

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

**The determinants of foreign trade development in
Canada**

Author : BSc LI DANYANG

© 2022 CZU Prague

BACHELOR THESIS ASSIGNMENT

Danyang Li

Economics and Management
Economics and Management

Thesis title

The determinants of foreign trade development in Canada

Objectives of thesis

The main aim of the present Bachelor thesis is to identify the determinants of foreign trade development in Canada. Being one of the least corrupt countries in the world, and one of the world's top ten trading nations with a highly globalized economy (Rotberg, Robert I. & Carment, David, 2018), it becomes interesting to investigate how foreign trade has been contributing to Canada's economic growth over the last 30 years. To achieve the formulated main goal the following partial research questions will be stated and gradually answered:

1. Which countries were the main trade partners for Canada in the beginning of the analysed period and which of them became key partners at the end (both importers and exporters)?
2. What goods constitute the bulk of foreign trade turnover in Canada?
3. Trade in what items had demonstrated a revealed comparative advantage over the analysed period?
4. What is the dynamics of associated macroeconomic indicators in Canada?
5. What are other factors, that play an important role in economic development of Canada?

Methodology

The theoretical part of the Bachelor thesis will be mainly based on a relevant literature review (represented by printed literature, scientific articles, surveys, web sources) and the research of similar studies, using methods such as abstraction, inductive reasoning, analysis, synthesis, and deduction.

The practical part will contain descriptive statistical analysis and qualitative thematic synthesis of the main economic indicators and selected for the analysis variables. Own research work will be mainly based on RCA index analysis (i.e. Balassa, Vollrath, or Lafay) along with comparative techniques and statistical inference.

The results of the conducted analysis will be discussed and complemented with the author's corresponding recommendations.

The proposed extent of the thesis

40-60

Keywords

Canada, Foreign trade, RCA, Economic growth

Recommended information sources

DALGAARD, P. *Introductory statistics with R*. New York: Springer, 2008. ISBN 978-0-387-79053-4.

FISCHER, S. – SCHMALENSEE, R. – DORNBUSCH, R. *Introduction to macroeconomics*.

HELPMAN, E. – KRUGMAN, P. R. *Market structure and foreign trade : increasing returns, imperfect competition, and the international economy*. Cambridge: The MIT Press, 1999. ISBN 0-262-58087-.

JENÍČEK, V. – KREPL, V. – ČESKÁ ZEMĚDĚLSKÁ UNIVERZITA V PRAZE. INSTITUT TROPŮ A SUBTROPŮ.

Foreign trade and development economics. Prague: Czech University of Life Sciences, 2007. ISBN 978-80-213-1651-5.

MONTIEL, P. *International macroeconomics*. Chichester: Wiley-Blackwell, 2009. ISBN 978-1-4051-8386-4.

SACHS, L. *Applied statistics : a handbook of techniques*.

Expected date of thesis defence

2021/22 SS – FEM

The Bachelor Thesis Supervisor

Mgr. Elena Kuzmenko, Ph.D.

Supervising department

Department of Economics

Electronic approval: 26. 2. 2022

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 3. 3. 2022

doc. Ing. Tomáš Šubrt, Ph.D.

Dean

Prague on 13. 03. 2022

Declaration

I declare that I have worked on my bachelor thesis titled " The determinants of foreign trade development in Canada" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 13.3.2022

Acknowledgement

I would like to thank Mgr. Elena Kuzmenko, Ph.D. for the valuable advices and support during my work on this thesis.

Title of Bachelor Thesis in English

Abstract

The Canadian government has always pursued a policy of promoting economic growth and employment through trade, and while utilizing the rich domestic natural resources, it has accelerated the development of Canada's trade import and export by introducing resources and technologies from other countries. Therefore, Canada's trade structure is now more and more more and more diverse. The main research purpose of this thesis is to determine the determinants of foreign trade development in Canada, Discuss what kind of economic growth has been brought to Canada by the development of foreign trade in the past 30 years. It mainly analyzes changes in Canada's trading partners and trade structure, and discusses macroeconomic indicators, including unemployment and inflation, changes in GDP index, and other factors that affect Canada's economic development. Through the RCA index, it is helpful to analyze and To understand which industries Canada has more obvious advantages in exporting, the research results and implications can be used to discuss the development factors of Canada's foreign trade and Canada's own economic development potential.

Keywords: Canada, Foreign trade, RCA, Economic growth

Title of Bachelor Thesis in Czech

Abstrakt

Kanadská vláda vždy sledovala politiku podpory hospodářského růstu a zaměstnanosti prostřednictvím obchodu a při využívání bohatých domácích přírodních zdrojů urychlila rozvoj kanadského obchodního importu a exportu zavedením zdrojů a technologií z jiných zemí. Obchodní struktura Kanady je proto nyní stále více a více rozmanitější. Hlavním výzkumným záměrem této práce je určit determinanty vývoje zahraničního obchodu v Kanadě, Diskutovat o tom, jaký ekonomický růst přinesl Kanadě rozvoj zahraničního obchodu v posledních 30 letech.

Analyzuje především změny kanadských obchodních partnerů a obchodní struktury a probírá makroekonomické ukazatele, včetně nezaměstnanosti a inflace, změny indexu HDP a další faktory, které ovlivňují ekonomický rozvoj Kanady.

Prostřednictvím indexu RCA je užitečné analyzovat výsledky výzkumu a pochopit, která průmyslová odvětví má Kanada zjevnější výhody při exportu a důsledky mohou být použity k diskusi o rozvojových faktorech kanadského zahraničního obchodu a potenciálu vlastního ekonomického rozvoje Kanady.

Klíčová slova: Kanada, zahraniční obchod, RCA, ekonomický růst

TABLE OF CONTENTS

1. INTRODUCTION.....	10
2. OBJECTIVES AND METHODOLOGY.....	11
2.1. Objectives.....	11
2.2. Methodology.....	11
3. LITERATURE REVIEW.....	12
3.1. Definition of Foreign Trade.....	12
3.2. Development of Trade Theories.....	13
3.2.1. Comparative Cost Theory.....	13
3.2.2. Factor Endowment Theory.....	13
3.3. Impact of Developing Foreign Trade on the Country.....	16
3.4. Empirical Findings on Trade Theories.....	17
3.5. Overview of Revealed Comparative Advantage Index.....	18
3.6. Impact of Trade for Canada.....	19
3.7. Reason for Canada's Trade Port Development.....	21
4. PRACTICAL PART.....	23
4.1. Current Situation of Canadian Foreign Trade.....	23
4.2. Commodity structure of foreign trade import and export.....	24
4.3 Share of Canada's import and export trading partners (1990, 2000, 2010, 2020years).....	26
4.4 Canada's Trading Partners.....	28
4.4.1 Canada-UK Trades.....	30
4.4.2 Canada-US Trades.....	31
4.4.3 Canada-China Trades.....	32
4.4.4 Canada-Japan Trades.....	33
4.4.5 Canada-Mexico Trades.....	34
4.5 Canada's Comparative Advantage Index.....	35
4.6. Analysis of Canada's Free Trade Ports.....	39
4.7. The Development of Canada's Foreign Trade Policy.....	40
5. RESULTS AND DISCUSSION.....	42
6. CONCLUSION.....	45
7. REFERENCES.....	46

LIST OF PICTURES

Figure 1: Canadian Total Global Exports, (1990-2020 , in Millions of USD).....	23
Figure 2: Canadian Total Global Imports, (1990-2020 ,in Millions of USD).....	23
Figure 3: Changes in Canadian Exports, 1990-2020 (unit:%).....	24
Figure 4: Changes in Canadian Imports, 1990-2020(unit:%)	25
Figure 5: Pie chart of share share of Canada's trading partners(1990, 2000, 2010, 2020years)	26
Figure 6: Total exports (2005-2020years, in millions of US dollar.....	35
Figure 7: Container throughput at Canadian trade ports over the past 15 years	39

LIST OF TABLES

Table 1: Share of top ten trading partners(1990, 2000, 2010, 2020years).....	26
Table 2: Total Imports and Exports of Canada and the United Kingdom (1990-2020)	30
Table 3: Total Imports and Exports of Canada and the United States (1990-2020)	31
Table 4: Total Imports and Exports of Canada and China (1990-2020).....	32
Table 5: Total Imports and Exports of Canada and Japan (1990-2020).....	33
Table 6: Total Imports and Exports of Canada and Mexico (1990-2020).....	36
Table7: Balassa Index for Machinery, Energy Fuels, Agriculture and Fishing,Ore (China, US, Germany).....	37

LIST OF ABBREVIATIONS

CPI - Consumer price index

TEU - Twenty-foot Equivalent Unit

GDP - Gross domestic product

NAFTA - North American Free Trade Agreement

GNP - Gross national product

1. INTRODUCTION

Foreign trade has become an important module of social and economic development. Canada is not only one of the most important economies in the world, but also has obvious characteristics in international trade. The development of trade and economy relies on its own country's rich natural resources and makes use of its unique foreign trade model. Import and export trade accelerated the process.

The purpose of this paper is to explore how foreign trade had been contributing to the economic growth of Canada over the last 30 years. Focusing on the trades conducted between Canada and its main trading partners, followed by changes in the structure of traded goods. Mainly from the analysis of imported and exported commodities, and investigate the relationship between macroeconomic indicators and Canada's foreign trade, mainly focusing on inflation and GDP and unemployment, as well as other factors (natural resources, geographical analysis, trade policy) on the important role of Canada's economic development is analyzed through the explicit comparative advantage index proposed by Balassa and analyze the industries in which the country has obvious advantages from the trades with Canada's major trading partners.

2. OBJECTIVES AND METHODOLOGY

2.1. Objectives

The main aim of this thesis is to identify the determinants of the development of Canada's foreign trade, and how foreign trade contributes to Canada's economic growth over the last 30 years. To achieve the formulated main aim, the following partial research questions will be stated and gradually answered:

1. Which countries were the main trade partners of Canada?
2. What are the prevailing trade patterns Canada's foreign trade from 1990 to 2020?
3. Did Canada possess comparative advantage of trading with its main trade partners?
4. What are the impact of international trade towards Canada's macroeconomic indicators?
5. What are other factors that plays important role in the economic development in Canada?

2.2. Methodology

This paper mainly determines the determinants of the development of Canada's foreign trade, which is divided into theoretical part and practical part. In the theoretical part, it mainly introduces the basic definition and theory of foreign trade, and introduces the impact of foreign trade on the country, and the basic introduction of foreign trade to the macro economy. The final section introduces the basic concepts of RCA index analysis.

In the practical part, it mainly introduces the status quo of Canada's foreign trade, Canada's trade commodity structure, uses data to illustrate the changes in the total trade volume between Canada and its trading partners, and uses data to illustrate the dynamics of Canada's macroeconomic-related indicators, and finally uses explicit comparison. The advantage index shows that Canada will have more advantages in which industries, and finally analyzes other powerful factors for the development of Canada's foreign trade.

The currency used for all data is US dollars. data sources Worldbank Organization and United Nations trade database and website of statistical trade data.

3. LITERATURE REVIEW

3.1. Definition of Foreign Trade

Foreign trade, also known as import and export trade, is an exchange activity between one country and another country with commodities as the main content, and is composed of imported commodities and exported commodities (Helpman, 1999).

Foreign trade not only links countries with high production development to each other, but also enables countries with relatively low production development to join the field of exchange through foreign trade, so it is also an important means for each country to develop foreign relations, and a country has only when exports are greater than imports can the national economy change, so international trade is also an indispensable and important part of the national economy (Cui, 2009).

Secondly, traditional foreign trade theory and modern foreign trade theory are indispensable, which are mainly divided into several stages. The earliest stage was Adam Smith's "Absolute Cost Theory" in 1776. In this theory, Adam Smith believed that the professional division of labor can improve the productivity of labor and bring benefits to the country. If a country trades products that it is good at producing things it is not good at producing, it will be beneficial to both countries.

Economic theory provides one key explanation on how trade is a wealth creation process: particularly, in the issue of specialization. Throughout history, mankind had gradually improved their economic wellbeing through specializing their economic activities. Marengo & Dosi (2005) outlined that the improvements of economic conditions cannot be separated from aspects such as the labor division, specialization as well as international goods and service exchanges. As specialization increases, total output would follow along with productivity. This would lead to greater economic benefits to be shared amongst the population.

Butler (2012) argued that there are various instinctive reasons which enhance the efficiencies of specialization. First of all, each specializing nations could gain better expertise and subsequently improving their performances over time. Secondly, specializing could also eliminate the switching costs associated with different production activities. Specialization

also reduces the costs for equipping the production functions with different skills and equipment to solely satisfy production activities that could otherwise, be more efficiently produced elsewhere. International trade also further emphasize the specialization importance, by allowing the benefits of specialization to be spread into wider areas and shared amongst more individuals.

3.2. Development of Trade Theories

3.2.1. Comparative Cost Theory

This is also one of the theoretical contents of the early division of labor theory, so that both countries can play their own advantages, and improve labor productivity, increase output, and reduce costs. (Smith and Tang 2005). This is followed by David Ricardo's Theory of Comparative Costs. The absolute cost theory also has defects, so Ricardo proposed the "comparative cost theory", which was developed on the basis of Adam Smith's absolute cost theory. The concept of comparative advantage, postulated that one country might possess better production capabilities than the other, and that such country should be focused on producing goods they could efficiently produce, rather than pursuing to produce all types of goods and services indiscriminately. Using the illustration of cloth and wine trade between England and Portugal, earlier proponents of this view showcased that even if one of the two trading partners possess absolute advantage in producing both goods, there remained scope for mutually beneficial trades, in case that both counties engaged in specialization in accordance to their comparative advantage patterns. The proponents of this view believed that as long as there are relative differences in the products produced by each country, then the Trade benefits are obtained through the division of labor in international trade, so not only countries with absolute advantages can gain benefits by exchanging commodities, but countries with comparative advantages can also increase their benefits through trade. (Ricardo 2005).

3.2.2. Factor Endowment Theory

The second stage of the theory is Ohlin's theory of production factor endowments in 1933. In the early 20th century, in order to explain Ricardo's "comparative cost theory", he put forward the "factor endowment theory", which was summarized by the trade theory of economists Ohlin and Heckscher. trade is one-sided, so Ohlin systematically put forward his own trade theory in his book "Regional and International Trade" published in 1933, use the

lack or abundance of production factors (land, labor, capital) to explain the emergence of international trade, and propose that labor-abundant countries export labor-intensive goods and import capital-intensive goods; capital-abundant countries export capital-intensive goods and import labor-intensive goods, (Hekexieer et al., 2018).

In this regards, the trade would be incentivized by the differences of relative prices between countries that are reflected by the labor costs of producing the goods (Syverson, 2011). At this point, it is necessary to recognize that the divergence between self-sufficiencies and prices in free trades could only partially explains the benefits from trading. Del Gatto et al. (2006) proposed a more complete explanation that the trade gains should also be measured after considering underlying factors that causes different prices: subsequently creating conditions that could foster mutually-beneficial trading activities. In fact, these factors are the fundamentals that lie beneath the source of comparative advantages. These factors includes aspects such as technological differences and differences of natural endowments between nations.

First, the Ricardian model and its proponents generally agreed that technological differences could become the source of comparative advantage. In fact, this factor had been classically illustrated through Ricardo's classic example between England and Portugal's trade, assuming that labor is the sole factor of production, and subsequently causing the technological differences to explain the differences of output that could be obtained through one labor unit (Reisman, 2018). Such differences would allow each countries to exploit their comparative advantages and expand the size of their economic resources.

Accordingly, since the Ricardian theory assumes that labor is the sole production factor, countries could only be able to obtain comparative advantage by having superior labor productivity. However, this theory had been criticized by Dosi & Tranchero (2021), who argued that in real-life, countries could also gain comparative advantages through their differences in resource endowment, such as fertile land and natural resources.

Accordingly, the concept that international trade is motivated by the differences of relative factor endowments between countries would become the foundation for the Heckscher-Ohlin

trade model. Considering that this model is focused on factor endowments as another source of comparative advantage, Melvin (1989) remarked that the Heckscher-Ohlin trade model provides additional explanations regarding the trade patterns. According to the Heckscher-Ohlin theory, as long as the factor endowment of a country is known, the direction of trade can be inferred. In 1953, American economist Leontief used the "input-output analysis method" created by him to the opposite conclusion is drawn from the analysis of the foreign trade data of the United States from 1947 to 1951. This contradictory theory is also called the "Leontief Mystery".

Fundamentally however, the Heckscher-Ohlin model is based on the theory that a country possess production bias towards exports and therefore, they had higher tendencies to export the goods that intensively utilizes factors with which the country is regarded as well-endowed. Reflecting from the characteristics of these theories, authors such as Neary (1985) had argued that the trade gains realized from trading activities under the Heckscher-Ohlin trade model, would fundamentally be similar with trades conducted with Ricardian model, in a sense that such trade gains are obtained from specialization that arise from the differences of resource ownership between countries.

Furthermore, Neary (1985) remarked that there are other gains from trading activities beyond those that are linked between countries. Specifically, countries would prefer to trade in attempts to obtain economies of scale for their productions, or to obtain access to greater varieties of goods. Neary (1985) also pointed out that, in case that trading activities is able to either reduce or entirely eliminates monopoly power, there will be greater gains from trading activities beyond the usual cost-advantages and efficiencies benefits.

The third stage: the new theory of the division of labor in international trade after World War II (1945)

The theory of new factors of international trade believes that new meanings should be given to factors of production and the scope of factors of production should be expanded. These new elements play an important role in explaining the basis of foreign trade division of labor and trade pattern, including the theory of technical elements, the theory of research and development elements, and the theory of information elements. (Ge et al. 2001).

3.3. Impact of Developing Foreign Trade on the Country

The development of the foreign trade department also directly affects a country's foreign economic relations, so the arrival of foreign trade is an important means for each country to maintain foreign relations. Another benefits of foreign trade would be to improve labor productivity. The export of capital goods reduces the pressure on the input of factors of production, thus improving the industrial efficiency of various countries.

According to Adam Smith's theory of international division of labor, foreign trade not only allows countries to make full use of resources, but also accelerates the process of introducing advanced technology and equipment, hence increasing labor productivity in a short period of time. Additionally, foreign trade could also accelerate the introduction of foreign capital into the domestic market. This aspect not only solves the shortage of domestic investment market, but also conveys the development of production technology in various countries.

Foreign trades also yield positive impact to the economy by concentrating domestic capital goods in areas of advantage. According to traditional trade theory, comparative advantage must play an important role in a country's international trade. Only by concentrating on producing products with its own comparative advantages can a country obtain more inferior products when exchanging products with other countries, thus solving the unnecessary resources consumed by self-production. (Ge et al., 2001)

The role of foreign trade in the economy Foreign trade allows many products to have more markets and drives the development of industries and enterprises in each country. Foreign trade enriches the content of trade economy, reduces the risks of trade, and enables products to achieve the ultimate value (Marshall, 1890). Marshall (1890) particularly emphasised that the reasons that determine the economic development of various countries belong to the scope of international trade research. In fact, the expansion of foreign trade leads to the growth of the global internal and external economy and production, thereby promoting the growth of economic income.

According to the theory of comparative advantage, international trade leads countries to use resources more efficiently, promotes economic growth by promoting technological progress, and thus reduces the large amount of money that the country needs to spend on production. In

the economic aspect of trade promotion, import and export are equally important and are two inseparable and mutually complementary factors. Therefore, the changes in the economy of each country are clearly displayed in the foreign trade transactions.

The impact of foreign trades are also imminent in at least three macroeconomic indicators: GDP (gross national product), consumer price index CPI (an important indicator for observing inflation), unemployment rate. First, regarding the impact of foreign trade on GDP, the contribution of foreign trade to GDP is the degree of dependence on exports, which refers to the proportion of a country's export trade to GDP (or GNP) in a certain period of time, which has a good guiding effect on economic development.

Secondly, both import and export trade can affect the change of CPI value. first of all, import trade increases the total domestic supply, so when supply and demand reach a certain level, it helps to reduce the level of domestic prices. On the contrary, if imported goods The increase in the price of imported goods leads to a decrease in the national demand for imported goods, which increases the demand for domestic consumer goods and also leads to an increase in the domestic price level – all of which indicating the influence of foreign trade towards Consumer Price Index (CPI).

Finally, regarding the impact of foreign trade on unemployment: although some economists began to discuss the impact of foreign trade on national unemployment in the early 20th century, they only temporarily adjusted structural unemployment (Trefler, 2004). Different characteristics can sum up the impact of foreign trade on unemployment in different directions, so whether foreign trade affects unemployment must be proved from an empirical perspective, so different perspectives bring different results. (Hong GuanJing 2019)

3.4. Empirical Findings on Trade Theories

Although the concepts regarding comparative advantages and trade gains tend to be straightforward, Deardorff (1982) pointed out that it is difficult to empirically capture the benefits of trade. This is because there are substantial difficulties in translating both Ricardo and Heckscher-Ohlin's theory into models that could be empirically investigated. This problem had also been discussed by Leamer (1995), who remarked that there remains limited knowledge regarding empirical magnitudes from international trade gains, as well as the prevailing mechanisms that generates such gains. Most importantly, there remained limited

evidences regarding the contributions of specialisation towards the economic prosperity of a particular nation.

One of the most widely referred case would be the Japanese trade liberalization in the 1850s, where Japan transformed from its economic isolation to open trade. Reflecting from this case, Bernhofen and Brown (2005) attempted to measure the size of gains from trade obtained from comparative advantage towards national income. Bernhofen and Brown (2005) successfully discovered that the law of comparative advantage prevails in Japanese trading pattern after the country opened up, with gains resulted from comparative advantage estimated between 8% to 9% of Japan's GDP.

Another example would be Irwin (2005)'s investigation on the Jeffersonian Trade Embargo in the United States. Irwin (2005) discovered that the embargo imposed welfare costs to the US populaces, with impact reaching 5% of GDP. However, such costs do not represent total gains from trade, since the US trades had already been restricted before the embargo.

There have been wide arrays of literatures on the investigation of the Heckscher-Ohlin model. However, as pointed out by Stone (2021), most of these empirical works tend to utilised inappropriate methods and therefore, generally irrelevant to provide understanding about the Heckscher-Ohlin model. However, more recently, newer empirical works had emerged, focusing on the recognition of global trade flows instead of testing hypotheses on trade theories, such as Rai et al. (2021) and Lee and Wu (2022). These studies showcased that the application of appropriate methodologies and the inclusion of global trade flows would showcase that factor abundance could provide substantial impact on economic prosperity. However, Stone (2021) also warned that such impact would only be imminent if both technological difference factors and home bias are included, with relaxed assumption about an integrated world.

3.5. Overview of Revealed Comparative Advantage Index

One of the most widely used indices to measure trade is the Balassa index : the ratio of the industry's share in the country's exports relative to its share in world trade. (COMTRADE). This index helps the user identify industries where the targeted country has an obvious

advantage in international competition. and this is of special importance in order to promote trade of products that are more likely to be competitive. (COMTRADE).

The mathematical definition of Balassa Index is defined as:

$$RCA_{d,i} = \frac{X_{d,i}/X_w}{X_d/X_w} \quad (1)$$

Where:

d is the country under study.

w is the set of all exporting countries.

i refers to a specific industry.

X are the exports.

akes values of BRCAij between [0, +∞]. If BRCAij >1, it can be regarded that the studied country is specialized in exporting selected industry's products. On the other hand, if BRCAij <1, the studied country is not specialized in exporting selected industry's products (COMTRADE).

This index should be used in industries where trade is not distorted by export incentives and trade barriers, because they are likely to obscure whether a country has a real comparative advantage (disadvantage) in these goods. (COMTRADE).

3.6. Impact of Trade for Canada

The aforementioned discussions had provided various evidences on the potential benefits of trade for an economy. Clearly, various aspects of trades are actually intertwined one another. Liberalized trade would increase competition in both domestic and foreign markets, and increasing the product varieties whilst reducing the price pressures. Furthermore, trades might also encourage firms to engage deeper in specialisation and increase the efficiencies of their productions. These effects would consequently lead to the supplementary benefits for the nation, such as improved productivity, higher wages and improved societal prosperity.

This is also evident in the case of Canadian trades, with Carvalho et al. (2019) remarking that one of the main objectives of Canada to engage in trades would be to gain access to comparatively cheaper international goods and maintaining its production specialisation. It is expected that the subsequent international division of labour would gains from increased specialisation – allowing Canadian firms to increase their outputs, better wages for Canadian workers, and allowing Canadian consumers to purchase higher quality products at lower prices (Carvalho et al., 2019).

According to Drysdale & Garnaut (2022), Canadians possess opportunities to gain from specialisation through two channels. First, it is possible to engage in one-time resource shifts from less-efficient to more efficient sectors. Second, it could also retain its ongoing form, as workers, firms and the entire nation focused on specialisation and increase their specialisation performances. Authors such as Baldwin et al. (2001) had discovered the linkage between specialisation and trade liberalisation throughout the Canadian industry.

In particular, Baldwin et al. (2001) pointed out that there are strong relationships between the intensity of export of Canadian manufacturing plants and their specialisation following trade liberalisation periods in the 1980s, as well as the implementation of CUSFTA. Average Canadian nominal tariffs was reduced by more than 5% within the 1970s to 1990s, with increased export intensity averaged at 10%. The implementation of CUSFTA had also reported to increase Canadian firms' specialisation, with approximately 30% of Canadian manufacturers reducing their output diversity and switching from multiple-plant productions to single-plant production models (Baldwin et al., 2001), another strong indications on the changes towards specialisation model.

Beckstead et al. (2002) further remarked that the main benefits of specialisation for Canada would be the increased productiveness, as evidenced from the increased labour productivities amongst Canadian manufacturing firms and improvements of Canadian wages, following the implementation of CUSFTA, as reported by Trefler (2004).

3.7. Reason for Canada's Trade Port Development

The interaction between the regionalization of production process and the globalization of resource allocation produced in the process of world economic development has promoted the rapid development of regional economy. At present, more and more countries and regions in the world regard ports as the channel connecting the world market and the allocation of resources. The increase in the scale of port construction has gradually formed a synchronous growth trend of regional economic development and regional international port competition, resulting in the emergence of different countries and regions competing for each other's trade and economic goods sources.

Canada is one of the three cores of NAFTA, and Canada's main port management and features are:

1. Efficient port: The Port of Vancouver is the largest port in Canada and one of the three largest ports in North America. The port is the main passage from North America to Asia. When the oil terminal of Vancouver Port is at its busiest, there can be as many as three shipping vessels per day. In the port, all incoming goods must leave the port within 24 hours, but such a large port only has a small warehouse. Port cargo loading, unloading, turnover, and targeted predictive maintenance, resulting in a large number of small faults disappearing at the root cause, avoiding major accidents and losses. Every year, 27 million tons of coal are shipped to Asia, 13 million tons of wheat enter and leave this port, and the port's containers Throughput averages 76 million tons per year. The annual import and export value of Hong Kong goods is 23.5 billion US dollars, and the profit is 30%.

2. Not only the port of Vancouver, but also other ports in Canada, such as the port of Halifax, the port of Montreal, the port of Quebec, and the port of Fraser are all competing for development, adapting to the unloading of various goods, and opening different terminals for different industries. The packaging, loading and unloading of containers can reduce the cumbersome links in the middle, save costs and achieve an efficient port.

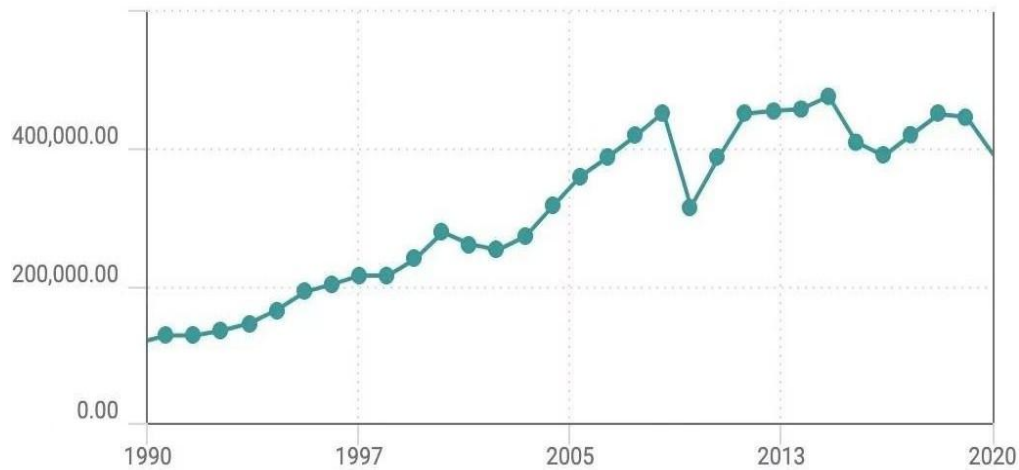
Canada's major ports are precisely because of their independent management model, the port land rights owned by Canada itself, and the clear responsibilities assumed by each port, which have greatly exerted the unified and coordinated management advantages of Canadian ports.

This independent and efficient management model brings higher reputation and more customers to the enterprise, which increases the benefits, and the good port operation system enables Canadian ports to develop continuously in the competition, which is also a prominent feature of Canadian ports. Features.(Qiu.C, 2006)

4. PRACTICAL PART

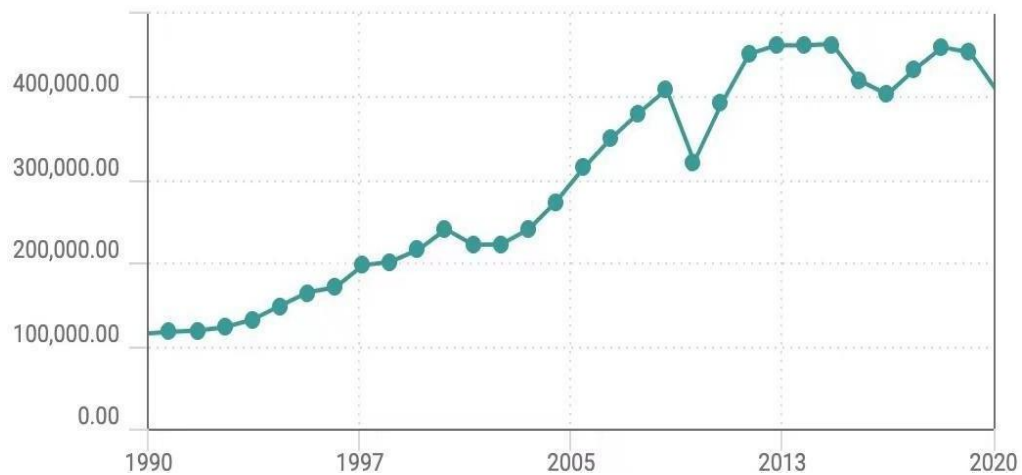
4.1. Current Situation of Canadian Foreign Trade

Figure 1: Canadian Total Global Exports, 1990-2020 (in Millions of USD)



Source: <https://www.ceicdata.com/en/plan>

Figure 2: Canadian Total Global Imports, 1990-2020 (in Millions of USD)



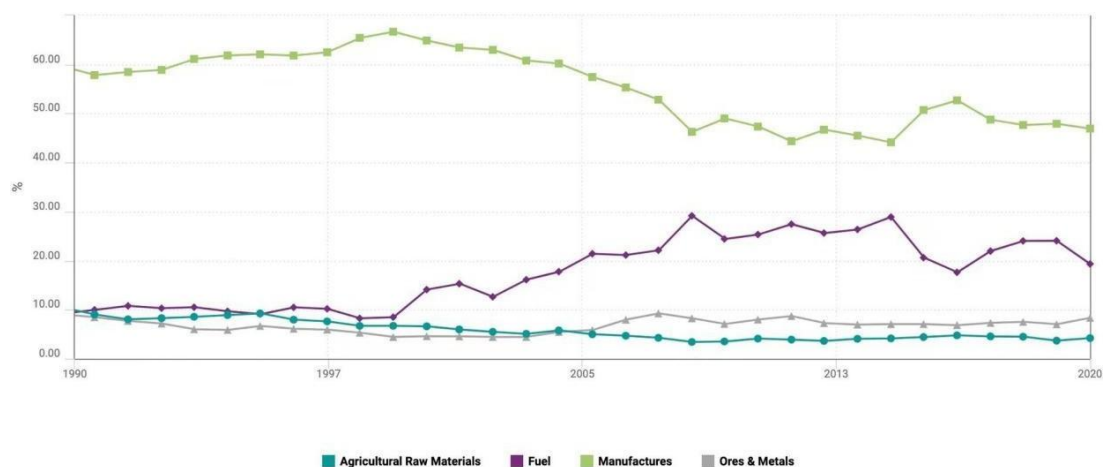
Source: <https://www.ceicdata.com/en/plan>

According to Statistics Canada, the two graphs above show Canada's annual constant total imports and exports from 1990 to 2020. As can be seen from the chart, first of all, Canada's foreign trade has come out of the low point of the financial crisis in 2009 and also has an upward trend.

Second, in terms of the overall import and export trend, Canada's exports in 2014 amounted to US\$4,769 million and imports were US\$4,638 million, which can be seen to be the highest share of imports and exports in the past three decades. Exports have also surpassed their pre-crisis peaks in 2009. Third, there was a trade deficit after 2010, and exports began to decline, mainly from 2011 to 2015. Finally, the import and export volume hit a new low in 2016 after the financial crisis, and the impact of the new crown epidemic in 2020 once again brought a downward trend in import and export volume.

4.2. Commodity structure of foreign trade import and export

Figure 3: Changes in Canadian Exports, 1990-2020 (unit:%)

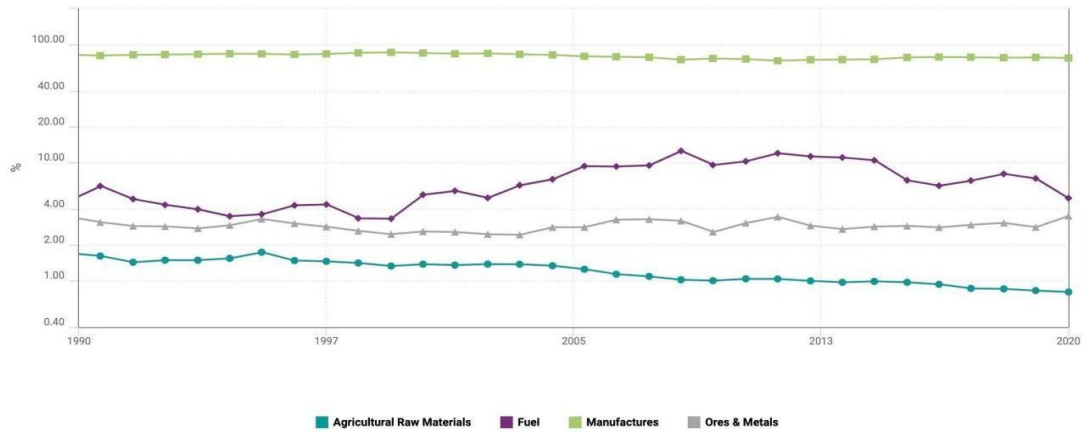


Source: own elaboration based on information retrieved from website: <https://www.ceicdata.com/en/plan>

There are two aspects to the structure of Canada's export commodities. On the one hand, the import and export of the automobile industry is dominated by the United States, the largest trading partner, so it accounts for a large proportion of American industrial products. Therefore, it can be seen from Figure 3 that industrial manufacturing has for the past 30 years, it has been the highest proportion of export commodities, up to 60%. On the other hand,

export commodities to other countries are more focused on agricultural products and energy, such as crude oil, natural gas, coal, etc.

Figure 4: Changes in Canadian Imports, 1990-2020(unit:%)



Source: <http://2.62.s.a875.unv.proxy1.online/Untitled-insight/views>

In terms of imported goods, due to the division of labor between the United States and Canada, the United States exports auto parts to Canada, which are then processed and assembled in Canada and then sent to the United States. Therefore, most of them are industrial products, mainly automobiles and parts. It can be seen from the above that the proportion of imported goods in the past three decades has also been very high, accounting for about 80%. The oil in fuel also plays an important role in Canada's imports, and the proportion of imports is half of that of exports. , there are also reasons for the rise in international energy prices, followed by the import demand for ores, metals and agricultural products is also relatively large.

4.3 Share of Canada's import and export trading partners (1990, 2000, 2010, 2020years)

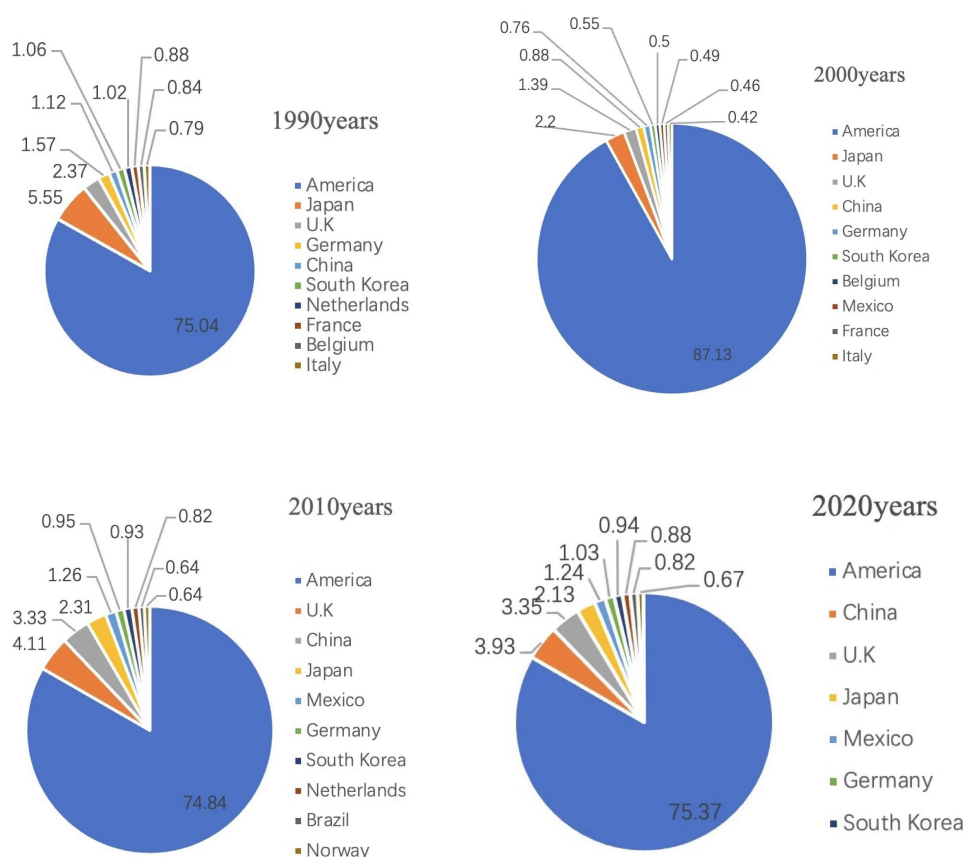
Table1: Share of top ten trading partners(1990, 2000, 2010, 2020years)

1990		2000		2010		2020	
Country	export share	Country	export share	Country	export share	Country	export share
America	75.04	America	87.13	America	74.84	America	75.37
Japan	5.55	Japan	2.2	U.K	4.11	China	3.93
U.K	2.37	U.K	1.39	China	3.33	U.K	3.35
Germany	1.57	China	0.88	Japan	2.31	Japan	2.13
China	1.12	Germany	0.76	Mexico	1.26	Mexico	1.24
South Korea	1.06	South Korea	0.55	Germany	0.95	Germany	1.03
Netherlands	1.02	Belgium	0.5	South Korea	0.93	South Korea	0.94
France	0.88	Mexico	0.49	Netherlands	0.82	Netherlands	0.88
Belgium	0.84	France	0.46	Brazil	0.64	India	0.82
Italy	0.79	Italy	0.42	Norway	0.64	China Hong Kong	0.67

Source: own elaboration based on information retrieved from website <https://wits.worldbank.org/>

The above is the share of Canada's trading partners in 1990, 2000, 2010 and 2020 to analyze the changes in Canada's trading partners. According to the frequency of trade exchanges, the top ten countries are USA, Japan, UK, China, Mexico, Germany, Korea, Netherlands, France, Italy.

Figure5: Pie chart of share share of Canada's trading partners((1990, 2000, 2010, 2020years)



Source: own elaboration based on information retrieved from website <https://wits.worldbank.org/>

As can be seen from the above figure, the top five countries in which Canada's share of its trading partners accounted for in 1990 and 2000 included the United States, Japan, the United Kingdom, Germany, and China. For cultural and historical reasons, the United States has always been Canada's main partner. It is obvious that between 1990 and 2000, Germany's share fell by 0.81 percent, while China's share declined, but The ranking has risen, indicating that the trade exchanges between Canada and Germany are decreasing, and the trade exchanges with China are increasing. It can be seen that in the past ten years, the trade exchanges between Canada and the United States have become more frequent, which reflects the fact that the trade exchanges between Canada and the United States are more frequent. highly dependent.

From 2000 to 2010, Canada's trading partners began to change, and the top five countries with a share of the top five included: the United States, the United Kingdom, China, Japan, and Mexico. It can be seen that in 2000, Mexico's share has begun to increase, because in 1994 Canada and the United States and Mexico signed the "North American Free Trade Agreement" and established a free trade area, so in 2010, it increased by 100%. 0.77, and trade with Canada increased significantly. Secondly, the share of the United States is declining, but the share of other countries is rising, indicating that Canada has begun to pursue the diversification of foreign trade markets and reduce its dependence on the US market.

From 2010 to 2020, the top five countries in terms of share include: the United States, China, the United Kingdom, Japan, and Mexico. On the whole, the share of each country has not fluctuated much. Relatively speaking, this decade has been a stable development trend. But it is obvious: it can be seen that China's ranking has risen to the second place, and its trade share has increased by 0.6%. In fact, it can be seen from the data that in the past three decades, China's trade share has basically accounted for It is in a rising state, so the ranking is also rising, and the trade with Canada has gradually increased, and now it has become Canada's second largest trade market.

So in general, the top five major trading partners of Canada in the early stage are the United States, the United Kingdom, China, Japan, and Germany. Later, because of the gradual increase in trade between Canada and Mexico, the proportion of the share gradually increased, so the top five major partners of Canada in the later period were the United States, China, the United Kingdom, Japan, and Mexico.

4.4 Canada's Trading Partners

According to the analysis of the changes of Canada's trading partners in the past three decades in the previous section, it is concluded that the top five trading partners of Canada currently include: the United States and China. UK, Japan, Mexico. This section mainly analyzes the development trend of the total import and export value of these five countries during 1990-2020.

The total import value of foreign trade represents whether a country's overall economy is prosperous. The following data describe the total import and export value of Canada and major trading partners, mainly showing the data from 1990 to 2020, in millions of dollars. On the whole, Canada's total import and export volume is a stable trend. Except for the financial crisis in 2009, Canada's total import and export volume to various countries has shown a downward trend. Under the influence of the epidemic in 2020, enterprises, logistics and transportation have There have been delays and stagnation, so production efficiency has alsodecreased a lot in the short term, so Canada has once again ushered in a downward trend in the import and export volume of various countries.

The following data is mainly Canada's main trading partners: the United States, China, the United Kingdom, Japan, Mexico's total trade import and export analysis. In particular, there are changing course of Canada's foreign trading partners. Initially, because Canada has always been a traditional American colony, the United Kingdom has always been an important trading partner of Canada and the largest market for its exports. Later, the United States became a capitalist country, so the capitalist world economic center also shifted to The trade focus of the United States and Canada has gradually shifted to the United States, which has led to a continuous decline in the share of the United Kingdom in Canada's import and export trade market.

After 1991, it became Canada's third largest trading partner after the United States and Japan, but Canada also attaches great importance to its trade relations with Japan (Gwen, 1994). In the 1960s, Canada and Japan developed relatively fast, since 1973. Japan has always been Canada's second-largest trading partner, and both Canada and Japan are in the Asia-Pacific region, so the two countries also have complementary economic relationships.

The United States, Canada and Mexico signed the North American Free Trade Agreement in

1992, and the basic mode of operation of this agreement is that Canada and the United States use advanced technology to further strengthen their position in Mexico through the flow of goods and capital, In addition, Mexico can also obtain investment from the United States to promote its own industrial structure and accelerate the upgrading of its own products. Therefore, Gwen (1994) remarked that Canada, the United States and Mexico are also one of the representatives of North-South economic cooperation and these three countries have also become the world's largest trade Group.

Canada had also established trading relationship with other countries beyond North America. For instance, the trade exchanges between Canada and China began in the 20th century. At that time, the two countries were mainly based on private trade, thus establishing a foundation for future trade exchanges. In 1973, the two countries signed the "Bilateral Trade Agreement", which officially started the trade between the two countries' cooperation until today (Gwen, 1994).

4.4.1 Canada-UK Trades

Table 2: Total Imports and Exports of Canada and the United Kingdom (1990-2020)

Year	Imports (USD million)	Exports (millions of dollars)
1990	3378.11	4008.94
1991	3001.32	3390.08
1992	2779.49	3343.30
1993	2767.94	2784.95
1994	2934.97	2886.93
1995	2859.27	3753.87
1996	3081.25	3877.46
1997	4692.73	4184.26
1998	4255.77	4308.44
1999	5456.09	5074.56
2000	8769.47	3868.62
2001	7564.73	3265.81
2002	6200.15	2821.17
2003	6583.59	4346.24
2004	7420.24	5944.49
2005	8600.28	6814.37
2006	9587.92	8936.37
2007	10679.28	11905.42
2008	11769.30	12182.61
2009	8228.28	10558.40
2010	10401.16	15888.75
2011	10444.12	19000.33
2012	8545.76	18770.51
2013	8182.40	13553.41
2014	8334.24	13779.51
2015	7192.56	12475.05
2016	6229.41	12898.40
2017	6860.53	13633.61
2018	7106.70	12812.46
2019	6954.26	14924.09
2020	5848.10	14853.53

Source: <http://2.62.s.a875.unv.proxy1.online/Untitled-insight/views>

As can be seen from the figure, from 1990 to 2011, the total import and export volume of trade increased steadily. From 2012 to 2020, the total import volume began to show a downward trend, and in 2020, it dropped to 5,848 million US dollars.

In terms of total export volume, there is a relatively steady rise, and the total export value is greater than the total import value, indicating that the UK has a relatively large trade demand for Canada.

4.4.2 Canada-US Trades

Table 3: Total Imports and Exports of Canada and the United States (1990-2020)

Year	Imports (USD million)	Exports (millions of dollars)
1990	83,673.80	98,629.80
1991	85,149.8	91,063.90
1992	90,594.30	91,380.10
1993	100,444.20	111,216.40
1994	114,438.60	128,405.90
1995	127,226.00	144,369.90
1996	134,210.20	155,892.60
1997	151,766.70	167,234.10
1998	156,603.50	173,256.00
1999	166,600.00	198,711.10
2000	178,940.90	230,838.30
2001	163,424.10	216,267.90
2002	160,922.70	209,087.70
2003	169,923.70	221,594.70
2004	189,879.90	256,359.80
2005	211,898.70	290,384.30
2006	230,656.00	302,437.90
2007	248,888.10	317,056.80
2008	261,149.80	339,491.40
2009	204,658.00	226,248.40
2010	249,256.50	277,636.70
2011	281,291.50	315,324.80
2012	292,650.50	324,263.00
2013	300,754.90	332,503.60
2014	312,817.00	349,286.10
2015	280,855.20	296,305.10
2016	266,734.50	277,719.80
2017	282,773.80	299,065.40
2018	299,731.70	318,574.80
2019	292,820.30	318,778.30
2020	255,392.30	270,313.40

Source: <https://www.ons.gov.uk/>

Canada's economy is highly dependent on the U.S. market. After World War II, the U.S. has been Canada's largest trading partner, with total imports and exports of \$312,817 million in 2014. Ten years, the value is the highest among trading partners. As seen in Table 2 below, in 1990-2008 and 2010-2019, the total import and export volume has always been on a steady upward trend. After Canada joined the WTO in 1995, Canada's total export volume basically rose, indicating that it also helped increase the country's income.

4.4.3 Canada-China Trades

Table 4: Total Imports and Exports of Canada and China (1990-2020)

Year	Imports (USD million)	Exports (millions of dollars)
1990	430.350	1478.370
1991	555.030	1646.250
1992	653.190	1926.570
1993	1197.780	1375.220
1994	1396.970	1848.750
1995	1532.530	2681.310
1996	1615.960	2572.590
1997	1906.530	2006.960
1998	2126.870	2237.210
1999	2432.960	2334.030
2000	3157.840	3751.080
2001	3345.580	4027.800
2002	4303.460	3626.880
2003	5632.180	4374.490
2004	8161.179	7352.990
2005	11653.670	7511.160
2006	15516.719	7662.114
2007	19355.685	10979.134
2008	21795.877	12673.351
2009	17674.584	12053.261
2010	22216.134	14923.746
2011	25266.103	22169.947
2012	28124.796	23210.485
2013	29216.688	25236.971
2014	30003.679	25182.010
2015	29422.642	26213.749
2016	27338.848	18336.834
2017	31375.455	20423.007
2018	35153.243	28359.401
2019	36931.958	28152.090
2020	42109.143	21878.663

Source: <http://2.62.s.a875.unv.proxy1.online/Untitled-insight/views>

China remains Canada's second-largest trading partner, second-largest source of imports and second-largest export market, after the United States alone. It can be seen from the figure that the trade between Canada and China is close, and the annual import and export volume basically maintains an upward trend. The highest value of total imports to China was US\$42,109 million, setting a record high. Canada's total exports to China in 2020 fell slightly, but the impact was not significant.

4.4.4 Canada-Japan Trades

Table 5: Total Imports and Exports of Canada and Japan (1990-2020)

Year	Imports (USD million)	Exports (millions of dollars)
1990	6.7	8.4
1991	7.3	7.7
1992	7.1	7.7
1993	6.3	8.1
1994	5.9	8.9
1995	5.8	10.8
1996	5.1	10.1
1997	6.1	9.8
1998	6.3	7.7
1999	7.0	7.9
2000	7.5	8.7
2001	6.6	7.7
2002	7.3	7.1
2003	7.4	7.5
2004	7.6	8.4
2005	8.8	8.9
2006	10.0	9.6
2007	10.5	10.0
2008	10.8	12.8
2009	7.7	9.2
2010	9.3	10.9
2011	8.9	12.9
2012	10.3	12.7
2013	8.7	12.0
2014	8.0	11.2
2015	7.7	9.2
2016	8.2	9.2
2017	9.6	10.9
2018	9.4	11.7
2019	8.9	11.8
2020	7.2	11.0

Source:own elaboration based on information retrieved from website:<https://www.ceicdata.com/en/plan>

The total import and export volume of trade in 2008 was 10.8 million US dollars and 12.8 million US dollars respectively, which were the highest in the past three decades. It can be seen from the figure that Canada's total exports to Japan are greater than its total imports, indicating that Japan's total exports to Canada The demand for imported volume is greater than that of export volume.

4.4.5 Canada-Mexico Trades

Table 6: Total Imports and Exports of Canada and Mexico (1990-2020)

Year	Imports (USD million)	Exports (millions of dollars)
1990	1482.163	519.625
1991	2247.363	401.428
1992	2278.052	649.639
1993	1562.856	1175.341
1994	1519.486	1621.214
1995	1987.395	1374.246
1996	2172.004	1743.555
1997	2157.009	1968.042
1998	1519.281	2290.204
1999	2311.175	2948.883
2000	3340.006	4016.558
2001	3082.621	4234.854
2002	2991.325	4480.300
2003	3041.784	4120.461
2004	3291.538	5327.479
2005	4234.471	6169.337
2006	5176.217	7376.211
2007	6490.952	7957.346
2008	7102.347	9442.473
2009	8244.248	7303.736
2010	10685.646	8607.477
2011	10694.582	9645.442
2012	10937.578	9889.847
2013	10452.654	9847.041
2014	10714.208	10045.059
2015	10544.806	9948.337
2016	10432.440	9631.938
2017	11359.963	9788.174
2018	14079.760	10772.160
2019	14315.791	9839.334
2020	11139.390	8325.722

Source: <https://comtrade.un.org/http://2.62.s.a875.unv.proxy1.online/Untitled-insight/myseries>

In 1992, Canada, Mexico, and the United States signed the North American Free Trade Agreement (NAFTA), and after it came into effect on January 1, 1994, it can be seen from the total import value in the figure that Canada's import demand for Mexico Gradually increasing, the trade deficit is also getting bigger and bigger.

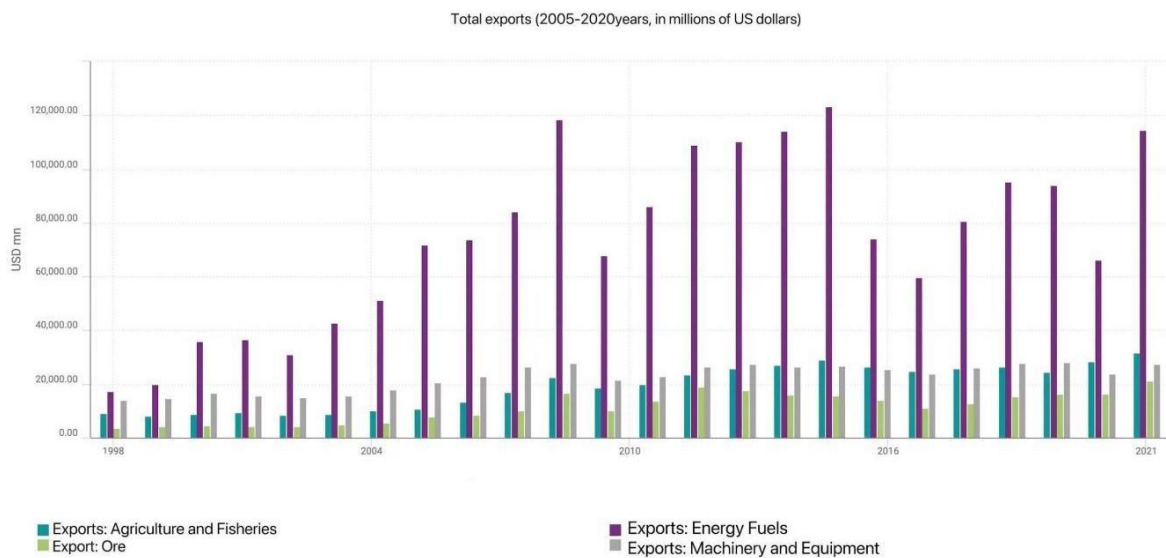
In 2019, Canada's total imports reached a record high of 14,316 million US dollars. In 2018, the total export value also reached the highest value of 10,772 million US dollars. In 2020,

due to the new crown pneumonia , the world belongs to a state of logistics stagnation, so the total import and export volume of trade has decreased slightly.

4.5 Canada's Comparative Advantage Index

This part mainly discusses the comparative advantage of Canada and the world, which mainly export machinery and equipment, energy and fuel, ore, agriculture and fishery, to calculate and analyze the revealed comparative advantage index.

Figure 6: Total exports (2005-2020years, in millions of US dollars)



Source: <https://comtrade.un.org/data/>

As can be seen from the figure, the total export value of the energy and fuel industry has been ranked first in the past fifteen years, reaching a maximum of 120,000 million US dollars, followed by industrial machinery, agricultural and fishery products and metal ores. It can thus be seen that energy fuels are an integral part of Canada's export industry.

The following data is a comparison and analysis of the revealed comparative advantage index of Canada and the main exporters of these four traded products: China, the United States, and Germany.

Table 7 : Balassa Index for Machinery, Energy Fuels, Agriculture and Fishing, Ore (China, US, Germany)

YEARS	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MACHINERY AND TRANSPORTATION EQUIPMENT																
Canada	0.18	0.19	0.02	0.21	0.24	0.21	0.22	0.24	0.23	0.21	0.22	0.21	0.22	0.21	0.21	0.20
China	0.46	0.55	0.48	0.49	0.70	0.58	0.54	0.55	0.54	0.46	0.46	0.40	0.46	0.40	0.37	0.36
The United States	1.17	1.31	0.12	1.44	1.51	1.50	1.50	1.58	1.61	1.48	1.46	1.46	1.50	1.58	1.59	1.57
Germany	0.66	0.68	0.60	0.57	0.77	0.63	0.61	0.54	0.59	0.55	0.53	0.55	0.52	0.51	0.44	0.00
FOSSIL FUELS																
Canada	0.91	0.60	0.06	0.58	0.52	0.44	0.32	0.19	0.19	0.25	0.21	0.23	0.27	0.24	0.23	0.26
China	0.05	0.16	0.18	0.16	0.21	0.16	0.10	0.10	0.08	0.08	0.10	0.11	0.17	0.25	0.30	0.32
The United States	0.01	0.04	0.00	0.05	0.05	0.04	0.03	0.03	0.02	0.03	0.03	0.04	0.06	0.10	0.13	0.14
Germany	0.11	0.10	0.01	0.08	0.08	0.08	0.08	0.10	0.10	0.09	0.10	0.09	0.09	0.09	0.10	0.09
AGRICULTURE AND FISHERIES																
Canada	0.82	1.10	0.14	1.81	1.62	1.55	1.51	1.72	1.74	1.71	1.71	1.53	1.45	1.42	1.37	1.61
China	5.65	5.06	5.15	5.20	5.36	4.59	3.65	5.61	5.46	4.85	4.41	5.96	5.52	5.07	4.62	5.18
The United States	0.15	0.17	0.02	0.21	0.16	0.17	0.16	0.16	0.16	0.16	0.14	0.14	0.12	0.13	0.15	0.14
Germany	0.22	0.25	0.03	0.30	0.10	0.09	0.09	0.09	0.11	0.10	0.09	0.07	0.06	0.05	0.05	0.07
ORE																
Canada	0.84	0.88	0.10	0.78	0.87	0.99	0.86	0.65	0.61	0.69	0.86	0.96	0.92	0.84	0.88	1.40
China	0.62	0.63	0.81	0.70	0.98	0.90	0.80	0.75	0.78	0.96	1.44	1.57	1.43	1.40	1.56	0.32
The United States	0.16	0.17	0.02	0.20	0.19	0.23	0.20	0.17	0.16	0.21	0.27	0.33	0.27	0.32	0.38	0.65
Germany	0.15	0.10	0.08	0.05	0.16	0.14	0.14	0.12	0.12	0.13	0.15	0.13	0.13	0.14	0.16	0.19

Source: <https://data.worldbank.org.cn/topic/21?end=2018&start=1960> and <https://opendata.cbs.nl/#/CBS/en/>

Because the Balassa Index is analyzed from trade export data, it is analyzed from the perspective of exports to reveal comparative advantage. It can be seen from the figure that in the past fifteen years, the RCA index of the United States in machinery and transportation equipment has hovered above 1.4, indicating that the United States has strong international competitiveness. The competitiveness is weak, and the competitiveness gap with the United States is relatively large.

Among energy fuels, Canada's RCA index remains above 0.2. Compared with the other three countries, it has a relatively large advantage. China is basically maintained at around 0.2, and the United States and Germany are maintained at around 0.1. Relatively speaking, these three The country has relatively weak competitiveness.

In agriculture and fishery, China's RCA index did not change much, remaining at around 5, while Canada's RCA index remained above 1.5 all year round, indicating that these two countries have relatively strong comparative advantages, ranking first and second. The RCA index of the United States and Germany is around 0.1, with relatively weak international competitiveness.

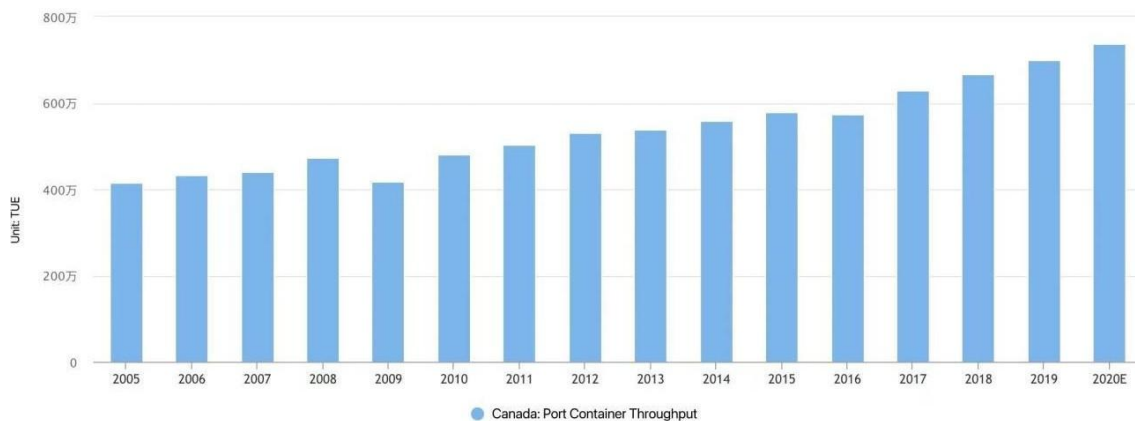
Among ores, the RCA indices of Canada and China have remained at around 0.8 all year round, indicating a moderate comparative advantage. The RCA indices of Germany and the United States have remained at around 0.1, with obvious comparative disadvantages.

So on the whole, according to the comparison of the RCA index, in the machinery and transportation equipment, the United States has a more obvious comparative advantage. In the comparison of energy and fuel, although Canada's RCA index hovers around 0.2, it has a demonstrable comparative advantage compared with the other three countries. In the RCA index of agriculture, fishery and ore, it is obvious that Canada and China have strong comparative advantages, which means they have strong international competitiveness. On the whole, most of Canada's RCA indexes are developed over time. It rose and then fell, but the magnitude changed little and was relatively stable.

4.6. Analysis of Canada's Free Trade Ports

The free import and export of trade goods in the free trade port is also one of the factors that help and promote the development of Canada's foreign trade. Canada's use of the advantages of natural geographical location and natural resources is not only beneficial to the construction of the free trade port, but also promotes Canada's economic growth. played a very important role. Canada currently has 18 ports, and the increase or decrease in the throughput of trade ports is also a measure of how a country's economy is doing.

Figure 7 : Container throughput at Canadian trade ports over the past 15 years



Source: <https://d.qianzhan.com/xdata/details/a312768b296eaa42.html>

As can be seen from the figure, although the throughput decreased in 2009, it has little impact. The annual container throughput of the port is basically an upward trend, from the throughput of 4 million in 2005 to 7 million in 2020. throughput, indicating that Canada's demand for the international trade market is increasing. The increase in the demand for foreign trade also brings opportunities for business development, and the GDP will also increase with the increase in the use of the needs of other countries to develop their own country's economy. It also reflects the influence of the construction of trade ports on the development of Canada's economy.

4.7. The Development of Canada's Foreign Trade Policy

Multilateral and Regional Preferential Trade Arrangements

Regional trade arrangements are preferential trade arrangements between specific countries or regions and as a founding member of the World Trade Organization, Canada has always upheld a firm support and support for the multilateral trade order. Multilateralism is also reflected in many Canadians, mainly in the fact that Canada has always actively participated in all rounds with the WTO, and public attitudes on broader foreign policy issues have basically remained unchanged. (Paris, 2014)

Due to the impasse in the Doha round of multilateral trade liberalization, Canada has to consider regional and bilateral options for opening new markets as an alternative to multilateral liberalization. The fundamental reason is that it relies on a high degree of international trade and significant share in export-oriented industries.

The Global Business Strategy, launched in 2007, is the source of Canada's current trade policy and aims to "expand Canada's network of trade relationships, strengthen its competitive position in traditional markets, and expand its influence in emerging markets." (Government of Canada, 2018f). The 2012 Economic Action Plan adopted by the Government of Canada reinforced this strategy and culminated in a new Global Market Action Plan. To "ensure that all of the Canadian government's diplomatic assets are used to support Canadian companies and investors in their pursuit of commercial success." So "economic diplomacy" has become the driving force of the government's trade promotion activities. (Government of Canada, 2018f).

The Justin Trudeau government refines the Global Markets Action Plan, the key objective of the "incremental" trade agenda is to "expand trade with large, fast-growing markets and deepen trade links with traditional partners" to ensure gender equality and advancing the interests of minorities. Efficiency will be enhanced through better utilization of the capabilities of women and minorities, and SMEs will be successful. In addition to this, "incremental" trade has become a requirement to promote Canadian agricultural interests during negotiations, promote investment, and prioritize trade negotiations between major emerging markets (such as China, etc.) and mature markets.

However, the general direction of Canada's trade policy has not changed much because of the

North American Trade Agreement. With only some minor changes reflecting geopolitical, economic, Canada's post-NAFTA trade policy has two main development goals. One is to maintain and protect access to the U.S. market; second, to diversify from the U.S. market to other mature and emerging markets.

The United States has always been Canada's trading partner because of its common language and similar culture, huge market and geographic location. Over time, however, trade with the United States became an over-reliant market for Canadian businesses. According to the Canadian government (2018a), more than 75% of goods were exported to the United States in 2017. Therefore, trying to wean itself off of the US market while maintaining access to the US market has become critical.

During the U.S. economic crisis, Canada's high reliance on the U.S. market fluctuated, leaving Canada vulnerable to changes in U.S. trade policy, such as an increasingly protectionist stance. So, there is a need to move away from the diversification of the U.S. market and to achieve this with conditional regional and bilateral trade agreements. The high reliance on trade and exports following the slowdown in multilateral liberalization has led to a shift towards preferential liberalization policies. The Canadian government is highly dependent on international trade, which accounts for 60% of GDP. In addition to this, approximately 20% of jobs are related to exports (2018f). Canada cannot be excluded from the development of bilateral and regional levels of international trade due to its high reliance on international trade.

Canada's embrace of regionalism requires the identification of key foreign-priority markets in which Canadian businesses have a particularly high share. These include emerging and mature markets where Canadian businesses have broad and specific interests. These include emerging and mature markets where Canadian businesses have broad and specific interests. These markets include high growth potential countries in Asia Pacific, Latin America and the Caribbean, North America, Middle East and Africa, and Europe, which are part of the regional trade platform. The idea is to consolidate the presence of Canadian businesses when needed and ensure a first-mover advantage where possible (Government of Canada, 2018f). "Uncertainty about the direction of trade policy of its largest trading partner" (Wolfe et al., 2017, p. 613) has added to the pressure for Canadian companies to open up new markets.

As such, Canada's embrace of regionalism requires the identification of key foreign-priority

markets in which Canadian businesses have a particularly high share. These include emerging and mature markets where Canadian businesses have broad and specific interests. These markets include high growth potential countries in Asia Pacific, Latin America and the Caribbean, North America, Middle East and Africa, and Europe, which are part of the regional trade platform. (Government of Canada, 2018f). The idea is to consolidate the presence of Canadian businesses when needed and ensure a first-mover advantage where possible (Government of Canada, 2018f). Therefore, the implementation of this trade policy is to develop regional trade while consolidating Canada's traditional dominant position in foreign trade, so as to make its foreign trade market more diversified, and to a certain extent get rid of its high dependence on the US market.

5.RESULTS AND DISCUSSION

In the practical part, it analyzes the changes of Canada's major trading partners based on history and Canada's own trade needs in the past three decades, and uses the data of imports and exports of Canada and its trading partners to analyze, and draws a conclusion. Canada is very dependent on the US market in terms of trade imports and exports, followed by close trade relations with China, the United Kingdom, Japan and Mexico.

The trading pattern in Canada is seemingly reflective to its natural conditions, and from the perspective of Canada's import and export commodity structure: agricultural and fishery products, machinery and transportation equipment, minerals, energy and fuel, are largely dependent on the development of natural resources, and Canada Imports are greater than exports. Among the imported products, industrial machinery has long been the main product, followed by energy and fuel. Canada started early with various primary products. Later, after continuous improvement of the structure of trade commodities, the status of industrial machinery has been continuously improved. The transportation of equipment is mainly for automobile products, because the division of labor between the United States and Canada in the automobile industry accounts for a large proportion. Among other imported products, agriculture, fishery, ores, and energy fuels are relatively stable. Among the export products, industrial manufacturing also accounts for a large proportion, which shows that Canada has a large demand for machinery and equipment transportation, and also has a great dependence on the trade market.

In terms of impact of trades towards macronomic indicators in forms of inflation and CPI,

there has been little change, and they have basically maintained a steady upward trend. Therefore, the overall economic development of Canada is relatively stable. In terms of unemployment rate, although inflation has little impact on the economic development of Canada, but it is related and affected by the unemployment rate, so when inflation fluctuates, the employment situation in Canada is also changing. The highest proportion was 11.4% in 1993, and the lowest was 2007. The ratio is 6.1%. The overall trend is that it rises, then falls and then rises. From the data analysis, we can see that the unemployment rate in Canada is very unstable.

The economy of the trade port is a two-way economy both internally and externally, and the trade port has a large number of foreign trade goods, many international routes, and needs to contact many countries. Therefore, based on Canada's favorable geographical location, there are many fixed routes. It connects all parts of the world, and has the shortest route connecting Europe and the Great Lakes of North America, and has the closest connection with ports in China, the United States, Japan, and the United Kingdom.

According to the data, it can be seen that in the past fifteen years, from the container throughput of 4 million in 2005 to nearly 7 million in 2020, it has basically maintained an upward trend every year. Economic development is an integral part.

In Canada, a major trading country, the main import and export are machinery, energy fuels, ore, agriculture and fishery, among which machinery accounts for 80% of Canada's imports and 90% of exports, and energy and fuels account for 90% of Canada's imports. 30 percent of exports and 15 percent of exports. Finally, minerals and agriculture and fisheries.

Based on these may be important export trade industries in Canada, the Balassa index was analyzed, and the United States, China, and Germany were compared and calculated.

Canada itself is rich in natural resources and there are many islands around. The export of fishery and energy and fuel has a comparative advantage. The United States has a comparative advantage in the export of machinery. In the export of minerals, according to the comparison of the average value of the RCA index, China has a comparative advantage in the export.

Analyzed the impact of the development of trade ports on the Canadian economy. According to the analysis of the data, the annual container throughput in Canada is basically on a steady upward trend. The role of the port in transporting goods is used to increase Canada's import and export volume and allow international trade flows. As the number of ports increases gradually, the role of ports will gradually increase, and the effect on promoting Canada's economic growth will be more significant. Therefore, the development of free trade ports is also an indispensable part of promoting Canada's economic development.

And through the development of Canada's trade policy to analyze the impact on Canada's economy, the use of regional and bilateral trade policies to achieve the diversification of Canada's foreign trade, to open up more trade markets, to a certain extent, to get rid of the status quo that is highly dependent on the US market.

6.CONCLUSION

The main purpose of this paper is to study the determinants of Canada's foreign trade development. After investigating the data of the past fifteen to thirty years, and analyzing the characteristics of Canada's foreign trade and economy, we can draw the following conclusions:

Canada possesses comprehensive trading relationships due to its natural conditions, which prompted the country to be export-oriented. Canada's export-oriented economies is also supported from its RCA index which hovers around 0.2: implying that it has a demonstrable comparative advantage with trading partners such as the UK, the US and Japan. At the same time, it is also important to note that the relatively stronger export-oriented tendencies of the nation also showcasing that the Canadian economic system would be highly dependent on international market.

The trading patterns also shown that Canadian trading activities also possess substantial impact towards the national economy – particularly on the industrial aspect. For instance, production equipment and technology required by American companies in Canada must be imported from the United States, since the Canadian firms tend to be highly specialised in regards to their productions. This subsequently established economic dependencies between Canada and its European trading partners and the US.

It is also necessary to contemplate that a substantial portion of jobs in Canada is dependent on foreign trade, whereas the dependence to foreign trade had also caused approximately a quarter of Canadian GDP to be linked to foreign trades, hence outlining that foreign trades would be important in the development of Canadian national economies. The imports would have allowed Canada to maintain its specialisation orientation and retaining its specialisation benefits, while also strengthening this specialisation by importing products that helps in production activities, such as US and European machineries. Furthermore, since production has inverse relationships with unemployment, the growth of international trade could become strong impetus for the national economy growths.

7. REFERENCES

- Baldwin, J. R., Beckstead, D., & Caves, R. E. (2001). Changes in the diversification of Canadian manufacturing firms (1973-1997): A move to specialization. Statistics Canada, Analytical Studies-Micro-Economic Analysis Div. Series 11F0019MIE, (179).
- Baldwin, J. R., Caves, R. E., & Gu, W. (2005). Responses to trade liberalization: changes in product diversification in foreign-and domestic-controlled plants. Economic Analysis (EA) Research Paper, (031).
- Baldwin, J. R., & Gu, W. (2004). Trade liberalization: Export-market participation, productivity growth, and innovation. *Oxford Review of Economic Policy*, 20(3), 372-392.
- Baidu. (2022). Global Financial Network. [online] Available at: https://author.baidu.com/home?from=bjh_article&app_id=1579112565524491 [Accessed 12 March 2022].
- Beckstead, D., Caves, R., & Baldwin, J. R. (2002). Changes in the Diversification of Canadian Manufacturing Firms and Plants (1973-1997): A Move to Specialization (No. 2002179e). Statistics Canada, Analytical Studies Branch.
- Bernhofen, D. M., & Brown, J. C. (2005). An empirical assessment of the comparative advantage gains from trade: evidence from Japan. *American Economic Review*, 95(1), 208-225.
- Butler, E. (2012). The condensed wealth of nations. Centre for Independent Studies.
- Canadian Council Of Ministers Of The Environment (1993). Trade, competitiveness and the environment. Winnipeg, B.C: Canadian Council Of Ministers Of TheEnvironment
- Carvalho, M., Azevedo, A., & Massuquetti, A. (2019). Emerging Countries and the Effects of the Trade War between US and China. *Economies*, 7(2), 45.

Deardorff, A. V. (1982). The general validity of the Heckscher-Ohlin theorem. *The American Economic Review*, 72(4), 683-694.

Del Gatto, M., Ottaviano, G. I., & Mion, G. (2006). Trade integration, firm selection and the costs of non-Europe.

Dosi, G., & Tranchero, M. (2021). The Role of Comparative Advantage, Endowments, and Technology in Structural. *New perspectives on structural change: causes and consequences of structural change in the global economy*, 442.

Drysdale, P., & Garnaut, R. (2022). The Pacific: an application of a general theory of economic integration. In *Regional Institutional Arrangements*. The Australian National University.

Ebrary.net. (2022). [online] Available at:

<https://ebrary.net/75784/business_finance/measurement_comparative_advantage_meaning_indices> [Accessed 12 March 2022].

Gorg,H.and Gorlich, D. (2011).Trade and Labour Market Outcomes in Germany[J]. *OECD Trade Policy Working Papers*,No.125.

Gwen, J. (1994). Analysis of The North American Free Trade Agreement. *Global S&T Economic Outlook* (01), 57.

Helpman, E. (1999). The structure of foreign trade. *Journal of economic perspectives*, 13(2), 121-144.

Helpman, E., and Itskhoki, O.(2010). “Labour Market Rigidities, Trade and Unemployment.” *Review of Economic Studies*, vol. 77, no. 3, 4 Feb. 2010, pp. 1100–1137, 10.

Irwin, D. A. (2005). The welfare cost of autarky: evidence from the Jeffersonian trade embargo, 1807–09. *Review of International Economics*, 13(4), 631-645.

- Leamer, E. E. (1995). The Heckscher-Ohlin model in theory and practice.
- Lee, C. T., & Wu, S. F. (2022). Technology advantage, terms of trade, and pattern of trade. *International Journal of Economic Theory*.
- Leontief, W., & Shuxiang, C. (2019). UN Comtrade | International Trade Statistics Database. Retrieved 12 March 2022, from <https://comtrade.un.org/>
- Marengo, L., & Dosi, G. (2005). Division of labor, organizational coordination and market mechanisms in collective problem-solving. *Journal of Economic Behavior & Organization*, 58(2), 303-326.
- Marshall, A. (1890), Principles of economics, London: Macmillan, 8st ed., 1920 [repr. In 1974]. TRADE COMPETITIVENESS MAP
- Melvin, J. R. (1989). Trade in producer services: a Heckscher-Ohlin approach. *Journal of Political Economy*, 97(5), 1180-1196.
- Ministry of Commerce of PRC. (2022). Available at: <http://ca.mofcom.gov.cn/article/ddgk/zwjingji/201407/20140700672399.shtml> [Accessed 12 March 2022].
- Neary, J. P. (1985). The Observational Equivalence of the Ricardian and Heckscher–Ohlin Explanations of Trade Patterns. *Oxford Economic Papers*, 142-147.
- Nguyen, M. L. T., & Bui, T. N. (2021). Trade openness and economic growth: A study on Asean-6. *Economies*, 9(3), 113.
- Peoplecen.com. (2022). [online] Available at: <http://www.peoplecen.com/> [Accessed 12 March 2022].
- Paris, R. (2014) 'Are Canadians Still Liberal Internationalists Foreign Policy and Public Opinion in the Harper Era'. *International Journal*, Vol. 69, No. 3, pp. 274– 307.

Qiu C. (2006). *Vancouver, Canada Utilizes the Port 2010 Shoreline Management Plan* (Vol.

3). Port Technology News. <https://doi.org/10.3969/j.issn.1673-6826.2006.03.011>

Rai, S., Paswan, A. S., & Jha, S. N. (2021). The An Analysis of India's Trade Flow with BIMSTEC nations-A Gravity Model Approach. *Studies in Economics and Business Relations*, 2(2).

Rao, S., Souare, M., & Wang, W. (2009). The economics of FDI: a Canadian perspective.

Transnational Corporations Review, 1(4), 28-41.

Reisman, D. (2018). Customs Unions. In *James Edward Meade* (pp. 125-145). Palgrave Macmillan, Cham.

Ricardo, Z., Zhi, J., Ji, X., Ji, F., & Shui, Y.L. (2005). On The Principles of Political Economy and Taxation the Principles of Political Economy and Taxation. *Hua Xia Chu Ban She*, Beijing, China, 2005.

Rondi, L., & Vannoni, D. (2005). Are EU leading firms returning to core business? Evidence on refocusing and relatedness in a period of market integration. *Review of Industrial Organization*, 27(2), 125-145.

Smith, A., and Risong, T. (2005). State-of-the-art / Guo Fu Lun. Huaxia Press, Beijing, Huaxia Chu Ban She.

Stone, L. L. (2021). *The Growth of Intra-Industry Trade: New Trade Patterns in a Changing Global Economy*. Routledge.

Syverson, C. (2011). What determines productivity?. *Journal of Economic literature*, 49(2), 326-65.

Trefler, D. (2004). The long and short of the Canada-US free trade agreement. *American*

Economic Review, 94(4), 870-895.

Wang, H., (2005). *Gang Kou Fa Zhan Zhan Lue Yu Gui Hua*. Tianjin, Tian Jin Ren Min Chu Ban She.

World Database of Economic and Social Development. (2022). [online] Available at:
<https://www.pishu.com.cn/skwx_ps/database?SiteID=14> [Accessed 12 March 2022].

Zenglin, H., and Xiaopeng, A. (2006). *Ji Zhuang Xiang Gang Kou Fa Zhan Yu Bu Ju Yan Jiu*. Beijing Shi, Hai Yang Chu Ban She, 2006.

Ccagr.net. (2022). Retrieved 12 March 2022, from <http://www.ccagr.net/>.

D.qianzhan.com. (2022). Retrieved 12 March 2022, from <https://d.qianzhan.com/>.

Government of Canada (2018a). Annual Merchandise Trade (Global Affairs Canada: Ottawa,Ontario).
Available online at: http://www.international.gc.ca/economist-economiste/statistics-statistiques/annual_merchandise_trade-commerce_des_marchandises_annuel.aspx?lang=eng

Government of Canada (2018f) ‘ Global Markets Action Plan’ (Global Affairs Canada: Ottawa, Ontario).
Available online at: <http://international.gc.ca/global-markets-marches-mondiaux/plan.aspx?lang=eng>