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Dissertation

Analysis of Resource curse theory: A comparative analysis
in Canadian and Saudi Arabian Economies

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Multiple studies that have been published since the late 1980s show that states with many natural resources are less 'rich' than states with limited natural resources. These studies have shown that having a lot of natural resources can lead to slower economic growth, increased poverty, and violent political upheaval that frequently results in authoritarian regimes or even civil wars. Natural resources may also lead to unbalanced economic growth, which drags down other forms of economic activity. The resource curse is a contradiction in which economies that have an excess of non-renewable natural resources expand slowly or even negatively. The fundamental cause of the resource curse is when a country begins to focus all of its production resources on a single industry, such as mining or oil production, and neglects investment in other crucial businesses. It may be a result of political corruption and is also known as a resource trap or the paradox of plenty. The government may abuse its regulatory authority if a sizable percentage of the country's wealth is concentrated in a small number of industries, for example by offering lucrative contracts in exchange for bribes. The rest of the economy could be affected, and the entire country could suffer from an excess of manpower and capital going to a small number of industries.

1.2 Aim of the Essay

The objective of this essay is to investigate whether the resource curse and the Dutch Disease exist in the economies of Canada and Saudi Arabia, as well as their effects and consequences on both countries' social and economic systems, in light of International Political Economy. The study comes to a conclusion by comparing the two examples, drawing conclusions, and making suggestions.

The particular sub-objectives of this research include:

1. To carry out research, through the analysis of economic data and indicators, in order to establish the existence or not of the phenomena of the resource curse and Dutch disease in Canada,
2. To carry out a similar investigation for Saudi Arabia,
3. To carry out a comparison between these two cases,
4. To record the conclusions drawn and possible strategies for dealing with these phenomena.

1.3 Methodology

The field of international political economy was initially studied, with an emphasis on the school of realism, in order to perform the current research. Then, research was done on international macroeconomic theory and its applications.

The macroeconomic statistics for the two countries (Canada and Saudi Arabia) were gathered. To process the data, examine the data, and connect the findings in order to reach our final conclusions, descriptive statistics were used.

1.4 Essay Structure

The paper consists of six (6) chapters.

The first chapter provides a brief account of the importance of the work, its objective, the methodology followed around the creation of the research, a brief structure of the work and a reference to the expected results.

The second chapter develops the concepts of international political economy, international macroeconomics, the resource curse, and the Dutch disease. In addition, these concepts are interlinked, and the effects of the resource curse and the Dutch disease are discussed.

In the third chapter, the macroeconomic data for Canada are presented in the form in which they were gathered from various sources. Using descriptive statistics, the theories and data are analyzed and connected to determine whether or not the resource curse and Dutch disease are present in the Canadian economy.

In the fourth chapter, the macroeconomic data for Saudi Arabia are presented in the form in which they were gathered from various sources. Using descriptive statistics, the theories and data are analyzed and connected to determine whether or not the resource curse and Dutch disease are present in the Saudi Arabian economy.

Chapter five provides a comparative illustration and evaluation between the two economies studied in Chapters 3 and 4 respectively.

Chapter six presents the overall conclusions drawn from the study carried out in the above two cases (Canada -Saudi Arabia). At the same time, suggestions are made to minimize the effects of the resource curse and the Dutch disease.

1.5 Expected results

Numerous field studies have been conducted to investigate the connection between a wealth of natural resources and slow growth rates. The purpose of this study is to determine if Canada's and Saudi Arabia's abundant natural resources are exploited and used in an effective manner to raise both the economic performance and the standard of living of the two nations' population. Additionally, it is anticipated that by studying and documenting the resource curse and Dutch disease phenomena, we will be able to offer suggestions for how to deal with them.

CHAPTER 2: The theoretical background

2.1 Introduction

In this chapter we will examine the field of International Political Economy. We will focus extensively on the main actors of IPE, the dominant approaches, the historical background and also the role of IPE in the energy sector. A brief historical preview will be presented, in order to understand the advancement of the IPE. In addition, it will be presented a brief analysis of International Macroeconomics in order to understand the basic notions of International Macroeconomics and their impact on the interdisciplinary field of International Political Economy (IPE). Subsequently, we will examine the Resource Curse Theory, analyzing the three major Resource Curse theories models: the Dutch Disease, Rent-seeking, and Institutions models. Afterwards, the main macroeconomic and microeconomic policies will be examined. Finally, we will present the conclusions of the chapter.

2.2.1 Definition of International Political Economy

International Political Economy (IPE) is an interdisciplinary field. International Political Economy (IPE) is the study of the global system's reciprocal interaction between politics and economics. Recognizing the economic roots of global order, it offers a synthesis of economic and political research to build a comprehensive approach to studying the global system. It investigates a collection of guiding concerns arising from areas like as commerce, production, and finance, as well as their interplay with political forces found in wealthier and poorer governments, transnational corporate tactics, and international organizations.

Theories of international political economy offer many solutions to the problem of significant system change that would affect who receives what, when, and how. By connecting political actors from different nations to international economic connections, they build on some of the ideas and theoretical frameworks of the many IR models. The latter, economic interactions, is

based on markets, which serve as the hub for trading based on supply and demand. Individual homes and commercial enterprises come together as buyers and sellers to exchange goods and services at predetermined pricing. The manner in which the global system should be adjusted (if at all) is up for debate among market participants, such as private businesses or those who sell their labor for money.

The main purpose of IPO is to study the interaction between the state and the global economy. In addition, the domestic and international “actors”. The study of the dynamics of the interactions between these four dimensions permeates the structure of the IPO.

The focus is on the allocation of limited resources and the power that determines distributional outcomes. The concept of power involves the ability of an actor, e.g., a state or an individual, to change the behavior of others. Power also includes the ability of the actor to be able to set the agenda of the discussions and determine the terms of this to benefit over other actors (Cohen, 2008).

There are three fundamental principles of International Political Economy (Underhill, 2000):

- The political and economic realms cannot be separated and when this is done for analytical purposes it is risky.
- Political interaction is one of the key tools by which economic market structures are shaped and then transformed.
- There is a close relationship between the domestic and international fields of analysis, which cannot be significantly separated.

2.2.2 Main actors of International Political Economy

Depending on the perspective used by each researcher, the actors shaping the international economic and political environment differ substantially. The

study of international political economics has shown a number of players who shape the international economic and political environment to varying degrees. These actors include a) the government, b) the market, and c) international organizations.

A state, according to one definition, is a community founded by individuals and wielding permanent control over a defined region. A state is commonly described in international law. The state, as a person of international law, must meet the following requirements: 1. Constant population 2. Clearly defined territory 3. The government 4. The ability to establish contacts with other states (Article 1 of Montevideo Convention). Its contact with other actors is primarily determined by its power, but it is also influenced by other factors. The pursuit of its interests is still a critical aspect in today's world economic and political realities.

Market is concerned with the economic pursuit of wealth. According to neoclassical theory, the market is a self-regulating and self-correcting mechanism whose operation is subject to principles and laws. The market, according to the liberal viewpoint, is the most essential element in defining the world economic and political environment.

International systems are defined as "sets of informal or explicit principles, norms, rules and decision-making procedures on which the expectations of actors in a given area of international relations converge" (Krasner, 1983). The formal regulations of international organizations are characterized as international regimes. In the context of the IPO, international regimes interact with both the market and nations, and in many situations, they help the global economy run smoothly (Gilpin, 2011).

Naturally, depending on the perspective used by each researcher, the aforementioned actors that affect the worldwide economic and political environment vary substantially. However, the borders of these institutions remain unclear. As a result of these disparities, the limits of these institutions are formed not only by the distinct core ideals of governments, markets, and international organizations, but also by the diverse manner in which they work, resulting in tensions and disputes within and between nations.

2.2.3 Historical background

The field of international political economy rose to prominence in the early 1970s, when the Arab oil embargo and other crises brought an end to the postwar era of virtually uninterrupted economic growth in the United States and Europe, and it is now an essential component of both political science and economics. (Benjamin J. Cohen, 2008). The phrase "international political economy" (IPE) was later popularized to emphasize that what happens in the globe is not limited to exchanges between states, and that the IPE comprises a wide range of players.

The inability of economics and international relations to comprehend changes in the worldwide economy and interpret contemporary developments in international politics resulted in the partnership of 'economics' and 'politics' to better comprehend the changes that were occurring. This necessity has resulted in the growth and formation of the topic of study known as international political economy.

In this sense, international political economy is an interdisciplinary approach that necessitates the collaboration of scientists from several disciplines, such as international economists, political scientists, economists, historians, and so on. Global governance, international structure, national energy policies, the function of international organizations, and the community of interests are all academic topics.

International relations academics Robert Keohane, Joseph Nye, and Robert Gilpin in the United States, as well as Susan Strange in the United Kingdom, were influential characters in the discipline's development. Along with conventional international relations study focused on material security, IPE has subsequently become a crucial pillar in political science departments as well as a prominent subdiscipline of international relations.

2.2.4 Dominant Approaches of IPO

Theories of international political economy can be divided into three groups:

liberalism, realism and Marxism. In each case, the choice of the theoretical approach adopted by the researcher, leads to the perception of which elements we consider important. Accordingly, in the study and evaluation of these elements.

The three main approaches of International Political Economy are:

- The approach of Liberalism.
- The approach of Realism.
- The Historical Structuralism approaches.

The Liberal case highlights how the market and politics are both arenas in which all parties may gain from voluntary exchanges with others. Liberals argue that if there are no barriers to individual commerce, everyone can be as well off as feasible given the existing inventories of commodities and services. In other words, all market players will be at their greatest degree of usefulness. Liberals argue that the government's economic role should be strictly circumscribed. Many types of government interference in the economy, they claim, purposefully or accidentally limit the market, preventing potentially profitable exchanges from taking place.

Liberals usually advocate the supply of some "public goods"—goods and services that benefit society but would not be delivered by private markets. Security issues in liberalism do not have a dominant role as, for example, political economy issues do (Manoli and Maris, 2015).

The conceptual foundations of realism may be traced back to Thucydides' works in 400 B.C.E., as well as those of Niccolò Machiavelli, Thomas Hobbes, and the Mercantilists Jean-Baptiste Colbert and Friedrich List. Realists think that nation-states want power and use the economy to get it. Furthermore, they are the dominating actors in the global political economy.

The international system, according to Realists, is anarchical, a condition in which nation-states are autonomous, the only judges of their own behavior, and subject to no higher authority. Realists argue that if no authority is greater than the nation-state, then all actors must be submissive to it.

Realists argue that the nation-state legislates the grounds for this contact. Thus, where Liberals are concerned with people and Marxists with classes, Realists are concerned with nation-states. Realists also contend that national governments are primarily concerned with international power dynamics. Because the international system is built on anarchy, other nation-states may employ force or coercion, and no higher authority is bound to come to the assistance of a nation-state under attack.

The structuralist viewpoint, with its emphasis on economic power and class struggle, provides a means of seeing their underlying logic. Structuralism has its origins in Karl Marx's views, but it now covers a far larger collection of researchers and activists. While most structuralists do not share certain Marxists' commitment to a socialist society, they do feel that the existing global capitalism system is unjust and exploitative and can be altered into something that distributes economic production more justly. The global economic system is, indeed, the structure in structuralism. The global capitalist economy serves as the driving force in society as an underlying system or order. It influences the economic, political, and social institutions of society and limits what is possible.

2.2.5 IPO in the Energy Sector

International Political Economy of Energy (IPE) is a study of the interplay between economic and political concerns that extend beyond the scope of a single nation-state. It draws on a wide range of disciplines, including political science, economics, geography, sociology, and anthropology. After decades of hydrocarbon domination as the primary source of energy for the global economy, scientists, social movements, governments, and commercial actors are increasing pressure to shift away from fossil fuel dependency and toward alternative energy sources. This effort comes with expenses, heated disputes, and as political economists point out, victors and losers.

Most experts in this field have concentrated on topics connected to a) oil, such as OPEC and oil firms, b) the "resource curse," and c) affluent nations' oil-related policies. At the same time, major study subjects on the theoretical side of international political economy of energy include global governance, international structure, and the role of international organizations.

2.3 INTERNATIONAL MACROECONOMICS

2.3.1 Introduction

Macroeconomics is a discipline of economics that investigates how a whole economy—markets, corporations, consumers, and governments—behaves. Macroeconomics studies economic phenomena such as inflation, price levels, economic growth rate, national income, gross domestic product (GDP), and variations in unemployment (Mankiw,2002). Macroeconomics, as the name indicates, is an area of study that examines an economy through a broad lens. Unemployment, GDP, and inflation are examples of such variables.

Macroeconomists also develop models to describe the relationships between these factors. Governmental organizations utilize these models and the estimates they offer to help in the formulation and assessment of economic, monetary, and fiscal policy. The models are used by companies to create strategies for both domestic and international markets, and by investors to estimate and get ready for changes in asset classes.

When used properly, economic theories may shed light on how economies function as well as the long-term effects of various policies and activities.

By giving a more thorough understanding of the effects of broader financial trends and policy on each industry, macroeconomic theory may also help small businesses and individual investors make better decisions.

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is a key metric in macroeconomic theory (GDP). The Gross Domestic Product (GDP) of a nation is defined as the total final products and services produced in that country during a specific time period (year), represented in monetary units. The Gross Domestic Product (GDP) is another indication of a country's economic strength, although it has a number of limitations. The Gross National Product (GNP) is a related term that consists of the entire final products and services generated by a country's factors of production, either at home or abroad, represented in monetary units.

A nation's GDP is calculated by taking into account both private and public consumption, public spending, investments, increases in private inventories, paid-in building costs, and the balance of international commerce. One of the most important elements of a nation's GDP is the foreign trade balance. When the entire value of goods and services sold by local producers to other countries exceeds the total value of goods and services imported by domestic consumers, the GDP of the country grows. A nation is said to have a trade surplus when this happens. The nation, however, has a trade imbalance (Coyle, 2015).

Level of employment

The level of employment is also an essential factor. The unemployment rate and the employment rate are important indicators for calculating this amount. The Unemployment Rate is defined as the proportion of the labor force that are jobless but have stated a desire and readiness to work. The formula for calculating the unemployment rate is $\text{unemployment rate} = (\text{number of unemployed}) / (\text{labor force})$, whereas the Employment Rate is supplied by the ratio of employed people to the labor force. It is worth noting that the Labor Force is defined as "that portion of an economy's total population that is willing and able to work." One of the most serious issues confronting European labor markets is poor labor-force participation (John Maynard Keynes and Press, 2019).

Inflation

The increase in prices over time, that has as a result the loss of buying power is referred to as inflation. A basket of selected goods and services might show, through the increase of average price, the rate at which the buying power declines. We might use a percentage, to note that a unit of money buys less than it did previously. There is a difference between inflation and deflation. Deflation occurs when prices decline but purchasing power increases. The assessment of the impact of price fluctuations on a wide range of goods and services is the goal of inflation. It is possible to assess the evolution of the price level of an economy's basket of services and commodities, throughout time, as a single economic value. (John Maynard Keynes and Press, 2019).

2.3.2 International Economic Relations

It is crucial to study, comprehend, and ultimately take advantage of economic variables, models of governance, and transnational agreements in today's globalized world for the benefit of both nations and the global economy itself. This is especially true in the multiform environment of international economics, which is changing and evolving more quickly than ever before in human history.

An essential hub of the economic sciences has always been and continues to be international economic relations. Today, it is unimaginable for a state to not engage in international trade, and the advantages of such trade are without dispute. International trade is a major contributor to the world economy, whether through comparative advantage, an abundance of factors of production, or transnational capital flows. It is easy to see how important it is for the daily life of citizens, the framework and rules within which a state pursues economic strategies, develops its plans for membership of organizations and institutions, but also pursues diplomatic policies for advantageous transnational economic agreements.

Governments may be growing more receptive to taking part in international trade, according to the recent trend toward globalization. Closed economies run counter to current economic theory, which supports opening local markets to international commerce in order to capitalize on comparative advantages, ideally for the benefit of all citizens. According to the principle, businesses and people can improve their income by allocating labor and other resources to their most fruitful, effective operations.

The recent trend toward globalization suggests that governments may be becoming more open to engaging in international trade. Modern economic theory favors opening local markets to foreign trade in order to benefit from comparative advantages, ideally for the benefit of all citizens, and discourages closed economies. The idea is that businesses and individuals can increase their wealth by directing labor and other resources toward their most lucrative, successful endeavors.

Additionally, according to the worldwide Organization for Economic Co-operation and Development (OECD), "Economies that are generally open grow faster than those that are largely closed, and businesses that trade typically pay more and have better working conditions than those that don't. Global prosperity and opportunity are also boosted by improved stability and security for all."

There are few to no constraints on how enterprises can conduct themselves in a market that is open to competition. An open market is devoid of tariffs, taxes, licensing requirements, subsidies, unionization, and any other rules or procedures that impede free-market activity. Competitive entry barriers may exist in open markets, but regulatory entry barriers never exist.

In a free economy, supply and demand, with little intervention or outside influence from large corporations or governmental organizations, mostly decide how much goods and services cost. Free trade policies, which aim to prevent distinction against trade, go hand in hand with trade liberalization. Without the government imposing tariffs, quotas, subsidies, or restrictions on products and services—significant entry barriers in world trade and sellers from other economies can do business freely.

Converting one currency into another is necessary for the conduct of international trade and the international movement of capital. It becomes necessary to exchange national currencies. The operation of the foreign exchange market, where this exchange takes place, facilitates transactions. These markets are used to calculate exchange rates. Exports and the exchange rate are related; the lower the exchange rate, the less expensive domestic goods are relative to imports and the greater the demand (Leventakis, 2003).

In a fixed exchange rate system, central banks buy and sell any amount of domestic currency at a fixed price against foreign currency in order to keep the exchange rate stable. In a floating exchange rate system, central banks let the exchange rate move freely with the aim of balancing the supply and demand of foreign exchange. In an intermediate situation is the system of controlled exchange rate fluctuation. Central banks intervene by buying and selling foreign exchange in order to influence exchange rates.

2.3.3 Macroeconomic policy - Exchange rate

The following is an analysis of important concepts of macroeconomic theory:

Fiscal Deficit: The fiscal deficit is the difference between government expenditure and revenue (taxes) over a period of time (year).

Fiscal Debt: The accumulation of fiscal deficits and interest payments due is the fiscal debt.

Money Demand: The demand for money, as determined by firms and households, is a function of income and interest rate.

Money Supply: The money supply (which in its narrow sense includes cash - coins and banknotes - and deposits) is determined directly (through the exclusive right to mint banknotes), but also indirectly by the central bank (through monetary policy instruments such as open market operations, the setting of banks' reserve requirements and the discount rate).

The above elements constitute the mainstay of fiscal policy. It is emphasized that fiscal policy is carried out by the government through taxation and public expenditure (Mankiw, 2002).

2.4 Resources Curse Theory

2.4.1 Introduction

A country's economy with plenty of assets, such as oil and gas, would often have slower GDP growth and slower long-term growth than a country with less resources. This phenomenon is known as the "resource curse" (Ross, 1999). Political researchers and economists have both conducted research and studies on this topic.

In the 1950s and 1960s, the notion that a nation's natural riches might be more of a curse than a blessing for its economy first appears. The main

problem with this debate was the absence of empirical facts. The main points of the resource curse theory are supported by the findings. National economies whose main exports are dependent on resources experience slower long-term growth rates (Roukanas, 2012, pp.48–65). Richard Auty coined the phrase "resource curse" in 1993 to explain why nations with abundant mineral resources failed to utilize this wealth to boost their economies and saw slower economic growth than nations with limited natural resources (Sachs & Warner, 1995).

Michael Ross asserts that there are a few economic theories for the resource curse phenomenon. The structuralist school of thought formulated the hypothesis that national resource-exporting economies would see a drop in trade terms in the 1950s. Additionally, economies that exported a lot of resources were susceptible to price fluctuation. For a home economy, price volatility would primarily have three effects: a) a restriction on private investments; b) a restriction on government revenue; and c) a restriction on foreign exchange. Finally, national resources cannot support economic growth if foreign multinational corporations control resource exploitation and repatriate their gains (Ross, 1999, pp.297–322).

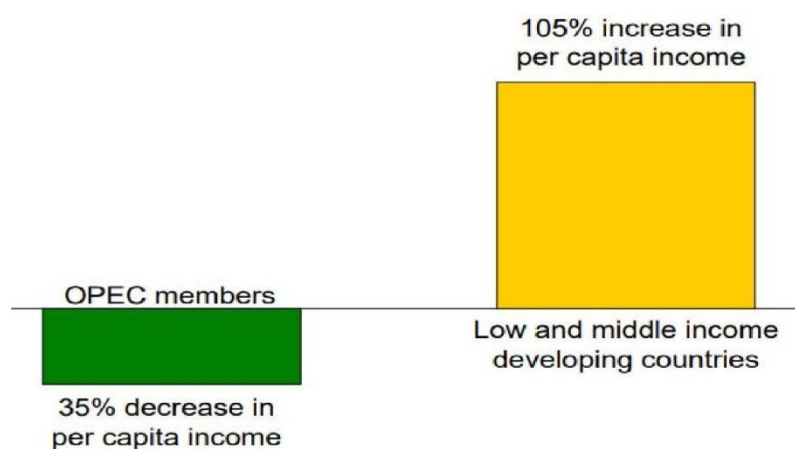
Economic and political studies have provided a variety of theories for how, why, and when natural resources will act as a curse and when they will act as a blessing, respectively. The economic study by Nankani (1979), which revealed that the developing world leads the globe in exports of hard rocks and has a growth rate of per capita GDP (Gross Domestic Product) of 1.9 percent, half the rate of countries without minerals, stands out among the many others. According to Sachs and Warner (1995), countries with a higher proportion of natural resource exports saw disproportionately high rates of GDP growth. Additionally, the World Bank conducted research and discovered that nations that export minerals and oil do worse than their counterparts that lack access to such resources.

Economic development does not require the possession of natural resources. As a result, many academics have come to the opinion that a nation's access to natural resources can either be a crucial factor for economic progress or a barrier to it. As a result, having access to natural resources can be viewed as either a blessing or a curse.

The curse of the resource does not just apply to nations that have oil or other minerals; it also applies to those whose economies are heavily reliant on them. This dependency is often quantified by the percentage of total exports that are made up of oil exports (typically between 60 and 95 percent of all exports) or by the proportion of oil and gas exports to GDP.

According to an Organization of Petroleum Exporting Countries (OPEC) research, from 1965 to 1998, the per capita gross domestic product of OPEC members decreased by an average of 35%, whereas in developing nations outside of OPEC, it climbed by an average of 105%. (Figure 1). According to the study, a country's growth performance is worse the more dependent it is on oil.

Figure 1. GDP study for the period 1965-1998



Source: United Nations, 2004.

Different schools of economic thought have attempted to offer an explanation for the inverse relationship between national resource availability and economic expansion. The response to this query has a direct bearing on the state of the global economy. The international economy has become more volatile since fixed exchange rates were abolished in 1970, and going forward, any attempt to explain the resource curse phenomenon must take the future of the global economy into consideration. Verifying the resource curse phenomenon has become increasingly challenging due to economic

interconnectedness. Since this time, it is necessary to comprehend the global political and economic system in the context of political economics (Roukanas, 2011).

It is clear that the definition of the Resource Curse is rather vague, which leads to flaws in the theory behind it. There isn't a single, accepted theory or explanation for the Resource Curse phenomenon. After a thorough study of the literature, the Dutch Disease, Rent-seeking, and Institutions models—three major Resource Curse theories—were identified.

2.4.2 Dutch Disease

Large gas reserves were discovered in the Netherlands in 1959. These findings led to a significant increase in Dutch exports.

However, there were some negative impacts on the national economy. Between 1970 and 1977, unemployment rose from 1.1% to 5.1%, while private investment fell (The Economist, 2014).

The strong national value of the currency, which was brought on by an increase in Dutch gas exports and foreign exchange inflows, had an effect on other areas of the economy as well. The presence of a 'strong' currency reduced their competitiveness significantly, since the things produced were more expensive than previously. The need to deal with the swift appreciation of the Dutch national currency led to low interest rates. Due to investors' hunt for destinations with greater capital performance, capital outflows surged. It should be mentioned that the gas extraction industry requires a significant amount of cash. The paradox is that gas production, which was primarily meant to generate large capital inflows, ultimately resulted in significant capital outflows. The extraction of gas is a capital-intensive industry.

The second effect concerns investment. The fast increase in resource output attracted capital and labor away from manufacturing and agriculture. The direct result was a decrease in industrial and agricultural exports, as well as an increase in the cost of products and services that the government could not import. Additionally, Dutch disease worsens inflation. The influx of foreign currency raises consumer demand for non-exportable products and services, such those provided by the construction sector. Consumers can now only buy

a fewer number of goods and services due to the higher prices brought on by the greater demand, which lessens competition (Roukanas, 2012, pp.48–65).

After experimentally verifying the connection between resource availability and economic development, Sachs and Warner developed the Resource Curse theoretical model in 1995. In recent years, the Dutch Disease concept's influence on the resource curse theory has been widely acknowledged. In economic parlance, a nation is said to have "the Dutch Disease" if its traded products include both prospering and failing sectors. According to Corden and Neary, the successful sector drains resources from the less successful one, raising the relative price of non-traded items (1982, p.825). The crowding-out hypothesis is the theoretical underpinning of Sachs and Warner's proposal.

Inevitably, growth-generating sectors of the economy will be pushed to the side as natural resources are extracted. There is considerable debate over the true drivers of economic expansion, although the Dutch Disease model (Sachs & Warner, 1995, 1999 in Sachs & Warner, 2001) identifies manufacturing as a sector that contributes to expansion. According to the Dutch disease model, there are three distinct economic subsectors: natural resources, manufactured goods, and services. Only the industrial and service sectors employ capital and labor. Capital and labor are often allocated to the non-traded sector in resource-rich countries, whereas the natural resources sector handles the commercially viable product. Manufacturing declines and the non-traded sector expands as a consequence of an abundance of natural resources. With more money coming in, the price of non-traded goods might go up.

Non-traded items are utilized as inputs in manufacturing, hence higher input prices combined with set international pricing result in decreased manufacturing profitability. As a result, the reduction in manufacturing threatens economic growth. Furthermore, Sachs and Warner discovered a link between resource richness and higher prices in non-tradable industries, concluding that resource-rich nations had higher prices.

According to Spyros Roukanas and Gabriel Diamantis:

The school of thought of economic nationalism of International Political Economy has two main principles. Firstly, the international system is anarchic

and at the same time the role of the state is centric and sovereign for the configuration of the world political and economic environment. (O'brien and Williams, 2011). According to Robert Gilpin, anarchy means that there is no higher authority than the nation- state for the configuration of the world economic and political system.

The market operation is under the control of each nation-state and functions in a certain social context. The international economic and political system reflects the national interests of the most powerful nation-states of the world economy. The nation-states serve their national interests according to their power in the international economic and political environment (Roukanas and Diamantis, 2014, pp.51–67).

The erroneous premise of the Dutch Disease model is that an abundance of natural resources would have a negative impact on economic growth. Countries that avoided the Resource Curse, such as Norway, Botswana, Australia, etc., cannot be explained by the Dutch Disease model. This shows that the Dutch disease model is flawed in important ways. These conditions must be met, but they are not sufficient on their own. They may include the health of the economy, the effectiveness of the government, or anything else.

2.4.3 The Rent-seeking model

The rent-seeking model emphasizes established institutions and established political systems, in contrast to the Dutch Disease model's focus on informal networks. In contrast to the Dutch Disease model, which attributes poor economic development to a shrinking manufacturing industry, Lane and Tornell (1999) argue that it is the outcome of distortive wealth redistribution behaviors (rent-seeking). Under the rent-seeking model, the natural resources sector is constrained due to disruptive rent-seeking activities and the absence of positive wealth events. Therefore, the explanatory component is much different from the Dutch Disease model. The Resource Curse is a condition described by Lane and Tornell (1999, page 41) as a "distributive conflict" in resource-rich nations, where various powerful groups compete for control of the rents created by these assets. Reducing or minimizing rent-negative seeking's effects requires institutions or the concerted actions of powerful organizations. Instances of such power blocs include municipalities that get federal funding, labor organizations that lobby for favors, and businesses that are bribed to avoid competition.

Distinction between areas of the economy is less clear than in the Dutch Disease model. According to the rent-seeking theory, the economy is divided

into a conventional functional sector (in this case, natural resources) and an unofficial lesser effective sector. Revenues collected by the government from the economy at large are used to fund charities and other worthy causes. To avoid paying taxes, powerful organizations put their money in the less attractive informal economy. High profits in the public sector lead governments with strong institutions to restrict economic growth by increasing fiscal expenditure.

Poor financial efficiency is blamed on the "Voracity effect," which according to Lane and Tornell (1999, p.34) means more money is spent on government programs. Increases in discretionary redistribution (government spending) in response to increases in formal sector returns are known as the Voracity effect. Due to the Voracity effect, there is a negative correlation among rising income and expanding economies. Power blocs find it "convenient" to seize cash via government transfers because of the national government's mechanism as a beneficiary of natural resource earnings and because of the national budget process. So, money is often wasted in ways that don't improve lives or spur development. Government capital costs are being mismanaged, as seen by the economy's dismal performance; rather than being invested in productive projects, funds are being spent on unnecessary perks or shipped offshore (Lane & Tornell, 1999, p.40).

The Resource Curse might be explained by rent-seeking behavior. The issue is that the rent-seeking model relies on certain circumstances to work (institutions). The effect of rent-seeking activities on the economy, and the oil industry in particular, is being determined by authorities. This means that the Resource Curse is dictated less by rent-seeking and more by the strength of the institutions in place.

2.4.4 The institutions model

The below institutional model incorporates institutions and rent-seeking into the study. A framework of institutions was developed by Mehlum et al. (2006) with an emphasis on the role of rent-seeking and institutions in resource-rich countries. Mehlum et al. disagree with the rent-seeking model proposed by Lane and Tornell (1999) and hold that some forms of rent-seeking are less harmful than some others. To expand upon this idea, the institutions model serves as a conceptual bridge between institutions and rent-seeking. The

institutions model maintains that institutions are the determining element in how the availability of natural resources affects economic development (Mehlum et al., 2006, p.3). Mehlum et al. argue that the Resource Curse is more common in countries with weak policy structures because an abundance of natural resources places a strain on government and business.

Organizations in countries like Botswana and Norway, which have both strong foundations and low levels of corruption, are good examples of those that endorse the strategy. Nigeria, Venezuela, Mexico, and the Congo, all of which have poorer institutions, perform financially worse than Botswana and Norway. The Resource Curse occurs when a country has poor structures and an abundance of natural resources.

Natural resource abundance limits economic development only in nations with grabber-friendly structures, according to research by Mehlum et al. (2006, 2006, p.7), while nations with producer-friendly structures are immune to the Resource Curse. As a consequence, the Dutch Disease model's contention that a lack of resources automatically leads to slower financial development is challenged by the institutions model. To fully understand how institutions work, Mehlum et al. (2006, p. 6) accept rent-seeking and center their analysis on the tension between various forms of rent-seeking and productivity.

Though certain forms of rent-seeking are worse for the economy than others, all of it is detrimental. In an economy with producer-friendly institutions, such as the power of the law, limited rates of corruption, an efficient administration, and minimal risks of the government denouncing agreements, rent-seeking and production are complimentary practices. In the fight for natural resource rents, producers nevertheless confront legal and institutional limits on their ability to push for lucrative contracts, subsidies, and public support. On the contrary side, institutions that favor grabbers promote the illegal taking of rent or property by techniques such as bribery, illegal transactions, expropriation, or extort. Being a producer is disadvantageous here, so there's a tension between that and trying to extract rent.

Development benefits and costs are shared by natural resource-based nations. As the institutions model sees it, the main reason for different economic outcomes among resource-rich nations is their varying levels of institutional quality. Even among countries with grabber-friendly systems,

there is tremendous variability in the administration of natural resource riches. Nonetheless, many resource-rich states have centralised authority and poor institutions. Because of this, the disparity in economic performance and growth across resource-rich nations cannot be attributed to a general lack of high-quality institutions (Kendall-Taylor, 2011, p.345).

2.4.5 Resources as a Blessing

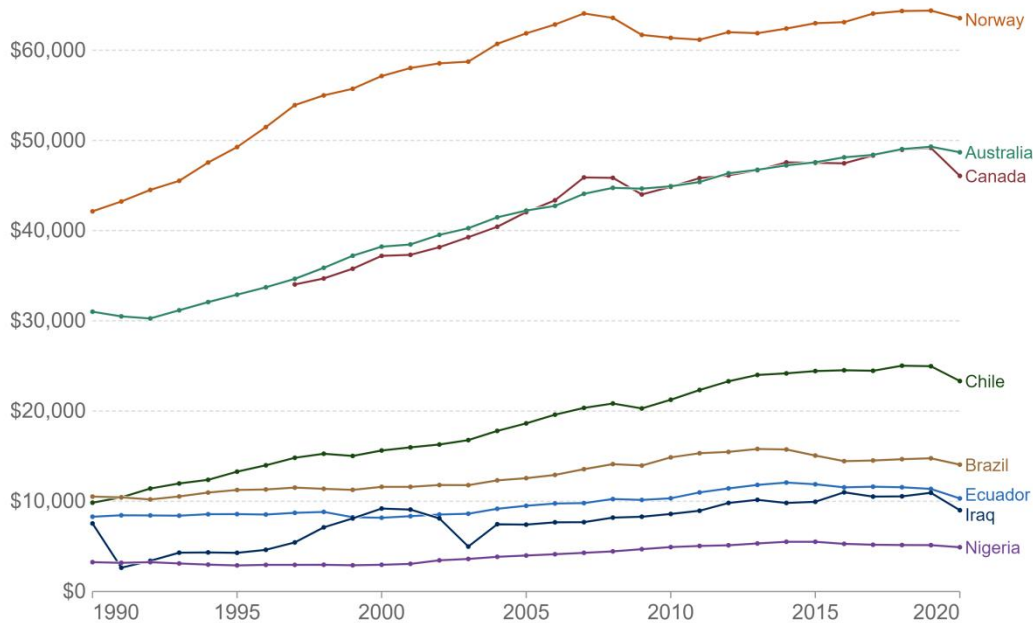
Some argue that a country's possession of natural resources is a blessing, despite the fact that a large number of analysts see it as a curse. In other words, having control of a country's natural resources often benefits a country. Manzano and Rigobon (2001), who claim that their research discovered no connection between the possession of natural resources and curse, are some of the researchers who concur with this phenomenon. Natural resource wealth has a beneficial impact on GNP, according to Alexeev and Conrad (2009). Nevertheless, Konte (2013) cites a number of resource-rich and rapidly developing nations, including Botswana, Canada, the United States, and Norway, as examples of places where natural resources can be a benefit. (Othitis, 2014).

Resources have a variety of effects on development since economies and managerial capacities vary widely among nations. High-income nations often have stronger institutions, more human capital, and a more diverse economy than poor nations. Cross-country analyses show no proof that wealthy nations have been cursed by a glut of resources. Despite the expenses of relocation and readjustment that come with the resource cycle, many nations' solid resource foundations have been an advantage. However, not every country has been so lucky, and the problem only worsens as development levels drop. Figure 2 shows the variation in GDP per person between nations that are very rich in natural resources.

Figure 2: GDP per Capita, comparative analysis.

GDP per capita

Measured in constant international- $\$$.



Source: Data compiled from multiple sources by World Bank

OurWorldInData.org/economic-growth • CC BY

Source: Our world in Data,2022.

Whether in cases like Norway, Australia and Canada natural resources (even if it is not the sole reason) have assisted in a great economic development, in other countries like for example Brazil and Ecuador have not assisted in such a manner.

Answers to these questions are desperately needed so that governments can take action to break the resource curse. Research conducted by economists and political scientists over the past ten years has significantly improved our comprehension of the problems. We recognize in particular that politics play a significant role in the issue. Macroeconomic and microeconomic policies must be implemented to guarantee that the nation makes the most of its resources, that those resources lead to faster growth, and that the benefits are fairly distributed.

2.4.6 Macroeconomic Policies

How soon the resource should be exploited and how the earnings should be used are the hardest choices a producing nation must make. Should the country take out more debt to boost its cash flow? And what institutional adjustments should be made to ensure that the appropriate macroeconomic decisions are implemented?

The rate of extraction

The optimal course of action might not be to extract natural resources. If a nation is unable to use the money properly, it might be desirable to keep the resources underground because they will increase in value as supplies become scarcer and prices rise.

Furthermore, unless the money made from the extraction of resources is used in other ways, it lowers a country's wealth. Because resources like oil, gas, and minerals are non-renewable, the process of extraction itself makes the country poorer. Once they have been dug up and sold, they cannot be replaced. The only way to compensate for the loss of these natural resources and boost national prosperity is through later investments in capital, whether they be physical or natural.

Natural resources are assets; hence one should see extraction as simply transferring a component of the asset base of the natural resource into another form. It could be wise to exercise caution while selling Brazil's gas, for example, because the country has limited natural gas reserves and no other trustworthy ways of defending itself against long-term energy price increases.

The "card" of Borrowing

Governments of countries that export petroleum frequently spend more than they can afford thanks in part to international banks. They are eager to lend them money to enhance their rate of spending when oil prices are high. But financial markets are erratic, sporadic friends. Lenders swiftly demand repayment of loans when oil prices drop, or interest rates increase. Generally speaking, bankers like to lend to people who don't need their money. When oil prices fall, the nation needs the money, but the lenders then demand their money back. Because of this, capital movements, particularly short-term capital flows, tend to be pro-cyclical, escalating the fluctuations brought on by the decline in the price of the natural resource. Since short-term capital flows

in particular tend to be cyclical, the fluctuations already brought on by the decline in the price of the natural resource are amplified.

All of this would be acceptable if governments utilized the funds intelligently to pursue profitable investments that would yield returns well in excess of the interest rates they must pay. But this isn't always the case. The amount of investment that is increased as a result of borrowing is typically far less than the amount borrowed. Additionally, when borrowed funds are utilized to cover local expenses, the currency may become overvalued as a result, which could hurt local suppliers and exporters according to the Dutch Disease effect.

Accounting frameworks

Governments frequently handle their revenue streams so poorly, and this has something to do with the generally accepted standard accounting systems. Naturally, governments desire to demonstrate their proficiency in economic management. They believe they will be better off if they can accelerate their growth rates. If a nation extracts more resources, but the money is not wisely invested, the nation will become poorer rather than richer.

Institutional reforms—stabilization funds

The extreme volatility of international commodity prices served as the primary impetus for the establishment of stabilization funds, which enable the smoothing out of expenditures. However, these stabilizing funds have further used. For instance, they can verify that the spending pattern does not result in significant Dutch Disease issues. Stabilization funds can help ensure that funds are invested so that the depletion of natural resources is balanced by an increase in human and physical capital by setting money aside in a separate account. This counteracts governments' natural propensity to spend all of the resources at their disposal. Rent seeking can also be decreased with the help of stabilization funds. Stabilization money can aid in preventing and reducing the frequently violent conflicts that have historically distinguished resource-rich countries by offering an open and transparent mechanism for selecting how the monies are used.

2.4.7 Microeconomic Policies

There are a number of tactics that governments can use to increase the possibility of tax increases and ensure that the money is used effectively.

Transparency

Perhaps the most crucial practices are those that demand more openness concerning the government's interactions with those associated in resource extraction, as well as the signing of contracts, the amounts paid to the government, the quantity of natural resources produced, and the uses made of the funds. There is less room for corruption when information is readily available. Despite this, bribing the government of a producing nation is sometimes more costly for businesses than paying market pricing for the right to exploit a petroleum resource. Transparency reduces the likelihood of corrupt behavior.

Auction design

How much money a country with abundant natural resources makes from the contracts it enters into with international businesses to develop those resources might vary greatly. Some strategies for working with foreign companies may lead to significantly less competition, which decreases government revenue. For instance, "fire sales" in which governments quickly release substantial portions of oil resources for commercial development are likely to lead to reduced pricing. Even huge oil firms appear to have a limited taste for risk and will only purchase increasingly more exploration possibilities at a discount (before to learning the return on leases already acquired).

If one corporation is allowed to enter before others, future competition inside the nation can be deterred. Since it will be more knowledgeable about information regarding not only the oil or gas tract it has examined, but also information about other tracts, a corporation that is invited to do initial research will benefit from knowledge asymmetries. Even if the government later offers other tracts for competitive auction, the knowledge asymmetry (as well as the initial firm's links with authorities) will lead to a cheaper price, fewer rivals and lower tax revenue for the government. Each bidder will be aware of

their informational disadvantage; if they win the auction, it will be because they outbid the rival who is knowledgeable and conscious of the genuine value of the field. As a result, the new companies will submit less aggressive offers.

2.5 Conclusions

Because of this, when it is observed, the presence of natural resources is either seen as a curse or a blessing. In conclusion, the inability to convert natural richness into sustainable economic progress is caused by the resource curse. When the curse is active, economic growth is prone to instability, with brief expansions followed by protracted recessions. Thus, a differentiation between the two is created, and international energy corporations want to buy natural resources at the lowest price feasible, so delaying the political and institutional development of these nations.

The management of natural resources and the income generated from their exploitation, on the other hand, can result in exhilaration and growth in some nations, such as Norway, Canada, and Australia. In these situations, having access to natural resources is seen as a benefit.

Given the circumstances surrounding how a state uses its natural resources, the distinction between a curse and a blessing is established on an individual basis.

CHAPTER 3: Analysis of Canadian Economy

3.1 Introduction

The goal of this chapter is to investigate the existence of the resource curse phenomenon in the Canadian economy in light of International Political Economy's economic nationalism. As a result, this chapter will present some introductory information about Canada's history, intertwined with the trajectory of oil and natural gas production. Then, a review of macroeconomic fundamentals, as well as an examination of general economic statistics, will be conducted to determine if Canada is subject to the resource curse.

3.2 Historical Analysis and Natural Resources

Canada, occupying about half of North America, is the world's second biggest nation in terms of land area, second only to Russia. Canada ranks among the lower populations on the planet despite its size. The Arctic Circle is south of the southernmost provincial and the southernmost territory. Ottawa serves as the nation's seat of government, while Toronto, Montreal, and Vancouver are its three most populated cities. Forecasts indicate that Canada's population will hit 38.25 million. The political system of Canada is a parliamentary democracy and constitutional monarchy modeled after the Westminster model. The prime Minister of Canada is named Justin Trudeau. This makes him the 23rd Prime Minister of the nation. Having led his Liberal Party to a win in the 2015 federal election, he was asked to form Canada's 29th Ministry. Trudeau was re-elected in 2019 and 2021 despite receiving support from a minority of lawmakers. The federal government of this Commonwealth region is officially bilingual (English and French).

Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Saskatchewan make up the 10 provinces that constitute Canada, along with three territories (Northwest Territories, Nunavut and the Yukon). In the Canadian province of Ontario, Ottawa serves as the capital. The three biggest cities are Vancouver, Montreal, and Toronto, all in Canada (British Columbia). French and English are the official languages of Canada.

More than 1.4 million Indigenous people live in Canada, divided into the First Nations, Inuit, and Métis groups, each of which has its own history, geography, customs, culture, and language. Indigenous communities may be found all throughout Canada, with a large number of them concentrated in rural and isolated locations, coastal areas, and Inuit Nunangat territories in Canada's far north. Indigenous groups and the Canadian government have signed historical and contemporary treaties. These treaties and agreements frequently outline the ongoing advantages and privileges of each group, such as access to resources and land. These treaties include all of Canada's geographical regions, and Canada's procedure for establishing treaties is continuous and always changing.

It ranks well in worldwide assessments of government transparency, civil liberties, standard of living, economic freedom, education, gender equality, and ecological sustainability. Large-scale immigration has made it one of the world's most racially and multi cultural countries (D. Michael Jackson, 2013). Canada's economy and cultural have been profoundly impacted by the country's long and tangled relationship with the United States. Canada is a developed nation with a nominal per capita income that ranks twenty-fourth in the world and a Human Development Index rank that places it sixteenth worldwide. Life expectancy, education (mean years of schooling completed and predicted years of schooling upon enrollment to the education system), and per capita income are all used to place nations into one of four human development categories: low, medium, high, and very high on the HDI (Nations, 2022).

The First Nations, Inuit, and Métis are the three main groups of indigenous people in contemporary Canada. The Métis are a mixed-race group that originated in the mid-17th century when First Nations people get married European immigrants and so forged their own culture. The term "Canada" comes from the Huron-Iroquois *kanata*, which means "village" or "hamlet." Canada was first used by the French adventurer Jacques Cartier in the 16th century to describe the area around the city of Quebec. Canada was a synonym for New France from 1534 until 1763, including all of the French territory between the St. Lawrence and the Great Lakes. After New France was conquered by the British, the name Quebec was sometimes substituted for Canada. In 1791, when Britain split the territory of Quebec into Upper and Lower Canada, the term Canada was officially revived (renamed in 1841 Canada West and Canada East, respectively, and collectively called Canada).

The British North America Act of 1867 formalized the union of the three Canadian colonies into the Dominion of Canada. Canadian provinces of Nova Scotia and New Brunswick. Ontario and Quebec were carved out of a different Canadian territory by the same law. Dominion status bestowed to Canada a high degree of autonomy; but, the conduct of foreign policy and the formation of military cooperation remained the prerogative of the British monarch. Canada achieved a high degree of autonomy within the British Empire beginning in 1931, but it did not become really independent until 1982, when it won the ability to draft its own constitution (Innis and Ray, 2017).

As we can see from Table 1, Canada is the world's fourth-largest oil exporter. In 2020, it exported \$47.2 billion in oil, accounting for 7.37% of the global total. It has the world's third-largest known oil reserves, at 167 billion barrels. The majority of such reserves are found in Alberta's oil sands. Oil is utilized in the production of transportation fuels such as gasoline, diesel, and jet fuel. It is also used for heating and as a feedstock for petrochemicals, which are used to manufacture a wide range of common things.

Table 2 shows that Canada is the sixth biggest natural gas producer worldwide (2020 data). British Columbia and Alberta, in particular, are home to massive natural gas reserves throughout the country. Canada has enough natural gas to last the nation for another 300 years at current usage rates, with sufficient to spare for export. Canada might transmit its vast energy resources to Asian markets via the construction of liquefied natural gas (LNG) facilities on its west part. Coal would be phased out, and the country's growing energy needs met, all while contributing to global efforts to reduce emissions of greenhouse gases. Natural gas has potential use outside the home kitchen. Additionally, it may be utilized as a fuel, a source of energy, and as a feedstock for the petroleum industry (Jorge Morales Pedraza, 2019).

Table 1: Top 10 Oil production Countries, 2021

Country	Monthly Production (barrels per day)
United States	11,567,000
Russia	10,503,000
Saudi Arabia	10,225,000
Canada	4,656,000
Iraq	4,260,000
China	3,969,000
United Arab Emirates	2,954,000
Brazil	2,852,000
Kuwait	2,610,000
Iran	2,546,000

Source: OECD, 2022

Table 2: Top 10 Natural gas Production Countries, 2021

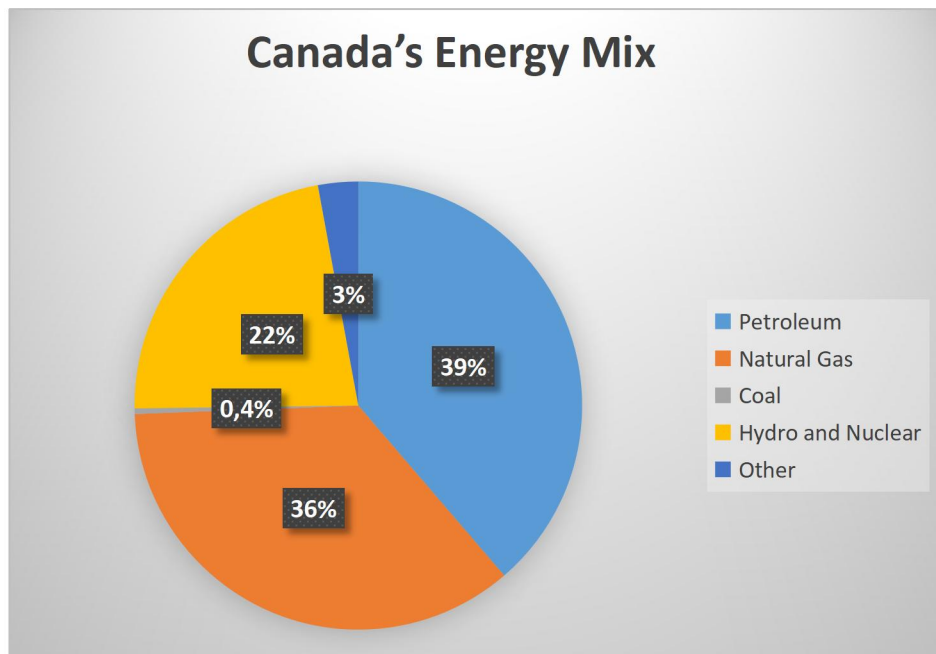
Country	Produce by Cubic Meters
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United States	914.6 billion
Russia	638.5 billion
Iran	250.8 billion
China	194 billion
Qatar	171.3 billion
Canada	165.2 billion
Australia	142.5 billion
Saudi Arabia	112.1 billion
Norway	111.5 billion
Algeria	81.5 billion

Source: OECD, 2022

Canada's energy options are diverse, and the country is rich in natural resources. Despite their abundance, oil and natural gas do not constitute the country's main energy sources. Canada's energy needs are met in large part by hydroelectricity, coal, nuclear power, and renewable wind, solar, and geothermal projects.

Figure 3: Canada's Energy Mix



Source: Energy Source's in Canada, 2019.

The majority of Canada's hydro power comes from holding water behind dams. Alternatively, water may be transported to a higher reservoir for store (a

process known as "pumped storage") using hydropower. At the precise moment that power is needed, the water is released. In run-of-river power plants, the water flows straight into turbines, where it instantly rotates to produce electricity. With a capacity factor of over 85,000 MW, hydro is by far Canada's most significant kind of power production, accounting for more than 60% of total energy output. To date, China is the world's greatest generator of hydroelectricity, with Canada in second place (G Bruce Doern, Morrison and Dorman, 2001).

It wasn't until the early 1960s that nuclear power reactors began producing commercial energy in Canada. Canada's four nuclear power facilities met around 15% of the country's electrical need last year (Canada Energy Regulator). In comparison to New Brunswick's lone nuclear power plant, Ontario has two.

Chemical energy from the sun has been kept in the form of biomass, which may be a solid, liquid, or gaseous biological component. Biomass may come from things like wood, peat, and even agricultural waste.

Renewable biofuels are becoming an increasingly important energy option in the country of Canada. In 2013, Canada produced 2% of the world's biofuels, ranking fifth after the USA, Brazil, the EU, and China (Natural Resources Canada). Both ethanol (used as a gasoline alternative) and biodiesel are produced in Canada (a diesel substitute).

3.3 Macroeconomic Analysis

To answer the question, whether the Canadian economy is suffering the resource curse and the Dutch disease or not, we must first its macroeconomic performance. For this reason, we are going to

analyze the Gross Domestic Product (GDP) for the period under study (2010-2021) as well as real GDP growth, central government debt as a percentage of GDP, the fiscal deficit or surplus as a percentage of GDP, GDP per capita and the unemployment rate.

Canada's GDP for year 2021 was the 1.2% of world's GDP. With a nominal GDP of \$1.73 trillion, Canada's economy ranks as the world's tenth-largest. Canada's GDP (PPP) of \$1.84 trillion places it in 17th place internationally,

whereas its per capita GDP of \$46,260.71 places it in 20th place (World Bank, 2022).

Table 3: Canada Macroeconomic indicators

Year	GDP (US. \$)	GDP GROWTH (as a % of GDP)	Central Government Debt (As a % of GDP)	Fiscal deficit surplus (as a % of GDP)	GDP per capita (\$)	Unemployment (as a % of GDP)
2010	1,62 trillion	3,1	43%	-2,1%	47627,34 \$	8,1%
2011	1,79 trillion	3,1	44%	-1,6%	52285,93 \$	7,6%
2012	1,83 trillion	1,8	45,1%	-1,2%	52744,00 \$	7,4%
2013	1,85 trillion	2,3	45,4%	-0,4%	52708,61 \$	7,1%
2014	1,81 trillion	2,9	39,6%	0%	51020,84 \$	7%
2015	1,56 trillion	0,7	42,2%	-0,1%	43626,47 \$	6,9%
2016	1,53 trillion	1	41,4%	-0,9%	42382,63 \$	7,1%
2017	1,65 trillion	3	39%	-0,9%	45191,99 \$	6,4%
2018	1,73 trillion	2,8	36,1%	-0,6%	46625,85 \$	5,9%
2019	1,74 trillion	1,9	35,7%	-1,7%	46403,98 \$	5,8%
2020	1,65 trillion	-5,2	59,2%	-14,9%	43306,63 \$	9,6%

Source: International Monetary Fund, 2022.

We can notice that despite the big economic crisis the GDP of Canada has increased during the period 2010-2014. From the 1,62 trillion \$ in 2010 will increase to 1,81 trillion \$ in 2014. The Central Government Debt had a steady percentage around the 44%. The fiscal deficit has been in low numbers with best the year 2014 when it reached the 0%. Similarly, for the GDP per capita. A big increase from the 47627,34 \$ to the 51020,84 \$ in 2014. The unemployment rate was in a steady pace around the 7%. In 2015 we observe a recession in the Canadian Economy with a slight decrease in the GDP until 2019. The fiscal deficit remains in low percentage as well as the unemployment rate. Although we observe a notable decrease in GDP per capita from the 51020,84 \$ in 2014 to 46403,98 \$ in 2019. The unexpected dip in GDP reflected the impact of government shutdowns as well as lower adjustments to oil and gas output, a sector that Statistics Canada has traditionally struggled to adequately measure. Another key reason is the fact, that the Canadian economy was heavily damaged by wildfires in its oil sands area in 2015, which reduced output. Wildfires ravaged sections of northern Alberta, where much of Canada's oil and natural gas is produced, in May 2015.

The Canadian's Economy GDP was steadily on growth as a % of GDP until the 2020. In 2020 the COVID 19 pandemic has occurred an economic crisis a fact that we can observe in 2020 numbers. The GDP growth had a huge drop back of -5,2%. Similarly, the fiscal deficit has increased from the -1,7% to the 14,9 %. Similarly, the unemployment rate has increased in the notable 9,6%. A very big percentage of GDP and a very important consequence of the COVID 19 in the economics worldwide.

The global debt hit an all-time high in 2020, the first year of the catastrophic COVID-19 epidemic. The federal government paid transfers and subsidies to provinces, territories, towns, and enterprises, resulting in "huge deficits" of \$325.5 billion to give relief during the epidemic (Government of Canada, 2021).

Based on the COVID-19 Economic Response Plan, the Canadian government has taken swift, decisive, and successful measures to protect its citizens from the epidemic (the Plan). The Canadian government was able to swiftly address Canadians' immediate concerns and shield the country's economy from the unexpected character of the COVID-19 pandemic because Canada entered the recession with a robust balance sheet, the lowest net debt-to-GDP ratio in the G7, and historically low borrowing rates. The budget deficit rose from -1.7% of GDP in 2019 to -14.9% of GDP in 2020 due to spending on different health initiatives and aiding those who require assistance. In 2020, GDP fell from \$46403,98 per person to \$43306,63. Similarly, the unemployment rate in 2020 was 9.6 percent, up from 5.7 percent in 2019. The epidemic has broad repercussions on economies of all sizes (Government of Canada, 2021).

3.4 Energy Sector

Ten percent of Canada's GDP comes from the energy sector, which is also a major driver of foreign direct investment, exports, and middle-class employment—especially for Indigenous communities. Canada is a major contributor to the global energy supply. Amongst top ten producers of oil, natural gas, hydropower, uranium, nuclear power, biofuels, and wind, it is also a prominent producer of more than 60 minerals and metals, such as a broad range of important minerals.

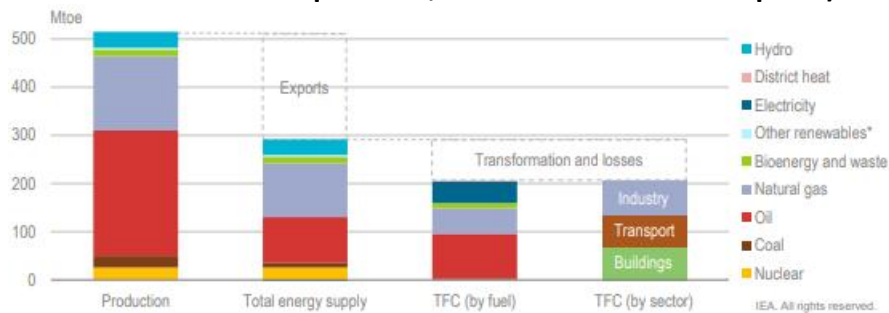
Similar to the ten provinces, but codified in federal law rather than the Canadian Constitution, the three territories' jurisdiction is more or less autonomous. The federal government and the provinces and territories are both responsible for natural resource management under the Constitution. The federal government is responsible for interprovincial and international trade, resource-based research and innovation, and federal administration of natural resources on Canadian province. For instance, the federal government regulates exports and resource projects like pipelines and transmission lines that span province or global boundaries. However, the provinces and territories are guaranteed the authority to explore, produce, conserve, and manage their own non-renewable natural resources, forest resources, and electrical energy according to the Constitution. This involves the right to levy mining taxes and royalty. Energy efficiency, environmental protection and conservation, and economic growth are all shared responsibilities of the federal, provincial, and territory governments.

Well over half of Canada's economy is based on the services industry, making it a crucial one (World Bank, 2021). In 2019, industry—which encompasses production, infrastructure, utility, mining, and oil and gas extraction—will account for 27% of GDP, making it the second-largest economic sector (Global Affairs Canada, 2020). In Canada, agricultural, mine, energy, and the utilization of raw materials are the primary sectors. Both natural gas and crude oil production are among Canada's top five global strengths. The Western Provinces are home to the vast majority of the country's oil deposits, making them third biggest in the globe. Canada also has significant natural gas reserves, especially in the provinces of British Columbia and Alberta (CAPP, 2021).

Furthermore, in 2018, Canada ranked #7 in coal exports (95% of which is coking coal), and #3 in hydro power production (behind the People's Republic of China [thus "China"] and Brazil] (Government of Canada, 2021).

Canada's mining sector is vital to the nation's economy, turning out \$47 billion in minerals last year alone (Government of Canada, 2019). Canada is the world's second-largest producer and fourth-largest exporter of uranium, and a key supplier of the minerals required to create steel and battery. Canada is a leading exporter of agriculture products, accounting for 1.7% of global GDP in the agricultural sector.

Figure 4: Canada energy production, Supply - Demand (Mtoe million tons of oil equivalent, TFC= total final consumption)



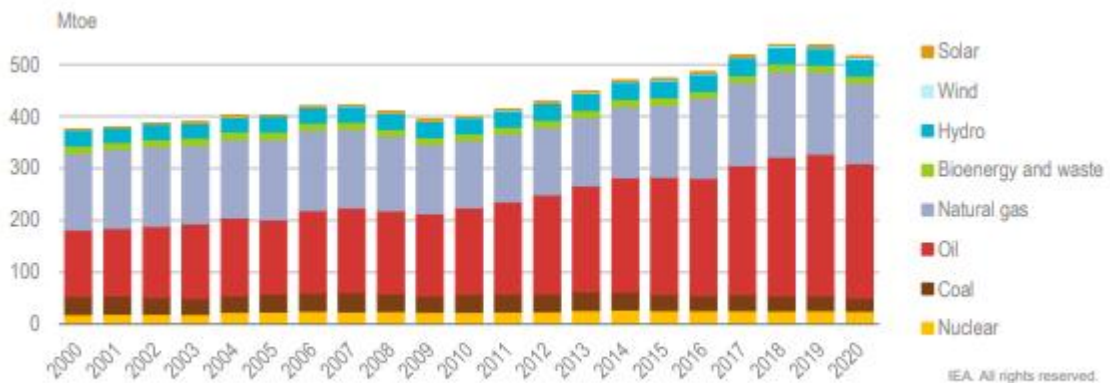
Source: IEA Statistics, 2022

Canada has more oil and natural gas reserves and production capacity than what it requires, therefore the country exported 44% of its domestic energy output in 2020. (Figure 4). In 2020, 76.5 percent of the world's energy came from fossil fuels. (TES). In 2020, 39% of the world's energy came from natural gas, with oil coming in as a distant second at 33%. Coal (3.7% of the total), hydro (12%), and nuclear (8.9%) provide a substantial portion of the nation's energy.

In 2019, oil constituted over half of all final consumption (TFC), at 45%, followed by natural gas (26%), electricity (22%), bioenergy and waste (5.3%), and finally natural gas. TFC is divided equally across the construction and transportation and manufacturing sectors.

The bulk of Canada's energy comes from oil and natural gas production, with total output reaching 515 Mtoe in 2020, up 29% from 2010. (See Fig. More than half (51%) of total energy output in 2020 will come from oil, which drove a 55% increase in domestic production from 167 Mtoe in 2010 to 260 Mtoe in 2020. In 2020, 30% of the world's energy came from natural gas, making it the second most abundant source of energy behind solar. The next most common source of energy generation was hydropower (6.4%), then coal (4.8%), then nuclear (5.0%), then biofuels and trash (2.6%) (: IEA (2021), IEA World Energy Statistics and Balances (database)).

Figure 5: Canada's Energy production by Source (Mtoe million tons of oil equivalent) 2000-2020



Source: IEA Statistics, 2021

The growth of domestic energy production between 2009 and 2019 was driven mostly by increases in oil exploration. In 2020, energy output dropped by 4% because to the Covid-19 pandemic. Canada's national energy output has increased in recent years, and by 2020 it will have fulfilled 179% of domestic demand (Figure 6), with oil and coal generation meeting 276% of domestic demand and natural gas production meeting 232% and 138%, accordingly. Since this is the case, Canada is able to sell a large quantity of fossil fuels, mostly to its southern neighbor the United States but also to a variety of other countries across the globe.

Canada is able to create more energy than it really needs because to its domestic fossil fuel industry. Because of this, Canada can play a pivotal role as an energy exporter.

Figure 6: Canada's Energy self-sufficiency, 2000-2020



Source: IEA Statistics, 2021

3.4.1 Natural gas

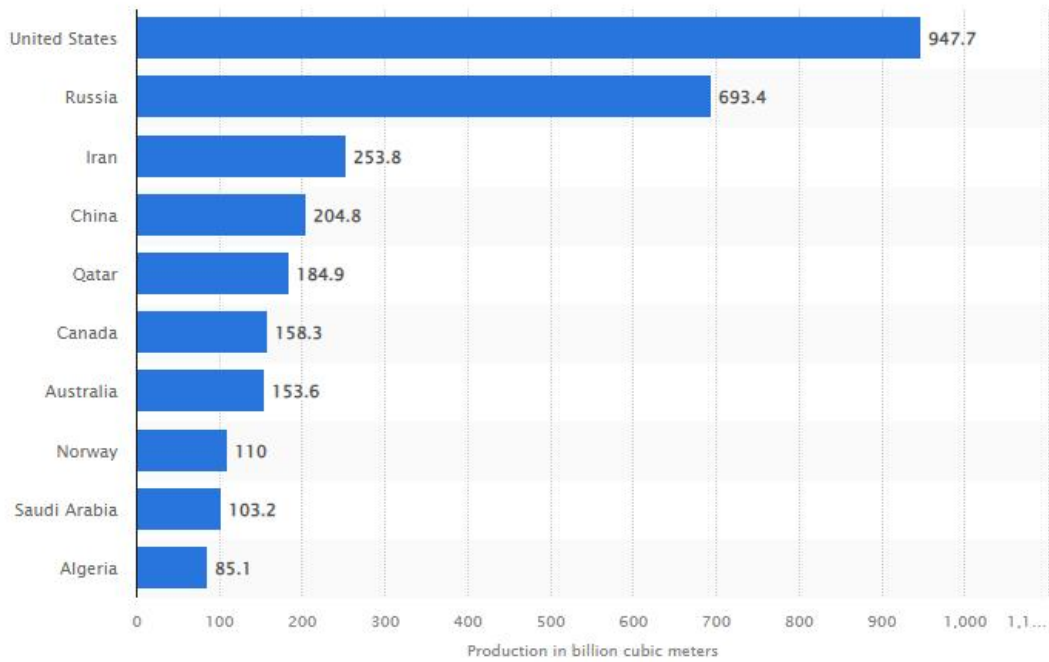
Canada is one of the planet's largest natural gas providers, with reserves that would last about 200 years at current production rates. Alberta and British Columbia account for almost all (97%) of Canada's total natural gas production.

By 2020, natural gas accounted for 39 percent of Canada's total energy supply, up from 29 percent in the year 2000. Even if natural gas demand growth is slow or even reverses, Canada expects it to play a transitional role in the global energy balance over the next several decades as it strives to achieve its own zero-net-energy goal.

In 2020, Canada ranked sixth globally in natural gas production, behind only the United States, Russia, Iran, Qatar, and China (bcm) (Figure 7). Alberta and British Columbia account for almost all (97%) of Canada's total natural gas production. Natural gas extraction in Canada came from conventional sources (29%), while unconventional ones (71%), such as coal bed methane, shale, and tight gas, were responsible for the rest (OEC,2022).

The vast bulk of Canada's natural gas trade with the U.S. is comprised of relatively tiny imports from a handful of other countries through the Canaport LNG import facility in New Brunswick, including Trinidad and Tobago, Angola, Qatar, and Norway.

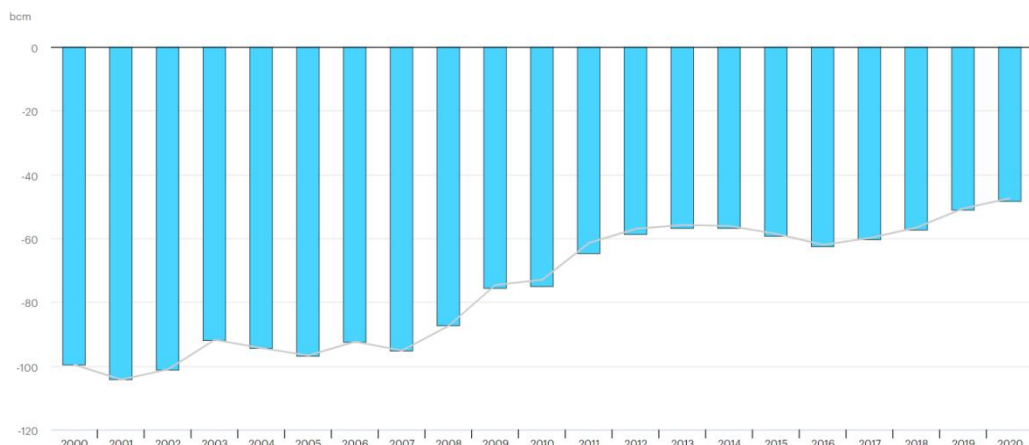
Figure 7: Leading countries based on natural gas production in 2020(in billion cubic meters)



Source: Statista, 2022

Canada bought 24 bcm total in 2020, nearly completely from the United States, while exporting 71 bcm to the United States. In 2020, Canada will net export 48 bcm, or about 5% of the total 869 bcm US natural gas consumption. The volume of global gas trade has decreased in recent decades; Canada's net exports were 104 billion cubic meters in 2001, 73 billion in 2010, and 47 billion in 2020 (Figure 8).

Figure 8: Natural gas net exports in Canada, 2000-2020 (United States)



● United States ○ Net trade

Source: Statista,2022

The number of cubic meters of natural gas used annually has risen from 92 in 2000 to 133 this year. Most of the recent demand rise has been the result of the large growth in the energy sector demand, especially for gas used to create steam required in different Canadian oil sands production activities and other industrial activities. The need for gas condensates, which are generated along with condensates and utilized as diluents in Canada's oil sands sector, has led to a rise in natural gas output (BCOGC,2020).

Natural gas use in Canada is highly seasonal, with the colder months seeing the highest peaks in usage. The residential and commercial sectors are mostly to blame for seasonally, with the summer months seeing the lowest demand because of the widespread usage of natural gas for domestic purposes. Since natural gas is the primary warming source for half of Canadian houses, wintertime need is often twice as high as summertime demand. Canada's domestic gas supply is supplemented by imports and gas storage, which are filled during the non-winter months when production is greater than demand (CER, 2020).

Market Structure

The natural gas market in Canada has been completely liberalized. Private and international capital may invest in Canada's natural gas industry, and the natural gas commodity price influences this decision.

Gas pricing in Canada was deregulated in 1985, thus prices now reflect the free market. United States and Canadian citizens are able to easily pass into each other's territory owing to the interconnected gas transportation networks in the region.

Pipeline tariffs set by regulators are based on the outcomes of commercial negotiations among purchasers (like local distribution enterprises) and sellers (like production corporations) to determine the flows of natural gas transmission pipes. The "rules of operation" of the piping system are outlined in the tariff, and they include topics like shipper intake and off-take

requirements, daily balancing, and gas quality. It is the duty of particular pipeline firms to ensure that the pipelines' loads are balanced, and that this is done in accordance with rules for shippers that include things like non-discriminatory third-party access and penalties for noncompliance. Because of this, it is the shippers' responsibility to arrange for storage or other balancing services as required to keep the pipelines balanced (the input and outflow from each shipper has to be balanced).

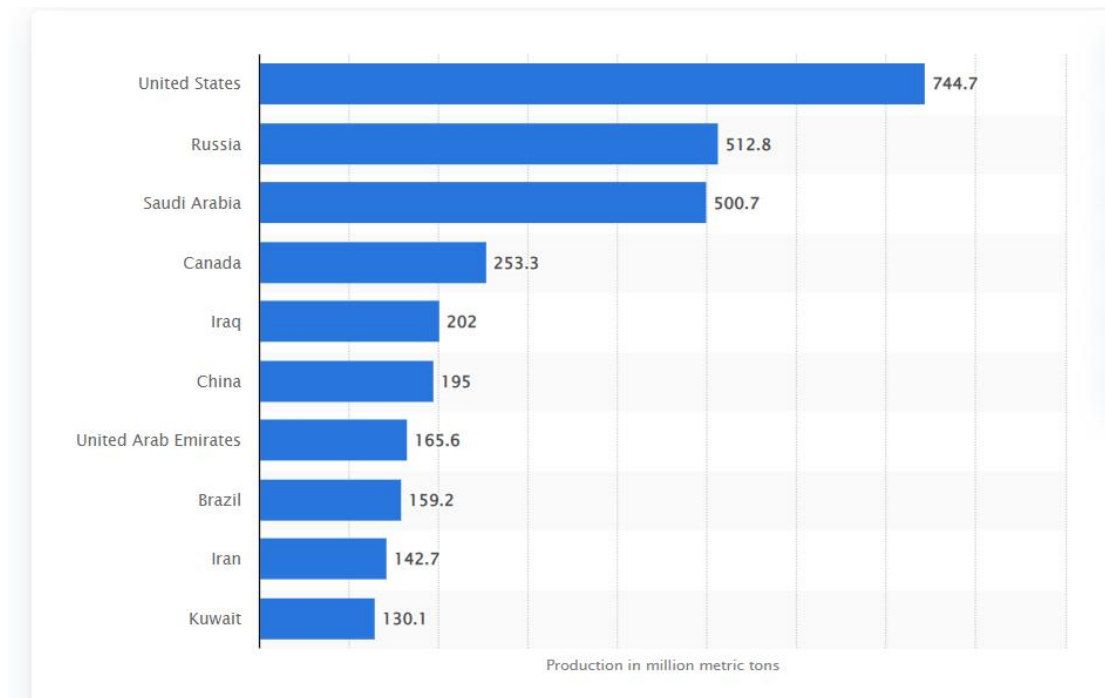
In Canada, private businesses that have the only right to distribute gas in a certain area are in charge of managing the distribution of natural gas. Distribution businesses are subject to provincial regulation. With hundreds of producing businesses, Canada's upstream market is extremely competitive. But as of the end of 2019, the top 10 businesses produced 47% of all the natural gas in Canada. The effects of COVID-19 are also causing a wave of industry consolidation.

To major end users like gas utilities and industrial consumers, some natural gas producers sell gas directly. In order to sell gas on the wholesale gas market, many producers sell their gas output to gas marketing and trading firms. Along with certain banking organizations, major gas marketers and traders in Canada include BP Canada Energy, Shell Energy North America, Navicomm, and Direct Energy. The primary means of natural gas transportation is through vast pipeline networks. Natural gas pipelines are run by five major corporations in Canada: Enbridge Inc., TC Energy, ATCO Pipeline, TransGas Ltd., and Brookfield Infrastructure Partners (Natural Resources Canada,2021).

3.4.2 Oil

Canada's continued growth as a major oil producer has solidified the country's status as a leading crude oil exporter. Major new oil sands projects and the addition of light condensates to bitumen have been credited for much of the production growth. Additional crude oil production has been allowed to be exported from Canada since local demand for refined petroleum products has remained consistent. Most of Canada's oil exports go to the United States because American refineries are equipped to handle heavier crude levels.

Figure 9: Leading crude oil-producing countries in 2020(in million metric tons)



Statista, 2022

In 2020, Canada produced 253 million metric tons of oil, making it the fifth-largest oil producer in the world.

Canada is a significant crude oil producer and exporter, and it has the third in the world oil reserve, at 166.7 billion barrels (Figure 9). Ninety-seven percent of its reserves come from oil sands, while the remaining three percent come from traditional sources such tight oil and offshore reserves. Alberta is responsible for the vast bulk of output, along with Saskatchewan and the seas off the coast of Newfoundland and Labrador. The incremental production cost for oil sands is acceptable in relation to upfront costs, with the majority of operations capable to produce positive cash flows at a West Texas Intermediate (WTI) oil price slightly under USD 40 per barrel.

Consequences to 2020 output from the Covid-19 pandemic. Canadian exporters halted just over 1 mb/d of output in the second quarter of 2020, with oil sands activities accounting for almost half of that total. Oil sands production was renewed online gradually throughout the course of the second half of 2020, while traditional oil output trailed behind, resulting in a 4.2% decline in production for the year. By the end of 2020, output had returned to pre-pandemic rates.

In 2020, total imports of feedstocks, NGLs, and oil into Canada amounted to 788 kb/d. In 2020, the United States was Canada's primary source of crude imports (at 80%), followed by Saudi Arabia (10%) and Nigeria (3%) (CER,2020).

Canadian crude oil exports have almost doubled over the last decade, thanks mostly to an uptick in oil sands production. In 2020, it exported a total of 3.7 mb/d of crude, NGL, and feedstock, nearly 75% of which was heavy crude (bitumen). However most Canada's oil exports go to the United States, where refineries in the Midwest and Gulf Coast have residual coking equipment to process heavier crude grades. As production growth has outpaced advances in pipeline takeaway capability, Canada has increasingly relied on rail to transport its crude oil exports to the United States (OEC, 2022B).

Market Structure

As a market-based industry, the oil industry in Canada is reliant on private firms to make investment choices and advance oil resource development. Canada's oil industry may be broken down into the following broad categories: exploration and production, refining, midstream transportation and storage, and wholesale and retail. Many companies choose to specialize on just one or two of these areas, however there are exceptions.

The concentrated, highly specialised oil sands business is dominated by large, profitable Canadian producers. Imperial Ltd., Cenovus Energy, Suncor Energy, and Canadian Natural Resources Ltd. are four major corporations with a primary emphasis on oil sands (CNRL). These four companies control almost 70% of Canada's oil production, 85% of its oil sands output, and 85% of its oil shale output. Fifteen percent of oil sands production is owned by smaller local businesses and international oil giants.

Suncor, Imperial, and Cenovus (after its merger with Husky is complete in January 2021) all have fully integrated business models including upstream production, downstream refining, and marketing, whereas CNRL exclusively concentrates on upstream production (Cass,2012).

To this day, Imperial Oil continues to be the largest of Canada's ten refinery companies, supplying over a quarter of the country's oil products via its

industrial and commercial activities and retail brands, Esso and Mobil. Suncor, Irving Oil, Valero, and Shell round up the top 5, accounting for the remaining 80% of Canada's refining capacity with Imperial.

As of 2019, 67 firms operated 11,937 retail stations in Canada under 93 retail brands, with Esso accounting for 15%, Suncor for 12%, and Shell for 11%.

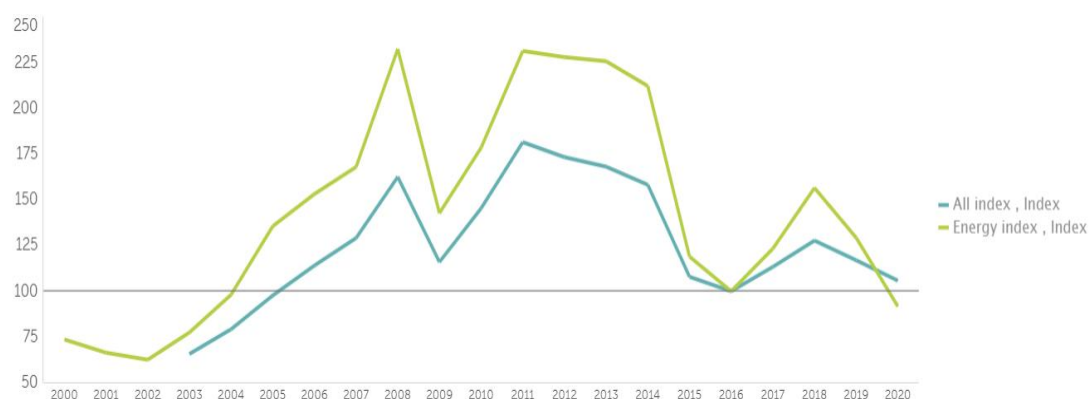
3.5 Resource Curse Theory and the Canadian Economy

Among the world's greatest economies, Canada's is extremely developed and prosperous. In 2020, the country's annual GDP was valued at \$1.65 trillion in current USD. Since then, Canada's economy has grown to become the ninth biggest in the world (World Bank,2020). One-third of Canada's Gross Domestic Product comes from exports and imports, making international trade crucial to the country's economy.

Three of the most important trading partners for the nation are the United States, China, and the United Kingdom. Construction, leasing, and real estate management contribute the most to GDP, followed by manufacturing and mining, quarrying, and oil and gas exploitation (Statistics Canada,2020). Examining critical economic figures between the years 2000 and 2020 is vital for grasping whether or not the Resource Curse phenomena holds true for the Canadian economy.

Market and real prices for non-fuel commodities and petroleum are shown in US dollars by the Primary Commodity Price System. The weekly average of commodity and energy costs. (The World Bank Group) Figures 10 and 12 show the results of this comparison.

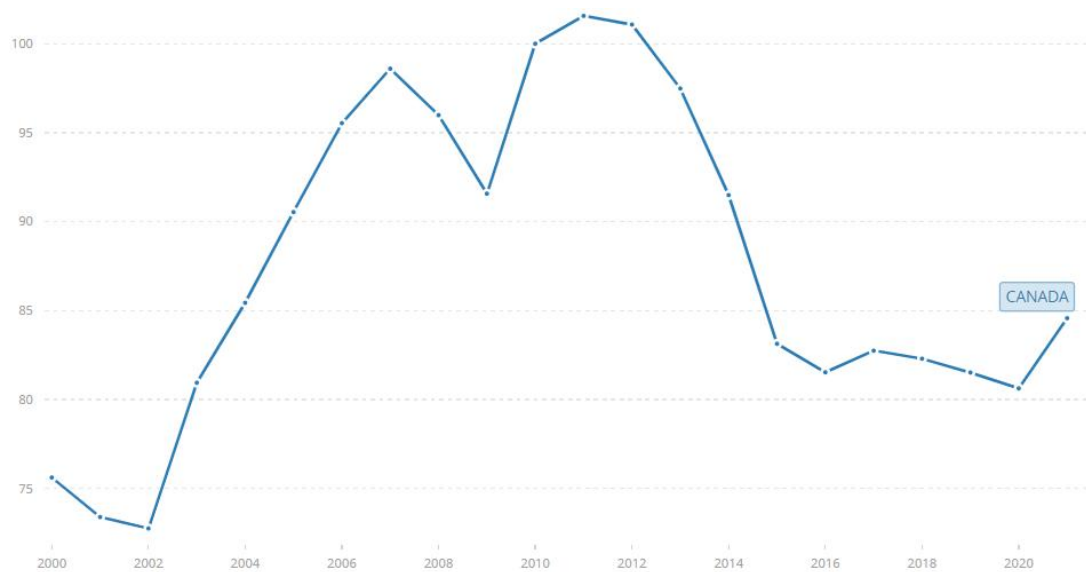
Figure 10: Primary Commodity Price System, All Index, Energy Index (2016=100)



Source: International Monetary Fund,2021

To calculate the real effective exchange rate, we divide the nominal effective exchange rate (a measure of a currency's value against a weighted average of many foreign currencies) by a price deflator or index of expenses (International Monetary Fund). From 2002 until 2012, the Canadian Dollar grew at an astounding pace, but then the effects of the Global Financial Crisis of 2009 started to manifest in the Canadian Dollar's exchange rate. The Canadian dollar followed a consistent path until 2019, when an uptick was seen (Figure 11).

Figure 11: Real Effective Exchange Rate Index (2010=100)



Source: International Monetary Fund, 2021

Figures 10–13 show that the Canadian economy was not significantly affected by the rise and fall of crude oil prices. When compared to the movement of crude oil prices, the Canadian dollar followed a distinct path. Since 2008, oil prices have dropped from a high of \$140 in 2008 to a low of \$79 in 2011. However, the real value of the Canadian dollar remained quite high. Our research tells us that the Canadian dollar followed a path opposite to that of the spot price of crude oil. Natural resources are the primary focus of Canada's mining, quarrying, and oil and gas extraction businesses.

Although oil and gas extraction account for the vast majority of activity, coal mining and the mining of other metals including gold, silver, copper, nickel, and others are also important parts of the industry. In this sector, you may find the mining and quarrying of stone, sand, gravel, clay, and ceramics, as well

as the mining and quarrying of potash. The Canadian government estimates that the industry's GDP, which employs around 190,000 people, expanded by 15.1% in the year ended in 2021 (Statistics Canada).

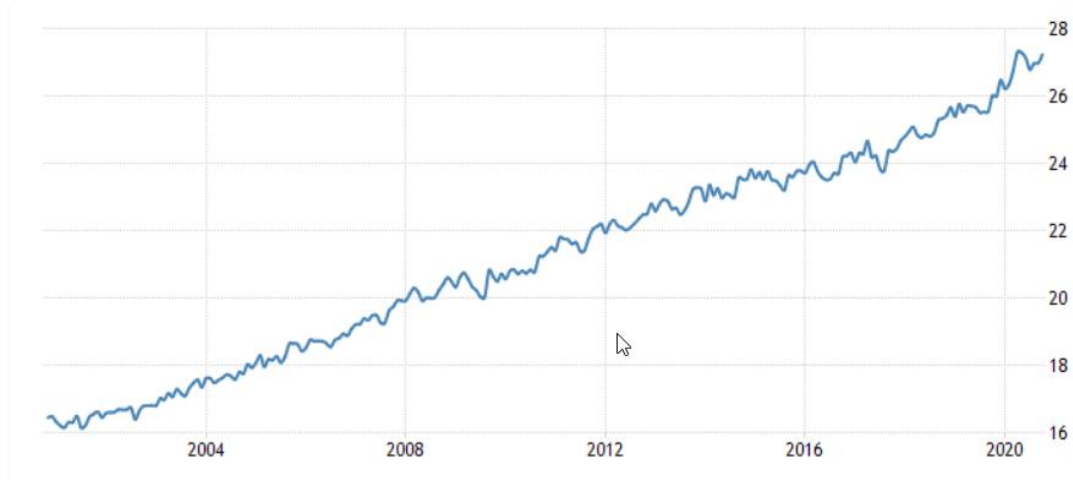
Figure 12:Crude Oil Spot Price Source (USD/Bbl)



Source: Trading Economics,2022

The following figures 13- 15 robust our argument, that Canadian Economy is not a “victim” of Resource Curse Theory. Canadian hourly average wage has been on an impressive continuous increase from 2004. It has been unaffected from the fluctuations of the spot prices of crude oil.

Figure 13: Canada Hourly Average Wage (Canadian Dollar)



Source: Trading Economics, 2022

Figure 14: Exchange Rate US Dollar-Canadian Dollar 2000-2020

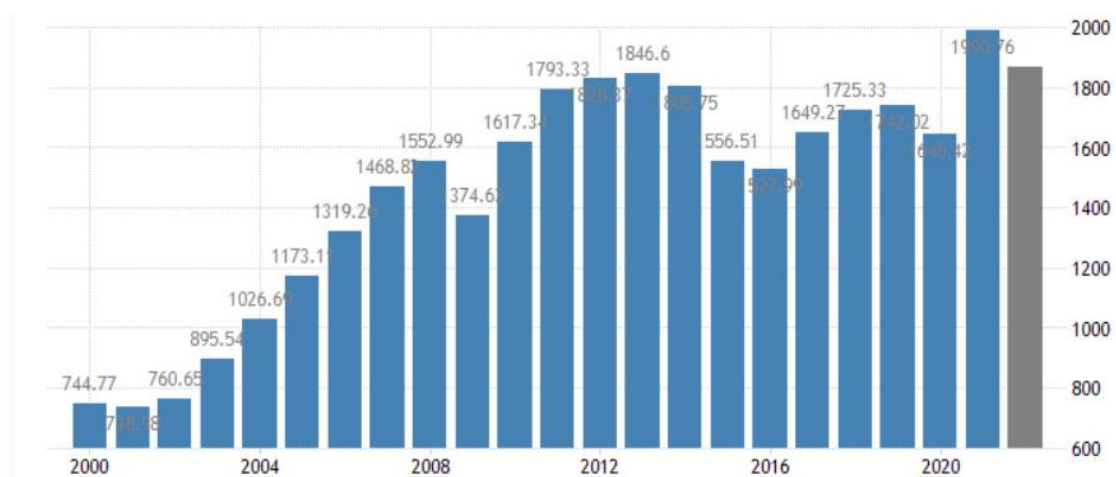


Source: Trading Economics, 2022

The resource curse phenomenon seems to have no direct consequences for the Canadian economy. Comparing figure 12 and figure 14, we can clearly

observe that the exchange rate of Canadian Dollar with the US dollar had a small decline mainly from the 2008 economic crisis, but not in correlation with the 2008 oil price crash. The small decline of the exchange rate to US Dollar did not lead to an increase in inflation (Figure 15). Despite reaching the all-time low of December 2008 for the price of 48 US dollar per barrel the exchange rate had a different course (Figure 14). During this period, we have a maintenance in the exchange rate, which has not been harmed by the drop in oil prices. The above facts testify to the minimal effects of the resource curse on the Canadian economy. The presentation of Figure 14 reveals that compared to the fall in the price of oil over the period 2009-2015, Canada's GDP has followed an upward trend. The exception is the year 2009, where we observe a contraction in GDP as a result of the 2008 economic crisis.

Figure 15: Canada GDP per Year 2000-2020



Source: Trading Economics, World Bank, 2022

Figure 16: Canada Inflation Rate



Source: Trading Economics, 2022.

3.6 Conclusions

We came to the conclusion that Canada had successfully "escaped" the resource curse after doing the analysis in this chapter. For resource-rich nations like Canada, large-scale natural resource development presents both potential and challenges. Canada has an advantage over countries that are highly specialized in one or more resource sectors due to its broad and diverse array of resources. Canada diversifies its energy portfolio by making investments in various energy sources and working toward the 2050 net zero emissions objective while utilizing the economic rent from oil and natural gas. They can establish and maintain a national consensus in favor of using rents to boost institutional and human capital as well as physical investments to diversify national capital. Diversification of the economy offers advantages. The ability to expand on the resource base to develop upstream, downstream, or horizontal linkages with other businesses may be limited for a variety of reasons. This may involve putting an emphasis on necessary infrastructure and skills. It might not necessitate a very picky industrial policy

The Canadian government has released plans and legislation to help it achieve its short- and long-term commitments to reduce emissions. Canada committed in 2015 to the Paris Agreement to reduce its greenhouse gas emissions by 30% below 2005 levels by 2030. In order to surpass Canada's 2030 emissions reduction target and put the country on a course to reach net zero emissions by 2050, the federal government pledged in December 2019 to bolstering current GHG reduction policies and introducing new ones. Canada can diversify even more by utilizing the financial rent from oil and natural gas to invest (even more) in nuclear and renewable energy sources. Canada has achieved a significant penetration of renewables in its power industry thanks to its abundant renewable energy resources, especially hydro and wind.

CHAPTER 4 Analysis of Saudi Arabian Economy

4.1 Introduction

The goal of this chapter is to investigate the existence of the resource curse phenomenon in the Saudi Arabian economy, in light of International Political Economy's economic nationalism. As a result, this chapter will present some introductory information about Saudi Arabia's history, intertwined with the trajectory of oil and natural gas production. Then, a review of macroeconomic fundamentals, as well as an examination of general economic statistics, will be conducted to determine if Saudi Arabia is subject to the resource curse.

4.2 Historical Analysis and Natural Resources

The Arabian Peninsula in Western Asia is home to the Kingdom of Saudi Arabia (KSA), also referred to as Saudi Arabia. With a land size of over 2,150,000 km² (830,000 sq mi), it is the fifth-biggest country in Asia and the largest in Western Asia. It is also the second-largest Arab country. On the west, it is bordered by the Red Sea, Jordan, Iraq, and Kuwait; on the east, by the Persian Gulf, Qatar, and the United Arab Emirates; on the southeast, by Oman; and on the south, by Yemen. Off the east coast sits the island nation of Bahrain. Gulf of Aqaba in the northwest divides Saudi Arabia and Egypt. Dry desert, lowland, steppe, and mountains make up the majority of Saudi Arabia's topography. The only country that has coasts on both the Red Sea and the Persian Gulf is Saudi Arabia. The largest city and capital of Saudi Arabia is Riyadh. The two holiest cities in Islam, Mecca and Medina, are located there.

Saudi Arabia is governed by a unitary absolute monarchy founded on Islamic principles, with the King acting as both the head of state and the head of government. Before making important decisions, the King consults with the Council of Ministers and the nation's traditional elites. The majority of critics describe Saudi Arabia's leadership as autocratic. The Saudi Basic Law

displays a number of characteristics of what is typically known as a constitution in other countries. However, because it is based on Islamic law (Shari'a), the Qur'an is accepted as the country's official constitution. The Allegiance Council will elect the future King and Crown Prince. The next King and Crown Prince will be chosen by the Allegiance Council. Every adult has the right to speak to the king directly, participate in the majlis, the customary tribal assembly. The powerful Al Saud royal family, which controls the government, has occasionally split into rival factions and been ripped apart by internal strife. The primary legally recognized political actors in the government are family members. There is not a lot of political action going on outside of the royal family. One of only two nations, along with Vatican City, without its own legislative body is Saudi Arabia (Bandow, 2020).

Although Saudi Arabia is an absolute monarchy, the Basic Law of Saudi Arabia, which was passed by royal decree in 1992 and serves as the country's de facto constitution, stipulates that the king must abide by Sharia, or Islamic law, and the Qur'an. The Qur'an and the Sunnah are acknowledged as the de facto laws of the nation. The Qur'an and Sunna are still open to interpretation, and there is no binding written constitution. Even though its authority has drastically diminished recently, this is being carried out by the Council of Senior Scholars, the Saudi religious establishment. King Salman, who assumed the throne on January 23, 2015, is the head of state of Saudi Arabia. The Saudi government is the seventh-most autocratic of the 167 nations ranked by the Democracy Index since neither political parties nor national elections are permitted there. The royal family is in charge of the government (Champion, 2003).

Saudi Arabia is encouraging the growth of the private sector in order to diversify its economy and hire more Saudi nationals. The nearly 6 million foreign workers contribute to the Saudi economy, particularly in the oil and service sectors, but Riyadh is also seeking to reduce unemployment among its own nationals. Saudi authorities emphasize the need to hire its large youth population (Central Intelligence Agency, 2022).

Tribalism is prevalent among Saudi Arabia's Arab citizens, who make up the majority of the country's population. However, more than 30% of Saudi Arabia's population is made up of non-citizens. According to a random survey, the majority of foreign nationals living in Saudi Arabia are from Arab and

subcontinental countries. Many Arabs from neighboring countries—particularly Egyptians— are employed in the country since the Egyptian community has expanded since the 1950s. Asian immigrants also make up a sizeable portion of the population; they are mainly from Syria, Yemen, Indonesia, Pakistan, Bangladesh, and India.

Saudi Arabia's economy is based mostly on oil, and the government has strong regulations governing this sector of the economy. It ranks as the leading exporter of petroleum, owns 16% of global proved petroleum reserves, and participates actively in OPEC. The petroleum industry accounts for over 42% of GDP, 90% of export income, and 87% of budgetary income. Saudi Arabia ranks as the third country in monthly oil production. It produces 10,225,000 barrels per day. As a consequence of the worldwide COVID-19 epidemic and the economic slump, Saudi Arabia, one of the OPEC+ agreement's core members, curtailed output in order to rebalance the global oil market, lower record-high oil inventories, and stabilize fluctuating crude oil prices in 2020. In addition, Saudi Arabia is a big producer of natural gas, ranking 8th with 112.1 billion production by cubic meter (BP, 2020).

Table 4: Top 10 Oil production Countries

Country	Monthly Production (barrels per day)
United States	11,567,000
Russia	10,503,000
Saudi Arabia	10,225,000
Canada	4,656,000
Iraq	4,260,000
China	3,969,000
United Arab Emirates	2,954,000
Brazil	2,852,000
Kuwait	2,610,000
Iran	2,546,000

Source: OECD, 2022

Table 5: Top 10 Natural gas Production Countries

Country	Produce by Cubic Meters
United States	914.6 billion
Russia	638.5 billion
Iran	250.8 billion
China	194 billion
Qatar	171.3 billion
Canada	165.2 billion
Australia	142.5 billion

Saudi Arabia	112.1 billion
Norway	111.5 billion
Algeria	81.5 billion

Source: OECD, 2022

4.3 Macroeconomic Analysis

To answer the question, whether the Saudi Arabian economy is suffering the resource curse and the Dutch disease or not, we must first analyze its macroeconomic performance. For this reason, we are going to analyze the Gross Domestic Product (GDP) for the period under study (2010-2021) as well as real GDP growth, central government debt as a percentage of GDP, the fiscal deficit or surplus as a percentage of GDP, GDP per capita and the unemployment rate.

Following a drop in oil prices/demand and COVID-19 in 2020, the Saudi economy will experience a dramatic acceleration in recovery in 2022, owing primarily to rising oil prices and increased output (hydrocarbon accounts for 35-40% of GDP).

Table 6: Saudi Arabia Macroeconomic indicators

Year	GDP (US. \$)	GDP GROWTH (as a % of GDP)	Central Government Debt (as a % of GDP)	Fiscal deficit surplus (as a % of GDP)	GDP per capita (\$)	Unemployment (as a % of total labor force)
2010	528,21 billion	5%	8,4%	4,3%	19,262\$	5,6%
2011	671,24 billion	10%	5,4%	11,5%	23,745\$	5,8%
2012	735,97 billion	5,4%	3,1%	11,9%	25,243\$	5,5%
2013	746,65 billion	2,7%	2,1%	5,6%	24,845\$	5,6%
2014	756,35 billion	3,7%	1,6%	-3,5%	24,464\$	5,7%

	billion					
2015	654,27 billion	4,1%	5,8%	-15,8%	20,627\$	5,6%
2016	644,94 billion	1,7%	13,1%	-12,8%	19,878\$	5,7%
2017	688,59 billion	-0,7%	17,2%	-9,2%	20,802\$	5,9%
2018	816,58 billion	2,5%	19%	-5,8%	24,228\$	6%
2019	803,62 billion	0,3%	22,8%	-4,4%	23,450\$	5,7%
2020	703,37 billion	-4,1%	32,5%	-7,1%	20,203\$	7,4%

Source: International Monetary Fund,2022.

The high share of hydrocarbons in country's GDP affected the country's economic performance. After a steadily growth from 2010-2019, the GDP dropped for 100 billion \$(2020) in comparison with the 2019 803,62 billion \$ GDP. The -4,1% is the result not only of the COVID-19 pandemic, but also the significant fall of the oil and natural gas demand. Saudi Arabian economy is heavily reliant on the hydrocarbons as a percent of GDP. In addition, we can notice (Table 6), the big increase in the unemployment rate of the country. For the period 2010-2019, the unemployment rate is steady in a rate around 5%-6%. In contrast, in 2020 the unemployment rate increased in 7,4%, mainly due to the economic consequences of Covid-19 pandemic.

The general unemployment rate in Saudi Arabia is relatively high, and it is notably high among women, the young, and the well-educated. A lack of appropriate public transportation, a lack of information about job availability, and a lack of professional networks for young and female employees make it expensive and time-consuming for job seekers to find positions that match their talents, and difficult for businesses to find qualified candidates (Harvard Kennedy School, 2021). One of the key elements of Saudi Vision 2030 is the decrease of unemployment.

Saudi Vision 2030 is a plan framework aimed at diversifying the Saudi economy and expanding public service areas such as health, education, infrastructure, recreation, and tourism. Increased economic and investment activity, non-oil foreign trade development, and portraying the Kingdom in a softer, more secular light are among the key objectives. It also implies increased government military spending as well as the production of weapons and munitions.

Saudi Arabia has a fixed exchange rate system that is pegged to the US dollar. Since June 1986, the spot USD/SAR exchange rate has been steady at 3.7500, while The Saudi Arabian Monetary Authority (SAMA) provides dollars to local banks to meet the requirements of the SAMA. The peg held despite currency pressures during the low oil price period of 2015-2017. This happened, mainly, due to huge foreign exchange reserves held at the SAMA. As a result, we can notice at Table 7 the increase in the fiscal deficit to -15,8% in 2015. In addition, there is a steady increase in the Central Government Debt reaching the all-time high 32,5% in 2020.

Since mid-2014, drastically decreased oil prices have resulted in a significant decline in fiscal revenues. The fiscal balance will be in deficit from 2014 to 2020, with an average yearly shortfall of roughly -10% of GDP. Budgetary shortfalls were first nearly totally compensated by a decrease of SAMA's foreign exchange (FX) reserves. Following that, reserves remained constant at USD500 billion until the end of 2019, before plummeting to USD450 billion by the end of 2020 as a result of the immediate crisis, forcing a further drop. Since 2016, Saudi Arabia has effectively used the international bond market to meet its foreign finance needs. As a result, the national debt has increased from 2% of GDP in 2014 to almost 30% in 2020. Following 15 years of extremely high surpluses, the country's yearly current account balance switched to significant deficits in 2014-2015 as a result of the oil price downturn. The partial recovery in oil prices from 2016 to 2019 and lower Saudi import demand in the context of a lower economic growth regime shifted the current account back into surplus, before the double whammy of the global Covid-19 crisis and the renewed oil price slump in 2020 shifted the external account back into a moderate deficit of around -7% of GDP (Berk, I. and E. Çam,2020).

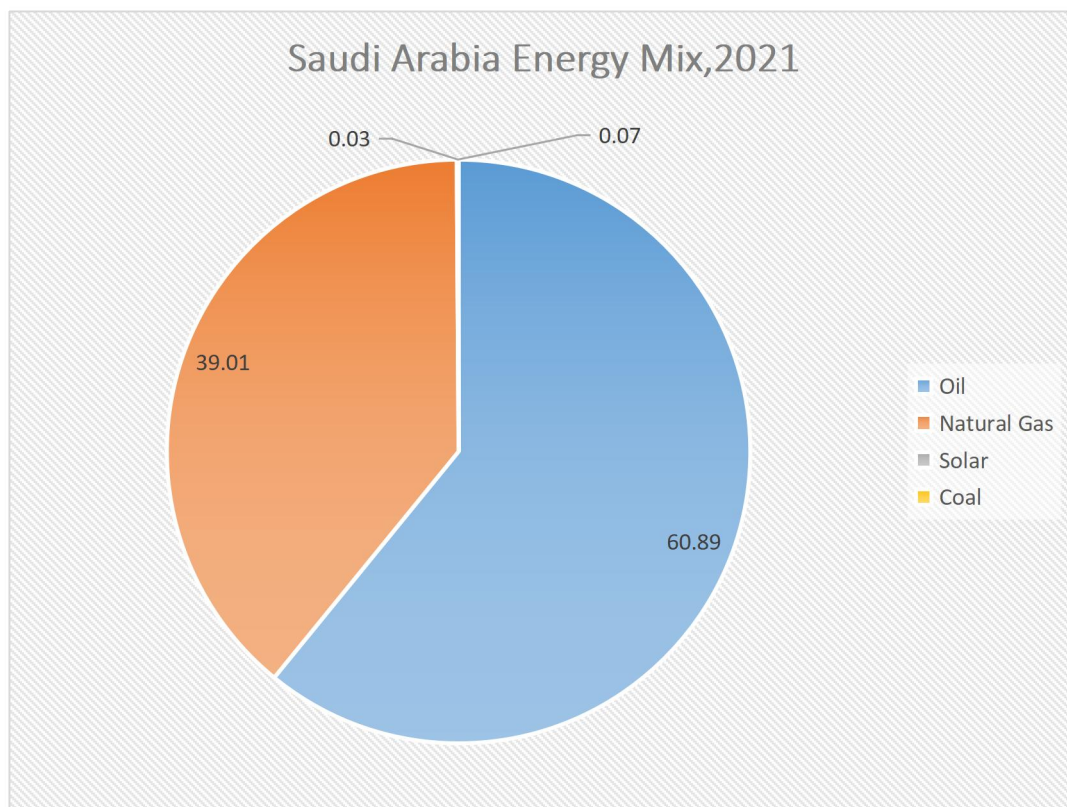
4.4 Energy Sector

Saudi Arabia's energy industry comprises the production, use, and exports of petroleum and natural gas, as well as electricity generation. Saudi Arabia is the world's leading oil producer and exporter. The Saudi economy is concentrated on petroleum; oil accounts for 90% of exports and 75% of

government revenue. The oil industry contributes around 45% of Saudi Arabia's GDP, while the private sector contributes 40%. Saudi Arabia also has the world's largest, or one of the world's largest, proved crude oil reserves (i.e., oil that can be economically extracted) (18% of worldwide reserves, or around 41 billion m³ (260 billion bbl)).

Saudi Arabia possesses one of the largest natural gas reserves in the Persian Gulf. Natural gas reserves are estimated to be at 7 trillion m³ (44 trillion bbl). Global oil output in 2009 was 4.6 billion m³ (29 billion bbl), while natural gas output was 3 trillion cubic meters (110 trillion cubic feet). However, because to the size of its domestic gas markets, it is unlikely to become an LNG exporter very soon. Saudi Arabia prioritizes upstream gas investment for local power production rather than export (BP, 2020). Saudi Arabia's energy mix is heavily dependent on natural gas and oil (Figure 17).

Figure 17: Saudi Arabia Energy Mix,2021



Source: BP Statistical Review of World Energy, 2022.

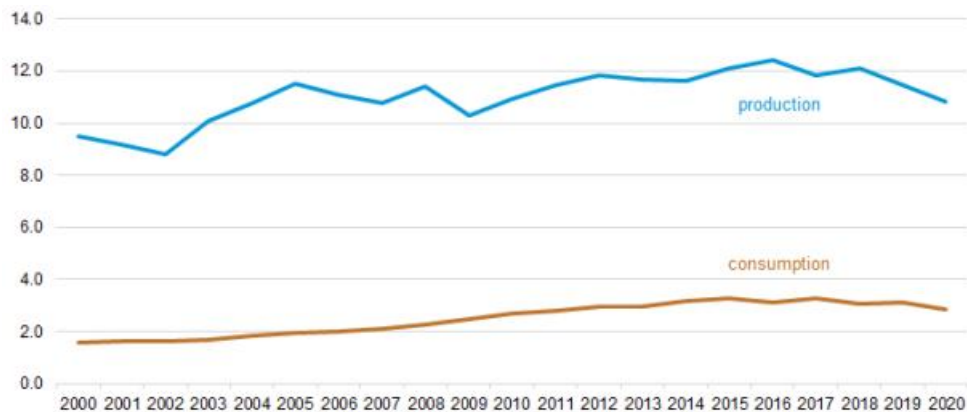
4.4.1 Oil

In 2021, Saudi Arabia consumed 10 quadrillion British thermal units of total primary energy, making it the Middle East's second-largest energy user, following only Iran, and the world's 11th-largest energy consumer. In 2020, oil accounted for 61% of total energy consumption in the country, while natural gas accounted for 39%. Since 2015, natural gas supplies and processing capacity have expanded as oil output has fallen, allowing natural gas to replace a significant portion of crude oil utilized for power generation. Solar energy and coal contributed very little to Saudi Arabia's energy consumption (BP, 2020).

According to the Oil and Gas Journal, Saudi Arabia has the world's second-largest proven oil reserves by the end of 2020, totaling 259 billion barrels, accounting for 31% of proven Middle Eastern reserves and 15% of worldwide reserves. Saudi Arabia's biggest fields, both onshore and offshore, are located in the country's east (Oil and Gas Journal, 2020).

Saudi Arabia's total oil output, which includes crude oil, condensates, and natural gas liquids, has fallen since 2018, when output peaked at 12.1 million b/d (Figure 18). Saudi Arabia produced 10.8 million barrels per day of total petroleum liquids in 2020, with crude oil accounting for 9.2 million barrels per day and non-crude liquids accounting for around 1.6 million barrels per day. Saudi Arabia, which possesses the world's largest spare crude oil capacity, has an influence on global oil markets by swiftly increasing or decreasing its oil output.

Figure 18: Saudi Arabia's Petroleum and other liquid fuel production and consumption 2000-2020 (million barrels per day)



Source: U.S Energy Information Administration (E.I.A.),2021

Due to its commitment to the April 2020 OPEC+ deal to cut oil production, Saudi Arabia's crude oil output in 2020 was 9.2 million barrels per day, a 10-year low. Prior to the OPEC+ agreement, Saudi Arabia's crude oil output had reached a new high of 11.6 million barrels per day (b/d) in April 2020. The agreed-upon reduction in Saudi Arabia, along with an extra optional 1.0 million b/d decrease for one month, resulted in crude oil output decreasing to 7.7 million b/d in June 2020. OPEC+ countries increased output by 150,000 b/d in January 2021, however Saudi Arabia offered an additional cut of 1.0 million b/d from February to April 2021 due to slow global oil demand growth and surplus global supply stocks as a result of ongoing COVID-19 control measures. Saudi Arabia's crude oil output declined to an average of 8.5 million barrels per day in the first half of 2021. The Middle East's largest oil consumer, Saudi Arabia, used 2.9 million barrels per day (b/d) of petroleum products and crude oil in 2020, down from 3.1 million b/d in 2019, owing mostly to the worldwide COVID-19 epidemic and the ensuing economic and industrial downturns (Figure 17). Petroleum and jet fuel use, Saudi Arabia's two most important transportation fuels, have dropped considerably. The increased use of fuel oil in the power industry, on the other hand, more than compensated the losses in gasoline and jet fuel (US Energy Information Administration, 2021).

Until 1973, the government received no part of the oil extracted inside its borders. In 1973, the Saudi government acquired a 25% stake in Aramco. The Saudi government bought practically all of Aramco's oil industry in 1980, giving Saudi authorities ultimate control over prices and output. The oil

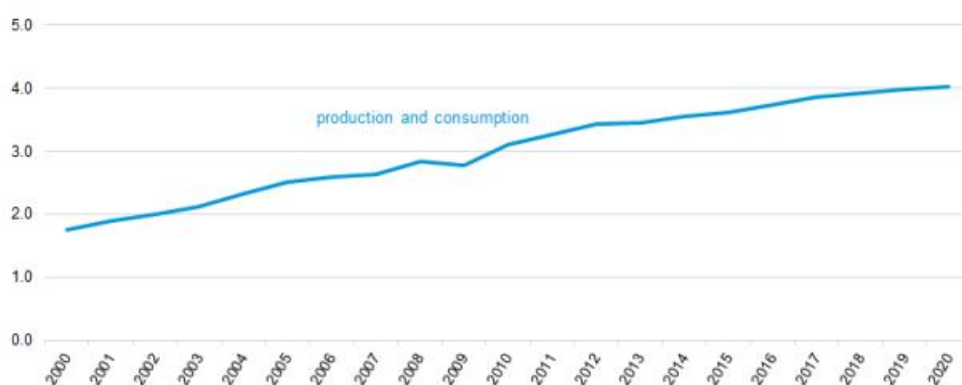
corporation was renamed Saudi Aramco in 1988. The government controls the corporation, although it also has a board of advisers and a CEO. Amin H. Al-Nasser is the current CEO and President of Saudi Aramco. The headquarters of Saudi Aramco are in Dhahran, although the company's operations are global, spanning exploration, production, refining, chemicals, distribution, and marketing. Every part of the business' activities is supervised by the Saudi Arabian Ministry of Petroleum and Mineral Resources, working in conjunction with the Supreme Council for Petroleum and Minerals. The ministry, on the other hand, has significantly greater authority in this area than the council.

4.4.2 Natural Gas

In 2020, Saudi Arabia's dry natural gas output will reach 4 Tcf for the first time, representing a 30% increase over 2010. During this time, the proportion of natural gas from crude oil production fields (associated gas) and natural gas from non-crude oil production fields (non-associated gas) varied. Domestic natural gas output growth has been boosted by the fast finding of non-associated gas resources, particularly after 2015.

However, the increase in total natural gas production slowed in 2017 due to decreasing associated gas output. Associated gas accounted for more than 80% of Saudi Arabia's natural gas output in 2016, and it is expected to account for more than half of the country's natural gas output by 2020 (Ketenci and Ayşe Sevenscan, 2021).

Figure 19: Saudi Arabia's Natural Gas production and consumption 2000-2020 (trillion cubic feet)



Source: U.S Energy Information Administration (E.I.A.) , 2021

All natural gas is met with the domestic production. Saudi Arabia imports and exports no natural gas, and domestic production meets all domestic demand. The majority of Saudi Arabia's natural gas output is used in the electrical and industrial sectors, notably petrochemicals. By 2030, the Saudi government wants to replace crude oil, fuel oil, and diesel in power generation with natural gas and renewable energy, which will likely increase natural gas consumption and investment in natural gas supply during the following few years. However, given the country's limited achievement in eliminating crude oil, fuel oil, and diesel fuel thus far, this goal will be tough to achieve.

Natural gas use varies by area in Saudi Arabia. In 2019, natural gas was utilized to create 97% and 72% of the power in the eastern and central sectors, respectively.

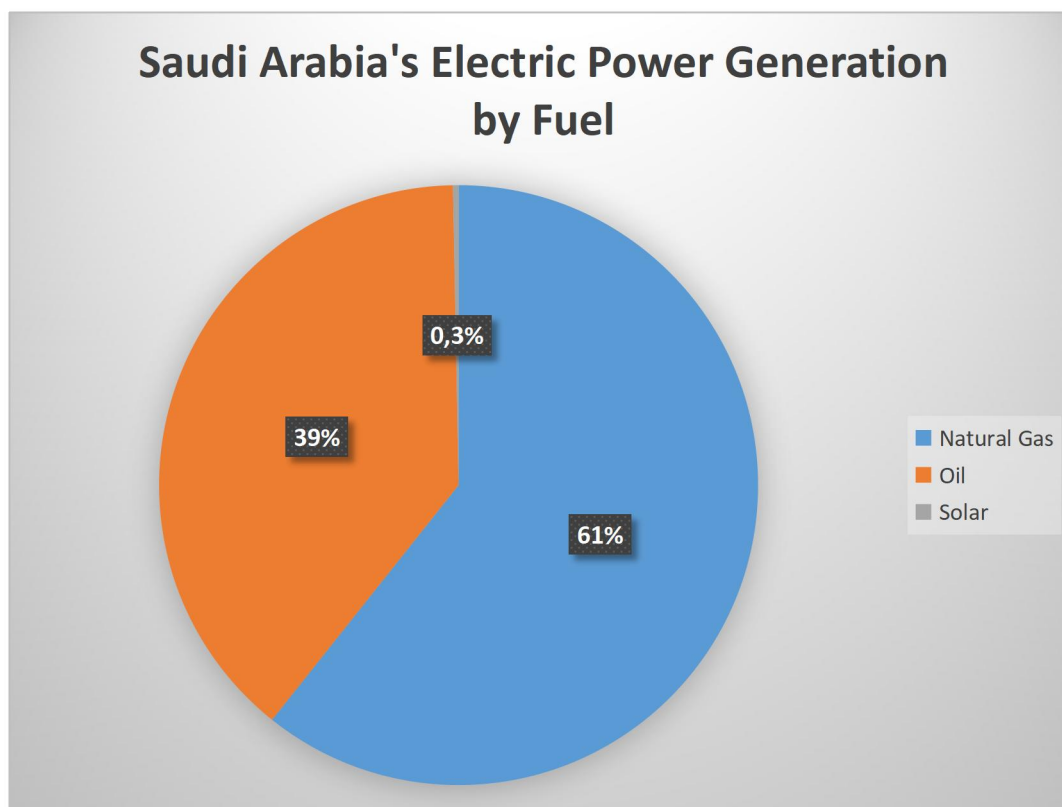
However, due to a shortage of natural gas pipeline capacity from the eastern fields, which provide the majority of the country's output, the western and southern areas rely on petroleum liquids for nearly all of their power generation. Extending natural gas pipeline and processing infrastructure to the western and southern regions may help meet rising natural gas demand in those areas while lowering oil use in the power industry (IEA, 2021).

At the Fadhili natural gas processing plant, Saudi Aramco began processing natural gas from disconnected sources in the eastern area in 2019. The reinstatement of some associated gas production that was paused during Saudi Arabia's crude oil production cutbacks, as well as the continuous increase of non-associated gas production, will determine the future growth of Saudi Arabia's natural gas supply.

Saudi Arabia generated the most power in the Middle East, with 362 terawatt-hours expected in 2019, about the same as in 2018. Power generation growth slowed considerably between 2016 and 2018, after rising at an average annual rate of 6% between 2000 and 2015, as population growth slowed, GDP growth slowed, energy efficiency and demand-side control measures were implemented, and electricity bills soared. Electricity generation declined by 1% in 2020 as a result of the COVID19 pandemic's economic downturn. Residential power use increased as a result of the

COVID-19-related lockdowns and limits, whereas commercial and government electricity sales fell (BP, 2021).

Figure 20: Saudi Arabia's Electric Power Generation by Fuel, 2020



Source: BP Statistical Review of World Energy 2021

In 2020, natural gas powered nearly all of Saudi Arabia's electricity generation (61%), followed by crude oil (39%), although the Saudi government plans to diversify electricity generating fuels in order to increase available crude oil for export and reduce carbon emissions. Natural gas's share of total power generation has expanded dramatically over the previous decade, rising from 42% in 2010 to 48% now, thanks to increased natural gas-fired production capacity backed by rising output (Figure 20). Natural gas output growth slowed drastically in 2019 and 2020, increasing crude oil use in the power sector, particularly during the high summer season. In the future years, the Saudi government wants to replace most crude oil burn and diesel-fired power facilities with natural gas and heavy fuel oil.

Although solar generation supplied just a small part of total power output, multiple utility-scale solar projects are now under construction. The Saudi government aims to build solar and wind energy power plants over the next

decade, but they must be cost competitive with fossil fuels, adhere to Saudi government energy price restrictions, and spend significantly in project development. Some sections of the kingdom are remote and disconnected from the natural gas system, and the Saudi government plans to replace some of the oil used in electricity generation with renewables, mostly solar (BP,2021).

The Sakaka Solar Power Plant Project in Al Jawf is th first renewable project to be guided by the Ministry of Energy. Independent power producers (IPPs) will receive power under a 25-year arrangement with the Saudi Power Procurement Company under the private-sector scheme. The Sakaka Solar Power Plant is made up of 1.2 million solar panels spread across 6 kilometers of land. A Saudi technical team of experts carefully picked the site to provide the best possible quality of electrical power generation. The Kingdom benefits from a range of geographical and climatic circumstances that make the use of renewable energy sources economically possible, hence supporting Saudi attempts to diversify the domestic energy mix.

4.5 Resource Curse Theory and the Saudi Arabian Economy

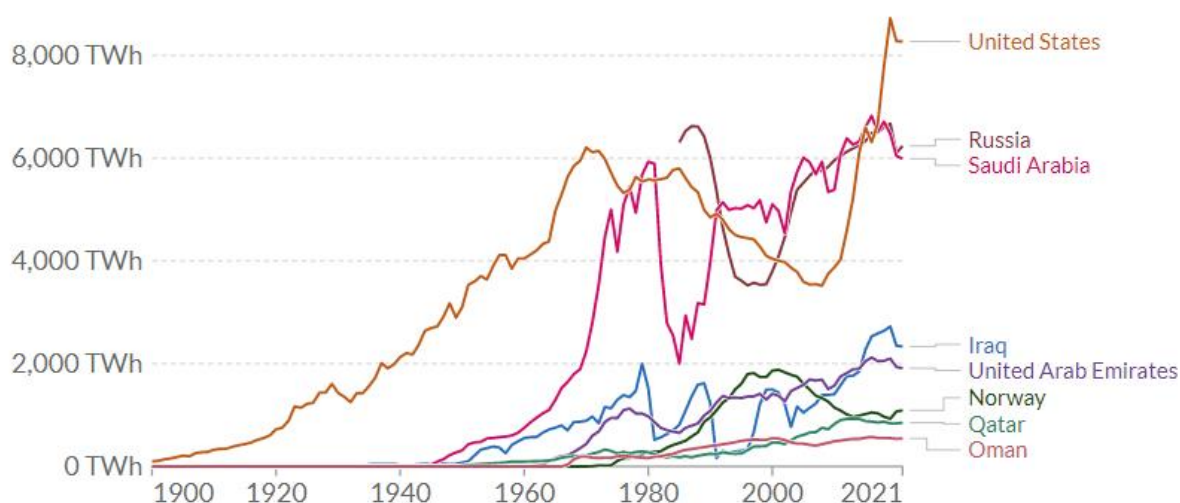
Oil has been a vital energy source since the nineteenth century. Crude oil accounted for 33% of the world's yearly primary energy consumption in 2018. (BP Energy, 2020). Both the world's oil output and consumption have been steadily increasing since the late 19th century when oil started to be employed extensively in industry. In the twenty-first century, rising demand in emerging nations has offset stagnant demand in the industrialized world. Today, oil still only receives a minimal amount of replacement, particularly in the fields of technology (transportation, chemicals), and transportation (big tankers, pipelines). This guarantees a constant demand despite changing prices. Empirical research, especially in the short term, support the world's oil demand's relatively low-price elasticity (Caldara et al., 2019). Due to its low substitutability and oligopolistic market structure, oil has provided its providers with a steady flow of cash. The second half of the 20th century was troubled

by the economic threat of "peak oil" as a result of the growing demand for fossil resources.

This concern over a negative supply shock has recently shifted to emphasize "peak demand." According to recent predictions, oil's dominance and associated criticality will dramatically drop during the next 30 years. This profound mindset shift is primarily driven by worries about the environmental impact of greenhouse gas emissions. Fracking also turned the US from an importer to an exporter of oil and gas. In addition to the pressure on prices, this has strategically cut off the US from the Middle East as a military safeguard for the world's oil supplies. In an effort to eliminate the US fracturing industry in response, Saudi Arabia launched an assault on oil prices that indirectly harmed Iran, its biggest regional rival, in its drive to modernize its industrial base.

One country that primarily depends on its crude oil reserves for economic power is Saudi Arabia. In the first ten years of the new millennium, Saudi Arabia ranked as the top oil provider. Later, the American fracking revolution overtook both it and Russia (Figure 21). Despite an absolute increase in its oil production, Saudi Arabia consequently suffered a fall in its global oil share.

Figure 21: Oil Production 1900-2021. 2022

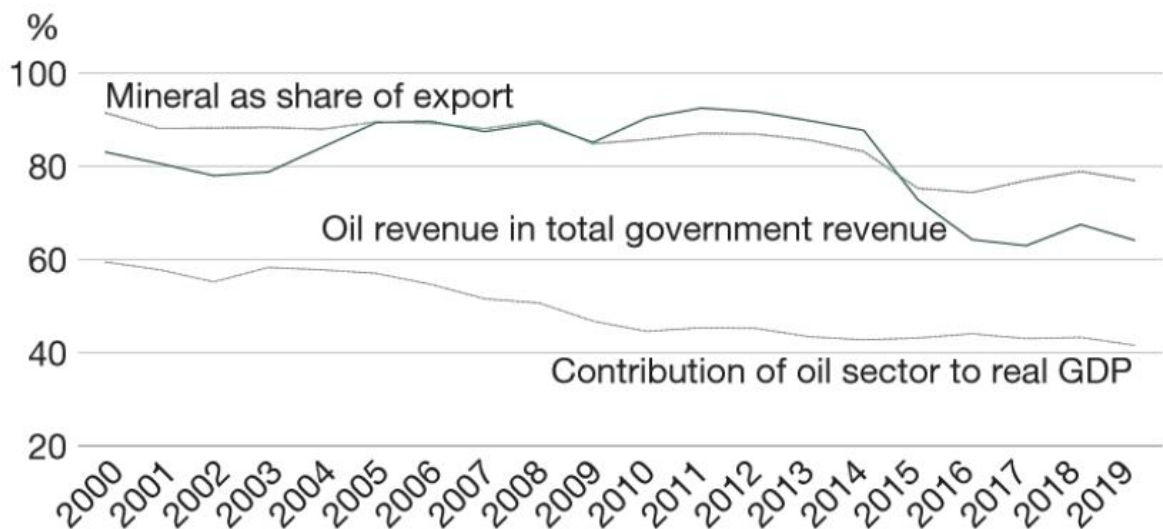


Source: Our world in Data, 2022

Saudi Arabia makes significant profits from oil given the size of its economy. About three-quarters of Saudi Arabia's tax revenue and 40% of the nation's

total GDP during the first two decades of the twenty-first century came from the oil industry (Figure 22). In 2019, oil contributed more than 40% of Saudi Arabia's real GDP and over 64.1% of the government's annual revenue. Due to its small economy and lack of industrial diversification, Saudi Arabia, which is heavily involved in the oil trade, is forced to sell the majority of its oil reserves to the rest of the globe. In the new millennium, minerals accounted for 85% of Saudi Arabia's exports and 40% on average of GDP. The huge importance of oil to Saudi Arabia's GDP highlights the ongoing problem of gradually weaning off oil dependence, which is difficult because oil is essential to the stability of the budget (Kingdom of Saudi Arabia, 2015).

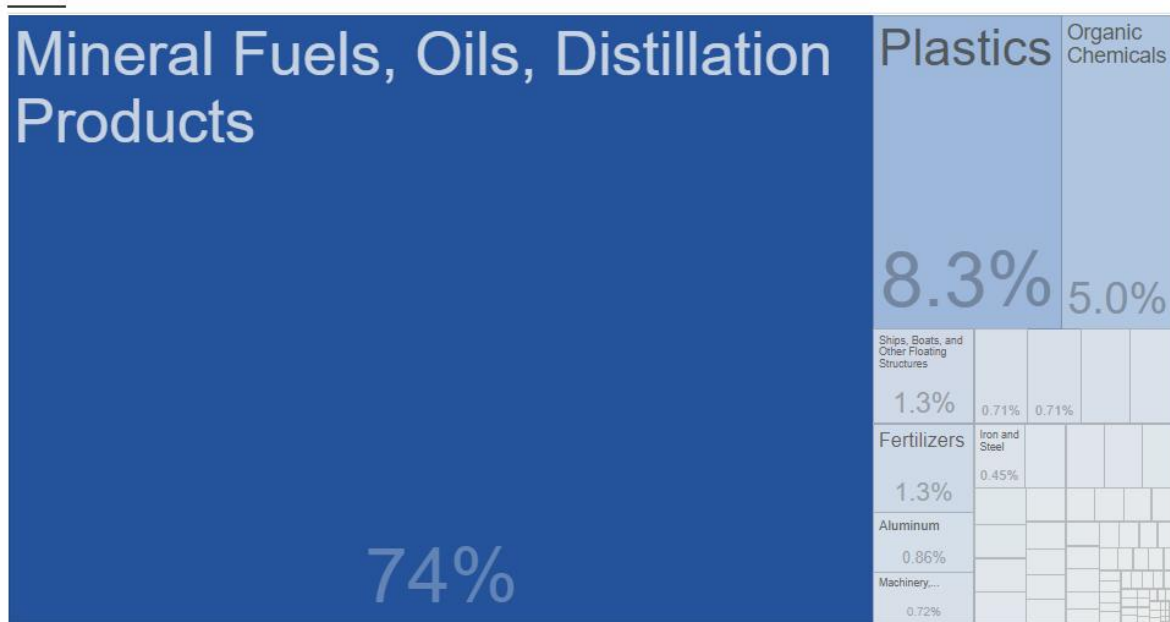
Figure 22: Saudi Arabia Oil Vulnerability 2000-2020.



Source: Intereconomics, 2022

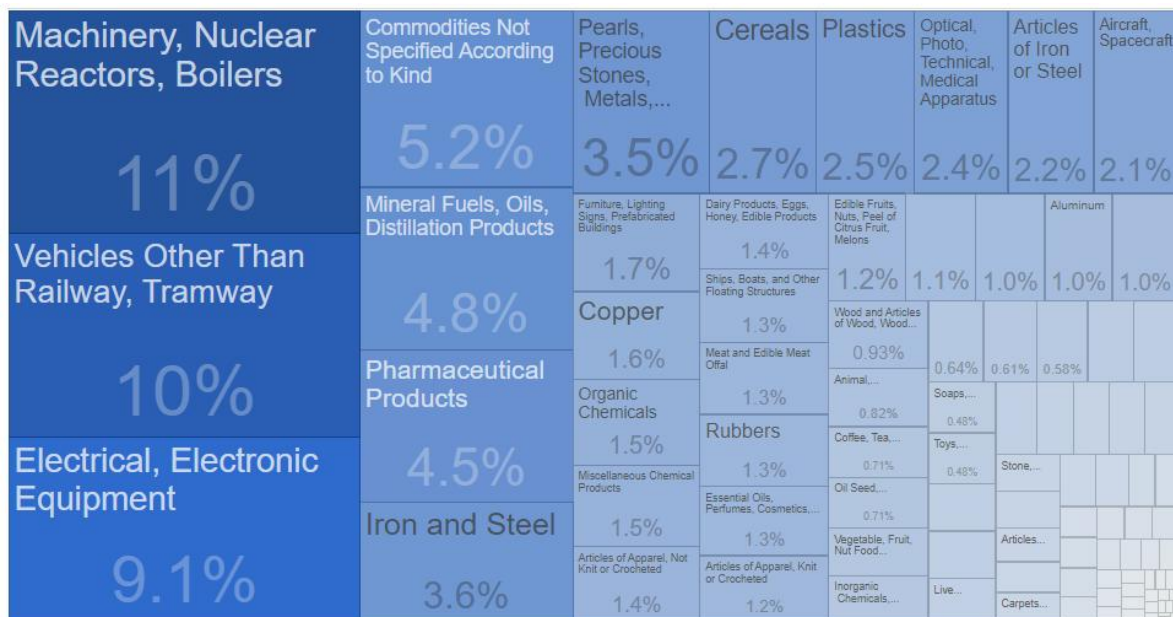
Saudi Arabia's economy is heavily reliant on oil and its derivatives and may import a wide range of goods. Saudi Arabia is a highly specialized Ricardian state that mainly relies on its comparative advantage: oil, to put it simply. Exports of resources are made in exchange for goods that demand a lot of labor, money, and expertise. Intra-industry trade, which is regularly observed in countries that actively participate in global value chains, is less evident (GVCs) (Figure 23,24).

Figure 23: Saudi Arabia Exports by sector , 2021



Source: Trading Economics, 2022

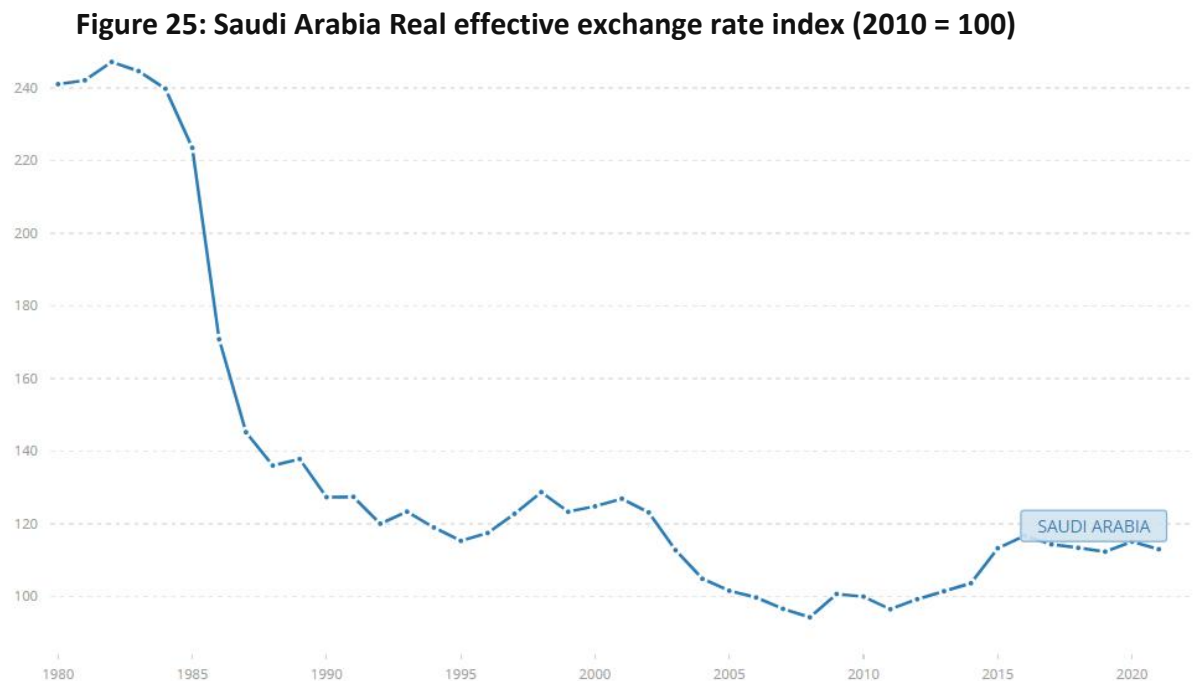
Figure 24: Saudi Arabia Imports by category, 2021



Source: Trading Economics, 2021

Overall, oil revenue has had a positive impact on Saudi Arabia's real GDP per capita. Given its small population, the Kingdom has many opportunities to invest in industrialization successfully for the benefit of its entire populace. (Alkhatlan, 2013) .

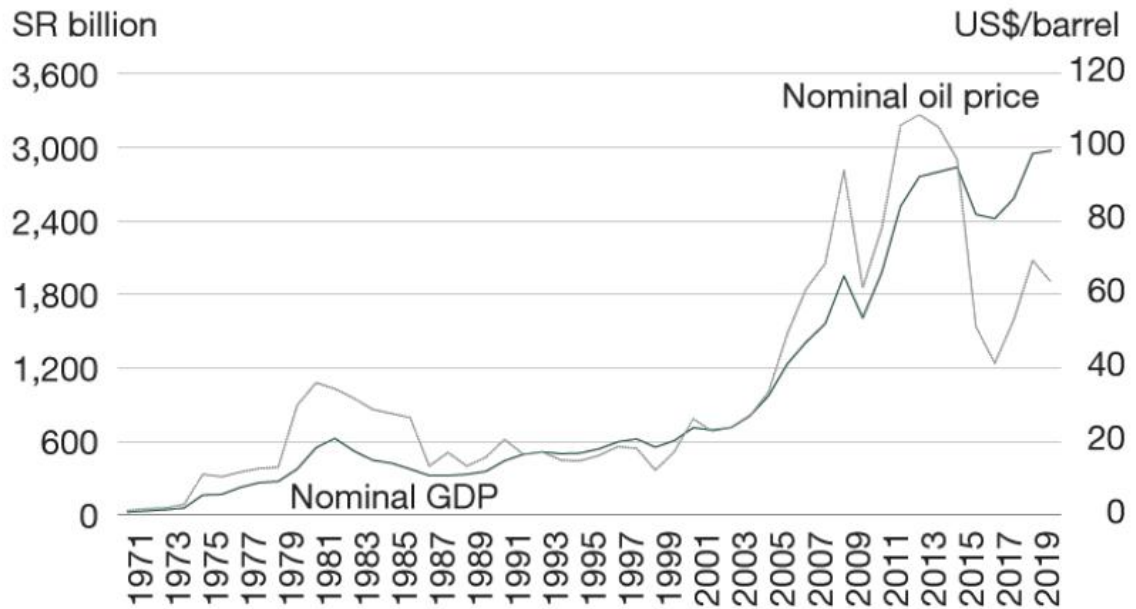
Saudi Arabia was only marginally affected by the Dutch disease following the oil boom. The Saudi riyal's real effective exchange rate was advantageous for the duration of the 1970s (Figure 25). As a result, industrial output declined, particularly in significant non-oil industries, labor prices increased locally, and industrialization was hindered. As a result, exporting became expensive and importing became inexpensive (Ahmad Bajwa , 2019). As a result, from 2005 to 2015, migrant workers accounted for about two-thirds of the whole labor force in the country.



Source: Trading Economics, 2022

Oil prices had an effect on the Iranian Revolution, the Iran-Iraq War, the Gulf Wars, and the global financial crisis of 2009. Both the COVID-19 pandemic and the oil price shocks of 2014 significantly hurt Saudi Arabia's real economy (Jawadi and Ftiti, 2019). In Figure 26 we can clearly notice how vulnerable is the Saudi Arabian Economy in the fluctuations of oil prices and how clearly its GDP affected by the fluctuations of oil prices. Saudi Arabia is clearly a country affected by the Dutch Disease, as the most part of its GDP affected by the price of oil and in the 1970s, as we illustrated before, has experienced the negative consequences of Dutch Disease in its economy.

Figure 26: Saudi Arabia's GDP and oil prices, 1970-2019, 2020



Source: Intereconomics, 2022

4.6 Conclusions

We came to the conclusion that Saudi Arabia is a victim of the Resource Curse Theory. The significant oil riches of Saudi Arabia can be used the vulnerability of Saudi Arabia economy. The oil curse on Saudi Arabia's labor markets is a result of the politically convenient largesse that oil income enables, such as affordable financing of high public sector employment and wages, transfers, and subsidies that serve to deter the adoption of market-based policies to increase Saudi employment. The long-term impact of those policies may even bring stress points that already exist to the point of collapse. The main source of GDP of Saudi Arabia are the oil revenues. The economy is vulnerable to the fluctuations of oil prices as we analyzed in this chapter.

A stabilization strategy for the Saudi economy would have to balance the expected decline in oil revenues, create the need for the economy to diversify over time, capitalize on geographic advantages, and adopt new technology. From a global perspective, such a plan should aim to stabilize rather than disrupt global financial flows. Vision 2030 encounters political and economic barriers due to rent-seeking, particularly intertwined institutions and interests that oppose a decoupling from oil.

Chapter 5: Comparative evaluation of Canada - Saudi Arabia

5.1 Introduction

Regarding the analysis that has been presented in the previous chapters on the Canadian and Saudi Arabian economies, we can clearly notice that there are two different cases regarding the management and exploitation of natural resources. In addition, an analysis of the impact on the economies and societies of the two countries was carried out.

In this chapter we will carry out a comparative analysis and evaluation of the two cases under study. The aim is to identify the similarities and differences that exist, as well as their consequences on the economies of the countries.

5.2 Saudi Arabia - Canada Comparative analysis

Based on the analysis carried out in chapters 3 and 4, the present chapter will make a comparison between the two economies. More specifically, an analysis will follow on the similarities and differences observed in the countries under study. Emphasis will be placed on the fundamental macroeconomic fundamentals of the two countries.

First, a presentation of the similarities between the economies of the two countries follows.

5.3 Similarities

1. Canada and Saudi Arabia are two countries that are very rich on their natural resources. Saudi Arabia is the third biggest producer of oil in the world, while Canada is the fourth biggest in the world. Regarding the natural gas, both countries are very rich in their production. Canada is the sixth biggest producer, while Saudi Arabia is the eighth biggest in the world.

2. The economies of the two countries are largely dependent on the oil sector, which accounts for the bulk of government revenues. Oil sector and extraction is the third biggest source of revenue for Canada's GDP, while Saudi Arabia is the biggest source of GDP.

3. Both countries have a similar rate of GDP growth. From 2010-2019 both countries have a positive rate of GDP growth, while for the year 2020 both

countries have a negative rate of GDP growth, mainly due to the consequences of COVID 19 pandemic.

4. The rate of unemployment is similar for both countries for the period 2010-2020. Canada's unemployment rate is higher than Saudi Arabia for every year under consideration, but only by a small margin.

Noting that the existence of natural resources in the two countries had different effects in each country, the differences between the economies of Saudi Arabia and Canada are presented:

5.4 Differences

1. From 2010 until 2013 the Saudi Arabian economy had a fiscal surplus as a percent of GDP. Contrary, the Canadian economy has a negative for all the years under study (2010-2020) apart from 2014 that is in perfect balance. Similarly, both countries have a negative percent of GDP for the year 2015-2022. But the main difference is that Canada has a deficit at a small percent around zero apart from the 2020, that due to COVID 19 has a record high of -14,9%. On the other hand, Saudi Arabia has a much higher deficit for the years 2014-2020.

2. There is a significant difference regarding the central government debt as a % of GDP. For the years under study 2010-2020, Canada has a much higher percentage with the record high in 2020 with 59,2%. In contrast, Saudi Arabia has much smaller percentage for the years under study. For Saudi Arabia the highest percentage is in 2020 with a percentage of 32,5%.

3. Another difference is that Canada has a heterogeneous population. Canada has three fundamental components of the multicultural society: the British, the French, and other Canadians. Saudi Arabia is a more ethnically homogeneous country, when the 90% of the population are Arab.

4. Canada has a long history of diversifying its economy and taking part as an active member of COP 27 and the commitment in the emission reduction policies. Saudi Arabia has only recently in the projection of hydrogen projects, regarding the renewable energy investments of the country, with the program Saudi Vision 2030, that was signed only in 2016.

5. The Canadian Economy has small fluctuations regarding the fall of oil prices. As we have explained above, the Canadian Economy has successfully coped with the Resource Curse Theory. In the other hand, Saudi Arabian Economy is vulnerable regarding the fall of oil prices. This is a clear symptom of the effects of Resource Curse Theory.

Chapter 6: Conclusions

This chapter will attempt to make some broad conclusions based on the examination of the economies of Canada and Saudi Arabia as well as the relationship between the availability of plentiful natural resources and overall prosperity. In light of the comparison made in chapter five, we will now go on to outline recommendations and strategies that emphasize minimizing the negative effects of having an abundance of natural resources while promoting economic and social development. Based on the theoretical approach to the resource curse and the Dutch disease conducted in chapter two on the one hand, and the analysis and comparison of the economies of the two countries under consideration conducted in chapters three, four, and five on the other hand, we can identify the key factors that contributed to the development of these phenomena.

The paradoxical phenomenon known as the resource curse occurs when nations with an excess of non-renewable natural resources suffer sluggish or even negative economic growth. The effect is most obvious when a nation starts to concentrate all of its production resources on a single industry, like mining or oil production, and neglects investment in other crucial industries. Strong exchange rates prevent the expansion of other economic sectors, especially those that are export-oriented, in countries with abundant natural resources. Since the majority of GDP is made up of natural resource profits, changes in commodity prices have an impact on growth rates.

Another hypothesis is that it is the product of governmental corruption. If a sizable portion of the nation's wealth is concentrated in a small number of industries, the government may abuse its regulatory authority by, for example, awarding lucrative contracts in exchange for bribes. An overabundance of capital and labor going to a select few industries could have a negative impact on the rest of the economy and the entire nation. Due to its attractive earnings and potential for economic growth, this new industry draws people to put their savings in it, and as a result, it grows to be a relatively affluent economic sector. Because of this dynamic, countries that rely too much on the price of a particular commodity may find it challenging to sustain economic growth over the long term.

After carefully comparing the two economies under consideration as well as their overall picture, we come to the conclusion that the aforementioned factors, which are the main pillars of the development of the phenomena of the resource curse and the Dutch disease, are strongly present in the case of Saudi Arabia.

However, with competent management and sensible decisions, the aforementioned problems can be considerably reduced, allowing the

abundance of resources to also lead to economic and social growth. The following are a few ideas for limiting and lessening the negative effects:

Initially, the resource rich countries should protect national interests, provide legal and financial structures for the extractive industry (EI) sector. Existing frameworks or contracts that breach this idea and act against the public interest must be annulled or changed in order to provide a fair deal between enterprises and national governments. In addition, they should include community and civil society representatives in the decision-making process for EI policy. The inclusion of these representatives is crucial because the resource-rich nations must do more to guarantee that their citizens benefit fully from their natural resources. Resource firms, which are typically foreign, and the nations that possess the resources inherently have competing interests. Countries desire the opposite, whereas the former want to minimize what they pay for. A higher revenue from agreements of interest might result from systems that are well-designed, competitive, and transparent. Contracts should also be clear and should state that unexpected profits won't merely go to the corporation in the event that prices rise suddenly, as they frequently do.

They should also outline how fiscal earnings from the extractive sectors will be used in short-, medium-, and long-term national and municipal budgets and development plans (for instance, to lessen the effects of exploitation on health, education, or the environment) (for example, to diversify production and rebuild sources of income in exploitation-affected areas). Governments should enact equitable treatment legislation in the distribution of EI revenues at both the national and subnational levels to ensure the sustainability of public investment in the event of significant, abrupt, or changing flows.

It is essential to employ natural resource revenue to fund development. By developing local economies and societies and utilizing all connections possible, such as local worker training programs and the expansion of small and medium-sized businesses in the country's economic structure, as well as by building infrastructure (roads, railways, and ports) to take advantage of the resources.

There should be a considerable emphasis placed on general education and the cultural formation of the populace in order for these countries to build the institutions, regulations, and laws necessary to ensure that natural resources benefit all residents.

These resource-rich nations ought to sign up for the Extractive Industries Transparency Initiative (EITI) and impose total transparency throughout the entire value chain of the industry, from licensing to contract awards outlining the government's share of profits to the point at which those profits are put toward social spending. Additionally, through national legislatures and civil society organizations, governments should promote institutions of checks and balances (CSOs). The EITI (Extractive Industries Transparency Initiative) was established by the World Bank and donor countries in 2002. The aim of the EITI is to combat the political dimension of the "resource curse" through increased revenue transparency in the extractive sectors.

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