play as large a role in comparison to services, agriculture's 17% share of the GDP in Armenia's is substantially higher than many other countries in the EaEU. To put this in perspective, the agricultural sectors in Belarus, Kazakhstan, and Russia contribute less than 7% to the country's GDP. Compared to the other members of the EaEU, as a percentage of GDP, Armenia engages in a moderate amount of trade.

Table 3: Economic Activities of Belarus (% of GDP)

	2005	2010	2015
Agriculture, forestry, and fishing, value added (% of GDP)	8.52	8.89	6.28
Industry, value added (% of GDP)	37.84	35.39	32.69
Services, value added (% of GDP)	39.63	43.47	47.74
Trade (% of GDP)	118.88	115.92	115.91
Source: World Development Indicators			

Belarus' economy, in terms of GDP and GDP per capita, ranks in the middle of the five member countries of the EaEU. It is significantly larger than the economies of Armenia and

Kyrgyzstan (about six times as much), yet it is not even half the size of Kazakhstan's, much less Russia's. While the size of Belarus' economy in 2015 may not mirror the likes of the larger players like Kazakhstan and Russia, Belarus' GDP per capita is quite similar. Within Belarus' economy, the services sector has become increasingly important towards its contribution towards Belarus' GDP. In 2005, the services sector contributed just a 39% share of the country's GDP, but as recently as 2015, that number rose to 48%. While services might make up a larger percentage of the country's GDP in 2015 than in 2005, services contribute less to Belarus' GDP than any other country in the EaEU. In contrast to services, the industrial sector, as a percentage of GDP, has decreased in Belarus from 2005 to 2015. However, it still makes up one third of the country's GDP, which is higher than all other countries in the EaEU, as of 2015. Additionally, prior to Belarus' membership as part of the EaEU, Belarus engaged in the highest percentage of trade that made up the country's GDP in 2005 and 2015.

Table 4: Economic Activities of Kazakhstan (% of GDP)

	2005	2010	2015
Agriculture, forestry, and fishing, value added (% of GDP)	6.37	4.51	4.71
Industry, value added (% of GDP)	37.63	40.60	30.85
Services, value added (% of GDP)	52.02	51.68	59.30
Trade (% of GDP)	97.76	74.14	53.05
Source: World Development Indicators			

Kazakhstan's economy is comfortably the second largest of the five member countries of the EaEU. However, as recently as 2015 when the EaEU was officially established, Russia's GDP was still more than 8 times as large as Kazakhstan. Yet, over the past 20 years or so, Kazakhstan's GDP per capita closely resembles what is seen in the much larger Russian economy. In fact, in 2005, Kazakhstan had the highest GDP per capita. While Russia's GDP per capita has passed Kazakhstan in 2010 and 2015, the GDP per capita of both countries remain

quite close. Kazakhstan's economy is consistently reliant on the services sector, with services accounting for more than half of the country's GDP in the years of 2005, 2010, and 2015.

Alternatively, Kazakhstan does not rely much on agriculture, with agriculture making up less than a 5% share of the economy during 2010 and 2015. Since 2005, Kazakhstan has experienced significant drops in trade as a percentage of GDP. In 2005 trade accounted for 98% of the country's GDP, but in 2015 that number fell to just 53%. While it is certainly possible that the quantity of trade has decreased, it is likely that such a decrease, at least in part, is attributable to Kazakhstan's increasing GDP per capita.

Table 5: Economic Activities of Kyrgyzstan (% of GDP)

	2005	2010	2015
Agriculture, forestry, and fishing, value added (% of GDP)	28.48	17.45	14.06
Industry, value added (% of GDP)	19.97	26.27	25.08
Services, value added (% of GDP)	42.43	49.34	52.15
Trade (% of GDP)	95.08	133.23	110.96
Source: World Development Indicators			

Kyrgyzstan's economy has consistently been the smallest over the 10 years prior to the inception of the EaEU. However, from 2005 to 2015, the size of Kyrgyzstan's economy doubled, jumping from 12.3 billion I\$ in 2005 to 25.1 billion I\$ in 2015. While the doubling of a country's economy over a 10-year period is certainly impressive, Kyrgyzstan has not seen the same growth in the country's economic standard of living, with the country's GDP per capita lagging heavily behind all four other countries in the EaEU. Although Kyrgyzstan and Armenia are comparable in terms of GDP, Armenia far outpaces Kyrgyzstan in GDP per capita. As for the makeup of the economy, Kyrgyzstan is like Armenia in terms of the distribution between the agricultural, industrial, and services sectors. However, agriculture's contribution to the country's GDP has cut

in half from 28% to 14%, during 2005 and 2015, respectively. Kyrgyzstan's trade makes up 111% of the country's GDP.

Table 6: Economic Activities of Russia (% of GDP)

	2005	2010	2015
Agriculture, forestry, and fishing, value added (% of GDP)	4.26	3.34	3.87
Industry, value added (% of GDP)	32.63	30.00	29.79
Services, value added (% of GDP)	48.81	53.12	56.14
Trade (% of GDP)	56.71	50.36	49.36
Source: World Development Indicators			

Of all the countries that joined the EaEU in 2015, Russia has a massive economy, especially when compared to the other member countries. Russia's economy is more than 8 times as large as Kazakhstan, the second largest member. While closer to the other member countries in terms of GDP per capita in 2005 and 2010, particularly Kazakhstan, Russia still maintained the largest GDP per capita amongst all countries heading into the EaEU in 2015. The industrial and services sectors of the economy contributed the most to Russia's GDP in 2015, with each accounting for 30% and 56% respectively. Since 2005, services have contributed increasingly more to Russia's GDP, while the industrial sector has contributed increasingly less. Perhaps the most interesting aspect of Russia's economy is the relatively small percentage that trade accounts for as a percentage of Russia's GDP. It is important to note that given the large size of Russia's economy, this finding is not all too surprising. Large economies, like Russia, have a greater ability to produce than smaller economies, lessening their need to trade, resulting in trade that accounts for a smaller percentage of GDP. During the years 2005, 2010, and 2015, trade has never accounted for more than 57% of the country's GDP and has continued to fall since 2005.

In 2015, the EaEU combined 5 countries of various economic sizes and strengths. Russia is the economic giant of the bunch, mostly in terms of economic size, but also leads the way in

GDP per capita. On the other end of the economic size spectrum lie Armenia and Kyrgyzstan. While not the economic force of the larger economies at the time of the formation of the EaEU, both smaller economies contribute more on the agricultural front than the larger members. The percentage of GDP contributed through trade also varies substantially amongst the five members. The larger member countries, Russia and Kazakhstan have lower percentages of trade that make up their GDP as compared to the smaller members of the EaEU. This is not all too surprising as large economies, like Russia, have a greater ability to produce than smaller economies, lessening their need to trade, resulting in trade that accounts for a smaller percentage of GDP.

2. LITERATURE REVIEW

Since the EaEU's inception in January 2015, the results of the union have been mixed. Some view the EaEU as a tremendous success, with the benefits heavily outweighing acknowledged costs. Other researchers question the overall economic benefits that result from EaEU membership.

The EaEU has provided member countries with specific trade benefits. Vasudevan (2021) looked at the impact of trade in the EaEU on global production sharing from 2000-2018. Data regarding bilateral exports of intermediate goods, parts and components, and final assembly were compiled for 12 Eurasian countries, including the 5 member countries of the EaEU. Using a gravity model, Vasudevan (2021) found that the EaEU was responsible for a 111% increase in net trade creation of intermediate goods. Overall, the EaEU allowed for immense trade creation effects for both Russia and Armenia, while Belarus and Kazakhstan experienced export diversion effects. This left Kyrgyzstan as the country receiving the fewest economic benefits due to the EaEU. Upon examining bilateral trade within the EaEU, Cieřlik and Gurshev (2022) also found Kyrgyzstan as the least benefitting member of the EaEU. Kyrgyzstan is the only member country

not to receive any positive trade benefits across various modes of trade within the EaEU (Cieślak & Gurshev, 2022).

Tarr (2016) is optimistic that the EaEU customs union can succeed due to two driving factors. Firstly, Russia's recent inclusion as a member of the WTO will likely result in the fall of the customs union tariff between 40 and 50 percent. Lower tariffs should result in a more open customs union and decreased financial transfers from member countries to Russia, allowing for a more unified approach towards the enforcement of custom union tariffs. Secondly, Tarr (2016) argues that the EaEU's integration initiatives and economic support of poorer countries promotes future custom union success for all members. Economic support is primarily accomplished through a common labor market that allows for the free transfer of labor and services to poorer countries within the EaEU, such as Armenia and Kyrgyzstan. Employers in a member country can hire workers from another member country, without subscribing to labor restrictions of their national labor market (Vinokurov, 2017). In 2015, the amount of Kyrgyz migrant workers in Russia increased by 1.6%. Such a broad common labor market could lead to significant further economic growth and stability in smaller countries, especially those of Kyrgyzstan and Armenia (Tarr, 2016).

Zhanakova (2016) uses a wide range of methodology including statistical and economic analysis, theoretical analysis, and inductive and deductive methods on EaEU's member countries' economic development and trade data during 2010-2014 to determine the advantages of the EaEU's common market and its contribution towards improved economic growth. The study highlights Kazakhstan's automotive development due to the common market, in which manufactured automotive products can be sold more easily across EaEU countries. Along with the automotive industry, the Supreme Eurasian Economic Council approved a wide range of

service sectors including construction, engineering, and retail that will become part of the EaEU's unified single market. The incremental easing of licensing agreements and other roadblocks that stifle trade within the EaEU will allow for more coordinated economic and industrial cooperation amongst member countries.

Non-tariff barriers (NTB's) are another example of roadblocks that limit cooperation. The reduction of NTB's would bring about benefits, as a percent of consumption, of 4.8% for Belarus and 0.8 % for Russia, with Kazakhstan and Armenia falling in between (Knobel et al., 2019). Vakulchuk (2018) uses an empirical model from 2010-2015 to find further benefits in the reduction of NTB's. With a 50% elimination of NTB's, trade involving the agricultural and food industries would receive a 40% increase in trade growth. The elimination of NTB's would most improve trade between Belarus and Kazakhstan, two smaller countries that have high levels of internal trade share.

Garashchuk et al. (2023) explores potential benefits the EaEU would receive from increasing internal bilateral trade along with trade outside of the EaEU. Garashchuk et al. (2023) uses data from 76 countries, including the member countries of the EaEU, from 2010-2016 for use in a gravity model. The model finds that the EaEU could become more productive upon choosing strategic trade partners based on similar commercial interests, geographical proximity, and shared values. Additionally, countries associated with integration blocs including the EU, BRICS, and the G7 represent ideal trade candidates that will contribute to bilateral trade in the EaEU.

Kot et al. (2023) takes a comprehensive approach at understanding the EaEU and its foreign trade by conducting a SWOT analysis. The institutional structure of the EaEU single market is highlighted as a major strength. Large economic gaps between member countries and

the overall institutional structure of the EaEU are emphasized weaknesses. Opportunity for potential growth can be found by diversifying trade with more Asian and Middle Eastern countries, adding more members to the EaEU, and furthering cooperation in technological development and financial security across member countries. The increased share of member countries' trade with China, along with significant economic and political differences between member countries are noteworthy threats.

Czerewacz-Filipowicz (2017) argues that member countries of the EaEU could see economic benefits by helping develop the New Silk Road (NSR). This investment would strengthen relationships with China along with the EU.

While the common market institutional structure is an argued benefit of the EaEU, the EaEU's overall institutional structure prevents productive integration from occurring. The EaEU's institutions allow for individual member countries to control the actions of the union, most commonly Russia (Dragneva & Hartwell, 2021). This results in EaEU goals of unified economic action for mutual benefit to be disregarded in favor of Russian political interests, which often involve unagreed upon sanctions (Verdiyeva, 2018; Konopelko 2018). In some cases, the asymmetrical imposition of sanctions can allow for the targeted country of the sanction to avoid repercussions by engaging in trade with non-participating countries of the EaEU's customs union (Khitakhunov et al., 2017). Asymmetrical imposition of sanctions is not uncommon. For example, against the support of the rest of the EaEU countries, Russia engaged in a sanctions war with the West, implementing significant trade bans following conflict in Ukraine. These unilateral trade restrictions went directly against the EaEU's goal of establishing a customs union with a common external tariff, and ultimately led to higher transaction costs for Kazakhstan and Kyrgyzstan regarding Ukraine imports. Without the institutions to enforce

unified action, the EaEU can do little to disincentivize Russia or other member countries from engaging in actions that go against the purpose of an economic union.

Knobel (2017) also critiques the EaEU due to its unequal distribution of economic resources, which goes against a major motive of initial integration, to allow for the creation of economic resources through the mutual removal of trade restrictions. However, Knobel (2017) is hopeful the EaEU can become stronger upon finding ways to redistribute profits received through free trade arrangements from non-CIS countries (Knobel, 2017).

Defraigne (2021) looked at the development of trade of manufactured products, medium and high-tech products, and research and development due to the EaEU. The formation of the EaEU had not created any significant changes regarding the international division of labor, especially for manufactured and technology products, resulting in low levels of economic integration. Russia has failed to lead in initiating economic integration of the EaEU, allowing for China's economic influence to grow in the EaEU and with other Asian countries.

While the EaEU has not made impressive strides in industrial and technological cooperation, Eder (2021) cites that it is not as if the EaEU has not attempted to improve cooperation. In 2015, the EaEU created an industrial cooperation initiative with the purpose of promoting industrial and technological projects to promote developmental regionalism, which was especially desirable for both Armenia and Belarus. Armenia would be able to salvage its reputation as a "science hub" and would be able to incorporate local businesses into Russian global value chains. Belarus would be able to horizontally specialize in manufacturing, and due to its geographic location, would result in Russian companies integrating with Belarus global value chains. However, industrial cooperation has proven to be difficult due to the heavy

financial burden that would be placed on Russia to finance most cooperation projects, along with Russia's non-tariff trade barriers (NTB) on EaEU competitors.

Roberts (2017) looks at "regime security" and its impact on economic cooperation in the EaEU. Member countries in the EaEU have differing concerns regarding regime security, making it difficult to engage in unified cooperation. Without an agreed upon common threat towards regime security, engaging in economic cooperation projects can be challenging, due to perceived diminishing regime security returns that come with economic cooperation projects.

Falkowski (2017) believes that the EaEU has a limited economic future. Falkowski uses B. Balassa's RCA methodology over a time period from 2000-2014 for all five countries of the EaEU. Falokowski's (2017) analysis finds that EaEU countries can only compete on an international stage in goods of low technology advancement, goods with low added value, and goods requiring high capital intensity. Given an international economy that has become increasingly focused on high and medium technology goods, the competitive potential of the EaEU appears weak.

Pak and Iwata (2020) explore the banking states of the countries within the EaEU to find inconsistencies that might prevent the creation of a single financial services market. Without increased regulation amongst the member countries and improving the ability to limit bank risks, the financial stability of the EaEU would be in danger. Additionally, a single financial market would likely result in Russian banks dominating in the small countries of the EaEU.

Libman (2021) explores how the creation of the EaEU impacted relationships between EaEU member countries and the WTO. The formation of the EaEU was found to have no impact on reducing the desirability of Eurasian countries to join the WTO or on hurting Eurasian

countries in the WTO negotiation process. However, countries in the EaEU seem to prioritize their agreements with the WTO over their agreements with the EaEU. This is likely because countries in the EaEU are concerned regarding overreliance on specific countries, as is necessary in the EaEU. The WTO also has a stronger track record for producing more consistent results in comparison to the EaEU.

While the EaEU may not be a perfect economic union, some researchers argue that EaEU membership still provides worthwhile benefits. Perhaps most importantly, the EaEU has established common economic markets that have allowed for increased coordination and economic productivity amongst the members of the EaEU, most notably accomplished through the formation of a common labor market. Along with benefits achieved through common markets, the EaEU has seen significant increases in trade creation, specifically of intermediate goods, and trade benefits with countries outside of the EaEU, primarily Vietnam. EaEU membership does not restrict member countries from association with the WTO, and in fact, Russia's recent WTO membership has allowed for a more open and effective customs union within the EaEU. Researchers are optimistic that increased international trade, support in the construction of the New Silk Road, and the reduction of internal trade barriers can provide further benefits to the EaEU in the future.

Critiques of the EaEU primarily stem from the EaEU's institutions. The EaEU's inability to enforce decisions on members incentivizes larger countries to dominate the EaEU's agenda and forces smaller members to become overly reliant on larger members. Therefore, abiding by the WTO rather than the EaEU can be more appealing, lessening the unity and effectiveness of the EaEU. Unequal power dynamics between EaEU members result in asymmetry when imposing sanctions, ruining the intended purpose and value of a unified customs union.

3. METHODOLOGY

The empirical analysis is based on the gravity model of trade, which formulates trade flows as a function of factors that facilitate or impede the cross-border exchange of goods. In particular, the specification of the model is given by:

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln Y_{jt} + \beta_2 \ln DIST_{ij} + \beta_3 \ln CONT_{ij} + \beta_4 EU_j + \beta_5 EEU_j + \varepsilon_{ijt} \quad (1)$$

where X_{ijt} is the value of trade (exports or imports) between country i and j in year t ; Y_{jt} is the GDP of country j ; $DIST_{ij}$ is the distance between the capitals of country i and country j ; $CONT_{ij}$ is a dummy variable that takes the value of 1 if there is contiguity between country i and country j ; EU_j is a dummy variable that takes the value of 1 if country j is member state of the European Union; and EEU_j is a dummy variable that takes the value of 1 if country j is member state of Eurasian Economic Union.

Eq.(1) is estimated using OLS for each of the five EEU countries separately. Trade is further split into exports and imports in goods with the top 30 trading partners. The sample period is limited to the years 2010-2019, beginning with the establishment of the Eurasian customs union and ending with the last year before the start of the pandemic. Once the coefficients in Eq. (1) have been estimated, they can be used to calculate the mean predicted value of trade for the years 2020-2022. Specifically, I obtain the average value of trade between an EEU member state and its partner, as predicted by the patterns over the period 2010-2019.

The next step of the analysis involves the construction of an index in line with Tochkov (2018) that measures the ratio of actual to predicted trade as follows:

$$Z_{ijt} = \frac{e^{\ln X_{ijt}}}{e^{\ln \widehat{X}_{ijt}}} \quad (2)$$

where $\ln \widehat{X}_{ijt}$ is the predicted value of trade using the estimated coefficients from Eq. (1). If the index is 1, then actual and predicted trade overlap completely. If the index is larger (smaller) than 1, then trade in the years 2020-22 was higher (lower) than predicted. In other words, the index allows us to assess how the trade flows in the period of the pandemic and war changed relative to their earlier patterns during a more normal period.

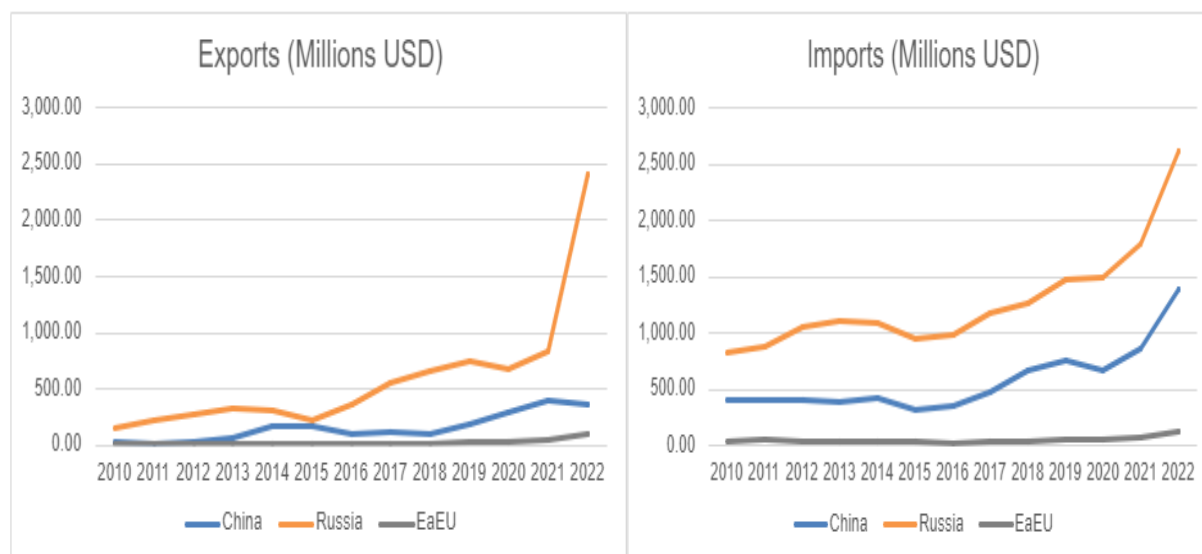
4. DATA

The main variable in the gravity model is the value of trade for the five EEU member states and their top 30 trading partners. Data on exports and imports is expressed in current USD and is obtained from the IMF's Direction of Trade Statistics database. The remaining variables from Eq.(1) are collected from the International Trade Commission's Dynamic Gravity Dataset. Data on GDP (in current USD) for the years 2020-2022 was gathered from the World Bank's World Development Indicators database.

5. RESULTS

Trade Patterns

Figure 1: Exports and imports of Armenia with its major trading partners, 2010-2022



Source: IMF Direction of Trade Statistics (DOTS)

Figure 1 details trade flow trends between Armenia and its major trading partners over the period 2010-2022. Table 7 describes the corresponding data over the same period while accounting for the share of trade. Prior to the inception of the EaEU in 2015, exports from Armenia were primarily to the Euro Area. In fact, in 2010, the share of exports to the Euro Area doubled that of exports to all countries within the EaEU, including Russia. However, during the pre-pandemic period of 2015-2019, in which the EaEU was in effect, Armenia saw a substantial increase in exports to Russia, with the share of exports almost doubling to Russia from 2010 to 2019. In turn, exports to the Euro Area have consistently dropped since 2010. The war in Ukraine seems to have had an immense effect on export patterns in Armenia, particularly regarding Russia. From 2021 to 2022, exports to Russia have more than tripled, with Russia receiving an incredible 46.8 percent share of all Armenian exports during 2022. Although, exports to Russia

see a sizable increase, exports to the other member countries of the EaEU remain relatively constant throughout the entire period. Along with Russia, exports to the United Arab Emirates see a noticeable rise during 2022.

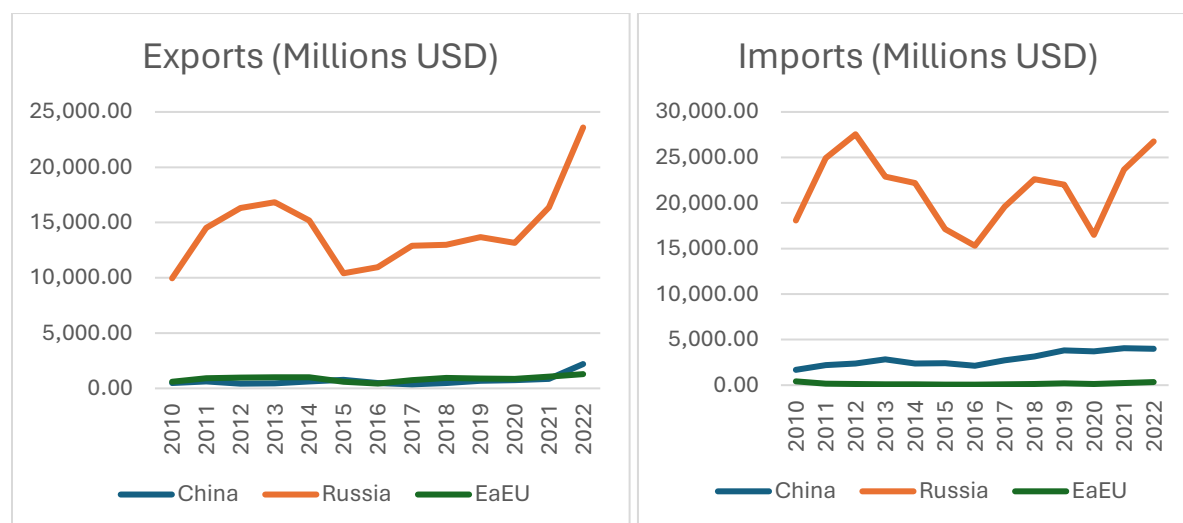
Imports into Armenia from Russia follow a relatively similar pattern in comparison to exports, with imports more than doubling from 2015 to 2022. While the quantity of imports from Russia rises dramatically from 2015 to 2022, the share of imports received from Russia does not consistently climb upwards. As was the case with exports, Armenia engages in few amounts of imports with the other members of the EaEU over the duration of the 12-year period. Beginning in 2015, the share of imports received from China has steadily increased while imports received from the Euro Area have declined, likely due to Armenia's involvement with the EaEU.

Table 7: Armenia's trade with major trading partners for selected years (millions USD)

	2010	%	2015	%	2019	%	2020	%	2022	%
EXPORT										
EaEU	169	16.2	237	15.9	768	29	710	28	2,510	46.8
Belarus	5	0.4	5	0.4	18	0.7	21	0.8	75	1.4
Kazakhstan	3	0.3	5	0.3	5	0.2	7	0.3	18	0.3
Kyrgyzstan	0	0	0	0	3	0.1	2	0.1	6	0.1
Russia	161	15.4	226	15.2	741	28	680	26.8	2,411	45
China	31	3	165	11.1	194	7.3	290	11.4	370	6.9
Euro Area	341	32.7	304	20.5	352	13.3	262	10.3	539	10.1
United Arab Emirates	8	0.8	11	0.7	57	2.2	96	3.8	534	10
TOTAL	1,041	100	1,487	100	2,647	100	2,537	100	5,360	100
IMPORT										
EaEU	879	23.4	982	30.2	1,537	27.8	1,560	34	2,758	31.4
Belarus	32	0.9	34	1	50	0.9	59	1.3	111	1.3
Kazakhstan	12	0.3	0	0	3	0.1	6	0.1	23	0.3
Kyrgyzstan	0	0	0	0	0	0	0	0	1	0
Russia	835	22.3	948	29.1	1,484	26.8	1,495	32.6	2,623	29.9
China	404	10.8	316	9.7	751	13.6	674	14.7	1,388	15.8
Euro Area	686	18.3	612	18.8	919	16.6	731	15.9	1,237	14.1
TOTAL	3,749	100	3,254	100	5,529	100	4,583	100	8,769	100

Source: IMF Direction of Trade Statistics (DOTS)

Figure 2: Exports and imports of Belarus with its major trading partners, 2010-2022



Source: IMF Direction of Trade Statistics (DOTS)

Figure 2 relates the trade flows between Belarus and its major trading partners over the period 2010-2022, while Table 8 reports the corresponding data for specific years over the period. As seen in Figure 2, Belarus sees a significant increase in exports to Russia from 2010-2013. However, this is followed by a practically symmetrical fall over the following couple of years. Following a dispute with Russia over gas supply, the two countries entered a customs union which likely somewhat explains the increased exports to Russia over the period. Additionally, Belarus experienced a financial crisis in 2011 in which Belarus relied on bailouts and energy deals with Russia to stabilize their economy. Such financial support likely led to increased exports to Russia. However, exports to Russia fall again from 2013 to 2015. Following the formation of the EaEU in 2015, exports to the EaEU have steadily increased each year and have made up over a 40% share of total exports, reaching an unbelievable high of 62.7% in 2022, likely due in part to the beginning of the war in Ukraine. The war also impacted Belarus' exports to Ukraine as exports have dropped by over 50% from 2020 to 2022. Like Armenia, exports to other members of the EaEU are almost non-existent. Exports to the Euro Area have steadily decreased since 2010, likely due to Belarus' involvement in custom unions.

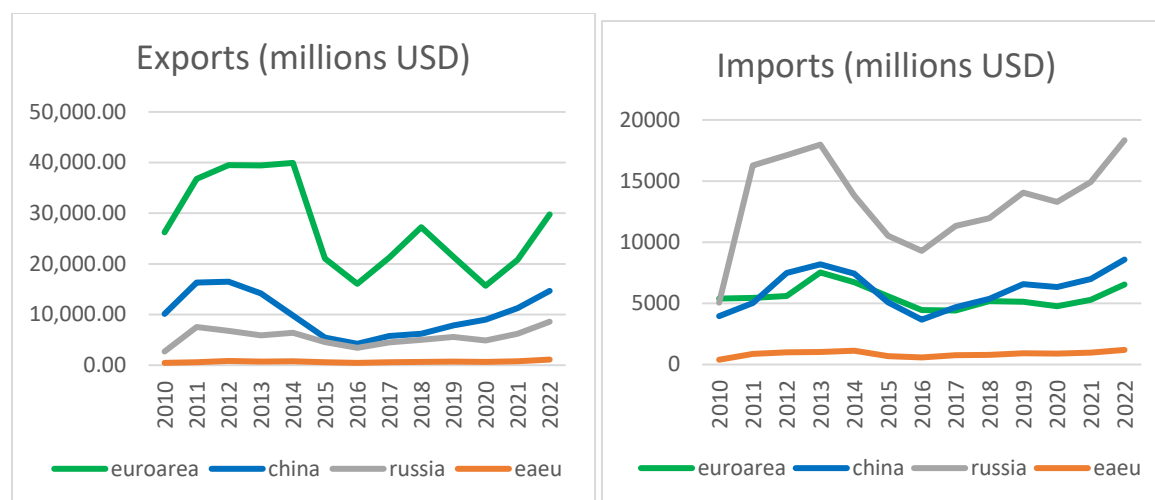
While Figure 2 highlights inconsistency in the number of imports received from Russia, Russia has consistently ranked as the primary partner for providing imports to Belarus. Throughout the entire period, Russia has accounted for a greater than 50% share of Belarus imports, while other EaEU countries make up essentially none of Belarus' imports. The country experienced a 15% increase in share of imports from Russia from 2020 to 2022, likely due to the Ukraine war. Ukrainian imports decreased noticeably over the same period. Imports from the Euro Area have significantly decreased from 2010 to 2022, which is in line with Belarus' exports to the Euro Area over the same period. While imports from China have steadily increased since 2016, imports from China have not exceeded the 11.3% percent share seen in 2020.

Table 8: Belarus' trade with major trading partners for selected years (millions USD)

	2010	%	2015	%	2019	%	2020	%	2022	%
EXPORT										
EaEU	10,546	41.7	11,007	41.3	14,564	44.2	14,004	48	24,884	62.7
Armenia	42	0.2	28	0.1	53	0.2	57	0.2	107	0.3
Kazakhstan	465	1.8	525	2.0	765	2.3	729	2.5	1,065	2.7
Kyrgyzstan	85	0.3	55	0.2	61	0.2	60	0.2	117	0.3
Russia	9,954	39.4	10,398	39.1	13,686	41.5	13,157	45.1	23,595	59.5
China	476	1.9	781	2.9	673	2.0	748	2.6	2,200	5.5
Euro Area	5,452	21.6	4,432	16.6	4,297	13.0	3,622	12.4	2,867	7.2
Ukraine	2,560	10.1	2,515	9.4	4,144	12.6	3,150	10.8	1,289	3.2
TOTAL	1,041	100	1,487	100	2,647	100	2,537	100	5,360	100
IMPORT										
EaEU	18,500	53	17,204	56.8	22,200	56.2	16,643	50.8	27,128	65.9
Armenia	5	0.0	8	0.0	20	0.1	25	0.1	81	0.2
Kazakhstan	406	1.2	49	0.2	155	0.4	99	0.3	235	0.6
Kyrgyzstan	8	0.0	4	0.0	8	0.0	9	0.0	37	0.1
Russia	18,081	51.8	17,143	56.6	22,016	55.8	16,511	50.4	26,775	65.1
China	1,684	4.8	2,401	7.9	3,808	9.6	3,709	11.3	3,995	9.7
Euro Area	5,359	15.4	3,904	12.9	5,067	12.8	4,613	14.1	3,546	8.6
Ukraine	1,879	5.4	952	3.1	1,699	4.3	1,398	4.3	250	0.6
TOTAL	34,884	100	30,264	100	39,477	100	32,767	100	41,135	100

Source: IMF Direction of Trade Statistics (DOTS)

Figure 3: Exports and imports of Kazakhstan with its major trading partners, 2010-2022



Source: IMF Direction of Trade Statistics (DOTS)

Figure 3 highlights trade flows between Kazakhstan and its major trading partners, while Table 9 details the corresponding data for the selected years. Compared to the other members of the EaEU, Kazakhstan exports the fewest percentage of their exports to Russia, although that percentage has increased from 2010 to 2022. Exports to the other member countries of the EaEU are relatively miniscule throughout the sample period. As is seen in Figure 3, exports to Russia increase consistently following 2016, which is likely due to the formation of the EaEU, with the decrease in 2020 likely being attributable to the COVID pandemic. Exports to China and the Euro Area hit peaks in the early 2010's but fall to lows in 2016, which are likely related to Kazakhstan's involvement in the EaEU. However, Kazakhstan imports from China still increase relatively consistently following 2016. Exports to all sampled countries increase after 2020, likely due to the economy's recovery from COVID.

Kazakhstan's import patterns are much different than their exports. Perhaps most notably is the much larger role that Russia plays in Kazakhstan's imports. However, similarly to export patterns with Russia, imports from Russia grew substantially after 2016 due to EaEU

involvement. The Euro Area is not as dominant a player in Kazakhstan's imports compared to exports.

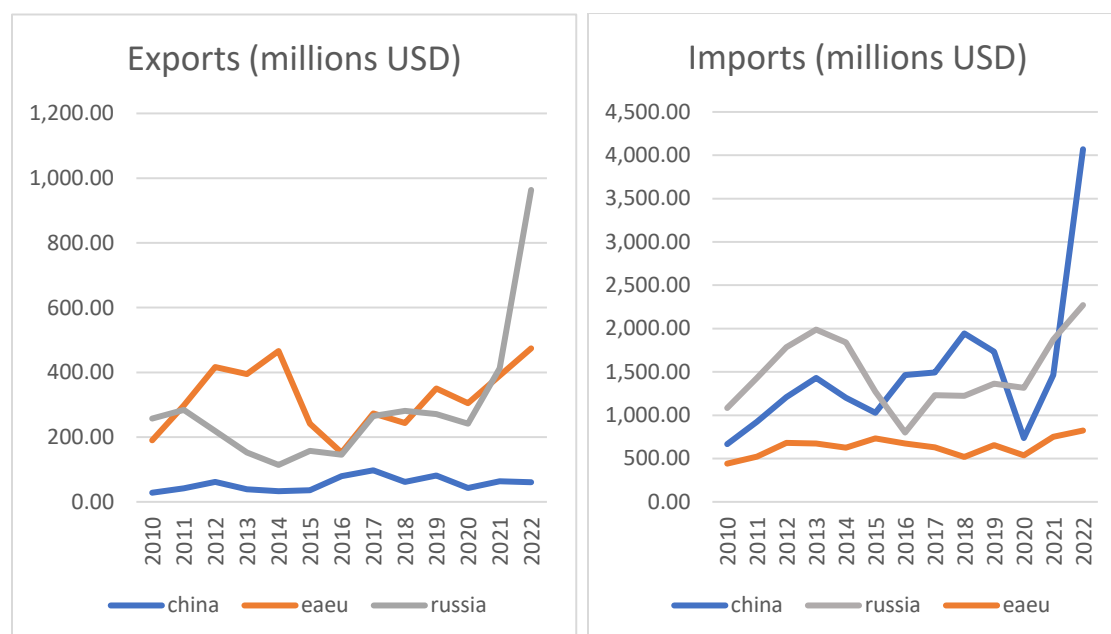
Figure 4 illustrates the trade flows between Kyrgyzstan and its major trading partners over the period 2010-2022, while Table 1 reports the corresponding data for selected years. We can see in 2010 that the EAEU is the major destination of Kyrgyzstan's exports with a share of around 30%. Russia and Kazakhstan absorb the largest part, whereby the former was initially dominant but has been eclipsed by the latter over the years. Exports to Russia have been on the decline since 2010 but this pattern changes after 2014 when Russia became subject to Western sanctions in the aftermath of the annexation of the Crimea. Exports to Russia experience a dramatic surge in 2021 and 2022, the first being caused by the recovery from Covid, while the

Table 9: Kazakhstan's trade with major trading partners for selected years (millions USD)

	2010	%	2015	%	2019	%	2020	%	2022	%
EXPORT										
EAEU	3,169	5.6	5,119	11.1	6,317	11.0	5,538	11.8	9,702	11.9
Armenia	8	0.0	1	0.0	9	0.0	7	0.0	14	0.0
Belarus	35	0.1	53	0.1	102	0.2	70	0.1	131	0.2
Kyrgyzstan	423	0.7	518	1.1	604	1.0	562	1.2	968	1.2
Russia	2,703	4.7	4,548	9.9	5,603	9.7	4,899	10.4	8,590	10.6
China	10,122	17.8	5,480	11.9	7,823	13.6	9,004	19.2	14,644	18.0
Euro Area	26,253	46.1	21,065	45.8	21,444	37.2	15,685	33.4	29,787	36.6
TOTAL	56,967	100	45,952	100	57,677	100	46,927	100	81,375	100
IMPORT										
EAEU	5,452	23.0	11,204	36.6	14,979	39.0	14,188	37.2	19,539	38.1
Armenia	3	0.0	4	0.0	7	0.0	8	0.0	11	0.0
Belarus	225	0.9	488	1.6	655	1.7	647	1.7	867	1.7
Kyrgyzstan	166	0.7	182	0.6	252	0.7	234	0.6	321	0.6
Russia	5,058	21.4	10,529	34.4	14,065	36.6	13,300	34.9	18,341	35.8
China	3,963	16.7	5,088	16.6	6,566	17.1	6,346	16.6	8,584	16.8
Euro Area	5,393	22.8	5,579	18.2	5,125	13.3	4,780	12.5	6,557	12.8
TOTAL	23,660	100	30,601	100	38,419	100	38,143	100	51,216	100

Source: IMF Direction of Trade Statistics (DOTS)

Figure 4: Exports and imports of Kyrgyzstan with its major trading partners, 2010-2022



Source: IMF Direction of Trade Statistics (DOTS)

second pointing to the effect of the war in Ukraine, which resulted in Russia being cut off from Western imports. Kyrgyz exports to Kazakhstan also increase but at a slower pace. Overall, the share of EAEU in Kyrgyz exports reaches 66% in 2022, which is more than twice the share in 2010. Russia accounts for two thirds of this amount, hinting at a potential channel for parallel imports of sanctioned goods. China and the Euro Area absorb only about 5-6% of Kyrgyz exports over the sample period.

The imports of Kyrgyzstan offer a very different picture. Russia's predominant role in the early 2010 is gradually eroding, while China becomes the more important trading partner. China doubles its share from 21% in 2010 to 42% in 2022, while Russia sees a decline from 34% to 24%, even though in 2022 the value of imports from Russia increases. The fact that Kyrgyzstan imported \$4 billion worth of goods from China in 2022, twice as much as Russia and more than twice than Chinese imports in 2019, indicates again that this might be a channel for parallel

imports destined for re-export to Russia. If we exclude Russia, Kyrgyz imports from the rest of the EAEU are relatively stable over the sample period.

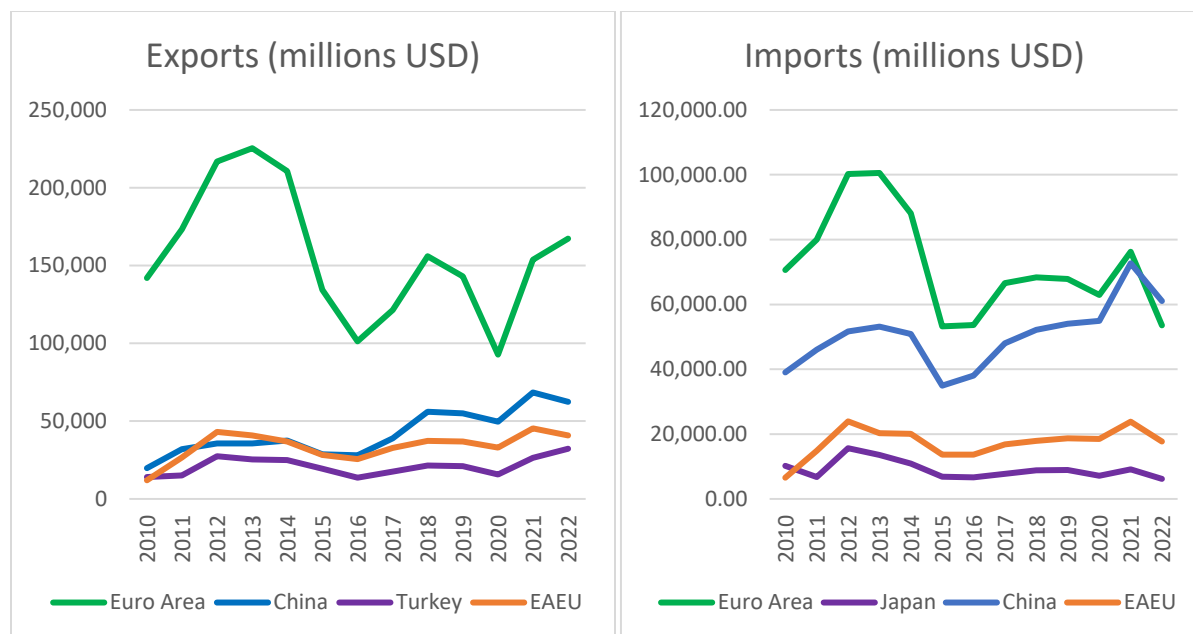
The trade patterns for Russia in Figure 5 and Table 11 show that the European Union is by far the most important trading partner of Russia, accounting for about 40% of Russian exports and 30% of imports in 2015. This share declines dramatically after 2014 after the annexation of Crimea and in response to Western sanctions. The war in Ukraine seems to have affected imports from the EU but not exports which continue to grow. This is most likely the effect of oil and gas deliveries which the EU despite the sanctions allowed to continue for some member states that were not well prepared to deal with the abrupt stop of energy resources. The EEU plays a relatively modest role in Russia's trade with a rough share of 8% of exports and imports.

Table 10: Kyrgyzstan's trade with major trading partners for selected years (millions USD)

	2010	%	2015	%	2019	%	2020	%	2022	%
EXPORT										
EAEU	448	30.1	399	28.1	621	31.6	546	27.8	1,438	65.8
Armenia	2	0.2	0.2	0.0	0.1	0.0	0.2	0.0	0.3	0.0
Belarus	6	0.4	14	1.0	13	0.6	11	0.5	36	1.6
Kazakhstan	182	12.2	228	16.0	338	17.2	294	15.0	438	20.0
Russia	258	17.3	157	11.1	271	13.8	242	12.3	964	44.1
China	28	1.9	36	2.5	81	4.1	43	2.2	61	2.8
Euro Area	62	4.2	38	2.7	43	2.2	41	2.1	63	2.9
TOTAL	1,488	100	1,421	100	1,966	100	1,964	100	2,187	100
IMPORT										
EAEU	1,525	47.3	2,003	49.2	2,016	41.1	1,855	50.3	3,094	32.1
Armenia	2	0.1	0.3	0.0	1	0.0	3	0.1	5	0.1
Belarus	53	1.7	54	1.3	43	0.9	35	1.0	68	0.7
Kazakhstan	385	12.0	677	16.6	610	12.4	500	13.6	750	7.8
Russia	1,084	33.6	1,272	31.2	1,362	27.8	1,316	35.7	2,271	23.6
China	666	20.7	1,029	25.3	1,735	35.4	737	20.0	4,069	42.3
Euro Area	223	6.9	237	5.8	232	4.7	199	5.4	435	4.5
TOTAL	3,225	100	4,071	100	4,904	100	3,684	100	9,629	100

Source: IMF Direction of Trade Statistics (DOTS)

Figure 5: Exports and imports of Russia with its major trading partners, 2010-2022



Source: IMF Direction of Trade Statistics (DOTS)

However, this share has continuously increased over the sample period, albeit only very gradually. Belarus is the main trading partner among the EEU, accounting for about half of the exports and about 70% of imports.

China is the second largest trading partner after the EU, but it has a dominant role in imports. Its share of imports into Russia has climbed relatively fast to reach almost 30% in 2022, thus surpassing the EU as Russia's main importer. Moreover, China absorbs about 12% of Russian imports but it is still far from replacing the EU as the major export destination for Russia.

Table 11: Russia's trade with major trading partners for selected years (millions USD)

	2010	%	2015	%	2019	%	2020	%	2022	%
EXPORT										
EAEU	11,980	3.2	28,239	8.2	36,817	8.8	33,090	9.8	40,748	7.8
Armenia	396	0.1	1,048	0.3	1,649	0.4	1,550	0.5	1,701	0.3
Belarus		0.0	15,206	4.4	19,955	4.8	16,029	4.7	18,988	3.6
Kazakhstan	10,609	2.8	10,686	3.1	13,683	3.3	14,053	4.2	17,608	3.4
Kyrgyzstan	975	0.3	1,299	0.4	1,530	0.4	1,458	0.4	2,450	0.5
China	19,783	5.2	28,606	8.3	54,937	13.1	49,583	14.7	62,327	11.9
Euro Area	141,922	37.4	134,309	39.1	142,942	34.1	92,752	27.5	167,234	31.9
Turkey	13,977	3.7	19,332	5.6	21,120	5.0	15,760	4.7	32,267	6.1
TOTAL	378,968	100	343,427	100	419,732	100	337,885	100	524,744	100
IMPORT										
EAEU	6,398	2.9	13,501	7.4	17,851	7.4	17,858	7.7	17,202	7.9
Armenia	159	0.1	197	0.1	803	0.3	647	0.3	524	0.2
Belarus			8,662	4.7	12,197	5.0	12,585	5.4	11,688	5.3
Kazakhstan	6,011	2.7	4,767	2.6	5,346	2.2	5,034	2.2	5,260	2.4
Kyrgyzstan	387	0.2	71	0.0	307	0.1	239	0.1	254	0.1
China	39,059	17.7	34,946	19.2	54,066	22.3	54,908	23.7	61,025	27.9
Euro Area	70,584	32.0	53,236	29.2	67,907	28.0	62,944	27.2	53,568	24.5
Japan	10,256	4.6	6,813	3.7	8,959	3.7	7,114	3.1	6,189	2.8
TOTAL	220,854	100	182,404	100	242,628	100	231,430	100	218,855	100

Source: IMF Direction of Trade Statistics (DOTS)

Empirical Analysis

Along with the above results regarding general trading patterns, my gravity model produced significant results. Table 12 lists the estimated coefficients for the gravity model, as discussed in section three.

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln Y_{jt} + \beta_2 \ln DIST_{ij} + \beta_3 CONT_{ij} + \beta_4 EU_j + \beta_5 EEU_j + \varepsilon_{ijt}$$

Table 12: Coefficients of Gravity Model

	Armenia		Kazakhstan		Kyrgyzstan		Russia	
	EXP	IMP	EXP	IMP	EXP	IMP	EXP	IMP
distance	-0.50***	-1.81***	-0.50*	-1.31***	-1.53***	-0.67***	-1.47***	-0.74***
contiguity	-0.07	-1.33***	2.23***	1.05***	0.810*	1.03***	0.47***	0.97***
GDP	0.34***	0.96***	0.36***	0.74***	0.50***	0.76***	0.59***	0.61***
EU	-0.20	-0.90	0.64***	-0.11	0.20	-0.05	-0.12	-0.06
EEU	0.02	-1.12***	-2.15***	0.17	0.598*	1.80***	0.25*	0.02
# of obs.	300	300	300	300	300	300	300	300
R ²	0.12	0.65	0.49	0.67	0.29	0.53	0.68	0.79
Source: Author's Calculations								

According to the coefficients, the model is well-behaved. The “distance” coefficient has the expected negative value and is statistically significant for all countries. Countries that are further apart typically have higher transportation costs, therefore having a negative effect on trade. The “contiguity” coefficient is significant and positive for each country except for Armenia. Armenia does not border any country in the EaEU, which likely attributes to the negative coefficients for both exports and imports and insignificance for the export coefficient. The “GDP” coefficient is significant and positive across all specifications, which is as expected. Larger economies typically trade more than smaller economies. The “EU” coefficients are largely insignificant. The “EEU” coefficients are mostly significant and positive with some exceptions. Kazakhstan’s negative and highly significant export coefficient can likely be explained by the country’s reliance on trading with countries outside the EaEU. For most countries, the gravity model encapsulates a strong amount of the variation of trade that can be explained by the independent variables in the model.

Index Analysis

Using the coefficients from Table 12, I forecasted trade flows from EaEU countries. I applied the index from the “methodology” section to calculate the predicted value of trade flows from 2020-2022, as if the period had been a part of the normal period. In other words, I was able

to predict levels of trade for each member country during 2020-2022 as if the COVID pandemic and Ukrainian war had not occurred, and instead had been replaced with events more consistent with those seen over the normal period. With both the predicted and actual values, as mentioned before, I developed a z-index to determine whether high or low levels of integration occurred over the 2020-2022 period.

While there are plenty of takeaways from the z-indices of all five countries presented in Tables 13 and 14, Kyrgyzstan jumps out as a particularly fascinating case. As can be seen succinctly in the bottom two graphs of Figure 6, Kyrgyzstan's z-index in relation to both Belarus and Russia consistently increase over the entire three-year period. Not only does the z-index increase each year, but in 2022, the z-index of exports from Kyrgyzstan to both Belarus and Russia skyrockets. The z-index of Kyrgyzstan's exports to Belarus jumps from 3.47 to 7.86, and the z-index of Kyrgyzstan's exports to Russia more than doubles, reaching an incredible 25.26. This means that the actual number of exports exceed the predicted number of exports by a substantive amount, and in the case of Kyrgyzstan's exports to Russia, twenty-five times the predicted value. Such a tremendous jump is most likely due to the war on Ukraine and seems to suggest the presence of parallel imports. It seems that, due to Western sanctions imposed on both Russia and Belarus as a result of their involvement in the Ukrainian war, both Russia and Belarus turn to Kyrgyzstan as a parallel importer for needed goods that had previously been supplied by Western countries. This seems like an especially plausible scenario given the relatively constant trade patterns seen between Kyrgyzstan and both Armenia and Kazakhstan, two countries that are not subject to Western sanctions. It is apparent that the war has had a positive effect on exports in Kyrgyzstan, and that these significant increases would likely not have occurred under a normal period.

Table 13: The index for exporters

Exporter	Importer	2020	2021	2022
Armenia	Belarus	1.66	2.11	5.52
	Kazakhstan	0.39	0.63	1.00
	Kyrgyzstan	0.28	0.44	0.89
	Russia	19.38	22.31	59.80
Belarus	Armenia	0.49	0.56	0.77
	Kazakhstan	2.69	3.18	3.52
	Kyrgyzstan	0.76	1.05	0.19
	Russia	2.59	2.98	3.97
Kazakhstan	Armenia	0.03	0.31	0.43
	Belarus	1.69	2.03	2.98
	Kyrgyzstan	1.68	2.04	2.57
	Russia	3.46	4.06	5.25
Kyrgyzstan	Armenia	0.07	0.05	0.08
	Belarus	2.55	3.47	7.86
	Kazakhstan	2.35	2.79	3.06
	Russia	7.73	11.93	25.26
Russia	Armenia	0.87	1.00	0.74
	Belarus	1.63	2.16	1.75
	Kazakhstan	1.01	1.22	1.08
	Kyrgyzstan	1.34	1.85	1.85
Source: Author's Calculations				

When looking at the z-index from Russia's perspective we see the effects of both the COVID pandemic and the Ukraine war on trade relations with EaEU countries. Russia sees an increase in its z-index with all four members in 2021, likely due to the recovery from the COVID pandemic. In general, there is a decline in both exports and imports in 2022, likely because of the war in Ukraine. The decline in exports from Russia to both Kazakhstan and Kyrgyzstan are relatively small compared to the more significant slides seen in exports from Kyrgyzstan to both Armenia and Belarus.

Table 14: Indices for importers

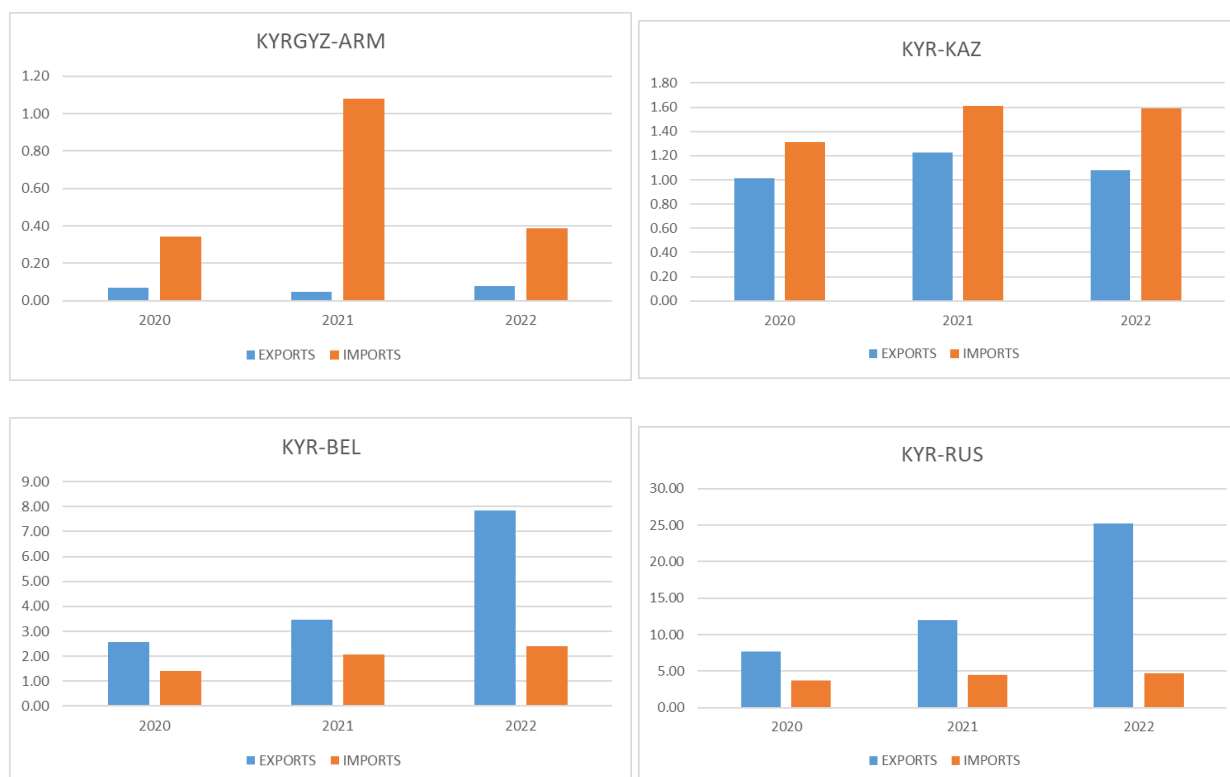
Exporter	Importer	2020	2021	2022
Belarus	Armenia	7.09	6.20	11.35
Kazakhstan		1.32	1.57	4.16
Kyrgyzstan		0.59	0.19	0.94
Russia		11.28	11.04	13.40
Armenia	Belarus	1.10	1.17	2.36
Kazakhstan		0.57	0.92	1.05
Kyrgyzstan		1.11	1.27	0.58
Russia		1.18	1.38	1.29
Armenia	Kazakhstan	0.19	0.21	0.19
Belarus		7.17	7.14	8.46
Kyrgyzstan		0.84	0.85	0.90
Russia		3.20	3.08	3.27
Armenia	Kyrgyzstan	0.34	1.08	0.39
Belarus		1.42	2.07	2.42
Kazakhstan		1.31	1.61	1.59
Russia		3.73	4.53	4.71
China				
Armenia	Russia	1.38	1.43	0.86
Belarus		3.34	3.83	2.79
Kazakhstan		0.81	1.06	0.72
Kyrgyzstan		0.75	0.99	0.65

Source: Author's Calculations

My results indicate that there is not a uniform effect across the member countries of the EaEU during the 2020-2022 period. For Russia, which is subject to strict sanctions, both the pandemic and the war had a negative effect on exports and imports. For the other EaEU economies, there is a different effect. Kyrgyzstan and Armenia seem to have economically benefited enormously from both events, especially so from the war in Ukraine. Likely due to its role as a parallel importer, as a way for Russia and Belarus to circumvent sanction restrictions, Kyrgyzstan has seen far greater export activity to Russia and Belarus than could have been

expected under a normal period. Kazakhstan has also experienced modest improvement in trade from 2020-2022.

Figure 6: Kyrgyzstan's Z-Index for Exports and Imports from 2020-2022



Source: Author's calculations

6. CONCLUSION

The COVID pandemic and the war in Ukraine are two of the most important international events of the past decade. At the outset of my research, I was curious to discover whether such a newly formed economic union, the EaEU, would be able to withstand the consequences of two major, global events. Certainly, such events would have some sort of effect on trade cooperation and integration within the EaEU, whether that be positive or negative.

As my results have shown, the integration within the EaEU has deepened when viewed from the smaller member states and their trade with Russia during the 2020-2022 period. On one hand, it is bizarre that a war would bring countries together. On the other hand, the isolation of Russia has transformed smaller economies like Armenia and Kyrgyzstan into regional trade hubs that re-export goods to Russia that are unobtainable directly from the sanctioning countries. Given that the war in Ukraine continues and the isolation of Russia from the West deepens, it is likely that we will see a continuation of these trade patterns in the near future, unless however, the United States and other Western countries decide to strictly enforce secondary sanctions on other member states of the EaEU.

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