

Review Article

The Impact of International Trade on GDP: Evidence from Belarus

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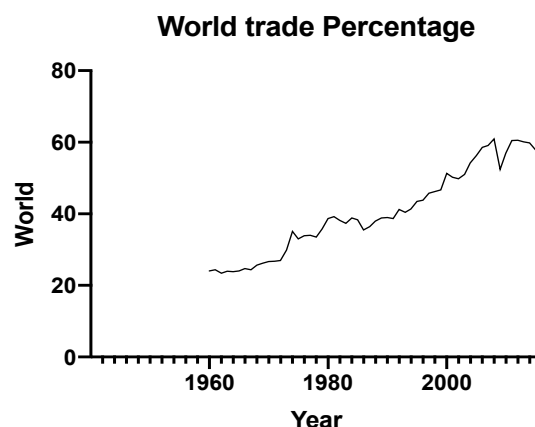
Abstract - This paper studies the Impact of International Trade on GDP. By using the simple linear regression technique, we examine three equations. Firstly, we established the relationship between GDP and its contributors. It was concluded that International Trade, more specifically Exports, has a positive impact on GDP. The results showed that a 1% increase in Exports would increase GDP by 0.43%. Similarly, a 1% increase in Imports will decrease GDP by 0.43%. Subsequent to that, we use the SITC data to investigate the impact of the different types of Imports and Exports on GDP. The second equation focuses on the relationship between Exports and GDP. The significant variables in this regression are Chemicals and Related Products Exports, Commodities & Transactions Exports, Food, and Live Animals Exports and Manufactured Goods Exports. The results show that a 1% increase in chemical exports will increase GDP by 0.166%. On the other hand, a 1% increase in Commodities & Transactions Exports, Food, and Live Animals Exports, and Manufactured Goods Exports will decrease GDP by 0.09%, 0.27%, and 0.55%, respectively. The third equation focuses on the relationship between Imports and GDP. The results show that Imports have no impact on GDP since all of the variables are insignificant. The paper also places the regression results into context by using the RCA (Revealed Comparative Advantage Index). Overall, Chemical Exports have the highest Trade surplus of the significant variables and have shown consistent Comparative Advantage.

Keywords - International Trade, SITC Data, GDP, RCA

I. INTRODUCTION

For centuries, economists have devoted time and effort to determine the elements and importance of international trade. It is one of the most important topics, and it continues to grow in importance with each passing year. In the modern world, there is a mutual interdependence of the various national economies. Today it is hard to find the example of a closed economy. All economies of the world have become open Vijayasri (, 2013). Since the spread of globalization, every country has become unbelievably interwoven by the fabric of International Trade. By now, it is plainly obvious that no country can survive in isolation; every country must forge alliances to export goods for-profit and import the goods it needs. Every country must trade.

Figure 1 shows the percentage of World Trade as a percentage of World GDP. It is clearly seen that Trade had risen from around 24% in 1960 to 56% in 2016. This confirms the importance of International Trade and the role it plays in the global economy. So far, the conclusion that has been made is that Trade is necessary for the development of the economy, but the world is not that simple. If this was the end of the story, the theoretical perfectly competitive environment would be the world we know today.



Source: World Bank Data Bank

Since this is not the case, we must dive into a deeper understanding of the matter. How is it, that if all countries trade, some are richer and more powerful than others? When it comes to the benefits of international trade, some countries benefit more from trade than others do, and some benefit from producing and exporting certain types of goods. Thus, the concepts of absolute and comparative advantage come into play in explaining trade patterns. There is always a need for international trade because countries have different products, capabilities, and specializations. Exports increase the market of a country beyond national borders and provide higher profits. Imports provide the consumer base with commodities, which are not in the country at higher prices.

Regarding the impact of International trade on Economic growth, there are two sets of economists with two different views. The first group of economists believes



that International Trade has wreaked havoc on developing countries through trade liberalization and the removal and reduction of tariffs. They believe that all the gains of trade are received by the developed countries who export goods to the developed countries. The second group of economists believes that Trade and globalization have benefitted developing countries such as China and India.

Commodities are usually the most significant exports of developing countries. Where raw or partially processed, these exports play a pivotal role in the development of these countries. However, volatile commodity prices can be a concern of many developing countries as they may not be able to anticipate earnings. On the other hand, the exports of developed countries are usually value-added products. This type of export yields higher profits and benefits to the economy. The developed countries take the commodity exports and create entirely new products, thus adding value and increasing the price. The mark of the transition economy may be value-added exports.

II. LITERATURE REVIEW

Many studies have given solid evidence of the positive impact that International Trade has on Economic growth. Firstly, Dollar (1992) posited two indices for measuring trade liberalization. The study reported that open economies grew faster than closed economies. Adding to this evidence, Sachs, and Warner (1995). This study revealed that open developing and developed countries had grown 4.49% and 2.29% per year while closed developing and developed countries have grown at 0.69 and 0.74%, respectively. Edwards (1998) endeavors to capture different channels through which policymakers can protect their economies from foreign competition. He shows that total factor productivity growth is higher for open economies. Frankel and Romer (1999), focus on the endogeneity issue associated with the trade-volume measure of openness by utilizing the gravity model of international trade. They find that there is a positive relationship between actual trade openness, instrumented trade openness, and economic growth. These findings suggest that the causality is running from trade openness to economic growth instead of the other way around (Willard, 2000).

Although the early literature proved a solid positive relationship between International Trade and Economic growth, some economists were not convinced. Roderick and Rodriguez (2000) questioned the results and methodology of many papers. Their study criticized the measure of openness used by Dollar (1992) and Sachs and Warner (1995). The paper also casts shadows of doubt on the methodology of Frankel and Romer (1999).

However, the proponents of Trade Liberalization were eager to prove Roderick and Rodriguez (2000) wrong. Some of them include Warner (2003), Jones (2000), and Panagariya (2004). They all agreed that there is obvious evidence that one cannot ignore regarding the relationship between economic Growth and International Trade. According to these pro-Trade Liberalists, the reason for any

possible rejection of a positive link is because of our inability to measure the protective effects of trade barriers. In addition, Fietsas (2005) argues that despite and methodological issues, there is no evidence that Trade Liberalization is harmful to the economy.

In more recent years, the literature has moved to a position of general acceptance of the positive effects of international Trade. Javed et al. (2012) study the impact of total exports to GDP ratio, imports to GDP, terms of trade, trade openness, investment to GDP ratio, and inflation on the economic growth of Pakistan. The results also show that with an increase in the import of raw materials, the production, employment, and output of the country are boosted up. Similarly, Trade openness has also a positive and significant influence on the economy of Pakistan.

Mago (2014) used the cointegrated VAR and ECM method to study the relationship between inflation, Exports, the exchange rate, Imports, and GDP. In this study, all the variables except Imports are positively related to GDP. Li, Chen, and San (2010) used cointegration analysis and ECM to study the relationship between GDP, Imports and Exports. They found that there is no evidence of a link between imports and GDP. Enu, Havi, and Hagan (2013) used the Johansen cointegration test to study Real GDP, FDI-Exports, Imports, FDI. They found that in the long run, Exports had a positive effect on GDP while Imports and FDI had a negative effect. Adeleye, Adetey, and Adewuyi (2015) used a cointegration and ECM to study the impact of International Trade on GDP. It turns out that Exports have a positive effect on GDP. Abdullahi, Safiyanu, Soja (2016) used a panel data model to study the impact of economic growth on GDP in West African Countries from 1991-2011. The results show that only Exports have a significant and positive effect on Economic Growth. Safana et al. (2011) used the ARDL approach to cointegration and Granger causality tests to examine the relationship between International Trade, financial development, and GDP growth for Pakistan. The authors found unidirectional relationships from International Trade to Economic Growth and from Financial development to international Trade. Jenks and Katrcogl (2010) also used the same methodologies for their investigation into the relationship between financial development, international trade, and economic growth for Cyprus. They found that international Trade and Real Income are cointegrated. They also found that the growth of real income stimulates International Trade which then stimulates the money supply. Arif and Ahmad (2012), using the Engle and Granger Cointegration analysis, studied the relationship between Trade opened and GDP for Pakistan from 1972 until 2010. As was expected, there was a cointegrated relationship between the variables, and a bidirectional relationship was found between Trade Openness and Economic Growth. Lal (2017) studies the short-run and long-run relationship between FDI Trade Openness and GDP in China, India, and Mexico. The results from this study confirm causal relationship between the three variables in China and Mexico.

Kim, Lin, and Suen(2012) give proof that Trade advances financial development in high-salary, low-expansion, and non-rural nations yet have a negative effect in nations with the contrary properties. For a panel of 46 nations, Huang and Chang (2014) find that the development impact of trade relies upon the degree of financial development. Trade improves monetary development when the nation achieves a limited dimension of securities exchange advancement. Sakyi, Villaverde, and Maza (2015) give proof of positive bi-directional causal connection among trade and monetary development, for an example of 115 nations. Were (2015) finds that trade applies a positive and huge impact on the financial development rate in developed and developing nations, yet its impact is not huge for least developed nations which to a great extent incorporate African nations. In an investigation of China, Hye, Wizarat, and Lau (2016) demonstrate that trade transparency is decidedly identified with development in the long and short run.

In a later work, Brueckner and Lederman (2015) utilized the instrumental variable method to deal with a panel of 41 Sub-Saharan African nations. They find that trade receptiveness or openness stops monetary development in both the short and long run. Musila and Yiheyis (2015) research the instance of Kenya and find that trade openness has a constructive outcome on venture proportion, however not on the rate of monetary development. Polat et al. (2015) find that trade openness obstructs economic development in South Africa. At last, Lawal, Nwanji, Asaleye, and Ahmed (2016) apply the ARDL strategy to Nigeria and locate a negative long-run effect of trade openness on economic development yet a positive development impact in the short run. Further, a two-way causality was found between the two factors.

It is easy to see that Trade and GDP are positively related. However, the pertinent question is what types of imports or Exports benefit the economy the most and which types are more harmful. It is productive and extremely insightful to examine the different types or classifications of trade and their individual impact on GDP. All of the studies in the literature use macro variables such as trade openness, imports, and exports as proxies of economic trade; however, there is a need for a dissection of trade. Knowing the specific types of trade and their impact on GDP can be valuable for the government in terms of economic restructuring and policymaking. In this paper, we will use the SITC data, which classifies international trade into ten classifications. This will allow the individual analysis of each classification. To the best of the author's knowledge, there has not been a study such as this that takes advantage of SITC data in this way and applies to Belarus.

III. DATA AND METHODOLOGY

A. Data

The data used in this paper was taken from the World Bank data bank and the UNCTD data bank. The data set includes 26 variables and covers a span of 22 years from 1995 – 2017. The variables included in the study are divided into three sets for the purpose of this paper. The first set of data is GDP, EXPORTS, IMPORTS, GCF, FDI,

POPULATION, and TRADE OPENNESS. The next set of data, which represented Import and Export data at the product level, is part of the SITC data set. SITC stands for The Standard International Trade Classification and, it is a method of grouping and classifying products, which emerged from a meeting in May of 1950 at the United Nations. This helps to compare and contrast trade among countries. There are ten Classifications of the SITC data.

They are as follows: Section 0 - Food and live animals, Section 1 - Beverages and tobacco, Section 2 – Crude materials, inedible, except fuels, Section 3 - Mineral fuels, lubricants, and related materials, Section 4 - Animal and vegetable oils, fats and waxes, Section 5 - Chemicals and related products, Section 6 - Manufactured goods classified chiefly by material, Section 7 - Machinery and transport equipment, Section 8 - Miscellaneous manufactured articles and Section 9 - Commodities and transactions not classified elsewhere in the SITC.

Table 1 presents the summary of the data in millions of US dollars. Most notably, Belarus has had an average GDP, Exports, and GCF of 37, 19 Billion, and 12 Billion US dollars. Given that, on average, these variables hardly fall below the minimum, this shows a healthy economy. In addition, Imports are 22 Billion on average, and FDI is 1 Billion. It is interesting to note that Imports are greater than Exports on average.

SITC data also tells an interesting story. The biggest Imports on average are Mineral fuels, lubricants and related materials Imports that is 7 million on average, Machinery and Transport Equipment Imports, which is 4 Million on average, and Manufactured Goods Imports, which is 3 Million on average.

In addition, the biggest exports are Mineral fuels, lubricants, and related materials Exports that is 5 million, Machinery and Transport Equipment Exports, which is 3 million and Manufactured Goods Exports and Chemicals and Related Products Exports, which are 2.9 million on average.

For the sake of a parsimonious model, we conduct unit root tests for all of the variables. If the variables have a unit root, we should use the differenced version, and if not, the level version will suffice. Table 2 reveals the result of the unit root tests using the augmented dickey fuller test. According to the results, only three of the variables are integrated of order 1. Those are Beverages and Tobacco Imports, Trade Openness and Population. Therefore, we use the first difference of the variable for estimation.

B. Methodology

This paper uses two tools for analysis. First, a simple linear regression is employed for the analysis. We employ this method instead of cointegration because of the limited amount of data points. This may cause a degree of freedom issue. The OLS analysis is sufficient to bring meaningful results from this analysis. We focus on three regressions.

The first regression establishes the relationship between GDP and its common contributing variables, including Exports, Imports and Trade Openness, Gross Capital Formation, Population, and Foreign Direct Investment. The second and third regressions include the SITC Product level data. After the results of equation 1, we observe the breakdown of the effects of international trade through the Import and Export SITC data.

$$GDP = \alpha + \beta_1 GCF + \beta_2 FDI + \beta_3 POPULATION + \beta_4 TRADE\ OPENNESS + \beta_5 IMPORT + \beta_6 EXPORTS \quad (1)$$

$$GDP = \alpha + \beta_1 GCF + \beta_2 FDI + \beta_3 POPULATION + \beta_4 TRADE\ OPENNESS + \beta_5 IMPORTS + \delta EXPORTS \quad (2)$$

$$GDP = \alpha + \beta_1 GCF + \beta_2 FDI + \beta_3 POPULATION + \beta_4 TRADE\ OPENNESS + \beta_5 EXPORTS + \gamma IMPORTS \quad (3)$$

After estimating the results of the OLS regression, we use the Revealed Comparative advantage index to give some context to the results. The Index of Revealed Comparative Advantage was introduced by Balassa (1965) as a method to measure a country's Advantage or Disadvantage in the manufacturing and exporting of Goods classified in certain classes.

$$RCA_{cp} = \frac{E_{cp} / \sum_{p \in P} E_{cp}}{\sum_{c \in C} E_{c'p} / \sum_{c' \in C} E_{c'p}} \text{ where,}$$

E = Exports

c, c' = Country Index

C = Set of countries

pp' = Commodity index

P = Set of commodities

The RCA is equal to the proportion of the country's exports that are of the class under consideration, divided by the proportion of world exports that are of that class. A comparative advantage is "revealed" if $RCA > 1$. If RCA is less than unity, the country is said to have a comparative disadvantage in the commodity or industry.

Table 1. Summary Statistics for Belarus data from 1995-2017.

Variable	Min	Max	Mean	Std. Dev	Skew	Kur
GDP	12138.00	78814.00	37866.00	22947.00	0.27	-1.40
Exports	4803.00	46060.00	19855.00	12834.00	0.50	-0.93
Imports	5564.00	46404.00	22999.00	14335.00	0.27	-1.50
Inward FDI	15.00	4002.00	1022.00	1012.00	1.20	1.70
GCF	2878.00	29303.00	12377.00	9026.00	0.46	-1.20
Population	9.50	10.00	9.70	0.25	0.69	-1.20
Trade Openness	74.00	141.00	112.00	16.00	-0.22	0.62
Animal and Vegetable Oils Imports	0.05	0.20	0.12	0.04	0.34	-0.88
Chemicals and Related Products Imports	0.34	4.60	2.40	1.40	0.24	-1.50
Commodities and Transactions Imports	0.11	2.90	1.10	0.74	0.84	0.85
Crude Materials inedible except Fuels Imports	0.05	1.70	0.78	0.47	0.45	-0.90
Machinery and Transport Equipment Imports	0.76	10.00	4.60	3.00	0.36	-1.30
Manufactured Goods Imports	0.52	6.60	3.50	1.90	0.21	-1.40
Mineral fuels, lubricants and related materials Imports	0.06	19.00	7.40	5.50	0.52	-0.76
Miscellaneous manufactured articles Imports	0.25	2.40	1.10	0.72	0.50	-1.10
Beverages and Tobacco Imports	0.13	0.43	0.25	0.10	0.35	-1.10
Food and Live Animals Imports	0.44	4.10	1.80	1.20	0.64	-1.10
Commodities & Transactions Exports	0.10	2.50	0.74	0.68	1.30	0.97
Miscellaneous Man Articals Exports	0.23	2.30	1.30	0.56	0.20	-0.80
Animal & Vegitable Oils Exports	0.00	0.15	0.04	0.05	1.30	0.33
Beverages and Tobaco Exports	0.00	0.24	0.09	0.06	1.20	1.40
Chemicals and Related Products Exports	0.52	8.30	2.90	2.20	0.95	0.06
Crude Materials Except Fuels Exports	0.22	0.79	0.50	0.19	0.13	-1.40
Food and Live Animals Exports	0.09	5.00	2.10	1.70	0.58	-1.30
Machinery and Transport Equipment Exports	0.43	7.00	3.40	1.80	0.44	-0.77
Manufactured Goods Exports	0.55	5.10	2.90	1.40	0.10	-1.40
Mineral fuels, lubricants and related materials Exports	0.22	16.00	5.90	5.00	0.55	-0.78

Note: Figures represented in millions of US dollars

Table 2. Unit Root Test Results

Variable	level stat	Level prob	1st diff stat	1st diff prob
Animal and vegetable oils Exports	-3.23498	0.1047	-4.33047	0.033
Animal and vegetable oils Imports	-2.187634	0.4727	-5.189924	0.0005
Beverages and Tobacco Exports	-2.41247	0.3619	-4.263229	0.0038
Beverages and Tobacco Imports	-4.656064	0.0068	na	na
chemical and Related Products Exports	-3.037206	0.145	-5.455359	0.0003
chemical and Related Products Imports	-1.830861	0.6549	-4.608328	0.0017
Commodities and Transactions Export	-1.691638	0.7188	-7.766722	0.000
Commodities and Transactions Imports	-1.648422	0.7359	-5.16044	0.0006
Crude Materials inedible except Fuels Exports	-3.377972	0.0843	-5.437052	0.0003
Crude Materials inedible except Fuels Imports	-2.124771	0.5048	-5.079595	0.0006
Food and Live Animals Exports	-2.787055	0.2165	-3.557895	0.0169
Food and Live Animals Imports	-2.192475	0.4703	-5.613029	0.0002
Machinery and Transport Equipment Exports	-2.947809	0.1688	-4.436238	0.0026
Machinery and Trnsport Equipment Imports	-1.870555	0.6353	-3.895964	0.0079
Manufactured Goods Exports	-2.29063	0.4213	-4.625219	0.0016
Manufactured Goods Imports	-2.322815	0.4057	-5.160582	0.0005
Mineral fuels, lubricants and related materials Exports	-1.699914	0.7168	-4.172695	0.0043
Mineral fuels, lubricants and related materials Imports	-2.640709	0.2684	-3.828358	0.0027
Miscellaneous Man Articals Exports	-3.284394	0.0961	-4.387666	0.0027
Miscellaneous manufactured articles Imports	-3.349875	0.0856	-4.588277	0.0019
GDP	-1.499665	0.7984	-3.884275	0.0081
Imports	-1.57313	0.7706	-4.111176	0.005
GCF	-1.113571	0.9035	-3.904315	0.0063
Exports	-1.901464	0.6197	-4.002001	0.0063
FDI	-3.278156	0.0959	-8.293767	0.0000
Trade Openness	-4.267876	0.0149	na	na
Population	-4.060916	0.0245	na	na

IV. RESULTS

Table 3. REGRESSION 1 RESULTS

Variable	Coefficient	Prob	
LGCF	0.712	0.000	***
LIMPORTS	-0.437	0.043	**
LFDI	0.003	0.867	
LPOPULATION	-0.557	0.259	
LTRADE OPENNESS	-0.132	0.317	
LEXPORTS	0.436	0.020	**
C	9.618	0.237	
R-Squared	0.940		

Note: All variables are differenced once except Population and Trade Openness.

Table 3 shows the results of regression 1. The results tell an interesting story as population and trade openness have a negative sign, suggesting that population and trade openness have a negative relationship with GDP. However as expected, Imports has a negative relationship with GDP. This is consistent with the literature. Of the six regressors, only three of them are significant. This includes GCF, Imports and Exports. These three have the expected signs. Therefore, a 1% increase in GCF, Imports and Exports has a 0.7%, -0.437% and 0.436% impact on GDP.

Table 4. Exports Regression Results

Variable	Coefficient	Prob	
D(LOG(GCF))	0.867	0.000	
animal and Vegetable Oils Exports	-0.019	0.582	
beverages and Tobacco Exports	0.054	0.180	
chemicals and Related Products Exports	0.166	0.024**	
LCommodities and Transactions Exports	-0.092	0.083*	
crude Materials inedible except Fuels Exports	0.133	0.417	
food and Live Animals Exports	-0.271	0.079*	
machinery and Transport Equipment Exports	0.315	0.131	
manufactured Goods Exports	-0.559	0.079*	
mineral fuels, lubricants, and related materials Exports	-0.001	0.970	
miscellaneous manufactured articles Exports	0.049	0.840	
C	0.035	0.045**	
R-Squared	0.962		

Note: All variables are differenced once and logged.

Now we try to observe the breakdown effect of Trade on GDP. The significant variables are Chemicals and Related Products Exports, Commodities & Transactions Exports, Food, and Live Animals Exports and Manufactured Goods Exports. However, all except chemicals and related products Exports have the wrong sign. According to the results, a 1% increase in chemical exports will increase GDP by 0.166%. On the other hand, a 1% increase in Commodities & Transactions Exports, Food, and Live Animals Exports, and Manufactured Goods Exports will decrease GDP by 0.09%, 0.27%, and 0.55%, respectively. To explain this unusual result, we look to the summary data. Notice that chemical Exports outweigh chemical Imports by 500,000 US Dollars (2.9- 2.4). The increase in Exports may be the reason for the positive impact on GDP. This is also the case for Food and Live Animals Exports. Exports (2.10 Million USD) outweighs imports (1.80 Million USD). On the other hand, for the two other variables, Commodities & Transactions, and Manufactured Goods Imports outweigh Exports by 360,000 USD (1.10-0.74) and (3.5 – 2.9) 600,000USD, respectively.

Table 5. Imports Regression Results

Variable	Coefficient	Prob	
LGCF	0.768	0.000***	
LEXPORTS	0.237	0.210	
animal and Vegetable Oils Imports	-0.045	0.850	
beverages and Tobacco Imports	0.041	0.630	
chemicals and Related Products Imports	-0.249	0.472	
LCommodities and Transactions Imports	-0.072	0.267	
LCrude Materials inedible except Fuels Imports	0.219	0.298	
food and Live Animals Imports	-0.158	0.638	
machinery and Trnsport Equipment Imports	-0.114	0.753	
manufactured Goods Imports	-0.048	0.498	
mineral fuels, lubricants, and related materials Imports	0.099	0.758	
miscellaneous manufactured articles Imports	-0.063	0.724	
C	0.023	0.247	
R-Squared	0.942		

Note: All variables are Differenced once and logged.

Table 3.2 presents the results of the Impact of Imports on GDP. In this case, none of the variables are significant. This is a clear indication that Imports do not affect economic growth. Although the variables are insignificant, one would expect that some imports would add to the efficiency of the economy. Not every country has an absolute or comparative advantage in producing a certain type of good. Therefore, there are imports, say of raw materials, that may very well be needed to manufacture value-added products that have a greater positive impact on GDP.

To help explain the results of the models, and put them in context, the RCA index is calculated for Belarus for 1995 – 2017. Tables 4.1 and 4.2 show the calculated index for the ten classifications of the SITC index.

Table 6. RCA for Belarus from 1995 - 2006

Product	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Animal & Vegetable Oils	0.0	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.4
Beverages and Tobacco	1.3	14.7	11.4	10.6	7.2	5.0	6.3	7.3	5.7	5.7	4.2	3.2
Chemicals and Related Products	1.2	1.5	1.5	1.5	1.6	1.3	1.4	1.2	1.1	1.0	1.0	0.9
Commodities & Transactions	18.1	0.6	0.6	0.6	1.6	1.0	0.6	1.1	0.9	0.7	0.4	0.4
Crude Materials Except Fuels	1.5	1.0	1.1	1.2	1.3	1.4	1.3	1.5	1.4	1.1	0.9	0.7
Food and Live Animals	0.3	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.4	1.5	1.4
Machinery and Transport Equipment	0.2	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5
Manufactured Goods	0.7	1.5	1.5	1.5	1.4	1.4	1.5	1.3	1.4	1.3	1.1	1.1
Mineral fuels, lubricants and related materials	0.6	0.9	1.0	1.3	1.2	1.9	1.8	2.2	2.2	2.4	2.5	2.6
Miscellaneous Man Articals	0.4	1.0	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.6

Table 7. RCA for Belarus from 2017 - 2017

Product	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Animal & Vegetable Oils	0.2	0.2	0.6	0.4	0.1	0.5	0.8	0.8	0.7	0.4	0.6
Beverages and Tobacco	2.1	0.5	0.9	1.3	1.7	2.6	3.8	5.1	3.6	2.8	3.3
Chemicals and Related Products	1.0	1.5	1.2	1.3	1.6	1.7	1.0	1.3	1.6	1.4	1.6
Commodities & Transactions	0.5	0.4	0.4	0.9	1.1	0.8	0.8	0.7	0.8	0.8	0.5
Crude Materials Except Fuels	0.6	0.4	0.6	0.6	0.4	0.4	0.5	0.6	0.7	0.8	0.6
Food and Live Animals	1.4	1.2	1.6	2.1	1.5	1.6	2.3	2.2	2.3	2.4	2.5
Machinery and Transport Equipment	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.3	0.5	0.4
Manufactured Goods	1.1	1.1	1.1	1.2	0.9	0.9	1.1	1.1	1.0	1.2	1.1
Mineral fuels, lubricants and related materials	2.4	2.1	2.6	1.8	2.0	1.9	1.8	2.0	2.5	2.2	2.3
Miscellaneous Man Articals	0.6	0.5	0.5	0.6	0.4	0.4	0.6	0.5	0.5	0.6	0.5

Focusing on the significant variables, the index reveals that Belarus has had a consistent advantage in chemical exports surpassing unity 18 of the 23 years captured in the index. Commodities & Transactions exceeds unity for only 4 years out of the 23 years, suggesting that Belarus has not had a comparative advantage in this export. Food and Live Animals Exports exceed unity 21 times of the 23 years calculated. Finally, Manufactured Goods Exports exceeded unity 18 times. Combining the analysis from above with the RCA calculated, there seems to be an explanation for the significance and positive impact of Chemical Exports for Belarus. Firstly, of the two significant variables whose Exports outweighs its Imports, the trade surplus of Chemical Exports is much greater than that of Food and Live Animal Exports. Secondly, Belarus has had a fairly consistent revealed comparative advantage in Chemical exports during the past two decades.

V. CONCLUSION

This paper studies the Impact of International Trade on GDP. By using the simple linear regression technique, we examine three equations. Firstly, we established the relationship between GDP and its contributors. It was concluded that International Trade, more specifically Exports has a positive impact on

GDP. After that relationship was established, we examined the impact of the different types of Imports and Exports using the SITC data. Since this data was broken into different categories, it was interesting to know what type of Exports are more valuable to the development of Belarus' Economy and, likewise, what type of Imports was detrimental to it. The second equation focused on the relationship between exports and GDP. The expected result was that value-added goods would be more valuable than other exports, and that exports, on the whole, would have a positive impact. However, of the significant SITC variables, only Chemicals, and related Products Exports had a positive impact. It is also interesting to note that manufactured goods were significant, but negatively related to GDP. The third equation focused on the relationship between Imports and GDP. The expected result was that imports overall would have a negative relationship with GDP. The results indeed indicated that imports overall had a negative relationship with GDP, given that most of the signs were negative and none of the variables were significant. The results of the regressions were further put into perspective by making use of the RCA index. This showed that Belarus had had a consistently revealed comparative advantage in three of the four exports. The significance and positive impact of Chemical Exports on GDP can be explained by its

500,000 USD trade surplus and its consistent RCA. This is not the case for the other significant variables. This paper is useful to policymakers and government officials because it gives insight into the trade patterns of Belarus. By breaking its trade down, it is easy to analyze which sectors and industries are beneficial and which are not. This can be used for the development of future trade strategies to improve the trade position of Belarus.

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