

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Economics**



**Bachelor Thesis**

**Foreign Trade: Case Study of Natural Gas in Qatar**

**Ziyad K.M Alattrash**

**Supervisor: Prof. Ing. Mansoor Maitah, Ph.D. et Ph.D.**

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# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

## BACHELOR THESIS ASSIGNMENT

Ziyad Alattrash

Business Administration

Thesis title

**Foreign Trade- Natural Gas – the Case of The State Qatar**

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### **Objectives of thesis**

The aim of the thesis is to analyze the natural gas trade with emphasis on the economy of Qatar, in addition, the analysis with focus theoretically and practically on the impacts of natural gas foreign trade in Qatar on the economic well-being of Qatari citizens, as well as, the economic growth of the economy as a whole.

### **Methodology**

In the practical part, the thesis will use descriptive and comparative methods, to analyze statistical data about natural gas trade in Qatar, as well as the analysis of policies and events that affected the natural gas trade and the Qatari economy.

**The proposed extent of the thesis**

40 – 50 pages

**Keywords**

Foreign trade, tariff, subsidies, market turbulence, foreign investment

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**Recommended information sources**

Building an Import/Export Businesses, Kenneth Duane Weiss, 9780470120477

Global Trade Policy: Questions and Answers, Pamela J. Smith, 978-1-118-35765-1

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

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**The Bachelor Thesis Supervisor**

prof. Ing. Mansoor Maitah, Ph.D. et Ph.D.

**Supervising department**

Department of Economics

Electronic approval: 23. 11. 2020

**prof. Ing. Miroslav Svatoš, CSc.**

Head of department

Electronic approval: 24. 11. 2020

**Ing. Martin Pelikán, Ph.D.**

Dean

Prague on 12. 03. 2021

## **Declaration**

I declare that I have worked on my bachelor thesis titled "Foreign Trade: Case Study of Natural Gas in Qatar" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 15/3/2021 \_\_\_\_\_

Ziyad Alattrash

## **Acknowledgement**

I would like to thank I would like to thank and appreciate **prof. Ing. Mansoor Maitha, Ph.D. et Ph.D.**, for his efforts, guidance, and supervision during the time in which I was writing this thesis. As I would like to thank my parents and friends for their support.

**Foreign Trade Theories, Policies, and Influence:** Case Study of Natural Gas Trade in the  
State of Qatar.

## **Abstract**

On macro level, trade becomes a major issue for states and individuals. The need for trading on international level has pushed states to use it as sanctions against each other.

In this paper we attempt to inspect the influence of “Natural Gas” on Qatari economy, in context of “Foreign Trade”. The main idea is to examine the strength of an economic model that depends on “Natural Gas” trade as one of its main two greatest GDP generators: crude oil and natural gas.

The construction of this thesis is built on two main pillars: Literature Review, and one Case Study (Qatar). The Literature Review focuses on the terms “foreign trade” and “natural gas”. The preliminary chapters discuss “foreign trade” definition, types, policies, theories, and influences in context of best of interest for economy. The latter chapters of the literature review discuss natural gas market, prices, and factors affecting its trade. It also examines the main actors of “Natural Gas” trade on international level, and the influence of this trade on states, people, and economies, in general.

The second pillar of the paper is a case of study of state that trades with natural gas worldwide. Qatar is considered the third whale of natural gas export worldwide. After Russia, and Iran, Qatar occupies the third seat of the biggest natural gas exporters on earth.

The case study goes not off the limits set by literature review, it rather draws a parallel line with a practical case -at hand- to examine “Natural Gas” trade on an international aspect.

The case starts with a quick fly-off the economic history of the State of Qatar. It then examines the natural gas industry in Qatar and its trade on Qatari local level and on international level. The thesis then follows to examines the potentials of natural gas and the role of the Qatari Investment Authority (QIA), which was founded solely for backing up trade with investments.

Lastly, the paper provides a set of conclusions and recommendations aimed at proving solutions for problematics faced in the pillar above.

**Keywords:** Trade balance, Terms of Trade, Price Divergence, Tariff, Quota, Entrepot trade, GDP, intra-industry, shale-gas, associated gas, foreign trade, Qatari Investment Authority.

## Abstraktní

Na makroúrovni se obchod stává hlavním problémem pro státy i jednotlivce. Potřeba obchodování na mezinárodní úrovni přiměla státy, aby jej využily jako vzájemné sankce.

V tomto příspěvku se pokoušíme prozkoumat vliv „zemního plynu“ na katarskou ekonomiku v kontextu „zahraničního obchodu“. Hlavní myšlenkou je prozkoumat sílu ekonomického modelu, který závisí na obchodu se „zemním plynem“ jako jedním z jeho hlavních dvou největších generátorů HDP: ropa a zemní plyn.

Konstrukce této práce je postavena na dvou hlavních pilířích: Přehled literatury a jedna případová studie (Katar). Přehled literatury se zaměřuje na pojmy „zahraniční obchod“ a „zemní plyn“. Úvodní kapitoly pojednávají o definici, typech, politikách, teoriích a vlivech „zahraničního obchodu“ v kontextu nejlepšího zájmu ekonomiky. Poslední kapitoly přehledu literatury pojednávají o trhu se zemním plynem, cenách a faktorech ovlivňujících jeho obchod. Rovněž zkoumá hlavní aktéry obchodu se „zemním plynem“ na mezinárodní úrovni a jeho vliv na státy, lidi a ekonomiky obecně.

Druhým pilířem příspěvku je případ studie státu, který obchoduje se zemním plynem po celém světě. Katar je považován za třetí velrybu exportu zemního plynu do celého světa. Po Rusku a Íránu zaujímá Katar třetí sídlo největších vývozců zemního plynu na Zemi.

Případová studie nepřekračuje limity stanovené v literární rešerši, spíše vytyčuje paralelní linii s praktickým případem - zkoumat obchod se zemním plynem z mezinárodního hlediska.

Případ začíná rychlým odletem z ekonomické historie státu Katar. Poté zkoumá průmysl zemního plynu v Kataru a jeho obchod na katarské místní úrovni a na mezinárodní úrovni. Poté následuje zkoumání potenciálů zemního plynu a role katarského investičního úřadu (QIA), který byl založen výhradně pro podporu obchodu s investicemi.

V neposlední řadě příspěvek obsahuje soubor závěrů a doporučení zaměřených na prokázání řešení problémů, kterým čelí výše uvedený pilíř.

**Klíčová slova:** Obchodní bilance, Obchodní podmínky, Cenová divergence, Tarif, Kvóta, Entrepôt obchod, HDP, v rámci odvětví, břidlicový plyn, související plyn, zahraniční obchod.



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## 1. Introduction

*“I have directed the government to allocate **gas revenues** from new discoveries to **invest** for future generations”.*<sup>1</sup>

*Prince Tamim of Qatar*

It is with no doubt that when we mention the word “Qatar”, the first word will cross your mind would be “gas”. This is justified by the enormous change that “fossil fuel” has brought among in this area. In this paper, the influence, the potentials, and the risks of this change will be examined among other definitions such as foreign trade and foreign investment in two parts: theoretic, and practical.

Although foreign trade has been around for centuries, its significance hasn’t come into seen until our present time. Foreign trade defines as the act of importing and exporting commodities between two or more states, which in turn helps in building multilevel relations with a greater number of countries.

Foreign trade is a good indication of a nation’s economy, as the relation between economic benefits of foreign trade, would always pay in the overall increase of GDP. The clearest example of these benefits is Qatar, as the Qatari foreign trade income is contributing for up to 50% of the country’s GDP, resulting in the thriving rich Qatar we now know.<sup>2</sup>

To understand these concepts in a bigger frame, we need to examine the history of gas and factors that affect the gas commodity in the global market. In this context, gas sets on the top of the list of commodities traded around the world. For Qataris of the 18<sup>th</sup> century gas meant nothing, and for nowadays-Qataris, natural gas is their national resource.

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<sup>1</sup> Prince Tamim Binhamad. “Speech of Prince of Qatar to the Qatari Nation”. 22/7/2017. Available on: <https://www.gco.gov.qa/ar/speeches>

<sup>2</sup> "World Economic Outlook Database, April 2019". IMF.org. International Monetary Fund. Retrieved 29 September 2019.

## **Objectives and Methodology**

### **2.1 Objectives**

Although many schoolers have directed their writings towards the foreign trade, few have discussed these writings in the context of natural gas. It is particularly important to target this topic because of the misunderstanding, represented in the mere dependency on such foreign trade as the main economy model for a country's survival.

There is also an urgent need for this type of research, given the new aspects introduced in the world economy, such as having natural gas as an alternate product for oil. Furthermore, the lack of specific and clear behavior of natural gas market -being influenced by politics- is yet another reason for conducting such a research.

Consequently, the paper aims to identifies the natural gas as a product of foreign trade and its influence on local economy. The paper provides Qatar as a case study to understand the concepts arising from foreign trade theories, policies, and types.

Finally, the paper provides several recommendations aimed at the reformation of economies relying on natural gas trade internationally, in its economies. The recommendations are derived from the conclusion drawn on the final chapter of the research.

This thesis is meant to focuses on the economic aspect of natural gas market as to constitutes an essential incubator for Qatari natural gas trade behavior, its influence, risks and potentials.

## **2.2 Methodology**

The selected research methodologies chosen for this thesis are qualitative method, quantitative method, and textual research. These methods will allow a systematic analysis of the topic, in two pillars: Literature Review (theoretic), and the Case Study of the state of Qatar (practical).

These methods are best suitable for this research, because of the nature of data to be consumed. This method is used in examining social phenomenon or interpreting a certain dilemma and are useful for discussing the first pillar: literature review.

This way, we will be able to conclude results based on standing facts, answer some questions regarding foreign trade definitions, types, policies, theories, and influences. Also, E-library and archival sources are to be of great importance as many literature reviews are to be conducted. Contextual evaluation of foreign trade is to be conducted in context of factors affecting prices, exports, and imports.

In addition, I will use numerical and quantitative analysis (statistical information) of natural gas market in Qatar, as a case study. This would show a practical profile of the foreign trade models applied on Qatari natural gas trade. The study will also include analytical methods using graphs to determine how gas price fluctuation effects the overall economy of Qatar negatively or positively.

Methods of collecting data will be based on electronic sources of a set of Qatari governmental websites, Qatari Ministry of Development Planning and Statistics, and other official websites. Also, studies conducted by third party organizations/ NGOs, records, reviews, and observations of other scholars are all included in the research.

The aim of the research as mentioned before, is to examine the concept of foreign trade in applied method with Qatar as a case-study. The qualitative data used in the research will demonstrate the basis of interpretation of the foreign trade theories, and policies. And the

statistical data, on the other hand. are to illustrate the influence of natural gas trade -as a foreign trade product- on the economy of Qatar.

Concerning the construction, the paper is divided into two main pillars: Literature Review and Case Study of the state of Qatar. In the Literature Review, foreign trade definitions, types, policies, theories, and influences are examined in context of variety of schoolers.

The Literature Review further discusses natural gas extractions methods, in addition to its markets, prices, factors affecting gas trade, and the influence of this trade on states, people, and economies.

In the second pillar of the paper, Qatar is introduced as model of a natural gas-dependent economy. The paper passes on the economic history of the State of Qatar quickly. It then examines the natural gas industry in Qatar and its trade on Qatari local level and on international level. The thesis then follows to examines the influence of natural gas trade internationally on national economy.

Finally, the paper examines the reasons for finding the Qatari Investment Authority (QIA), and its role on the Qatari natural gas trade, and draws conclusions and recommendations.

## 2. Literature Review

### 3.1 Foreign Trade

Foreign trade is self-explanatory term, which mainly means exchanging goods and services with other countries. <sup>3</sup>Although it trade has been present for centuries, its importance in the modern era has never been preceded. This is due to the fact that it consists a major part of an economy's GDP (Gross Domestic Product), and using it as an indicator of economy's progression or retrogression.

It is always difficult to have a self-sufficient economy with a sustained satisfaction of goods and services. This urge pushes residents of different countries to trade with one another, to fulfil the needs from goods and services. That is why countries tend to buy goods and services that are not produced within the country, or when the quantity produced is less than demanded quantity in the country. This also explains states selling what they have a surplus of. Such process is called foreign trade, where buying **from abroad** is called **“import trade”** and selling goods and services **to abroad** is called **“export trade”**. <sup>4</sup>

#### 3.1.1 Types of Foreign trade:

##### **“import trade”:**

“import trade” is simply the process of buying goods and services from producers outside the country (external purchase), by buyers in the country. This, together with “export trade”, make what is called “trade balance”. This type of trade is made by individuals, legal persons, public economic institutions, or governments.

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<sup>3</sup> "Trade – Define Trade at Dictionary.com". Dictionary.com. available on : <https://www.dictionary.com/browse/trade>

<sup>4</sup> Gene M. Grossman. National Bureau of Economic Research. The Purpose Of Trade Agreements. March 2016. UK. P. 26  
Available on: [https://www.nber.org/system/files/working\\_papers/w22070/w22070.pdf](https://www.nber.org/system/files/working_papers/w22070/w22070.pdf)



Now, although better quality of goods and services were available for cheaper prices -as a result of foreign trade- an economy with high levels of imports suffers “trade deficit”, which is a bad indicator of how beneficial the trade is in a certain economy.<sup>5</sup>

### **“export trade”:**

On the contrary to “import trade”, “export trade” is basically producing and selling goods and services to buyers within a different country for foreign currency. “Export trade” is divided into two types, direct exports, and indirect exports.

Direct export is trading directly with a seller abroad, for instance, a producer of olive oil in country “A”, is selling products in country “B”. This type of trade can be applied through the company selling points, marketing, and keep and close and direct contacts with customers in country “A” , or alternatively, through sales in a foreign branch.<sup>6</sup>

### **Entrepôt trade:**

“Entrepot trade” or “transit trade” is the process of importing goods for the purpose of exporting those goods to a third buyer abroad. for example, India imports rubber from Thailand and re-exports it to Japan.

Another explanatory example is Singapore. With two main commercial ports and strategic location as a transit point between India and China, Singapore occupies the reselling global arena. Furthermore, the exports of electronics and machinery production, enabled Singapore to be the most stable economy in the world.<sup>7</sup>

## **3.2 The Influence of Foreign Trade on Society and the Economy**

International trade or foreign trade is thought to have existed since the earliest times of human civilization. The silk road, amber roads, and the salt roads are perfect examples of international trade activity of ancient societies. It is no doubt that traders found an advantage

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<sup>5</sup> Council on Foreign Relations. "What a Trade Deficit Means". Accessed on 1.2.2021. available on : <https://world101.cfr.org/global-era-issues/trade/what-trade-deficit-means>

<sup>6</sup> <https://www.businessstudynotes.com/marketing/international-marketing/foreign-trade-types-importance/>

<sup>7</sup> Pollard, Elizabeth (2015). *Worlds Together Worlds Apart*. W.W. Norton & Company. p. 343

in being specialized in a productive profession for people in other countries, as in all situations and all circumstances, there is some people demanding some things.

For instance, Chinese people specialized in producing silk, and sold it across the world through what was later called the “silk road”, which extends from china to the Mediterranean Sea.<sup>8</sup>

Foreign trade is, indeed, an important, and essential part of almost every economy, however, trading on an international level is too broad to be comprehended within one system, thus it involves economic, political, social, legal, and environmental aspects that affect it and are affected by it.

### **3.2.1 Advantages of foreign trade:**

Foreign trade as explained above, is seen to have only a positive side, despite the accuracy of this sentence, one advantage of foreign trade is providing a way to improve the living standards and the economic wellbeing of the citizens within the economy, as well as lifting the efficiency of the use of natural resources. In addition, foreign trade helps in inspiring and sharing cultural and educational values among nations. It also enhances and promotes mutual coexistence and interest- relations between nations. For example, large companies such as Coca-Cola has sponsored many projects that help spreading social responsibilities.<sup>9</sup>

Another positive look on foreign trade would observe the job opportunities, provided by foreign producers in the nation land. On both “foreign export” and “foreign import”, the traders will benefit from unemployment decrease. On the “foreign export”, the exporter will have the chance to bring foreign currency into the country resulting in economic prosperity.

Foreign trade supporters further claim that foreign trade ensures specialization in industries, in addition to the establishments of new industries. Nowadays this is seen as trends, sometimes we see products that hits a high revenue in a place, while it is produced in another country.

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<sup>8</sup> Gayathri, Amrutha (11 June 2011). "From marijuana to LSD, now illegal drugs delivered on your doorstep". International Business Times. Retrieved 13 April 2013.

<sup>9</sup> See Coca Cola Corporate Social Responsibility, available on: <https://www.coca-colacompany.com/sustainable-business>

### **3.2.1 Disadvantages of foreign trade:**

As for the advantages of international vary and benefit the nations, disadvantages are for sure present, and to some extent can be harmful to the society, individuals as well as the environment.

With foreign trade, producers try to keep the cost of productions as low as possible, for the sake of having the lowest price possible to compete with other producers abroad. This may cause many small local businesses to close or collapse in such a huge competition.

This decrease in start-ups and small business opening contributes to a greater share of unemployment. The harmful effect of such trade is present clearly in the small-scale production businesses.<sup>10</sup>

Exporting natural resources to other countries can sometimes be the only solution for an economy's survival, such as Saudi Arabia. The Saudi economy mainly depends on the exports of crude oil. Although this extraction of crude oil has made Saudi Arabia a rich country, the oil is expected to run out in less than two decades due to exhaustion. Leaving Saudi Arabia in the risk economic depression.<sup>11</sup>

Another bad influence of foreign trade is economic/political dependence on the states controlling the national economy through its corporations, investments, and companies. In this context, Golf countries have economies that mainly depend on foreign trade, investments, and deals, which paves the ways for political control by U.S.

Callers against foreign trade also state that foreign trade brings unwanted goods to the country. In a way or another, illegal drugs dealing is a form of foreign trade when conducted trans-nationally.

### **3.3 Foreign Trade Theories:**

#### **3.3.1 classical theories:**

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<sup>10</sup> Fariha Ahmad, Mercantilism, Feenstra, R. C. (2015). Advanced international trade: theory and evidence. Princeton university press

<sup>11</sup> Dominic Dudley. The Forbes Magazine. "Could Gulf Countries Run Out Of Money Before They Run Out Of Oil?". 6.2.2021.

Available on: <https://www.forbes.com/sites/dominicdudley/2020/02/06/gulf-run-out-of-money-oil/?sh=77983ec116fd>

## **Mercantilism**

It's one of the first theories developed in attempt to obtain an understanding of the international trade patterns, it stated that a country's wealth is measured by the amount of gold and silver it holds, thus, from a mercantilists point of view, a country should pursue to increase the amount of gold and silver by growing their exports in contrary to imports that are discouraged and unpromoted, so, if a country imports your goods more than it exports to you, the difference between what have been imported and exported by the country must be pain in gold and silver, therefore, every economy's goal is to achieve trade surplus, by exporting more than importing. And when imports of a specific country are greater than its exports, this country is said to have achieved trade deficit.<sup>12</sup>

The reason behind the success of such theory in the 16<sup>th</sup> century until the 19<sup>th</sup> century, is the fact that during this era, new nation-states were on the rise, and the rulers of those desired to strengthen their armies, and building national institutions, indeed those rulers did enlarge their amount of gold and silver in their countries by strategy called protectionism, which calls for putting restrictions on imports for the sake of promoting exports.<sup>13</sup>

Even though mercantilism is one the oldest trade theories, yet it is still being used until today to some extent, for instance countries like Japan, China, and Singapore to name a few, still encourage exports and discourage imports by a neo-mercantilist approach, which can be described as a combination of protectionist policies, restrictions on imports, as well as subsidies to support some local industries.<sup>14</sup>

As the mercantilist theory seems appealing through promoting exports and creating trade surplus, it can still have some bad influence on consumers and other companies; companies that operate as exporters may prefer protectionist policies that goes in their favour, and taxpayers pay for government subsidies in the form of higher taxes, and restrictions on imports makes the consumer pay more for foreign goods. In other words, free trade advocates emphasise the importance of free trade to all the partners, while mercantilists policies favour some selected industries on the expense of consumers and other companies within the economy and beyond.

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<sup>12</sup> C. F. Bastable, *The Theory of International Trade* (London, 1903) pp. 168–9.

<sup>13</sup> Adam Smith, *The Wealth of Nations*, ed. E. Cannan (New York: Random House, Modern Library Edition, 1937) book IV. ii. 12.

<sup>14</sup> H. Myint, 'The "Classical Theory" of International Trade and the Underdeveloped Countries', *Economic Journal*, vol. 68 (June 1958) pp. 317–37

### **Absolute Advantage Theory:**

Adam Smith, also known as the father of economics, introduced the theory of absolute advantage in 1776, where he argued in his book "the wealth of nations" that the degree to which a country's wealth is measured cannot be determined by the amount of gold and silver the state possesses, but by the standard of living of its citizens, Smith also argued that trade should not be influenced by government regulations, and restrictions shall be put on trade, instead, trade must flow naturally driven by the forces of the market.<sup>15</sup>

Smith argued that economic growth and wellbeing can be achieved through free trade and specialization which increases the efficiency and productivity between trading countries if each specializes in producing the product to which they have an advantage in, for instance, south American countries have an advantage in producing coffee comparing to Canada, in south America coffee can grow naturally and the cost of production costs much less than if the coffee was to be produced in Canada where climate conditions must be replicated to sustain the coffee production.<sup>16</sup>

### **Comparative advantage theory:**

Comparative advantage theory, developed by David Ricardo in 1917 doesn't differ so much from absolute advantage theory, it states that trade can still happen in a scenario where a country has advantages in producing all goods comparing to the other country, or if the country has no absolute advantage whatsoever. For example, a lawyer who charges \$400 per hour for her legal services and can also type faster than the administrative assistants in his office, who are paid \$40 per hour. Even though the lawyer clearly has the absolute advantage in both skill sets, yet he should not be doing both tasks. For every hour the lawyer decides to type instead of doing legal work, he would be giving up \$360 in income. His productivity and income will be highest if he specializes in the higher-paid legal services and hires a qualified administrative assistant, who can type fast, although a little slower than the lawyer. By having both the lawyer and his assistant concentrate on their respective tasks, their overall

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<sup>15</sup> "Absolute advantage | economics". Encyclopedia Britannica. Retrieved 2020-10-21

<sup>16</sup> Ibid, at p. 56

productivity as a team is higher, this is comparative advantage. A person or a country will specialize in doing what they do relatively better.

### **Heckscher Ohlin theory:**

Theories by Adam Smith and David Ricardo assumed that unregulated free trade would eventually lead traders to determine which goods and services they are more efficient at, in the 1900s, the Swedish economists Eli Heckscher and Bertil Ohlin, concentrated more on utilizing the abundant resources of an economy to create comparative advantage, the two economists introduced land, labour and capital as the factors of production. However, those factors are determined by supply and demand, thus, factors that have high demand and low supply tend to be more expensive, while factors that have high supply and low demand would be cheaper. Therefore, countries would export goods and services that require resources that have greater supply within the economy and import goods and services that require factors that have greater demand. For example, China and India are home to low-cost, large numbers of labour. Consequently, these countries have become the ideal locations for labour-intensive industries like textiles.<sup>17</sup>

### **3.3.2 Modern Firm-Based Theories:**

#### **Country Similarity Theory:**

Country similarity theory was developed by the Swedish economist Steffan Linder, it emphasized similarities between countries or economies whether it was political, economic, cultural, geographical or the possession or lack of economic/natural advantage is the determinant of trade between countries, Linder believed that foreign trade took place between countries with similar factors shared the consumer preferences, for example, people with a higher purchasing power are more likely to trade with one another; people from developed countries introduce products or goods that people of other developed country may find useful therefore trade happens.<sup>18</sup>

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<sup>17</sup> Blaug, Mark (1992). The methodology of economics, or, How economists explain. Cambridge University Press. p. 190

<sup>18</sup> An Essay on Trade and Transformation, Staffan Burenstam Linder, Stockholm: Almqvist & Wicksell, 1961.

Linder argued that producers produce good for domestic market in first place then those producers may find success abroad, but this success is most likely due to the similarity in the market preferences between home and abroad. (Yaw and Keong 2019)

The Swedish economist introduced the concept of intra-industry, which basically means engaging in trade within one industry, for instance, the UK exports expensive luxurious suits to Taiwan and imports cheap casual wear. However, country similarity theory states that manufactured goods are most likely to be traded between people with similar purchasing power where interindustry would be the dominant type of trade between the similar countries.

### **Product Life Cycle Theory**

Raymond Vernon established the theory of product life cycle in the 1960s, he assumed that a product's life cycle consists of three main stages: first, introducing the product in the country where it was innovated, this stage is characterized with a higher cost to promote the product, second, growth stage; in this stage, revenues of the products increase as the product becomes more demanded. Third, the product goes through the maturity stage, in this stage the products tend to have lower to no sales as competition escalates and competitors lower their prices, in addition, companies tend to start developing new updated versions to keep up with the technology and the preferences of the consumers, and some competitors get pushed out of the market, at a point known as shake off point. This stage may last long term or is followed by the next stage relatively quickly.

Last, producers face the inescapable decline stage, where market shares of the companies start to drop, demand decreases, and producers become put in a situation where they are forced to update and upgrade their products to keep them relative for the consumers, however, most products that go through their decline stage end up quitting the market.<sup>19</sup>

### **National Competitive Advantage theory**

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<sup>19</sup> Hill, Charles (2007). International Business Competing in the Global Marketplace 6th ed. McGraw-Hill. pp. 168

In the 1990s, Michael Porter developed the theory of national competitive advantage, he introduced a new model where he argued that national competitiveness is determined by the extent to which the industry and the producers innovate and update. Porter's new theory was illustrated by four determinants that are interconnected which are: first, the ability and the resources of the local market. Second, the demand conditions within the local market. Third, complementary industries and local producers. And last, local firm characteristics. Porter also argued that government can play a major role in enhancing the competitiveness of local industries.<sup>20</sup>

### 3.4 Terms of trade

After the emergence of foreign trade, specializing in production spread along. This led most countries to start producing goods and services with the greatest comparative advantage possible. David Ricardo illustrates in his theory of competitive advantage; that countries would benefit from trade, yet it all depends on Terms of Trade (TOT), this term describes the relation between the monetary value of what is imported, and the monetary value of what is exported.

Term of Trade increases when the prices of exported goods exceed prices of imported goods. Likewise, TOT decreases when the prices of imported goods exceed exported goods.

Terms of trade is also referred to as the "Ratio Index", and can also be expressed by this equation:<sup>21</sup>

$$\text{Terms of Trade (TOT)} = \text{Index of Export Prices} / \text{Index of Import Prices} \times 100$$

Let's assume that the Czech Republic in a certain year imports 20 cars and exports one truck in exchange, if the Czech Republic increases the number of cars it exchanges for one truck in the next year, then the TOT in the Czech Republic is said to be improving, similarly, if Czechs import less cars for the same number of trucks which is one truck or increases the quantity of trucks exported for the same number of cars, the Czech terms of trade are deteriorating. (Reinsdorf 2010)

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<sup>20</sup> Porter, Michael E. (1990-03-01). "The Competitive Advantage of Nations". Harvard Business Review (March–April 1990). ISSN 0017-8012

<sup>21</sup> "gross domestic product - Definition & Formula". Retrieved 15 March 2020.



Provided that the term of trade is an index, the base year in an index calculation is always equal to 100. The purpose of using index is showing changes of a country's exports and imports over time. This lets the economic experts to see whether the exports are gaining revenues over time, as well as imports. This allows us to see the imports are becoming more expensive or cheaper over time. In real life Both will be continuously changing but using indexes provides us with general illustration. For instance, let's assume that in 2020 the Czech Republic had an index of export prices of 130 and the index of import prices of 120, the Czech Republic's term of trade is 109 which means that there the term of trade is improved. Notice that when the term of trade goes above 100 then there is an improvement but if it gets lower than 100 it is getting worse. (Reinsdorf, 2009)

Several factors can influence a country's term of trade, some of those factors are, elasticity of supply, elasticity of demand, and the rate of exchange.

First, the elasticity of both supply and demand, a country's term of trade is beneficial when the demand of a country's exports is less elastic than a country's imports. Second, if the supply of a county's exports is more elastic than its imports, then the term of trade is favourable. Lastly, changes in the exchange rate between countries can influence term of trade, for example, the term of trade of a particular country would improve if the currency of that country appreciates, which consequently causes the prices of imported good to drop, and the prices of exported goods to increase.

### **3.5 Trade Policies and Trade Balance**

Foreign trade between countries is of course regulated through laws, treaties, and agreements between the trading countries creating policies to regulate imports and exports, each of the parties tries to achieve *trade balance*, or balance of trade (BOT), which is basically the difference in monetary value between exports and imports during a specific time range.

A positive balance of a country means that the monetary value of the county's exports exceeds the monetary value of the country's imports. While a negative balance means that

the value of imports is greater, hence, trade balance can be expressed in the following formula.<sup>22</sup>

$$\text{BOT} = \text{VALUE OF EXPORTS} - \text{VALUE OF IMPORTS}$$

Provided that every country tries to achieve a positive trade balance by reducing imports and promoting exports for the country, government use policies to try and control or regulate foreign trade between countries through tariffs, quotas, and subsidies.

Tariffs, or tariffs on imports are basically taxes on imported goods, this process can be applied in various forms, the most common of which are specific tariffs and ad valorem tariffs, for instance, a government can impose a payment of 2000\$ on every car that enters the country from abroad as a tariff, this is an example of a specific tariff, whilst an ad valorem tariff would be if the government charges, a percentage of the good's value. <sup>23</sup>

Another policy a government can use to regulate trade is a quota, or quota on imported goods, which represents a limit to the quantity of goods imported from abroad into the country during a specific time range. Quotas on imported good is known to be strictive than a tariff, also quotas can be harmful for consumers whose demand is high and are left with few other choices that mostly come at a higher price.

Governments impose tariffs and quotas to restrict, control, and regulate imports, for the sake of promoting or increasing their exports, in other words, to achieve a positive trade balance, yet governments can also promote their exports by subsidizing a particular sector or industry. a subsidy in generally a payment given by the government from the taxpayers' money to the producer or the consumer of a particular industry, subsidies are thought of as negative taxes to promote an activity, for instance, governments usually subsidize exports by paying producers and encourage the industry to compete in the international market as other companies do and might also be subsidized by their governments too. <sup>24</sup>

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<sup>22</sup> O'Sullivan, Arthur; Sheffrin, Steven M. (2003). Economics: Principles in Action. Upper Saddle River, New Jersey 07458: Pearson Prentice Hall. p. 462

<sup>23</sup> Murschetz, Paul (2013). State Aid for Newspapers: Theories, Cases, Actions. Springer Science+Business Media. p. 64.

<sup>24</sup> Myers, N. (1998). "Lifting the veil on perverse subsidies". Nature. 392 (6674): 327–328

### 3.5 Foreign trade organizations

Free trade organizations and treaties as we know them today have an unprecedented level of sophistication and comprehension, such evolution to those organizations started taking shape after the devastating events of world war II, the General Agreement on Tariffs and Trade (GATT) was established, and came into act in the very first day of 1948, the purpose of this agreement was the facilitate trade and reduce tariffs and quotas between the 23 founding member countries that consisted of Australia, Belgium, Brazil, Burma, Canada, Ceylon, Chile, China, Cuba, Czechoslovakia, France, India, Lebanon, Luxembourg, Netherlands, New Zealand, Norway, Pakistan, Southern Rhodesia, Syria, South Africa, United Kingdom and the United States.<sup>25</sup>

The establishment of GATT eventually lead to the birth of World trade Organization (WTO), which is the result of Marrakesh agreement in 1995, as an extension to GATT, WTO's purpose with its 153 members is to regulate trade, reduce quotas and tariffs, and it is also said to be an important factor to keeping peace worldwide, due to the legal capabilities of WTO in international law, the ability to apply dispute settlement mechanisms, and the fact the WTO is a permanent agreement unlike GATT which was temporary by nature.<sup>20</sup>

Alongside with WTO which is the largest and most comprehensive trade organization, there are numerous multilateral organizations and institutions that are involved in regulating trade in the world, such as, International Monetary Fund (IMF), Asia-pacific Economic Cooperation (APEC), Association of Southeast Asian Nations (SEAN), Organization for Economic Cooperation and development (OECD), and the International Chamber of Commerce (ICC), all such organizations consist of treaties and agreements with the purpose of eliminating trade barriers, securing the trade, and improve the economic well-being of the countries within the treaty.

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<sup>25</sup> See GATT 1994: General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187, 33 I.L.M. 1153 (1994) [hereinafter GATT 1994].

### 3.6 Natural Gas

The term “Natural Gas” defines as the layers of organic remnants of plants and animals (diatoms) built a thick layer on the ocean bed over hundreds of millions of years, mixed with sand, calcium, silt, and rock. Under an enormous amount of pressure and heat, this material in which carbon and hydrogen is abundant, changed into coal, oil, and natural gas.<sup>26</sup>

The existence of natural gas has been known as far back as 1000, B.C. yet, in 1626 French explorers discovered natural gas in the United States of America, the first, natural gas was discovered in commercial use of natural gas occurred in the 18<sup>th</sup> century. In 1785, natural gas was being used by the British people to light up houses and streets, then by 1821, the first natural gas well was dug in New York by William Hart, and founded the Fredonia Light Gas Company.<sup>27</sup>

In the 19th century, natural gas was used almost exclusively as a source of light, but in 1885, the Bunsen Burner was invented, which opened a wide opportunity to exploit natural gas expanding its uses to cooking, heating, manufacturing and processing plants, and electricity generation. Before so, natural gas was considered a by-product, and was mostly leaked and burned out.

Natural gas is an odourless, and colourless fossil fuel in its pure form, it provides a large deal of energy when burned, with relatively lower levels of emissions and by-products into the air than most fossil fuels. Natural gas consists of hydrocarbon gases that are highly flammable, such as methane which is most of the natural gas composition, in addition to propane, butane, and pentane. The percentages of those gases in the composition of natural gas may vary, but a typical natural gas composition is divided as follows<sup>28</sup>:

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<sup>26</sup> "Natural gas explained". U.S. Energy Information Administration. Retrieved 30 September 2021

<sup>27</sup> "A Brief History of Natural Gas - APGA". [www.apga.org](http://www.apga.org). Retrieved 18 February 2019. Available on : <https://www.apga.org/apgamainsite/aboutus/facts/history-of-natural-gas>

<sup>28</sup> "Organic Origins of Petroleum". US Geological Survey. Archived from the original on 27 May 2010.

Retrieved on 2021. Available on:

[https://web.archive.org/web/20100527093933/http://energy.er.usgs.gov/gg/research/petroleum\\_origins.html](https://web.archive.org/web/20100527093933/http://energy.er.usgs.gov/gg/research/petroleum_origins.html)

**Table 1: Typical Composition of Natural Gas**

Methane	CH <sub>4</sub>	70-90%
Ethane	C <sub>2</sub> H <sub>6</sub>	0-20%
Propane	C <sub>3</sub> H <sub>8</sub>	
Butane	C <sub>4</sub> H <sub>10</sub>	
Carbon Dioxide	CO <sub>2</sub>	0-8%
Oxygen	O <sub>2</sub>	0-0.2%
Nitrogen	N <sub>2</sub>	0-5%
Hydrogen sulphide	H <sub>2</sub> S	0-5%
Rare gases	A, He, Ne, Xe	trace

### 3.7 Natural Gas Extraction and Processing

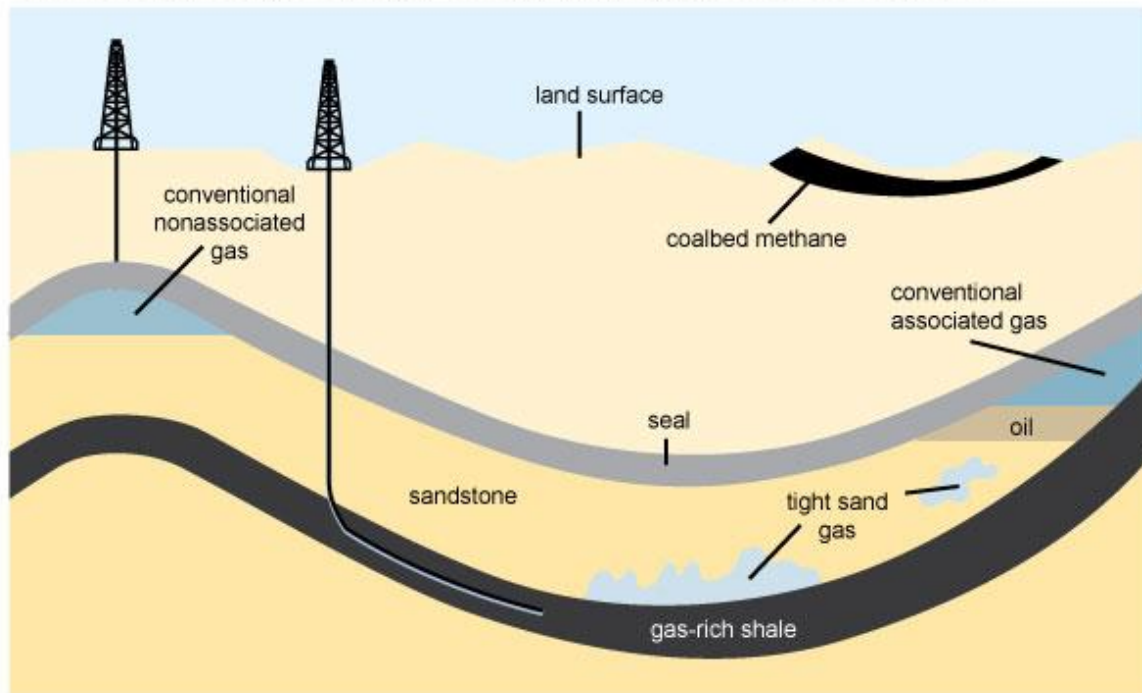
Natural gas deposits are found on land, offshore, or deep in the sea floor, Natural gas or what's referred to as conventional natural gas can be found in large fractures and cracks between layers of rock, while shale gas or tight gas and sometimes referred to as unconventional gas, arises in small pores within some formations of shale, sandstone, and other types of rock. Also, gas that occurs with deposits of crude oil is called associated natural gas, while coalbed methane is found in coal deposits.<sup>29</sup>

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<sup>29</sup> "Extraction". NaturalGas.org. Archived from the original on 8 July 2013.retrieved on 2021.

**Figure 1: Schematic Geology of Natural gas locations**

## Schematic geology of natural gas resources



Source: Adapted from *United States Geological Survey factsheet 0113-01* (public domain)

Natural gas is extracted from the earth by natural gas and crude oil wells, such gas contains mostly methane plus some natural gas liquids (NGL) such as, water vapor, propane, butane, and ethane, in addition to nonhydrocarbons such as, hydrogen, sulphur, carbon dioxide, nitrogen, helium, and hydrogen sulphide. However, most of those material is processed and removed, and a bad odour is added to the gas before sending it to the consumer, such process is done in processing plants. Natural gas in the form of dry gas is stored in underground storage units, while liquified natural gas (LNG) is shipped on huge containers to the consumers overseas. (Appendix 2015)

### 3.8 Natural Gas Market

The worldwide gas market has gone through enormous changes over the past thirty years, making natural gas the quickest growing fossil fuel, covering today for 23% of global primary energy demand and almost 25% of electricity generation worldwide.<sup>30</sup>

These developments have allowed the market to be more active and more competitive, enabling more new market contributors to be involved, both on the sell and the buy side of the situation. The procedure is anticipated to proceed as the role of gas in the worldwide energy combination kept on increasing at 2%pa, to the cost of oil (increasing at 0.7%pa) and, partially, coal (increasing at 0.7%pa) and nuclear energy. This development is both inside national borders, and overseas. Gas utilization is developing across all areas, including power, heating, industrial, petrochemicals, and transport use. New advancements, like GTL and CNG, may likewise open further gas interest in the future, once difficulties and efficiencies exceptional to these models can be defeated on a bigger scope.

Previously, gas contracts were generally basic and clear. A gas asset owner would normally assemble and work out the production and the administration of gas facilities. The facilities would eliminate petrol fluids from the gas stream for distinct sale—at higher prices than lean gas as well as pipeline-quality lean gas (with adequate amounts of impurities) would be offered to a gas distributor or purchaser. A ringing charge would be paid to the pipeline owner to move the gas, and the gas distributor would be liable for guaranteeing that the gas was accessible to the buyer at the predefined volume and time.<sup>31</sup>

As gas markets develops, public networks such as the United States, and international networks such as Europe and other selected areas of the world were created. These networks linked enormous quantities of buyers and sellers. These parties regularly contracted with the pipeline proprietor or with a mediator organization to purchase and sell gas. Gas with different qualities was frequently intermixed in the pipeline, and the conditions of the agreement turned out to be progressively more adaptable.

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<sup>30</sup>World Energy Council. Natural Gas Perspectives | 2017. The Role Of Natural Gas. 2016. United Kingdome. P. 6.

<sup>31</sup> Ulvestad, Marte; Overland, Indra (2012). "Natural gas and CO2 price variation: Impact on the relative cost-efficiency of LNG and pipelines". International Journal of Environmental Studies. 69 (3): 407–426.

A comparable development has happened in the LNG area. Before, there were restricted quantities of LNG exporters. LNG importers were restricted to those organizations that approached LNG-receiving terminals, and most of these terminals were in Japan, some in Europe and North America. LNG was sold on a long-term basis, agreements were more than 20 years' length, with exceptionally restricted flexibility. The purchasers were forced to take their contracted volumes without the option to redirect cargoes, and ships, either possessed by the purchasers or the sellers, were devoted to the agreements. LNG prices were regularly set by an equation identified with oil costs with restricted extent of alterations.

As the LNG world extended significantly since 2000, countries engaged with the trade extended to around 50 states today. Somewhere between of 2008 and 2015, the quantity of nations buying increased from less than 20 to around 35 (an increase of 75%), and the quantity of nations trading LNG increased from 15 to 20 (25% increase).<sup>32</sup>

New participants are not, at this point limited by the standards of the past and are more able to acknowledge more limited span contracts, more elastic terms, valuing equations not connected to oil costs, and nonrigid delivery choices. The rise of the global LNG spot market, from 5% to 10% of the worldwide trade (in 2000) to around 25% of the trade 2011, as well as being 3.8% of the global GDP, this is an indication of this change.<sup>33</sup>

Previously, LNG activities would just be grown once all the created volumes were contracted to blue-chip reliable purchasers. As LNG prices started to increase around 2007, escalating economies like Korea and others (like Spain) had the potential to pay a premium for individual or short-term cargoes. These spot cargoes permitted the purchasers to enhance their long-term contracted volumes for cyclical varieties or for bizarre occasions. For instance, during Spain's dry season in 2008, Spanish utilities were able to pay a high premium to bring in LNG to compensate for the deficit in hydroelectric power generation. Thus, LNG suppliers started to hold an extent of their yields for these 'spot' deals. An increasing extent of LNG projects are being developed to have such distributed volumes. Sadly, the premium that spot market costs instructed over long period contracts can't be ensured, and there have been periods where the spot market prices have been less than the long-term prices.

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<sup>32</sup> European Commission. "Quarterly Report Energy on European Gas Markets Market Observatory for Energy DG". Energy Volume 13 (issue 1, first quarter of 2020). Brussels. P. 38

<sup>33</sup> *ibid*, p. 39



As would be anticipated in markets of normal goods, as the quantity of buyers and sellers expanded, LNG trade businesses grew to be progressively dynamic. These organizations might be associated with singular trades, where they purchase LNG cargo at a specific cost for resale at a greater price, or they could agree to buy quantities over periods of several years, whereby they, thusly, would go into LNG deals to end consumers. Energy companies, like Shell, Gazprom, Total, BG, and others, are active LNG dealers. Expert trading companies and corporations have likewise gone into this business. An LNG user (like a utility company in Singapore or Dubai) would contract with a trading company like BG or Shell to provide LNG to its terminals. BG and Shell would buy these cargoes from their own equity-owned LNG projects or from different projects based on the opportunity available. Proprietors of the LNG exporting plants would sell to BG or Shell with no genuine control where the load's destination is. A cargo shipment sold to buying company may, compete with cargo traded on a long- term contract supposition by the same plant to a similar or the same end user. <sup>34</sup>

Arising LNG importers, like China and India, are utilizing LNG to expand to their current gas supply. In spite having signed some long-term LNG and pipeline contracts, the two business sectors are dynamic role players in the LNG spot market. They purchase spot cargoes when these cargoes are cheaper than their contracted supply of gas. These business sectors are as well hesitant to accept oil-price ties to their gas contracts. As oil prices remain high, big exporters, for example, Qatar keeps on pushing their buyers toward oil-linked agreements; nonetheless, this is encountering growing crippling, from both current and arising buyers. <sup>35</sup>

The impressive progress of U.S. unconventional gas production has been a massive a major role player in changing the global market for gas. Unconventionals, which including shale gas, coal steam methane gas, and tight gas, have built up from low levels to more than half of current U.S. production. This bountiful production has brought about lower gas prices in the U.S., expanding the difference between North American prices and prices in Europe and North Asia. This has come at a deplorable time since various big energy companies assembled LNG-receiving terminals expecting a gas shortage domestically, which results in dramatic increase in gas prices expected in North America. These terminals are currently

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<sup>34</sup> Dickel, R., Gönül, G., Gould, T., Kanai, M., Konoplyanik, A., Selivanova, Y. & Jensen, J. (2007) Putting a Price on Energy: International Pricing Mechanisms for Oil and Gas. Brussels, Energy Charter Secretariat.

<sup>35</sup> Dickel, R., Gönül, G., Gould, T., Kanai, M., Konoplyanik, A., Selivanova, Y. & Jensen, J. (2007) Putting a Price on Energy. Op. Cit. at p. 123

running at extremely low volumes since it is not, at this point convenient to import large volumes of moderately costly LNG into the U.S. market, however on an occasional basis it could be practical for restricted volumes. Therefore, some of these terminals are assessing the choice to put money into new liquefaction facilities. Which would let them to import LNG during periods when U.S. pipeline grid prices are high and export LNG when U.S. prices are sufficiently low to help acquire gas from the grid in addition to liquifying and shipping expenses to worldwide LNG markets. Advocates of these recommendations have provided cost estimates of under \$10/MMBtu for transferred LNG to Europe and Japan. if they can deliver LNG at these prices, U.S. LNG would be in competition with new LNG suppliers in Australia and somewhere else. <sup>36</sup>

The worldwide gas markets are highly dynamic. contracts are changing to more flexible, shortening, and become progressively delinked from oil costs. These alterations are being advertised by both consumers and just as arising buyers in Asia and other countries. The future vows to be progressively dynamic.

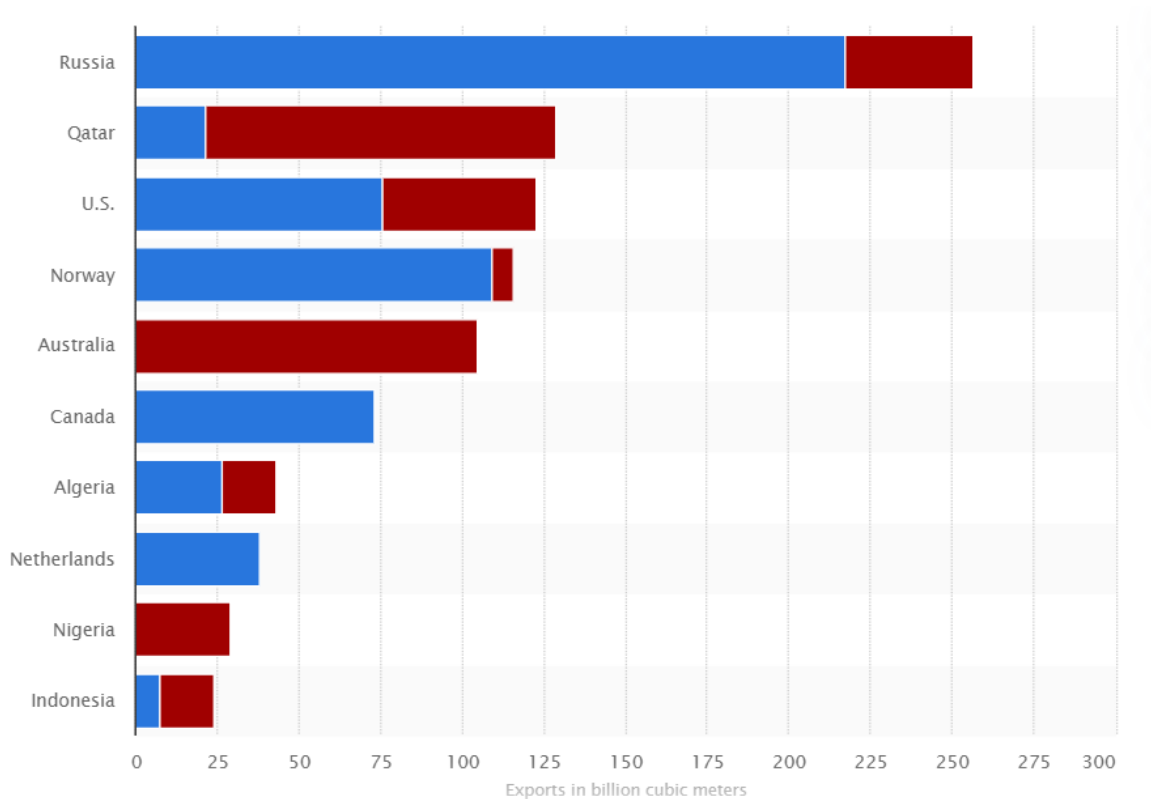
### **3.8.1 Natural Gas Exporters**

Russia remains the largest natural gas exporter, with quantity of 217.2 billion cubic meters of pipeline gas in 2019 and 39.4 billion cubic meters of liquefied natural gas (LNG). Qatar occupies the second place of as the largest natural gas exporter globally, followed by Norway and the United States.

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<sup>36</sup> Saeid Mokhatab, William A. Poe, in Handbook of Natural Gas Transmission and Processing, 2012.

**Figure 2: World's leading gas exporting countries in 2019.** <sup>37</sup>



In addition to other top natural gas exporter countries, Canada and the Netherlands are odd for using entirely pipeline exports. In the Netherlands' case, this is due in large part to a ban on hydraulic fracturing, one of the methods used to extract natural gas. While Canada has not banned fracking, pipelines are used to export gas to the U.S, Canada's major trading partner, liquified natural Gas is mostly used in overseas exports, mainly to Japan, China, and South Korea.<sup>38</sup>

### 3.8.2 Natural Gas Importers

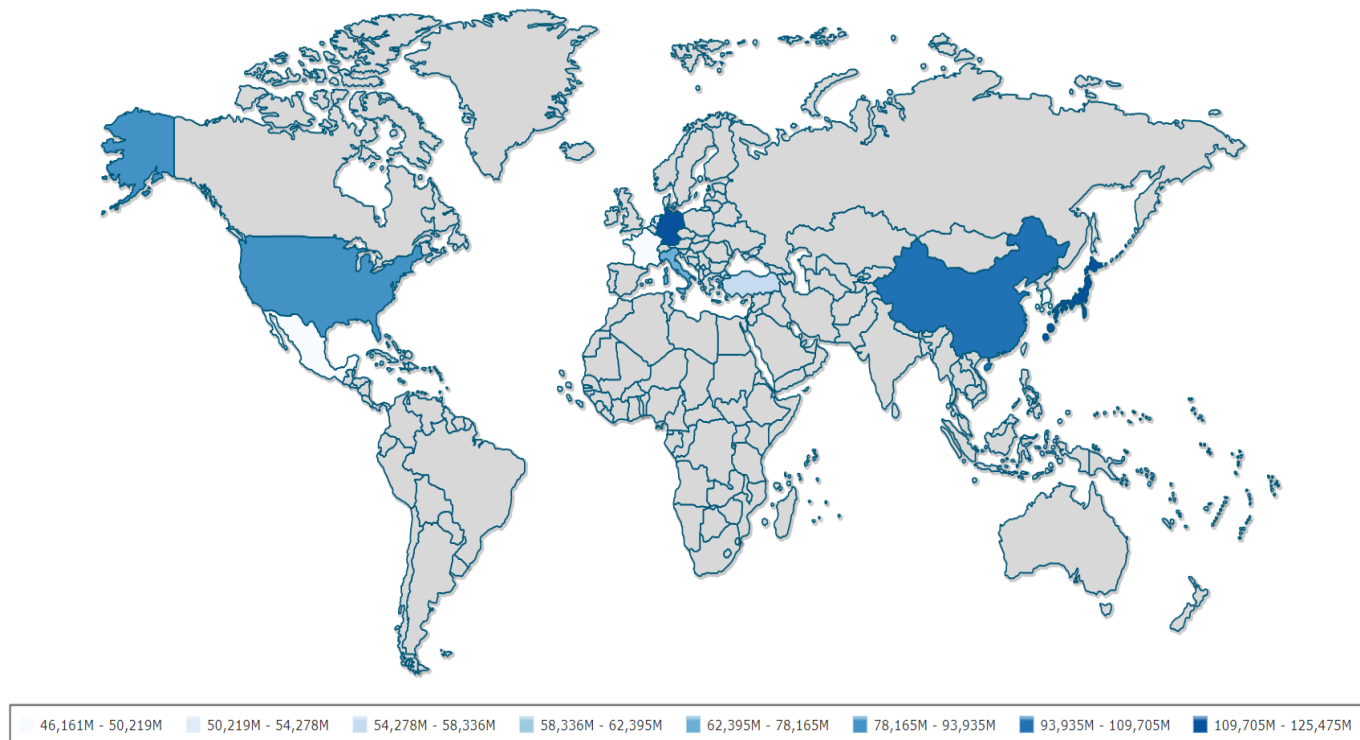
In 2020, the largest importer of natural gas was Germany with an amount of 119,5 Billion cubic meters of natural gas, followed by Japan with 116,6 billion cubic meters, then China with the quantity of 79,6 billion cubic meters of natural gas, in the fourth place is the United States of America with the quantity of 86.1 billion cubic meters of natural gas, then Italy with 69,7 billion cubic meters, Turkey with 55,1 billion cubic meters, Netherlands with 51,0

<sup>37</sup> The World Factbook - Central Intelligence Agency". Available on <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2251rank.html>

<sup>38</sup> Ibid.

billion cubic meters, Mexico with 50,1 billion cubic meters, South Korea with 48,6 billion cubic meters, and France with 48,5 billion cubic meters. <sup>39</sup>

**Figure 3 : map of the top 10 natural gas importer countries<sup>40</sup>**



### 3.9 Factors that Influence Gas prices:

Natural gas prices are predominantly a function of market supply and demand. Because there are limited other short-term options to natural gas as a fuel for heating and electricity generation, alterations in supply or demand over a short period may lead to a significant price fluctuation. Prices themselves often act to balance supply and demand.

On the supply-side that affect prices of natural gas include natural gas production, net imports, and storage inventory levels. A higher supply tends to lower the prices down, while lower supply tends to boost prices up. An increase in prices tends to encourage natural gas

<sup>39</sup> IEA. Key World Energy Statistics 2014. Natural Gas. Access date - 01/17/2021

<sup>40</sup> See "China Passes South Korea as World's No. 2 LNG Importer" . Bloomberg.com . 2018-01-23

production as well as imports, and sales from natural gas storage inventories. Declining prices tend to have the reverse effects.<sup>41</sup>

Other factors influence the prices of natural gas from the demand are various, such as, weather conditions, economic growth, competition resources, and natural gas storage. First, Weather influences travel, bad weather conditions can also affect pricing due to artificial scarcity caused by delayed deliveries of natural gas. Warmer temperatures in cold season can drop the prices of natural gas since people use their heating systems less, thus demand less gas. on the other hand, in summer, for example in the united states, 30 percent of power plants use natural gas to produce electricity, and people use more electricity for cooling systems, consequently the prices of gas increase as a result of the increase in demand.<sup>42</sup>

Second, in a stable growing economy, prices of natural gas grow as the economy develops, because in a growing economy, the demand for all varieties of products which are produced using natural gas increases, so the does the demand of natural gas, as a result, the prices for natural gas increases in this case. Especially in the industrial and commercial sectors.

Third, prices of natural gas are affected by the interrelated nature energy fuel markets, producers of industrial sectors may have different preferences for energy fuels, such as coal, oil, and gas, depending on the prices and availability of those fuels. For instance, if electricity generating companies shift towards using more coal which decreases the demand for oil and natural gas, thus, their prices drop as a result of the lower demand.

Last, natural gas is stored in underground fields, in strategic locations to help deliver gas to its end-users, however, in increase of the storage cost can affect the price of natural gas, which itself is influenced by demand and supply of gas, for instance, if there is a low demand for natural gas, this means that natural gas would stay in storage for a longer period, which increases the cost of storage. Thus, the price of natural gas increases.

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<sup>41</sup> "Natural Gas and the Environment". NaturalGas.org. Archived from the original on 3 May 2009. Retrieved 11 June 2020.

<sup>42</sup> Nuwer, Rachel (17 August 2012). "A 20-Year Low in U.S. Carbon Emissions". The New York Times. Available on <https://green.blogs.nytimes.com/2012/08/17/a-20-year-low-in-u-s-carbon-emissions/>

### **3. Practical part: Case-Study of Natural Gas in Qatar**

#### **4.1. Qatar from poor to wealthy:**

Qatar became fully independent in 1971, when the UK declared its withdrawal from the Suez Canal. On February 22, 1972, Khalifa bin took to throne to become the new prince of the State of Qatar. Khalifa bin Hamad improved expenditure on social programs, accommodation, health, education, and pensions. In 1971, the world's largest natural gas field, the South Pars/North Dome, was discovered off the coast of Qatar. Oil production was still running high at the time, so the field was not developed, despite containing over 896 trillion cubic feet of natural gas.<sup>43</sup>

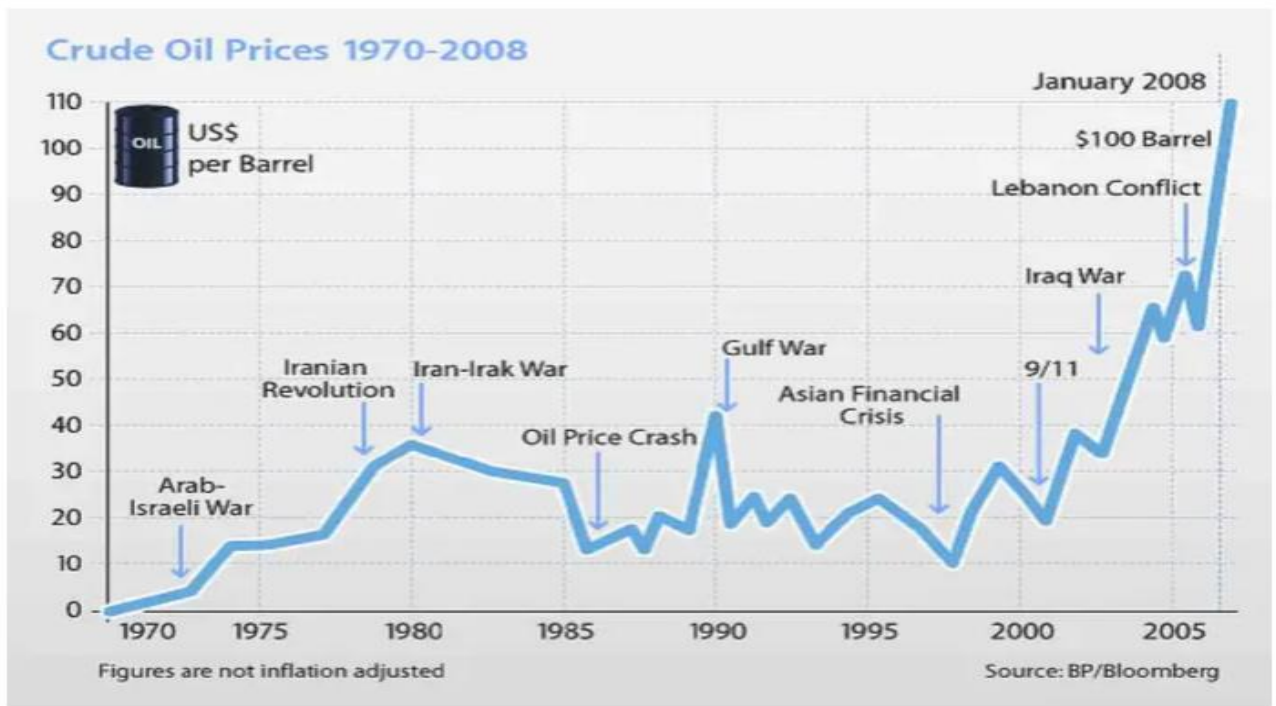
The crash of oil prices in the 1980s, along with the emir draining off oil revenues, slowed down the Qatari economy. The crisis led Qatar finally to develop the North Field in 1989, yet production was still not rapid enough.<sup>44</sup>

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<sup>43</sup> Staff (January 2011). "Qatar". Country Analysis Briefs. Energy Information Administration. Archived from the original on 2012-08-01. Retrieved 27 May 2020.

<sup>44</sup> *ibid.*

**Figure 4: Historical Events That Influenced Oil Prices**

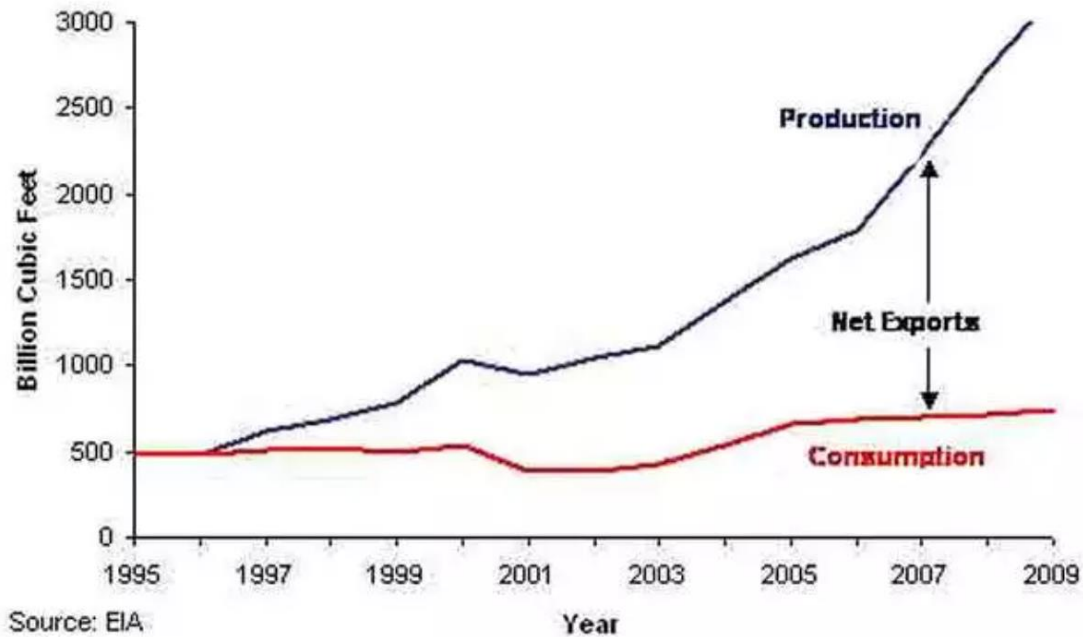


The situation was not any better by 1995, the throne was taken in a violent free fashion from Khalifa Bin Hamad, so Hamad Bin Khalifa (the grandson) became the new emir of the country. Sheikh Hamad established an entire new path for the country.

One of Hamad's first changes was to fast-track the advancement of the North Dome field. Production was raged up, and Qatar began exporting liquid natural gas (LNG) for the first time.<sup>31</sup>

**Figure 5: Qatar Gas Production and Consumption from 1995 to 2009**

**Qatar's Natural Gas Production and Consumption,  
1995-2009**



Qatar has begun to diversify its economic base. The government constructed an Education City in 1998, a large campus that houses six American and two European universities, as well as research institutes. Since 2000, 58 skyscrapers, as well as museums, stadiums, massive infrastructure projects, and more, have been constructed, planned, or are in progress in Doha. Qatar created the Qatar Investment Authority in 2005 to recycle oil and gas revenues into other sources of revenue. Barclays Bank, Credit Suisse, Harrods, Porsche, Volkswagen and a majority stake in the Paris Saint-Germain soccer team are among QIA's major investments.<sup>45</sup>

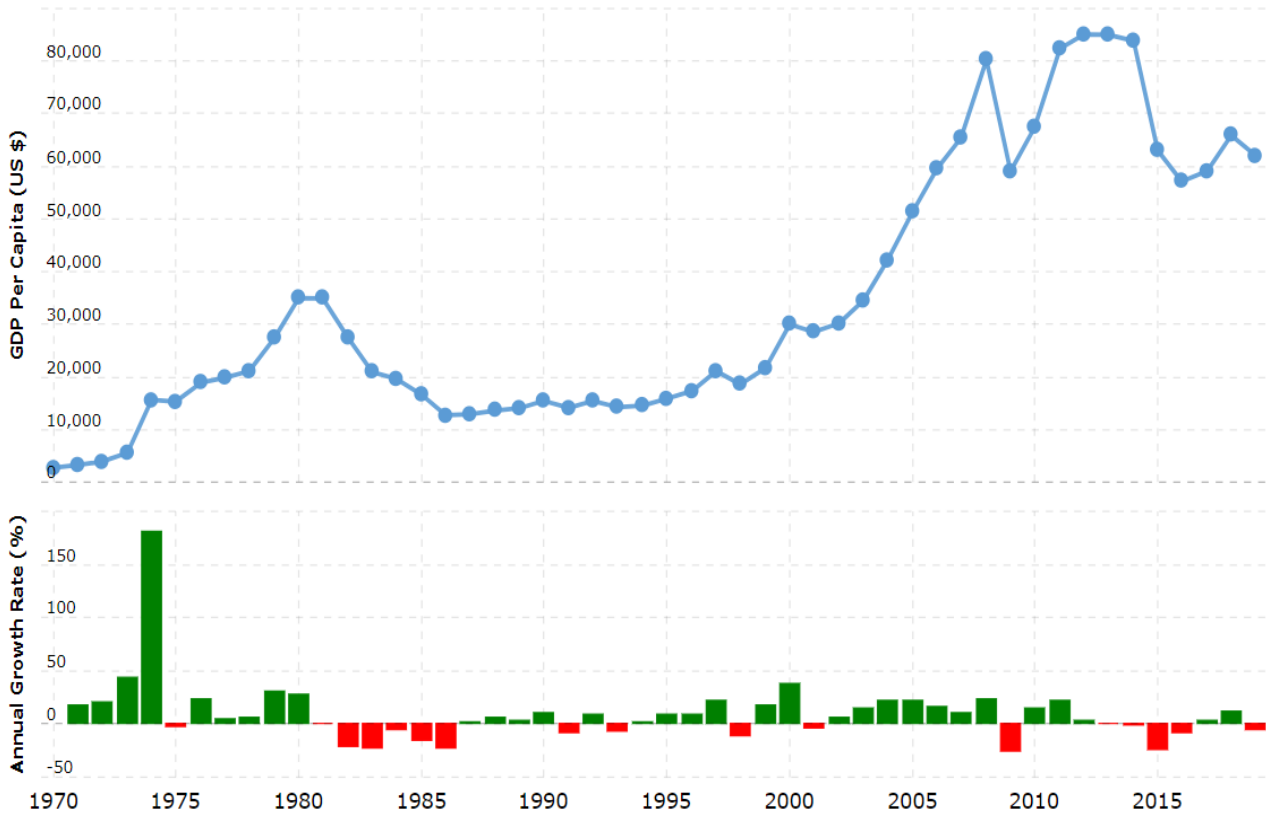
Thanks to the QIA, Qatar has become one of London's largest real estate owners. The Shard, Western Europe's tallest building, is owned by Qatar. In 2005, the Qatar Financial Centre was established to help the country's financial services industry develop. Because of its relatively secure and broad capital base, the country claims it can become a financial services pioneer for Gulf states. But there was going to be more competition, as liquid-natural-gas production increased in places like the United States and Australia. Qatar was chosen to host the 2022 FIFA World Cup in December 2010. Qatar has agreed to construct 12 stadiums with cooling

<sup>45</sup> International Forum of Sovereign Wealth Funds. "IFSWF Our members". Archived from the original on 27 September 2016. Retrieved 24 September 2016.



technology to allow players to flee the heat. Qatar has established itself as a regional sporting centre, hosting or preparing to host several international sporting events.<sup>46</sup>

**Figure 6 Qatar GDP AND Growth Rate from 1970 to 2015**



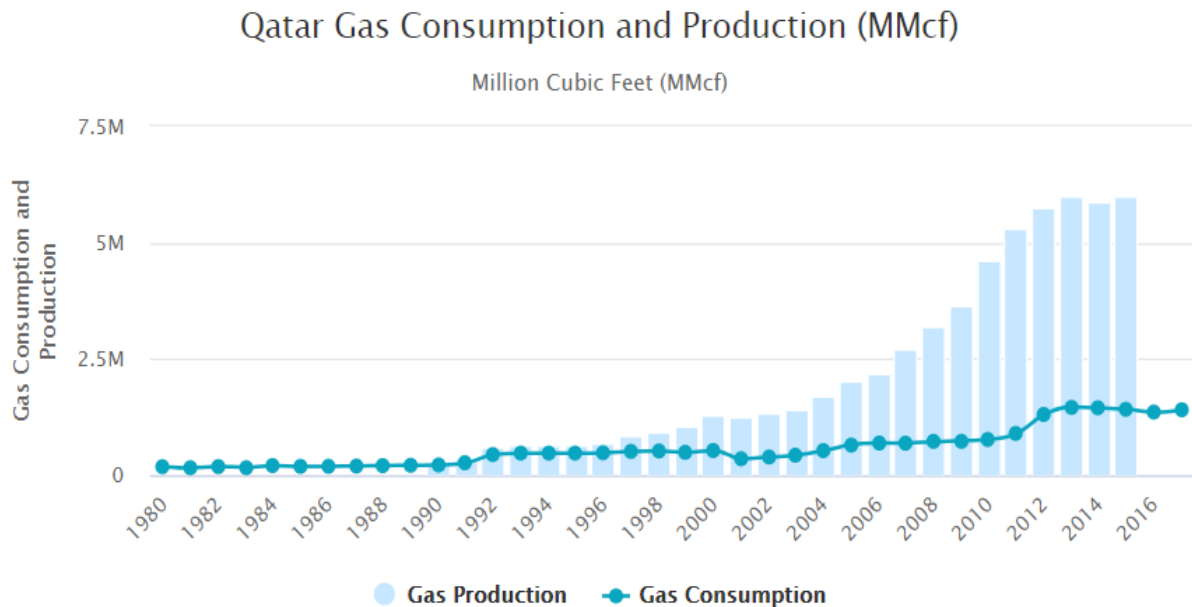
The figure above shows the economic growth of Qatar along with its GDP per capita, we can notice that the economic growth had been affected negatively in the 1970s due to the IRAQ-IRAN War, and the slowdown continues until the 1987 because of the Oil Crisis in the 1985. then by 1991 gulf war occurred which further pushed the Qatari economy down. another worth-mentioning decline was in 2008 due to the global financial crisis.

#### 4.2 an Overview of Gas Industry in Qatar:

Natural gas in Qatar presents a big share of natural gas supply globally. in 2011, Qatari natural gas reserves were estimated to be 25.4 trillion cubic meters, which measures for 14%

<sup>46</sup> Website of [www.thenationalnews.com](http://www.thenationalnews.com). April 2017. Retrieved from Reuters. Available on: <https://www.thenationalnews.com/business/qatar-lifts-development-moratorium-on-world-s-biggest-gas-field-1.77097>

of the world natural gas reserves, which is the largest gas reserve after Russia and Iran. Thanks to the gigantic natural gas field of the offshore North Field, which covers an area as big as Qatar itself. Qatar relies on gas in its power generation almost entirely, thus it uses a part of its production of the domestic consumption.<sup>47</sup>



The government of Qatar dedicated some resources to focus on the development of natural gas production in the present era, specifically on the exports of Liquefied Natural Gas (LNG), now Qatar is the largest LNG exporter in the world, exceeding Indonesia in 2006. Revenues from LNG and Oil industries account for 60% of the Qatari Gross Domestic Product (GDP) making the Qatari Citizen the richest in the world.<sup>48</sup>

### 4.3 Qatar Trade Balance:

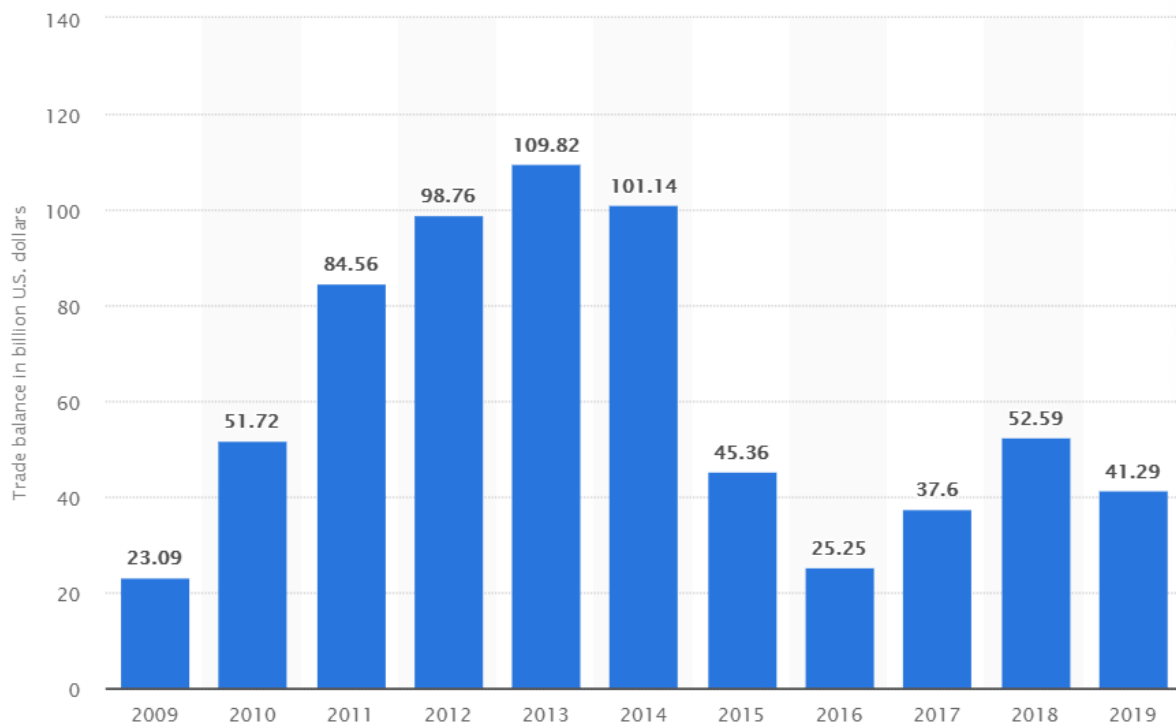
Trade balance is the value of exported goods minus the value of imported goods. A positive trade balance implies a trade surplus, while a negative value means a trade deficit. From 2009

<sup>47</sup> 2011 report on oil and gas companies, Promoting revenue Transparency. Transparency International 2011 page reserves 113

<sup>48</sup> Photius Coutsoukis (January 1993). "Qatar Natural Gas". ITA Maps of the World. Photius Coutsoukis. Retrieved 27 May 2012.

until 2019, Qatar had always had a positive trade balance reaching its highest in 2013 with the value of 109.82 Billion U.S Dollars.<sup>49</sup>

**Figure 7: Qatar: Trade balance from 2009 to 2019**



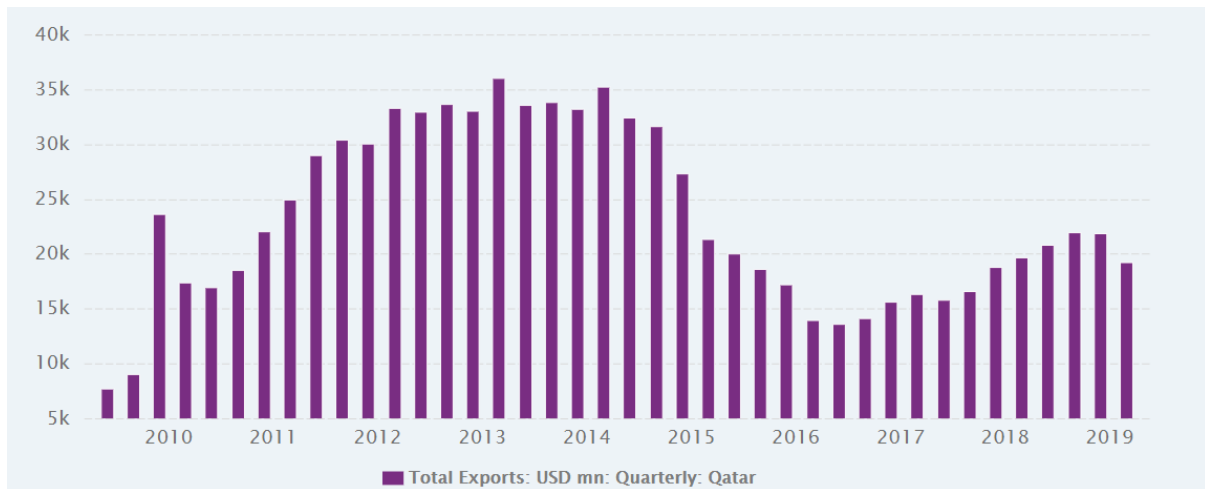
#### 4.4 Natural Gas and GDP of Qatar:

Natural gas remains the major component of the Qatari trade balance alongside with crude oil, Qatar increased its production and exports making total exports of the country reach their highest levels in 2012 with 224 billion U.S. dollars or 65.5 billion Qatari Rial. From which 91% were mostly natural gas and crude oil, 2.5% plastic, in addition to other goods such as, fertilizers, aluminium, and organic chemicals. Those exports were mainly headed towards, Japan 28%, South Korea 91.2%, India 12.2%, China 5.79%, Singapore 5.68%, in addition to other countries such as, UK, Italy and Spain.<sup>50</sup>

<sup>49</sup> Nakamura, Makoto. 2018. "Resilient Qatar's Natural Gas Development Policy and Energy Situation Under Its Crisis"

<sup>50</sup> Website of World Integrated Trade Solution (WITS) . Qatar trade balance, exports and imports by country 2018. Available on: <https://wits.worldbank.org/CountryProfile/en/Country/QAT/Year/LTST/TradeFlow/EXPIMP/Partner/by-country>

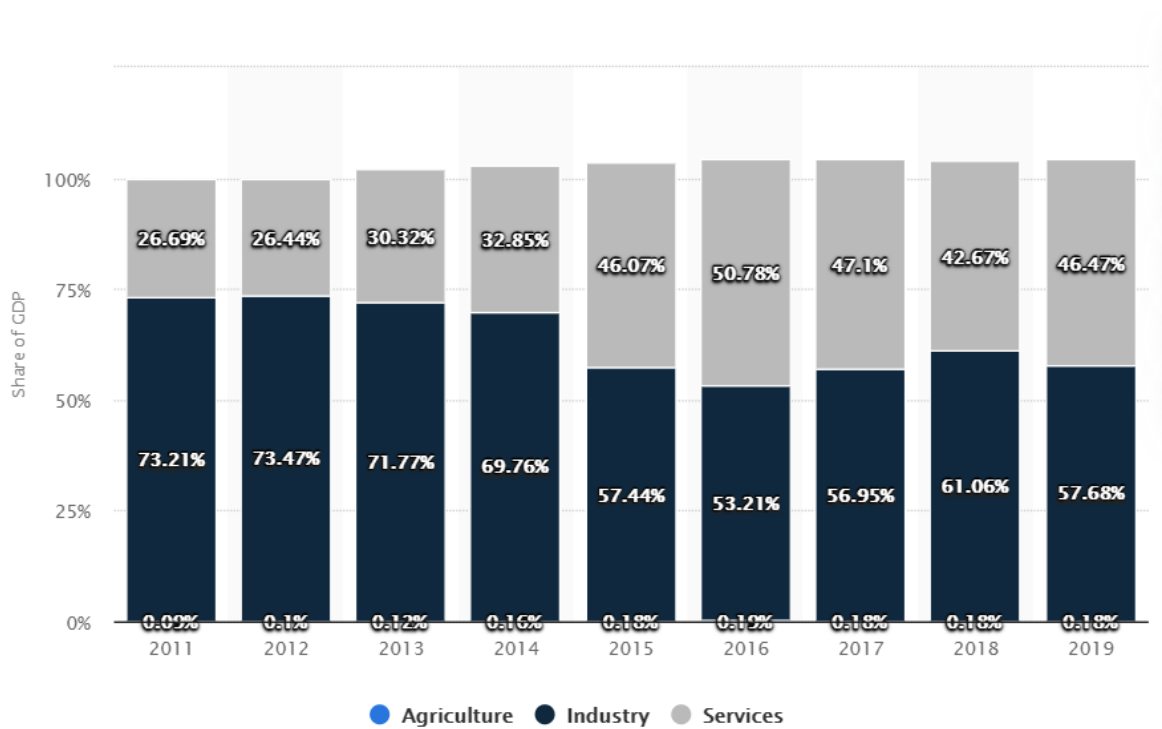
**Figure 8: Total Exports of Qatar from 2010 to 2019**



Qatar deteriorated from being the leading exporter of liquefied natural gas, giving the first place to Australia in 2020, yet Qatar holds the third largest gas reserves globally (approximately at 12% of the global total in 2021). Qatar’s economy is thus heavily focused in the gas trade, which represents over 60% of its GDP and almost four fifths of export earnings. Like other Gulf kingdoms, Qatar has been hit by the global decline in oil prices since 2014. Though, the economic consequences have been better than that of its neighbouring countries, thanks to successful economic diversification, namely via the advancement of large-scale projects. The country endured the diplomatic conflict with other Gulf crisis by finding new trade routes, with its growth rate anticipated to be 1.2% in 2018, while the GDP only increased by 0.8% in 2019. Because of COVID-19 disease, it dropped to -4.5% in 2020.<sup>51</sup>

<sup>51</sup> Website of [www.nordeatrade.com](http://www.nordeatrade.com). Qatar: Economic and Political Overview. The economic context of Qatar. March 2021. Available on : <https://www.iea.org/reports/gas-2020/2021-2025-rebound-and-beyond>

**Figure 9: Qatari GDP Distribution by Sector**



#### 4.5 natural gas production:

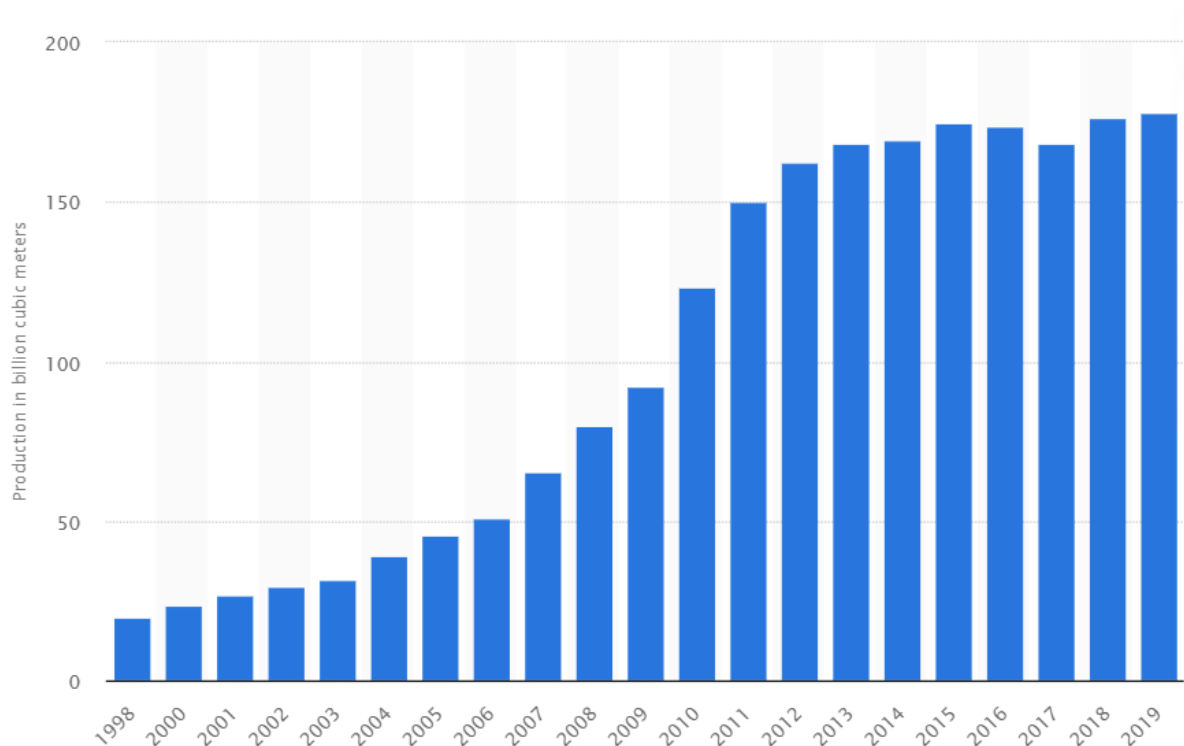
Qatar is known to be one of the richest countries in the world, having always been in the top rankings of GDP per capita, thanks to its huge, production of natural gas and crude oil and its relatively small population that measures to be around 2.8 million people, which makes the majority of its trade balance. Qatar’s dependence on exporting natural gas, mainly LNG keeps the country as rich as it may seem to be, despite the fact that Qatar is the fourth largest producer of natural gas in 2007, yet it has always been the leading country for producing natural gas per capita. Gas production per capita in Qatar is 63.54 cubic meters per capita, surpassing the major natural gas producers combined.<sup>52</sup>

by 2019, the United States was the biggest natural gas producer in the world, with a quantity of (32,914,647,000) MMcf, followed by Russia at (22,728,734,000) MMcf, Iran (9,097,956,245) MMcf, Canada (6,751,698,275), Algeria (6,491,744,560) MMcf, and Qatar with (6,000,936,690) MMcf.<sup>53</sup>

<sup>52</sup> supranote 37: at: Natural gas - production.

<sup>53</sup> ibid

**Figure 10: Production of Natural Gas in Qatar from 1998 to 2019**



Two main companies share the production of LNG in Qatar, Qatargas and Rasgas. QP owns the majority of stakes in both companies, and QP itself is owned by the state of Qatar and the royals, and international oil companies holding smaller stakes in separate specific production trains. Rasgas is divided between QP and ExxonMobil with the majority of the company by 70% and ExxonMobil by 30% , while Qatargas is owned by an association consisting of QP, in addition to Total TOTF.PA, ExxonMobil, Mitsui 8031.T, Marubeni 8002.T, ConocoPhillips COP.N and Royal Dutch Shell RDSa.L.<sup>54</sup>

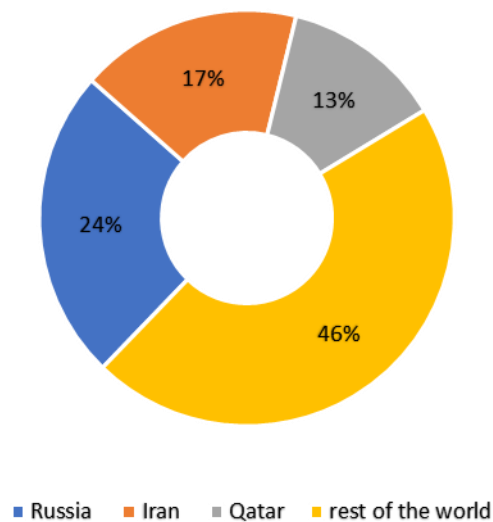
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<sup>54</sup> Reuters official Website. Reuters Staff. Factbox: Qatar, Iran share world's biggest gas. JULY 26, 2010. Doha.

#### 4.6 Natural Gas Reserves:

Natural gas reserves is s reference to large deposits of natural gas, that are thought to exist based on scientific geological studies, also, a gas reserve is characterized by its accessibility for the sake of extraction and benefitting from it as a natural resource for energy. Countries all over the world have gas reserves, the largest of which is Russia, followed by Iran and Qatar. Those 3 countries have around 54% of the world natural gas reserve which is estimated to be 6 quadrillion cubic feet of gas.<sup>55</sup>

World Natural Gas Reserve by ountry 2020



the fact that Qatar has the third largest natural gas reserve reaching 24,7 trillion cubic meters, which is around 13% of the world gas reserve secures the economic well-being of Qatari citizens as well as the government, since Qatar is self-sufficient in the energy sector, generating electricity almost entirely from the use of natural gas. In addition, in case of a country like Qatar, what is produced in the natural gas plants far exceeds what's needed in the domestic demand, so countries with natural gas reserve surplus have a trade advantage by selling gas to other countries.

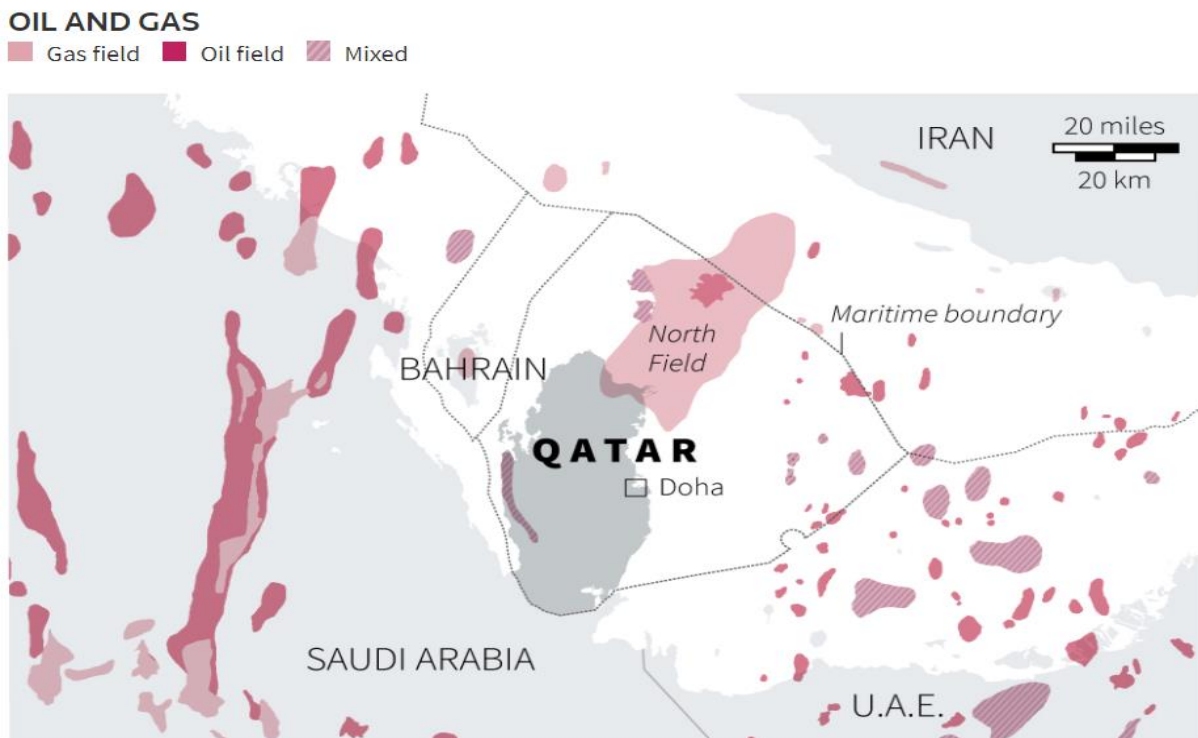
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<sup>55</sup> website of worldometer: <https://www.worldometers.info/gas/gas-reserves-by-country/>

#### 4.7 Natural Gas Fields in Qatar:

Qatar contains numerous gas fields, oil fields, and fields that contain both gas and crude oil, the biggest of which is the Northfield/south pars, located in the Persian Gulf between Iran and Qatar. This field covers an area of 9,700 square kilometres which is comparable to the area of Qatar itself., both Iran and Qatar share this field, as shown in the map below, Qatar’s share of the gas field is called the north field aka north dome, and Iran share is the south pars, yet Iran has not been able to benefit from it and extract natural gas. Due to the economic sanctions that are imposed on Iran as a result of international political conflict.<sup>56</sup>

**Figure 11: Map of Oil and Gas Fields in Qatar**



#### 4.8 Natural Gas Transportation:

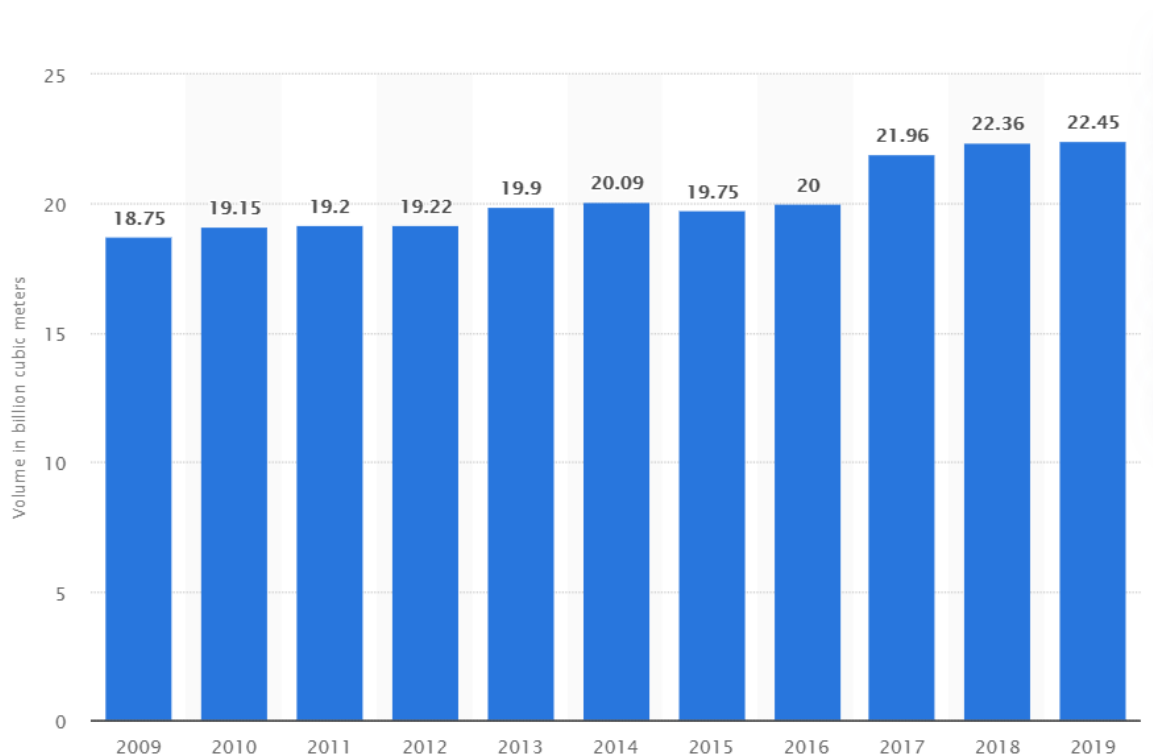
Qatar exports large amount of natural gas, most of which is Liquefied natural gas (LNG), and is transported via ships with huge cooling tanks called Gas Carriers, the company responsible

<sup>56</sup> Supranote number 54



for those transportations in (Nakilat), which translates to (transporters in Arabic). yet, Qatar also exports large amounts of shale Gas via the “Dolphin” pipelines that stretches from Qatar delivering gas to Syria, United Arab Emirates, and Oman. Another pipeline connecting Qatar with turkey and Europe through Saudi Arabia, Jordan, and Syria. However, the proposal was denied from the Syrian part to protect the interest of the Russian federation which is the first ally of Al Assad regime, and the main gas exporter to Europe. <sup>57</sup>

**Figure 12: Qatar Natural Gas Exports via Pipelines<sup>58</sup>**



#### 4.9 Natural Gas Ports in Qatar:

Qatar contains several commercial ports, that operate the beating heart of the Qatari economy, such as, Doha port, Mesaieed port, and Ras Laffan. However, when it comes to natural gas trade, Ras Laffan port is the main port from which natural gas is exported.

<sup>57</sup> The University of Akron. Muneer Althaaly. A Dissertation Presented to The Graduate Faculty of The University of Akron. An Efficient and Reliable Route For The Transportation Of Qatari Natural Gas To Europe. December, 2016. University of Akron. P. 5

<sup>58</sup> This chart can be found on: <https://www.statista.com/statistics/1127299/qatar-volume-of-natural-gas-pipeline-exports/#:~:text=As%20of%202019%2C%20the%20volume,the%20Persian%20Gulf%20with%20Iran.>

Ras Laffan Port is owned and operated by QP (Qatar Petroleum), the port is located at the northeaster tip of Qatar and in the middle of the Persian Gulf, 70 kilometres away from the North dome. Founded in 1996, the port covers an area of 850 hectares and is designed as an export unit for gas acquired from the North Field, including (LNG), liquid petroleum gas (LPG), condensates, petroleum products and sulphur.

Ras Laffan Port is a deep-water port and is the biggest manmade dock in the world and contains the world's biggest LNG export facility. Ras Laffan is the perfect facility to support offshore commercial activities, thus, one can say that Ras Laffan port was one of the main reasons behind the success of transforming Qatar into the leading LNG exporter at some point of time.<sup>59</sup>

**Figure 13: Arial View of Ras Laffan Port**



[https://solidportsolutions.com/projects/ras\\_laffan.html](https://solidportsolutions.com/projects/ras_laffan.html)

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<sup>59</sup> John Davison (15 June 2017). "Gulf crisis a "blessing in disguise" for Qatar seaport". Reuters. Retrieved 23 July 2020

#### 4.10 The Relationship Between Crude Oil Prices and Natural Gas Prices:

both Natural gas and crude oil are energy commodities. As a result, we use these fuels to heat and cool our houses, as well as to meet other energy requirements. an inter- commodity relation is found between prices of natural gas and oil, which means that their prices fluctuate in relation to one another.<sup>60</sup>

When one commodity becomes more costly in an inter-commodity spread, the other becomes more favourable due to lower prices and higher availability.

Natural gas is produced by several of the same companies that manufacture crude oil. Since natural gas can be released and captured during the oil extraction process, natural gas and crude oil extraction and production are often linked. Since more natural gas reserves were found in the United States around the beginning of the 21st century, the relationship between crude oil and natural gas shifted.

A dramatic drop in the price of crude oil occurred in late 2014, continuing through early 2016, due in part to the slowing growth of emerging economies and a decrease in oil demand. Crude oil prices had risen to more than \$70 per barrel by 2018. However, as a result of the coronavirus nearly suspending demand for oil in 2020, crude oil prices fell to record lows, while natural gas prices fell marginally, but not significantly.

The price relationship between natural gas and crude oil until 2009 averaged around 10:1. Oil is measured in barrels, while natural gas is measured in millions of Btu (British thermal units or MMBtu). The ratio is 10 MMBtu of natural gas per barrel of crude oil, for instance, if the price of one barrel of crude oil was 200\$, the price of MMBtu would 20\$.<sup>61</sup>

The price relation between natural gas and oil reached its peak by 2012, as the ratio was 50 to 1, which means the price of crude oil was 120\$ for a barrel, and the price for natural gas was 2\$ per MMBtu.<sup>62</sup>

Starting in 2012, as natural gas prices started to rise, a drastic return to long-term pre-2009 norms occurred. When natural gas prices started to fall in 2014, crude oil prices declined

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<sup>60</sup> Villar, Jose A et al. 1989. "Energy Information Administration, Office of Oil and Gas, The Relationship Between Crude Oil and Natural Gas Prices." (October 2006): 1–43

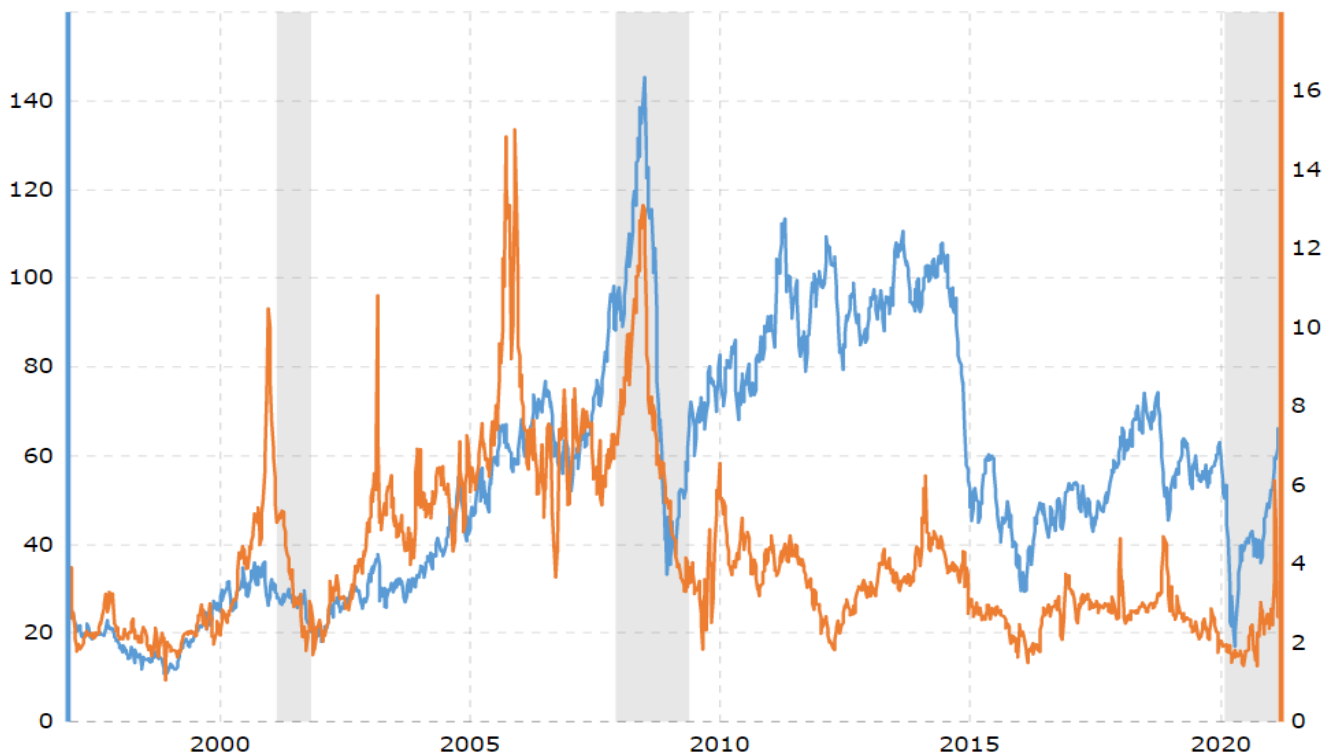
<sup>61</sup> Ibid, at p. 16

<sup>62</sup> Supranote 61, at p. 23

even further on a relative basis. The gap dropped below 16 to 1 during the crude oil bear market, which saw prices drop from over \$107 per barrel in 2014 to below \$45 in 2015.

As a result of the COVID-19 pandemic, crude oil prices fell to record lows by April 2020. The need for oil was greatly decreased as a result of government orders to remain at home. Crude oil was about \$15 per barrel at the end of April 2020, while natural gas was about \$1.91 per MMBtu, taking the difference to around 8:1. Understanding the price relationship between two goods that compete for the same use may provide valuable details and hints about potential price movements. There is usually an explanation for price divergence when one product becomes more costly than the other. When it comes to oil vs. natural gas, supply and demand are normally the driving factors.<sup>63</sup>

**Figure 14: Prices of Natural Gas and Oil<sup>64</sup>**



<sup>63</sup>Macrotrends. "Crude Oil vs Natural Gas - 10 Year Daily Chart".

<sup>64</sup> This chart can be found on: <https://www.macrotrends.net/2500/crude-oil-vs-natural-gas-chart>

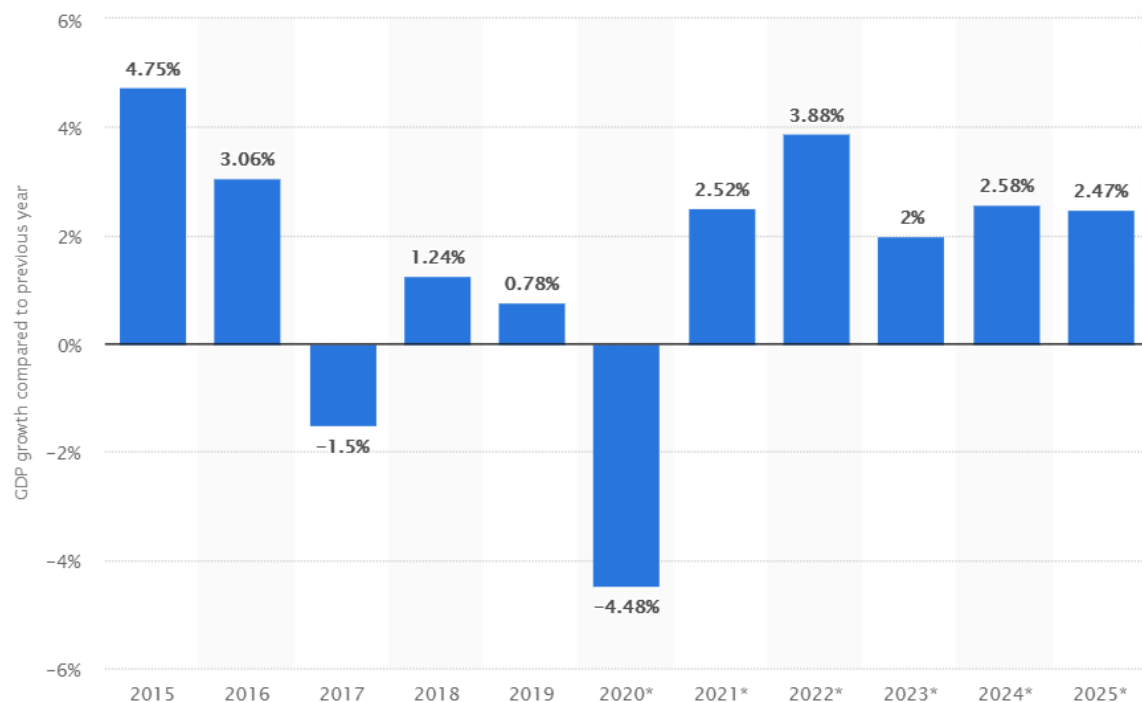
#### 4.11 Recent Events that Affected the Qatari Economy:

In the past few years, the economic growth of Qatar witnessed some fluctuations due to historical or political events that forced the economy of Qatar off its track, such as, the conflict between Qatar and its Arab neighbours, namely, the Kingdom of Saudi Arabia, the United Arab Emirates, Bahrain, and Egypt.

Like any other country, Qatar suffered a great deal of economic loss and expenses in handling the Covid-19 pandemic. This has definitely affected the market locally, in a rapid way.

In attempt of enhancing the economy, Qatar has also established the Qatari Investment Authority (QIA). This has pushed the economy of Qatar in a massive move towards the investment road. The next chapters will discuss further the role of the QIA.

**Figure 15: GDP Growth Compared to Previous Year<sup>65</sup>**



<sup>65</sup> Website of World Bank. [www.data.worldbank.org](http://www.data.worldbank.org) . Available on: <https://www.statista.com/statistics/379966/gross-domestic-product-gdp-growth-rate-in-qatar/>

The figure above shows a steep decline in economic growth during 2017, from 4.75% growth to -1.05%, this is due the Qatari conflict with its Arab neighbours. Tens atmosphere was growing in the Persian Gulf also known as Arabic gulf, between Arab neighbours as Iran and Qatar steadily began strengthening their trade relations. Furthermore, Qatar started helping Islamist political groups such as the Muslim Brotherhood ( considered the main opposition of the current government of Egypt), which are terrorist groups from the Saudi-UAE perspectives. Undeniably, Qatar admitted supporting and assistance those groups but denied supporting terrorist organizations linked to Al-Qaeda or other terrorist organizations such as ISIS. <sup>66</sup>

In addition, the Arab neighbours sought that Aljazeera network was representing voices of those terrorist organizations, thus, demanded a complete shutdown of Aljazeera.

Increasingly the environment became tight as Saudi Arabia, leader of Sunni Islam, saw the Shia political groups as a threat to its leadership in the region. Especially due to the deepening relations between the Shia Iran and Qatar.

As a consequent, the Gulf countries (KSA, UAE, Oman, Bahrain, Kuwait, and Qatar), except for Oman and Kuwait, agreed to impose a blockade on Qatar, demanding Qatar to reconsider its diplomatic relations with Iran, the end of terrorist organization support, and the shutdown of Aljazeera network. However, Qatar did not agree on the mentioned conditions and called it a violation of the country's sovereignty. <sup>67</sup>

A greater and more recent event that affected the Qatari economy was the Covid-19 Pandemic, Qatar relies on Asian demand for LNG, mainly Japan, China, India, and Singapore, in its exports which account for nearly have of Qatari trade balance. So, a change in demand drives the prices of natural gas to fall or rise, for instance, the demand for natural gas declined during 2020 as governments around the world, especially china, took protective measures to limit the spread of Covid-19 Virus. By doing so, less electricity and power was demanded from the Qatari gas market, consequently, it led to a fall in the Qatari economic growth from 0.87% in 2019 to -4,48% in 2020. <sup>68</sup>

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<sup>66</sup> www.aljazeera.com. Qatari emir condemns 'unjust blockade' in UNGA speech. 19.9.2017. available on: <https://www.aljazeera.com/news/2017/9/19/qatari-emir-condemns-unjust-blockade-in-unga-speech>

<sup>67</sup> ibid

<sup>68</sup> Website of Argus Independent Media Organisation. "Qatar's LNG exports slow amid maintenance". 25 November 2020. Available on: <https://www.argusmedia.com/en/about-us>

#### 4.12 The Future of Natural Gas in Qatar:

Natural gas is projected to be the quickest growing fossil fuel in the global energy mixture for several decades. This plentiful, and affordable fuel is expected increase its share from its current 23% of the energy sources mixture to 28% by 2050. Natural gas is a crucial fuel, balancing the energy transition. Supporting 48% to the global growth in energy demand, natural gas is expected surpass coal by 2025 to be the biggest energy source by the mid-2040s, according to Gas Exporting Countries Forum (GECF) secretary-general Yury P. Sentyurin. This abundant, flexible and clean source of energy will enlarge predominately within the Asia Pacific, North America and Middle Eastern markets, which will be responsible for over three quarters of total gas demand growth by 2050, while the Asia-Pacific region is expected to be the major gas consumer.

As the great energy shift intensifies, it will be natural gas, and renewable energy resources, which will supply almost 60% of the world's electricity supply by 2050. Demand for energy will grow as the economy and the population of the world grows. Additionally, undiscovered production will also be vital, emphasizing the necessity for expanded search and investment in new gas reserves.

The Doha-based forum is chasing its efforts to evaluate and sustain the role of natural gas in minimizing energy systems emissions, while at the same time highlighting economic and social improvement. It is also critical to emphasize the increasing interest in hydrogen as a force to support the deep de-carbonisation of the economies worldwide.

According to the GECF estimates, natural gas will sustain its important role in hydrogen production in an eco-friendly way by adding to more than 50% of the hydrogen required by 2050.<sup>69</sup>

In an attempt to face the blockade, imposed by the previously mentioned countries, Qatar's recent investment decision on the \$28.75bn North Field East Project (NFE) should be noticed. Unquestionably, this was the best time for such a move. It is estimated that the project will raise Qatar's LNG production capability from 77mn tons per year (mmtpy) to 110 mmtpy, by the year of 2025.<sup>70</sup>

The North Field is one of the global energy industry's heaviest investments in the past few

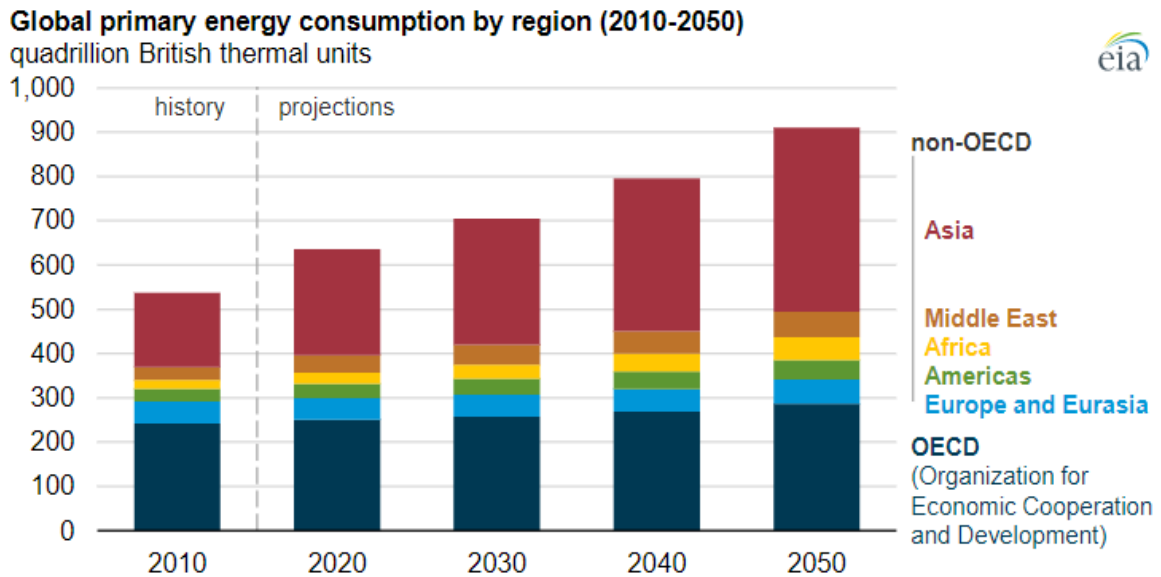
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<sup>69</sup> Gas Exporting Countries Forum. GECF Global Gas Outlook 2050 Synopsis. February 2021. P.

<sup>70</sup> *ibid*

years, in addition, it is expected to start producing in the last quarter of 2025 and its total production is expected to make about what's equivalent to 1.4mn barrels oil per day.<sup>71</sup>

**Figure 16: Global Primary Energy Consumption by Region from 2010 to 2050 forecast<sup>72</sup>**



The graph above shows the future expected consumption of natural gas, we can notice that the consumption will increase globally, thus, Qatar will witness economic growth if it keeps supplying natural gas in the same present rate. Provided that Qatar has 600 times its annual consumption of natural gas which means it is able to keep providing natural gas for the next 100 years.

#### **4.13 The Role of Qatari Investment Authority (QIA) on Economy:**

In the past four decades, Qatar's economy relied solely on the revenues generated by crude oil trading. This has exposed the economy of Qatar to the risks of singular GDP generator.

<sup>71</sup> U.S. Energy Information Administration. Today in Energy Project. International Energy Outlook 2019.

Available on: <http://www.eia.gov/outlooks/ieo/>

<sup>72</sup> Ibid



Consequently, in the year of 2005, Emir of Qatar, Hamad Bin Khalifa Al Thani, founded a Qatari investment fund, called “Qatar Investment Authority”, to manage the wealth of Qatar.<sup>73</sup>

The main functions of this authority are to manage the surplus revenues of crude oil, in a way that sustains the Qatari economy. The QIA commits these functions through investing in huge projects worldwide, and on Qatari local level. Although the QIA is a public authority, it never published its holdings to the market.<sup>74</sup>

The QIA also hold shares in several giant companies, such as Qatar Holding, Qatari National Bank, Qatari Islamic Bank, and Qatar Sports Investment. With these enormous abilities and subsidiaries, the QIA started to hold investments in great deal of countries such as the United States and UK. Some of the most gigantic companies in the world also started to be owed partially by the QIA. For example, QIA holds a number of shares in Volkswagen Group, Porsche, Hochtief, and other companies.

In some other states such as France, the QIA was named partner in Lagardère, Total, EADS, Technip, Air Liquide, Royal Monceau, France Telecom and Areva. France has also paved the way for Qatari investment through providing investment privileges to Qatar and its state-owned enterprises; one example is capital gains exemptions.

Other investment that are wildly known for the QIA are in petrochemical industries. As the QIA often declared its intention in investing in this field with billions of dollars in China and the U.S. alone.<sup>75</sup>

The emergence of the QIA has irritated several competitors. This resulted in several campaigns against the QIA, and accusation of funding terrorism. These campaigns were well handled by the government of Qatar, which found alternate solution for foreign trade boycotts conducted by few countries.

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<sup>73</sup> International Forum of Sovereign Wealth Funds. "IFSWF Our members". Archived from the original on 27 September 2016. Retrieved 2021

<sup>74</sup> Website of Qatari Investment Authority (QIA). QIA in focus. Sovereign Wealth Fund Institute. Available on: <https://www.qia.qa/About/QIAGlance.aspx>

<sup>75</sup> "Qatar's wealth fund to launch \$10 billion investment fund with China's CITIC". Reuters. Retrieved 4 November 2014.

## 5. Conclusion:

The paper has concluded the required sections, starting with clarifying the ambiguities around foreign trade, and its three types: foreign import, foreign export, and foreign export. It then discussed the advantages and disadvantages of foreign trade and its influence on people and economies.

The paper then examined the main theories behind foreign trade elements. These theories were: classic theories, and modern theories. The paper then mentions the natural gas part, its extraction, transportations, means of trade, and markets. In this part, the paper was able to drop this concept on a big scope of foreign trade and the way it interacts with on a global scale.

Qatar has the equivalent of 600 times its annual consumption of gas, thus, is expected to continue supplying natural gas for its importers for the next few decades while growing its economy because of this trade.

The second part of the paper examined the historic context of Qatar and the road from poor to rich. It then followed to discuss the main areas of Qatari natural gas reserve, its management and export. Also, the natural gas market and factors influenced by it, were discussed in the same context.

In summary, the economic model of Qatar, specifically, the reliance on crude oil and natural gas trade has proven its efficiency for a while. On the other hand, it proved the weaknesses of such model in rescuing a drowning economy. The interaction between natural gas biggest exporters and importer, have also demonstrated a scene, where prices of gas and nature of politics played a major role.

The emergence of the QIA, as an alternate economic approach further deepened the idea that an economy, which relies on foreign trade alone is a weak economy. Through out the text, the paper was able to draw the conclusion on the main needed factors for an integral and a healthy economy.

## **6. Recommendations:**

These recommendations are aimed at the reformation of economic models that solely rely on one product foreign trade, such as Saudi Arabia:

- Initiating a diverse-product foreign trade, can solve the problem of singular product trade dependency, and will lower the risk of economic siege.
- Widening the scope of foreign importers may also pay to the diversity of importers and thus greater possibilities to sustain exporting.
- Conducting foreign investments, as a back-up strategy with the main foreign exporters.
- Initiate partnerships with giant corporations worldwide. By doing this, the economy will be more robust in case of any external economic shocks.
- Investing in other sectors of the same country can be beneficial for alternating such model. For example: managing the surplus of foreign export of a certain product in the tourism field.
- Holding foreign subsidiaries of local head quarter- businesses, would enable the economy to make use of cheaper human resources in foreign countries. This approach is called “outsourcing” and can benefit well established economies and developing economies in mutual manner.

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