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The resource curse trap: rentierism and diversification in Azerbaijan

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I dedicate this thesis to my Family

CONTENTS

ABSTRACT

The main idea behind the resource curse theory is countries that are resource-rich develop less and slower than that non-resource rich. Resource curse has been considered as an economic matter, but it also affects other spheres. Therefore, Dutch disease is examined as an economic symptom of the resource curse. Azerbaijan is one of the resource-abundant countries. The long-standing dominance of the extractive industry in the economy has created a situation that can be understood with the Dutch disease model. Azerbaijan has suffered from unregulated investments, untargeted policies, and opportunistic behavior that has meant that mineral revenue has been spent rather than saved or redirected toward rebuilding the country's industrial heritage. Therefore, this research evaluates the presence of resource curse in the economy of Azerbaijan using the available statistical data, at the same time highlights the importance of economic diversification for sustainable development.

INTRODUCTION

Over the last decade a significant amount of research has been invested on the examination of the correlation between natural resources capital and its economic progress. The majority of these studies support the idea that non-renewable natural resources (for instance, oil and gas) restrained economic growth in the long term of time scale, as same as the effectiveness of the public institutions. Moreover, the effect of the abundance of natural resources on the economy and the society has been defined as *"resource curse"*.[1]

Initially, scholars mainly focused on the impact of resource curse on the economy. However, scholars, such as, Newberry, Auty, Sachs, and Warner claimed that natural resource curse does not only influence the economy of a state, but also socio-political sphere of the country.[2] The major indicators of the impact of resource curse in socio-political life are government inefficiency, high-level of corruption, non-transparency, as same as decreasing of school enrolment, low investment in education, etc.

In other words, the concept of Dutch diseases, considered as one of the economic signs of resource curse theory, which is linked with natural resource exploitation.[3] This phenomenon emerged after the discovery of gas resources in Groningen in Netherlands. Since that gas reserves caused the Dutch currency flipped over and later it leads to decline in manufacturing.[4] Later, W. Max Corden and J. Peter Neary defined this Dutch disease as one of the economic symptoms of resource curse theory. As to the Dutch disease theory, the main issue indicate itself in appreciation of real exchange rate and decrease in manufacturing and agriculture due to the revenue inflows emerged from the exploitation of natural resources.

In the case of Azerbaijan, it is among the world's 15 to oil dependent economies. Within the Contract of the Century (1994) oil led economic structure developed. Although the presence of Dutch disease is rare in Azerbaijan, it has been argued by scholars that it could become a recurring issue due to the country's institutional shortcomings. In fact, the dependency on the exportation of

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[1] Alexeev M., Conrad R. (2009) The Elusive Curse of Oil. *Review of Economics and Statistics*. Volume 91, Issue 3.
[2] Gasimov I. (2014). Resource Curse and Dutch Disease in Azerbaijan: Empirical Analysis. Institute of Graduate Studies and Research at Eastern Mediterranean University.
[3] "Dutch Disease" term was first used by the journal "Economist" in 1977.
[4] This tendency is observed also in other resource abundant countries such as United States of America (USA), Australia and etc., and commonly it is called Dutch disease.

natural resources and vulnerability toward the international price velocity, at the same time the foreign direct investment inflow to the extractive industries lead to the symptoms of resource curse theories. Many experts from several nations researched various elements of oil production and its impact on Azerbaijan's economy, politics, and social lives. The quantity of research publications on this topic surged dramatically during the oil boom at the beginning of the 2000s. Various models and approaches were used by foreign and local researchers to investigate resource curse and Dutch disease issues in Azerbaijan during this time period. Scholars focused on distinct points of theory independently in papers, with a concentration on the economic and political aspects.

Participating in regional and international energy projects lead to the economic growth in the country. Indeed, the GDP significantly increased, including GDP per capita at the same time state investment in different sectors increased and lead to the development of non-oil sectors. in the beginning of the century those achievements were considered particularly successful, taking into account the situation in the region. Beside the economic development, other issues emerged, which could be considered as early symptoms of Dutch disease, for instance, as the oil sector developed non-oil manufacturing showed the opposite, real effective exchange rate appreciation and others.

In spite of the economic development based on the natural resources, concerns about the diversification of the economy raised. Regarding the natural resource curse and Dutch disease theories if the diversification in the economy is absent sustainable development is at risk in long run. Contemporary studies have highlighted the absence and importance of diversification in the economy of Azerbaijan. For instance, Yasmin et al. (2020) noted that "Azerbaijan is poorly diversified among the Caspian Basin Countries specializing only in mineral products".[5] Similarly, empirical studies provide that even though the revenue from oil sector increased since the beginning of the century, the non-oil industry is low developed and oil dependency remains.

Putting the country's economy solely on the back of the mineral industry puts it in a cyclic situation. As the price of oil rises, various economic factors, including gross domestic product, trade balance, and investments, also go up. It is highly risky due to the volatility of the international commodity market. This dynamic ignites various economic activities, such as the de-industrialization process

[5] Yasmin, T., El Refae, G. A., & Eletter, S. (2020). Oil price and urgency towards economic diversification through effective reforms and policies in Caspian Basin. *Journal of Eastern European and Central Asian Research* (JEECAR), 7(3), pp. 305–315

and the lagging non-oil tradable sectors. In this matter Ayber *et al.* (2015) highlighted several concerns regarding the economy of Azerbaijan such as "appreciated national currency which demotivates the export potential, discourages the preparation of the skilled labor, decreases the efficiency of the utilization of the accumulated revenue in the oil fund".[6] Moreover, A review conducted by Oxford Analytica in 2019 highlighted the need for diversifying the country's economy despite the discovery of oil and gas reserves.[7]

The primary goal of this thesis is to explore resource curse theory in all three aspects for Azerbaijan and establish whether or not the country is affected by resource curse. For this reason, this thesis examines the problem through three spheres, as such, the impact of resource curse on the country's economic, political, and social sectors. The first chapter is dedicated to the main resource curse, Dutch disease, and rentier state theories and implication, including literature review. The literature review is divided into general literature relate to the concerned theories, and specific literature analyzing resource curse and Dutch disease in Azerbaijan. The second chapter enshrines the political and economic overview since the independence of the Republic of Azerbaijan. The third chapter concentrated on examining main approaches to the problem regarding Azerbaijan and analyzing statistical implications and models. The final chapter is dedicated to the importance of economic diversification in Azerbaijan.

[6] Aybar, S., Rasulova, M., & Qasimli, F. (2015). Economic Diversification and Policy in Azerbaijan. *Florya Chronicles of Political Economy*, 1(1), pp. 39-59.
[7] Oxford Analytica. (2019). Azerbaijan needs diversification despite gas growth. *Emerald Expert Briefings, oxan-db*(oxan-db). Available at: https://doi.org/10.1108/OXAN-DB243281.

I. THE THEORIES OF RESOURCE CURSE AND DUTCH DISEASE

1.1. THE ORIGIN AND DEVELOPMENT OF RESOURCE CURSE AND DUTCH DISEASE THEORIES

Juan Pablo Perez Alfonso, a Venezuelan politician and one of the founders of Organization of Petroleum Exporting Countries (OPEC), stated in one of his speeches in the 1970s: "ten years from now, twenty years from now, you will see: oil will bring us ruin… oil is devil's excrement". Some years later, the history showed that his words may illustrate the truth, however, not only oil but also other natural resources bring the nation for the short-term happiness while in long run unhappiness and ruin. Therefore, his statement can be considered as an essence of resource curse theory.

"Resource Curse" was introduced as a theory by Richard Auty in 1993, while the first concerns about the issue go back to middle-ages. Auty defined it as "the perverse effects of a country's natural resource wealth on its economic, social, or political well-being." While, in XIV century, an Arabian philosopher Ibn Khaldun defined five stages of a state. As to him, the fifth stage is "squandering and waste" of state power that comes after succeeding in initial stages, which are "acquiring authority form its rivals, control over people, tranquility and leisure, peacefulness and contentment". As to him, "in fifth phase rulers of the country waste the stocks of state for entertainment and fun, which this tendency continues until the state is able to gather humanity and social capital".[8] Later, French philosopher Jena Boden investigated this topic in 1576. He stated that "men of a fat and fertile soil, are most commonly effeminate and cowards; whereas contrariwise a barren country make men temperate by necessity, and by consequence careful, vigilant, and industrious".[9]

[8] Ibn – Khaldun. (1384.1967). The Muqaddimah: An Introduction to History. Princeton, NJ: *Princeton University Press*. Pp. 353-355

[9] Bodin, Jean. (1576, 1962). The Six Books of a Commonwealth. (Les six livres de la republique). *Cambridge, Harward University Press*, p.565

After World War II, the subject of natural resource abundance reemerged. Famous economists Prebisch and Singer suggested in the 1950s that raw materials can stifle economic expansion. According to them, a high proportion of natural resources in exports harms emerging countries' economies. In other words, if natural resources account for a greater proportion of exports, the economy may suffer.[10] Due to the importance of the issue several experts presented their approaches to the topic, its impact on economic growth and the links between resource abundance other sectors of a state and foreign direct investment.

The emergence of the issue entered into new era by 1980's. Economists started to investigate the problem empirically on the cases of different countries. For instance, Gobind N. Nankani came to the conclusion after their experiments on the issue that; "between 1960 and 1976 growth rate of developing hard-rock exporters was two times less than non-abundant countries".[11] Similarly, Wheeler examined thirty sub-African states which are natural resources rich and he observed inverse relationship between export of natural resources and economic growth.[12]

The investigation of political aspects or resource curse started with the research of Newberry, who argued that "the main reason of lower growth in resource abundant countries is not economic, but political issues".[13] On the other hand, Alan Gelb redefined the natural resource curse (or Dutch Disease) on the basis of different theories. He claimed that links between natural resource curse and economic development can be clarified by the theories, such as, *"the Neo-classical and Related Growth Theory"*, *"Export Instability Theory"*, *"the Linkage Theory"* and *"Booming Sector and Dutch Theory"*.[14]

It should be noted that, Richard Auty was the first scholar who used the term of "resource curse" in his book in 1993. He stated that; "the conventional view concerning role of natural resources in economic development has been that the resource endowment is most critical in the early low-income stages of development process. It assumes that, as development proceeds and population acquire more and more skills, those skills are deployed with increasing effectiveness to counteract

[10] Rosser, A. (2006). The Political Economy of Resource Curse. *IDS Working Paper*, 268, p.7.
[11] Nankani, Gobind. (1980). Development Problems of Non-Fuel Mineral Exporting Countries. *Finance & Development*, 17, p.8.
[12] Wheeler, D. (1984). Sources of stagnation in sub-Saharan Africa. *World Development*, 12:1, pp. 1-23.
[13] Newberry, D. M. G. (1986). "Round – Table Discussion" in J. Peter Neary and Sweden van Wijnbergen eds. *Natural Resources and the Macroeconomy*, Oxford, Basil, Blackwell, p. 134.
[14] Gelb, A. (1988). Oil Windfalls: Blessing or Curse? New York, *Oxford University Press*, pp. 14-29

any resource deficiency".[15] In his study, Auty examined several resource-rich countries to non-resource-rich countries and found that non-resource-rich countries experience higher economic growth than resource-rich countries.[16] He also stated that resource abundance has a negative impact on the economy not only in the early stages, but also in the middle stages. Auty presented two options for enhancing his outcomes. The first is an examination of government role in economic growth, while the second is acceptance of neoliberal ideas.

Auty's research inspired other scholars to examine the resource curse problem and its various dimensions. Following this period, economists explored not only the economic but also the political aspects of theory. Lane and Tornell, for example, experimentally demonstrated in 1996 that; "governments in resource-rich nations are more rent-seeking than governments in resource-poor countries. They contended that natural resources are the most important factor in this situation".[17] Moreover, J.D. Sachs and A.M. Warner were also involved in the investigation of the resource curse theory. They attributed the resource curse and Dutch disease on political causes. Other economists, on the other hand, contended that raw material costs do not cause a curse.[18]

"Dutch disease" term was first used by the journal "Economist" in 1977 but, actually its history is older.[19] In 1959 gas reserves were discovered in Groningen in Netherlands. After that Dutch currency valuated sharply, while in 10-15 years most of the Dutch industries lost their competitiveness in international market. Similar experiences occurred also in the economic situation of different states therefore, it was named as "Dutch disease". In 1970s Bruno, Rodriguez, Dornbusch, Liviaton and others studied different aspects of the problem. W. Max. Corden and J. Peter Neary are two of the famous and important scholars in the history of Dutch disease theory. In 1980 they examined the impact of resource boom on excess demand and stated that causes the wages in manufacturing sector to drive. Two years later, they explained the de-industrialization – labor shift from tradable goods to non-tradable goods, in other words from lagging sectors to booming sector. As to Corden and Neary high level of extraction of natural resources cause the

[15] Auty, R. M. (1993). Sustaining Development in Mineral Economies. *London, Routledge*, p. 1
[16] Auty, 1993, p. 3
[17] Lane, P. R. & Tornell, A. (1996). Power, Growth and the Voracity Effect. *Journal of Economic Growth*, 1, pp. 213 – 241.
[18] Sachs, J. D. & Warner, A. M. (1997). Sources of Slowth Growth in African Economies. *Journal of African Economies*, p. 21.
[19] The Economist, 1977, pp. 82-83

demand for labor in booming sector to increase. As a result of this, production shifts from lagging sector to booming sector.

At the same time Corden and Neary introduced their research; "booming sector and de-industrialization in a small open economy", and it provided the basis of the "Dutch disease" theory.[20] Later, Van Wijnbergen directed his focus on analyzing the inflation and employment through the impact of natural resource.[21] In addition, Edwards investigated the relationship between inflation, money supply and spending effect during boom.[22]

The 1990s marked a new era in the research of Dutch disease. It was around this time that scholars began to conduct empirical research on the Dutch disease problem. Mohsen Fardmanesh was one of the first to use this word. In 1991, he conducted a study on resource-rich countries such as Nigeria, Algeria, Ecuador, Venezuela, and Indonesia, utilizing annual data from 1966 to 1986, and discovered that Dutch disease reduces non-abundant sector output. Another finding is that there is a contradiction between global oil prices and Dutch disease symptoms, implying that oil prices cannot be recognized as a cause of Dutch disease.[23]

Richard Auty also delved at several elements of Dutch disease theory. He claimed in 1994 that booms in natural resource extraction are one of the primary drivers of diminished government support for non-resource sectors. According to him, the expansion in resource-rich industries compels governments to focus on these areas and devote all of their infrastructure to their development. Eventually, non-resource sectors such as manufacturing and agriculture decline.[24]

Sachs and Warner are two other well-known names in the history of Dutch disease theory. According to Sachs and Warner, an increase in domestic expenditure leads to an increase in prices, and in this situation, the price of non-tradable items rises more. Another finding by Sachs

[20] Corden, W. M & Neary, J.P (1982). Booming Sector and De – Industrialization in a Small Open Economy. *Economic Journal*, pp. 825 – 845.
[21] Wijnbergen, S. (1984). The "Dutch Disease": A Disease After All? *The Economic Journal*, pp. 41 – 45.
[22] Edwards, S. (1985). A Commodity Export Boom and the Real Exchange Rate: The Money – Inflation Link. NBER Working Paper Series, 1741, p. 7.
[23] Fardmanesh, Mohsen. (1991). Dutch Disease Economics and the Oil Syndrome: An Empirical Study. *World Development*, pp. 711- 717.
[24] Auty, R. M. (1994). Industrial Policy Reform in Six Large Newly Industrialized Countries: The Resource Curse Thesis. *World Development*, 12, pp. 11 – 26.

and Warner is that a loss in the manufacturing sector will be insignificant in a neoclassical competitive market.[25]

Scholars began to explore the Dutch disease model in many aspects after the 2000s. Some experts, Olumuyiwa and Olin, Moene, Gylfason, Subramanian, Sala-i-Martin, Herbertsson, and others explored Dutch Disease issues for countries such as Norway, Iran, Iceland, Nigeria, Mexico, and Bolivia, among others. By the second half of 2000s studies focused on overcoming and reducing ways of Dutch disease more intensively. Namely, Rosser indicated that "governments must follow policies such as controlling inflation, risk-free management, avoid of taking more foreign debt and etc."[26]

The resource curse and Dutch disease theories remain prominent. Over the previous 20 years, the boundaries of investigations have been expanded in order to discover additional aspects associated to these hypotheses. Now, fresh facts, differing outcomes for different countries, and investigation into numerous parts of theories allow us to conclude that the resource curse and Dutch disease hypotheses are extremely "far" from their origins.

1.2. DEFINITION, CAUSES, SIGNS AND EFFECTS OF RESOURCE CURSE AND DUTCH DISEASE THEORIES

As previously said, resource curse and Dutch disease concepts are typically examined separately, however it is important to remember that Dutch disease is one of the key symptoms of resource curse. Another thing that resource curse and Dutch disease have in common is that they both appear in resource-rich countries. The experience of natural resource-rich countries shows that such countries sometimes endure poor economic growth rather than rapid growth. This can be attributed to economic and political factors. It is obvious that in resource-rich countries, natural resources generate significant revenue for the economy, and governments place a strong priority on this sector. As a result, countries face the following challenges:

[25] Sachs, J. D. & Warner, A. M. (1999). The Big Push, Natural Resource Booms and Growth. *Journal of Development Economics*, pp. 43 – 76.
[26] Rosser, A. (2006a). Escaping the Resource Curse. *New Political Economy*, pp.554-567.

a) In resource rich countries the main export products are natural resources;

b) Economic growth is lower than resource deficit countries

c) There are serious problems with social welfare. Especially education and health systems are less developed.

d) Face income inequality

e) In many cases centralized political systems are characteristic for natural resource countries.

f) Most of the resource abundant countries suffer from anti-democracy, pressure on free media, lacked human rights and etc.

Many scholars have attempted to explain the major causes of resource curse in various ways from the beginning of research. As a result, we can identify several common and critical characteristics that contribute to the curse. In the presence of natural resources, most countries confront governmental instability, military interference in political life, and poor management of natural resource earnings, resulting in low economic growth. According to Rigobon and Hausmann, uncertainty over resource revenues causes a fierce struggle and stifles economic growth.[27]

The second reason for the resource curse is a lack of resource earnings. According to one school of economists, the volatility of natural resource profits and economic growth are inversely connected. Natural resource revenues are known to be erratic as a result of natural resource prices, complicating decisions on future moves in terms of economic growth. Volatility is not just negatively associated to economic growth, but also to investment. According to several economic theories, free markets are not ideal, which is why the unpredictability of natural resource earnings implies high capital costs, resulting in reduced societal welfare.

J.D. Sachs and A.M. Warner empirically demonstrated the relationship between natural resources and economic development in 2001. They also compared resource-rich and resource-poor countries. The primary goal of this study was to demonstrate that resource-rich countries have weaker economic development than resource-poor countries. They used resource-rich and

[27] Hausmann, R. & Rigobon, R. (2002), An Alternative Interpretation of the "Resource Curse": Theory and Policy Implications. *WBER Working Paper*, 9424, p. 7.

resource-scarce countries from around the world as an example. This study focused mostly on resource-rich Asian and African countries. The findings of the analysis verified Sachs and Warner's findings about the negative effects of natural resource abundance on economic growth.[28]

Figure 1. Growth and natural resource abundance between 1970 – 1989[29]

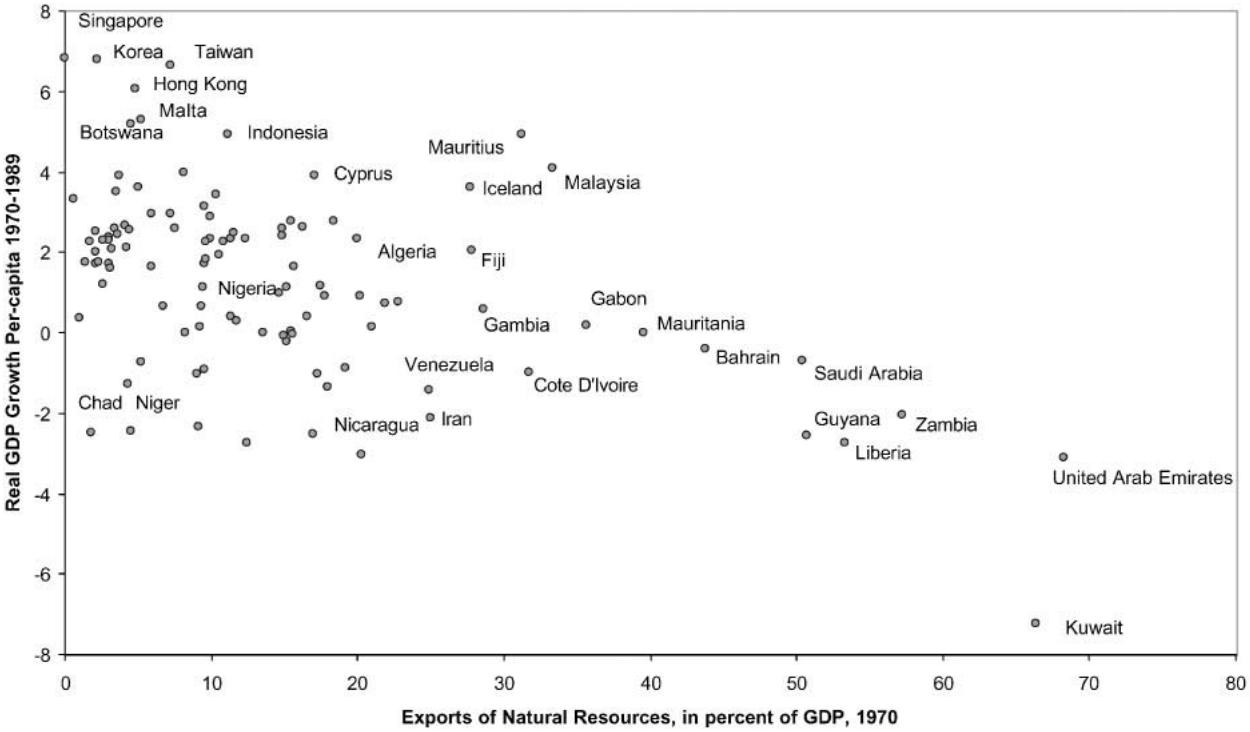

Figure 1 illustrates most of the resource abundant countries, such as United Arab Emirates, Liberia, Saudi Arabia, Kuwait and others have lower economic growth as compared to the resource deficit countries such as Taiwan, Korea, Singapore, and etc. In terms of political situation and institutional quality same results can be observed. According to authors these findings can be accepted as strong evidence of resource curse in first group of countries. Back to the initial years following the formation of the resource curse idea, scholars sought economic explanations for the problem. However, it became evident after a while those economic arguments alone could not explain the resource curse. Following that, political factors were explored as variables that cause problems for

[28] Sachs, J. D. & Warner, A. M. (2001). The Curse of Natural Resources. *European Economic Review*, pp. 827–838.
[29] Source: J.D. Sachs, A.M. Warner / *European Economic Review* 45 (2001) 827-838

resource-rich countries. Researchers have discovered that resource curse is affecting the social lives of resource-rich countries as a result of politics.

Many scholars believe that the function of institutions is the primary cause of the resource curse problem. Supporters of this theory associate it with the role of institutions in the management of resource revenues. They also imply that if a country's resource profits are mismanaged, institutions are the primary means of resolving the problem. On the other side, the behavior of institutions influences economic growth, development, and social welfare. Government effectiveness is clearly low in many resource-rich countries, and as a result of government inefficiency and inadequate management of natural resource earnings, major economic and social problems occur.[30]

On the other hand, corruption is also one of the symptoms of an abundant resources. Increases in resource revenues are generally accompanied with political corruption in resource-rich countries. Since revenue inflows from resources attract individuals, especially bureaucrats, who are interested in making money and tend to capture rents. Moreover, rapid revenue inflows and ineffective government experience make managing the flows from resource abundance problematic. Furthermore, in most situations, governments spend these earnings as bribes to various individuals, groups, or countries, increasing the level of corruption. As a result, people only benefit from a small portion of resource earnings. The main issue emerges when political parties in power use revenue to alleviate public dissatisfaction. Instead of growing other areas of the economy, the government does not tax the people heavily for this goal.[31] Natural resource income have an important role in combating corruption and other issues. Rents from resource abundance can also be utilized for antidemocratic government and public pressure. If a government has an abundance of resources but there is corruption or incompetent management of those resources, large uprisings by peoples and independent groups are typical. It is apparent that free media organizations are also serving as a deterrent to anti-democratic governments. Naturally, resource income is employed as the primary source for preventing opposing businesses and people in this process.[32]

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[30] Mehlum, H., Moene, K. & Torvik, R. (2006). Institutions and the Resource Curse. *The Economic Journal*, 116, pp. 1-20.
[31] Mehlum, Moene, Torvik, (2006), p. 13.
[32] Ross, M. (2001). Does Oil Hinder Democracy? *World Politics* 53, 325 – 361.

Internal disputes are another issue that arises as a result of the availability of natural resources. Some economists believe that it occurs as a result of the country's insecurity. Internal conflicts primarily arise between political or armed factions vying for control of natural resources. According to Collier, economic and social inequity or societal pressure, ethnic or religious discrimination as a result of resource revenues cause civil wars. It is well recognized that in nations where there are internal conflicts or civil wars, management institutions such as ministries or committees fail to perform, which has a detrimental impact on economic growth. Collier believes that during civil wars, economic development is 2.2 percent slower than during peacetime.[33]

Similarly, education level is an important indicator of a country's growth. It improves the standard of living and makes the country or society more active in daily life. As a result, public control over governments grows, which leads to improved governance. There are two primary debates about the impact of abundant resources on education. Some economists suggest that governments that care about the country's future should invest in education. However, another group of researchers contends the reverse. They imply that in resource-constrained countries, policymakers opt not to spend in education. Since then, there has been a decrease in the demand for high-quality capital and skilled personnel in resource extraction.[34]

Furthermore, health system also significantly affected by the resource abundance. "If there is resource curse in a country it often impacts the health expenditures, nutrition, rate of child mortality and etc. According to statistics of World Health Organization (WHO) 1% increase in oil production causes under five years old child mortality per 1000 to increase 3.8%. Moreover, the rate of starvation for children under five years old is 1% for every 5% increase in oil dependence. The main reason of less developing health system is that resource abundant countries are trying to avoid from high value projects such as health. The governments in these states try to invest sectors which actually away from attention such as infrastructure, because of secrecy corruption".[35]

It is commonly accepted that Dutch disease is basically connected with the exploitation of new reserves of resources. Consequently, the currency of a state gets valuated due to the sudden increase in revenue inflows to the economy. Indeed, when currency is over-valued tradable goods

[33] Collier, P. On the Economic Consequences of Civil War. (1999). *Oxford Economic Papers* 51, pp. 168 – 183.
[34] Gylfason, T. (2001). Natural Resources, Education and Economic Development. *European Economic Review,* 45, pp. 847 – 859.
[35] Shleifer, A. & Vishny, R. W. (1993). Corruption. *The Quarterly Journal of Economics,* 108:3, pp. 599 – 617.

become more expensive and less competitive in international markets. Eventually, import good from foreign states becomes cheaper than the domestic products, which leads to reduce the competitiveness of domestic businesses. In the other words, it drives to the decline in manufacturing, agriculture and other non-resources-based sectors. All of these symptoms make the economy of a state be dependent on the natural resources. It should be noted that this tendency also increases the unemployment rate, due to the fact that as resource abundant sector emerges, salaries in this sphere increase and it attracts workers this this sector. While, natural resource sector (for instance oil and gas) is mostly capital intensive and not human. Therefore, most of the population of a country is employed by other sectors such as manufacturing and agriculture, and when these sectors decline it leads to affect employment rate negatively.[36]

1.3. POLITICAL ASPECTS OF RESOURCE CURSE AND RENTIER STATE THEORIES

Rentier state theory can be considered as a sub-category research of the resource curse theory. According to the research of Beblawi, "in order to define a state as a *rentier state* or *rent-seeking state*. The state required to meet some characteristics, as such, domination of rents in state economy, externality of rents and few people engagement in generation of rents".[37] Eventually, the term of rentier state can be identified as a state where rents are paid by foreign actors, therefore, they accrue directly to the state and only a few are engaged in the generation of this rent, the majority being involved only in the distribution or utilization of it. [38] Although this definition may lead to the idea that rents can be a result of loans or aid from foreign investors, the rentier state notion has traditionally been used to countries that generate rents from their abundant natural resources. For instance, Beblewi claims that, "most of the resource abundant state of Middle East states notably Saudi Arabia and Kuwait can be acknowledged a per-excellence of the rentier states due to the resource rents in their economy".[39]

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[36] Tsalik, S. (2003). Caspian Oil Windfalls: Who Will Benefit? *Open Society Institute, Central Eurasia Project.*
[37] Beblawi, H. The Rentier State in the Arab World, in The Arab State, ed. Giacomo Luciani (Berkeley: *University of California Press*, 1990), pp. 85-99.
[38] Ross, M. 'Does Oil Hinder Democracy', p. 329.
[39] Beblawi, H. The Rentier State in the Arab World, p. 89.

After understanding the definition of the rentier state concept, it is crucial to evaluate in what ways rentier states leads to resource curse and elaborate its effects on social, political, and economic life of resource abundant states. In order to observe this matter, I will mainly uphold the method developed by Michael Ross.[40] As to his findings, the effects of rentier state theory can be classified under three groups, so-called; the rentier effect, the repression effect and the modernization effect.

Referring to the Ross's findings the rentier effect occurs when the governments in resource-rich countries have a tendency to employ rents to relieve social constraints, gaining increasing independence from the public in the process.[41] Moreover, he claims that rentier behavior of the states can be analyzed through 'taxation effect', 'spending effect' and 'formation effect'. First, the tax effect assumes that governments tend to pay less or no taxes when sufficient revenues from energy exports flow into the treasury, reducing the likelihood that the public will demand democracy and accountability. The reluctance of citizens to stand up for democracy can be explained by historical practices. The general idea is that democratic representation and accountability of government emanated from the ruler in order to collect new and higher taxes.[42] There is no taxation in the rentier countries, so it is argued that the tax system in the rentier countries makes citizens less demanding in terms of their political participation. In addition, low taxation reduces the state's will to satisfy the people's demands for democracy, so that it can be concluded that the rentier state suffers from democratic issues.[43]

Second, the "spending effect" posits that governments use rents in popular social programs (education, health, etc.), sector subsidies (e.g. energy and agriculture), and resource creation to legitimize their power. In addition to the legitimation of authority through the issuing of rents instead of free elections, rentier states invest their energy income in clientelist networks in order to avoid the emergence of democratic claims by citizens.[44] Hence, it can be confirmed that authoritarian regimes tend to keep their power in rentier states as long as the rents flow into the

[40] Ross, M. 'Does Oil Hinder Democracy', 329
[41] Ibid, 332
[42] Rosser, A. 'The Political Economy of the Resource Curse: A Literature Survey', 15.
[43] Beblawi, H. The Rentier State in the Arab World, 89-90.
[44] Meissner, H. 'The Resource Curse and Rentier States in the Caspian Region: A Need for Context Analysis', GIGA Working Papers (Germany: German Institute of Global and Area Studies, 2010), 11. Available at: http://www.giga-hamburg.de/en/system/files/publications/wp133_meissner.pdf.

state coffers. In addition, it can be argued that most citizens in rentier states become more obedient to the ruling elites because of government spending on popular social programs.[45]

Thirdly, the 'group formation effect' suggests that rentier states have a tendency to use its "largesse to prevent the formation of social groups that are independent from the state and hence that may be inclined to demand political rights".[46] To put it differently, emergence of opposition to status quo or independent social groups are very likely to be suppressed by the governments as they are perceived as a threat to the very existence of their states. Chaudhry explains the lack of civil society and independent civil institutions in rentier states, in particular Saudi Arabia, Iraq and Libya with the 'group formation effect' of the rentier state theory .[47]

Referring to the repression effect, Ross claims that "there are two reasons behind presence of large military forces in rentier states. The first argument is that as governments in rentier states are more prone to suppress popular uprisings as they are regarded as a challenge to their authority. Hence, the more military forces they have the easier to repress oppositions. The second argument suggests that resource abundance might result in ethnic or regional conflicts not only within state but also between states.[48] More specifically, if energy resources are concentrated in a region populated by minority groups, resource extraction may lead to conflicts as everyone naturally competes for getting more from energy resources. Therefore, the central authority has large military apparatus to prevent eruption of any conflict in resource rich regions for the security of energy infrastructures.

On the other hand, Ross derived the modernization effect from the work of Ronald Inglehart. Despite the fact that modernization effect is not directly related with resource wealth, this effect argues that democracy is "collection of social and cultural changes – including occupational specialization, urbanization, and higher levels of education – that in turn are caused by economic development".[49] To put it differently, if economic development brought about by resource wealth does not pave the way for social and cultural changes, democratization will not take place. Ross utilized different quantitative methods so as to test Inglehart's arguments. Basically, there are two

[45] Ross, M. 'Does Oil Hinder Democracy', p. 329.
[46] Ibid, 334.
[47] Chaudrhy, K. 'Economic Liberalization and the Lineages of the Rentier State', Comparative Politics 27 No.1, (1994), p. 19.
[48] Ibid, 336.
[49] "BP Statistical Review of World Energy June 2013", British Petroleum

arguments derived from Inglehart's work. The first is that higher education levels will lead to emergence of more articulate public; the second is increasing occupational specialization will create more independent workforce which will definitely strengthening labor's bargaining power *vis-a-vis* political elites.

1.4. ENERGY TRANSITION AND ITS IMPACT ON RESOURCE DEPENDENT ECONOMIES

Energy transition refers to a wide structural change in the energy system and the power relations established through it. As many scholars already outlined in their researches, the main driven factor in this matter is emergence of reducing carbon emission. The academic sphere considers both *"pace and nature"* of energy transition.[50] Pace is one of the most important matters, due to the International Energy Agency (IEA) estimations, this decade (2020-2030) is "highly critical", because carbon emission required to be reduced approximately 45% from 2010 level by the end of the decade in order to achieve net-zero carbon emission by 2050.[51]

Literature on the subject could be classified under two categories. One side consider energy transition as a long process.[52] This concept holds that rapid transitions are anomalies, which are limited to certain special circumstances and are difficult to replicate. Moreover, "the complexity of the built infrastructure and institutional legacies protect the status quo and *'lock in'* a fossil-fuel-dependent energy system".[53] On the other hand, scholars argue that rapid transitions can happen at varying scales, and that they are consciously governed by global changes.[54] Perhaps, it is also

[50] Sovacool, B. (2017). The history and politics of energy transitions: Comparing contested views and finding Common ground. In D. Arent, C. Arndt, M. Miller, F. Tarp, & O. Zinaman (Eds.), The political economy of clean energy transitions. *Oxford University Press*

[51] IEA. (2020). *World energy outlook 2020*. International Energy Agency.

[52] For instance, Fouquet, R. (2016). Historical energy transitions: Speed, prices and system transformation. *Energy Research & Social Science*, 22, 7–12. Available at: https://doi.org/10.1016/j.erss.2016.08.014; Smil, V. (2016). Examining energy transitions: A dozen insights based on performance. *Energy Research & Social Science*, 22, 194–197. available at: https://doi.org/10.1016/j.erss.2016.08.017.

[53] Myhrvold, N. P., & Caldeira, K. (2012). Greenhouse gases, climate change and the transition from coal to low carbon electricity. *Environmental Research Letters*, 7, 014019. Available at: https://doi.org/10.1088/1748-9326/7/1/014019.

[54] For instance, Kern, F., & Rogge, K. S. (2016). The pace of governed energy transitions: Agency, international dynamics and the global Paris agreement accelerating decarbonisation processes? *Energy Research & Social Science*, 22, 13–17. Available at: https://doi.org/10.1016/j.erss.2016.08.016; Newell, P., & Simms, A. (2020a). How did we do

important to mention the political consensus on the need for change based on environmental imperatives.[55] The technological advances that have allowed developing nations to move beyond traditional economic development could help accelerate the pace of transition. Further, the Covid 19 and "green recovery" plans might accelerate the pace of energy transition. [56]

Furthermore, it is also important to define the nature of energy transition. As already being mentioned above, energy transition refers to shifting from one/more dominant energy sources an replace the associated technologies with contemporary one.[57] In real terms, renewable and low-carbon emission energy sources have not yet replaced its counterparts in global scale.[58] As to Larid (2013), "a narrow focus on energy sources alone, however, masks the social and political dimensions of energy systems behind a false veneer of limited technological choices".[59] Moreover, The idea that political transitions are inevitable or are not representative of the spatial and geographical dynamics of these events undermines the importance of innovation.[60] Despite the increasing interest in power and incumbency, research on socio-technical transitions remains focused on innovation.[61]

A deeper understanding of the various political, economic, and cultural shifts that occur during significant structural transition is also necessary to successfully navigate these changes.[62] The

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that? Histories and political economies of rapid and just transitions. *New Political Economy*, 1–16. Available at: https://doi.org/10.1080/13563467.2020.1810216.

[55] Szabó, S., Bódis, K., Huld, T., & Moner-Girona, M. (2013). Sustainable energy planning: Leapfrogging the energy poverty gap in Africa. *Renewable and Sustainable Energy Reviews*, 28, 500–509. Available at: https://doi.org/10.1016/j.rser.2013.08.044

[56] Kuzemko, C., Bradshaw, M., Bridge, G., Goldthau, A., Jewell, J., overland, I., Scholten, D., Van de Graaf, T., & Westphal, K. (2020). Covid-19 and the politics of sustainable energy transitions. *Energy Research & Social Science*, 68, 101685. Available at: https://doi.org/10.1016/j.erss.2020.101685.

[57] Hirsch, R. F., & Jones, C. R. (2014). History's contributions to energy research and policy. *Energy Research & Social Science*, 1, pp. 106–111. Available at: https://doi.org/10.1016/j.erss.2014.02.010

[58] York, R., & Bell, S. E. (2019). Energy transitions or additions? Why a transition from fossil fuels requires more than the growth of renewable energy. Energy Research and Social Science, 51, 40–43. Available at: https://doi.org/10.1016/j.erss.2019.01.008

[59] Laird, F. N. (2013). Against transitions? Uncovering conflicts in changing energy systems. *Science as Culture*, 22(2), 149–156. Available at: https://doi.org/10.1080/09505431.2013.786992

[60] Sovacool, B. K., Hess, D. J., Amir, S., Geels, F. W., Hirsch, R., Rodriguez Medina, L., Miller, C., Alvial Palavicino, C., Phadke, R., Schot, J., Silvast, A., Stevens, J., Stirling, A., Turnheim, B., van der Vleuten, E., van Lente, H., & Yearley, S. (2020). Sociotechnical agendas: Reviewing future directions for energy and climate research. *Energy Research & Social Science*, 70, 101617. Available at: https://doi.org/10.1016/j.erss.2020.101617

[61] Bridge, G., & Gailing, L. (2020). New energy spaces: Towards a geographical political economy of energy transition. Environment and Planning A: *Economy and Space*, 52(6), 1037–1050.

[62] Paterson, M. (2020). Climate change and international political economy: Between collapse and transformation. *Review of International Political Economy*, 28, 394–405. Available at: https://doi.org/10.1080/09692290.2020.1830829.

concept of transformation refers to the various elements that interact with each other during a deep and structural transition.[63] For instance, as the energy transition unfolds, it is important to consider the various geopolitical and institutional arrangements that are shaping the dynamics of the energy system. Indeed, the transition to low- and high-carbon energy sources must be coordinated across various sectors and from global scale to local.[64] The energy transition is a transformative event that will eventually reorient the way we consume and supply energy. It will also alter the geopolitical dimensions of the energy supply. While, some scholars argue that the transition to a low-carbon energy system will create new geopolitical tensions.[65]

It is undeniable fact that, the oil exporter economies or resource abundant economies have enjoyed the geopolitical power so far. In other words, as has been referred in the previous section, "rentier states" have been using the inflows of exporting their natural resources to comply with their social contract toward their citizens and advance their security capabilities.[66] Moreover, many of the resource curse states have been showing low economic diversification and relative protection of human rights.[67] Therefore, significant amount of researches have been focusing on examining "resource curse", in particular oil industry. Indeed, limited number of researches have been dedicated to investigate the energy transition from carbon emission for these economies' resource endowments.[68]

It should be noted that production costs vary widely across producer economies.[69] Although, for instance lower production costs can help boost economic growth, indeed, they can also create winners and losers. In this context, so-called *"green paradox"* appears; a green paradox refers to the idea that producers are increasing their supply in anticipation of lower demand in the future.

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[63] Pearse, R. (2020). Theorizing the political economy of energy transformations: Agency, structure, space, process. *New Political Economy*, pp. 1–13. Available at: https://doi.org/10.1080/13563467.2020.1810217

[64] Bocca, R. (2020, April 26). *As coronavirus shocks the energy sector and economy, is now the time for a new energy order?* Available at: https://www.weforum.org/agenda/2020/04/energy-oil-gas-electricity-sustainability-economy-covid19-coronavirus-pandemic-market-stability/

[65] Bordoff, J. (2020, October 5). *Everything you think about the geopolitics of climate change is wrong*. Available at: https://foreignpolicy.com/2020/10/05/climate-geopolitics-petrostates-russia-china/

[66] Schwarz, R. (2008). The political economy of state-formation in the Arab Middle East. *Review of International Political Economy*, 15(4), pp. 599–621. Available at: https://doi.org/10.1080/09692290802260662

[67] Klare, M. T. (2002). *Resource wars. The new landscape of global conflict*. Holt.

[68] Bradley, S., Lahn, G., & Pye, S. (2018). *Carbon risk and resilience: How energy transition is changing the prospects for developing countries with fossil fuels*. Chatham House.

[69] Goldthau, A., & Westphal, K. (2019). Why the global energy transition does not mean the end of the petrostate. *Global Policy*, 10(2), 279–283. Available at: https://doi.org/10.1111/1758-5899.12649

Increasing production delays the pace of energy transition to low carbon emission.[70] In the Gulf, for instance, low-cost producers are increasing their output to capture a larger portion of the market. As same as resource abundant states are taking the credits for high amount of greenhouse emissions, equally they are vulnerable to the effects of low carbon economy than other nations.[71]

Perhaps, producer economies can still manage the transition to a low-carbon economy by diversifying their revenues and developing green industrial policies. This strategy can stimulate domestic demand and reduce greenhouse gas emissions. On the other hand, diversifying the tax base and reducing fossil fuel consumption subsidies can help minimize the impact of the transition on the economy.[72] For instance, in 2018, the Gulf Cooperation Council members agreed on a collaborative VAT system, and, some members of the council increased their domestic VAT even further during early spread of Covid 19. It occurred because of the rapid reduction in oil price, which lead to decline in rents and it makes it difficult to maintain the fossil fuel subsidies. Therefore, low oil price necessitates the pricing reform.

1.5. THE IMPORTANCE OF ECONOMIC DIVERSIFICATION IN RESOURCE DEPENDENT STATES

As many researchers argue, defining the diversification performance of resource abundant countries is crucial to observe the question; "how the resource curse can be mitigated". Indeed, without diversification, resource rich states are speed more vulnerable to the "resource curse".[73] Economic diversification is a policy target that can help manage the boom-and-bust cycles of resource-rich economies. Unfortunately, the literature on the subject does not clearly answer the question of how natural resources can undermine economic diversification.[74] Moreover, there are

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[70] Fattouh, B. (2021). *Saudi oil policy: Continuity and change in the era of the energy transition*. Oxford Institute for Energy Studies.
[71] World Bank. (2020). *Diversification and cooperation in a decarbonizing world. Climate-strategies for fossil-fuel dependent countries*. World Bank Group.
[72] Skovgaard, J., & van Asselt, H. (Eds.). (2018). *The politics of fossil fuel subsidies and their reform*. Cambridge University Press.
[73] Sala-i-Martin X., Subramanian A. 2013. "Addressing the Natural Resource Curse: An Illustration from Nigeria." *Journal of African Economies* 22 (4): pp. 570–615.
[74] Van der Ploeg F., Poelhekke S. 2009. "Volatility and the Natural Resource Curse." *Oxford Economic Papers* 61 (4): 727–60.

at least four major obstacles which prevent the emergence of a clear answer regarding the relationship between economic diversification and the natural resources.[75]

The first challenge is that the vast majority of research on GDP per capita focuses on the growth of resource and non-resource sectors. This means that the data are not able to capture the heterogeneity of responses among tradable and non-tradable goods in the presence of resource curse. Nevertheless, since GDP includes various resource-related activities, such as mining and energy, the negative relationship between the GDP per capita and resource wealth could be explained by the decline in commodity prices.[76] Indeed, establishing the link between resources curse and diversification requires a closer look at the non-resource sectors' performance. Aside from being classified as commodity goods, non-resource activities are also often linked to the extraction of resources. This makes them require a careful identification process to arrive at robust conclusions.[77]

The second issue that constrains our ability to measure non-resource growth is the price correction. Since commodity prices follow the boom-and-bust dynamics of their markets, it is necessary for resource-rich countries to make appropriate price corrections. This means that nominal non-resource output will always appear high during periods of commodity price boom and low during bust. Although total gross domestic product can be corrected using the sectoral deflators, they are not available for making adjustments for non-resource sectors.[78] This leaves researchers with the alternative of using the aggregate GDP deflator. Therefore, the use of the aggregate deflators might lead to a systematic measurement bias in times of commodity boom and bust.[79]

Third, the relationship between resource wealth and non-resource growth can be assessed depending on the time period and the horizon. For instance, it has been generally negative during commodity price booms (during 1970s and more recently since early 2000s). It is argued that high resource revenues can be beneficial for the economy, but the volatility of commodity prices can

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[75] James A. 2015. "The Resource Curse: A Statistical Mirage?" *Journal of Development Economics* 114. 55–63.
[76] Corden W. M., Neary J. P. 1982. "Booming Sector and De-industrialization in a Small Open Economy." *Economic Journal* 92 (368): 825–48.
[77] Venables A. J. 2016. "Using Natural Resources for Development: Why has it Proven so Difficult?" *Journal of Economic Perspectives* 30 (1), pp. 161–84.
[78] Van der Ploeg F., Poelhekke S.. 2009. "Volatility and the Natural Resource Curse." *Oxford Economic Papers* 61 (4): 727–60.
[79] Collier P., Goderis B.. 2012. "Commodity Prices and Growth: An Empirical Investigation." *European Economic Review* 56 (6): 1241–60.

have negative effects on economic performance.[80] For instance, using rich census data from the United States, Allcott and Keniston (2017) report that "resource booms are associated with higher growth of employment and wages in manufacturing sectors among affected counties. Manufacturing output expanded due to linkages with locally traded sectors, although highly-tradable manufacturing subsectors contracted during booms. An explicit focus on commodity price cycle and the time lag after resource discoveries could thus be important for understanding the effect of resource windfalls on economic diversification".[81]

Finally, establishing a causal link between economic diversification and resource wealth is challenging because of the various channels that could link the two. Frankel (2012) identified six potential channels that could cause a resource curse: "*(i)* long-term trends in world prices; *(ii)* price volatility; *(iii)* permanent crowding out of manufacturing; *(iv)* autocratic/oligarchic institutions; *(v)* anarchic institutions and potential civil wars; and *(vi)* cyclical Dutch Disease that elicits the expansion of the non-traded sector".[82] Furthermore, recent studies have started adopting quasi-experimental techniques for identifying diversity patterns.[83]

In economic literature three main approaches are used to measure economic diversification. The three main types are quality-based, variety-based, and output-oriented. Quality-based measures consider the structural changes in the economy that can promote diversification. While the latter two measures take into account changes in non-resource activities regardless of its composition. Although variety-based and quality-oriented measures of diversification have theoretical merits, they require vast and disaggregated datasets to perform their intended function. Moreover, the quality-based measures of export diversification depend on the input-output data sets and econometric specifications. Instead, variety-based measures tend to be influenced by changes in the external environment.[84] For instance, if the price of gold goes down, it could also affect the

[80] Van der Ploeg F., Poelhekke S.. 2017. "The Impact of Natural Resources: Survey of Recent Quantitative Evidence." *Journal of Development Studies* 53 (2): 205–16.
[81] Allcott H., Keniston D. 2017. "Dutch Disease or Agglomeration? The Local Economic Effects of Natural Resource Booms in Modern America." *Review of Economic Studies* 85 (2): pp. 695–731.
[82] Frankel J. A. 2012. "The Natural Resource Curse: A Survey of Diagnoses and Some Prescriptions." Kennedy School of Government Working Paper Series RWP12-014, Harvard University, Boston, MA.
[83] Smith B. 2015. "The Resource Curse Exorcised: Evidence from a Panel of Countries." *Journal of Development Economics* 116: 57–73.
[84] Ross M. L.. 2017. "What Do We Know about Economic Diversification in Oil-producing Countries?" available at: https://ssrn.com/abstract=3048585 .

export of certain commodities. Although the concept of output-based measures is very simple, they have not been widely used to measure the economic diversification of resource-rich countries.[85]

1.6. LITERATURE REVIEW

As a post-soviet resource abundant state Azerbaijan's economy has been theoretically and empirically examined by several scholars. Within this thesis I will mainly focus on the studies that investigate the impact of resource curse on the economy, political and social life of Azerbaijan.

1.6.1. LITERATURE ON THE ECONOMIC SIDE OF RESOURCE CURSE

Rosenberg and Saavalainen are among the first experts that investigated resource abundance problem in the case of Azerbaijan. As to them; "the oil boom can lead to resource curse and Dutch disease in Azerbaijan economy". They claim that "as a result of oil exploitation domestic goods and assets prices created fluctuations for Azerbaijan economy in the short run, but real exchange rate did not damage the competitiveness of non-oil sector in the short period of time. According to authors after the independence GDP growth rate was firstly positive during 1996 and 1997, also there was a decline in industry and manufacturing sectors. Indeed, long-term effects of oil exports resulted with Dutch disease for Azerbaijan. Though there is not much information about existence of Dutch disease in country economy, while after the capital inflow from resources and foreign direct investment to oil sector real exchange rate appreciated and it can be noted as one of the main symptoms of Dutch disease problem. The second sign of Dutch disease in Azerbaijan economy is the decline in manufacturing and agriculture sectors. They indicate inefficient allocation of resource revenue as a third factor".[86] The authors underlined some recommendations for tackling the economic issues connected with resource curse and Dutch disease. They support the idea that Azerbaijan must save some portion of its oil revenues in foreign states. On the other hand, they

[85] Bahar D., Santos M. A.. 2018. "One More Resource Curse: Dutch Disease and Export Concentration." *Journal of Development Economics* 132: 102–14.
[86] Rosenberg, C.B., & Saavalanien, T. O. (1998). How to Deal with Azerbaijan's Oil Boom? Policy Strategies in a Resource – Rich Transition Economy. *IMF Working Paper*.

believe that remedy avoiding from Dutch disease is to develop the efficiency of authorities mandated on oil revenues, and investment matters.

Singh and Laurila investigate the link between economic growth and abundance of resources such as natural gas and oil, including the symptoms of Dutch Disease in Azerbaijan economy between 1990 and 1998. As to them, "during first five years of independence, despite many problems such as huge decline in GDP, and high inflation rate Azerbaijan achieved stabile economic development. By the signing of contracts with foreign companies on exploitation of natural resources in 1995 Azerbaijan entered to a new period of development which started to benefit from the oil and natural gas revenues. Due to large revenue inflow, country faced with threats such as Dutch disease. Eventually, during the first years of resource production real exchange rate did not appreciate, opposite happened. Indeed, it can be the impact of other causes rather than Dutch disease. While, it is expected appreciation of real exchange rate in future years".[87]

Later, Clemens examined the resource curse and foreign direct investment in the case of Azerbaijan. In the first stage, the study analyzes the economy of Azerbaijan, then the effect of resource curse on foreign direct investment. He believes that "within the first decade of 21th century Azerbaijan reached high rate of growth. This growth attracts many investors and millions of dollars to country. It is clear that most of these investments go to resource abundant sector and it leads Dutch disease symptoms. In contrary, the government can prevent this threat by directing investments to non-oil sector. Because of this, level of direct investments decreased and it does not affect economy negatively. However, if Azerbaijan government makes some reforms in democracy, human rights fields and fight against corruption it can be one of the most developed countries of former Soviet Union".[88]

Moreover, Vugar Gojayev investigated the resource curse in Azerbaijan during 2004-2009 and theoretically proved that Azerbaijan suffers from both resource curse and Dutch disease. Author states that "country will get large revenues from natural resources in future years and must direct these revenues to non-oil sectors. For avoiding from symptoms of Dutch disease government have

[87] Singh R., & Laurila, J. (1999). Azerbaijan: Recent Economic Development and Policy Issues in Sustainability of Growth. *BOFIT Discussion Paper 5*.
[88] Clemens. M. (2017). Azerbaijan Between Resource Curse and Foreign Direct Investment. *International Working Paper*.

to struggle with monopolies and enforce the economic management".[89] On the other hand, Bayramov and Conway investigated Dutch disease problem by researching 238 traded and non-traded businesses in Azerbaijan. The hypothesis was that, whether the studied companies faced with Dutch disease since 2006. Results reject this hypothesis and show that there is almost no difference between experience of tradable and non-tradable companies.[90]

Hasanov studied the relationship between real oil prices and real exchange rate of Azerbaijan currency. His research covers seven years period, between 2000 to 2007 and used Error Correction Model and Johansen Cointegration Test. Results show that "in the long run real oil price is positively correlated with real exchange rate. However, it is not enough for concluding about presence of Dutch disease in Azerbaijan economy, but it is clear that there is Balassa-Samuelson effect". As to him, the government must manage the oil revenues more efficiently and also must develop the non-oil sector rather than spending revenues on large infrastructure projects.[91]

Resource curse and Dutch disease problem have been deeply studied by Egert within post-Soviet states. Egert conduct his study empirically whether former Soviet states are vulnerable to Dutch disease. First, he examined real and nominal exchange rate models for clarifying link between exchange rate and commodity prices. Second, he analyzed the effects of commodity prices and economic growth dependency on resources. As a result, studied states, especially Azerbaijan is highly dependent on raw products.[92]

Furthermore, Bildirici and Kayıkçı investigated economic aspects of resource curse in former-Soviet countries between 1993 and 2010. They use Pedroni Cointegration Analysis for testing cointegration and causality relationship between production and growth. In this paper both Pedroni Cointegration Test and Granger Causality Test show that oil production and economic growth is positively correlated and there is cointegration between oil exploitation and growth. According to results authors state that Azerbaijan must increase oil production. Similarly, they believe that Azerbaijan has not enough technology and management tool for exploitation and refining the resources and that is why mostly foreign companies take control over resource. If Azerbaijan can

[89] Gojayev, V. (2010). Resource Nationalism Trends in Azerbaijan, 2004 – 2009. *RUSSCASP Working Paper*, March.
[90] Bayramov, G., & Conway, P. (2016). The Azerbaijan Producers Survey: Dutch Disease and Financial Crisis.
[91] Hasanov, F. (2010). The Impact of Real Oil Price on Real Effective Exchange Rate: The Case of Azerbaijan. *DIW BERLIN Discussion Paper*, August.
[92] Egert, Balazs. (2018). Dutch Disease in the Post-Soviet countries of Central and South West Asia: How contagious is it? *Journal of Asian Economies*, 23, pp. 571–584.

sign agreements without waving control over natural resources it can get more profit and it will lead to faster growth in country.[93]

1.6.2. LITERATURE REVIEW ON THE POLITICAL SIDE OF RESOURCE CURSE

According to some researchers, political factors also contribute to countries' resource curse. Following this, the number of research publications examining the political aspects of resource abundance rose. This is also true for Azerbaijan. As a post-Soviet republic in which all fields of the country were centrally controlled, politics plays an active role in the country's economic life. This probably applies for natural resources as well. It is unsurprising that political authority has control over natural resources. However, there is a scarcity of empirical research publications studying the impact of oil abundance on Azerbaijani politics. While, the majority of the works investigate the issue conceptually.

Luong and Weinthal examined the oil and gas strategy of Azerbaijan with Central Asian post-Soviet Countries. Scholars state that "after the collapse of Soviet Union, like other countries, Azerbaijan also reconstructed its economy and needed large amount of investment. Many economic and political problems, also, the war with Armenia made the policymakers to start using the natural resources as a source for development. Because it was only way to enter the world market and attract FDI flows to country. That is why, political elite tried to keep control over resources. Therefore, this fact is considered one of the main reasons of initial political system and oil - gas strategy". [94]

Another work was presented by Raiser, Buiter and Esanov, based on the economic and political system of resource abundant post-Soviet states; Turkmenistan, Kazakhstan and Azerbaijan after ten years of independence. Authors believe that "resource abundance is not blessing, but curse for these countries during 10 years because of political system. First part of transition period Azerbaijan attracted large number of foreign direct investment and it forced the country to make

[93] Bildirici, M, E., & Kayıkçı, F. (2012). Effects of Oil Production on Economic Growth in Eurasian countries: Panel ARDL Approach. *Energy Journal*, 49 (2013), pp. 156 – 161.
[94] Luong, P, J. & Weinthal, E. (2018). Prelude to the Resource Curse: Oil and Gas Development Strategies in Central Asia and Beyond. *Comparative Political Studies*, pp. 367 – 395.

some reforms. Indeed, it was not enough and in the second period of process opposite happened. While, policymakers are not interesting for making reforms and there is negative relationship between resource revenues and reforms". Scholars suggest to simplify registration process for businesses, make available condition for domestic and foreign trade, effective taxation system and increase institutional quality.[95]

Moreover, Bayulgen investigated resources curse, investment and democracy matter in case of Azerbaijan and Russia comparatively. He believes that foreign investment and government relations determine the link between resource wealth and degree of democracy. Scholar highlights relationship with resource abundance and existence of authoritarian regimes. In this case both Azerbaijan and Russia are resource abundant countries and because of this they are more desire to attract foreign investment than developed countries. Bayulgen claims that in Azerbaijan oil is the main power of political authority. Regime increases relationship with foreign investors, give them some concessions and it make their authority stable. Soviet Union experience also has role in this process.[96]

Kalyuznhova provided a comparative study in case of Azerbaijan and Kazakhstan, the overcoming methods of resource curse and the role of oil funds in this process. He believes that "oil funds can be one of the main factors of governance through three channels. First, government must determine the aims of such funds, second, policymakers must build such systems which can create connection among these aims. Third, government must provide transparent management of oil revenues in these funds. Also, these funds must provide transparent management of oil revenues. Scholar indicates that creation of oil fund is one of main steps of reforms". Author argues that funds in investigated states are newly established and that is why it is not easy to judge their activities. Only after long term the role of this type of funds can be clear in Azerbaijan and Kazakhstan.[97]

Shannon O'lear spent time in Azerbaijan researching the political ramifications of curse. She believes that this country is suffering from a resource curse. As to her, "oil is Azerbaijan's principal export and that income from resources go to the political elite rather than being spent on other

[95] Esanov, A., Raiser. M., & Buiter, W. (2019). Nature's blessing or nature's curse: The Political Economy of Transition in Resource – Based Economies. *EBRD Working Paper*, p. 65.
[96] Bayulgen, O. (2015). Foreign Investment, Oil Curse and Democratization: A Comparison of Azerbaijan and Russia. *Business and Politics*, 7: 1, Article 3.
[97] Kalyuznova, Y. (2016). Overcoming the Curse of Hydrocarbon: Goals and Governance in the Oil Funds of Kazakhstan and Azerbaijan. *Comparative Economic Studies*. 48 (2006), pp. 583 – 613.

sectors' development. It is apparent that economic reforms that do not improve people's welfare and life quality are unpopular, and they undermine the legitimacy of the political elite. Analyses suggest that concentrated political control in the Azerbaijan is another symptom of curse Though the government attempts to establish legitimacy for the international world by taking some democratic initiatives, corruption, lack of transparency in budget expenditures, and a lack of political freedoms reveal that Azerbaijan is moving extremely slowly toward democracy".[98]

Furthermore, Samantha Lange investigated the link between resource abundance and human rights in sample of former Soviet republics. She used pool-time series cross-national data from 2008 to 2014. She considered resource dependency as a GDP percentage and hypotheses that there is positive relationship between resource dependency and pressure on human rights. Author believes that Azerbaijan still faces with patronage of same elite, authoritarian regime is characteristic. There is control over oil sector. As to Lange, "Azerbaijan is in middle place among post-Soviet countries in terms of human rights. It can be considered better than only few countries such as Turkmenistan".[99]

Alakbarov, Gawrich and Franke studied the political system of Azerbaijan and Kazakhstan and the impact of resource abundance. According to the authors, "low degree of political interest with these factors makes Azerbaijan and Kazakhstan rentier states. Large revenues from resources make the autocracy more powerful and it means that until the system mechanisms are same there will not any change in political and economic policy making. Azerbaijan and Kazakhstan are stable countries, but this stableness has negative effects on democracy". They believe that large revenues lead to passive society.[100]

Similarly, Kendal investigated the political aspects of resource curse in Azerbaijan and Kazakhstan. Kendal considers that in both states resource revenues help the political leaders to win the presidential election campaigns. Taking into account the elections data, he indicates that "head of the states use resource profits for making the economy better off before the elections and

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[98] O'lear, S. (2015). Azerbaijan's Resource Wealth: Political Legitimacy and Public Opinion. *The geographical Journal*, pp. 207 – 223.

[99] Lange, Samantha. (2016). The Impact of Natural Resource Dependence on Human Rights Practices in the Former Soviet Republics. Available at: http://blog.stetson.edu/inkwell/wp-content/uploads/2011/02/slang-paper.pdf .

[100] Franke, A., Gawrich, A. & Alakbarov, G. (2018). Kazakhstan and Azerbaijan as Post – Soviet Rentier States: Resource Incomes and Autrocracy as a Double "Curse" in Post – Soviet Regimes. *Europe and Asia Studies*. 61:1, pp. 109 – 140.

spend the revenues for their promotion". These are set by Kendall-Taylor under two concepts in this paper. Firstly, "states that government's fiscal shortage is larger in resource rich countries than non-rich countries during the presidential elections. It is because of in such countries usually political leaders decrease revenues or increasing spending, which both of these cases cause to budget deficit. Secondly, in oil abundant states spending are increasing, not revenues decreasing during the presidential elections. Because, policymakers are increasing expenditure or decreasing the government revenues for getting the support of more people. Eventually there is more discretion for the government for manipulating the economy during pre-elections by using resources. Therefore, the lack of transparency, control over resources, centralized political system are main determinants of this process". As a result, when the government increases the spending more money inflows to the country and it can result by real exchange rate appreciation which is one of the main signs of Dutch disease.[101]

Later, Mammadov, Aslanli and Ahmadov investigated the relationship between resource dependency and institutional quality in four post-Soviet states; Azerbaijan, Turkmenistan, Russia and Kazakhstan empirically. Their approach suggests that "resource revenues can hurt institutions and it results with less reforms and poor management of institutions". The examined data were collected for the period between 2006-2016. They considered government effectiveness as dependent variable and oil reserves, GDP per-capita, political freedom index and foreign direct investment stocks as independent variables. Results show that natural resource revenues and government effectiveness are negatively correlated for those countries such as Azerbaijan.[102]

1.6.3. LITERATURE REVIEW ON THE SOCIAL SIDE OF RESOURCE CURSE

It is undeniable fact that resource curse has a negative influence on the social life of a state as same as economic and political system. Even though it is one of the important aspects of resource curse theory, indeed it is less investigated part. The majority of research in this sphere focus on the

[101] Kendell – Taylor, A. (2016). Purchasing Power: Oil, Elections and Regime Durability in Azerbaijan and Kazakhstan. *Europe – Asia Studies*. 64:4, pp. 737-760.
[102] Ahmadov, I., Mammadov, J. & Aslanli, K. (2017). Assessment of Institutional Quality in Resource – Rich Caspian Basin Countries. *MPRA Working Paper*. 47430.

impact pf natural resource curse on health and education system of a state. It applies to Azerbaijan as well.

McKee, Chenet and Figueras examines reforms in health sector of Central Asian states and Azerbaijan. Authors use data from World Health Organization (WHO) and Health Systems in Transition (HIT) profiles published by WHO. There are also some additions from other sources such as World Bank development indicators. They consider that "war with Armenia postponed reforms, especially in health sector in Azerbaijan and this factor impacts the situation negatively in health system. Absence of any national health program in Azerbaijan is also one of the negative cases".[103]

Moreover, Falkingham presented his article, which studies influence of transition period on the living standards in Turkmenistan, Azerbaijan and Kazakhstan. As to the author, "by the initial years of the independence of these states, they faced serious economic obstacles, while they experienced economic growth later on".[104] Therefore, within his research Falkingham examined to what extend the economic growth is sustainable. Habibov and Fand investigated poverty and social protection issues in Azerbaijan. According to the authors, "Azerbaijan has reach significant development in decreasing poverty rates by initiating social protection programs, however, further reforms are crucial because of the limitations within the framework of this programs".[105]

Ahmadov, Aslanli and Musabeyov introduced their research on the effects of natural resource curse on the social life of Azerbaijan. They believe that "there are very few countries that could avoid from the negative impacts of resource abundance, especially in social issues. It is clear that Azerbaijan is abundant with oil and natural gas and it means that there are such threats for social life as equally for economy". Their research was based on a survey which held among 1000 people from different regions of Azerbaijan during 2016 and 2020. Results indicate that "most percentage of people participating in survey are hopeful about future. Majority of people answering the questions feel themselves in secure and does not expect any serious change in their life. They also think that main problems of Azerbaijan can be solved with the help of resource revenues. Only

[103]Mckee, M., Figueras, J. & Chenet, L. (1998). Health Sector Reform in the Former Soviet Republics of Central Asia. *International Journal of Health Planning and Management*, 13, pp. 131 – 147.
[104] Falkingham, J. (2015). The End of Rollercoaster? Growth, Inequality and Poverty in Central Asia and Caucasus. Social Policy & Administration, 39:4, pp. 340 – 360.
[105] Habibov, N. & Fan, L. (2017). Social Protection and Poverty in Azerbaijan, a Low-Income Country in Transition: Implications of a Household Survey. International Social Security Review.

few percentages of respondents are afraid of negative effects of resource abundance". Therefore, scholars provided some recommendations for policymakers; as such, "there must be serious control over the property rights, government must ensure the transparency for oil fund revenues".[106]

On the other hand, Habibov and Afandi provided a survey on the effect of social capital on self-rated health. They conducted this survey in three South Caucasian states; Azerbaijan, Georgia and Armenia. They use two-level random-coefficient ordered logistic regression for analysis and results show that explaining rate of total variation in self-rated health is 23% for Azerbaijan. This is the highest number among the sample countries. Outcomes also indicate that both social and human capital has impact on health status separately.[107]

O. Harhay, S. Harhay and Nair investigated the link between education, wealth and health in Ukraine (2010), Armenia (2009), Azerbaijan (2011) and Albania (2010-2011) by using Demographics Health Surveys (DHS) for these countries. Authors took blood pressure as health indicator. They measured this problem in rural and urban areas among women and men between 15 and 49 years old. Authors indicated that socioeconomic factors, especially education also affect health and they divide the respondents into three groups: people with only primary school education, people with secondary school graduation and with university diploma. Respondents chosen from rural and urban regions. Results for Azerbaijan indicates that blood pressure is less observed among men compare to women. Outcomes also show that richest females have less blood pressure. [108]

1.6.4. MAIN RESEARCH PROBLEMS

As it is clear from the literature review, since Azerbaijan gained its independence due to its geostrategic location, ethnic and historical background and natural resources appealed the attention of international researchers to examine different aspects of the country. The intensity of research

[106] Ahmadov, I., Aslanli K. & Musabeyov, R. (2020). The Impact of the Oil and Gas Revenues to the social tension: Case of Azerbaijan. *FEF & PFMC* book.
[107] Habibov, N, N. & Afandi, E, N. (2017). Self – Rated Health and Social Capital in Transitional Countries: Multilevel Analysis of Comparative Surveys in Armenia, Azerbaijan and Georgia. Social Science & Medicine, 72, pp. 1193 - 1204.
[108] Harhay, M, O., Harhay, J, S. & Nair, M, M. (2015). Education, Household Wealth and Blood Pressure in Albania, Armenia, Azerbaijan and Ukraine: Findings from the Demographic Health Survey, 2009 – 2011. *European Journal of Internal Medicine*, 24, pp. 117 – 126.

on the economic side of Azerbaijan increased significantly in the beginning of 21st century. In impact of abundant natural resources on the economy has been the major concern of the research. Nevertheless, it has to be mentioned that the amount of research is limited due to the barriers on the access to information and appropriate materials. In order to achieve reliable sources on the resource curse and Dutch disease related to the economy of Azerbaijan, first it is crucial to analyze the compliance of authorities to grant researchers or economists to access the data.

Because of the technical issues there are very few empirical studies on in the case of Azerbaijan. Azerbaijan has been mainly investigated within a bench of other states, for instance, Caucasian countries, post-Soviet countries, or Caspian countries and others. In particular, investigating empirically the political side of Azerbaijan is hard-reachable for international and independent researchers due to the lack of information on the matter. Therefore, the majority of research on this issue is conducted by local experts.

II. AZERBAIJAN'S POLITCAL AND ECONOMIC OVERVIEW

Azerbaijan was one of the fifteen states got their independence after the collapse of the Soviet Union, and the legacy of communism brought several troubles for those countries, especially on economic and political matters. However, Azerbaijan has experienced different stages of evaluation since its independence until now, namely from recession to stable economic growth. in order to evaluate each stage separately, this chapter is divided into four parts – starting with recession period until current time, so called post-war time.

2.1. RECESSION PERIOD:1991-1994

The Republic of Azerbaijan is located in the boundary of east Europe and western Asia. It is a south Caucasian state surrounded by Caspian Sea, Iran, Turkey, Armenia, Gorgia and Russia. The modern Republic of Azerbaijan declared its independence on the 30th of August 1991 after the act approved by the parliament of Azerbaijan SSR, later on 18th of October same year the Constitutional Act on the State independence of Azerbaijan was approved.[109] At the same time the Armenian ethnics living in Nagorno-Karabakh claimed their independence to establish their republic, so-called Republic of Artsakh.[110] The dispute over the territory followed up with the war which resulted in the occupation of Nagorno-Karabakh district including seven regions around it by Armenian military forces, indeed those territories are recognized as a part of Azerbaijan under international law.[111] Since the end of the first Karabakh war (1994) the negotiations were facilitated by the Organization for Security and Cooperation in Europe (OSCE).[112] Almost 30 years of negotiations over the status of Nagorno-Karabakh came up with the second Karabakh war in

[109] King, David C. (2006). Azerbaijan. Marshall Cavendish. p. 27. ISBN 978-0761420118.
[110] Zürcher, Christoph (2007). The Post-Soviet Wars: Rebellion, Ethnic Conflict, and Nationhood in the Caucasus ([Online-Ausg.]. ed.). New York: *New York University Press*. p. 168. ISBN 978-0814797099.
[111] Резолюция СБ ООН № 874 14 октября 1993 года (in Russian). United Nations. Archived from the original on 3 May 2011. Retrieved 4 January 2011.
[112] Swietochowski, Tadeusz (1995). Russia and Azerbaijan: A Borderland in Transition. *Columbia University Press*. pp. 69, 133. ISBN 978-0-231-07068-3.

2020 and consequently the Republic of Azerbaijan regained control over seven territories and parts of Nagorno-Karabakh in order to fulfil its territorial integrity.[113]

Initial years of the independence are classified as recession years for the country. To be more precise, after the declaration of independence, Azerbaijan faced with serious political and economic problems, beside the war with Armenian forces over the status of Nagorno Karabakh. The main political problem occurred after the change of communism system, which was regulating the country for seventy years. On the other hand, the Soviet politics and economy were controlled by a centralized system. Indeed, the government was established unitarily of one political party, therefore, entire economic aspects were ensured and implemented by the centralized system. Overall, the economy was under the pure monopoly of the state. However, after the dissolution of the Soviet Union, the states entered into a "market economy" through implementing "multi-party" democratic system.[114]

The legacy of Soviet Union mainly influenced Azerbaijan through economic channels. As I mentioned previously, the economy of Azerbaijan was under the mandate of the centralized system, and Azerbaijan was known as a producer of raw materials and agriculture products during these years.[115] Therefore, the economy was instructed in a way that all members were economically dependent on each other. Azerbaijan was in demand to import from other states of the Union, and were able to export only to those Union members. Though, after the collapse of the Union, affected the economic relations among the member states. On the other hand, the infrastructure for economic development was not efficient.

Furthermore, Azerbaijan was also suffering from unstable political situation. Even though, Soviet regime was collapsed, still the communist party was powerful enough to influence the over the government. As a successor of Soviet Unionç Russia was keeping pressure over the newly born. Due to its geostrategic location, to have control over Azerbaijan was highly important for Russia, in order to keep the region under its surveillance. Ayaz Mutalibov was the first president of the Republic of Azerbaijan. Because of the Russian pressure on the government, he resigned from his position and Abulfez Elchibey succeeded him. After Abulfez Elchibey came to power, he changed

[113] Kramer, Andrew E. (10 November 2020). "Facing Military Debacle, Armenia Accepts a Deal in Nagorno-Karabakh War". *The New York Times*.
[114] Zulfugarli, M. (2009). Referendum. AVCIYA Paper, p.5.
[115] Kalyuznova, Y. (2002). Energy in the Caspian Region: Present and Future. London, *Palgrave Press*, p.3.

the direction foreign policy from Russia to Turkish states and western European countries. His efforts resulted in withdrawn of Russian troops from the territory of Azerbaijan.[116]

As far as the changes in the politics produced positive outcomes for the sovereignty of the country, later on they accompanied with political and social catastrophes. Russia used the "Karabakh card" to influence the administration of Elchibey. To do so, Russia supported the Armenian militants in the region of Karabakh, which lead to the illegal occupation of Nagorno Karabakh and seven regions around it by Armenian forces.[117] As a result, about 1 million refuges flew to the other regions of Azerbaijan, which made the socio-economic situation worse.

Moreover, Elchibey administration succeeded in some economic reforms. During his presidency, the Central Bank of the Republic of Azerbaijan was established and the national currency, so-called Manat (AZN) was introduced[118]. These reforms also include, the Stated Committee on Property Issues of the Republic of Azerbaijan[119], Anti-Monopoly Committee, Committee on Foreign Investment and other state agencies were founded.[120] Though, the reforms in terms of economy were relatively successful, the unstable political sphere, opposite parties and the pressure of Russia resulted in the resign of Elchibey administration. After Elchibey resignation Haydar Aliyev came to power, who also was the head of the communist party of Azerbaijan SSR between 1969 and 1982. At the same time, he was former general of Committee for State Security in other words KGB.

The main task of the Aliyev's administration was to stabilize the situation in the country. The first step in this way was to achieve ceasefire on going war with Armenian forces. The efforts of international organizations (such as OSCE) and western world succeeded in signing ceasefire agreement between Armenia and Azerbaijan.[121] It should be underlined that, the major player in the process of signing ceasefire agreement was Russia. Russia had significant influence on the

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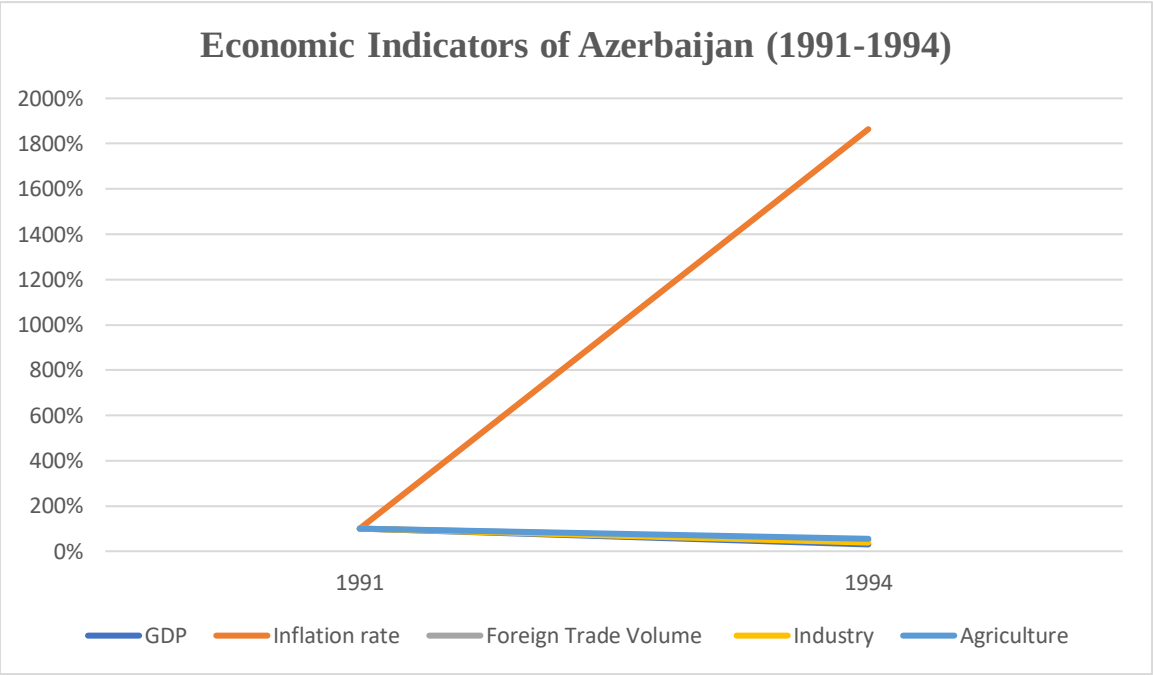
[116] Yunusov, A. (2011). Twenty Years of Independence in Azerbaijan, South Caucasus 20 Years of Independence, Friedrich – Ebert – *Stifhung*, pp. 60 – 77.
[117] Aydin, M. (2000). Geopolitics of Central Asia and the Caucasus; Continuity and Change since the End of the Cold War. *The Turkish Yearbook*, 32, pp. 168 – 216.
[118] 1 Azerbaijani Manat (AZN) is ≈ 0.50 euros (data of 30.10.2021)
[119] The State Committee on Property Issues of the Republic of Azerbaijan is the central executive body implementing state policy and regulation on real estate management and its privatization, involving investments and conducting state registration and cadastre of real estate in the Republic of Azerbaijan. Later this agency was revised to "State Service on Property Issues", and was given under the mandate of the Ministry of the Economy (19.05.2009).
[120] Yunusov, (2011), p 64.
[121] Hoffman, D. I. (1999). Oil and Development in Post – Soviet Azerbaijan. *NBER Analysis*, 19:3, 5 – 29.

both sides of the conflict, therefore, the western powers had relative influence in the negotiations. Ceasefire in the war and negotiations for the peaceful resolution of the conflict somehow stabilized the situation in the country, therefore, the government had a better opportunity to concentrate on the economic development.



To be more precise, GDP was 30% lower than the year of independence; inflation rate was extremely high ≈ 1864%; foreign trade volume decreased ≈ 50%; industry decreased ≈ 62%; agriculture decreased ≈ 45%;[122]

Nevertheless, in order to overcome these issue, Haydar Aliyev's administration followed the course of foreign policy, so-called "balanced foreign policy". To be more precise, his main direction was western world while he also kept good diplomatic relations with Russia. Aliyev was well aware of the fact that, exploitation of natural resources (oil and gas) were the major tools to rescue the country from that turmoil. After one year of negotiations with foreign oil companies on the 20th of September, 1994, between the State Oil Company of Azerbaijan Republic (SOCAR) and 13 companies from 8 countries, an agreement was signed. Because of its strategic value of the

[122] Aras, O. N., Suleymanov, E. & Huseynov, R. (2013). The Importance of Azerbaijan's Energy Revenues in its Exports Volume and the Effects on the National Economy. *International Journal of Business and Social Science*,4:6, p.2.

country, it was later called "contract of the century".[123] The scope of the contract applied to the oil reserves of Azerbaijan in Caspian Sea, to be more precise, the exploitation and processing of oil from oil fields so-called, "Azeri", "Chiraq", and "Gunashli".[124] This was the first global transnational project in the post-Soviet space for the long-term development of oil and gas fields, therefore, due to its significance and representativeness, was immediately dubbed the "contract of the century".

The "Contract of the Century" is calculated as a whole for 30 years and has already been at the end of it, which gives grounds to sum up some results. For past years, the "contract of the century" has acquired real-political and economic outlines, becoming a significant factor in the development of the country. According to SOCAR, the total volume of investments by foreign companies in the oil and gas sector of Azerbaijan is over 60 billion US dollars. The proven gas reserves exceed 2.5 trillion cubic meters. This allows the country to be not only a significant exporter of oil, but to be also an important supplier of gas to international markets. Since the signing of the "contract of the century", the State Oil Company of Azerbaijan has signed 32 sharing agreements with 53 international energy companies representing 20 different countries.[125] Azerbaijan actively invested in energy and transport infrastructure, seeking to diversify supply routes. In 1994, Azerbaijan did not have foreign exchange reserves, and now the country is spending and saving tens of billions of dollars. Capital investments in various spheres of the country's life have already reached about $ 30 billion. According to estimates, over the term of the *"contract"* only the oil fund will receive over $ 200 billion.

Geostrategic and political dividends are equally important. The "Contract of the Century" allowed Azerbaijan to ensure its energy security and at the moment the country is making a significant contribution to the energy security of the partner countries. Thanks to the "contract of the century", which ensured strong ties of strategic partnership with the United States, Europe and other

[123] Bayulgen, O. (2003). Facing the Dilemma of Global Capitalism: The Case of Azerbaijan. Central Asian Survey, 22:2/3, pp. 209 – 220.

[124] In the "Contract of the Century" 13 companies were represented (SOCAR, Amoco, BP, McDermott, Unical, Lukoil, Statoil, Exxon, Turkish Petroleum, Penzoil, Itochu, Remco, Delta) from 8 countries of the world (Azerbaijan, Turkey, USA, UK, Japan, Norway, Russia and Saudi Arabia). It should also be noted that the "Contract of the Century" opened the way for the signing of another 26 agreements with the participation of 41 oil companies from 19 countries of the world.

[125] The main route options for export pipelines (to Europe) are: Baku-Batum pipeline (1897-1907), Baku–Grozny–Novorossiysk (a.k.a. the northern route), Baku–Tbilisi–Supsa (the western route), Baku–Tbilisi–Ceyhan (main oil pipeline), and Baku–Tbilisi–Erzurum gas pipeline (a.k.a. Trans-Caspian Gas Pipeline)

countries, and the international significance of Azerbaijan has significantly increased. It should be especially noted that "oil and pipe" have tied Turkey, Georgia and Azerbaijan into an indestructible alliance. In another word, the most striking geopolitical, political and socio-economic achievements of the modern history of Azerbaijan, one way or another, are closely related to the history of the signing and consistent implementation of the "contract of the century".[126]

The significance of the "contract of the century" and the positives of Azerbaijan's oil strategy are more noticeable in retrospective analysis. In the early years of independence, Azerbaijan was in such a chaotic and uncertain state that it was practically difficult to build optimistic plans. Then the Armenian-Azerbaijani war was in full swing, which ended with the occupation of about 15% of the territory of Azerbaijan and the appearance of about a million refugees. [127] Politically, the country was in a state of confusion. A deep socio-economic crisis (high inflation, unemployment, poverty) plunged society into an abyss of despair and skepticism. To this should be added an unfavorable foreign policy factor - threats from the outside against the background of the crisis inside Azerbaijan created real risks to security.

The conclusion of the "contract of the century" in such unfavorable conditions and the initiation of the BTC project, formed a geopolitical springboard for a way out of an unstable crisis situation. In fact, along the entire path of the implementation of the "contract of the century" and the BTC project there were incredible objective and subjective difficulties, external and internal obstacles, which were gradually and successfully overcome. [128] Indeed, the "contract of the century" and the implementation of the BTC project, Azerbaijan made a leap from an uncertain and frightening reality into the current contradictory but promising "new oil era" in its history.[129] From the moment of gaining independence, the society was persistently instilled that with the beginning of the flow of petrodollars, a solution to all the key problems of the country would be ensured.[130]

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[126] Columns. "Greece, Italy and Albania sign a tri-lateral intergovernmental agreement, demonstrating their full support for TAP". TAP. Retrieved July 1, 2018.
[127] Anne-Marie Gardner, "Democratic Governance and Non-State Actors", Palgrave-MacMillan, 2011
[128] "Western Route Export Pipeline | Pipelines | Operations and projects | BP Caspian". www.bp.com. Retrieved June 30, 2018.
[129] "Pipe transport. TRACECA ORG". www.traceca-org.org. Archived from the original on July 12, 2017. Retrieved July 6, 2018.
[130] Lenchowski, G. (1997). The Caspian Oil and Gas Basin: A New Source of Wealth? Middle East Policy, 5:1, 111-119.

The development experience of many countries confirms that oil itself does not unequivocally guarantee a country's prosperity. There is a very high probability that this resource of the country will disappear in the corrupt "black hole" of the mercantile interests of local oligarchs and Western companies. Unfortunately, a similar threat exists in Azerbaijan: today, the positives of the oil strategy often remain in the shadow of the negatives in the socio-political and economic life of the country.[131]

Overall analysis for this period indicates that Azerbaijan was in recession period until 1995. Fundamental motives of recession were transformation of centralized economic system to market-based economic system, and the political turmoil. Therefore, economic indicators decreased between 1991-1994, high level of inflation and negative economic growth was characteristic for the country. War with Armenia and political anarchy impeded the development of Azerbaijan, while, signing of "Contract of century" can be accepted as the end of recession period in Azerbaijan.[132]

2.2. TRANSITION PERIOD: 1994-2005

The term of "transition economy" is used for economies that transforming from a centralized economy to a market-based economy.[133] In the other words, the core element of Soviet economy was based on command model, which was somehow effective in mobilization of resources during war and postwar period. In general terms, Soviet economic policy could be classified under following categories:

a) no private property, neither private ownership in all means of production, including manufacturing, agriculture, and services.

b) absolute state monopoly over all spheres of foreign trade.

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[131] CESD. (2012). Azerbaijan Economy Since Independence: *Independent View.*

[132] Atmaca , T. (2002). Azerbaycan Petrolleri Hazarın Statüse ve Güç Dengesi. *Strategic Research File*. 3:12, pp.1-19.

[133] For instance, 13 states in Central and Eastern Europe (CEE): Albania, Bulgaria, Bosnia and Herzegovina, Croatia, Czech Republic, Hungary, Kosovo, Poland, Republic of Macedonia, Romania, Serbia and Montenegro, Slovak Republic, and Slovenia. As same as, 15 post-Soviet states: Armenia, Azerbaijan, Belarus, Estonia, Latvia, Lithuania, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan and Georgia.

c) the government provide annual plans for manufacturing sector as same as quarterly plans for all enterprises, these plans covered all aspects of the tasks of enterprises, such as prices, level of output, tariffs, limits for the consumption for the production and etc.

even though by 1950s the Soviet bloc countries reached a 4.5% annual growth rate in per capita Gross National Product (GNP)[134], comparing the market-based economies, those states were surpassing them. While, in long-term development, the applied rigidities of centralized economies entailed obstacles for innovation, development of technologies, and allocation of resources. Therefore, the short-term growth in the economy substituted with long term slowdown, which showed itself by the 1960s, the gap between soviet block and western block increased dramatically.[135] The data of 1980s indicate that the western block states' average rate of growth of GNP per capita was over 2%, instead the communist block's growth rate was below 1%.[136]

After the dissolution of the Soviet Union, the expectation about the economy of new independent states were outrage. Many scholars believe that, "the transition period for former Soviet bloc states will be quick. Moving from the planned economy to market economy will lead to fast economic growth and in short period of time those states will attain to be in the same level with middle-income developed countries".[137] The underestimated fact here was that, the legacy of communism did not only leave economic issues for independent states, beside serious political and social problems, which created a significant barrier in front of economic development. Indeed, even after a decade of independence, those states were not being able to reach the level of low-income Western European States.[138]

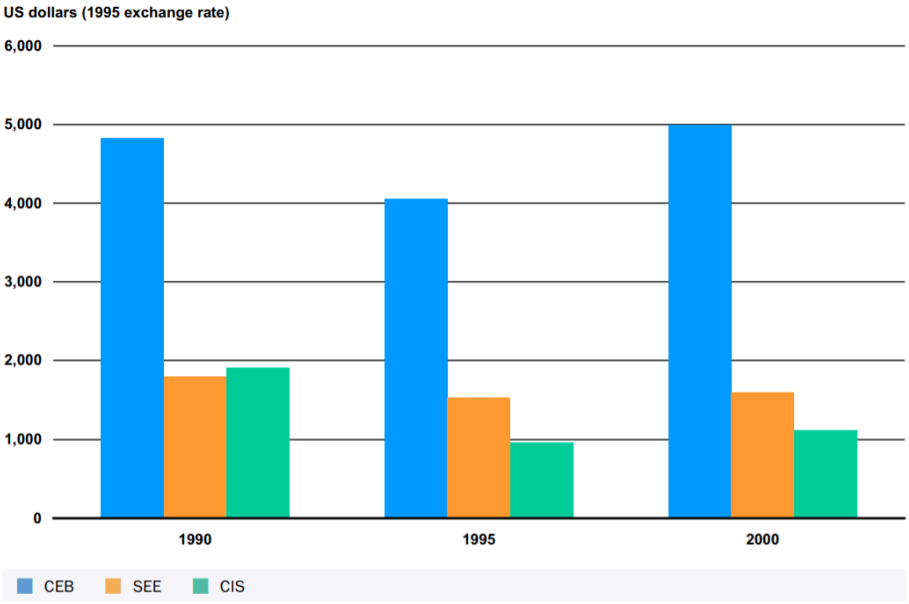
Nevertheless, the communist bloc states shared a similar economic model, but their economic features differed significantly in post-Soviet era. It is worth noting that, the Commonwealth of Independent States (CIS) members were not capable of implementing market-based features to

[134] Gross National Product (GNP) is the total value of all finished goods and services produced by a country's citizens in a given financial year, irrespective of their location. GNP also measures the output generated by a country's businesses located domestically or abroad.
[135] Gregorio, J.D & Wolf, H.C. (1994). Terms of Trade, Productivity and the Real Exchange Rate. *NBER Working Paper*, 4807.
[136] Jalles, J, T. (2011). Growth, Poverty and Inequality: Evidence from Post – Communist Economies. *Journal of Poverty*, 15:3, 277-308.
[137] Shaw, D. L. (2013). Good Governance in the Post – Soviet South: Testing Theories of the Resource Curse in Azerbaijan. *Journal of Politics & International Studies*. 9.
[138] Sultanov, M. (2011). Health Expenditure Efficiency in the Commonwealth of Independent States: A Data Envelopment Analysis Approach. *Transitional Studies Review*, 18, 384 – 404.

their economy, because they were not familiar with it in a practical framework. However, Baltic states and Central and Eastern European States joined to communist bloc only after WW II, which had a practical experience in market economy as same as institutional capacity to implement rules for market-based economy.[139]

Furthermore, the majority of CIS states are natural resource abundant countries.[140] Though, evaluating through per capita incomes, CEE states surpass them dramatically, due to their strategic geographical location and connections with the Western European states. On the other hand, transition states welcomed the reform packages enshrined in Washington Consensus.[141] Washington Consensus introduced a bunch of policy proposals to overcome an economic instability. Some of the core principles in this policy package was liberalization of economy, fostering the environment for foreign investment, protection of property rights, and etc.

Figure 2. GDP per capita, 1990-2000



[139] Wai, T. T. (1988). Management of Resource – Based Growth in Different Factor Endowment Conditions. Tokyo, United Nations University.

[140] For instance, Russia, Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan.

[141] The Washington Consensus is a set of ten economic policy prescriptions considered to constitute the "standard" reform package promoted for crisis-wracked developing countries by Washington, D.C.-based institutions such as the International Monetary Fund (IMF), World Bank and United States Department of the Treasury. The term was first used in 1989 by English economist John Williamson. The prescriptions encompassed free-market promoting policies in such areas as macroeconomic stabilization, economic opening with respect to both trade and investment, and the expansion of market forces within the domestic economy.

Source: World Development Indicators Database.[142]

Within the framework of post-Soviet states, promoting free trade become a fundamental strategy for economic development. Different aspects of the strategy were challenged by policy makers and experts during this process. Indeed, the implementation of Washington Consensus principles were partially evitable, such as, trade liberalization, stabilization of inflation, relatively privatization, while other were far from being applied in the referred economic systems. One of the main obstacles in the sphere was the application of privatization, which urgently required legal basis for ensuring it effectively. Similarly, reforms in legislation were equally important in price and trade liberalization in order to achieve competitive market-based economy.[143]

As highlighted in the previous section, the economies of communist bloc states experienced a radical decline in the early years. For instance, Central East and Baltic states went through a decrease in income by 11% in 1991, while the following years the region countries succeeded in stabilizing the situation except the Baltic countries, in which the situation fall by 35 %.[144] On the other hand, CIS countries followed a different scenario. In fact, the Soviet system already implemented, so-called "economic reorganization (perestroika)", by the mid of 1980s, therefore the collapse of the overall Soviet system in 1991 left the new independent countries in full-fledged chaos.

The table below indicates growth in real GDP in Central and Eastern Europe and the CIS countries. As illustrated in the end of the table, the real GDP level in 2001 in comparison in 1989, the situation, whether those states are recovered from the economic losses due to the transition. Moreover, CEE states were capable of reaching in 20% increase in 2001 than 1989, while Baltic and CIS countries are still in 40% decline comparing to the beginning of the transition period.[145]

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[142] CEB – Central-Eastern and Baltic countries, SEE – South East European countries, CIS – Commonwealth of Independent States.

[143] Yunusova, D. (2012). Privatization in Post – Soviet Azerbaijan Results and Prospects. *Master Thesis, Universiteit van Amsterdam*.

[144] Jalles, J, T. (2011). Growth, Poverty and Inequality: Evidence from Post – Communist Economies. Journal of Poverty, 15:3, pp. 277 – 308.

[145] Data for 1990-2000 represent the most recent official estimates of outturns as reflected in publications from the national authorities, the IMF, the World Bank and the OECD. Data for 2001 are preliminary actuals, mostly official government estimates. Data for 2002 represent EBRD projections. Estimates for real GDP represent weighted averages. The weights used for the growth rates were EBRD estimates of nominal dollar-GDP lagged by one year; those used for the index in the last column were EBRD estimates of GDP converted at PPP US$ exchange rates in 1989.

Table 1. Growth in real GDP in Central and Eastern Europe and CIS countries.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Estimated level of real GDP in 2001
						(in per cent)								(1989=100)
Croatia	-7.1	-21.1	-11.7	-8.0	5.9	6.8	6.0	6.5	2.5	-0.9	2.9	3.8	3.5	**85**
Czech Republic	-1.2	-11.6	-0.5	0.1	2.2	5.9	4.3	-0.8	-1.0	0.5	3.3	3.3	2.5	**106**
Estonia	-6.5	-13.6	-14.2	-8.8	-2.0	4.3	3.9	9.8	4.6	-0.6	7.1	5.0	4.0	**90**
Hungary	-3.5	-11.9	-3.1	-0.6	2.9	1.5	1.3	4.6	4.9	4.2	5.2	3.8	4.0	**112**
Latvia	2.9	-10.4	-34.9	-14.9	2.2	-0.9	3.7	8.4	4.8	2.8	6.8	7.7	4.0	**75**
Lithuania	-5.0	-5.7	-21.3	-16.2	-9.8	3.3	4.7	7.3	5.1	-3.9	3.8	5.9	5.2	**72**
Poland	-11.6	-7.0	2.6	3.8	5.2	7.0	6.0	6.8	4.8	4.1	4.0	1.0	1.0	**129**
Slovak Republic	-2.5	-14.6	-6.5	-3.7	4.9	6.7	6.2	6.2	4.1	1.9	2.2	3.3	3.5	**110**
Slovenia	-4.7	-8.9	-5.5	2.8	5.3	4.1	3.5	4.6	3.8	5.2	4.6	3.0	2.7	**121**
Central eastern Europe and the Baltic states	*-6.6*	*-10.3*	*-2.2*	*0.3*	*3.9*	*5.4*	*4.7*	*5.0*	*3.6*	*2.8*	*4.0*	*2.5*	*2.3*	***113***
Albania	-10.0	-28.0	-7.2	9.6	8.3	13.3	9.1	-7.0	8.0	7.3	7.8	6.5	6.0	**116**
Bosnia and Herzegovina	-23.2	-12.1	-30.0	-40.0	-40.0	20.8	86.0	37.0	9.9	10.6	4.5	2.3	3.0	**na**
Bulgaria	-9.1	-11.7	-7.3	-1.5	1.8	2.9	-9.4	-5.6	4.0	2.3	5.4	4.0	4.0	**80**
FR Yugoslavia	-7.9	-11.6	-27.9	-30.8	2.5	6.1	7.8	10.1	1.9	-18.0	5.0	5.5	3.0	**50**
FYR Macedonia	-9.9	-7.0	-8.0	-9.1	-1.8	-1.2	1.2	1.4	3.4	4.3	4.6	-4.1	2.0	**77**
Romania	-5.6	-12.9	-8.8	1.5	3.9	7.1	3.9	-6.1	-5.4	-3.2	1.8	5.3	3.5	**84**
South-eastern Europe	*-7.3*	*-14.8*	*-9.6*	*-2.4*	*3.0*	*6.4*	*3.5*	*-0.5*	*-0.7*	*-3.4*	*3.6*	*4.5*	*3.6*	***79***
Armenia	-7.4	-11.7	-41.8	-8.8	5.4	6.9	5.9	3.3	7.3	3.3	6.0	9.6	8.0	**74**
Azerbaijan	-11.7	-0.7	-22.6	-23.1	-19.7	-11.8	1.3	5.8	10.0	7.4	11.1	9.9	8.8	**62**
Belarus	-3.0	-1.2	-9.6	-7.6	-12.6	-10.4	2.8	11.4	8.4	3.4	5.8	4.1	3.0	**91**
Georgia	-12.4	-20.6	-44.8	-25.4	-11.4	2.4	10.5	10.8	2.9	3.0	2.0	4.5	3.5	**37**
Kazakhstan	-0.4	-11.0	-5.3	-9.3	-12.6	-8.2	0.5	1.7	-1.9	2.7	9.8	13.2	7.6	**84**
Kyrgyz Republic	3.0	-5.0	-19.0	-16.0	-20.1	-5.4	7.1	9.9	2.1	3.7	5.1	5.3	2.0	**71**
Moldova	-2.4	-17.5	-29.1	-1.2	-31.2	-1.4	-5.9	1.6	-6.5	-3.4	2.1	6.1	3.5	**37**
Russia	0.0	-5.5	-18.6	-13.0	-13.5	-4.1	-3.4	0.9	-4.9	5.4	8.3	4.9	4.1	**64**
Tajikistan	-1.6	-7.1	-29.0	-11.0	-18.9	-12.5	-4.4	1.7	5.3	3.7	8.3	10.3	7.0	**56**
Turkmenistan	2.0	-4.7	-5.3	-10.0	-17.3	-7.2	-6.7	-11.3	5.0	16.0	17.6	12.0	13.5	**96**
Ukraine	-4.0	-10.6	-9.7	-14.2	-22.9	-12.2	-10.0	-3.0	-1.9	-0.2	5.9	9.1	4.5	**46**
Uzbekistan	1.6	-0.5	-11.1	-2.3	-4.2	-0.9	1.6	2.5	4.4	4.1	4.0	4.5	2.5	**105**
Commonwealth of Independent States	*-0.4*	*-6.0*	*-17.4*	*-12.7*	*-14.1*	*-4.9*	*-3.4*	*1.0*	*-3.7*	*4.5*	*7.9*	*5.9*	*4.4*	***64***
Central and eastern Europe and the CIS[1]	**-3.3**	**-8.1**	**-11.0**	**-6.9**	**-6.1**	**-0.2**	**0.1**	**2.3**	**-1.0**	**3.0**	**5.5**	**4.2**	**3.4**	**76**

The following table indicates the economic growth rates for two decades after the dissolution of Soviet bloc. It is worth mentioning that economic growth in 2000s almost in al CIS countries has

followed an increasing path. Some experts linked it to the low base effect of initial recession years. In the case of Azerbaijan, a significant economic growth was registered by 35%.[146]

Table 2. Economies in Transition: rates of growth of real GDP, 2000-2010

Annual percentage change												
	2000-2008[a]	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009[b]	2010[c]
Economies in transition	**7.0**	**8.8**	**5.7**	**5.0**	**7.3**	**7.7**	**6.5**	**8.0**	**8.4**	**5.5**	**-6.5**	**1.6**
South-eastern Europe	4.8	4.3	3.7	4.4	4.0	5.7	4.7	5.3	6.3	4.5	-3.7	0.7
Albania	6.2	6.7	7.9	4.2	5.8	5.7	5.8	5.5	6.2	8.0	3.0	2.5
Bosnia and Herzegovina	5.0	5.4	2.0	4.9	3.8	6.3	3.9	6.9	6.6	5.4	-3.5	1.0
Croatia	4.3	3.0	3.8	5.4	5.0	4.2	4.2	4.8	5.5	2.5	-5.0	0.1
Montenegro	4.8	3.1	1.1	1.9	2.5	4.4	4.2	8.6	10.7	7.0	-4.5	1.0
Serbia	5.4	5.3	5.6	3.9	2.4	8.3	5.6	5.2	6.9	5.5	-4.0	0.8
The former Yugoslav Republic of Macedonia	2.9	4.5	-4.5	0.9	2.8	4.1	4.1	4.0	5.9	4.9	-3.0	1.0
Commonwealth of Independent States	7.2	9.3	5.9	5.1	7.6	7.9	6.6	8.3	8.6	5.6	-6.7	1.7
Net fuel exporters	7.2	9.9	5.6	5.0	7.4	7.4	6.9	8.3	8.5	5.6	-6.0	1.8
Azerbaijan	16.3	11.1	9.9	10.6	11.2	10.2	26.4	34.5	25.1	10.8	6.0	7.0
Kazakhstan	9.4	9.8	13.5	9.8	9.3	9.6	9.7	10.7	8.9	3.3	-2.0	2.0
Russian Federation	6.9	10.0	5.1	4.7	7.3	7.2	6.4	7.7	8.1	5.6	-7.0	1.5
Turkmenistan	7.0	5.5	4.3	0.3	3.3	4.5	13.0	11.4	11.6	9.8	4.0	8.0
Uzbekistan	6.4	4.0	4.5	4.2	4.4	7.7	7.0	7.3	9.5	9.0	7.0	7.0
Net fuel importers	7.4	5.8	8.0	5.5	9.1	11.6	4.7	7.9	8.9	5.2	-11.3	0.9
Armenia	11.4	5.9	9.6	15.0	14.0	10.5	13.9	13.2	13.8	6.8	-15.0	1.0
Belarus	8.0	5.8	4.7	5.0	7.0	11.4	9.4	10.0	8.6	10.0	-3.0	1.5
Georgia[d]	6.9	1.8	4.8	5.5	11.1	5.9	9.6	9.4	12.3	2.1	-4.0	2.0
Kyrgyzstan	4.8	5.4	5.3	0.0	7.0	7.0	-0.2	3.1	8.5	7.6	1.0	3.0
Republic of Moldova	5.8	2.1	6.1	7.8	6.6	7.4	7.5	4.8	3.0	7.2	-8.0	1.5
Tajikistan	8.8	8.3	9.6	10.8	11.1	10.3	6.7	6.6	7.7	7.9	2.0	3.0
Ukraine	7.1	5.9	9.2	5.2	9.6	12.1	2.7	7.1	8.9	3.2	-15.0	0.4

Source: UN/DESA, based on data of the Economic Commission for Europe.

The economic indicators of CIS countries have been represented separately from fuel exporters and fuel importers, so, it is possible to examine them separately and provide comparison. As shown in Table 3 the countries have similar economic growth level even though oil exporter countries showed low level of increase. The peculiar point here is the fact that we assume natural resource

[146] Country groups are calculated as a weighted average of individual country growth rates of gross domestic product (GDP), where weights are based on GDP in 2005 prices and exchange rates: a) Average percentage change. b) Partly estimated. c) Baseline scenario forecasts, based in part on Project LINK. d) Georgia officially left the Commonwealth of Independent States on 18 August 2009. However, its performance is discussed in the context of this group of countries for reasons of geographic proximity and similarities in economic structure

abundant countries are required to perform better due to the availability income resources, which can be consumed for infrastructure building or investment. Indeed, the statistics indicate the opposite.[147]

Table 3. Economies in transition: rates of growth of real GDP, 2010-2020

Annual percentage change

	2010–2017[a]	2010	2011	2012	2013	2014	2015	2016	2017	2018[b]	2019[c]	2020[c]
Economies in transition	2.0	4.5	4.7	3.5	2.4	0.9	-2.2	0.4	2.0	2.1	2.0	2.6
South-Eastern Europe	1.8	1.5	1.7	-0.6	2.4	0.1	2.1	3.1	1.9	3.9	3.7	3.7
Albania	2.7	3.7	2.5	1.4	1.0	1.8	2.2	3.4	3.8	4.2	4.0	3.8
Bosnia and Herzegovina	1.7	0.9	1.0	-0.8	2.4	1.1	3.8	3.3	1.3	2.7	3.0	3.0
Montenegro	2.7	2.7	3.3	-2.7	3.5	1.8	3.4	3.8	4.3	4.8	3.7	4.2
Serbia	1.3	0.6	1.4	-1.0	2.6	-1.8	0.8	2.8	1.9	4.5	4.0	4.0
The former Yugoslav Republic of Macedonia	2.3	3.4	2.3	-0.5	2.9	3.6	3.8	2.9	0.0	2.5	3.0	3.0
Commonwealth of Independent States and Georgia[d]	2.0	4.6	4.8	3.7	2.4	1.0	-2.3	0.3	2.0	2.1	2.0	2.5
Commonwealth of Independent States and Georgia - net fuel exporters	2.0	4.8	4.6	3.8	2.4	1.2	-2.2	0.0	1.8	1.8	1.7	2.3
Azerbaijan	1.6	5.0	0.1	2.2	5.8	2.8	1.0	-3.1	0.1	1.1	1.9	1.9
Kazakhstan	4.6	7.3	8.9	4.8	6.0	4.2	1.2	1.1	4.0	4.0	4.0	4.0
Russian Federation	1.7	4.5	4.3	3.7	1.8	0.7	-2.8	-0.1	1.5	1.5	1.4	2.1
Turkmenistan	8.9	9.2	14.7	11.1	10.2	10.3	6.5	6.2	6.5	6.0	5.0	5.0
Commonwealth of Independent States and Georgia - net fuel importers	2.1	3.3	5.9	2.3	2.2	-1.0	-3.5	2.3	3.6	4.0	3.8	4.0
Armenia	4.2	2.2	4.7	7.2	3.3	3.6	3.2	0.2	7.5	6.0	4.0	3.7
Belarus	1.9	7.7	5.5	1.7	1.0	1.7	-3.8	-2.5	2.4	3.6	3.0	3.0
Georgia[d]	4.8	6.2	7.2	6.4	3.4	4.6	2.9	2.8	5.0	5.0	4.5	4.3
Kyrgyzstan	3.9	-0.5	6.0	-0.1	10.9	4.0	3.9	4.3	4.6	2.1	3.0	3.0
Republic of Moldova	4.4	7.1	6.8	-0.7	9.4	4.8	-0.4	4.5	4.0	4.3	4.5	4.5
Tajikistan	6.3	6.5	2.4	7.5	7.4	6.7	6.0	6.6	6.6	7.0	6.0	5.5
Ukraine[e]	-0.4	0.3	5.5	0.2	0.0	-6.6	-9.8	2.4	2.5	3.2	2.9	3.4
Uzbekistan[f]	7.2	8.5	8.3	8.2	8.0	8.0	7.9	6.0	5.3	5.2	5.7	5.8

Source: UN/DESA, based on data of the United Nations Statistics Division and individual national sources.

[147]: Regional aggregates calculated at 2012 prices and exchange rates. a) Average percentage change. b) Partly estimated. c) Baseline scenario forecasts, based in part on Project LINK and the UN/DESA World Economic Forecasting Model. d) Georgia officially left the Commonwealth of Independent States on 18 August 2009. However, its performance is discussed in the context of this group of countries for reasons of geographic proximity and similarities in economic structure. e) Starting in 2010, data for the Ukraine excludes the temporarily occupied territory of the Autonomous Republic of Crimea and Sevastopol. f) Based on 2019 criteria, Uzbekistan is now considered a net fuel importer.

In the case of Azerbaijan, after reaching a ceasefire agreement over Karabakh war, the main goal of the government was to recover the economy. In order to get more freedom to act on behalf of the government, president at that period H. Aliyev implemented fundamental alterations in the political system. The first act of H. Aliyev's administration was to introduce new Constitution.[148] The new legal system, made Azerbaijan a presidential country, and gave wide discretion to the president. The system of Azerbaijan still is based on three main branches, namely; executive – the president, legislative – the parliament,[149] and the judiciary. Even though the constitution of Azerbaijan divides the government into three branches, in practice, those branches are not dependent on each other or have a freedom to act, they are circumstantially dependent on the decisions of president. For instance, after the referendum hold in 2016, the president has a power to dissolve the parliament, if he/she considers that the parliament acted unlawfully or is not able to fulfil its commitments.[150]

Energy sector entails the major part of the economy of Azerbaijan, therefore, to have control over it was crucially important for Aliyev administration. The President appointed his cousin (Natig Aliyev) as a president on the State Oil Company of Azerbaijan Republic (SOCAR). While, his son and current president of Azerbaijan was appointed as a vise-president of SOCAR. Later, the State Oil Fund of Azerbaijan[151] was established. The objective of this fund was outlined as following: "to ensure intergenerational equality of benefit with regard to the country's oil wealth, whilst improving the economic well-being of the population today and safeguarding economic security for future generations".[152] On the other hand, this fund play the major role in saving the value of the Azerbaijani currency form the undesirable influence of foreign exchange rate fluctuation.[153]

It should be noted that in the early years the government faces several challenges to apply the reforms in economy or any other fields. Therefore, only after the settling with the military and the opposite parties somehow Azerbaijan entered into a stability period. Indeed, for economic development international partnerships are fundamental. Due to its geostrategic location and being

[148] 12th of November 1995
[149] Parliament in Azerbaijan is called "Milli Majlis" and consist of 125 deputies
[150] Abbasov, S. (2011). Twenty Years of Independence in Azerbaijan, South Caucasus 20 Years of Independence, Friedrich – Ebert – Stifhung, 108 – 124.
[151] 29th December 1999.
[152] For more see at: http://www.oilfund.az/?page=sual-cavab&hl=en_US (accessed November 4, 2021)
[153] Eldaroglu, Ekber. (2001). Neft Fondunun Vesaitleri Hansı İstiqamete Yöneldilmelidir? Azerbaycan Milli Demokratiya Fondu, Azerbaycan Bulleteni, p.169.

one of the resource abundant countries in post-Soviet countries increase the interest of international organizations to enter into a partnership-agreements with Azerbaijan. The European Union (EU) was one of the primary organizations to support Azerbaijan to tackle the issues of transition period.[154]

Partnership with international organizations opened the gates for Azerbaijan to access the membership in international economic organizations, for instance, International Monetary Fund (IMF), World Bank (WB), Asian Development Bank (ADB), European Bank of Reconstruction and Development (EBRD) and other regional organizations. In particular IMF and WB are crucial providing financial assistance for recovering the economy of Azerbaijan.[155] Azerbaijan's membership in IMF goes back to 1992, and Azerbaijan had 117$ million Special Drawing Rights (SDRs). However, the unpredictable economy, political instability, and war impede large scale collaboration. Therefore, Azerbaijan received its first credit from IMF only in 1995. Azerbaijan was provided with 132$ million implementing economic reform program. The main objective of the initiative was to reduce inflation rate and restructuring the financial sphere.[156] [157]

Indeed, the support of IMF produced negative effect on the economy of Azerbaijan. The negative effect was mainly illustrated itself on the development of industry. As to statistics, in the beginning of 2000s the industry declined by 70% comparing to the year of independence.[158] While, the oil industry increased from 15% up to 48% between 1995 and 2005. Though, non-oil industry declined from 13% to 6% during previously defined time period. In the initial years of independence, the WB also hold 31 projects, in the value of 730$ million.[159]

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[154] In 1995 Azerbaijan signed the "Partnership and Cooperation Agreement" with EU. Therefore, tendency of integration to international organizations continued also afterwards. From 2000s Azerbaijan's membership to Nothern Atlantic Treaty Organization (NATO) Peace Keeping Operations have been accepted and Azerbaijan of one of the active members that the solders of Azerbaijan engaging in operations in different countries on behalf of the NATO. Also, in 2001 Azerbaijan became member of Council of Europe (CE)

[155] Yunusova, D. (2012). Privatization in Post – Soviet Azerbaijan Results and Prospects. *Master Thesis, Universiteit van Amsterdam*, p.68.

[156] Soyak, A. & Nesirova, Z. (2003). Küreselleşme Sürecinde İMF Politikalarının Sonuçları: Azerbaycan Deneyimi. Caucasus and Central Asia in the Globalization Process, International Conference, pp. 14 – 20.

[157] In December 1997 two separate 64 million credits was presented to Azerbaijan. In January 1999 112 million dollars credit was ensured for supporting economic and financial programmes and also compensate the negative effect of oil price decreases on exports. The last credit for this period was given in 2001. It was 100 million dollars credit and planned to reduce poverty and development of non-oil sectors.

[158] Hooper, M. (1999). Azerbaijan Investment Guide. US – Azerbaijan Chamber of Commerce. Washington DC 20006, USA.

[159]Sucayev, F. (2003). Azərbaycanda Qaz Hasilatı və Ona Olan Tələbatın Ödənilməsinin Başlıca İstiqamətləri. *Azərbaycan Müstəqillikdən Sonra Beynəlxalq Konfransın Materialları*, pp. 36 – 37.

Transition period includes reforms in the privatization program. The initial stages of this process were the establishment of State Committee on Privatization in 1992. Moreover, the legal basis on this matter were established in 1993. The large-scale privatization process started only after 1996.[160] Privatization process also increased the interest of foreign investors to buy stocks of companies in Azerbaijan. To be more precise, foreign investors bought more than 50 companies and 17% of stocks were privatized by foreign nationals between 1995-2005.[161]

Table 4. Share of private sector in the GDP of Azerbaijan between 1995-2000.

Year	1995	1996	1997	1998	1999	2000
Share of private sector in GDP, %	28.6	35.3	45.0	53.6	56.8	59.0

Source: State Statistic Committee of the Republic of Azerbaijan

Was also carried out in agriculture sector. Several legislative decrees were adopted in order to facilitate the process in this sector. As to the data of States Statistics Committee (2001), from 1995 to 2000 over 2100 farms were privatized and more than 30,000 new farms have been established. As a result, approximately 3.5 million people are engaged in this sector. In the first half decade of implementation of the reforms state owned shared reduced from 60% to 21%.[162] The lack of experience and non-effective control of the authorities over the process strengthened monopolies. On the other hand, state officials also directly or indirectly benefited from the occurred situation. In spite of those issues privatization was one of the major steps to achieve economic development of the country.

[160] This program revived the economy. According to statistics till 1999 approximately 22200 small-scale business were privatized and also nearly 1100 joint stock company was created.

[161] Bayramov, Q. (2006). Özəlləşdirmənin Nəzəri – Metodoloji Problemləri və Retrospektiv İqtisadi Təhlil. Bakı, *Elm və Həyat*.

[162] Ibadoglu, G. (2014). Azerbaijan's Economic Model and it's Development Since Independence. Available at: http://azerireport.com/index.php?option=com_content&task=view&id=2981&Itemid=55 (accessed November 4, 2021)

Table 5. Main economic indicators for the period of 1993-2000

Years	Growth rate GDP, (%)	GDP per capita ($US)	Consumer Price Index (%)	Deficit of the state budget in GDP (%)	Revenues of the state budget in GDP (%)	Expenditures of the state budget in GDP (%)	Deficit of the payment balance ($US)	Deficit of the foreign trade balance, ($US)
1993	-24.2	178.4	1128.4	8.3	36.0	N/A	N/A	173.6
1994	-20.8	178.4	1664.6	12.5	32.6	N/A	N/A	-143.2
1995	-12.5	324.7	422.9	6.2	13.9	20.2	400.6	-383.2
1996	2.6	432.0	17.5	3.8	13.5	17.7	931.4	-692.5
1997	6.9	516.8	4.8	5	15.2	18.8	916.9	-577.7
1998	9.0	543.8	-0.5	2.7	12.6	17.7	1366	1048.3
1999	7.5	510.3	-9.6	3.5	16.4	19.6	697.9	-106.5
2000	11.3	519.9	-13.8	5.7	13.7	18.9	799.4	-95.7

The death of Haydar Aliyev brought new era to the political stage. H. Aliyev died in 2003 and his son Ilham Aliyev substituted him after winning the election of 15th October, 2003.[163] Due to the fact that son replaced his father led to protests of opposition parties against it. Therefore, I. Aliyev administration has been labeled as "an administration imposing pressure on opposition parties and freedom of expression of people".[164] For instance, the chief editor of the magazine, so-called "Monitor", which was publishing articles on political issues and human rights matters, he was killed in 2005 and the files about the case are still not completed, because the murderer is not been identified yet. In short, this period could be determined as a period of stability and recovery from the economic point of view. In this transition period, natural resources of the country were the main source for the recovery of the economy.

[163] It was the first case in post Soviets that father is replaced with his son. As it stated before until now Ilham Aliyev was vice-president of SOCAR. Except this, he was deputy of MM, head of National Olympic Committee and was the prime minister of country for a short time.

[164] Abbasov, S. (2011). Twenty Years of Independence in Azerbaijan, South Caucasus 20 Years of Independence, Friedrich – Ebert – Stifhung, 108 – 124.

2.3. TRANSITION AND ECONOMIC DEVELOPMENT PERIOD: 2005 – PRESENT TIME

As previously been mentioned, the volume of natural resources produces substantial impact on the economic development of a country even in 21st century. Depending on the role natural resources in the economy, the influence of price fluctuations differs from state to state. On the other hand, developing oil-exporting countries are, by definition, more exposed to oil price shocks than advanced oil-importing countries. Therefore, scholars have been interested in analyzing the relationship between oil price changes and macroeconomic activity since the first and second oil crises in 1973 and 1979, respectively.[165] It should be noted that the vast majority of studies have been focused on the advanced economies, while relatively few researches have been undertaken on the impact of natural resource price fluctuation on the economic development of developing raw-material exporting economies.

Azerbaijan is one of the oil abundant countries in post-Soviet era, while this sector is tightly been regulated under the auspices of the government. The figure below plots the overall GDP of Azerbaijan,[166] the shares of oil and gas in GDP,[167] GDP excluding oil and gas shares,[168] and the fluctuation of oil prices[169] between 2001-2018. During this time, Azerbaijan's total GDP expanded significantly, and the correlation with the oil price indicator is quite strong (ρ=0.55).[170] Due to energy exports being a significant component of total GDP and major oil price windfalls, the relative prominence of the two different sectors swapped multiple times during that period. The oil and gas sector recorded at highest in importance in 2007, accounting for 62.7 percent of the overall GDP.

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[165] Pioneering studies that mostly establish a negative relationship between oil prices and real economic activity include, inter alia, Rasche and Tatom (1977), Darby (1982), Hamilton (1983), Burbidge and Harrison (1984), and Gisser and Goodwin (1986). Starting from the second half of the 1980s, studies on a linear relationship between oil price shocks and real economic activity lost their significance. The substantial decreases in oil prices from the mid-1980s had smaller positive impacts on real economic activity than foreseen by the previous linear models. Consequently, Mork (1989), Lee et al (1995), and Hamilton (1996) presented non-linear approaches to analyze the relation between oil price increases/decreases and economic recessions/booms.

[166] Red line, left axis

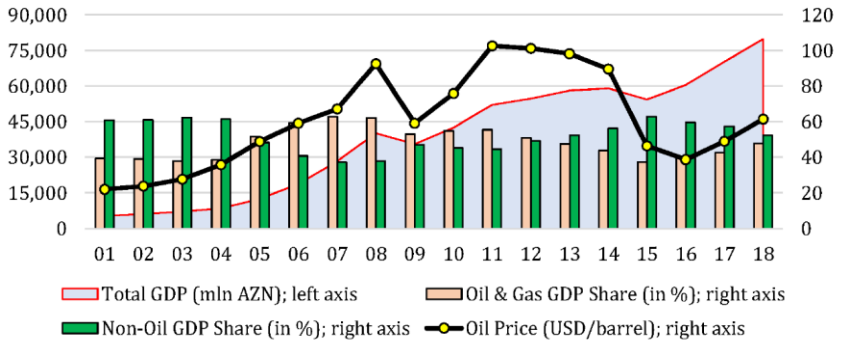
[167] Orange bar, right bar

[168] Green bar, right axis

[169] Black line, right axis

[170] Note that the correlation increases to ρ = 0.67 when removing the deterministic trends from both series.

Figure 3. Oil Price, Total GDP in Azerbaijan, and Sectoral GDP Shares between 2001-2018



Source: State Statistics Committee of Azerbaijan, US Energy Information Administration, and own calculations.

The economic development in transition period in Azerbaijan is strictly tied to the increase production in energy sector, because after the contracts been entered into with international oil companies, export of oil started only after 2006 by Baku-Tbilisi-Ceyhan. After the discovery of gas reserves in Shah-Deniz[171] terminal, Azerbaijan become also a gas exporter country.[172] Due to the mass production of natural resources, at the end of the first decade of 21st century Azerbaijan recorded over 80% economic growth comparing to 1999. Similarly, the poverty rate in 1999 was over 60%, while in 2010 it was under 8%. Another factor had a significant impact on this process was the substantial increase in foreign direct investment.[173] The volume of the foreign direct investment was dramatically hampered by 2009 economic crisis.[174] In the other hand, as the exportation of oil increase, the share of oil revenues in the GDP increased. For instance, oil production in overall production of the country were around 40% in 2000, while in 2010 it reached its maximum at 93%.

Moreover, the main revenue inflows to the country were coming from the oil sector. Since that oil revenues were mainly invested on the construction sector, while, since the focus of the government shifted to agriculture sector as well. However, the lack of attention on the education, social services

[171] Shah-Deniz is Azerbaijan's 1st world's 9th field with 1.2 trillion m^3 natural gas stock
[172] Sucayev, F. (2003). Azərbaycanda Qaz Hasilatı və Ona Olan Tələbatın Ödənilməsinin Başlıca İstiqamətləri. Azərbaycan Müstəqillikdən Sonra Beynəlxalq Konfransın Materialları, pp. 36 – 37.
[173] The total number of investmens from 1995 to 2010 was 54.2 billion dollars. These investments were consisted of 23% loans, 69% indirect investment, 1.3% portfolio investment, 6% as other type of investments.
[174] For more see at: http://www.economy.gov.az/index.php?option=com_content&view=article&id=91-:%C9%99-sas-kapitala-y%C3%B6n%C9%99ldil%C9%99ninvestisiyalar&catid=17:investisiyalar&lang=en.

and health services resulted in decrease in this sphere. The main cause of this tendency could be linked to the high salaries in oil sector, tough, in other sectors salaries were relatively low. In real terms, salaries in oil sector are 12 times higher than agriculture, 8 times higher than education system. As to the statistics, people employed in the oil sector constitute only 2%percent of overall population.[175] All of these facts can be considered one of the main symptoms of Dutch disease in the economy of Azerbaijan.

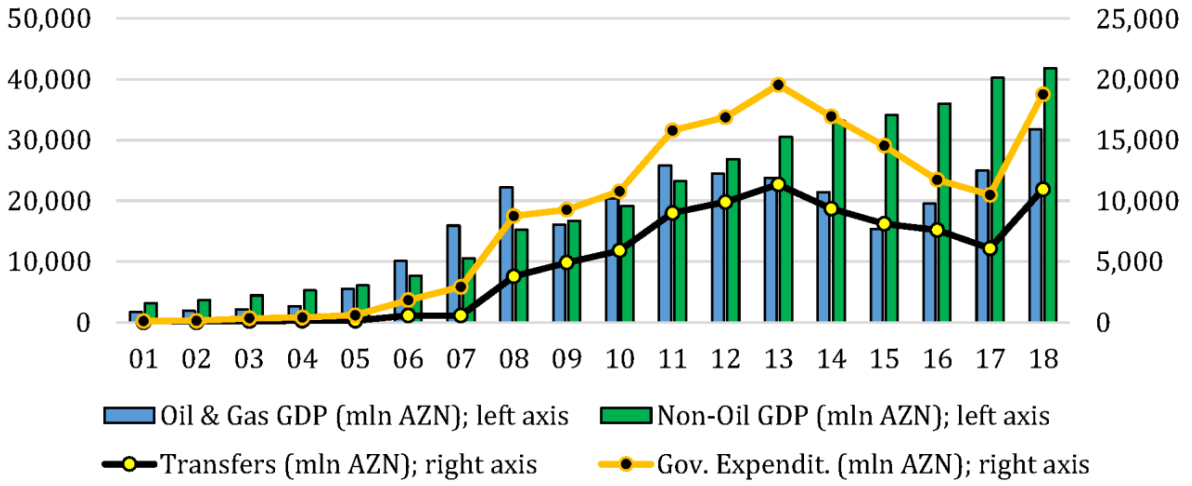
The main sign of the Dutch disease came by the currency value appreciation. The president of Azerbaijan signed a decree in 2005 on denominating nominal face value of money units and the scale of the prices. Eventually, one new Azerbaijani Manat become equal to 5000 old Azerbaijani Manats. This new policy affected all spheres of economy, because the currency of Azerbaijan gained value and due to this fact Azerbaijani products lost their competitiveness in the international market. Therefore, the economy of Azerbaijan become more dependent on the natural resources. As I mentioned in the previous sections, due to the mass production and exportation of natural resources lead to the high revenue inflow the country and it result in economic growth in a short term, while in the long-term it affects negatively other aspects of the economy.

The negative impact of the natural dependency showed itself dramatically after 2009. As the oil prices fluctuated, it reflected itself in the economy of Azerbaijan. In the other words, the oil prices decline, it results in the reduce of the government expenditure in social services. For instance, the following figure indicates the percentage of oil and gas GDP[176] and non-oil GDP[177] alongside transfers from the State Oil Fund of Azerbaijan to the government's budget[178] and total government expenditures.[179] As indicated on the graph, "until 2008, rising oil prices contributed to extraordinary growth rates in both, the oil and gas sector and the remaining economy, with average annual growth rates of 48% and 25%, respectively. As a by-product, Azerbaijan's currency reserves reached twice the volume of its foreign debt at the end of 2008. In 2009, output declined as a result of slackening world oil prices but resumed its steady growth thereafter until the next oil price slump in 2014. The recession in 2014 and 2015 was driven by the oil and gas

[175] For more see at: World Bank (2019), http://worldbank.org/external/default/WDSContentServer/WDSP/IB/-2019/01/07/000333037201001072309 43/Rendered/PDF/443650ESW0AZ0P1IC0Disclosed01161101.pdf.
[176] Orange bar, left axis
[177] Green bar, left axis
[178] Black line, right axis
[179] Yellow line, right axis

sector and accompanied by a shrinkage of foreign reserves as the Central Bank of Azerbaijan (CBA) injected 4 billion USD to the economy in this period. Despite these interventions, the manat (AZN) devalued twice by a total of more than 50%. Following the second devaluation, the CBA adopted a managed float".[180]

Figure 4. Oil and Gas GDP, Non-Oil GDP, Government Expenditures, and SOFAZ Transfers



Source: State Statistics Committee of Azerbaijan Republic, SOFAZ Annual Report 2017, and SOFAZ Revenue and Expenditure Statement for January–December 2018.

On the other hand, figure 2 also demonstrates that the non-oil sector is significantly reliant on government spending, which is primarily made up of transfers from the State Oil Fund of Azerbaijan (SOFAZ), which was established in 1999 to manage currency and earnings from oil and gas activities. SOFAZ transfers, together with a share of direct and indirect oil revenues, accounted for around 60% of total state budget revenues. As a result, it is clear that the government's budget is heavily reliant on resource earnings.

To recapitulate, Azerbaijan has had significant economic growth since the turn of the century, owing to its abundant energy resources. However, due to a lack of diversification, it grew overly reliant on resource earnings. Transfers from the oil and gas industries boost the non-oil industry. Therefore, the economy of Azerbaijan is highly sensitive to the fluctuation of oil prices. s

[180] Bayramov, V. and Abbas, G. (2017): "Oil Shock in the Caspian Basin: Diversification Policy and Subsidized Economies," *Resources Policy* 54, pp. 149–156.

2.4. THE ROLE OF RESOURCE CURSE IN CURRENCY CRISIS IN THE POST-SOVIET ECONOMIES

The definition of a currency crisis is not always straightforward, and it frequently necessitates clarification. For the purposes of this section, a currency crisis is defined as a sudden loss of credibility in a certain currency, which usually results in a speculative attack on it. Currency crises can be identified analytically by a significant depreciation in a certain currency, a decrease in a country's international reserves, or both.[181] It is also crucial to separate currency crisis from the term financial crisis, because financial crisis includes all types of monetary systems.[182]

In terms of resource curse, crude oil is essential to the economic progress of countries all over the world. The exchange rates of oil-importing and oil-exporting countries are affected by oil price volatility. In theory, there are two main approaches to this problem. The first method is based on wealth transfer, and it assumes that oil prices influence exchange rates by causing wealth reallocation between oil-exporting and oil-importing countries.[183] [184] An increase in oil prices results in a wealth transfer from oil importers to exporters. When oil importer demand for oil is inelastic, it may cause depreciation of oil importer currencies and appreciation of oil exporter currencies. As to Krugman (1983), "the relationship between oil prices and exchange rates may be either positive or negative. The sign depends on the countries' trade balance, trade elasticities, capital flows, and the scale of speculative transactions in the financial market".

The second method is based on the transmission channel and assumes that oil prices influence exchange rates via terms of trade.[185] According to Chen (2007), "for G7 countries' exchange rates related to the U.S. dollar, the increase in oil prices decreases the real exchange rates in the long run. This stems from the fact that the increase in real oil prices may increase the prices of tradable goods relative to non-tradable goods in both the domestic countries and the USA. If the domestic country is more dependent on imported oil than the USA, the increase of tradeable to non-tradeable

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[181] Dabrowski, M. (2003a). Currency crises in emerging-market economies: An overview. In M. Dabrowski (Ed.), Currency crises in emerging markets. Boston, Dordrecht & London: Kluwer.
[182] IMF (1998). World economic outlook. Washington, DC: International Monetary Fund.
[183] Krugman, Paul. 1983. Oil Shocks and Exchange Rate Dynamics. In Exchange Rates and International Macroeconomics. Chicago: *University of Chicago Press*, pp. 259–84. Available online: http://www.nber.org/books/fren83-1 (accessed November 9, 2021).
[184] Golub, Stephen S. 1983. Oil Prices and Exchange Rates. *The Economic Journal 93*: p. 576.
[185] Chen, Yu-Chin, and Kenneth Rogoff. 2003. Commodity Currencies. Journal of International Economics 60: pp. 133–160.

prices ratio may exceed the ratio in the USA and thus leads to depreciation of the domestic currency against the U.S. dollar".[186]

According to Adam Smith and David Ricardo, "countries rich with natural resources perform economically better than those without natural resources".[187] This theory was questioned in the late 1970s when the so-called Dutch disease was found to have occurred. as been mentioned in the previous chapter, Corden and Neary (1982) and Corden (1984) were the first researchers that presented the Dutch disease phenomenon. "The phenomenon applies to all negative effects driven by resource discoveries such as factor reallocations and deindustrialization".[188] Furthermore, Dutch disease is often characterized by the substantial appreciation of the resource-rich country's currency.

On the other hand, Lizardo and Mollick (2010) claimed in their research that "oil price changes significantly influence crude oil exporter countries' currency. For instance, the currencies of Canada, Mexico, and Russia appreciated against the U.S. dollar due to rising oil prices".[189] Similarly, Akram (2004) focused on the links between oil prices and exchange rate of Norwegian exchange rate. As to him, oil prices are one of the major factors for the currency appreciation in Norway.[190] It is also important to refer the work of Chen *et al* (2016), which examines the monthly data of 16 OECD countries. He found out that, "the U.S. dollar exchange rates response to oil price shocks depend on whether oil price changes result from changes in supply or demand".[191]

Volkov and Yuhn (2016) find that "the reaction of exchange rates to oil price changes depends more on financial market efficiency than on the relevance of oil revenues in the economy".[192] While, Malik and Umar (2019) find that "oil price shocks driven by demand changes and risk

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[186] Chen, Shiu-Sheng, and Hung-Chyn Chen. 2007. Oil Prices and Real Exchange Rates. Energy Economics 29: pp. 390–404.
[187] Letiche, John M. 1960. Adam Smith and David Ricardo on Economic Growth. In The Punjab University Economist. Punjab: Department of Economics, *University of the Punjab*, vol. 1, pp. 7–35.
[188] Magud, Nicolás, and Sebastián Sosa. 2013. When and Why Worry about Real Exchange Rate Appreciation? The Missing Link between Dutch Disease and Growth. *Journal of International Commerce, Economics and Policy 4*: 1350009.
[189] Lizardo, Radhamés A., and André V. Mollick. 2010. Oil Price Fluctuations and U.S. Dollar Exchange Rates. Energy Economics 32: pp. 399–408.
[190] Akram, Qaisar Farooq. 2004. Oil Prices and Exchange Rates: Norwegian Evidence. The Econometrics Journal 7: pp. 476–504.
[191] Chen, Hongtao, Li Liu, Yudong Wang, and Yingming Zhu. 2016. Oil Price Shocks and U.S. Dollar Exchange Rates. *Energy* 112: 1036–48.
[192] Volkov, Nikanor I., and Ky-hyang Yuhn. 2016. Oil Price Shocks and Exchange Rate Movements. *Global Finance Journal* 31: 18–30.

significantly affect exchange rates volatility".[193] They conduct their research on currencies of major oil-exporting and oil-importing countries such as the Brazilian Real, Canadian Dollar, Chinese Yuan, Indian Rupee, Japanese Yen, Mexican Peso, and Russian Ruble. Moreover, they show that the strength of the relationship between oil price shocks and exchange rates has significantly increased since the global financial crisis. Moreover, Reboredo (2012) shows that "the relationship between oil prices and exchange rates is stronger for oil-exporting countries than oil-importing ones". Eventually, he reveals that "the co-movement is rather weak in pre-crisis periods and stronger in crisis periods".[194]

Driven by the global financial crisis (2008–2009), sharp oil price decreases in the international commodity market (2014–2015), the COVID-19 pandemic outbreak, and conflicts over oil prices, the oil revenue decreases have challenged the monetary system of oil-dependent countries. In the case of Azerbaijan, oil prices impose heavily influence on the main macroeconomic indicators.[195] As to many experts examined this matter, concluded that oil change fluctuations mainly affect the Azerbaijani economy through exchange rate channel.[196] According to Hasanov (2010), "the impact of oil price changes on the value of Azerbaijani currency and finds that the real effective exchange rate of the Azerbaijani Manat appreciates by approximately 0.7 percentage points when there is a one percentage point increase in oil prices. [197]

Oil is one of the world's most essential energy sources. Monthly crude oil prices from January 2000 to May 2020 are shown in the figure 5. Between January 2007 and July 2008, as well as January 2009 and May 2011, oil prices rose significantly. Oil prices remained at a high level from 2011 to 2014. In 2014, the situation shifted dramatically. Oil prices fell by more than 75% between August 2014 and January 2016. Following the 2014 oil price crash, oil exporters faced numerous hurdles. It had a wide-ranging and negative impact on their economy. Private consumption and

[193] Malik, Farooq, and Zaghum Umar. 2019. Dynamic Connectedness of Oil Price Shocks and Exchange Rates. *Energy Economics* 84: 104501.
[194] Reboredo, Juan C. 2012. Modelling Oil Price and Exchange Rate Co-Movements. *Journal of Policy Modeling* 34: 419–40.
[195] Niftiyev, Ibrahim, and Natavan Namazova. 2020. Analysis of Cyclicality in the Azerbaijan Economy: Results of the Chi-Square Test. *Academic Journal of Economic Studies* 6: pp. 122–34.
[196] Humbatova, Sugra Ingilab, Ragif Kh. Gasimov, and Natig Gadim-Oglu Hajiyev. 2019. The Impact of Oil Factor on Azerbaijan Economy. *International Journal of Energy Economics and Policy* 9: 381–87.
[197] Hasanov, Fakhri. 2010. The Impact of Real Oil Price on Real Effective Exchange Rate: The Case of Azerbaijan. DIW Berlin Discussion Papers 1041: pp. 1–26.

investment fell sharply in the majority of them. Therefore, by 70% of oil-exporting developing markets and economies recorded a substantial decrease in the GDP growth rate.[198]

Figure 5. Monthly crude WTI oil prices in the period from January 2000 until May 2020 (USD/Bbl).

Changes in oil prices have a considerable impact on the economies of oil-exporting countries. The influence of fluctuations in oil prices on the exchange rates and international reserves of oil-exporting countries is depicted in this section. It is important to note that the majority of the negative consequences of oil price declines affect developing countries that rely heavily on oil revenue. In this case Azerbaijan, which is among the world's top 15 oil-dependent countries and represent former Soviet Union states in the Caspian Sea region.[199]

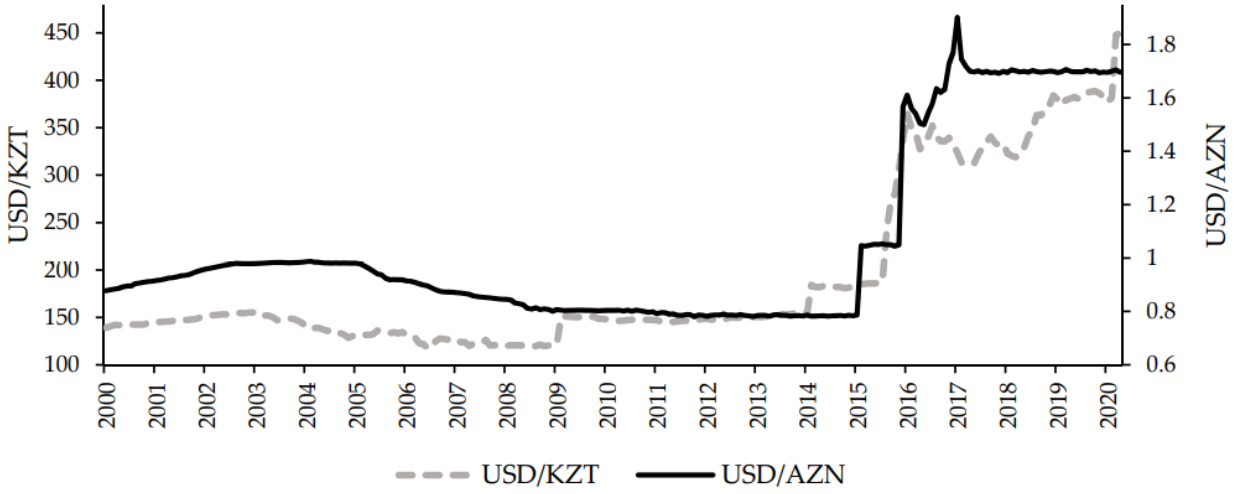
In order to understand the issue, I will evaluate it through two post-Soviet states, which are natural resource abundant, as same as natural resource dependent; Azerbaijan and Kazakhstan. Figure 6 indicates the volatility of the USD/AZN and AZN/KZT exchange rates from 2000 to 2020. As it is possible to extract from the graph, in the period of January 2000 to January 2015 the value of

[198] World Bank. 2018. Commodity Markets Outlook. Oil Exporters: Policies and Challenges. Commodity Markets Outlook. Available online: https://www.worldbank.org/en/research/commodity-markets (accessed on 10 November 2021)

[199] Czech, Katarzyna. 2018. Oil Dependence of Post-Soviet Countries in the Caspian Sea Region: The Case of Azerbaijan and Kazakhstan. *Acta Scientiarum Polonorum. Oeconomia* 17: 5–12.

Azerbaijani manat and Kazakhstani tenge[200] to USD remained at stable level. The 2014-2016 currency crisis in post-soviet economy cached Azerbaijan and Kazakhstan in 2015.[201] The sharp depreciation of the currencies forced the policymakers to shift the exchange rate regime from "a currency peg to a floating exchange rate". However, in the case of USD/AZN, the exchange rate still seems to be stable, mainly since 2017. Azerbaijan is not, indeed, a unique case. Levy-Yeyati and Sturzenegger (2005) point out that "many countries that theoretically have a floating exchange rate often intervene in the foreign exchange market. In practice, their exchange rate resembles a fixed exchange rate, not a floating one".[202]

Figure 6. Monthly USD/AZN and USD/KZT exchange rates in the period from 2000 until 2020.

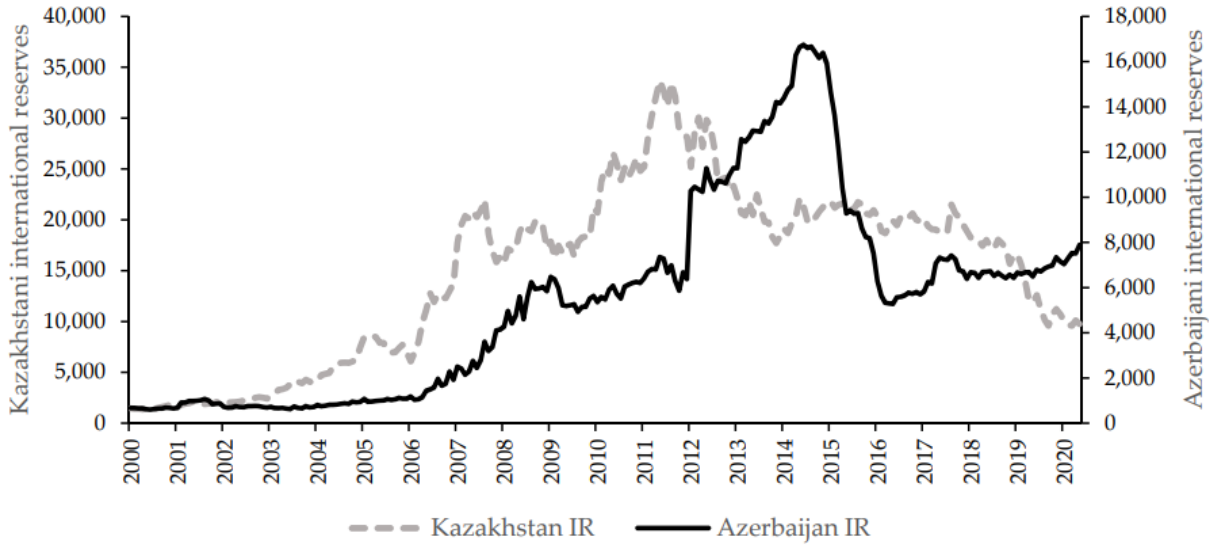


The Central Banks of investigated countries with fixed currency constantly required to monitor the supply and demand of the currency and regulate the cash flows in order to avoid spikes in the demand or supply of its currency. To do so, the Central Banks must maintain foreign exchange reserves to counteract exchange rate fluctuations. Therefore, Figure 7 illustrates ups and downs of international reserves held by the Central Banks of these countries.[203] In term of Azerbaijan, the significant decline in reserves occurred between 2014 and 2015, as a result of decreasing oil prices led a deficit in the balance of payments of the country. This tendency triggered currency

[200] Tenge is the official currency of Kazakhstan and 1 euro is equal to 495,58 tenge as of the date of November 10, 2021.
[201] The USD/KZT exchange rate increased from 180 to 334, and USD/AZN rose from 0.79 to 1.57.
[202] Levy-Yeyati, Eduardo, and Federico Sturzenegger. 2005. Classifying Exchange Rate Regimes: Deeds vs. Words. *European Economic Review* 49:1603–35.
[203] These reserves do not include gold.

devaluation and brought to a floating exchange rate. As to Levy-Yeyati and Sturzenegger (2005), "if neither the nominal exchange rate nor reserves move, then the exchange rate regime that the country is implementing is not apparent". For instance, in the case of Kazakhstan, both exchange rates and reserves have been volatile since 2016 as a result of floating exchange rate regime.[204]

Figure 7. Monthly international reserves excluding gold in Azerbaijan and Kazakhstan, in the period from January 2000 until May 2020 (in billion U.S. dollars).



As one of the natural resource dependent economy, Azerbaijan is highly sensitive to the fluctuations in the oil prices. In real terms countries go through a favorable trade balance, international reserves and experience currency appreciation in the case that oil price is high. Therefore, macroeconomic peculiarities of resource-rich economies impose a considerable challenge to design proper monetary and exchange rate policies to maintain inflation and exchange rate stability. Eventually, the relationship between oil prices and the exchange rate reflects the most fundamental issue in the macroeconomy of resource-rich countries.

According to the findings, rising crude oil prices are linked to a strengthening of the Azerbaijani Manat against the US dollar. However, the USD/AZN reaction becomes significant only in the sixth month following the shock of 2015. Moreover, I believe that the reaction of Azerbaijani

[204] Salisu, Afees A., Godday U. Ebuh, and Nuruddeen Usman. 2020. Revisiting Oil-Stock Nexus during COVID-19 Pandemic: Some Preliminary Results. International Review of Economics & Finance 69: 280–94.

international reserves to the oil price increase is positive and significant. The findings, on the other hand, are inconsequential for Kazakhstan's foreign exchange reserves, as previously reviewed.

In addition, I mentioned the link between daily oil price movements and exchange rate returns in both pre- and post-crisis eras. I used the time from December 2015, when both countries formally switched to a floating currency system, through December 2019 as a pre-crisis period. I chose the first phase of the COVID-19 pandemic as a crisis period, which runs from January to September 2020. In both of the studied periods, the study finds a negative and substantial link between crude oil prices and the USD/KZT.

On the other hand, I assume that the correlation is stronger during the COVID-19 pandemic. Indeed, the relationship is not significant in the case of the Azerbaijani Manat. The USD/AZN exchange rate has been stable since 2017, and the first phase of the COVID-19 pandemic has not caused a change in the exchange rate and a weakening of the Azerbaijani currency, despite significant drops in crude oil prices. It should be stressed that although Azerbaijan officially changed its exchange rate to a floating one in 2015, the preliminary data analysis indicates that the Azerbaijani exchange rate was kept at a stable level for most of the analyzed period. This constitutes a limitation of the study.

According to the several experts in this field, "the currencies of oil-exporting countries are positively correlated with commodity prices. The increase in oil prices leads to their significant appreciation. This, in turn, may suggest that these countries are at risk of experiencing Dutch disease, as the phenomenon is related mainly to the strong appreciation of resource-rich countries' currencies triggered by a rise in commodity prices. An appreciation of the national currency decreases the country's export competitiveness while reducing the possibilities of diversifying the national economy to be less dependent on the price changes of raw materials. In this context, exchange rate management should be at the center of attention for the Central Bank of Azerbaijan and related policymakers[205]. It should be noted that, Azerbaijani currency Manat survived two previous currency crises occurred in post-soviet era (1998-1999). Azerbaijan is not as dependent on the trade remittance inflows from Russia as other former Soviet Union states, and this

[205] Salisu, Afees A., Godday U. Ebuh, and Nuruddeen Usman. 2020. Revisiting Oil-Stock Nexus during COVID-19 Pandemic: Some Preliminary Results. *International Review of Economics & Finance* 69: 280–94.

dependency was the main cause for currency depreciation in other post-Soviet states.[206] While in the case of Azerbaijan, it suffered from oil price decline.[207]

2.5. THE ENERGY SECTOR AS A MECHANISM IN THT DEVELOPMENT OF AZERBAIJAN'S INTERNATIONAL RELATIONS

The Republic of Azerbaijan is an important actor in the region, not only because of its strategic location, but also abundant natural resource reserves. Perhaps, since the independence of the country, this factor has become defining perception of Azerbaijan's international relations. In order to acknowledge the importance of natural resources in Azerbaijan's foreign relations, it started with the presidency period of H. Aliyev. He is not only known as a leader who established the "balanced foreign policy" but also as a president who implemented natural resources (in this case oil-gas) a driving factor in the development of country's foreign relations. As being mentioned above, in 1994 the "oil strategy"[208] was established, which led to the "Contract of the Century".[209]

The Contract of Century, was not signed only for economic purposes, but rather political ones. Because of the sensitive regional circumstances, local experts believe that it is mandatory to consider the concerns of neighbor states, which could be defined as "genuine balanced and pragmatic foreign policy". In this respect, Azerbaijan has developed its relations with neighbor countries except Armenia, due to the Nagorno Karabakh issue. Relations with Georgia and Turkey are particularly important, which are the main transit states of Azerbaijan's energy projects. Moreover, Azerbaijan has played a key role in ensuring the energy security of those countries at the same time. On the other hand, relations with Turkey have particular significance because of

[206] In 2014–2015, the currency crisis spread over post-soviet economies. The spillover and contagion mechanisms involved decreasing trade volumes and deteriorating terms of trade with Russia, lower remittances from labor migrants working in Russia (particularly from Tajikistan, Kyrgyzstan, Uzbekistan, Moldova, and Armenia) and, most importantly, the devaluation expectations of households and financial market players. Those countries, which depend on Russia as an important trading partner—and particularly those that belong to the Russia-led Eurasian Economic Union (EaEU)—could not sustain the sharp nominal appreciation of their currencies against the Russian ruble (1 euro is about 81,66 Russian ruble, as of the date November 11, 2021)

[207] The AZN held up against market pressure until the end of 2014, but beginning in January 2015, it experienced a few waves of depreciation with a cumulative loss against the USD of 49.7% by the end of 2015. In turn, depreciation of AZN led to systemic banking crisis in 2016.

[208] The Oil strategy refers to a long-term national development program aimed at drawing the country's energy resources to the economic turnover by cooperation with big foreign companies on the principle of mutual benefit

[209] Strimbovschi, S. (2015), *"Interview with Farhad Mammadov"*, 10.02, Director of the Center for Strategic Studies under the President of the Republic of Azerbaijan.

two main reasons. First, Turkey has been a role model for Azerbaijan in transformation process to market-based economy. Second, Turkey is the safest corridor for Azerbaijan to European Market. Notwithstanding, the geopolitical and strategic foundations of the Turkey-Azerbaijan relations should not be ignored. Apart from economic partnership, Azerbaijan is also a key factor for Turkey to balance its relations with Russia and Iran over the region.

Oil is considered one of the most important factors that make Azerbaijan stand out in the international community. The natural resources' importance is evidenced by the fact that it accounts for around 80 to 90% of the country's income. Therefore, oil strategy is one of the government's foreign policy priorities. The fundamental aim of the strategy is to ensure the implementation of advanced technologies and foreign investment opportunities in the sector, as same as develop non-oil sector through the revenues of energy sector. Furthermore, development of the oil and gas industry, including the construction of pipelines, is considered one of the country's main foreign policy goals. In this regard, EU is the main partner and largest importer of natural gas, in particular natural gas. The dependence on energy imports highlights the concerns about the security of supplies from regions with social unrest or political conflicts. For instance, the Ukraine-Russia natural gas dispute in 2009 highlighted the need for a more robust energy policy to address the security challenges posed by potential supply disruptions.

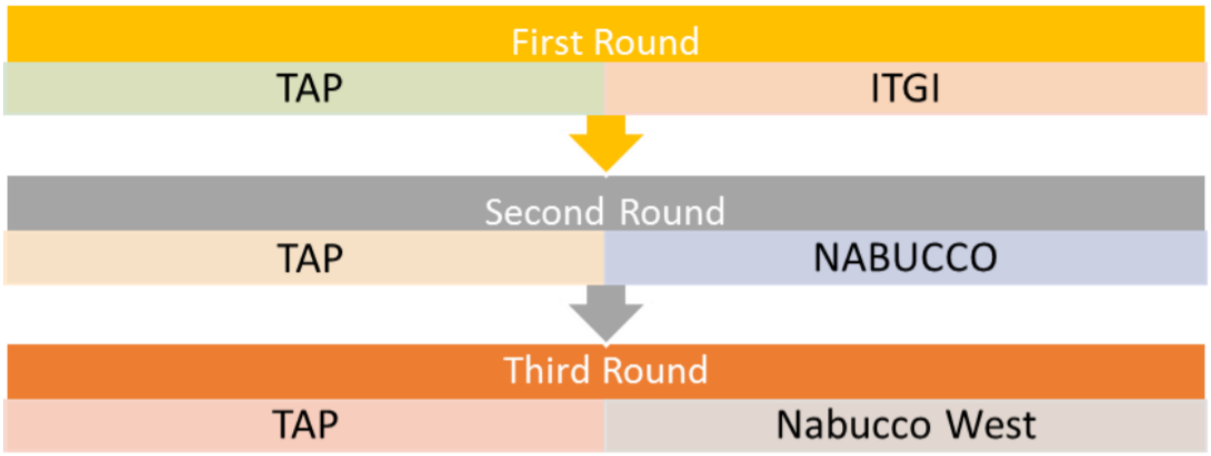
In 2014, the European Commission adopted a "European Energy Security Strategy" to improve the security of Europe's energy supply. Its goal was to diversify the sources of energy supply and reduce the risk of energy price volatility.[210] In this context, EU realizes Southern Gas Corridor (SGC) as an important element for the diversification strategy. The importance of SGC for the EU could be acknowledged from its active participation in financing Trans Adriatic Pipeline (TAP), which is a part of SGC and constructed to export Azeri gas to the European market. Moreover, implementation of ongoing projects such as Shah Deniz II and Shah Deniz III will significantly increase export of Azeri gas to Europe.

Furthermore, the SGC consists of three pipelines. The third pipeline, which is called the TAP, goes through Turkey to Greece and Italy. Some experts argue that Russian South Stream Project is the only competitor to the TAP. Indeed, during the initial years of the implementation of project it

[210]The same strategy was also reflected in the Energy Union Package, in particular for Eastern and Central European countries who are more vulnerable due to the limited number of suppliers.

faced resistance from the EU side, because of the potential advantages of other projects; Nabucco, Nabucco West, and the Interconnector Turkey-Greece-Italy (ITGI). Since the European Union did not always support the project, the pipeline's operators had to compete against above mentioned projects. The figure below indicates the stages of the competition among the concerning factors.

Figure 8. Three stages of the competition.



The European Commission in the initial years attached the political priority to the Nabucco project, because of the fact that Nabucco was intended to transport 31bcm gas to Europe. In this context, TAP was supported neither by Italy nor Greece, and it was uncertain whether TAP could provide that amount. As indicated on the figure above, the first round of the competition was between the shareholders of TAP and ITIGI.[211] Perhaps, ITIGI projects was vulnerable comparing to the TAP, even though both pipelines were planned to follow similar routes, economic crisis in Greece led it to privatize its energy company. Greece energy company DEPA did not succeeded to find investors, and it made the Greek's position on the project questionable. While, shareholders of the TAP were in stronger economic situation. Eventually, the Shah Deniz consortium dropped the ITGI in 2012.

The second stage of the competition was between TAP and Nabucco projects. Though EU sided Nabucco politically at the beginning, Nabucco (31bcm) downscaled to Nabucco West (16bcm) in 2012. The main reason of this was the construction of TANAP by Azerbaijan and Turkey which

[211] The ITIGI shareholders were Edison (Italy) and DEPA/DESFA (Greece). The initial shareholders of the TAP were Statoil (Norway), EGL (Switzerland) and E. ON (Germany).

overlaps with the easter section of Nabucco in Turkey. The TANAP was initially intended to serve only few countries comparing to the original Nabucco project, therefore, its capacity was only 16bcm. On the other hand, Azeri gas was the only sufficient sources feeding the pipeline of Nabucco. Furthermore, Nabucco West project also had EU's support politically, but one of the shareholders (Germany's RWE) dropped its support to the project and it affected the feasibility of the project against TAP. Eventually, TAP project was selected by the Shah Denis consortium in 2013. Currently, TAP plays a key role exporting Azeri gas to European market.

To sum up, Azerbaijan strongly encourages the development of inter-state relations between transit countries like Turkey and Georgia as these are the main states through which its resources are transported. Moreover, the development of economic and political ties with international community, in particular those have interest in the transportation of the energy resources of Azerbaijan are the driving factor in increasing its presence in world market.

III. CONCEPTUALIZATION OF RESOURCE CURSE AND DUTCH DISEASE THEORIES IN AZERBAIJAN

This chapter is dedicated to examine the amount of extractive industry within the Dutch disease in the economy of Azerbaijan. The phenomenon of Dutch disease occurs when the national economy produces and exports a single product or a particular sector becomes the booming sector. The increase in exports of particular goods and the expenditure of accumulated mining revenues appreciate the national currency, reducing competitiveness, production and export of other sectors. Azerbaijan is an oil and gas-rich country which naturally actualizes the existence of Dutch disease syndrome.

Azerbaijan is among the top 15 oil revenue dependent country in the world.[212] The volume of oil shares in Azerbaijan's GDP increased dramatically since 2001. Azerbaijan's exports consisted mainly of oil and petroleum products. Although the economic value added was mainly generated in mining, manufacturing and agriculture had to gradually shrink. The tertiary sectors expanded due to government spending from accumulated mineral revenues. Large infrastructure or transportation projects served to meet the needs of the extractive industries, particularly new oil and gas projects. The explanation of the economic structure highlights the primary function of mineral resources and the multiplier effect they have. A small transition country like Azerbaijan can benefit from a mineral resource boom. The hazards connected with crude oil exports or exports of barely processed minerals, on the other hand, can cause challenges in the form of slower growth.

In an economy with three sectors (growing, lagging, and non-tradable), the highest disposable income from natural resource discoveries, capital inflows, aid, or remittances might enhance overall demand, according to the basic Dutch Disease model. As a result, given a positive income elasticity, public or private agents are more likely to spend more, raising the price of non-tradable sectors (also known as expenditure effect).[213] As to Brahmbhatt *et al.* (2010), "the rise in the

[212] World Bank (2020a) Oil Rents (% of GDP) – Azerbaijan, Kazakhstan, Russian Federation, Ukraine, Georgia, Armenia, Turkmenistan, Uzbekistan, Latvia, Estonia, Belarus, Lithuania, Tajikistan, Moldova. Available at: https://data.worldbank.org/indicator/NY.GDP (accessed: 18.11.2021).

[213] Corden W.M., Neary J.P (1982) Booming Sector and De-Industrialization in a Small Open Economy. *The Economic Journal*, 92, 368, pp. 825–848.

relative price of non-tradable sectors over tradable sectors[214] causes real exchange rate appreciation in this situation".[215] Furthermore, resource sectors may flourish at the expense of non-resource sectors, as booming industries can draw labor and money away from the rest of the economy, through reducing output and employment in non-resource sectors[216].[217]

Applying the same model to the economy of the Republic of Azerbaijan, increase in oil exports and high oil prices led the economy to record rapid growth in overall GDP and GDP per capita during so-called, "oil booming period" between 2007 and 2012.[218] According to the statistics of World Bank, the median value of GDP in current prices between 1990–2000 was 4,4 billion USD. Hence, during and after the oil booming period, that median value reached 38,8 billion USD .[219] In 2014, GDP per capita in current USD was 12 times higher than 2000, when GDP per capita was $655.1 .[220] Moreover, "GDP per capita purchasing power parity was $3,836.6 in 2001 but gradually reached $14,926.64 in 2011 and lowered to $14,543.20 in 2018".[221]

As have been emphasized in the previous chapters, despite its achievements, Azerbaijan's economy has been labeled as suffering from the "natural resource curse".[222] Auty (1993) introduced the concept, later Sachs and Warner empirically tested in 1995.[223] "The curse depicts a condition in which resource-rich countries perform worse in terms of economic growth and well-being than

[214] The price of tradable sectors like manufacturing or agriculture is exogenously given and remains steady under the core model.
[215] Brahmbhatt M., Canuto O. Vostroknutova E. (2010) Dealing with Dutch Disease. Economic Premise, *World Bank*, 16, pp. 1–7.
[216] Also known as the resource movement effect.
[217] Fardmanesh M. (1991) Dutch Disease Economics and Oil Syndrome: An Empirical Study. World Development, 19, 6, pp. 711–71
[218] As to the State Oil Fund of the Republic of Azerbaijan measures (2012).
[219] World Bank (2020) GDP (current US$) – Azerbaijan. Available at: https://data.worldbank.org/indicator-/NY.GDP.MKTP.CD?locations=AZ (accessed: 19.11.2021).
[220] World Bank (2020). GDP per Capita (current US$) – Azerbaijan. Available at: https://data.worldbank.org/-indicator/NY.GDP.PCAP.CD?locations=AZ (accessed: 19.11.2021).
[221] World Bank (2020) GDP per Capita, PPP (current international $) – Azerbaijan. Available at: https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?locations=AZ (accessed: 19.11.2021).
[222] Gojayev V. (2010) Resource Nationalism Trends in Azerbaijan, 2004–2009. RUSSCASP Working Paper. Oslo: Research Council of Norway, Fridtjof Nansen Institute, Norwegian Institute of International Affairs, Econ Pöyry.
[223] Niftiyev I. (2020) The De-industrialization Process in Azerbaijan: Dutch Disease Syndrome Revisited. Proceedings of the 4th Central European PhD Workshop on Technological Change and Development (ed. B. Udvari). University of Szeged, Doctoral School in Economics, Szeged, pp. 357–396.

resource-poor countries". Similarly, in the last 20 years, the existence and documentation of Dutch disease impacts in the Azerbaijan economy has gotten a lot of attention.[224]

In real terms Dutch disease enshrines real risks for the economy of a country. If the manufacturing and agriculture sectors shrink their share of the output and net exports (de-industrialization or de-agriculturalization) due to exchange rate appreciation, there will be a decreased capacity to utilize the potential opportunities (innovative technologies, industrial spillovers, technical knowledge, etc.) to benefit from the learning-by-doing process. Academics have argued that manufacturing and agriculture ensure growth and that any crowding-out might harm the economy in the long-term .[225]

In order to observe the research question of the thesis, which is "does the extractive industry have any negative impact on non-resource sectors and economic growth in Azerbaijan, where that impact is predicted by the Dutch disease model?", this chapter will be devoted to the identification of the possible channels of the Dutch syndrome on the basis of the theoretical framework constructed which derives from the central model of the Dutch syndrome hypothesis as written by Corden and Neary (1982) and Corden (1984) . The main methodology is OLS multivariate linear regression. In addition, the calculated variables, such as "return on capital (ROC)" and "marginal propensity to consume (MPC)", fill the research gap in Dutch studies related to Azerbaijan. This approach aims to improve the theoretical conceptualization of Dutch syndrome in the Azerbaijani economy, improving the quality of research on the subject and applying techniques similar to those that have been used in international studies on the phenomenon.

3.1. EARLY CONCERNS OF DUTCH DISEASE

The term of "resource curse and Dutch disease" refers to the effects of the "booming sector" – in this case natural resources – on the other non-natural resource sector, for instance industry and agriculture production. As have been already mentioned, "The Economist" introduced the term of "Dutch disease" in 1977 to describe the structural changes in the development of the

[224] It should be noted that some scholars like Bayramov and Conway (2010), Anlsoy and Ekinci (2019), and others have questioned whether Dutch disease effects exist in the Azerbaijan economy.
[225] Magud N., Sosa S. (2013) When and Why Worry about Real Exchange Rate Appreciation? The Missing Link between Dutch Disease and Growth. *Journal of International Commerce, Economics and Policy*, 4, 2, 1350009.

Netherlands economy, where the manufacturing sector declined after the discovery of natural gas resources in the Northern Sea during the 50s and 60s of the last centuries. In the Netherlands, ballooned gas exports led to the appreciation of the Dutch guilder[226], making the country's manufacturing and service exports expensive. The volume of non-petroleum exports relative to GDP sharply decreased, indicating a loss of competitiveness .[227] Since then, the Dutch disease model has been widely used to understand resource-rich economies because the countries with the booming sectors demonstrate similarity. Moreover, Corden and Neary (1982) proposed the first model of the Dutch disease phenomenon, which explained why booming sectors negatively influence traditional manufacturing sectors.

The initial studies that intended to identify Dutch disease symptoms in the economy of Azerbaijan mainly concentrated on regional examinations, for instance, within the Caspian Sea states or within the resource rich post-Soviet states. These studies lacked an empirical analysis, with a strong focus on political economy aspects, simply assumed that the future outcomes of natural resource-based development would be similar to those of other resource-rich countries in the world, and considered the Dutch syndrome as an explanation of the natural resource theory of the curse. For example, Makhnovsky (2003)[228] studied the oil and gas-rich countries of the Caspian Basin. Makhnovsky, drawing on the basic characteristics of political regimes, concluded that "Dutch disease might emerge after the influx of enormous revenues from mineral resources, as Azerbaijan's authoritarian political system and weak institutions are poorly equipped to deal with fluctuating prices on international markets and economic alternatives to resource growth". Kaser (2003)[229] emphasized the risks of political and economic diversification , while Singh and Laurila (1999)[230] highlighted the exchange rate slippage scenario in the medium to long term . De Broeck

[226] In 2002 the Netherlands adopted the euro. The national currency of the Netherlands till the euro was the Dutch guilder

[227] Gylfason T. (2001) Lessons from the Dutch Disease: Causes, Treatment, and Cures. Institute of Economic Studies. *Working Paper Series W01:06. University of Iceland.*

[228] Mahnovski S. (2003) Natural Resources and Potential Conflict in the Caspian Sea Region. Ch. 5. Fault lines of Conflict in Central Asia and the South Caucasus: Implications for the U.S. Army (eds. O. Oliker, T. Szayna), *Santa Monica: RAND Corporation*, pp. 109–144.

[229] Kaser M. (2003) The Economic and Social Impact of Systemic Transition in Central Asia and Azerbaijan. *Perspectives on Global Development and Technology*, 2, 3, pp. 459–473.

[230] Singh R., Laurila J. (1999) Azerbaijan: Recent Economic Developments and Policy Issues in Sustainability of Growth. *Bank of Finland – Institute for Economies in Transition* (BOFIT), Discussion Papers no 5/1999.

and Sløk (2001)[231] empirically supported the argument that compared to the European Union transition countries, former Soviet countries might experience real appreciation of their national currencies during upcoming years if they failed to increase their productivity level . Moreover, Singh and Laurila (1999) discussed the industrial restructuring of the adopted economic heritage because the confidence that oil revenue brings might block the development policies related to non-oil manufacturing .

3.2. DIRECT EXAMINATION OF DUTCH DISEASE

Many scholars investigated Dutch disease empirically concerning the economy of Azerbaijan. The first attempt was by Gahramanov and Fan (2002), who applied the extended Balassa – Samuelson model to analyze the consequences of the oil boom in Azerbaijan.[232] Thus, the oil boom should have created a rapid real effective exchange rate (REER) appreciation as oil exports were rising; however, the authors concluded the absence of Dutch disease because the monetary side of their model did not show strong evidence. Nevertheless, the research period was still too early for proper evaluation of Dutch disease in the Azerbaijan economy because the oil boom was yet to come and data were scarce.

Corden (2012) has noted that "the exchange rate appreciates as a response to the increase in the revenue of the booming sectors because of the high domestic prices in non-tradable sectors. This appreciation makes non-booming products more expensive to foreign buyers, reducing demand for them".[234] Another source of the exchange rate appreciation is the capital inflows that aim to finance the development in the booming sectors. Hence, booming sectors should escalate inflationary processes in the economy. Several studies covered the exchange rate and inflationary

[231] De Broeck M., Sløk T. (2001) Interpreting Real Exchange Rate Movements in Transition Countries. *IMF Working Paper WP/01/56.*
[232] The Balassa – Samuelson model explains how a country's national currency appreciates due to the faster efficiency growth in the tradable sector than the non-tradable sectors.
[233] Gahramanov E.F., Fan L.-S. (2002) The «Dutch Disease» in Caspian Region: The Case of Azerbaijan Republic. *Economic Studies*, 5, 10, pp. 9–30.
[234] Corden W.M. (2012) Dutch Disease in Australia: Policy Options for a Three-Speed Economy. *The Australian Economic Review*, 45, 3, pp. 290–304.

effects in the extractive industry in Azerbaijan and can be included in the category of direct investigations of the phenomenon.

For example, Hasanov and Samadova (2010) used the vector error correction model to analyze the impact of REER on non-oil GDP and non-oil exports in the short-term and in the long-term period between 2002Q3–2009Q3. Their results claimed that "the appreciation of REER negatively affects non-oil exports, whereas non-oil GDP boosts non-oil exports".[235] A similar study from Hasanov (2010) based on the data ranging from 2000 to 2007 stated that that oil price is the statistically significant identifier of the value of the national currency. Therefore, 0.7% appreciation occurs if oil prices increase by 1%. Hasanov highlighted the existence of Dutch disease hypotheses in the background of discussing co-integration between oil prices and real exchange rates. [236] Huseynov (2009)[237], Ağazade (2018)[238], and Dikkaya and Doyar (2017)[239] found similar results following similar methodologies (for instance the autoregressive distributed lags approach) regarding the link between the oil price shocks and the price levels in Azerbaijan.

Consequently, the devaluation or appreciation of the national currency and overestimating the oil reserves in monetary terms are useful for tracking the Dutch disease syndrome. Azerbaijan experienced two national currency devaluations in 2015. Hayat et al. (2013) provided the evidence that "overestimation of oil reserves in Azerbaijan led to the REER appreciation. After the correction of the expectations regarding future income, the national currency started to depreciate".[240] Bahmani-Oskooee and Jamilov (2014) reported that the currency depreciation shocks in Azerbaijan caused non-oil sectors to have a positive and significant response in terms of

[235] Hasanov F., Samadova I. (2010) The Impact of Real Exchange Rate on Non-Oil Exports: The Case of Azerbaijan. *MPRA Paper*, no 29556.
[236] Hasanov F. (2010) The Impact of Real Oil Price on Real Effective Exchange Rate: The Case of Azerbaijan. *German Institute for Economic Research (DIW) Discussion Paper*, no 1041.
[237] Huseynov S. (2009) *Monetary Policy and Inflation Dynamics in Azerbaijan*. Doctoral dissertation, Central European University.
[238] Ağazade S. (2018) Reel Döviz Kuru ve Petrol Fiyatlari İlişkisinde Asimetri: Azerbaycan Örneğinde Bir İnceleme. Asymmetry in the Relationship between Real Exchange Rate and Oil Prices: An Analysis for Azerbaijan. International *Journal of Economics and Administrative Studies*, Special Issue, pp. 113–126.
[239] Dikkaya M., Doyar B.V. (2017) Causality Among Oil Prices, GDP and Exchange Rate: Evidence from Azerbaijan and Kazakhstan, *Bilig*, 83, pp. 79–98.
[240] Hayat A., Ganiev B., Tang X. (2013) Expectations of Future Income and Real Exchange Rate Movements. *Journal of Banking & Finance*, 37, 4, pp. 1274–1285.

increased exports to the country's main trading partners in Europe, which indicates that there is a negative impact of oil-related exchange rate appreciation. [241]

3.3. INDIRECT INVESTIGATION OF DUTCH DISEASE

Investigation of the expenditure patterns of the resource-rich government might reflect the spending effect of Dutch disease. The spending effect appears when the state uses accumulated revenue of the booming sector for various social and infrastructure projects. This increases the prices and share of GDP of the non-tradable sector, causing the national currency to appreciate in parallel with inflationary effects and sensitivity to external shocks. The main indicators of spending effect are a high share of transfers from windfall funds, high domestic prices during and after the booming period, and an increasing share of the non-tradable sector as the result of government spending. Usui (2007) pointed to the fiscal imbalance and low savings of oil money in Azerbaijan during the upsurge of commodity prices, indicating a loosened fiscal policy and instantaneous spending without institutional regulations. [242] Furthermore, Aliyev et al. (2016) investigated the fiscal policy and non-oil GDP relationships by applying OLS, "autoregressive distributed lags (ARDL)", and other techniques to the data based on a 2000 quarter 1 – 2015 quarter 2-time range in Azerbaijan.[243]

The findings supported Dutch disease-related studies such as from Hasanov (2013)[244] because it estimated the positive long-run relationship between public expenditures and non-oil GDP. Therefore, research from Sabiroglu and Bashirli (2013) tested Wagner's Law[245] in the case of Azerbaijan and concluded that "economic growth that is heavily based on favorable oil prices that determines government expenditure". The authors did not address the spending effect of Dutch

[241] Bahmani-Oskooee M., Jamilov R. (2014) Export Diversification and the S-curve Effect in a Resource Rich State: Evidence from Azerbaijan. *Economic Change and Restructuring*, 47, 2, pp. 135–154

[242] Usui N. (2007) How Effective are Oil Funds? Managing Resource Windfalls in Azerbaijan and Kazakhstan. ERD Policy Brief Series no 50, *Asian Development Bank.*

[243] Aliyev K., Dehning B., Nadirov O. (2016) Modelling the Impact of Fiscal Policy on Non-Oil GDP in a Resource Rich Country: Evidence from Azerbaijan. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 64, 6, pp. 1869–1878.

[244] Hasanov F. (2013) Dutch Disease and the Azerbaijan Economy. *Communist and Post-Communist Studies*, 46, 4, pp. 463–480

[245] The theory behind this law basically states that increasing the share of the public sector in the gross national product is the result of economic growth

disease directly; however, the research incorporated "oil price, which was a crucial factor behind the increase of public expenditure. In this case, the necessary conceptual framework for the presence of Dutch disease is obvious: high oil prices lead to high income, high income leads to high government spending, which in turn increases the number of provided services and the price".[246]

In addition, an earlier study from Koeda and Kramarenko (2008) evaluated fiscal policy scenarios via Azerbaijan-specific model simulation. The authors stated that "the development of the non-oil sector and increase in total factor productivity were due to high government expenditures, although the results of the simulation indicated that it would contract after rapid cuts in government expenditure. This result is very similar to the experiences of other resource-rich countries, where government expenditures are usually high during the oil booms that follow stagnation. This trend underlines the importance of effective government expenditures during the initial stages of the booming period".[247] Uçan and Ünal (2018) also defended the obviousness of the spending effect of Dutch disease in Azerbaijan applying "the Fully Modified Ordinary Least Squares (FMOLS)" method between 1996 and 2016, observing the high role of government expenditure in the economy. [248]

3.4. NONACCEPTANCE OF DUTCH DISEASE

It is worth noting than some scholars argue against the presence of Dutch disease effects in the economy of Azerbaijan. For instance, Şanlisoy and Ekinci (2019) applied "a nonlinear autoregressive distributed lag (NARDL)" analysis to 2001 quarter 1 – 2018 quarter 2 to argue that Azerbaijan did not have Dutch disease because the authors did not find any withdrawal of labor resources out of non-oil sectors. As to the authors, "this result is based on the fact that the oil industry has become more capital-intensive sector and non-demanding for employment. The oil production increased without any slowdowns among, as well as, the other non-oil sectors. On the

[246] Sabiroglu I.M., Bashirli S. (2012) Input-output Analysis in an Oil-Rich Economy: The Case of Azerbaijan. *Resources Policy*, 37, 1, pp. 73–80

[247] Koeda J., Kramarenko V. (2008) *Impact of Government Expenditure on Growth: The Case of Azerbaijan*. IMF Working Paper WP/08/115, pp. 1–18.

[248] Uçan O., Ünal A. E. (2018) *Hollanda Hastalığına Sebep Olabilecek Makroekonomik Etkenler: Seçilmiş Ülke Ekonomileri Üzerine Bir Analiz (Macroeconomic factors that may cause Dutch Disease: an analysis on aelected country economies).* 5th International Congress on Political, Economic and Social Studies (ICPESS), Niğde, Proceedings: 2, 2, pp. 376–393.

contrary, the increased production created additional demand in the other sectors by the help of excess revenue".[249]

However, it should be noted that the previous conclusion is based on the relationship of only two variables: real GDP and the price of crude oil. This excludes out important factors such as REER, the output of lagging sectors, indicators of non-tradable sectors, and employment. Indeed, Zulfugarov and Neuenkirch (2019) applied linear vector autoregressive models to 2002 quarter 1–2018 quarter 1 to argue that Azerbaijan has Dutch disease. "The key results indicated decreasing quarterly GDP growth rates in both oil and non-oil sectors of the economy immediately after the oil price shocks. As oil revenue and demand for oil in the world markets decrease, the oil tradeable sector stops being profitable, which is the unconditional factor for a sharp GDP slump".[250]

On the other hand, when oil revenue decreases, non-oil sectors lack the necessary subsidiary support from the government, which puts them in a vulnerable position; government investments also scale down. An increased consumer price index, appreciated exchange rate, expanded construction, and slowed competition indicators point to the presence of Dutch disease rather its absence even as the government makes various large-scale investments. [251] While, Nuri Aras *et al.* (2016) and Bulut and Suleymanov (2012) argued that "SOFAZ spendings were the measures against Dutch disease because such activities fill the financial gap in non-oil sectors and increase the welfare of groups such as internally displaced people from the Nagorno Karabakh war, who were challenged by unemployment and a loss of the permanent place of residence".[252] Nevertheless, the authors described such activities as "insufficient; without projects inclined to the advance of industrial areas having export potential, overcoming the challenges of Dutch disease effects might fail".[253] Ibadoglu (2008) mentioned an important aspect of those expenditures: "the

[249] Şanlısoy S., Ekinci R. (2019) Azerbaycan Ekonomisinin Hollanda Hastalığı Açısından Değerlendirilmesi. Yönetim ve Ekonomi: Celal Bayar Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, *Journal of Management and Economics*, 26, 2, pp. 595–608.
[250] Zulfigarov F., Neuenkirch M. (2019) *Azerbaijan and Its Oil Resources: Curse or Blessing?* Universitat Trier, Research Papers in Economics no 11/19, Available at: https://www.econstor.eu/bitstream/10419/207043/1/1667010700.pdf (accessed on 21.11.2021).
[251] Ibadoglu G. (2008) Current State of Azerbaijan's Economy: Myths and Realities. *Transition Studies Review*, 15, 2, pp. 425–430.
[252] Bulut C., Suleymanov E. (2012) Azerbaycanin Hollanda Hastaliği Problemini Önleme Stratejilerinde Türkiye Ile Yapilan Ekonomik Ilişkilerin Önemi [Importance of Economic Collaboration between Azerbaijan and Turkey in Preventing Dutch Disease in Azerbaijan]. International Symposium on Regional Cooperation and Development. Erzurum: Erzurum Ataturk University Culture and Performance Center
[253] Nuri Aras O., Suleymanov E., Mammadov K. (2016) *Economy of Azerbaijan: 25 Years of Independence*. Baku: Sharg-Garb Publishing House.

so-called *light oil money* made state officials feel careless and diverted them from thinking about balanced and sustainable development to the fight for quick sharing of oil revenues as though they were in competition. Ultimately, massive government spending towards infrastructure projects and social programs boosted the spending effect". [254]

Furthermore, Egert (2012) has argued that due to data issues, it is impossible to track resource movement and spending effects among the post-Soviet countries – including Azerbaijan – but concluded that increased oil prices resulted in appreciated nominal currency after certain time lags. [255] Yun (2018) analyzed the connection between REER and manufacturing employment and between oil price and manufacturing output between 1991 and 2017 to conclude that there was significant de-industrialization and oil dependence in the Azerbaijan economy. [256] Niftiyev (2020) also described de-industrialization signs in the case of Azerbaijan resulting from Dutch disease which is a notable result of the exchange rate appreciation. [257]

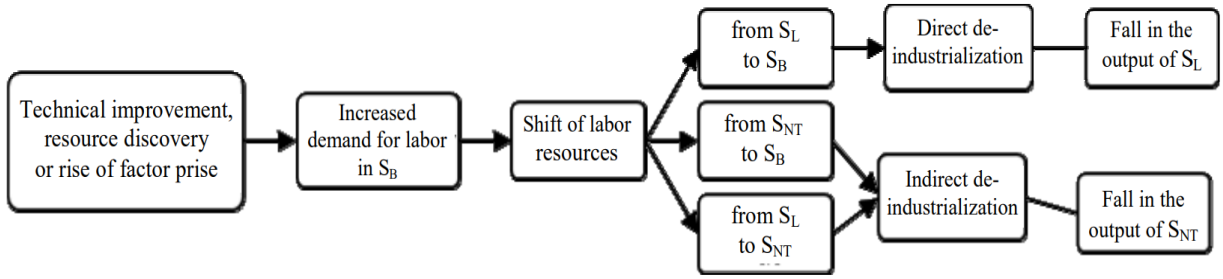
3.5. FUNCTIONAL DUTCH DISEASE MODEL – THEORETICAL APPROACH

Corden and Neary (1982) emphasized Dutch disease symptoms model relating to the open small economies. Their approach concentrates on three sectors of economy: "*booming sectors*"[258]; "*lagging sectors*"[259]; and "*non-tradeable sectors*"[260].[261] In the case of Azerbaijan, S_B consists of oil and gas sectors, while SL mainly comprises non-oil manufacturing and agriculture. Both S_B and S_L are tradable sectors, and the world markets determine the prices of these sectors. S_{NT} are tertiary sectors, and the prices of non-tradable goods are determined domestically. Mironov and Petronevich (2015) summarized other core assumptions of the model as follows: "the economy consists of two production factors: labor and capital; labor-to-capital ratio varies across the sectors; labor is mobile, although capital is specific (at least in the short-run); there is full employment; the

[254] Ibadoglu (2008, p. 425)
[255] Egert B. (2012) Dutch Disease in the Post-Soviet Countries of Central and South-West Asia: How Contagious Is It? *Journal of Asian Economics*, 23, 5, pp. 571–584.
[256] Yun K. (2018) Dutch Disease in Post-Soviet Oil Exporting Countries: Impact of Real Appreciation on De-industrialization. *East Asian Community Review*, 1, 3–4, pp. 199–219.
[257] Niftiyev I. (2020) The De-industrialization Process in Azerbaijan: Dutch Disease Syndrome Revisited. *Proceedings of the 4th Central European PhD Workshop on Technological Change and Development* (ed. B. Udvari). University of Szeged, Doctoral School in Economics, Szeged, pp. 357–396.
[258] Hereafter S_B
[259] Hereafter S_L
[260] Hereafter S_{NT}
[261] Corden W.M., Neary J.P (1982) Booming Sector and De-Industrialization in a Small Open Economy. *The Economic Journal*, 92, 368, pp. 825–848.

labor market is flexible; and household consumption is the only source of the internal demand".[262] Dutch disease appears via two effects, so-called the resource movement effect and the spending effect. In order to acknowledge this tendency, the figure below indicates the general mechanism of the resource movement effect, which leads to the withdrawal of the labor and capital towards S_B out of S_L and S_{NT}.

Figure 9. The mechanism of the resource movement effect.



Source: I prepared the graph based on the approach introduced by Corden (1984).[263]

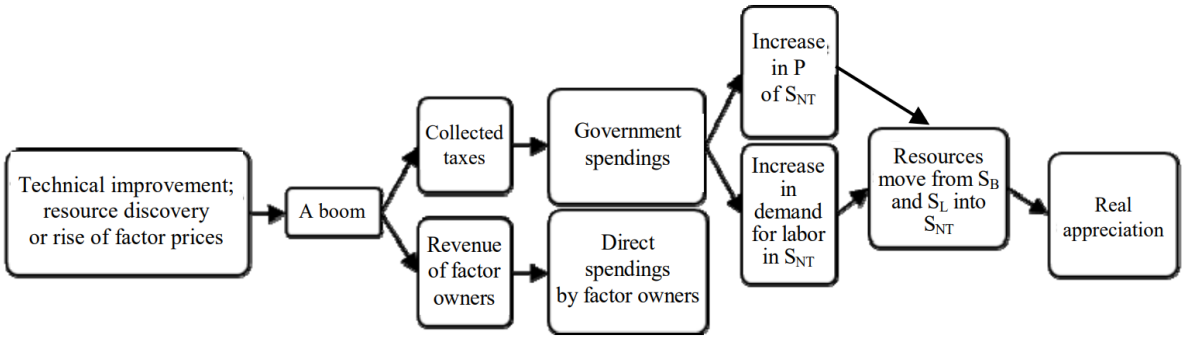
This is the result of the rise in the demand for the labor in S_B. Resource movement might happen in two ways: *(1)* the output of S_L decreases because the labor moves into S_B;[264] *(2)* the movement of labor from S_{NT} into S_B moves in parallel with the shift of the labor from S_L to S_{NT}, creating an excess demand in S_{NT}. [265]

The resource movement effect is rare in the low-income countries where mineral sectors employ inputs that are imported from abroad. Corden and Neary (1982) have mentioned the negligible nature of resource movement when booming sectors use few resources. If so, "the boom is a form of the spending of the accumulated revenue, which is the spending effect of the model. The spending effect occurs when a part of extra income is spent either by the factory owners directly[266] or indirectly via government expenditure"[267]. Moreover, Corden (2012) emphasized that "the

[262] Mironov V.V., Petronevich A.V. (2015) Discovering the Signs of Dutch Disease in Russia. *Resources Policy*, 46, Part 2, pp. 97–112.
[263] Corden W.M. (1984) Booming Sector and Dutch Disease Economics: Survey and Consolidation. *Oxford Economic Papers*, 36, 3, pp. 359–380
[264] Direct de-industrialization, without real exchange rate appreciation.
[265] Indirect de-industrialization, with real exchange rate appreciation.
[266] For instance, when a firm spends on intermediate inputs
[267] Where the government is the recipient of the revenue in a form of royalties, taxes, or profits

spending effect is concerned only with the spending *at home*, which is different from the spending on imports, the transfers of premiums overseas, and the acquisition of foreign assets. In real terms, a special case result does not participate in the domestic factor markets and does not employ a mobile factor in the economy during the oil boom". In this case, S_B is *an enclave*[268], the economy does not experience direct de-industrialization, and resource allocation happens throughout the real appreciation. Thus, the spending effect leads to the movement of the resources from S_B and S_L into S_{NT}, while demand occurs in the opposite direction – from S_{NT} to S_B and S_L. The main outcomes of the spending effect are higher output in S_{NT} during and after the boom compared to the pre-boom period.

Figure 10. The mechanism of spending effect



Source: I prepared the graph based on the approach introduced by Corden (1984).

Corden (1984) developed other fundamental assumptions concerning the income distribution: "the resource movement effect and spending effect lower the rents of the specific factor in S_L, rents in S_B unambiguously rise because the marginal product of labor rises or favorable exogenous factors make this sector more profitable, and rents in S_{NT} may rise or may not rise according to the changes in the output and real wages of other sectors". These clarifications help to understand the initial signals that direct the labor and capital resources on how to act in the face of the constantly changing oil prices in the world markets and profitability levels in the national economy. Then, both effects increase the wages level in the economy in terms of S_L because a rise in labor demand in S_B and S_{NT}. However, in the case of the spending effect due to the rise of the price of S_{NT}, real

[268] An enclave is rather a metaphorical term to describe the situation when a single sector carries the rest of the economy similar to a train that usually has only one locomotive.

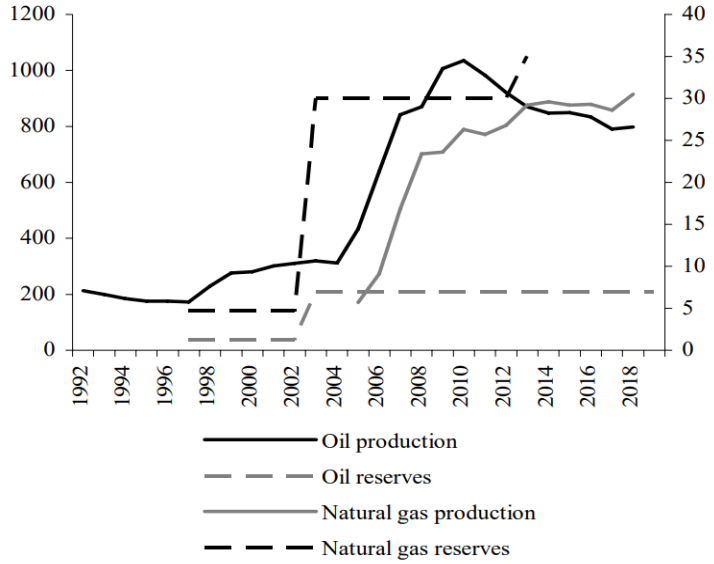
wages sometimes may fall or rise. Since wage-earners also consume goods and services from S_{NT}, the real wage dynamics are obscure[269]. However, when the resource movement effect occurs, real wages must rise because the fallen output of S_{NT} increases the wages in S_B in terms of S_{NT}.

3.6. MACROECONOMIC SURVEY OF AZERBAIJAN'S ECONOMY: VOLUME OF ENERGY SECTOR AND DUTCH DISEASE SYMPTOMS.

Excluding fundamental changes in the reserves, oil and gas production swell in the period from 2006 to 2009, including moderate declines in oil production since 2012, as indicated in Figure 10. While, Figure 11 illustrates the period of which S_B export reached its peak in 2009 and 2010. On the other hand, exportation of natural gas raised gradually since 2008. It should be noted that the negotiations for concluding an agreement with the interested parties were more complicated and long process comparing to the oil agreements. The role of S_B in the economy of Azerbaijan showed itself more obviously, when the its shares started to entail significant part of the state budget.

[269] Real wages also may fall, especially in the case of the spending effect

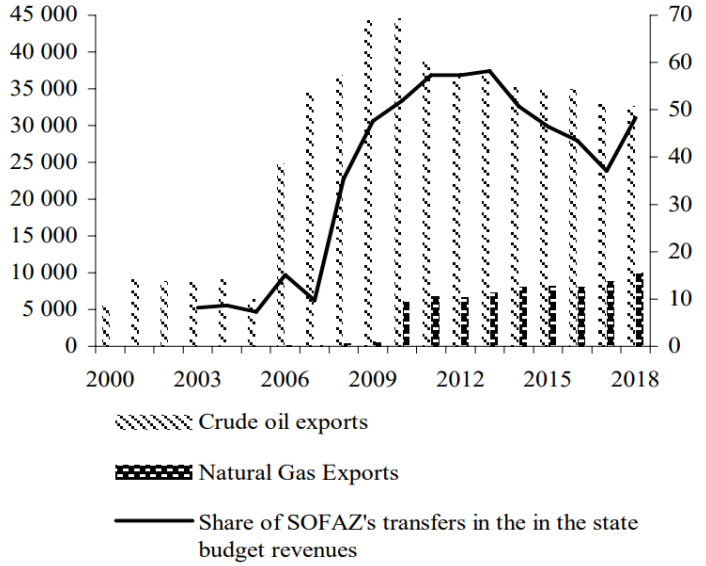
Figure 11. The share of S_B in Azerbaijani economy: oil production, oil reserves, natural gas production and natural gas reserves.[270]



Source: State Statistical Committee of The Republic of Azerbaijan (SSCRA), Reports of SOFAZ (2020).

[270] Oil production (thousand barrels per day), oil reserves (billion barrels, right axis), natural gas production (billion m3, right axis) and natural gas reserves (trillion cubic feet)

Figure 12. The share of S_B in Azerbaijani economy: oil and gas exports and increasing role of oil revenue in the state budget.[271]



Source: State Statistical Committee of The Republic of Azerbaijan (SSCRA), Reports of SOFAZ (2020).

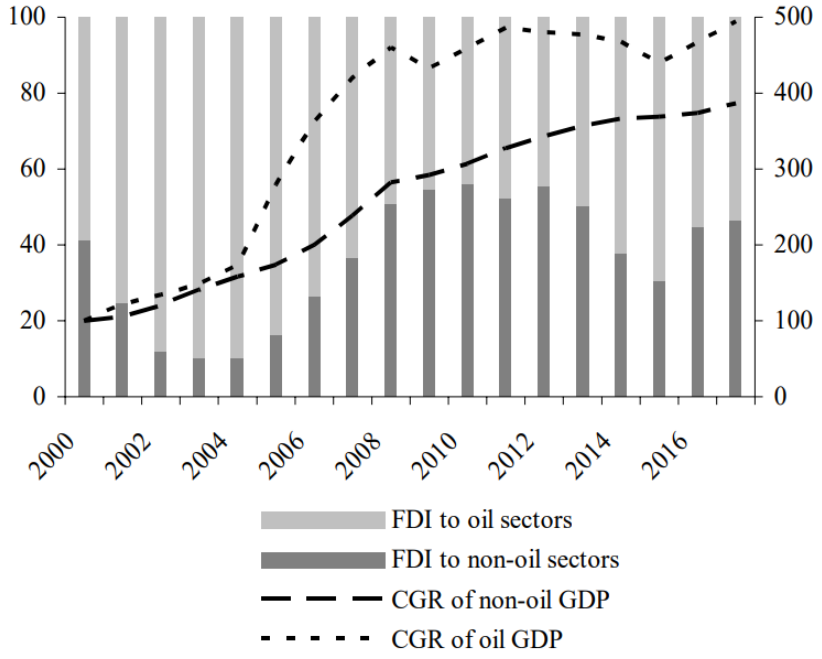
The figure below shows the foreign direct investment (FDI) inflows into the S_B. Between 2000–2009 (until the edge of the boom years for output and revenue), there was a significant difference between FDI inflows. All these boosted the cumulative growth rates (CGRs) of oil GDP while non-oil GDP between 2000–2017 was lower. The difference between CGR in oil GDP and non-oil GDP slightly narrowed in 2015 but started to grow again after 2016.

Mineral revenue increased overall government spending as a percentage of GDP between 2000 and 2014 by approximately 19%. SOFAZ's increased transfers to the state budget and possession of more than 50% share in oil GDP indicate how oil wealth started to dominate the economy. The abovementioned trends in the oil and gas industry, accompanied by the period of high oil prices, created benign conditions for rapid economic growth. The GDP of Azerbaijan exhibited recovering signs after the painful transition process but also achieved very high growth rates. Naturally, the share of the mining sector in real value-added GDP peaked in 2007 by 56.3% then gradually

[271] Oil (in thousand tons) and gas (in thousand tons) exports and increasing role of oil revenue in the state budget (as % share in the state budget, right axis, measured by million AZN)

slowed down and halved in 2016, as demonstrated by Figure 15. However, manufacturing value added in real GDP never exceeded the share of 7% after 2005; it hovered around 4.7 % on average per year during and after the oil booming period, whilst the agriculture sector experienced moderate slowdowns. As Hasanov (2013) has argued, "due to social development and infrastructure-based government spending, the tertiary sector expanded its share in real value-added GDP since the oil boom: 50% in 2016 and 2017". Nevertheless, despite the increased role of the extractive industry, GDP growth plummeted due to the sharp commodity price downturns during 2014–2015.

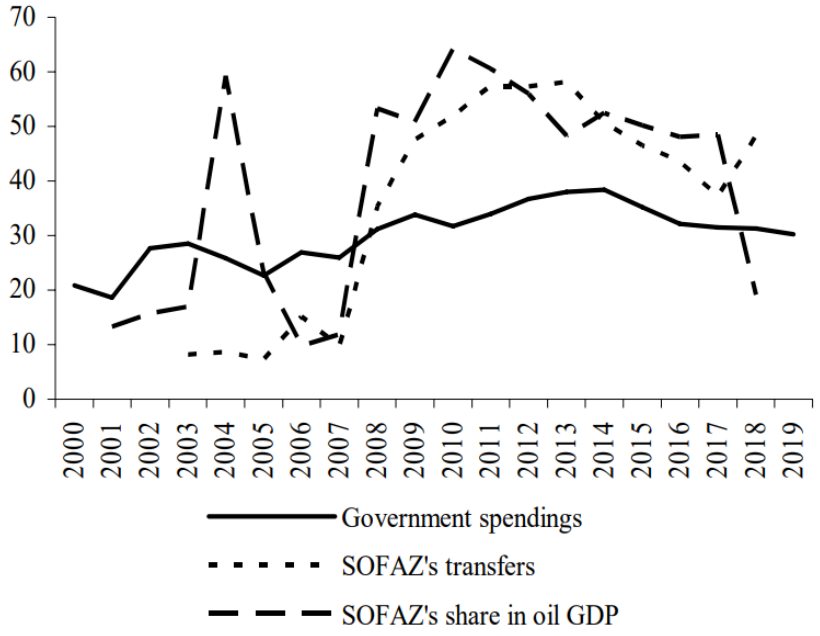
Figure 13. Sectoral distribution of FDI, GDP, and government expenditure: FDI to oil and non-oil sectors of the economy and cumulative growth rate (CGR) of oil and nonoil GDP[272].



Source: Reports of SOFAZ (2020).

[272] FDI to oil and non-oil sectors of the economy (in %, relative to the gross total, measured by million USD) and cumulative growth rate (CGR) of oil and non-oil GDP (in %, right axis, measured by million AZN, current prices)

Figure 14. Sectoral distribution of FDI, GDP, and government expenditure: overall government spending (% of GDP), the share of SOFAZ in the state budget (%), and the share of the revenue of SOFAZ in the oil GDP (%).



Source: Reports of SOFAZ (2020).

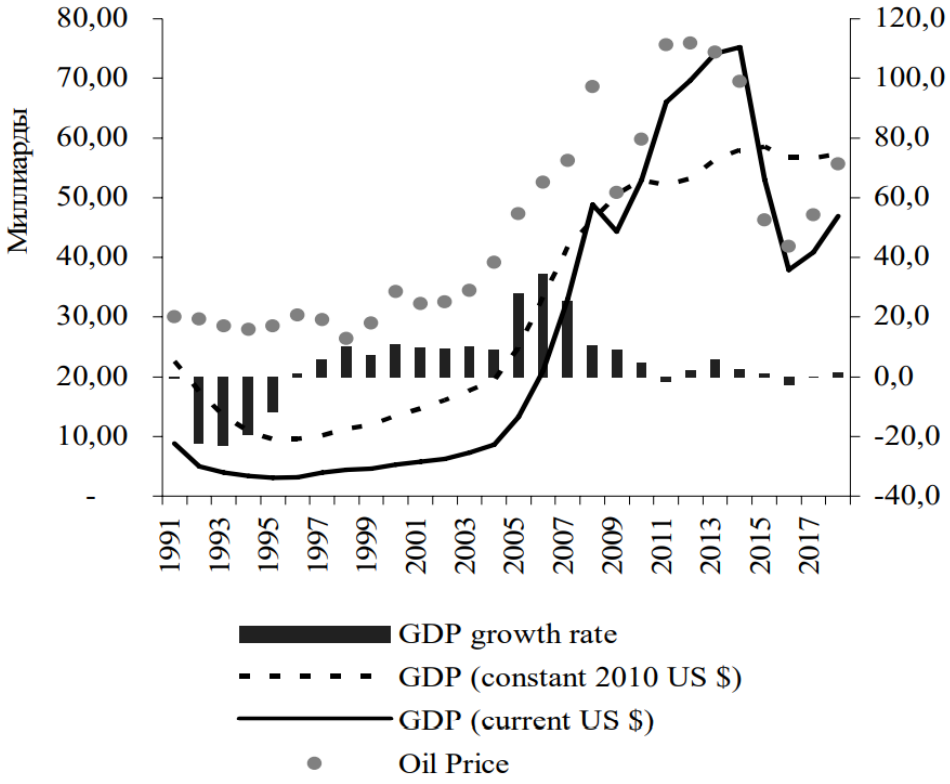
Growth in mineral revenue increased the well-being and social welfare of the citizens of Azerbaijan more than other neighboring post-Soviet countries. Measured by constant 2011 PPP USD, GDP per employed person employed averaged around 34,014 USD per year between 2009 and 2019; that same metric was 15,179 USD per year between 1991–2009. [273] During and after the booming period (2008–2011), GDP per capita measured by constant 2011 international USD also grew: in 2010 it was 16,215.8 USD, 16,828.9 USD in 2015, and 16,010.9 USD in 2018. In neighboring countries like Armenia and Georgia, the mentioned indicator was approximately two times lower.

However, there was arguably excessive dependency on oil production. These dependencies mirror the bitter realities during the sharp commodity price downturns (i.e., negative economic growth, decreased GDP). Furthermore, an overvalued national currency and a lack of incentives to

[273] World Bank (2020) Consumer Price Index (2010 = 100) – Azerbaijan. Available at: https://data.worldbank.org/-indicator/FP.CPI.TOTL?locations=AZ (accessed: 22.11.2021).

diversify the economy harm the competitiveness of the non-oil sectors. Falkowski's (2018) study of revealed comparative advantages stressed that "Azerbaijan's overall competitiveness was very low between 2000–2015. Non-oil sectors underperformed due to the low level of productivity and passive non-oil developments compared to the development of mining, construction, and trade".[274]

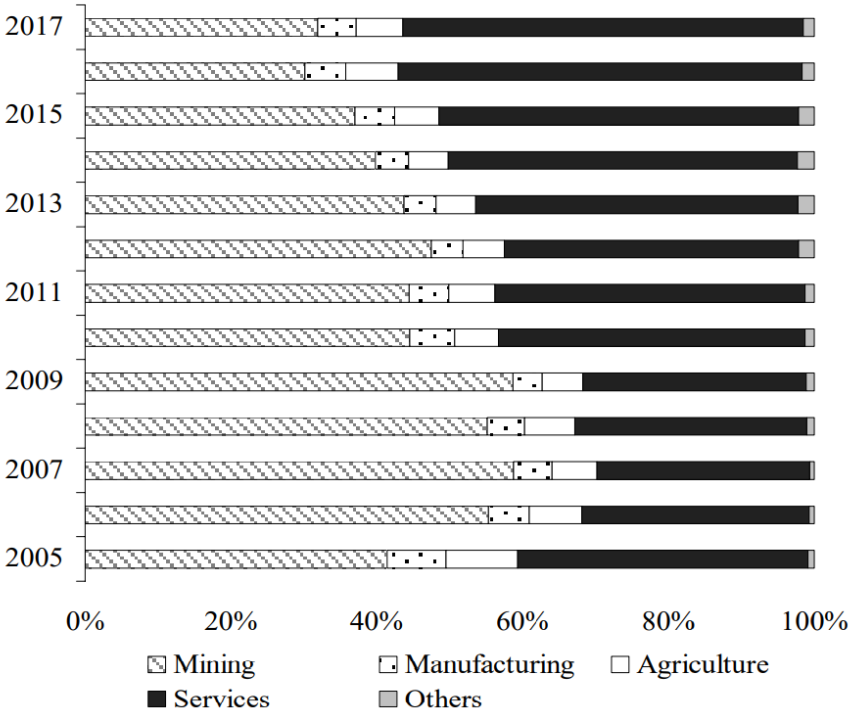
Figure 15. The link between the economic growth, oil prices and structural change.[275]



Source: SSCRA, World Bank national accounts data, OECD National Accounts data files, BP – Statistical Review of World Energy (2019).

[274] Falkowski K. (2018) The Importance of Energy Resources for Azerbaijan's International Competitiveness. *Journal of International Studies*, 11, 4, pp. 44–56.
[275] Current ($) and Constant GDP (Constant 2010 $), Brent oil price (right axis) – $ per barrel, GDP growth rate (right axis) – annual %

Figure 16. Decomposition of real GDP value-added, chain-linking method (%)



Source: SSCRA, World Bank national accounts data, OECD National Accounts data files, BP – Statistical Review of World Energy (2019).

3.7. METHODOLOGY

The thesis undertook OLS multivariate linear regression equations that take a three-sector aggregate approach to test the resource movement and expenditure effects of the Dutch syndrome model. This approach was used by Corden and Neary (1982) and Corden (1984) to theorize the concept of Dutch disease. OLS regression belongs to the group of the most popular statistical methods in the social sciences. [276] The overall design of the equations is similar to those used by Mironov and Petronovich (2015) in the case of Russia due to the adequacy and optimal adaptations of the models used with regard to the data collected in the case of Azerbaijan, which is similar to Russia. Specifically, output, employment, real wages, and returns to capital growth rates in booming, lagging, and non-tradable sectors were analyzed according to the different specifications

[276] Hutcheson G.D., Sofroniou N. (1999) The Multivariate Social Scientist: Introductory Statistics Using Generalized Linear Models. London: *SAGE Publications*.

of the first equation below. Thus, the second and third equations are the specifics of the model for the movement of resources and the expenditure effects.[277]

1) $OutputGR_t/EmploymentGR_t/Real\ WagesGR_t/Returns\ on\ CapitalGR_t=\beta_0+\beta_1 Olip_t Gr+\beta_2 Economic\ Crises_t+\beta_3(REER_t;NEER_t)+\varepsilon_t$.
2) $OutputGR_t/EmploymentGR_t=\beta_0+\beta_1 S_B GR_t+\beta_2+S_L GR_t+\beta_3 S_{NT} GR_t+\beta_4(Population\ income(\$_t);Poupulation\ income\ in\ AZN_t)+\varepsilon_t$.
3) $CPI\ GR_t/REER\ GR_t=\beta_0+\beta_1 MPC_t+\beta_2 S_{NT} output_t+\beta_3 population\ income\ in\ \$_t+\beta_4(government\ spending\ in\ bill(\$_t);Government\ spending\ as\ a\ share\ of\ GDP_t)+\varepsilon_t$.

Table 6. Explanation of the variables of interest in the estimations.

Variable	Explanation
Output GR – Estimation 1, 2	Output growth rate in booming, lagging, or non-tradable sectors in year-over-year percentage (depending on the model)
Employment GR – Estimation 1, 2	Employment growth rate in booming, lagging, or non-tradable sectors in year-over-year percentage (depending on the model)
Real Wages GR – Estimation 1	Real wages growth rate in booming, lagging, or non-tradable sectors in year-over-year percentage (depending on the model)
Return on Capital GR – Estimation 1	Return on capital growth rate in booming, lagging, or non-tradable sectors in year-over-year percentage
CPI GR – Estimation 3	Year-over-year growth rates in Consumer Price Index
Oil p. GR – Estimation 1	Year-over-year growth rates in annual oil prices
Economic Crises – Estimation 1	Dummy variable (2008–2009; 2014–2015)
REER – Estimation 1	Real Effective Exchange Rate
REER GR –Estimation 3	Year-over-year growth rate of Real Effective Exchange Rate
NEER – Estimation 1	Nominal Effective Exchange Rate
NEER GR – Estimation 3	Year-over-year growth rate of Nominal Effective Exchange Rate
S_B GR – Estimation 2	Year-over-year growth rates of output, employment, or real wages in booming sectors
S_L GR – Estimation 2	Year-over-year growth rates of output, employment, or real wages in lagging sectors
S_{NT} GR– Estimation 2	Year-over-year growth rates of output, employment, or real wages in non-tradable sectors
Population income in USD – Estimation 2, 3	Population income variable
Population income in AZN – Estimation 2	Population income variable
MPC – Estimation 3	Marginal Propensity to Consume
S_{NT} output – Estimation 3	The output of non-tradable sectors
Government spendings in bil. USD – Estimation 3	Government spendings
Government spendings as a share of GDP – Estimation 3	Government spendings

[277] The abbreviation of "GR" stands for growth rate among the listed formulas; "/" does not indicate the division sign, it shows multiple dependent variables at the same formula; ε is the error term; "t" denotes the time.

S_B refers to mining, oil and gas extraction, and petroleum and fuel production data. S_L include agriculture, fishing, forestry, and non-oil manufacturing. S_{NT} include construction, trade, transportation, and storage; accommodation and food service activities; information and communication; financial and insurance activities; real estate activities; professional, scientific, and technical activities; administrative and support service activities; public administration and defense; social security, education, human health and social work activities; art, entertainment, and recreation, and other service activities.

3.8. IN-DEPTH EXPLANATION AND DESCRIPTION OF THE VARIABLES

Employment data captures the number of the employed population in all three sectors of the economy. The data source is the "State Statistical Committee of the Republic of Azerbaijan".[278] The S_B's output is the total of the value of the output of the mining sector and the production of petroleum products provided by SSCRA (2020) in AZN. Similarly, S_L output is comprised of the total output value of manufacturing and agriculture in AZN. [279] Meanwhile, the data related to the services have been calculated by the World Bank based on the value-added in services (or S_{NT}). [280] The original data regarded services were in current USD and were converted to the current AZN by the exchange rate of 1.70AZN/USD, which follows the official exchange rate of AZN/USD according to Central Bank of the Republic of Azerbaijan (CBAR). The missing value of 2018 was replaced by the average between 2007–2017. The data obtained from SSCRA (2020d) pertains to the average monthly nominal wages and salaries (in AZN) among the economic sectors (following the same sectoral classification denoted in employment and output). Those data were used to calculate the real wages. Nominal wages were adjusted by Azerbaijan's CPI as provided by the World Bank (2020i), taking the year of 2010 as 100%. [281]

[278] SSCRA (2020a) Distribution of Employed Population by Economic Activities (Dynamics). Available at: https://www.stat.gov.az/source/labour/en/002_1-2en.xls (accessed: 22.11.2021)
[279] SSCRA (2020b) Volume of Industrial Products (Works, Services). Available at: https://www.stat.gov.az/source/industry/en/006en.xls (accessed: 22.11.2021)
[280] SSCRA (2020g) Volume of Investment in Fixed by Sectors of Economy. Available at: https://www.stat.gov.az/source/agriculture/en/1.6en.xls (accessed: 22.11.2021)
[281] SSCRA (2020d) Average Monthly Nominal Wages and Salaries by Economic Activities. Available at: https://www.stat.gov.az/source/labour/en/004_2-3en.xls (accessed: 22.11.2021)

An average of 12 months' annual data on oil prices (Brent trademark) between 2000–2018 were pulled from Indexmundi (2020). NEER and REER data were extracted from the official data set provided by the CBAR (2020). The income of the population in terms of AZN and $ was drawn from SSCRA's official statistical yearbook that is dedicated to national accounts. [282] There is a dummy variable that covers 2008–2009 and 2014–2015 years as economic crisis periods. Returns on capital (ROC) for booming, lagging and non-tradable sectors were calculated with the help of SSCRA's income account in current prices in terms of million AZN. [283]

As a form of processed data, the sectoral distribution of the ROC is not provided by official data sources such as SSCRA. Thus, that data was calculated between 2005 and 2017. The variable is the ratio of the net operable surplus over the directed investments (both foreign and domestic investments to industry, provided by SSCRA. The source for the directed investments to agriculture and non-tradable sectors is SSCRA (2020g).[284]

S_B's ROC does not include the petroleum production sector's data. All other calculations are the same as the above-mentioned compositions of the three-sector approach. There are other variables that were mainly tested within the spending effect of the Dutch disease hypothesis. These variables are population income (in AZN and USD) [285]; government spending in billions of USD;[286] and as a percentage share of GDP; marginal propensity to consume (calculated based on the following data, and consumer price index. Missing values for MPC (2000 and 2018) were replaced by the series mean. [287]

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[282] Indexmundi (2020) Commodity Prices – Oil Prices (BRENT trademark). Available at: https://www.indexmundi.com/commodities (accessed: 22.11.2021).

[283] SSCRA (2020e) Production and Generation of Income Account. Available at: https://www.stat.gov.az/source/system_nat_accounts/en/013en.xls (accessed: 22.11.2021)

[284] SSCRA (2020f) Investments Directed to Main Capital of Industry. Available at: https://www.stat.gov.az/source/industry/en/015en.xls (accessed: 22.11.2021)

[285] (SSCRA) State Statistical Committee of the Republic of Azerbaijan (2019) National Account of Azerbaijan. Statistical yearbook. Available at: https://www.stat.gov.az/menu/6/statistical_yearbooks/source-/system_nat_accounts_2019.zip (accessed: 22.11.2021)

[286] The Global Economy, World Bank (2020a). Azerbaijan: Government spending, in dollars. Available at: https://www.theglobaleconomy.com/Azerbaijan/government_spending_dollars/ (accessed: 22.10.2021).

[287] The Global Economy, World Bank (2020b). Azerbaijan: Government spending, percent of GDP. Available at: https://www.theglobaleconomy.com/Azerbaijan/Government_size/ (accessed: 13.11.2021).

Table 7. Descriptive statistics, normality test, and correlation coefficients against oil prices (2000-2018)[288]

Variables	Min	Max	Mean	S.D.	Shapiro-Wilk Test	Pearson's correlation
S_B employed, thsd. persons	37.90	44.30	41.30	2.00	0.942	0.421
S_L employed, thsd. persons	1,696.7	2,024.1	1,842.7	99.40	0.963	0.485*
S_{NT} employed, thsd. persons	2068.4	2,746.3	2,371.1	226.20	0.926	0.426
S_B output, current mil. AZN	2,186.7	37761.7	17,765.5	11,416.3	0.906	0.757**
S_L output, current mil. AZN	2102.2	14,645.2	7,303.9	3,974.0	0.942	0.495*
S_{NT} output, current mil. AZN	1,092.0	14871.8	6,760.8	4,746.4	0.900*	0.743**
S_B real wages, AZN	333.25	2,120.44	1,164.3	534.3	0.944	0.346
S_L real wages, AZN	72.11	328.59	204.50	88.70	0.918	0.656**
S_{NT} real wages, AZN	111.67	447.98	335.40	112.00	0.850*	0.735**
S_B returns on capital, ratio	1.19	7.23	4.14	2.15	0.911	0.649*
S_L returns on capital, ratio	1.84	11.90	5.05	3.01	0.837*	−0.581*
S_{NT} returns on capital, ratio	1.06	3.28	1.81	0.72	0.772*	−0.556*
Real Effective Exchange Rate (REER), 2000 = 100%	74.20	134.60	104.60	19.76	0.907	0.777**
Nominal Effective Exchange Rate (NEER), 2000 = 100%	65.46	113.28	93.33	14.08	0.909	0.363
Oil price, Brent trademark, in USD	24.42	111.97	64.69	30.01	0.925	–
Income of population, current USD	4,523.10	50,321.50	24,180.51	15,865.62	0.906	0.803**
Government spending, billion USD	0.77	8.19	4.01	2.61	0.900*	0.810**
Government spending, % share of GDP	8.50	15.15	11.27	1.71	0.965	−0.723**
Marginal propensity to consume (MPC), ratio	0.49	1.77	0.85	0.35	0.866*	−0.161
Consumer price index (CPI), in %	98.80	125.30	104.62	6.25	0.780*	0.242

[288] 1) * – indicates that the p-value is smaller than 0.05 or in other words, non-normal distribution under the "Shapiro – Wilk Test" column; 2) ** – correlation is significant at the 0.01 level (2-tailed); 3) * – correlation is significant at the 0.05 level (2-tailed) under the "Pearson's Correlation" column; and 4) S.D. denotes standard deviation.

3.9. RESULTS

Table 8 presents the results of the impact of oil prices, REER, NEER and the economic crisis on S_B, S_L and S_{NT}. This highlights the general theoretical expectations that the effects of Dutch Disease might create for S_{NT} in the economy. The growth in production rates was positively associated with the growth rate of oil prices, and in the model 3, production was also in a positive relationship with S_L. Only one model produced a negative relationship between changes in oil prices and S_{NT} employment. In addition, changes in oil prices had significant positive impacts and returns on the rate of capital growth in S_B, while returns on capital in S_L and S_{NT} were negatively associated with changes in oil price. Surprising findings were that REER and NEER had less significant impacts on the economic sectors. Only Model 12 produced a statistically significant and positive outcome between NEER and employment in S_{NT}.

Table 8. Sectoral distribution of the impact of oil prices, REER, NEER, and economic crisis, OLS results

Dependent variable												
	Output growth rate:						Employment growth rate:					
Exp.var	S_B		S_L		S_{NT}		S_B		S_L		S_{NT}	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	10.59 [0.37]	−21.79 [−0.61]	0.84 [−0.21]	−7.95 [0.49]	16.28 [0.88]	20.42 [0.88]	2.40 [0.52]	4.04 [0.70]	0.54 [0.60]	0.58 [0.52]	−0.49 [−1.13]	**−1.27** [−2.72]**
Oil p.-GR	**0.63*** [3.62]**	**0.65*** [3.73]**	**0.11* [2.00]**	0.12 [2.11]	0.19 [1.67]	0.18 [1.55]	0.01 [0.32]	0.01 [0.26]	−0.01 [−0.06]	−0.01 [−0.12]	−0.01 [−2.44]	**−0.01** [−2.40]**
Economic crisis	−9.97 [−0.68]	−15.57 [−1.13]	−4.53 [−0.97]	−5.20 [0.26]	−7.99 [−0.85]	−8.69 [−0.97]	−3.99 [−1.69]	−3.82 [−1.70]	0.08 [0.17]	0.03 [0.08]	−0.08 [−0.38]	−0.15 [−0.85]
REER	−0.08 [−0.30]		0.02 [0.80]		−0.14 [0.46]		−0.01 [0.52]		−0.01 [−0.58]		0.01 [1.13]	
NEER		0.27 [0.50]		0.09 [0.75]		−0.20 [0.88]		−0.03 [0.70]		−0.01 [−0.49]		**0.01** [2.74]**
R sq.	0.56	0.57	0.33	0.35	0.35	0.25	0.26	0.26	0.02	0.01	0.36	0.52
Adj. R sq.	0.46	0.47	0.18	0.20	0.20	0.20	0.09	0.09	−0.21	−0.21	0.21	0.41
F-stat.	5.50	5.72	2.14	2.33	2.33	2.34	1.51	1.56	0.09	0.07	2.40	4.69
Prob (F-stat)	0.01	0.01	0.14	0.12	0.12	0.12	0.26	0.25	0.96	0.98	0.12	0.02
Obs.	17	17	17	17	17	17	17	17	17	17	17	17
$Hetero_{F\text{-stat}}$	0.72 [0.56]	0.38 [0.77]	1.54 [0.25]	0.77 [0.53]	1.00 [0.42]	1.41 [0.28]	1.16 [0.35]	0.70 [0.57]	0.35 [0.79]	1.09 [0.39]	0.18 [0.91]	0.36 [0.78]
JB_N	0.43 [0.81]	1.08 [0.58]	0.86 [0.65]	0.87 [0.65]	0.26 [0.89]	0.30 [0.86]	1.49 [0.47]	1.69 [1.43]	4.16 [0.12]	2.30 [0.32]	1.83 [0.40]	1.93 [0.38]
LM test	1.47 [0.27]	1.33 [0.30]	1.89 [0.20]	2.69 [0.11]	1.41 [0.29]	0.76 [0.49]	1.16 [0.35]	1.36 [0.30]	4.45 [0.04]	7.18 [0.01]	0.26 [0.77]	0.14 [0.87]

Continues,[289]

Dependent variable												
	Real wages growth rate:						Returns on capital growth rate:					
Exp.var	S_B		S_L		S_{NT}		S_B		S_L		S_{NT}	
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
Intercept	−16.62 [−0.81]	−24.34 [−0.96]	1.72 [0.88]	−7.84 [−0.55]	1.90 [0.14]	−0.02 [−0.01]	−6.96 [−0.12]	23.90 [0.50]	−51.56 [−0.46]	4.23 [0.04]	−24.87 [−0.72]	−8.51 [−0.28]
Oil p. GR	−0.17 [−1.33]	−0.15 [−1.20]	−0.05 [−0.69]	−0.04 [−0.59]	**−0.15* [−1.79]**	−0.14 [−1.76]	**0.74** [3.49]**	**0.71** [3.39]**	**−1.13** [−2.69]**	**−1.16** [−2.69]**	**−0.57*** [−4.47]**	**−0.58*** [−4.41]**
Economic crisis	−8.00 [−0.77]	−7.63 [−0.77]	−8.29 [−1.42]	−9.69 [−1.77]	−7.87 [−1.15]	−8.18 [−1.26]	7.49 [0.43]	10.96 [0.65]	1.54 [0.04]	6.81 [0.85]	12.69 [1.21]	14.17 [1.33]
REER	0.16 [0.79]		0.01 [0.02]		−0.01 [−0.03]		−0.03 [−0.05]		0.40 [0.41]		0.15 [0.50]	
NEER		0.26 [0.94]		0.11 [0.70]		0.02 [0.10]		−0.37 [−0.72]		−0.11 [−0.11]		0.01 [0.02]
R^2	0.13	0.14	0.13	0.16	0.17	0.17	0.56	0.58	0.49	0.48	0.77	0.77
Adj. R^2	−0.07	−0.06	−0.07	−0.04	−0.02	−0.01	0.38	0.40	0.27	0.26	0.67	0.67
Obs.	17	17	17	17	17	17	11	11	11	11	11	11
F-stat.	0.63	0.70	0.65	0.80	0.90	0.90	3.01	3.26	2.21	2.15	7.87	7.65
Prob (F-stat)	0.61	0.57	0.60	0.52	0.47	0.47	0.10	0.09	0.17	0.18	0.01	0.01
$Het._{F\text{-}stat}$	1.37 [0.29]	0.28 [0.84]	1.22 [0.34]	0.33 [0.80]	1.64 [0.23]	0.30 [0.82]	1.29 [0.35]	0.62 [0.63]	2.44 [0.86]	0.25 [0.85]	2.51 [0.14]	1.22 [0.40]
JB_N	2.55 [0.28]	1.10 [0.58]	0.57 [0.75]	0.58 [0.75]	8.45 [0.01]	7.75 [0.02]	0.45 [0.80]	0.71 [0.70]	0.72 [0.70]	0.39 [0.82]	0.33 [0.85]	0.43 [0.81]
LM test	4.54 [0.04]	4.28 [0.04]	1.58 [0.25]	1.08 [0.37]	1.08 [0.37]	1.05 [0.38]	0.19 [0.84]	0.19 [0.83]	6.34 [0.04]	6.24 [0.04]	0.20 [0.83]	0.16 [0.86]

3.10. RESOURCE MOVEMENT EFFECT

Table 9 shows the results of the effect of resource movement of Dutch disease in Azerbaijan. The models largely reflected greater goodness of fit on the left side of the table where output growth rates were tested. On the other hand, the two models with the growth rate of employment in booming industries as dependent variables had the lowest adjusted R-squared values.[290] The number of observations was 17 for all models. There are trends in the estimation results that are

[289] Note: 1) PC denotes percentage change; 2) the bold coefficients emphasize the significant results; 3) the symbols *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively; 4) the numbers in the brackets are the corresponding t-statistics; 5) the estimations do not include degrees of freedom adjustment for standard errors and covariance; 6) numbers were rounded to the second decimal point for compactness; 7) Het. F-stat denotes heteroscedasticity test based on Breusch – Pagan – Godfrey method, JBN denoted the Jaque – Bera normality test results, and the LM test is the Lagrange Multiplier test for serial correlation. The numbers in the brackets indicate the p-values.

[290] considering higher R-squared and adjusted R-square values compared to the models with employment growth rates as dependent variables

consistent with the Dutch disease model. Some examples of these trends include a negative association between the output growth rates of S_B and S_{NT} and a negative association between S_L and S_{NT}. In addition, the income of the population as measured by AZN and USD showed significant results with the production of S_L and S_{NT}.

Table 9. Resource movement effect in Azerbaijan, OLS results.[291]

	Dependent variable											
	Output growth rate:						Employment growth rate:					
Exp.var	S_B		S_L		S_{NT}		S_B		S_L		S_{NT}	
	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)
Intercept	0.10 [0.02]	−0.09 [−0.02]	−0.35 [−0.27]	−0.36 [−0.25]	−0.48 [−0.16]	−0.24 [−0.14]	0.68 [0.76]	0.64 [0.76]	0.01 [0.02]	−0.01 [−0.03]	−0.01 [−0.08]	−0.01 [−0.09]
S_B-GR			−0.09 [−0.25]	−0.21 [−0.50]	1.19 [1.50]	0.23 [0.46]			8.91 [0.01]	0.02 [0.56]	−0.01 [−0.45]	−0.01 [−0.10]
S_L-GR	−0.10 [−0.01]	2.12 [0.19]			**−9.45* [−2.07]**	−3.63 [−1.29]	0.01 [0.01]	0.94 [0.56]			**−0.28** [−2.58]**	**−0.34** [−2.90]**
S_{NT}-GR	**−41.66** [−2.19]**	**−43.59** [−2.31]**	−6.03 [−1.62]	**−9.04** [−2.27]**			−1.36 [−0.45]	−0.29 [−0.10]	**−0.99** [−2.58]**	**−0.96** [−2.90]**		
Inc.AZN	0.78 [1.24]		**0.46*** [3.30]**		**0.67** [2.257]**		0.06 [0.62]		−0.02 [−1.14]		**−0.01** [−2.07]**	
Inc.USD		0.47 [1.10]		**0.23** [2.17]**		**0.89*** [6.90]**		0.10 [1.56]		**−0.02** [−2.21]**		**−0.01** [−1.83]**
R^2	0.44	0.43	0.56	0.43	0.44	0.80	0.06	0.16	0.28	0.40	0.41	0.38
Adj. R^2	0.31	0.29	0.45	0.30	0.31	0.77	−0.15	−0.03	0.12	0.26	0.27	0.24
Obs.	17	17	17	17	17	17	17	17	17	17	17	17
F-stat.	3.36	3.22	5.40	3.25	3.42	18.37	0.30	0.84	1.72	2.90	2.98	2.66
Prob (F-stat)	0.05	0.05	0.45	0.06	0.04	0.00	0.83	0.49	0.21	0.07	0.07	0.09
$Het._{F\text{-}stat}$	1.04 [0.35]	0.46 [0.65]	0.81 [0.65]	0.16 [0.97]	0.76 [0.47]	1.04 [0.77]	0.74 [0.83]	0.56 [0.58]	1.68 [0.56]	0.72 [0.49]	1.04 [0.35]	1.15 [0.31]
JB_N	0.55 [0.76]	0.62 [0.73]	0.31 [0.86]	0.24 [0.89]	0.22 [0.99]	0.57 [0.75]	0.47 [0.79]	0.34 [0.84]	0.23 [0.89]	0.38 [0.83]	1.57 [0.46]	1.54 [0.46]
LM test	0.77 [0.36]	0.21 [0.79]	1.77 [0.12]	0.77 [0.37]	0.55 [0.50]	1.92 [0.10]	0.51 [0.52]	0.55 [0.49]	0.89 [0.31]	1.13 [0.23]	4.06 [0.03]	1.56 [0.14]

[291] Note: 1) PC denotes percentage change; 2) the bold coefficients emphasize the significant results; 3) the symbols *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively; 4) the numbers in the brackets are the corresponding t-statistics; 5) The left side of the table employs output growth rates such as S_B-PC, S_L-PC, S_{NT}-PC as independent variables; 6) The right side of the table employs employment growth rates as independent variables such as S_B-PC, S_L-PC, S_{NT}-PC; 7) The estimations do not include degrees of freedom adjustment for standard errors and covariance; 8) All numbers were rounded to the second decimal point for compactness; 9) $Het._{F\text{-}stat}$ denotes heteroscedasticity test based on Breusch – Pagan – Godfrey method, JB_N denoted the Jaque – Bera normality test results, and the LM test is the Lagrange Multiplier test for serial correlation. The numbers in the brackets indicate the p-values.

The rate of employment growth in S_L was negatively associated with S_{NT} and vice versa. In addition, like the left side of Table 9, the income of the population had indicators that were only meaningful for S_L and S_{NT}. Although none of the interceptions and percentage changes in the S_B had a significant effect on the growth rates of output and employment, the signs of the coefficients were consistent with the general theoretical framework of the Dutch disease syndrome. Negative intercept coefficients indicate that the ceteris paribus, output and employment growth rates tend to decline over time. S_B output and employment growth rate were inversely associated with S_L and S_{NT}. The resource movement models contain homoscedastic and normally distributed residuals and a single model (number 35) showed a serial correlation.

3.11. SPENDING EFFECT

The effect of spending shown in Table 10 produced significantly higher results than the effect of resource movement. Its R squared values were greater than the resource movement equations. CPI growth rates were positively and significantly associated with MPC, but the difference in significance was greater in the first model in which public spending was tested in billions of USD instead of as a percentage of GDP. It is interesting to note that the output of the S_{NT} was negatively and significantly associated with the CPI. It is argued that the deepest signs of the effect of spending are S_{NT} price levels and the exchange rate. Therefore, the growth rates of the CPI, TCER and NEER were tested for interconnections. No significant results were found between MPC, S_{NT} production, and REER and NEER growth rates. However, the income of the population in USD had a positive and significant impact on the growth rates of the REER and the NEER in the first model. There were significant and negative coefficients for public expenditure relative to the growth rate of REER and NEER.

Table 10. Spending effect rate in Azerbaijan (OLS results).

	Dependent variable					
	CPI-GR		REER-GR		NEER-GR	
Exp.var.	(37)	(38)	(39)	(40)	(41)	(42)
Intercept	−0.23 [−0.27]	−0.40 [−0.24]	−0.01 [−0.01]	0.15 [0.07]	−0.17 [−0.07]	−0.02 [−0.01]
MPC	**0.11***** **[5.13]**	**0.09*** **[2.17]**	0.01 [0.34]	0.04 [0.78]	0.06 [1.02]	0.08 [1.32]
S_{NT} output	**−1.07***** **[−7.61]**	**−1.26***** **[−4.83]**	−0.05 [−0.15]	0.04 [0.11]	−0.18 [−0.45]	−0.07 [−0.17]
Population income in USD	**0.67***** **[4.18]**	**1.35***** **[4.91]**	**1.00**** **[2.49]**	0.50 [1.42]	**1.00**** **[2.18]**	0.48 [1.14]
Gov. spen. – billions USD	**0.48***** **[8.64]**		**−0.32**** **[−2.31]**		**−0.34*** **[−2.17]**	
Gov. spen. – % share of GDP		**0.30**** **[2.91]**		**−0.34**** **[−2.61]**		**−0.31*** **[−1.96]**
R^2	0.91	0.67	0.63	0.65	0.51	0.49
Adj. R^2	0.88	0.56	0.51	0.54	0.35	0.32
Obs.	17	17	17	17	17	17

Continues,[292]

	Dependent variable					
	CPI-GR		REER-GR		NEER-GR	
Exp.var.	(37)	(38)	(39)	(40)	(41)	(42)
F-stat.	30.0	6.18	5.16	5.70	3.11	2.87
Prob(F-stat)	0.00	0.01	0.01	0.01	0.06	0.07
$Het._{F\text{-}stat}$	0.41 [0.82]	0.27 [0.98]	0.35 [0.97]	0.56 [0.94]	0.29 [0.97]	0.47 [0.68]
JB_N	3.24 [0.20]	1.23 [0.54]	1.57 [0.45]	1.47 [0.48]	3.31 [0.19]	2.26 [0.32]
LM test	1.03 [0.23]	1.23 [0.17]	1.70 [0.10]	2.86 [0.04]	2.33 [0.06]	2.55 [0.05]

[292] Note: 1) the bold coefficients emphasize the significant results; 2) the symbols *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively; 3) the numbers in the brackets are the corresponding t-statistics; 4) MPC is marginal propensity to consume; 5) S_{NT} means non-tradable sectors; 6) the estimations do not include degrees of freedom adjustment for standard errors and covariance; and 7) the numbers were rounded to the second decimal point to be compact; 8) $Het._{F\text{-}stat}$ denotes heteroscedasticity test based on Breusch – Pagan – Godfrey method, JBN denoted the Jaque – Bera normality test results, and the LM test is the Lagrange Multiplier test for serial correlation. The numbers in the brackets indicate the *p*-values.

IV. ECONOMIC DIVERSIFICATION IN AZERBAIJAN

The rise of intra-industry trade flows and the expansion of multinational corporations have greatly impacted the production structure of economies at the global scale. In other words, regional and global integration trends have affected the production nature of emerging economies. In this sense the growing number of countries participating in regional and global trade agreements, which led to lower import tariffs and reduce logistics costs are particularly relevant. Doing so not only helps to reset trade and industrial policies, but also helps to build contemporary measures to capture the competitive advantage. Since oil and gas are non-renewable resources, diversification is a must for energy-dependent countries to ensure their economic stability. For instance, many of these countries, such as the United Arab Emirates, Norway, and the Netherlands, have successfully diversified their economies.

The economy of Azerbaijan has experienced a significant economic growth during last two decades due to its abundant energy resources. Similarly, as a resource abundant emerging economy Azerbaijan has been at the interest of local and foreign investors regarding energy sector. While, the government currently has directed its focus on non-oil sector and aimed to double its economy by the end of this decade through relying on this sector. Moreover, accelerating growth of non-oil sector are among the five priorities of the government outlined in *"2030 Strategy"*.[293]

4.1. THE PATTERNS DIVERSIFICATION

Azerbaijan has implemented several projects to develop different areas of economy and reduce dependency of economy on natural resources' price volatility. In 2016, the government took various measures to boost the country's economy following the double devaluation of the manat. These included the establishment of 11 comprehensive development strategies of non-oil sector. Therefore, "Strategic Road maps for the national economy and the main sectors of the economy" was adopted to develop different structures of the economy with the implementation of strategic

[293] "2030 Strategy" implemented in accordance with the United Nations' "Transforming our World: The 2030 Agenda for Sustainable Development".

roadmaps for promising sectors of the economy with efficient use of available resources in the country.

It should be mentioned that Azerbaijan has sufficient natural and economic resources to diversify the national economy, including expanding oil and gas processing, it is possible to increase the volume of non-oil products significantly. Prior to the establishment of the non-oil industry, many industries such as chemical and petrochemistry, were regarded as traditional. Due to the establishment of above-mentioned industries, the government is developing various high-tech parks, industrial parks and free economic zone. Moreover, the government's support for the non-oil industry is focused on developing the country's infrastructure and technical capabilities. For instance, in the city of Sumgait, over 25 residents have made long-term investments in a chemical industrial park to establish and expand competitive industrial enterprises of the processing cycle.

The non-oil industry's increasing presence in universities and research organizations is contributing to the development of innovative solutions that can enhance the productivity of non-oil sectors. Furthermore, non-oil sectors' development will allow the country to create new products and services that can be easily accessed by global markets. Azerbaijan's government believes that the country's economic diversification based on innovation can help to ensure sustainable growth. The acceleration of various non-oil sectors' innovation processes creates a more favorable environment for the development of entrepreneurial activities. Perhaps sustainable growth requires the involvement of various business activities and intellectual resources.

The non-oil sector's efficiency and diversification should be ensured through a balanced state policy that tackles various economic processes. As to, O. Brendan (2016), "the state can effectively influence the activation of existing resources for the expansion of business activities through the use of various support mechanisms, including financial preferences".[294] In other words, through implementing strategic development programs, the government is able to adopt sufficient measures to deepen economic reforms in the country and increase the efficiency of cooperation *"state-business sector-business environment"*.

[294] O. Brendan, H. Terence, H. David, L. Patrick, (2016) Searching for the Inclusive Growth Tax Grail: The Distributional Impact of Growth Enhancing Tax Reform in Ireland, *The Economic and Social Review* Vol. 47 Iss. 1, pp. 155-184.

According to the findings of T. Gerard (2015), "the development of promising sectors of the country's economy through active cooperation of business entities and government agencies will create a stronger foundation for the national economy and ensure its immunity to counteract external factors, including global impacts".[295] To be more precise, the government should regularly evaluate the various advantages and disadvantages of various economic development projects to ensure that they are beneficial eliminating the existing severe problems and shortcomings that slow down the pace of economic development. Approaching to the case of Azerbaijan through above-mentioned views, in order to reduce the dependency of the economy on oil and gas factors, it requires substantial development in non-oil sectors, such as services, production, and agriculture.

4.2. RECENT TRENDS TOWARD DIVERSIFICATION

Outbreak of coronavirus pandemic over the world, resulted in sharp decline in oil price. Oil dependent economies were mostly affected by the crisis. On the other hand, Covid-19 impacted supply-chain significantly, which caused disruption in allocation of resources globally. Oil dependent economies with less developed sectors were left with low credibility to response the challenges. In this regard, resource rich countries of Commonwealth of Independent States and Gulf states mainly provided stimulus packages to increase the maneuverability of the economy to tackle the crisis. Therefore, it is the government's obligation to provide a diversified and package of fiscal stimulus to boost the economy.

Although most countries have started implementing fiscal and monetary stimulus measures, they are not expected to have a significant impact on the recovery. In this case, the US and Europe's stimulus packages are being applied to counter the effects of the global financial crisis caused by the outbreak of the COVID-19 virus. In contrast, the oil-producing countries of the CIS are expected to experience a drop in output due to the stimulus packages. This type of economic collapse will mean that the stimulus is likely to have the effect that most oil-rich countries seem to be expecting. Although the stimulus packages are intended to help cushion the effects of the global economic recession, they should be implemented in a way that will stimulate the economy and

[295] T. Gerard, F. Darragh, Mc. Stephen, A Needs and Resources Assessment of Fiscal Equalization in the Irish Local Government System, The Economic and Social Review Vol. 46 Iss. 3, pp. 459-484.

provide long-term stability. The low demand arising from cheap oil prices and social isolation caused by coronavirus pandemic does not rule out impacts on Azerbaijan economy. As President Ilham Aliyev provided in his statement of (2020) “life is proving that we must work and live as if we were living in a post-oil era, explaining that now that the price of oil is $21-22, this is actually a post-era period for us”. The oil-producing countries of the region have developed various strategies to promote their social and economic positions. However, these plans are not yet clear on how they will affect the country's sustainable development, particularly in developed-developing partnerships.

In the case of Azerbaijan, the main strategies toward diversification started with 2014-2016 oil price fluctuation, which resulted in devaluation of the national currency twice. Since that, the government has adopted strategic roadmap for the further development of non-oil sectors. In this regard several programs have already been established. Developing the non-oil sector and diversify the economy, a strategic program of Azerbaijan has been prepared and implemented. The main goal of the 3-stage map is to develop metallurgy, mechanical engineering, chemistry, production of construction materials, food and other areas. Entrepreneurship development has been declared as a priority in this strategic map.

In order to develop the industry, the year of 2014 was declared the *“Year of Industry”* in Azerbaijan, and the “State Program for the Development of Industry in the Republic of Azerbaijan for 2015-2020” was adopted. Moreover, establishment of industrial parks ensures sustainable development of the economy, including the non-oil sector. Sumgait Technology park and Sumgait Chemical Industrial park can be shown as a great example. Newly, Garadagh, Mingachevir, Pirallahi, Balakhani industrial parks and Masalli, Neftchala and Hajigabul industrial districts are established and functional.

Most recently, the foundation of the first industrial park was laid in the newly liberated territories. This park will be created in Aghdam and will be divided into food processing, small and service industries, large industrial enterprises and more. In the other hand, if is key for diversification of economy to achieve the development of private entrepreneurship in the regions and to eliminate the sharp gap in the level of development of the regions and big cities. In this regard development in agriculture is crucial. The availability of good conditions for the production of fruits and vegetables in the country, especially cotton, grapes and tobacco and also tourist

facilities increase the development potential. Therefore, several state programs have been adopted. In accordance with the programs, state support measures for the agricultural sector in the regions are being strengthened.

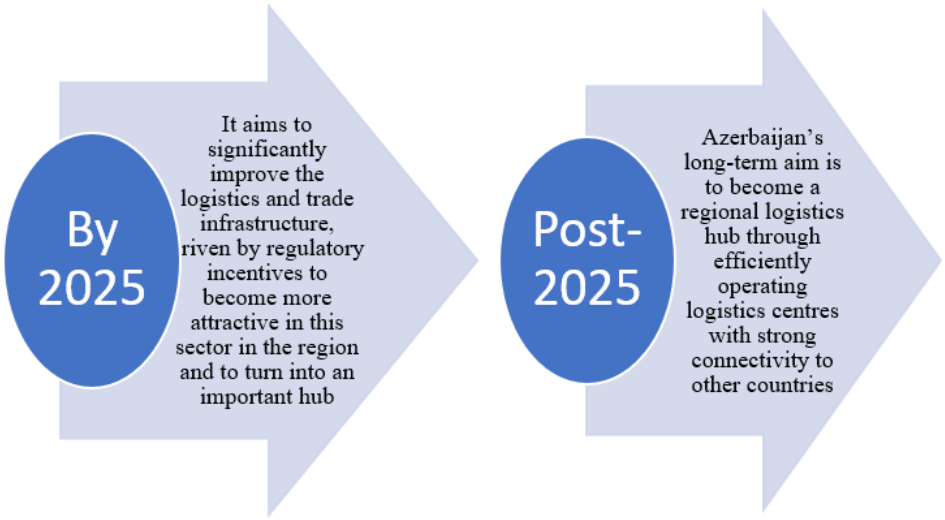
4.3. CHALLENGES OF ECONOMIC DIVERSIFICATION IN AZERBAIJAN

When oil prices collapsed in 2014, it exposed Azerbaijan's vulnerability due to its dependence on oil revenues. Despite this, the country's real GDP grew by 1.4 percent in 2018.[296] The hydrocarbons sector's growth rate of 1.1 percent was mainly attributed to higher natural gas export revenues.[297] Moreover, as the country continues to improve its investment climate, it needs to improve its public investment management system. The prolonged decline in oil prices can affect the revenues of these countries and equally the development of their non-oil sectors. Therefore, a price-fluctuations affect the whole diversification process. Furthermore, as part of its efforts to become a leading player in the region and avoid the possible disruption of crises, Azerbaijan has started to invest in its infrastructure in the 2000s. Nevertheless, recent windfall from oil, gas and financial resources have allowed it to expand its trade and logistics capabilities. Azerbaijan's strategic vision in logistics and trade is to achieve the creation of added value for regional transit freight.

[296] A.S. Shakaraliyev, Z.A. Shakaraliyeva, Socio economic problems of the non-oil sector in current condition, 37th International Scientific Conference on Economic and Social Development -Socioeconomic Problems of Sustainable Development, 2019, pp. 651-656.

[297] A.J. Muradov, Y.H. Hasanli, N.O. Hajiyev, The assessment of the impact of competitiveness on economic development, International Scientific Conference on Economic and Social Development, 2019, pp. 1171-1178, Baku, Azerbaijan.

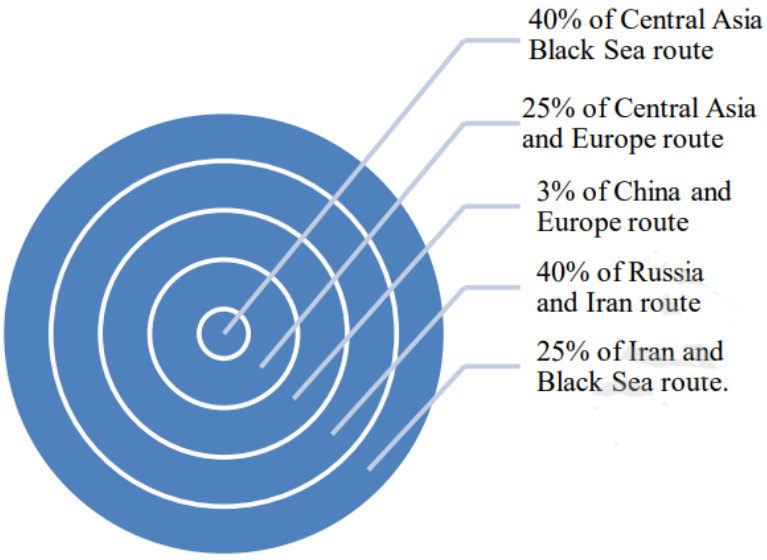
Figure 17. Strategic vision on logistic and trade (Azerbaijan)



Source: EU4Bussiness

By establishing a series of logistics centers in the country, Azerbaijan aims to increase its share of transit trade in the region, to achieve the targets indicated below.

Figure 18. Trade facilitation and logistics development strategy (Azerbaijan)



Source: EU4Bussiness

In order to realize its potential, the region's infrastructure needs to be improved. This is what prompted Azerbaijan to join the CAREC Program in 2003. Through the program, Azerbaijan was able to improve its transportation and trade logistics infrastructure. This will help the country realize its full potential as global markets become more integrated. Energy-rich countries that started diversifying their economies during the last two decades will have to step up their efforts in order to maintain their progress. Most of the projects that were started during the past decade were long-term and cannot generate additional revenue or jobs. Doing so could make the implementation harder in the current economic climate.

CONCLUSION

The thesis aimed to observer the resource curse in the economy of Azerbaijan and outline the symptoms of the Dutch disease. This research followed the original theories of the subject matter introduced by Corden and Neary (1982) and Corden (1984). In order to clarify the issue, the statistical analysis of collected data from various sources, such as, the SSCRA, the SOFAZ, the World Bank and others has been undertaken. As to the statistics, there is a significant dependency in the natural resource extraction industry in Azerbaijan. Therefore, the economy of Azerbaijan recorded high growth rate during favorable commodity prices, though decreased macroeconomic credibility after the super cycle ends.

The so called "oil boom period" brought huge amounts of cash flow to the economy and it led to the appreciation of the national currency, eventually reduced the competitiveness of the manufacturing sector. In real terms, the dependency of other sectors on the government expenditure increased, which refers to the first symptom of "Dutch disease". On the other hand, the real wages appreciation in mining sector, while the development of manufacturing decreased, which points to the second symptom of the Dutch disease. Indeed, in short term employment rates did not decrease in manufacturing and agriculture sectors, in cumulative terms the worst performance was recorded in the manufacturing sector. This situation emerges due to the large and unmonitored government expenditure funded from the budget of SOFAZ. Furthermore, all of the indicators lead to the last sign of the Dutch disease, which is fundamental decrease in non-oil production.

The third stage of this research investigated resource movement and spending effect of Dutch disease model in Azerbaijan using multivariate linear OLS regressions. In terms of the effect of resource movement, a negative association between S_L and S_{NT} employment growth rates could indicate indirect deindustrialization. Moreover, the income of the population calculated in USD, which also includes the effects of devaluation, indicated a negative and significant relationship with the rate in S_L and S_{NT}. Against the background of falling commodity prices, declining oil exports, and declining income of the population, the negative links between S_L and S_{NT} indicate the presence of resource movement effects, but the absence of such an inverse relationship with the presence of the resource movement effect. Overall, such research is essential to produce useful

policy adjustments and economic diversification. Otherwise, after the depletion of oil, the depletion of savings, and the drop in oil production, low volatility in commodity markets can undermine macroeconomic stability and lead to deep economic recession.

Finally, the economy of Azerbaijan is highly resource dependent. Considering the fact that economic growth skyrocketed during the period of favorable commodity prices, while the economic performance decreased in the opposite scenario. The oil boom period resulted in a increased cash inflow the country. Therefore, the national currency appreciated, foreign direct investment to non-oil sector and competitiveness of manufacturing decreased while the sectors benefited from the state expenditure and investment illustrated growth which points to the first symptom of Dutch disease. The second symptom of the Dutch disease is that the performance of the manufacturing sector has declined in cumulative terms, despite the fact that wages have appreciated in mining. Nevertheless, considering the current situation of the global economy and emerging trends such as energy transition in global scale, makes the economic diversification phenomenon urgently important for natural resource dependent countries. In order to achieve long term sustainable economic development a diversified economy is vital more than ever.

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