

Statistical Analysis of Long-Term Trends of Trade Relations between Georgia and Canada

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Received: December 10, 2018

Accepted: January 17, 2019

Online Published: January 22, 2019

doi:10.5539/ibr.v12n2p174

URL: <https://doi.org/10.5539/ibr.v12n2p174>

Abstract

The article analyzes the long-term time series of 1995-2016 depicting trade relations between Georgia and Canada. Georgia's trade partner countries are ranked as a whole trade turnover, as well as export and import volume of goods and the ordinary position of Canada is established. The nature and direction of total trade turnover, as well as export and import tendencies are revealed. In the process of statistical analysis, the absolute and relative indicators were calculated. The export and import volume of 1995-2016 is also considered by the commodity groups and the first five of the largest commodity groups are drawn in both directions.

The statistics show that the trade relations between Canada and Georgia and its development are important for both countries.

Keywords: trade turnover, export, import, growth rate, diversification

1. Introduction

In 1921-1991 Georgia was a Soviet Union and had no independent trade relations with other countries, including Canada. Since 1992, Georgia has already started bilateral trade relations with different countries around the world, but until 1995 the official statistics on foreign trade are incomplete, which is why it is not advisable to use scientific analysis and objective quantitative or qualitative evaluations (Gelashvili, 2016). Therefore, we have taken a 1995-2016 period Year and we used official statistical data of this period that are available in the National Statistics Office of Georgia and National Bank of Georgia.

Georgia is a small country with open economies, where over the last 15 years, significant reforms have been implemented in various sectors, including the economy. The positive results of reforms are clearly seen in the ratings published by many international organizations. So, for example, according to the Index of Economic Freedom, Georgia took the 13th position with 76 points among 180 countries, 123rd - in 1996, (107th - 2000, 93rd - in 2005, 26th - in 2010, 22th - in 2015 and 29 - in 2017). Currently Georgia is in the group of mostly free countries, and it is in more advanced position than many EU countries (http://www.economy.ge/uploads/ek_ciprebshi/reitingebi/reitingebi_geo/Heritage_2017-GEO.pdf).

Among the components of the Economic Freedom Index, Georgia's highest score (88.6) is in the freedom of the international trade and ranks the 5th in the world countries (http://www.economy.ge/uploads/ek_ciprebshi/reitingebi/reitingebi_geo/Heritage_2017-GEO.pdf).

Georgia has free trade regime with EU countries, CIS countries, China, Turkey and many other countries, which is a positive factor in the growth of foreign trade volume.

At present, trade relations between Georgia and Canada are based on the Generalized System of Preferences (GSP) regime and its beneficiary. The basic essence of this system is the establishment of reduced rates of basic import tariffs for imported goods from beneficiary countries, which facilitates access to developing countries in the developed countries. Georgia has the same foreign trade regime with the US and Japan (<http://www.economy.ge/?page=ecopolitic&s=12>).

2. Literature Analysis

There are many publications on foreign trade issues of Georgia. Most of them are published in Georgian, but there is a small part in English language (Gaganidze, G., Ramishvili, B. and others, 2017; Gelashvili, 2016, 2018;

Gelashvili, N. 2016; Medzmariashvili, 2014 and others). These publications mainly deal with foreign trade with the EU countries, CIS countries, Azerbaijan, Turkey and others. But there are no scientific or other publications on trade between Georgia and Canada either in Georgian or in other languages. So it is natural that their critical review is not presented in our article. Such research is of great importance for both Georgia and Canada, as it can be used as in learning process and for scientific and practical purposes. Therefore, this article is the first and it has both theoretical and practical significance. It will contribute to the elimination the deficit of the special publications on this issue.

3. Methodology of Research

In the research process we have used many concrete methods of statistical analysis such as: statistical grouping, data table presentation, relative and average values, indices, variation analysis. Some empirical tendencies have been identified on the basis of the indexes calculated by them and the conclusions were formed.

4. Empirical Research and Results

In 1995 Georgia had trade relations with 67 countries and in 2017 - 138. Thus, the geography of foreign trade has significantly expanded, in which in 1995, Georgia had trade relations with 67 countries, in 2000 this number was 102, in 2010 – 133, in 2015 - 137 and in 2017 – 138 (Gelashvili, 2018). Thus, the geography of foreign trade has significantly expanded, in which a major role has played the fact that Georgia is one of the most liberal and competitive trade in the world (Gelashvili, N. 2016). The trade turnover calculated on average by one country is also an interesting indicator: in 1995-2016, this figure increased by 7.3 times: 9,612 million in 1995 and \$ 69,682 million in 2016 (Gelashvili, 2018). The following table shows some generalized indicators of foreign trade of Georgia:

Table 1. General Indicators of Foreign Trade of Georgia

Years	Number of Georgia's trade partner countries	Georgia's trade turnover, Billion \$	Trade turnover on average 1 country, million \$
1	2	3	4
1995	67	0,644	9, 612
2000	102	1,034	10,137
2005	126	3,355	26,627
2010	133	6,913	51,977
2015	137	9,505	69,380
2016	135	9,407	69,682

Data Source: This table is drawn up by us, based on the data of National Statistics Office of Georgia and the 4th column's indexes are calculated.

In 1995 the total foreign trade volume of Georgia amounted to 644 million USD, while in 2016 - 9.4 billion (Gelashvili, 2018), or 15 times more. In the same period, the foreign trade turnover of Canada increased from \$ 172 thousand to \$ 86 million, almost 500 times. However, in 2008-2013 this figure was more than 100 million and its maximum value was recorded in 2008 - almost 150 million USD.

Canada's ordinary position in the ranking of Georgia's trade partner countries causes particular interest as export and import volume. To illustrate this, see Table 2.

Table 2. Private position of Canada in Georgia's foreign trade

Years	By Export volume	By Import volume
1	2	3
1995	38	43
2000	85	12
2005	8	33
2010	5	35
2015	10	48
2016	14	31

Data Source: This table is drawn up by us, based on the data of the National Statistics Office of Georgia.

As shown in Table 2, between 1995-2016, Canada appeared 10 times in the top ten of the main trading partner countries of Georgia, by Exports volume, including 2005-2013 yearly. Moreover, Canada was in the top five in 2008-2010, while in 2009, Canada ranked third place in Georgia's 128 trading partner countries. Canada's ordinary position is also important for the volume of import. For instance, in 2000, Canada ranks 12th from 102 trade partner countries of Georgia. All this indicates that Canada is an important trading partner for Georgia. The importance of this country is also due to the fact that Canada is one of the biggest countries in the world with which trade and other kind of close relationships are important for Georgia. It is noteworthy that for many years

now, according to UN-classification, Canada is in the top ten of highly developed countries (Gelashvili, 2015). Table 3 below illustrates the long-term general tendencies of trade relations between Georgia and Canada at the end of the 20th century and at the beginning of current century.

Table 3. Georgia-Canadian trade balance indicators

Years	Total trade turnover, million \$	Export, million \$	Import, million \$	Balance, million \$
1	2	3	4	5
1995	0,172	0,033	0,139	-0,106
2000	3,655	0,002	3,653	-3,651
2005	42,746	35,640	7,106	28,534
2010	137,056	118,736	18,320	100,416
2015	81,759	70,170	11,589	58,581
2016	85,524	41,260	44,264	-3,004

Data Source: This table is drawn up by us, based on the official data of National Statistics Office of Georgia and the National Bank of Georgia, and the 5th column's indexes are calculated by us.

As shown in Table 3, in the longer term analysis, i.e. within the 22 years, it should be separately allocated for 2005-2015, when Georgia had positive trade balance with Canada. In 2008-2012, export volume of goods exported from Georgia to Canada exceeded to Import volume 7 times. With this indicator, in all these years, Georgia has one of the best positions in trade with Canada. Another interesting fact is that in 2016, for the first time since 2005, Georgia's trade balance was negative with Canada. Generally, with the absolute majority of numerous trading partner countries, Georgia has unfortunately an extremely negative trade balance that is one of the major economic problems in our country (Gelashvili, 2002).

The long-term general trend of trade relations between Georgia and Canada during the analysis period is progressive. But if we analyze the trade balance, we will see that it is not statistically stable and is characterized by both quantitative and qualitative tendencies, i.e. in 1995-2004 it has a negative character, and in 2005-2015, on the contrary, positive. According to our calculations, it was established that the average annual growth rate of Georgia's foreign trade with Canada is higher than with the rest of the world. For example, the average annual growth rate of Georgia's foreign trade turnover in 2000-2016 amounted to 16.69 percent with all trading partner countries, while with Canada, it was 89.45 percent. This means that the volume of Georgia's foreign trade turnover with Canada has increased by 5.4 times a year. It should be noted that in some years there was the leap of growth, for example, in 2004-2010. These indicators indicate that Canada is an important trading partner country for Georgia. The same can be said about Canada in relation to Georgia. Overall, this relationship is more useful and positive for both countries.

Statistical survey of trade relations between Georgia and Canada also includes an analysis of export and import quantitative ratio. The following table shows 4 shares (percentage) of export and import in trade turnover.

Table 4. Specific shares of export and import of Georgia-Canada trade turnover

Years	Export share, %	Import share, %
1	2	3
1995	19,19	80,81
2000	0,05	99,95
2005	83,38	16,62
2010	86,63	13,37
2015	85,83	14,17
2016	48,24	51,76

Data Source: The 2nd and 3rd columns indicators of this table are calculated by us, based on the official data of the National Statistics Office of Georgia and National Bank of Georgia.

As shown in Table 4, long-term tendencies of changes in export and import between Georgia and Canada in 1995-2016 have different directions, but in 2000-2015 increasing the share of export is clearly expressed: if in 2000, the share of export of goods from Georgia to Canada was negligible (0,05 percent), in 2015 this indicator already reached 85.83 percent. Therefore, there is a clearly defined progressive tendency. Of course, such a ratio of export and import is a very positive moment for Georgia. However, the 11-year trend was changed in 2016 when the share of imports slightly exceeded the share of exports.

In order to assess the efficiency of foreign trade it is appropriate to use criteria such as export-import relative coefficient (Gelashvili, 2017). In this case it means that the volume of import must be divided by the export volume. When the value of such coefficient is zero, then the import of goods from other countries in the given country has no place and exports are carried out; If this coefficient is close to zero, it means that the volume of

exports is much higher than the import; Both cases are highly desirable for any country. Of course, if this coefficient is equal to one, then the volume of export and import is equal to the balance of foreign trade (Gelashvili, 2018). In case the ratio is more than one then the volume of imports is higher, which is undesirable for any country. According to Table 3 calculations, the minimum value of import-export ratio was quite long - over 11 years (2005-2015) and it is placed in 0,12 - 0,25 borders; The equilibrium coefficient, coefficient close to one was in 2016 and has reached 1,07; The maximum coefficient was recorded in 2000 and it was 1826,5.

In the study of Georgia-Canada trade relations as a theoretical and practical significance is the analysis of the commodity structure, separately, by export and import. We have established the rankings of commodity groups and then the largest share of 5 largest export and import products. It turned out that in 1995 only 1 commodity group went from Georgia in Canada, and it was "isotopes", at a total value of 33 thousand US dollars. Since 2002 the exporting commodity structure has been expanded and has reached to 8 groups, and in the following years more: in 2005 - 38, in 2010 - 29, in 2015 - 36 and in 2016 - 16 commodities. The following table shows the 5 largest export commodity groups (according to the 4-digit codes of the International Classification).

Table 5. The 5 largest commodity groups exported from Georgia to Canada

		2002 year	Thousand US dollars
1	mineral and fresh water		32.4
2	natural grape wines		21.9
3	devices and devices used in medicine or veterinary		12.0
4	timber material, dumped, More than 6 mm thick		3.4
5	ethyl spirits, non-alcoholic, alcoholic beverages		2.6
		2005 year	
1	gold semi-processed or unprocessed		32,679.5
2	ferroalloys		2,080.0
3	Machines and mechanisms for movement, dig, or drilling		537.0
4	engines and power plants		110.0
5	Natural grape wines		56.4
		2010 year	
1	gold semi-processed or unprocessed		117,646.7
2	manganese oxides		264.2
3	Natural grape wines		249.0
4	nuts fresh or dried		183.1
5	mineral and fresh water		129.1
		2015 year	
1	gold semi-processed or unprocessed		58,842.1
2	ferroalloys		9,591.4
3	mineral and fresh water		719.1
4	Natural grape wines		329.6
5	nuts fresh or dried		316.3
		2016 year	
1	gold semi-processed or unprocessed		31,576.6
2	ferroalloys		7,254.5
3	nuts fresh or dried		1,264.9
4	natural grape wines		570.7
5	mineral and freshwater waters		324.2

Data Source: This table is drawn up by us, based on Georgian National Statistics Office of Georgia and the National Bank Database.

In 2002, in the total exports of goods from Georgia to Canada, share of the first five largest export commodity groups was 99.63%, while in 2016 it was 99.25%. Although export commodity nomenclature has expanded, which is a positive trend of the content, but in the largest top five export commodity groups in almost the same denomination - 4 Commodity Group (gold semi-processed or unprocessed, natural grape wines, nuts, fresh or dried, and mineral water). Other export commodities have a very small share. All this indicates that it is necessary to expand the diversification of export goods (Gelashvili, 2016; Gaganidze, Ramishvili and others, 2017).

Of course, Statistical analysis of the commodity structure of registered imports from Canada to Georgia is also interesting. According to official data, in 1995 there were 2 nomenclature commodities groups ("wheat flour" and "various waters") from Canada. Since 1997, the commodity structure of import has significantly expanded and has reached 26 groups, and in the following years their number has grown stronger: in 2000 – 37, in 2005 – 106, in 2010 - 177, in 2015 - 159 and in 2016 - 173 commodity group. The following table covers volumes of 5 largest import commodity groups ranked by 2000-2016.

Table 6. The 5 largest commodity group imported from Canada to Georgia

		2000 year	Thousand US dollars)
1	Mixed goods		2,615.7
2	Ethyl alcohol non-denaturic, 80% or more of the concentration of alcohol		378.7
3	Seeds, fruits and spores		131.6
4	Cotton textile material, textile fibers are not longer than 5 mm		109.6
5	Knitted clothing, machine or hand woven		102.4
		2005 year	
1	Perfumes and toilet water		1,485.7
2	Binoculars, monoculars and other optical tubes		1,217.9
3	Fish frozen		838.5
4	Cosmetics, or makeup and skin care products		496.5
5	Engines and power tools		454.0
		2010 year	
1	Fish frozen		7,181.7
2	Pork fresh or frozen		2,883.5
3	Metal constructions from ferrous metals and their parts		2,736.2
4	Perfumes and toilet water		877.4
5	Oil and oil products		873.4
		2015 year	
1	Cars		1,501.8
2	Building prefabricated structures		1,498.0
3	Pork fresh or frozen		1,483.9
4	frozenFish frozen		862.0
5	Meat and nutritional subprojects of domestic poultry, fresh or frozen		591.2
		2016 year	
1	The medicines, packaged		35,918.2
2	Fish frozen		2,388.3
3	Building prefabricated structures		1,483.0
4	Pork fresh or frozen		1,069.2
5	Cars		1,050.0

Data Source: Based of Georgian National Statistics Office of Georgia and National Bank Database.

The study of the commodity structure of trade in between Canada and Georgia revealed that commodity nomenclature of exports from Canada to Georgia is much more varied and diverse compared to its reverse flow - exports, what is clearly confirmed by the following data: in 2016 from Canada, Georgia received 176 kinds of goods group, and in the same year exports from Georgia to Canada has passed a total of 16 commodity groups, i.e. 11 times less.

The study of imported commodity structures in Georgia from Canada draws attention to the fact that "frozen fish" is consistently represented in the first five of the largest imported commodity groups in the long term (2005-2016), and in 2010-2016 "Pork meat" was added to it. Additionally, in 2016 one of the commodities group - "Medicinal Products" reached 81,15 percent of total imports of goods from Canada.

In order to assess the efficiency of foreign trade, it is also recommended to use criteria such as total trade turnover per capita. The next 7th table shows that the foreign trade indicators of Georgia per capita are quite high with Canada: according to the total turnover and exports - in the long-term period, 2005-2015, and according to import only in 2016.

Table 7. Relative indicators of foreign trade of Georgia with Canada (calculation per capita, million USD)

Year	Total trade turnover	Export	Import
1	2	3	4
1995	0,036	0,007	0,029
2000	0,827	0	0,827
2005	9,800	8,171	1,629
2010	30,785	26,670	4,115
2015	21,990	18,873	3,117
2016	22,997	11,094	11,903

Data Source: This table is drawn up by us, based on Georgian National Statistics Office of Georgia.

On the basis of Table 7, it is possible to see the following important trends: the total turnover of Georgia with Canada in 1995 was only 36 thousand US dollars calculating per capita, and in 2016 it was already almost 23 million US dollars. Growth is noticeable (almost 300 times), which is very important for any big or small country. It is also noteworthy that the larger growth was observed in the relative indicators of exported goods: In 1995 the export of Georgia to Canada was only 7 thousand US dollars per capita, in 2016 this figure exceeded 11

million, or 1585 times. In the same period, the relative index of imported goods also increased from 29 thousand to almost \$ 12 million, or 410 times. Therefore, in the analysis period, the relative index of exports increased significantly by calculating per capita than the equivalent of imports. Although the relative ratings of export and import were approximately equal in size, in 2016, if we look at the whole analysis period, we'll see a strong variation of the figures, both inclusive and in the individual years (Gelashvili, Muchiashvili and Maisuradze, 2012; Mikeladze and Gelashvili, 2016; Papava, 2015).

5. Conclusions

The following statistical analysis made possible the following conclusions:

After independence, the foreign trade geography of post-Soviet countries (including Georgia) significantly expanded the volume of trade turnover. The clear proof is that if Georgia had trade relations with 67 countries in 1995, their number doubled in 2016 and became 135. This led to the overall volume of Georgia's foreign trade turnover (almost 15 times) significantly increased. At the same time, the turnover of Georgia's foreign trade increased almost 500 times to Canada. In 2000-2016, the average annual growth rate of Georgia's foreign trade turnover was 16,69 percent, and with Canada - 89.45 percent. This means that the volume of Georgia's foreign trade turnover with Canada has grown an average of 5.4 times a year, and in some years it has been a jump in growth, for example, in 2004-2010. These indicators indicate that Canada is an important trading partner country for Georgia.

It is noteworthy, that Georgia has had a positive trade balance over Canada (2005-2015) for quite a long time, and in 2008-2012 the export volume of goods exported from Georgia to Canada exceeded almost 7 times. With this indicator, in all these years, Georgia has one of the best positions in trade with Canada. In 2005-2015, Canada with export ranked 10 times in the top ten of the main trading partner countries of Georgia, including 2005-2013 yearly.

The study of the trade in the commodity structure between Canada and Georgia revealed that commodity nomenclature of Import from Canada to Georgia is much more varied and diverse, than the reverse flow - exports, which is clearly confirmed by the following data: in 2016 from Canada, Georgia received 176 kinds of goods group, and on the same year in the form of exports from Georgia to Canada has passed a total of 16 commodity groups, i.e. 11 times less. In 2005-2016, the export trademark nomenclature expanded to Georgia, but in the top five of the largest export commodity groups are consistently represented by 4 commodity groups (gold semi-processed or raw, natural wines of grapes, fresh or dried walnut, Mineral waters). Other export commodities have a minor share. This indicates that it is necessary to expand the diversification of export goods.

Long-term trends in the export and import of Georgia and Canada between 1995 and 2006 have different directions, but in 2000-2015 the share of export share clearly shows an increase: In 2000, the share of export of goods from Georgia to Canada was relatively insignificant (0,05 percent). This indicator in 2015 was 85.83%. Therefore, there is a clearly defined progressive tendency. Of course, such a ratio of export and import is a very positive moment for Georgia. However, the 11-year trend changed in 2016 when the share of imports a little bit exceeded of the share of export by a small amount.

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