

upper limit of the volume of output that the firm can produce. Therefore, let the following conditions be met:

1. The functions $R = R(q)$ and $C = C(q)$ are defined and differentiated on the interval $[0; Q]$;

2. The profit function reaches a maximum at some point q_0 ($q_0 \neq 0$ i $q_0 \neq Q$).

If both conditions are satisfied, then the function $P = (q)$ differentiated on the interval $[0; Q]$ has a maximum at the point $q_0 \neq 0$. Then by Fermat's theorem

$P'(q_0)=0$. Since $P'(q_0)= R'(q_0) - C'(q_0)$, then at the point $q=q_0$ we obtain the equality:

$$R'(q_0) - C'(q_0)=0, \text{ namely } R'(q_0)= C'(q_0).$$

Knowing that the derivative of the cost function C' expresses the marginal cost, and the derivative R' is marginal revenue, we obtain the basic economic principle:

The optimal level of productivity is achieved when the marginal income is equal to the marginal cost.

Conclusion. The equality described above defines the rule that an enterprise which maximizes its profits sets the volume of production so as to marginal income equals marginal cost.

References

1. Горобчук Т.Т. Мікроекономіка. Центр навчальної літератури, 2004. 272 с.

Horobchuk T.T. Mikroekonomika [Microeconomics]. Tsentr navchalnoi literatury [Center for Educational Literature], 2004. 272 s. [in Ukrainian].

2. Гребенников П.И., Леусский А.И., Тарасевич Л.С. Микроэкономика. 1998. 447 с.

Grebennikov P.I., Leussky A.I., Tarasevych L.S. Mikroekonomika [Microeconomics]. 1998. 447 s. [in Russian].

3. Економічна теорія: Політекономія. / В.Д. Базилович. 2006. 613 с.
Ekonomichna teoriia: Politekonomiia. [Economic theory: Political economy] / Bazylevych V.D. 2006. 613 s. [in Ukrainian].

4. Шваб Л. Економіка підприємства. 2006. 583 с.
Shvab L. Ekonomika pidpriemstva [Economics of the enterprise] / Liudmyla Shvab / 2006. 583 s. [in Ukrainian].

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CURRENT STATE OF CANADA'S ECONOMY

Introduction. Canada's economy is highly developed and has the ninth largest nominal GDP. Like in other developed countries, the service sector, which employs about three-quarters of Canadians, dominates the country's economy. Canada has the third highest total estimated natural resource, valued at \$ 33.2 trillion. It has the third largest proven oil reserves in the world and is the fourth largest oil exporter. Canada is very reminiscent of the United States for its market economy. Leading industries include automotive and other industries, forest products, minerals and oil. About three-quarters of Canada's exports join the United States, so the continuation of free trade agreements with the South Court is crucial to Canada's economic well-being.

Review or recent publications. All new and important information can be found on the official sites of the World Bank Group and on the specialized sites.

Objective of the paper is to study the strengths of Canada's economy and what it specializes.

Result of research. Canada is inferior to the United States in terms of GDP per capita, but in the set of socio-economic parameters that determine the standard of living, exceeds them.

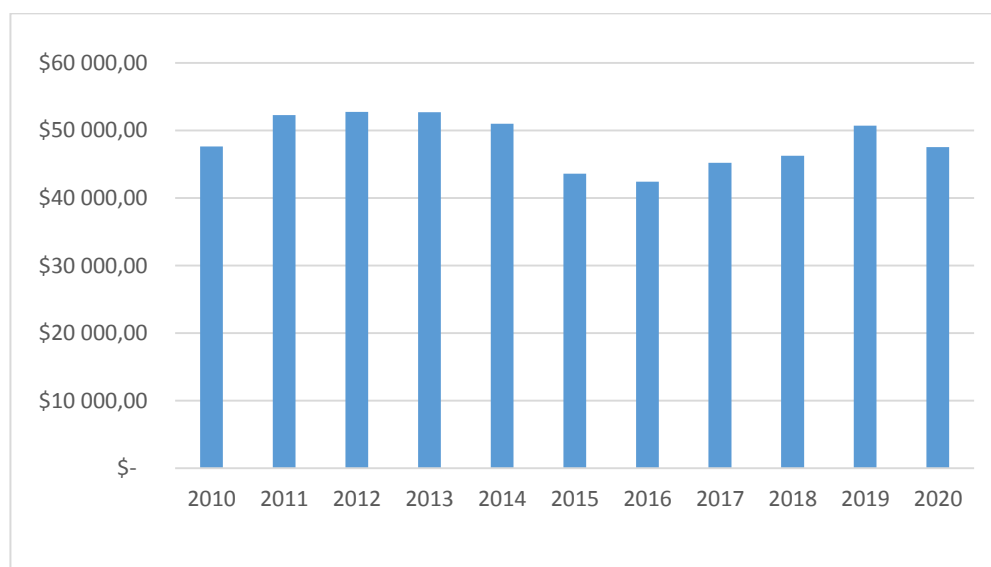


Fig.1 The dynamics of GDP per capita in 2010-2020, in dollars USA

Source: created by the author based on [1]

In the 1990s, according to UN statistics, Canada was recognized as the best country in the world by a set of key criteria (general standard of living, ecology, culture and art, education, crime rate, real income, life expectancy), and its cities Vancouver and Toronto were reported to be the best cities in the world for human habitation.

Maple leaf country produces a large number of resources. In terms of total reserves of mineral resources it ranks first in the world. In addition, Canada ranks fifth in by coal reserves. Moreover, it has significant reserves of oil and gas, iron ore, non-ferrous metal ores. In terms of diamond resources, Canada also ranks first in America and fourth in the world. This country is one of the largest agricultural

countries in the world, the third (after the United States and France) exporter of agricultural products to the world market. At the same time, the share of the agricultural sector in Canada's GDP is small – only 3.5%.

Most important for the country's economy is oil and natural gas production in the province of Alberta, which provides Canada with the role of an exporter of these important energy sources.

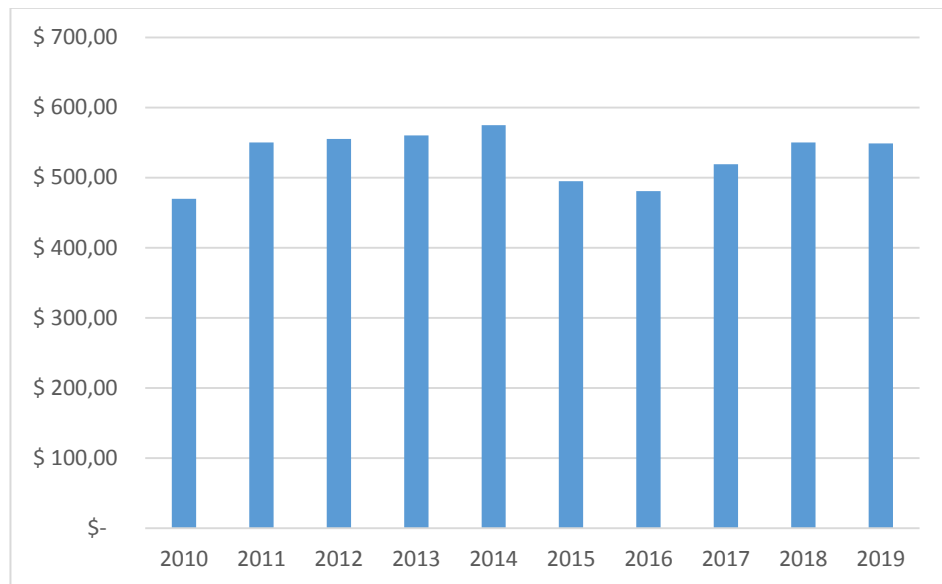


Fig.2 Exports rate of Canada in 2010-2019, in billion dollars USA
Source: created by the author based on [3]

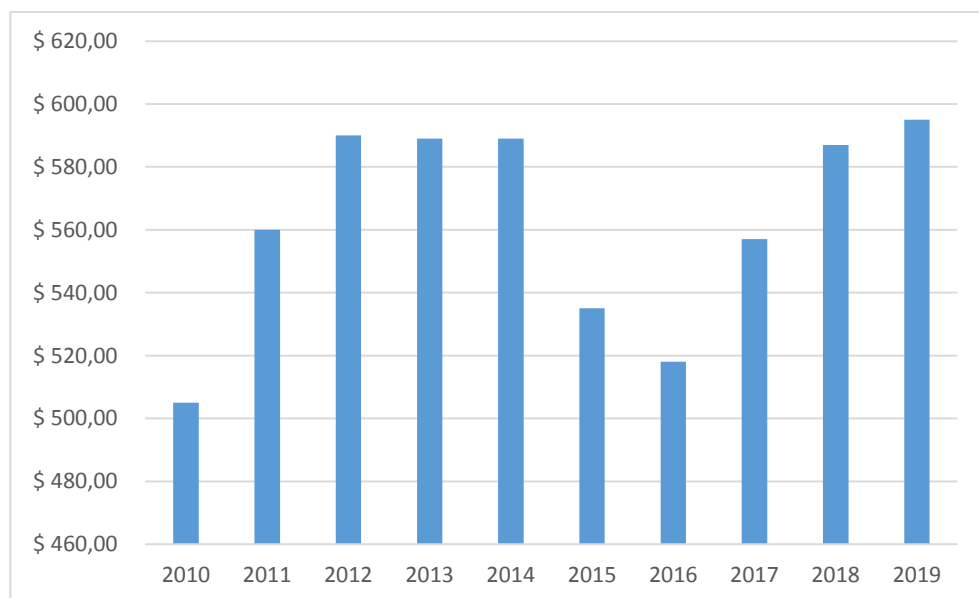


Fig. 3 Imports rate of Canada in 2010-2019, in billion dollars USA
Source: created by the author based on [4]

Canada specializes in many industries such as transport engineering (primarily automotive), woodworking, paper and printing industry, metalworking, food and chemical industry. These industries are the most profitable for the state.

The country is a powerful supplier of raw materials and semi-finished goods to the global market, exporting more than 80% of the extractive industry [2].

The bar chart shows that despite a slight fall in exports in 2015 and 2016, there has been a steady increase from 2017 to 2019.

Canada imports such goods as metals, clothing, plastics, shoes, food, soap, detergents, autos and equipment, fruits and vegetables. The bar chart below shows the dynamics in Canada's imports (fig. 3).

As is seen from the charts, Canada's imports are almost at the same level as exports, and there is a tendency to their growth.

Conclusion. The research has shown that Canada's exports are quite impressive, in general, this country is able to satisfy the domestic demand for goods and services; however, there are still some goods that Canada needs to import. It should be noted that many countries need to import goods and services from Canada, such as maple syrup. About 80% of all maple syrup in the world is produced in the Canadian province of Quebec. Canadian exports of maple syrup are estimated at more than \$145 million per year. Therefore, Canada has high economic indicators.

References

1. ВВП на душу населения [Электронный ресурс]. Режим доступа: https://www.theglobaleconomy.com/Canada/GDP_per_capita_current_dollars/

VVP na dushu naselennia [GDP per capita]. Retrieved from: https://www.theglobaleconomy.com/Canada/GDP_per_capita_current_dollars/. [in Ukrainian].

2. Экспорт Канады с часом: ресурсы та промышленные товары [Электронный ресурс]. Режим доступа: <https://www150.statcan.gc.ca/n1/pub/11-630-x/11-630-x2017005-eng.htm>

Eksport Kanady z chasom: resursy ta promyslovi tovary [Canada's exports over time: resources and manufactured goods]. Retrieved from: <https://www150.statcan.gc.ca/n1/pub/11-630-x/11-630-x2017005-eng.htm>. [in Ukrainian].

3. Экспорт Канады [Электронный ресурс]. Режим доступа: https://www.theglobaleconomy.com/Canada/exports_dollars/

Eksport Kanady [Canada's exports]. Retrieved from: https://www.theglobaleconomy.com/Canada/exports_dollars/. [in Ukrainian].

4. Импорт Канады [Электронный ресурс]. Режим доступа: https://www.theglobaleconomy.com/Canada/imports_dollars/

Import Kanady [Canada's imports]. Retrieved from: https://www.theglobaleconomy.com/Canada/imports_dollars/. [in Ukrainian].