Resource Curse and Dutch Disease in Azerbaijan: Empirical Analysis

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ABSTRACT

Resource curse theory studies negative effects of natural resource abundance on different sectors of countries such as economy, politics and social life. According to theory, countries with resource abundance develop less than the resource deficit ones. This problem also affects the political life of countries by decreasing institutional quality, increasing corruption and strengthening authority. Decreasing number of school enrolments and hospitals, low wages in education and health sectors are signs of resource curse problem in social life.

Dutch disease model is a separate from resource curse theory. Real exchange rate appreciation and decline in non-abundant sectors are main indicators of Dutch disease problem. Most times it is investigated as an economic symptom of resource curse theory.

Azerbaijan is one of the natural resource rich countries of former Soviet Union. After regaining its independence, this country enlarged the relations with international community in all fields. Economic integration was also important for this newly independent state. Natural resources, especially oil and natural gas played an active role in this process. Because of this, research papers studying different fields in Azerbaijan increased sharply. It is not surprising that resource curse and Dutch disease theories were more on center of attention in these studies. Different sides of resource curse theory had been researched for case of Azerbaijan during past years. However, there is not any paper investigating resource curse theory completely for

sample of Azerbaijan. Hence, the aim of this thesis is to investigate the resource curse problem with economic, political and social sides.

The main question of thesis is to determine whether Azerbaijan suffers from resource curse and Dutch disease or not. In other words to find, does oil have negative or positive effect on countrie's economy, politics and social life?!

For studying Dutch disease problem firstly, different tests such as unit root test, causality test, cointegration test, Impulse Response Function, Variance Decomposition are conducted. Then Vector Error Correction model is applied. For supporting previous results two regression models are also used. Then, separately political and social sides of theory have been investigated by using number of linear regression models.

According to estimation results, it can be concluded that oil does not create resource curse and Dutch disease in Azerbaijan economy. Also, it became clear that crude oil export is playing an active role in government efficiency increase and development in social sector.

Keywords: Resource curse, Dutch disease, VAR model, linear regression model, economic development, institutional quality, social life

ÖZ

Kaynak laneti teorisi kaynak zenginliğinin ülkelerin ekonomik, siyasi ve sosyal alanları gibi farklı sektörlerine negativ etkisini araştırıyor.Teoriye göre kaynak zengini ülkeler kaynak yoksulu ülkelere oranla daha az gelişiyor. Bu problem aynı zamanda, yönetim kalitesini düşürmekle, yolsuzluğu artırmakla ve otokrasiyi güçlendirmekle ülkenin siyasi hayatını da etkiliyor. Azalan okul ve hastahane sayısı, aynı zamanda eğitim ve sağlık alanlarında daha düşük maaşlar kaynak lanetinin sosyal alanda en önemli göstergeleridir.

Hollanda hastalığı modeli kaynak laneti teorisinden ayrıdır. Real para biriminin değerlenmesi ve gayri – zengin sektörlerde gerileme Hollanda hastalığının önemli indikatörleridir. Çoğu zaman bu kaynak lanetinin ekonomik etkilerinden biri olarak araştırılır.

Azerbaycan eski Sovyetler Birliğinin kaynak zengini ülkelerinden biridir. Bağımsızlığını kazandıktan sonra bu ülke uluslararası toplumla tüm alanlarda ilişkilerini genişletdi. Ekonomik entegrasyon da yeni bağımsız ülke için önemliydi. Doğan kaynaklar, özellikle petrol ve doğal gaz bu süreçte önemli role sahip oldular. Bu sebeptende Azerbaycanın farklı alanları ile ilgili araştırmaların sayı aniden artmağa başladı. Sürpriz değil ki, kaynak laneti ve Hollanda hastalığı teorileri daha çok dikkat merkezindeydi. Geçmiş yıllar boyunca Azerbaycan örneğinde kaynak lanetinin ayrı – ayrı tarafları araştırıldı. Ama, Azerbaycan için teoriyi bütün olarak ele alan bir araştırma yoktur. Bunun için bu tezin maksadı kaynak lanetini ekonomik, siyasi ve sosyal tarafları ile araştırmakdır.

Tezin ana sorusu Azerbaycanda kaynak laneti ve Hollanda hastalığının olup - olmadığını belirlemektir. Başka deyişle petrolun ülke ekonomisi, siyaseti ve sosyal hayatına negative ve ya pozitif etkisi olduğunu bulmaktır.

Hollanda hastalığını araştırmak için öncelikle birim kök test, nedensellik testi, koentegrasyon testi, İmpulse Response Fonksyonu, Varyans Dekompozisyon gibi farklı testler kullanıldı. Sonra, Vektor Regresyon model uygulandı. Önceki sonuçları desteklemek için iki regresyon model de kullanıldı. Teorinin siyasi ve sosyal tarafları bir kaç tane çizgisel regresyon model kullanılmakla araştırıldı.

Sonuçlara göre , petrol Azerbaycan ekonomisinde kaynak laneti ve Hollanda hastalığı yaratmıyor. Ayrıca belli oldu ki, ham petrol ihracatı yönetim kalitesinin artmasında ve sosyal sektörün gelişmesinde önemli role sahip.

Anahtar sözler: Kaynak laneti, Hollanda hastalığı, VAR model, çizgisel regresyon modeli, ekonomik gelişim, yönetim kalitesi, sosyal hayat

To my family

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ACG	Azeri – Chirag – Guneshli
ADF	Augmented Dickey Fuller
ADB	Asian Development Bank
AR	Azerbaijan Republic
AZN	Azerbaijan Manat
BET	Baku – Erzurum - Tbilisi
BP	British Petroleum
BTC	Baku – Tbilisi - Ceyhan
CBAR	Central Bank of Azerbaijan Republic
DHS	Democraphics Health Surveys
EBRD	European Bank for Reconstruction and Development
EIA	Energy Information Agency
EU	European Union
FDI	Foreign Direct Investment
GCT	Granger Causality Test
GDP	Gross Domestic Product
HIT	Health Systems in Transition

IEA	International Energy Agency
IMF	International Monetary Fund
IRF	Impulse Response Function
JCT	Johansen Cointegration Test
KGB	Komitet gosudarstvennoy bezopasnosti
LR	Long Run
LRM	Linear Regression Model
MEDAR	Ministry of Economic Development of Azerbaijan Republic
MFAR	Ministry of Finance of Azerbaijan Republic
MM	Milli Majlis
NATO	The North Atlantic Treaty Organization
NGO	Non – Govermental – Organizations
OLS	Ordinary Least Squares
OPEC	Organization of the Petroleum Exporting Countries
PCT	Pedroni Cointegration Test
PP	Philips - Perron
RER	Real Exchange Rate
RGDP	Real Gross Domestic Product
SCP	State Committee on Privatization

SDR	Special Drawing Rights
SOCAR	State Oil Company of Azerbaijan Republic
SOFAZ	State Oil Fund of Azerbaijan Republic
SPSDR	State Program on Social – Economic Development of Regions
SR	Short Run
SSCAR	State Statistics Committee of Azerbaijan Republic
UN	United Nations
USA	United States of America
USSR	The Union of Soviet Socialist Republics
VAR	Vector Autoregressive Model
VD	Variance Decomposition
VECM	Vector Error Correction Model
WB	World Bank
WHO	World Health Organization

Chapter 1

INTRODUCTION

Resource curse theory studies the negative effects of natural resource abundance on economy, politics and social sectors of resource abundant countries. According to this theory abundance of natural resources may impede the development of country by economic channels and can create curse rather than blessing. As a result, countries those have rich natural resources show lower economic performance than the ones that do not have. In the first period of investigating the theory economists believed that resource curse impacts only the economic life of countries. Some years later scholars such as Newberry, Auty, Sachs and Warner determined that abundance of natural resources does not only influence the economic, but also political and social sectors of country. The main signs of resource curse in political life are government inefficiency, high level of corruption, non-transparency, pressure over free media and etc. The decreasing level of school enrollments and hospitals, low wages in education and health sectors can be noted as indicators of resource curse in social life.

Dutch disease theory which is accepted as one of the economic symptoms of resource curse theory is related with exploitation of natural resources. “Dutch disease” term was first used by the journal “Economist” in 1977. This model was established after the gas extraction in Groningen in Netherlands. The new found gas reserves caused the Dutch currency to appreciate and after some years it leads to

decline in manufacturing sector. 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. After some time W. Max Corden and J. Peter Neary developed this theory and it was investigated as one of the economic symptoms of resource curse theory. According to the Dutch disease theory the main signs of this problem show itself in appreciation of real exchange rate and decline in manufacturing and agriculture sectors after sudden revenue inflows caused by exploitation of natural resources.

The main idea of this thesis is to determine whether Azerbaijan suffers from resource curse and Dutch disease. It is known that as a post-Soviet country Azerbaijan regained its independence in 1991. After this, it began to integrate to international community. The abundance of natural resources, especially oil and natural gas, available geographical position and interesting historical background made it one of the most important states of former Soviet Union and scholars from different countries started to be interested in Azerbaijan more closely. At the beginning oil sector and its impact on economy was more on focus, but then, political features of this country also became subject of interest. Former Soviet ruling method, Turkish nationality, Islamic religion and also living under the centralized communist political system made Azerbaijan more appropriate for different studies.

After signing Baku – Tbilisi – Ceyhan oil pipeline which is called as “Contract of century” Azerbaijan came to the center of attention of international community and researchers. This fact also influenced the researches about oil sector of country. Many scholars from different countries investigated various aspects of oil production and its impact on economy, politics and social lives of Azerbaijan. After the oil

boom at the beginning of 2000's number of research papers in this term sharply increased. During this period different models and methods were applied for investigating resource curse and Dutch disease issues in Azerbaijan by foreign and local researchers. In papers scholars concentrated on different points of theory separately where mostly economic and political sides were studied. However, there are not much research papers investigating impact of abundance of natural resources on social life of Azerbaijan. One other problem is that there is not any paper researched resource curse problem completely for case of Azerbaijan.

The main purpose of this thesis is to investigate resource curse theory with all three aspects for Azerbaijan and determine whether the country suffers from resource curse or not. For this purpose my research consists of three parts such as studying impact of oil on economic, political and social sectors of country. First, the influence of resource abundance on economy is investigated by Dutch Disease theory using Vector Autoregression Model (VAR) and two linear regression models. In this section Pairwise Granger Causality Test, Johansen Cointegration Test, Vector Error Correction Model, Impulse Response Function and Variance Decomposition are conducted. Then, for estimating impact of natural resource on political life of Azerbaijan three different linear regression models are used. Finally, three regressions for investigating impact of resource abundance on education sector and two models for impact of resource abundance on health system of Azerbaijan are applied.

The structure of my thesis is set as following:

Chapter 2 presents brief information about origin and development history of resource curse and Dutch disease theories. For explaining the source of thoughts about resource curse chronologically it began from middle ages and showed the way of forming of resource curse theory with different stages. Scholars in the history of theory and their findings are presented. Also development process of Dutch disease is shown. The main signs of resource curse and Dutch disease, impacts on economic, political and social sectors are introduced one by one.

In chapter 3 the previous research papers and studies about resource curse and Dutch disease for case of Azerbaijan are presented. For this purpose the papers are grouped into three parts. In first part, papers researched economic impacts of resource curse are shown. Second part is a collection of papers investigating political aspects of resource abundance and its effects on Azerbaijan's political life. Third group gives examples of research papers spoke about influence of oil export on social sector of country.

Chapter 4 summarizes the economic and political situation for a period between 1991 to nowadays. This chapter also consists of three parts. In the first part called "Recession period: 1991-1994" it is spoken about situation in political and economic sectors occurring after the declaration of independence. Second part which is named as "Recovery period: 1995-2005" talk about reviving of economy and stabilization of political situation in Azerbaijan. In third part named "Boom and slump period: 2005 to present time" oil booms and its impact on different fields are on focus. Also reforms in both economic and political sectors are explained chronologically.

Data and methodology issues are described in chapter 5. In this chapter first, sources and descriptions of data are shown. Then model variables, their means and other issues related with it are introduced. In “Empirical model” subsection all applied tests and methods in this thesis are presented. Also empirical models for Dutch disease are explained. Chapter 6 is about results and their interpretations. Conclusion and policy recommendations are given in chapter 7.

Chapter 2

RESOURCE CURSE AND DUTCH DISEASE THEORIES

2.1 The origin and development of resource curse and Dutch Disease theories

In one of his speeches in 1970s, Juan Pablo Perez Alfonso,Venezuelan politician and one of the founders of OPEC (Organization of Petroleum Exporting Countries) stated that: “Ten years from now , twenty years from now , you will see: Oil will bring us ruin… Oil is devil’s excrement”. At that time many people did not pay attention to him. But after some time history showed that his words may be true, that is: not only oil, but all other natural resources can bring unhappiness and ruin. His words can be accepted as the essence of resource curse theory.

Resource curse theory was introduced as a theory by Richard Auty in 1993, but the history of first thoughts about the problem goes to middle ages. In XIV century Arabian philosopher Ibn Khaldun identified five stages of state. He named squandering and waste as the fifth stage of state power after success in overthrowing the rivals for capturing authority, control over people, tranquility and leisure, peacefulness and contentment. According to him in this 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.

(Khaldun, 1967, pp 353-355).

Many economists accept this fact as the first idea about resource abundance problem. French philosopher Jena Boden continued investigations in 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" (Bodin, p 565, 1576). After Bodin some other economists and philosophers tried to explain the role of natural resource abundance on state's life.

The issue of natural resource abundance became popular again after II World War. In 1950s famous economists Prebisch and Singer stated that raw materials can impede the economic growth. According to them high percentage of natural resources in exports damage the economy of developing countries. In other words, if the share of natural resources is larger in export it can create problems for economy (Rosser, 2006, p 7). During these years many economists presented different ideas about the influence of natural resources and the relationship between resource abundance and economic growth, also its impact on other sectors and foreign direct investment.

After 1980's discussion of problem came to a new stage. Scholars began to study the problem empirically in the sample of different countries. For example, Gobind N. Nankani found that from 1960 to 1976 growth rate of developing hard-rock exporters was two times less than non-abundant countries (Nankani, 1980, p 8). In another study Wheeler took thirty sub-African countries with plenty of natural resources and found inverse relationship between export of natural resources and economic growth (Wheeler, 1984, pp 1-23).

Newberry is the first scholar who argued that the main reason of lower growth in resource abundant countries is not economic, but political issues (Newberry, p 334, 1986). It can be accepted as the beginning of investigating political aspects of resource abundance.

In 1988 Alan Gelb redefined the natural resource abundance problem by different theories. He stated that relationship between abundance of natural resources and economic development can be discussed by the theories such as "The Neoclassicial and Related Growth Theory", "Export Instability Theory" , "The Linkage Theory" and "Booming Sector and Dutch Theory" (Gelb 1988, pp 14-29).

Richard Auty is the first scholar who used the "Resource curse" term in his book and presented it as theory in1993. He wrote: "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 acquires more and more skills, those skills are deployed with increasing effectiveness to counteract any resource deficiency" (Auty, 1993, p 1,). Auty compared different resource abundant countries with non-abundant states and indicate that non-resource countries in this case catch high economic growth than resource abundant countries (Auty, 1993, p3). He also pointed that resource abundance affects the economy negatively not only in the early, but also in the middle stages. Auty offered two ways for supporting his outcomes. First is investigation of government participation in economic growth, second is admission of neoliberal policies.

The studies of Auty stimulated the other scholars to investigate resource curse problem and its different aspects. After this period economists studied not only economic, but also political sides of theory. For example in 1996 Lane and Tornell empirically proved that in resource abundant countries authorities are more rent-seeking than resource scarce countries. They argued that natural resources play the main role in this context (Lane and Tornell, 1996, pp 213-241).

J.D.Sachs and A.M.Warner also played an active role in investigation of resource curse theory. They presented political factors and Dutch disease as the reasons of resource curse. Oppositely from some other economists the argued that, raw materials' prices do not create curse. (Sachs and Warner, 1997, p 21).

"Dutch disease" term was first used by the journal "Economist" in 1977, but, actually its history is older (The Economist, 1977, pp. 82-83). In 1959 huge number of gas reserves was discovered in Groningen in Netherlands. After this event Dutch currency began to appreciate sharply and during 10 – 15 years most of the Dutch industries collapsed or lost their competitiveness in international markets. Afterwards such an experience showed itself in different countries and due to first incidence it is commonly called "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 this cause 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. According to Corden and Neary high level of extraction of natural resources cause the demand for

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

Same year Corden and Neary presented the paper named “Booming sector and de-industrialization in a small open economy” and this article established the Dutch disease theory (Corden and Neary, 1982, pp 825-848). After them in 1984 Van Wijnbergen studied another important issue related with Dutch disease, inflation and employment with Philips curve (Wijnbergen, 1984, pp 41-55). Furthermore, in 1985 economist Edwards studied the link between inflation, money supply and spending effect during boom (Edwards, 1985, p 7).

1990’s is a new stage in studying Dutch disease. It is a period that scholars mostly began to investigate Dutch disease problem empirically. One of the first pioneers in this term is Mohsen Fardmanesh. In 1991 he made a research on resource abundant countries such as Nigeria, Algeria, Ecuador, Venezuela and Indonesia using annual data from 1966 to 1986 and found that Dutch disease causes non-abundant sector output to decline (Fardmanesh, 1991, p 711-717). His another outcome is that there is inconsistency between world oil prices and Dutch disease symptoms , means that oil prices can not be accepted as a cause of Dutch disease.

Richard Auty is not famous with researches in resource curse theory. He also investigated different aspects of Dutch disease theory. In 1994 he stated that booms in natural resource extraction are one of the main causes of weakened government support for protecting non-resource sectors. According to him, boom in resource abundant sectors compel the governments focus on these sectors and spend all of their infrastructure for development of booming sectors. As a result, non – resource

sectors such as manufacturing and agriculture decline (Auty, 1994, pp 11-26). In 2000s Auty continued his studies and found different consequences of Dutch disease.

Sachs and Warner are other two famous names in history of Dutch disease theory. In 1997 they stated that Dutch Disease is one of the serious problems caused by natural resource abundance. Sachs and Warner argued that increase in domestic spending results with increase in prices and in this case price of non-tradable goods will raise more. Another outcome of Sachs and Warner indicates that decline in manufacturing sector will be harmless in the case of a neo-classical competitive market (Sachs and Warner, 1997, 1999, 2001).

After 2000s scholars began to study Dutch disease model with different aspects. The number of case studies increased during the last 10-15 years. Within this period Olumuyiwa and Olin, Moene, Gylfason, Subramanian, Sala-i-Martin, Herbertsson and others investigated Dutch Disease problems for countries such as Norway, Iran, Iceland, Nigeria, Mexico, Bolivia and etc.

After the second half of 2000s studies concentrated on overcoming and reducing ways of Dutch disease more intensively. For example, Rosser indicated that governments must follow policies such as controlling inflation, risk-free management, avoid of taking more foreign debt and etc (Rosser, 2006, pp 554-567).

The resource curse and Dutch disease theories are still on focus. During the last 20 years borders of investigations are enlarged to find new factors related with these theories. Now, new findings, different outcomes for the case of different countries and researches investigating various aspects of theories give us the opportunity to

conclude that resource curse and Dutch disease theories are very “far” from their origin.

2.2 Definition, causes, signs and effects of resource curse and Dutch disease theories

As it is mentioned above resource curse and Dutch disease theories are mostly investigated separately, but it must always be kept in mind that Dutch disease is one of the main symptoms of resource curse. The other common characteristic of resource curse and Dutch disease is that, both of them show themselves in resource abundant countries.

The experience of natural resource abundant countries indicates that such countries sometimes face low economic growth rather than high level growth. This can be explained by economic and political reasons. It is clear that in resource abundant countries natural resources bring high revenues to country and governments concentrate on this sector. As a result, countries face with following circumstances:

1. In resource abundant countries the main export products are natural resources
2. Economic growth is lower than resource deficit countries
3. There are serious problems with social welfare. Especially education and health systems are less developed.
4. These group of countries face income inequality
5. In many cases centralized political systems are characteristic for natural resource countries.

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

From the beginning of investigations many scholars tried to explain the main causes of resource curse in different ways. As a result, we can show some common and crucial factors generating the curse. In case of existence of natural resource, most of the countries face with governmental instability, military interventions on political life, also poor management of natural resource revenues, low economic growth shows itself. Rigobon and Hausmann state that uncertainty over resource revenues leads to sharp struggle and it prevents the economic growth (Hausmann and Rigobon, 2002, p 7).

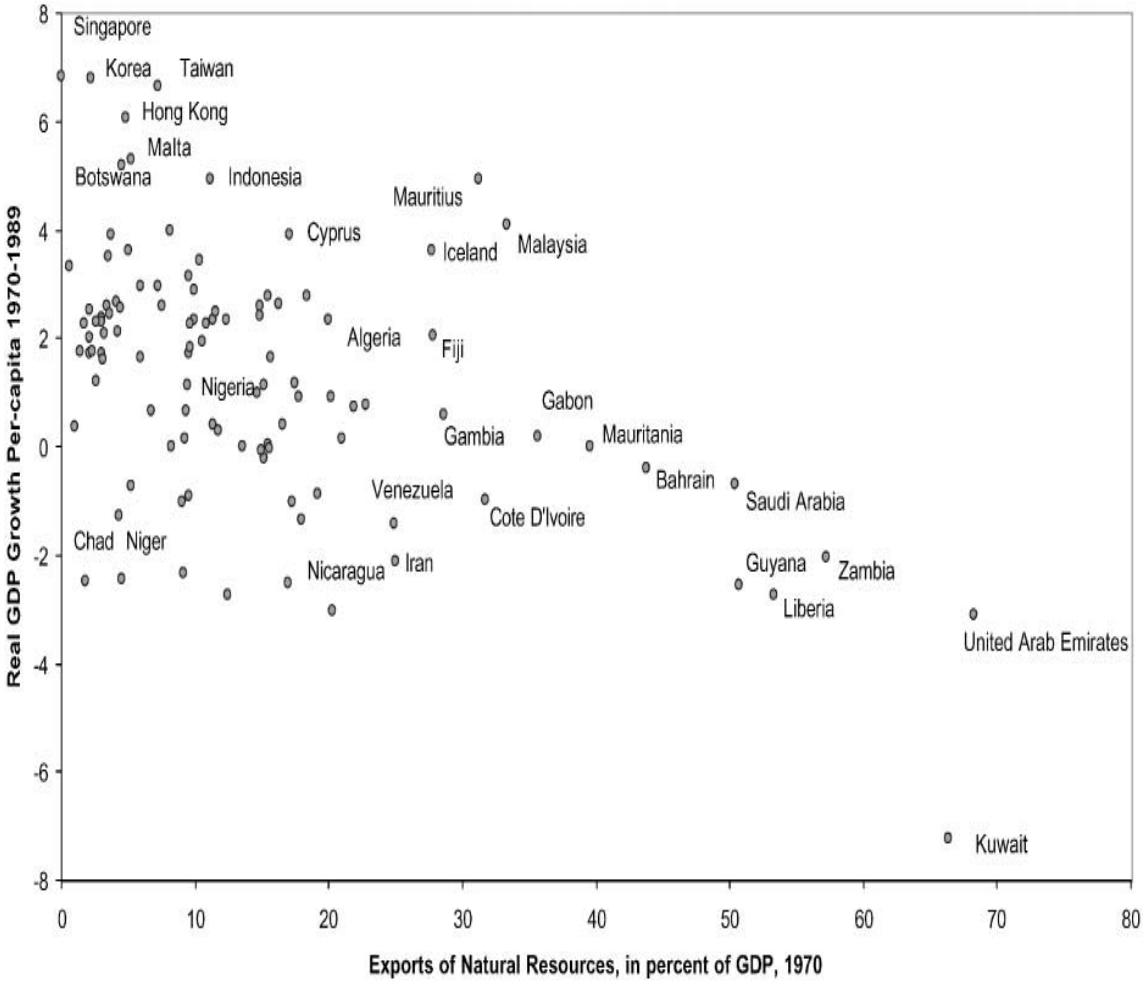
The second explanation for resource curse is resource revenues. Some group of economists indicates that volatility of natural resource revenues and economic growth are negatively correlated. It is known that because of natural resource prices natural resource revenues are volatile and it complicates the decision making about future steps in terms of economic growth.

Volatility is not negatively correlated with economic growth only, but also with investment. According to different economic theories free markets are not perfect and that is why volatility of natural resource revenues creates high cost for capital and this causes to lower social welfare.

The third and important economic explanation of resource curse is Dutch disease problem. We will emphasize on it more.

In 2001 J.D.Sachs and A.M.Warner empiricially showed the relationship between natural resources and economic development (pp 827 – 838, 2001). They also compared the resource abundant and resource deficit countries. The main purpose of this study was to show that resource abundant countries have lower economic growth compare with countries which have not resource abundance. As a sample they took resource abundant and resource deficit countries from different parts of the world. In this study mostly Asian and African resource abundant countries were on focus. Results of analyses confirmed the conclusions of Sachs and Warner about negative effects of natural resource abundance on economic growth.

Table 2.1 Growth and natural resource abundance between 1970 – 1989



Source: J.D. Sachs, A.M. Warner / European Economic Review 45 (2001) 827-838

In this figure it is seen that 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, Botswana and etc. If we look at the figure 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.

During the first years after establishment of resource curse theory researchers looked for economic reasons behind the problem. But after some time it became clear that economic reasons are not able to explain the resource curse alone. After this, political factors also became investigated as factors create troubles for resource abundant countries. Researchers also determined that as a result of politics social life of resource abundance countries also affected from resource curse.

According to many authors institutions are main factor creating the resource curse problem. The supporters of this idea link this with the role of institutions in management process of resource revenues. They also indicate that if country faces poor management of resource earnings, institutions are main power of solving this problem. On the other hand, economic growth, development, social welfare are also depend from institutions' behavior. It is clear that government effectiveness in many resource abundance countries are low and result of government inefficiency and poor management of natural resource revenues, serious economic and social problems arise. That is why number of researchers indicates that effect of resource abundance on economic growth is positive if institutions are acting well (Mehlum, Moene, Torvik, 2006, p 16).

Corruption is also one of the signs of resource abundance. In resource abundant countries increase in resource revenues is usually accompanied with corruption in political power. Since, revenue inflows from resources attract people, especially bureaucrats are interested with earnings and they tend to seize the rents. On the other hand sudden revenue inflows and inefficient government experience makes it difficult to manage the flows from resource abundance. Additionally, in most cases for continuing their authority governments spend these revenues as bribes to different persons, organizations or countries which increase the level of corruption. As a result of this, people benefit only from a few part of resource earnings. The main problem arises when political parties in power use the revenues for reducing discontent of people. For this purpose government does not tax the people highly instead of developing the other fields of economy (Mehlum, Moene, Torvik, pp1-20, 2006). The role of natural resource revenues is not limited with corruption and etc. Rents from resource abundance can be used also for antidemocratic governance and pressure over the public. If country is resource abundant and there is corruption or poor management of resource revenues, mass protests of peoples and independent groups are characteristic for country. It is clear that free media companies also acting as obstacle against the antidemocratic governments. Naturally, in this process resource revenues are used as main source for blocking opposite peoples and companies (Ross, p335, 2001).

The other problem with abundance of natural resources is internal conflicts. Some economists argue that it happens due to instability in country. Mainly internal conflicts occur among the political or armed groups for controlling the natural resources. According to Collier economic and social inequality or pressure on

society, ethnic or religious discrimination due to resource revenues generate civil wars. It is known that in countries where internal conflicts or civil wars, managing institutions such as ministries or committees are acting poor and this effects the economic growth negatively. Collier concludes that within civil wars, economies growth averagely 2.2% slower than the peacetime. (Collier, 1998, p 168 (83)).

The resource curse impacts human capital too. Health and education sectors are highly influenced.

Education level is one of the important signs of countries' development. It helps to raise the quality of life and makes the country or society more active in daily life. As a result of this, public control over governments increases and causes to better government. There are two main arguments about the impact of resource abundance on education. Some economists argue that governments thinking about the future of the country invest on education. But, other group of researchers states the opposite. They indicate that in resource curse countries politicians choose not to invest on education. Since, there is less need for high quality capital and high skilled labor in primary production. For example, according to findings of Gylfason school enrolment is negatively correlated with abundance of natural resources in every level of education (Gylfason, p 850, 2001).

Health system is also influenced by 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 (Shleifer, Vishny, pp 599-617).

It is known that Dutch disease is linked with exploitation of new resources. As a result of this sudden large revenues flow to economy. The first symptom of this problem is overvalued currency. When currency is overvalued tradable goods become more expensive and less competitive in international markets. This tendency impacts imports too. Since, imports become more cheaper and cause domestic products to be less competitive . This leads to decline in manufacturing, agricultural and other non-resource abundant sectors and it causes to the dependence of country from resources. Sachs and Warner argue that decline in manufacturing sector is not problem , but if it leads to slow economic growth it is dangerous for country. It is clear that manufacturing sector growth faster than a resource abundant sector and if there is shrinkage in manufacturing sector it also impacts the countrie's development rate.

The other problem of Dutch disease is unemployment. As a resource abundant sector develops, wages in this sector increase and this attracts people to work in this sector. But, mostly oil and gas sectors are capital intensive and do not need much workers. Most of the people usually work in manufacturing or agricultural sectors and when these sectors shrink it causes unemployment (Tsalik, p7, 2003)

In the case of Dutch disease problem in economy commodity price can be accepted as one of the threat for country. This is known that commodity prices, especially oil prices are fluctuating. In the case of Dutch disease country gets the largest part of revenues from resources and if there is significant fall in abundant resource prices it can generate disaster for economy. Country will face with budget deficit and have to borrow from other countries or international funds for covering the planned spending. Therefore countrie's external debt increases.

We learn that the main sign of Dutch disease is overvalued currency, but it is not enough for concluding about this problem in country. There may be some other reasons for appreciation of currency such as increase in productivity or great capital flows (Gregario, Wolf , Wolger , p 10 , 1994). The other symptom of Dutch disease is decline in manufacturing sector. It is also not exact signal for concluding about existence of Dutch disease problem. There are some other explanations for lagging sector rather than Dutch disease such as climate changes, pollution of nature and urbanization. As a result of mentioned reasons agricultural sector also can be decline.

Chapter 3

LITERATURE REVIEW

As a former Soviet resource abundant country Azerbaijan's oil and gas sectors are theoretically and empirically investigated by different scholars. The main directions of studies are effect of oil on the economic and political sectors of the country. However, there is lack in terms of studies about the effect of natural resource abundance on social life of the country.

3.1 Economic side of resource curse in Azerbaijan

Rosenberg and Saavalainen are among the first scholars who studied resource abundance issues for Azerbaijan (1998). They argue that the oil boom can lead to resource curse and Dutch disease in Azerbaijan economy. Rosenberg and Saavalainen state 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. Rosenberg and Saavalainen indicate that 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, authors state that 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 show inefficient allocation of resource revenue as a third factor.

Rosenberg and Saavalainen offer some suggestions for overcoming economic problems linked with resource curse and Dutch disease. They argue that country must save some part of oil revenues at out of the country. The other remedy for escaping from Dutch disease is to develope institutions controlling oil revenues and investment issues. Also fiscal and monetary policies must be conducted to overcome the negative effects of revenue inflows.

Singh and Laurila investigate relationship between economic growth and abundance of resources such as natural gas and oil , also study the symptoms of Dutch Disease in Azerbaijan economy between 1990 and 1998 (1999). Authors state that during first five years of independence, despite many problems such as huge decline in GDP, high inflation rate and etc, 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. Singh and Laurilla argue that as a result of large revenue inflow, country faced with threats such as Dutch disease. Scholars indicate that during the first years of resource production real exchange rate did not appreciate, opposite happened. But, it can be the impact of other causes rather than Dutch disease. But, authors state that it is expected appreciation of real exchange rate in future years.

In 2008 Clemens investigates the resource curse problem and foreign direct issues in Azerbaijan. First, the study overviews the Azerbaijan economy, then investigates the effects of resource curse and FDI flows to country. Author states that during the last years Azerbaijan catched 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 generates Dutch disease trouble. Scholar indicates that government can prevent this threat by directing investments to non-oil sector. Clemens argues that during last years level of direct investments decreased and it is not bad for economy. He presents this as a cause of increasing other type of investments. Author states that 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.

Vugar Gojayev investigated the resource curse in Azerbaijan during 2004-2009 and theoretically proved that Azerbaijan suffers from both resource curse and Dutch disease (2010). 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 to struggle with monopolies and enforce the economic management.

Bayramov and Conway studied Dutch disease problem by researching 238 traded and non-traded firms in Azerbaijan (2010). The hypothesis is that, sample firms 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 firms. Scholars set second hypothesis as import-competing tradable firms in the sample are acting similar with non-tradable companies. Excluding the length of operation time

Bayramov and Conway do not find any identicalness between two types of enterprises.

Hasanov investigate the relationship between real oil prices and real exchange rate of Azerbaijan currency (2010). He take 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. Scholar indicates that this result is not enough for concluding about presence of Dutch disease in Azerbaijan economy, but it is clear that there is Balassa-Samuelson effect. Hasanov suggests that government must manage the oil revenues more efficiently and also must develop the non-oil sector rather than spending revenues on large infrastructure projects.

Dutch disease problem in post-Soviet countries is investigated by Egert (2012). Egert study empirically whether former Soviet countries vulnerable tok Dutch disease or not. First, he estimate both real and nominal exchange rate models for clarifying link between exchange rate and commodity prices. Then he analyise effects of commodity prices and ecomic growth dependency on resources. He find that sample countries, especially Azerbaijan is highly dependent on primary products. But he can not find any sign of spending effect in Azerbaijaneconomy. Author also defined that oil has negative effect in first stage of production, but positive effect shows itself during recent years.

Paper by Bildirici and Kayıkçı studies economic aspects of resource curse in former-Soviet countries between 1993 and 2010 (2012). 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. Scholars argue that Azerbaijan has not technology and management skills for exploitation and refining the resources and that is why mostly foreign companies take control over resource. If Azerbaijan can sign agreements without loosing control over natural resources it can get more profit and it will lead to faster growth in country.

Paper by Hasanov analyses the Dutch problem for Azerbaijan between 2000 and 2007 (2013). He tested four main hypotheses of Dutch disease in Azerbaijan: 1)Decline in manufacturing sector, 2) Faster growth in non-tradable sector , 3)Fluctations in wage level, 4) Real exchange rate appreciation

The paper indicates that country does not suffer from absolute de-industrilization, but from relative de-industrilization. Research shows that "resource movement effect" is not significant for sample period, but there is "spending effect" in non-tradable sector. Author also states that average real wage increased from beginning of 2004 . Besides it, results show that there is posivite relationship between real oil prices and appreciation of real exchange rate.

3.2 Political side of resource curse in Azerbaijan

After some time scholars understood that it is not possible to explain the resource curse only with economic reasons. According to some scholars political reasons also cause the countries to face resource curse problem.After this, research papers investigating political side of resource abundance increased. This tendency is same

for Azerbaijan too. As a post – Soviet country, which all fields of country was centrally planned politics play an active role in economic life of the country. This is also true for natural resources. It is not surprising that natural resources are also under the control of political authority. However, there is limited number of research papers empricially investigating the impact of oil abundance on politics for Azerbaijan. Most of the papers study the problem theoretically.

Luong and Weinthal investigated the oil and gas strategy of Azerbaijan with Central Asian post-Soviet Countries (2001). 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. Scholars present this fact as one of the main reasons of initial political system and oil - gas strategy.

The paper by Raiser, Buiter and Esanov presents the economic and political view of resource rich countries of former Soviet Union such as Turkmenistan, Kazakhstan and Azerbaijan after 10 years of independence (2001). Authors argue that resource abundance is not blessing, but curse for these countries during 10 years because of political system. Paper explains the link between resource abundance and political reforms. According to authors in the first part of transition period Azerbaijan attracted large number of FDI and it forced the country to make some reforms. But, it was not enough and in the second period of process opposite happened.Raiser, Buiter and Esanov state that policymakers are not interesting for making reforms and there

is negative relationship between resource revenues and reforms. Scholars suggest to simplfy registration process for businessmen, make available condition for domestic and foreign trade , effective taxation system and increase institutional quality. Authors indicate that Azerbaijan is beter than Turkmenistan and worse than Kazakhstan in terms of economic and political reforms.

Bayulgen study curse, investment and democracy issues in Azerbaijan and Russia comparatively (2005). He argues that foreign investment and government relations determine the link between resource wealth and type of regime. Scholar explains this relationship with resource abundance and existence of authoritar regimes. According to author both Azerbaijan and Russia are resource abundant countries and because of this they are more desire to attract foreign investment than developed countries. Bayulgen states 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 long-lived. Soviet Union experience also has role in this process. According to author, Haydar Aliyev used this method, made some regulations and kept the political control on his hands.

Paper presented by Kalyuznhova investigates the overcoming methods of resource curse and the role of oil funds in this process (2006). As sample she takes two countries: Kazakhstan and Azerbaijan. Kalyuznova states 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 sample countries 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.

Paper by Shannon O'lear studies the political aspects of curse in Azerbaijan (2007). Author indicates that there are some serious signs of resource curse in this country. She states that oil is main export of Azerbaijan and revenues from resources are flowing to political elite, not spending for development of other sectors. It is clear that economic reforms which do not increase the welfare and life quality are not acceptable for people and it weakens the validity of political elite. According to O'lear, analyses show that political control which is centralized in sample country is another sign of curse. Though government tries to set up legitimacy for international community by making some democratic steps, however corruption, non transparency in budget spending, week political liberty shows that Azerbaijan moves very slowly to democracy or even goes backward.

Samantha Lange investigates the relationship between resource abundance and human rights in sample of former Soviet republics (2009). She used pool-time series cross-national data from 1996 to 2007. Here Lange takes resource dependency as a GDP percentage and hypotheses that there is positive relationship between resource dependency and pressure on human rights. Author indicates that Azerbaijan still faces with patronage of same elite, authoritarian regime is characteristic for this country. There is control over oil sector. According 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.

Alakbarov, Gawrich and Franke take Azerbaijan and Kazakhstan as sample in their paper (2010). They state that both countries are resource abundant and suffer from autocratic presidentalism. Low degree of political interest with these factors makes Azerbaijan and Kazakhstan rentier countries. This paper investigates impact of policy on political regimes in these rentier countries. Authors argue that signs of rentierism show itself in both countries. 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 lives. Azerbaijan and Kazakhstan are stable countries, but this stableness has negative effects.According to scholars large revenues, passive society and former Soviet neopatrimonialism are main causes of instability.

Another article investigating the political aspects of resource curse in Azerbaijan and Kazakhstan is presented by Kendall – Taylor (2012). Author argues that in both countries resource revenues help the political leaders to win the presidental elections. Using elections data, scholar indicate that head of the states use resource profits for making the economy better off before the elections and spend the revenues for their promotion. There is two hypothesis set by Kendall-Taylor in this paper. First hypothesis states that government's fiscal shortage is larger in resource rich countries than non-rich countries during the presidendal elections. It is because of in such countries usually political leaders decrease revenues or increasing spendings, which both of these cases cause to budget deficit. Second hypothesis is that in oil rich countries spendings are increasing, not revenues decreasing during the presidental elections. Because, policymakers are increasing expenditure or decreasing the government revenues for getting the support of more people. Results show that there

are more available situation for manipulating the economy during pre-elections by using resources. The lack of transarency, control over resources, centralised political system are main determinants of this process. Author find evidence that fiscal deficit increases before the presidental elections. There is another outcome is that government expenditures are also rising. But it has negative effects not only on political system, but also to economy. Because, when government increases the spendings more money enters to the country and it can result by real exchange rate appreciation which is one of the main signs of Dutch disease.

Mammadov , Aslanli and Ahmadov emprically investigate the relationship between resource dependency and institutional quality in four country, Azerbaijan, Turkmenistan, Russia and Kazakhstan (2013). Theory indicates that resource revenues can hurt institutions and it results with less reforms and poor management of rents. Authors collect data for period 1996-2011 and analysed the institutional quality in four country. They use government effectiveness as dependent variable and oil rents, GDP per capita, political freedom index and FDI stocks are independent variables. Results show that natural resource revenues and government effectiveness are negatively correlated for sample countries such as Azerbaijan. Scholars does not find any relationship between political stability and government effectiveness. But there is negative correlation between FDI stocks and government effectiveness.

Paper by Shaw studies the governance problem in Azerbaijan (2013). Author states that resource curse theory can not explain the failure of Azerbaijan in terms of development and there is need for another sub-theories and investigation of other factors such as historical background, cultural issues and etc. Shaw indicate that

rentier state theory can give some wrong conclusions for Azerbaijan. Because of this, there have to be a clear examination for political regime in this country. Results show that there are differences between assumptions of rentier state theory and case of Azerbaijan. But, there is also some cases in Azerbaijan which can be explained by this theory. Author concludes that in Azerbaijan patronage and control over the different sectors are more than non-rich neighbours such as Georgia and Armenia. The other conclusion of Shaw is that Azerbaijan invests to military sector a huge percentage of it's budget.

3.3 Social side of resource curse in Azerbaijan

Resource curse influence the social life too. It is the less investigated part of resource curse theory. This fact is also true for Azerbaijan. Also most of the existing research papers study the problem theoretically. Because of this, there is few research papers researching the impact of oil on social sector of Azerbaijan separately. Moreover, most of the existing papers investigate the resource abundance problem by explaining its negative impacts on health sector. It can be concluded that until now impact of oil on education system of Azerbaijan is not studied yet.

McKee , Chenet and Figueras study reforms in health sector of Central Asian countries and Azerbaijan (1998). Authors use datas from World Health Organisation (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. Scholars state that results are similar for sample countries. It is shown 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 for country.

Paper by Falkingham studies the impact of transition period on living standarts in Turkemistan, Azerbaijan and Kazakhstan (1998). Author states that after regaining independence these countries faced with serious economic problems. But later all three country revived and catched economic growth. Falkingham studies whether this growth created poverty and inequality and if there are these type of problems how sustainable they are. Analysis show that though there are troubles with inequality and poverty in sample countries, during last five year positive economic development is observed. Within this period of time inequality shrinks and poverty rates are beter off. Author suggests to increase transparency and efficiency of product markets. Investment in schools and health services are another remedies for Azerbaijan.

Habibov and Fan studies poverty and social protection problems in Azerbaijan (2007). Authors state that social protection programms have a positive effect on decreasing in poverty level. But there is stil high poverty level in Azerbaijan because of crucial limitations in this program. The most important insufficiency is that program does not cover all poor population. The second problem is bad governance and corruption. Because of these negative cases poor people get small parts of benefits. According to scholars the other important reason is that social payments are not able to remove the poverty. Habibov and Fan suggest to strength the current social protection program. According to authors only one program can not decrease the poverty. Scholars suggest solving this problem by developing new social measures held by government.

Paper by Ahmadov, Aslanli and Musabeyov studies the impact of resource revenues to social life of Azerbaijan (2010). Authors state that there are very few countries

that could get away from the negative impacts of resource abundance, specially in social issues. It is clear that Azerbaijan is abundant with oil and natural gas and it means that there is such threats for Azerbaijan too. Scholars present the results of survey which held among 1000 people from different regions of Azerbaijan during 2006 and 2010. 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 few percentage of respondents are afraid of negative effects of resource abundance. Scholars suggest some recommendations for policymakers. They state that there must be serious control over the property rights, government must ensure the transparency for oil fund revenues. Enlightenment is one of the main solutions of decreasing rate of criminal events. Government must held different type of surveys among the various range of groups and must held reforms for better institutions.

Habibov and Afandi investigate social capital effect on self-rated health (2011). Three Caucasus country, Azerbaijan, Georgia and Armenia are taken as sample. The survey covers 2014 respondents in Azerbaijan. 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.

The paper by Jalles studies inequality and poverty issues in Kazakhstan, Azerbaijan and Russia (2011). Paper empirically explains the relationship between growth and

income inequality, also poverty from 1991 to 2006. Author shows that in all three countries increase in income accompanied by decline in poverty rate. Results indicate that Kuznets' hypothesis is rejected in sample countries. Besides it, there is no suspect that in Azerbaijan and Russia poverty depends on income inequality, but its significance is not strong. Jalles suggests some policies such as target programs for poor poverty regions, social assistance programs and etc.

Sultonov Mirzosaid is also one of the scholars studying efficiency of health expenditure in former Soviet countries of Caspian sea by using Data Envelopment Analysis methodology (2011). He investigates efficient and inefficient outcomes by using expenditure measures and quantity inputs. Results show that Azerbaijan is efficient in all cases. Also health expenditure score of Azerbijan is more than average of other sample countries. Azerbaijan's results in per capita expenditures on health sector and infant survive degree are the best compare with other sample countries.

Paper by Valiyev researchs the weak society problem for the case of Azerbijan (2012). Author distinguishs the bonding and bridging capital in Azerbaijan. He states that bonding capital covers the people whom has same or similar features, such as family, dynasty, clan and etc, but bridging social capital is the group of people whom has common parties, organizations and so on. Valiyev indicates that after regaining independence the percentage of bonding capital in Azerbaijan increased and it has negative effects for country. For example, people who get higher status in government collected his or her relatives, family members around him and it resulted with unprofessionalism. Many people came from villages, rural places to cities and it make disbalance between regions. Scholar suggests some recommendations to policymakers for making the social capital better off. He argues that country must

increase the quality of institutions, also role of Non-Govermental Organizations (NGO) must be increasing. Azerbaijan have to learn the experience of developed countries and accept the assistance of international organizations such as United Nations (UN) and European Union (EU).

O. Harhay, S.Harhay and Nair investigate the realtionship between education, wealth and health in Ukraine (2007) , Armenia (2005) , Azerbaijan (2006) and Albania (2008-2009) by using Demographics Health Surveys (DHS) for these countries (2012). Scholars take blood pressure as health indicator. They try to measure this problem in rural and urban areas among women and men between 15 and 49 years old. Authors indicate 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 high university diploma. Household index states that there ise 20% poorest and 20% richest people take part in survey. Respondents choosen 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. Also females living in rural areas more vulnerable to hypertension.

Rzayeva studied the impact of oil to health sector in Azerbaijan (2013). She argues that health sector not only influenced by global, but also reginal and local elements. According to author for the case of Azerbaijan it is also related with policy which based on resources. Rzayeva states that during Soviet period health system was one of the main fields of country and it was duty of state to ensure the citizens by health care. This was not only theoretical but also ideological policy of government. According to author urban and rural areas were provided by health care in high level

of quality. Rzayeva states that after regaining independence government decreased the expenditures on this sector and it effected the life expectancy too. From 1990 to 2002 life expectancy decreased six years and it is the worst result in the world after Sub-Saharan countries. Besides it, according to statistics in 2005 Azerbaijan was second country which spend less money to health sector after non-rich Tajikistan among former Soviet states. Rzayeva states that this is the cause of oil-dependent economy and corruption. This sector also impacted by conflict with Armenia on Nagorny-Karabakh. She argues that after the collapse of Soviet Union country entered the international market and new oil intensive system negatively affected the health sector by reducing wages and role of this sector. Rzayeva concludes that after 2005 government spendings on health sector increased, but corruption and other institutional problems stil prevents the development of sector.

3.4 Problems with researches in the case for Azerbaijan

As a summary of the literature review, it can be said that after regaining independence Azerbaijan attracted the attention all around the world due to it's geographical position, historical background and also with natural resources – specially oil and natural gas. The first papers investigating Azerbaijan with different sides appeared in scientific journals after second part of 1990's. However, this process became more intensive after 2000s. It is clear that, the main subject of these studies was oil. Different scholars from various countries researched problems with natural resources and their impact on other sectors. Resource curse and Dutch disease are two of them. But it must be indicated that number of studies in these issues are not so much. Azerbaijan's short independence history and also absence of some datas for the first period of sovereignty can be shown as reasons for this. Because of this there are very few reserach papers about resource curse and Dutch disease for case of

Azerbaijan. Therefore, in most of the existing papers Azerbaijan is investigated with other group of countries such as "Caucasian countries", "Post-Soviet countries" or "Caspian countries". Also it must be mentioned that most of the research papers in this theme were prepared by Azerbaijan scholars. There is only one paper emprically investigating political aspects of resource curse and not any resarch emprically studying social factors related with curse.

Chapter 4

ECONOMIC AND POLITICAL OVERVIEW OF AZERBAIJAN

The collapse of Union of Soviet Socialist Republics (USSR) confronted Azerbaijan with many troubles. Problems in all fields, especially in economic and political lives showed itself. Azerbaijan passed a long way from 1991 to 2014, in other words from recession to stabil economic growth. There are various divisions for the period of history which covers time from 1991 to nowadays. In this thesis this period is divided into three parts: Recession period (1991-1994), recovery period (1995-2005) , boom and slump period (from 2005 to present time).

4.1 Recession period: 1991-1994

In 1991 world's political map changed again. Union of Soviet Socialist Republics (USSR) collapsed and 15 countries regained their independence. Azerbaijan also was among these countries.

In 1991, on the 18th of October Supreme Soviet of Azerbaijan adobted the "Constitutional Act on the State Independence of Azerbaijan Republic". This was the official declaration of independence of Azerbaijan. Ayaz Mutellibov became the first president of country. On 29th of December 95.27% of citizens took part in referendum and 99.58% of them voted for sovereignty of Azerbijan Republic (Zulfugarli, 2009, p 5).

The first years of independence passed very dramatic for Azerbaijan. After declaring independence country faced with serious economic and political problems. The main cause of problems was change of system. In Soviet Union economy and politics were centralized. State ensured the economy with all necessary elements and there was only one political party. But, after collapse of Soviets former union countries entered the market economy and multi-party democratic political system.

First of all, the collapse of Soviet Union impacted Azerbaijan by economic channels. As a part of centralized economic system Azerbaijan also mostly produced raw materials and agricultural products during soviet years (Kalyuzhnova, p 3, 2002). It needed imports from other union members and also exported to only other Soviet countries. But, break-down of USSR halted the economic relations between union countries. Besides it, there was not sufficient infrastructure for economic development.

The political situation was also unstable. Though the Soviet Union collapsed , "Communist party" was still very powerful and heir of USSR , new independent Russia kept the first president of Azerbaijan Ayaz Mutellibov under pressure. He was not independent and it made threats for young country. As a result of this situation in 1992 Abulfez Elchibey came to power. He changed the direction of the country from Russia to Turkish states and withdrew the Russian troops from Azerbaijan (Yunusov, 2011, p 62). The changes in politics accompanied with political and social catastrophes. Russia used Karabakh card as a pressing method to Elchibey. With the support of Russia Armenia began military operations in Karabakh and some of the cities in this region were occupied. (Aydın, p 13, 2000). As a result, more than one million refuges flew to different parts of country. This deepent the

political situation and also effected the economy negatively. Despite these problems, Elchibey did some useful reforms in terms of economy. The Central Bank of Azerbaijan Republic (CBAR) was founded and national currency – manat (AZN) was introduced. Moreover, State Committee on Property Issues, the Committee on Foreign Investment, Anti-Monopoly Committee and other important state enterprises were established during his short presidency period. (Yunusov, 2011, p 64). But, all these reforms were not enough him to stay on power. The increasing number of unsatisfied people, opposite groups and pressure of Russia made the president to resign. After him Haydar Aliyev came to power in July 1993. He was former KGB (Komitet gosudarstvennoy bezopasnosti, Committee for State Security) general and had ruled the country between 1969 – 1982.

The first task for new president was to stabilize the situation in the country. Economy was collapsed, all parts of the country were in chaos, bad news came from front. For taking the country out from this situation Aliyev needed a break in the war. The stability in country also meant as duration of his authority (Hoffman, 1999, pp 10-11). In that case the only assurance for him was western community. That is why, he signed ceasefire with Armenia in May 1994 and turn to economic problems.

As it mentioned before during three years economy worsened. In 1994 GDP was 30% lower than 1990. Inflation rate was in its record level – 1764% (Aras, Suleymanov, Huseynov, 2013, p 2,). The other macroeconomic indicators show the situation more clearly. For example, foreign trade volume, industry, agriculture decreased respectively 50%, 62%, and 45% between 1991 – 1994 (Soyak , Nesirova, 2003, p 4). For overcoming difficulties Haydar Aliyev changed the direction of country from Russia to west, but also tried to keep good relations with official

Moscow. He understood hat the only way of rescue the country is resources, especially oil and natural gas. We can say that from this period natural resources played an active role in the newly independent Azerbaijan's life. For example, in 1994 per day production was 195.000 barrels. In 1995 and in 1996 this number decreased 20.000 barrels per day (Lenczowski, 1997, p 113).The first and main step towards economic partnership with west in oil sector was Baku – Tbilisi – Ceyhan oil pipeline which is also called as "Contract of century" signed with 33 company from 15 country (Bayulgen, 2003, p. 209). Most of the participant states were developed countries and largest companies in this sector, such as Amoco, British Petroleum (BP) , Pennzoil, Exxon and etc. Russian companies were excluded from this contract. But after some political manoeuvres and pressures it got 10% share. Iran was also one of the participants but, as a result of USA's (United States of America) protests it was taken out. According to USA Department of State ,International Energy Agency (IEA), BP and national sources oil reserves of this pipeline were estimated respectively as 0.5, 0.5-1.5, 1 and 2 billion tons. 13 billion dollars was invested for this project. Contract gave the opportunity to government to get 80% of revenues after subtracting expenses (CESD research group, 2012, p 4). Actually this was the beginning of FDI flows to country.

After this Haydar Aliyev signed another contract with foreign companies which let Azerbaijan to export its resources from "Shah Deniz" terminal (Atmaca, pp 1-9, 2002). The common analysis of this period shows that country was in deep recession. The fundamental reasons of this recession were regaining independence, collapse of former economic system and also political catastrophes. As a result of this situation the main economic indicators decreased between 1991-1993, high level of inflation

and negative economic growth was characteristic for country. Some reforms and efforts were not able to rescue the country. War with Armenia and political anarchy impeded the development of Azerbaijan. The came of Aliyev to power and signing of "Contract of century" can be accepted as the end of recession period in Azerbaijan.

4.2 Recovery period: 1995-2005

After the first period, the main goal of state power was to recover the economy. For this purpose president had to make some amendments and changes in political system. Firstly, on 12nd of November in 1995 new constitution was introduced. According to new laws system Azerbaijan became presidential country and Aliyev got great power. Legislative and executive institutions were respectively parliament and judiciary (Abbasov, 2011, p 110). Parliament called Milli Majlis (MM) and it consisted by 125 deputies. The main executive courts were Constitutional Court, Supreme Court and High Economic Court. New constitution and authority of Aliyev gave him opportunity to control all branchs of state institutions. As oil was crucial factor for both country and Aliyev's authority president controlled the State Oil Company of Azerbaijan Republic (SOCAR). That is why, he appointed his cousin Natig Aliyev as president of SOCAR. Haydar Aliyev's son, future president of country Ilham Aliyev became vice-president.The reforms in oil sector continued by the establishment of State Oil Fund of Azerbaijan (SOFAZ) on 29th of December in 1999. Officially the creating purpose of this fund was stated as: "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". (http://www.oilfund.az/?page=sual-

cavab&hl=en_US). One of the main tasks of this fund was to preserve the country from undesirable impacts of foreign exchange rate increase (Eldaroglu, 2001, p 169). Some powers in country tried to hamper these reforms. Attempts to coup and assassination to president were prevented. After clearing country and government from military opposition Azerbaijan entered the stability period. Now, the main task was to develop the economy. For doing this, country needed parthnership with international community. Therefore, in 1995 Azerbaijan agreed with European Union's (EU) support on overcoming difficulties of transitioning to democracy. Some months later "Partnership and Cooperation Agreement" was signed with EU. Tendency of integration to international organizations continued also afterwards. From 2000s the idea of Azerbaijan's membership to Nothern Atlantic Treaty Organization (NATO) was discussed. Also in 2001 Azerbaijan became member of Council of Europe (CE) (Yunusov, 2011 , pp 68-69).

Partnership with multinational organizations opened a great opportunities for enlarging cooperation with international economic organizations such as International Money Fund (IMF) , World Bank (WB), Asian Development Bank (ADB) and European Bank for Reconstruction and Development (EBRD). These organizations, especially IMF and WB were main financial assistances for recovering the economy.

The history of partnership with IMF goes back to 18 September 1992. In this day Azerbaijan was the member of IMF with 117 million special drawing rights (SDR). But, political instability, war condition and other difficulties impeded the large scale collaboration. Country could get the first credit from IMF only in 1995. IMF specialists prepared stability programme and 46 million dollars was spent for this

project. Some months later Azerbaijan government was provided by 132 million dollars for supporting economic reform programme. It was intended to decrease the inflation rate and help for reconstructing the financial sector. 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 (Soyak, Nasirova, 2003, pp 5-6). As a result of IMF material support economy revived. There were also negative effects of IMF aids. This showed itself mostly in industry sector. In 2000 industry sector declined 70% compare to 1990. (Hooper, 1999 , pp 51-52). Moreover, oil industry increased from 16.4 to 37% between 1995 and first quarter of 2001. During this period non-oil industry decreased from 13% to 6%.

World Bank also played an active role in recovering of economy in Azerbaijan. The country entered to this organization in 1992, but as in the case of IMF , it got the first aid in 1995 after stabilization. During the partnership, World Bank spent 726 million dollars for 31 projects in Azerbaijan (World Bank, 2013).

One of the main reforms of this period was launching of privatization programme. Earlier steps towards privatization was taken by the establishment of State Committee on Privatization (SCP) in 1992. The first law on privatization adobted in 1993. Unfortunately, political instability, condition of war and other factors obstacled this process till the begining of 1996. In this date "small-scale privatization" started. One year later vouchers distributed among citizens and in May privatizationof medium-scale business began (Yunusova, 2012, p 26). This programme revived the

economy. According to statiscits till 1999 approximately 22200 small-scale business were privatizated and also nearly 1100 joint stock company was created. Foreign citizens also took part in privatization. They bought shares in more than 50 companies. In other words, 15% of stocks were privatizated by non-azerbaijan citizens (Bayramov, 2001, p 166). Though to some difficulties privatization process increased the share of private sector in country's GDP.

Table 4.1 The share of private sector Azerbaijan's GDP between 1994-1999

	1994	1995	1996	1997	1998	1999
Share of private sector in GDP, %	29.0	34.0	38.0	46.0	55.0	58.0

Source: State Statistics Committee of Azerbaijan

The privatization covered also agricultural sector. It started in 1996. For managing this process more than 50 laws and regulations were adopted by government. During the period less than five years nearly 2000 farm was privatizated , also approximately 36100 new farms was founded (State Statistics Committee, 2001, p 87). As a result 874 family consisting of 3.5 million people get private lands. After this implementation state owned 56%, municipalities' share was 23.5%, the remain lands turned to private estate (Ibadoglu, 2014, p 3).

The effects of privatization is doubtful. There are positive and negative effects of this programme for Azerbaijan. First of all, this process helped to store new economic system similar to other capitalist countries. Moreover, privatization strengthed the new economy and developed the integration to international markets. Another positive effect was that after a long period citizens get opportunity to take

part in economic life more actively. But, also some negative effects of privatization in economic and political life of country was observed. There were large number of enterprises which lost it's capacity 45ort his ceased activity after privatization. All these negative factors impacted the profits from privatization. The real revenues from programme were highly less than prognosis. As a result Azerbaijan gained 2120 dollars from privatization of every small enterprise and 18300 dollars from one medium and large size enterprise. Totally countrie's budget benefited 100 million dollars from privatization during first period (Ibadoglu, 2006, pp 80-81).

The absence of experience in this type of issues resulted with low governance during this process. State could not took part as owner and privatization was not able to decrease the monopolies, even increased the number of monopolistic firms and companies. Also state officials directly and indirectly participated and illegally intervened the process. In spite of all these negative cases privatization was launched and it's positive effects were more than negative. All these reforms made the economy better. The main macroeconomic indicators for this period approvals this. During 1991-1995 economic growth was negative. Only in 1996 GDP growth was 1.3%. In 1998 10% and in 2000 14% increase in GDP was observed. One of the main problems of economy was inflation. This problem also was solved in 1995. Inflation sharply declined from 1.788% in 1994 to 50% in 1995 and to 20% in 1996 (SSCAR). The main economic indicators 45ort his period is given at table 4.2.

Table 4.2: Main economic indicators for period 1993 - 1999

	Growth rate GDP, %	GDP per capita, in $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, in $US	Deficit of the foreign trade balance, in $US

				%				
1993	-23,1	177,6	1129,1	7.1	35,0	NA	NA	174,8
1994	-21,9	NA	1663,5	11.5	31,7	NA	NA	-141,1
1995	-11,8	321,6	411,8	5.2	14,9	20.1	400,7	-373,1
1996	1,3	421,0	19,9	2,9	14,7	17,6	931,2	-693,9
1997	5,8	507,5	3.7	4	16,2	18,6	915,8	-566,9
1998	10,0	537,0	-0,8	1,8	13,5	16,3	1365	1.046,1
1999	7,4	508,3	-8,5	2,4	14,6	19,8	599,7	-104,8

Source: CBAR, MFAR, SSCAR

The other indicators at table 4.2 shows that government could overcame the main problems and threats for economy. This numbers can be accepted as first stage's results of recovery period.

The second stage began in 2003. In 2003 political situation changed again. The death of Haydar Aliyev created new and serious questions for the future of country. After some month of his death president elections finished by the victory of Ilham Aliyev on 15th of October in 2003. 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 deputat of MM, head of National Olympic Comittee and was the primer minister of country for a short time. The opposition protested the results next day after elections and safety powers destroyed the rallies, large numbers of protestors were arrested. (Yunusov, 2011, pp 69-70). In this period, son Aliyev's presidency is mentioned as pressure on opposition and other free thought people. Some of opposition parties were banished from their offices, also several international radio studious had to halt the broadcasting (Abbasov, 2011, p 111). In 2005 cheif editor of "Monitor" political magazine Elmar Huseynov was killed. Murders are stil not determined and jailed. Besides it, same year two ministers were arrested. One of them was head of "Ministry of Economic Development".

After strengthing his place as president, Ilham Aliyev turned to economy. Economy stand as main priority of new president. In one of his first speeches as president he announced about 600.000 new job opportunities during first five years period. Moreover, he signed "*State Program on Social-Economic Development of the Regions of Azerbaijan Republic for 2004-2008*" in 2004. The main purpose of this programme was to abolish the economic difference between regions and large cities, also to develop the economy in different parts of country (SPSEDR, 2004, p 27).

The natural resources caused the FDI flows to country especially in this period. According to statistics in 1995 FDI flows into Azerbaijan was only 375.1 million dollars, one year later this number increased to 620.5. Next two years it became 1307.3 and 1472.0 million dollars. The increase in FDI continued till the end of this period. In 2000 it was 967.8 million AZN, after five years in 2005 it was 8 billion AZN. FDI increased approximately 22 times from 1995 to 2005 (Ibadoglu, 2014, p 5).

For summarizing this period we can conclude that economy developed as it planned, stability was achieved, also natural resources became the main source

of recovery period. The revenue inflows and increasing number of FDI developed the economy. Natural resource revenues also let Ilham Aliyev to establish and strength his authority regime.

4.3 Boom and slump period: (2005 - present time)

This period is characteristic with boom in oil sector and high level of revenue inflows. Because in 2006 the first oil was exported by Baku-Tbilisi-Ceyhan (BTC). Except this with 5.7 billion barrels reserves world's third largest oil platform Azeri-Chiraq- Guneshli (ACG) , one year later by Baku-Erzurum-Tbilisi (BET) pipeline, and Azerbaijan's 1st , world's 9th field with 1.2 trillion m3 stock Shah-Deniz

terminal increased the opportunity of exporting natural resources (Sucayev, 2003, pp 36-37).

In 2003 oil production was 15.3 million tons . During next two years it was 22.2 , 32.3 and 41.7 million tons in 2007. 2009 was a significant year in terms of oil production. In this year production was in it's record level – 56 million tons and two years later decreased to 46 million tons (Aras, Suleymanov, Huseynov , 2013, pp 80 - 81). In 2009 country was in 19th place due to it's proven crude oil reserves. In terms of production it was ranked in 22nd place. It took one of the top places in natural gas reserves and production. Azerbaijan was in 24th and 3th places respectively.

Gas production also increased during this period. After exporting natural gas by Shah-Deniz natural gas production increased 4 billion m3 and reached to 15 billion in 2008. According to prognosis this number will be 30 billion m3 in 2015

Increase in natural resource production impacted the economy positively. In 2006 Azerbaijan was first due to it's GDP increasing level. Also economic growth in 2011 was 80% higher compare with 2003. Poverty rate also declined . Though it was approximately 50% in 2003, in 2011 it was only 7%.

The development of oil and gas sector lead to increase in FDI. Signing contract with different countries and international companies impacted the FDI increase positively. The total number of investmens from 1995 to 2010 was 54.2 billion dollars. These invesments were consist of 23% loans, 69% indirect investment, 1.3% portfolio investment, 6% as other type of investments.

(http://www.economy.gov.az/index.php?option=com_content&view=article&id=91:%C9%99sas-kapitala-y%C3%B6n%C9%99ldil%C9%99n investisiyalar&catid=17:investisiyalar&lang=en). This tendency continued until 2009. In 2009 level of FDI to country decreased 3.8 billion dollars since a long time. In 2010 FDI reached to 5890 billion dollars.

The increasing number of oil and gas production also caused exports and share of oil revenues in budget to increase. In 2005 crude oil production was more than 50% of total production. In 2008 it reached to it's maximum level with 92.50%. In 2010 it was 86.50 % (SSCAR ,2011). The share of oil revenues in budget increased year-by-year. If in 2002 the portion of oil revenues in budget was 36.5% , in 2003 this number was 31%. One year later it increased to 40.9%. This tendency continued between 2005 and 2010. In 2005 the share of oil in budget was 51.4%. In 2010 this number became 65.4%. Numbers proves the importance of oil revenues in state budget too. If in 2003 revenues from oil was 887.76 million euros, during seven years it increased to 9.2 billion (SSCAR , 2010). The directions of budget spendings also changed in 2010. Until now the main part of budget was spent on construction and etc projects, but in 2010 share of health and education sectors increased. Also revenues to agricultural sector rose during 2009 and 2010 years budget. (The National Budget Group (2009, http://www.nbg.az/news_index.php?lang=en&news_id=410). But even in this case share of education ,social security and health sector decreased in real terms respectively 12.1%, 8.5% and 0.7% compare with 2003. Increase in salaries of people working in these sectors also observed. But these salaries are still one of the lowest. For example the average salary in education system was approximately 230 euro, while the average number of wages is 259 euros. It must be mentioned that the

highest salaries were observed in oil sector. According to statistics the workers in this sector is only 1.1% of all employees people. But they creates largest part of total GDP. Salaries in oil sector were 12 times higher than agriculture, 8 times higher than education sector in 2009. (World Bank. (2009, worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/ 01/07/000333037_20100107230943/Rendered/PDF/443650ESW0A Z0P1IC0Disclosed01161101.pdf.) These facts can be accepted as one of the main sources of suspects about Dutch disease. The another sign of Dutch disease in country economy is exchange rate appreciation. In 2005 president signed order about "On changing (denominating) nominal face value of money units and scale of the prices". According to this 5000 manats considered equal to 1 new manats. This decision impacted the countrie's exports negatively. Because it became more valuable and it made the exports less competitive in international markets.

During this period president Aliyev was the main ruler figure in politics and economy of country. In 2008 he win the elections again and became president for second time. During his second presidency he increased the pressure over opposition and in fact destroyed it. Non-officially, meetings of opposition and youth organizations were prohibited. In his new government most of the ministers were not changed, only few number of high rank bureaucrats lost their position. The struggle between political clans increased. The first lady of state Mehriban Aliyeva also actively participated in political and social life of republic. Since 2002 Mrs Aliyeva is the president of Azerbaijan Gymnastic Federation and since 2004 head of Haydar Aliyev Foundation. She is also deputat of MM after 2005. Besides it first lady is a Good Will Ambassador of UNESCO and ISESCO (Abbasov, 2011, 116).

In 2009 citizens of Azerbaijan Republic voted for amendements to constitution. According to international observers there were falsifications during the referendum. Finally, results showed that high level of people voted for changes in constitution. However, one of the amendments was criticized by democratic powers. This amendment abolished the limitations of number of presidency , which president guided to it and became president in 2013 for third period.

During Ilham Aliyev's second presidency economy was one of the main fields . In 2009 president signed a new decree about "State Program on Regional Socioeconomic Development" for 2009-2013.This programme can be considered as the second part of previous one.

One of the main exams of Aliyev in terms of economy was world financial crisis in 2008. Though, after crisis government officials claimed that crisis did not influence the economy, statistics shows the other things. The negative effect of crisis was observed mostly in non-oil sectors, specially in manufacturing and agriculture. The other "victim" of crisis was construction sector. It highly lagged during crisis years. The FDI also affected from crisis. EBRD datas show that in 2009 FDI decreased from 1.6 billion euros to 607.6 million (EBRD)
(2009 Financial sector analysis for South Caucasus. London, UK. Retrieved from http://www.ebrd.com/country/sector/etc/fi nsec.pdf). After all this facts we can conclude that Azerbaijan economy also influenced by crisis, but it's negative effects were compensated by revenues from oil. For this purpose government spent 3.27 billion dollars. (SSCAR, 2009)

Unemployment and immigiration continued during boom years. Though one of the first goals of president Ilham Aliyev was to decrease the unemployment rate and create new job opportunities, many people immigrated to different countries for better job and life. The main direction was Russian Federation. In 2008 money transfers from other countries to Azerbaijan was more than 1 billion dollars. Approximately 60% of these transfers came from Russia. The other interesting fact is that the more than half of receivers of transfers are females and 61% of them are not working. Also 60% of transfers were directed to rural regions of country (EBRD , 2009 , http://www.ebrd.com/country/sector/etc/fi nsec.pdf). According to ADB study 77% of money sent from abroad spent on hosehold issues (Asian Development Bank (2007), http://www.adb.org/Documents/ Reports/Consultant/40038-REG/40038-REG-TACR.pdf).

During this period manufacturing and agriculture sectors continued to decrease. Between 2000 and 2009 agriculture sector declined from 16% to 6.5%. Also manufacturing sector decreased 1.2 unit and became 4.1% (SSCAR, 2009). These declines accompanied by increase in oil and natural gas exploitation. It is not surprising that from 2000 to 2009 oil and gas exploitation rised from 27.6% to 44.8%.

Oil Fund played a crucial role in economy of country , specially in boom period. In 2003 the revenues from SOFAZ to budget was 100 million dollars. It was only 8.2% of budget. But after increasing oil revenues this share increased too. One year later it rose 20 million AZN and 8.6%. This numbers were followed by 150 million AZN and 7.2% in 2005, 585 million AZN and15.6% in 2006, 585 million and 9.7% in 2007 , 1.1 billion and 35.3% in 2008 , 4.91 billion and 40.4% in 2009, 5.91 billion

AZN and 51.4% in 2010 and 6.48 billion and 53.7% in 2011. During first six month of 2011 Oil Fund revenues were approximately 30 billion dollars (http://www.oilfund.az). SOFAZ was also the main financial source of some important projects in Azerbaijan. Oguz-Gabala-Baku water pipeline Baku-Tbilisi-Kars railway projects are only two of them.

One of the problems during Aliyev's authority was high number of corruption and lack of transparency in various important projects. Intervention to different projects by state officials are resulted with inefficiency and also high expences. "Eurovision Song Contest" which took place in Baku in 2012 was one of such examples. Though government officials rejected this argument, many international mass media companies claimed that state spent approximately 1 billion dollars for this organization.

One of the main features of resource abundant countries is that economic growth related with resources will began to decrease after some time. Azerbaijan also met such problem. After 2009 oil revenues began to decline. This also affected some main economic indicators which is shown at table 4.3.1.

Table 4.3 The main economic indicators between 2005 - 2010

	Growth rate of realGDP	Growth rate of oil industry	Growth rate of real non-oil GDP	Inflation rate	Growth rate of nominal income of population	Growth rate of nominal wage of population	Growth rate of nominal expenditure of state budget	Growth rate of bank assets
2005-	24.2%	42.9%	11.8%	13.9%	31.8%	27.0%	64.3%	65%

2008								
2009-2010	7.2%	8.3%	5.6%	3.6%	10.7%	8.9%	6.8%	14%

Source: CBAR, MFA, SSCAR

From table it is seen that most of the main macroeconomic indicators declined in 2009-2010 period compare with 2005-2008. According to some economists this is the beginning of slump period in Azerbaijan economy. It means that in future years FDI to oil sector will decrease, decline in budget spendings and also in revenues will be observed. If policymakers will not able to reduce the oil dependency, state can face with serious economic problems in future years.

Chapter 5

DATA AND METHODOLOGY

There are numerous papers investigating resource curse and Dutch disease theories for case of different countries by using various econometric models. Depending on purpose of investigation different dependent and independent variables can be used for studying the impact of resource curse and Dutch disease on countrie's economy, political and social lives.

As we stated in previous chapters there are not so much research paper investigating these theories in sample of Azerbaijan. Also it is clear that most of the existing working papers are theoretically investigate the resource curse and Dutch disease issues. That is why there are not much example for empirical research papers for case of Azerbaijan. This problem mostly show itself in economic and social parts of resource curse theory. Also Dutch disease issue is stayed far from attention of scholars during past years. Only few authors applied to this topic and studied the problem for Azerbaijan empirically.

The main purpose of my thesis is to investigate resource curse problem for Azerbijan with all three parts and also to stimulate the further investigations. It is clear that the impact of oil on Azerbaijan can not be explained only by economic aspects. From theory we know that politics also play an important role in this process and it effects the social life of country. There are numerous papers investigating resource curse and

Dutch disease theories for case of different countries by using various econometric models. Depending on purpose of investigation different dependent and independent variables can be used for studying the impact of resource curse and Dutch disease on country economy, as well as political and social lives.

As it is indicated in previous chapters there are not so much research papers investigating these theories in sample of Azerbaijan. Also it is clear that most of the existing working papers theoretically investigate the resource curse and Dutch disease issues. That is why, there are not much example for empirical research papers for case of Azerbaijan. This problem mostly shows itself in economic and social parts of resource curse theory. Also Dutch disease issue in the case of Azerbaijan stayed far from attention of scholars during past years. Only a few authors analyze this topic and studied the problem for Azerbaijan empirically.

The main purpose of this thesis is to investigate resource curse problem for Azerbijan with all three aspects and also to stimulate the further investigations. It is clear that the impact of oil on Azerbaijan can not be explained only by economic aspects. From theory we know that politics also play an important role in this process and it affects the social life of country.

5.1 Description and source of datas

In this theis three group of data are used. First group is used for investigating Dutch disease problem.Political aspects of resource abundance is measured by second group of data. The third group is used for studying social side of the resource curse problem.

For investigating Dutch disease problem, data, covering period from first quarter of 2000 to fourth quarter of 2010 are used. There are four variables, Real GDP, crude oil export, real exchange rate and manufacturing output in these data.

Real GDP and crude oil export are obtained from State Statistical Committee of Azerbaijan Republic and Central Bank bulletins.

Crude oil export is provided by State Statistical Committee of Azerbaijan Republic and State Oil Company of Azerbaijan Republic bulletins. Real exchange rate data are collected from Central Bank reports. Quarterly data for manufacturing sector of Azerbaijan is derived from World Bank Database.

The second group of data covering period from 1996 to 2012 are used for measuring impact of natural resource abundance on political life of Azerbaijan. For this purpose it is benefitted from the advantages of variables such as government effectiviness , control of corruption , regulatory quality, foreign direct investment and GDP per capita.

Government effectiveness which is obtained from World Bank Governance Indicators is a measurement of quality of civil services and also it's independence level from government.

Control of corruption which is also derived from World Bank Governance Indicators are used as dependent variable in one of the regressions. According to its source this variable reflects "perceptions of the extent to which public power is exercised for

private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests".

The another variable provided from same source is regulatory quality which demonstrates the level of government capability in terms of adopting and implementing different policies for improving private sector. All these three variables range between -2.5 and +2.5, from weakest to thestrongest levels. Independent variables such as FDI and GDP per Capita (current US $) and oil rent (share of oil rents on GDP) datas are taken from WB Development Indicators.

For measuring effects of resource curse on social life data, covering period between 1995 and 2011 are used. Public spending on education as share of total government expenditure and public spending on education as percentage of total GDP are dependent variables for measuring impact of natural resources on education sector. For case of health sector the dependent variables are public health expenditure as share of government expenditure and public health expenditure as percentage of GDP which both obtained from WB Development Indicators. Another independent variable, exchange rate also taken from same source. "Eviews 6" computer package is available for estimations. Also lags of some variables are obtained by the help of this programme.

5.2 Model variables

In this thesis Vector Autoregressive Model is conducted for investigating Dutch disease problem in Azerbaijan economy. This model is a system of different linear regression models. In this model the present degree of variables depends on previous year's levels. It has also an advantage such as studying the relationship between all

variables in the model. Vector Autoregressive Model is also accepted as an available tool for economic forecasting. However, for making correct decision about existence or absence of Dutch disease problem in Azerbaijan economy two linear regression model is conducted too.

According to Dutch disease theory the main sign of this problem is the real exchange rate appreciation which accompanies with decline in manufacturing and agricultural sectors. Since, the first two variables of regression are manufacturing output and real exchange rate for Azerbaijan. As a natural resource indicator crude oil export is also added to variables. The other factor effected by the Dutch disease is real GDP of country. According to economic theory high level export of natural resources cause real GDP to increase and impact the economy positively.

For estimating the impact of natural resources on political life of Azerbaijan three different linear regression models are applied. According to resource curse theory abundance of natural resources can damage the political life of country by decreasing the government efficiency. For checking this point in the case of Azerbaijan, government efficiency variable is used as dependent variable in two of the regressions. In the third regression in this subsection control of corruption is also used as dependent variable. It is obvious that corruption also negatively affects the institutional quality after the high level revenue from natural resources inflows to country. In this part share of oil rents in GDP as percentage is used as independent variable. However, other factors such as investment inflows impact the governance performance too. That is why, Foreign Direct Investment variable also added to variables. The other variable is GDP per Capita. This variable is indicator of development stage of country and also affected by natural resource abundance.

Impact of natural resource abundance on social life of Azerbaijan is estimated by using five different linear regression models. Three of regressions is intended for education sector and remaining two models is used for investigating impact of oil revenues on health system of Azerbaijan. For investigating impact of resource curse in sample of Azerbaijan public spending on education as the share of government expenditure and public spending on education as share of GDP are used as dependent variables. For health sector public health expenditure as share of total health expenditure and public health expenditure as share of government expenditure are used for same purpose. The another variable explaining the effect of resource abundance on social life is exchange rate. From Dutch disease theory it is known that real exchange rate appreciation is a sign of Dutch disease. As we know, Dutch disease is considered as one of the economic symptoms of resource curse and real exchange rate can be useful indicator for explaining resource curse problem in social sector of Azerbaijan.

5.3 Empirical model

In some of the existing research papers investigating Dutch disease problem scholars use real exchange rate as dependent variable, in others, authors preffer to use real GDP variable (RGDP) for same purpose. However, for estimating the effect of Dutch disease on economy it is important to measure the impact of variables on each other. Hence, in this thesis Vector Autoregressive model is applied for this purpose. Except this, two different linear regression models conducted for supporting conclusions. In these linear regression models real exchange rate and manufacturing output variables are taken as dependent variables respectively.

Before appliying Vector Autoregressive model all series have to be stationary at same level. In this thesis Augmented Dickey-Fuller (ADF) and Philips-Perron (PP) tests are conducted for checking stationarity. Also Levin-Lin-Chun test is used for common unit-root test. If series are stationary at same level cointegration test can be implemented. Johansen Cointegration Test is basic tool for determing long run relationship between variables. Trace and Eigenvalue are main indicators in this test. If there is cointegration among variables estimation can be continued. After this Vector Error Correction Model (VECM) is used for correcting mistakes occurred after cointegration in the long run (LR). Vector Autoregressive model is following by Pairwise Granger Causality Test. This test is applied for understanding the impact of oil on other variables more clearly.

Impulse Response Function (IRF) is available to measure the reaction of dependent variable to changes in independent variables. Also, Variance Decomposition is applied for measuring impact of crude oil on manufacturing sector.

For estimating impact of oil on political and social lives of the country linear regression models are applied. In these models different dependent variables are used for detecting the resource curse problem more completely. For political aspects of resource abundance, government effectiviness is taken as dependent variable. In third model control of corruption is also used for this purpose.

For education sector public education spendings as share of government spendings and public education spending as share of GDP are used as dependent variable. In the case of health sector public health spendings as share of government spendings and public health spendings as share of GDP are dependent variables.

After all we can introduce the models for three different sides of resource curse theory as following. In first group of models economic aspects of resource curse are shown. Second group refers the linear regression models investigating effects of resource abundance on politics. Third group of models are used for understanting the impact of oil abundance on social life of Azerbaijan.

1 a)

$$Y = \beta_0 + \beta_1 + Y_{1,t-1} + \beta_2 Y_{2,t-1} + \beta_3 Y_{3,t-1} + \beta_4 Y_{4,t-1} + u$$

b) DY= $\beta_5 + \beta_6 DY_{1,t-1} + \beta_7 DY_{2,t-1} + \beta_8 DY_{3,t-1} + \beta_9 DY_{4,t-1} + u$

Y_1: Log crudeoil

Y_2: Log RGDP

Y_3: Log manufacturing

Y_4: Log RER

u: Error term

b) $manufacturing_t = \beta_0 + \beta_1 crudeoil_{1t} + \beta_2 rer_{2t} + \beta_3 rgdp_{3t} + u$

c) $rer_{t=}\beta_0 + \beta_1 manufacturing_{1t} + \beta_2 crudeoil_{2t} + \beta_3 rgdp_{3t} + u$

2 a) $Goveff_t = \alpha_0 + \alpha_1 gdppcap_{1,t} + \alpha_2 gdppcap_{2,t-1} + \alpha_3 oilrent_{3,t} + \alpha_4 fdi_{4,t} + \varepsilon$

$Goveff_t$: Government effectiveness

$gdppcap_{1,t}$: GDP per Capita

$gdppcap_{2,t-1}$: GDP per Capita(-1)

$oilrent_{3,t}$: Oil rents as share of GDP

$fdi_{4,t}$: FDI net inflows

ε: Error term

b)$Goveff_t = \alpha_0 + \alpha_1 gdppcap_{1,t} + \alpha_2 fdi_{2,t-1} + \alpha_3 oilrent_{3,t+} \alpha_4 regqual_{4,t} + \varepsilon$

$fdi_{2,t-1}$: FDI net inflows (-1)

$regqual_{4,t}$: Regulatory quality

c) $contcorr_t = \alpha_0 + \alpha_1 gdppcap_{1,t} + \alpha_2 oilrent_{2,t} + \alpha_3 fdi_{3,t} + \alpha_4 goveff_{4,t-1} + \varepsilon$

$contcorr_t$: Control of corruption

$goveff_{4,t-1}$: Government effectiveness (-1)

3a $)Leducgdp_t = \gamma_0 + \gamma_1 loilrent_{1,t} + \gamma_2 lgdppcap_{2,t} + \gamma_3 lgdppcap_{3,t-1} + \gamma_4 lexchangerate_{4,t} + T + e$

$Leducgdp_t$: Log of public spending on education as share of GDP

$loilrent_{1,t}$: Log of oil rents as share of GDP

$lgdppcap_{2,t}$: Log of GDP per Capita

$lgdppcap_{3,t-1}$: Log of GDP per Capita (-1)

$lexchangerate_{4,t}$: Log of official exchange rate

T: Time trend

e: Error term

$b)\ educgov_t =$

$\gamma_0 + \gamma_1 gdppcap_{1,t-1} + \gamma_2 oilrent_{2,t} + \gamma_3 excrate_{3,t} + \gamma_4 excrate_{4,t-1} + e$

$educgov_t$: Public spending on education as share of government spending

$excrate_{4,t-1}$: Official exchangerate (-1)

$c)\ leducgov_t = \gamma_0 + \gamma_1 lgdppcap_{1,t} + \gamma_2 loilrent_{2,t} + \gamma_3 lexcrate_{3,t} + T + e$

$leducgov_t$: Log of public spending on education as share of government spending

$d) lhexpgdp_t = \gamma_0 + \gamma_1 lgdppcap_{1,t} + \gamma_2 lgdppcap_{2,t-1} + \gamma_3 Loilrent_{3,t} +$

$\gamma_4 lexcrate_{4,t} + \gamma_5 lexcrate_{5,t-1} + e$

$lhexpgdp_t$: Log of public health expenditure as share of GDP

$e) lhexpgov_t = \gamma_0 + \gamma_1 lgdppcap_{1,t} + \gamma_2 lgdppcap_{2,t-1} + \gamma_3 loilrent_{3,t} +$

$\gamma_4 lexcrate_{4,t} + y_5 lexcrate_{5,t-1} + e$

$lhexpgov_t$: Log of public health expenditure as share of government expenditure

5.4 Unit root test

In time series analysis assumption of stationarity indicates that mean, variance and standart deviation of variables are same in all time trends. Since, for regressing Vector Autoregressive model all series must be stationary at same level, otherwise estimations can be spurious. In this thesis for checking unit root problem ADF and PP tests are conducted individually for every variable. Except this, for common unit

root test Levin-Lin-Chun test is implemented. In unit-root testing null hypothes can be set as following:

H_0: Series are non-stationary (Has unit root)

If τ (tau) the statistic of the data is greater than t statistics in absolute value null hypothesis is rejected, means that series are stationary or has no unit root. Variables stationary at first difference can bewritten as I(1) , at second difference as I(2). Sometimes time series are stationary at level which can be denoted as I(0).

5.5 Cointegration test

In time series analysis assumption of cointegration indicates that there is correlation among variables through a long period of time, in other words they are cointegrated. This helps for concluding about relationship between variables in the long run. In case of cointegration variables move together in the long run and each of them impacts the others. In terms of short run this relationship can be not satisfied. One of the assumptions of cointegration states that for this testing variables have to be integrated in same order.

In this thesis for testing cointegration among variables Johansen Cointegration Test is conducted. Cointegration null hypothesis can be given as following:

H_0: There is no cointegration among variables

Test decisions about absence or existence of cointegration is given due to two indicators: Trace and Eigenvalue statistics. If the statistics of these indicators are greater than critical value null hypothesis is rejected. Also, if probabilities are lower than 1, 5 and 10% values H_0 is rejected, which means there is cointegration among variables.

5.6 Vector Error Correction Model

Rejecting the null hypothesis in cointegration test informs us about existing of cointegration, in other words relationship among variables within a long period of time. As it stated before, for applying Johansen Cointegration Test it is necessary to take differences of variables for making them stationary. When derivatives of variables are taken this causes to "loses" in series in the long run. As a result of this there are deviations in series. For solving this problem Vector Error Correction Model is conducted. This model approves the cointegration and also corrects the deviations in the long run.

5.7 Causality Test

In this thesis Pairwise Granger Causality Test is used for detecting causality among variables. This test is available for determining causes between all variables in the model. However, in this thesis it is aimed to define whether "crudeoil" causes other variables such as RGDP, manufacturing and real exchange rate or not . According to structure of test null hypothesis can be written as:

H_0: Crudeoil does not cause other variables

In Pairwise Granger Causality Test if probability levels of coefficients are lower than 1,5 and 10% values H_0 is rejected means that , crudeoil does Granger cause of other variables.

5.8 Impulse Response Function

Vector Autoregressive model gives us opportunity to measure impact of one variable on others. For understanding impact of variables on others more clearly Impulse Response Function is conducted. The main purpose of this test is to determine the sensitivity of dependent variable when there is change in one of the independent variables. From its name it is seen that there are two type of participants in Impulse

Response Function: Impulse and response. In some cases impulse is also called as "signal". When there is signal about innovation in one of the variables dependent variable responses to this change. In this thesis the impact of change in crude oil production on other variables is on focus.

5.9 Variance Decomposition

For studying the link between dependent and independent variables in Vector Autoregressive model Variance Decomposition is applied. The main assumption of this method is that change in one of the variables in model is explained by innovations in this variable and also by changes in other variables. It can be understand that innovation in each variable is not caused only by structure of this variable also by other variables in model. This is true for all participants of regression and Variance Decomposition gives us opportunity to calculate the information transfer about changes in variables from each other.

Chapter 6

RESULTS AND INTERPRETATIONS

6.1 Unit-root test results

For testing stationarity level of series ADF and PP tests are applied. For common unit root test also Levin-Lin-Chu test is conducted. The results of ADF and PP tests are given at table 6.1.1. From table it is seen that none of the variables are stationary at level, however, according to ADF and PP indicators all of the variables are stationary at I(1). Also excluding LRGDP, othersare meaningful in all levels.

6.1.1 Unit root test results

	ADF I(0)	**ADF I(1)**	**PP I(0)**	**PP I(1)**
LRGDP	1.681110	- 2.167271**	3.673479	- 6.931 225***
LREER	0.632694	- 4.869953***	- 0.518830	- 4.868 914***
LCRUDEOIL	1.776317	- 5.848734***	1.751148	5.848 776***
LMANUF	3.482496	- 6.789105***	3.844114	- 6.827 636***

Note: *, ** and *** denote significance level of 10 percent, 5 percent and 1 percent levels, respectively.
Source: Author's own creation

Results of the Levin Lin Chu test for detecting common stationarity are given at table 6.1.2. According to this table variables are commonly stationary after taking

first differences. Also , it is seen that Levin Lin Chu statistics is significant at 1, 5 and 10%.

Table 6.1.2 Levin Lin Chu test results

	I(0)	I(1)
Levin Lin Chu	2.27725	-10.1704***

Note: *, ** and *** denote significance level of 10 percent, 5 percent and 1 percent levels, respectively.
Source: Author"s own creation

6.2 Pairwise Granger Causality Tests Results

Pairwise Granger Causality Test is able to forecast variables by using one of the series. Eviews computer programme gives us opportunity to measure relationship between all variables. But, in this thesis Granger causality among crude oil export and remaining variables is on focus. Because, according to Dutch disease theory natural resource extraction causes manufacturing, GDP and exchange rate. That is why it is important to undestand the relationship between crude oil export and other variables separately. Before applying Pairwise Granger Causality Test causality between crude oil variable and remaining variables is graphed. Results are shown in figure 6.2.1.

Table 6.1.1 Unit root test results

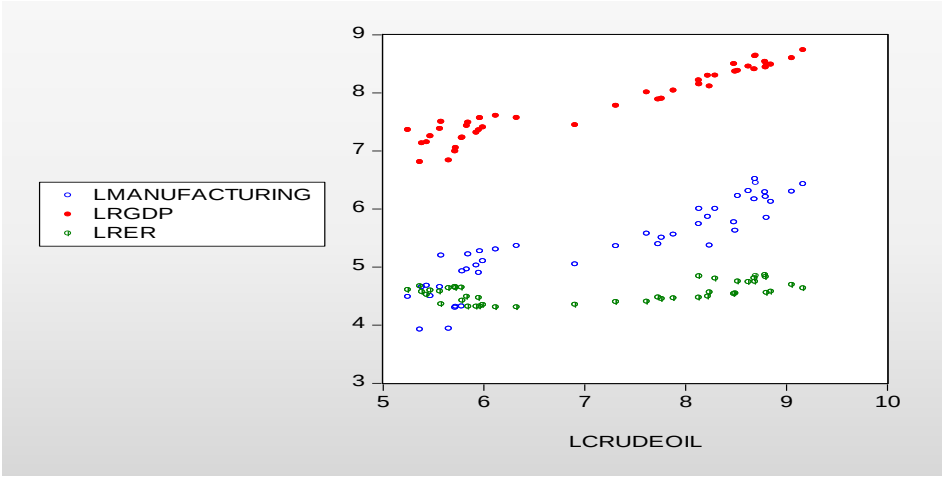


Figure6.2.1Granger CausalityGraph
Source: Author's own creation

It is difficult to interpret the figure 6.2.1. Graph does not introduce exact relationship between crude oil and other variables. Though, Dutch disease theory indicates that crude oil export causes the manufacturing sector to decline, in our graph opposite is observed. For analyzing the causality between crudeoil and other variables completely Pairwise Granger Causality Test is conducted.

Table 6.2.1 Pairwise Granger Causality Test results

Null hypothesis	Pairwise Granger Causality Tests F statistics
Crude oil export does not Granger cause RGDP	23.3224
Crude oil export does not Granger cause RER	16.5715***
Crude oil export does not Grange cause Manufacturing	5.16628**

Note: *, ** and *** denote significance level of 10 percent, 5 percent and 1 percent levels, respectively.

Source: Author"s own creation

Results indicate that null hypothesis is rejected for case of crude oil export Granger cause of real exchange rate at 1, 5 and 10% levels, also for manufacturing at 5 and 10% which means that crude oil export is Granger cause of real exchange rate and manufacturing. In case of real GDP null hypothesis is failt to reject. In other words crude oil export is not Granger cause of real GDP variable.

6.3 Johansen Cointegration Test results

The aim of conducting Johansen Cointegration test is to determine long run relationship among variables. For applying this test varibales must be stationary at same level. In our example all variables are integrated in order I(1). There are two main indicators for defining cointegration. The first is Trace numbers, the second is maximum Eigenvalue. In this thesis intercept and no trend model of Johansen Cointegration test is used. The null hypothesis states that there is no cointegration among variables. Both for Trace and Eigen if statistics of these indicators are greater than critical value, H_0 is rejected.

Table 6.3.1 Johansen Cointegration Test results

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value
None *	0.771901	115.1000	54.07904
At most 1 *	0.520991	54.50300	35.19275
At most 2 *	0.316747	24.32553	20.26184
At most 3	0.191372	8.709048	9.164546

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value
None *	0.771901	60.59700	28.58808
At most 1 *	0.520991	30.17747	22.29962
At most 2	0.316747	15.61648	15.89210

At most 3	0.191372	8.709048	9.164546

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Author's own creation

According to Trace values at table 6.3.1 H_0 is rejected at none, at most 1 and at most 2, means that there is cointetration among variables in the long run.

Maximum Eigen values at none and at most 1 gives us opportunity to reject the null hypothesis. In other words, this indicator also confirms that there is cointegration among variables in the long run. For summarizing results of Johansen Cointegration Test results it can be noted that variables are moving together in the long time periods. But, it does not present the variables exactly. That is why we can not accept this as the exact sign of Dutch disease problem for Azerbaijan economy.

6.4 Vector Error Correction Model results

The Johansen Cointegration Test results show that there is cointegration among variables in different levels. As it stated before cointegration analysis is made only with stationary variables in same degree. Also it is clear that it had been done by taking differences of variables. The Vector Error Correction Model corrects the "missings" caused by taking difference. For this purpose Vector Error Correction Model is conducted. This method is available for correcting deviations in variables. Results of Vector Error Correction Model are given at table 6.4.1.

Table 6.4.1 Vector Error Correction Model results

Vector Error Correction Estimates
Date: 03/04/14 Time: 18:48
Sample (adjusted): 2000Q4 2010Q4
Included observations: 41 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
DLCRUDEOIL(-1)	1.000000
DLMANUFACTURING(-1)	0.105094 (0.63237) [0.16619]
DLRER(-1)	-1.662914 (1.40814) [-1.18093]
DLRGDP(-1)	-4.349084 (0.63481) [-6.85101]
C	0.095240

Error Correction:	D(DLCRUDEOIL)	D(DLMANUFACTURING)	D(DLRER)	D(DLRGDP)
CointEq1	0.048663 (0.12118) [0.40159]	0.382328 (0.07502) [5.09639]	-0.049313 (0.01521) [-3.24299]	0.465131 (0.05069) [9.17519]
D(DLCRUDEOIL(-1))	-0.471113 (0.17428) [-2.70322]	-0.229738 (0.10789) [-2.12928]	0.030267 (0.02187) [1.38400]	-0.241634 (0.07291) [-3.31415]
D(DLMANUFACTURING(-1))	0.290413 (0.38760) [0.74927]	-0.574360 (0.23996) [-2.39358]	-0.074144 (0.04864) [-1.52441]	-0.051680 (0.16215) [-0.31872]
D(DLRER(-1))	-1.121181 (1.19210) [-0.94051]	0.249334 (0.73802) [0.33784]	-0.531197 (0.14959) [-3.55098]	0.377001 (0.49872) [0.75594]
D(DLRGDP(-1))	-0.389802 (0.46718) [-0.83438]	1.005734 (0.28923) [3.47733]	-0.069974 (0.05862) [-1.19361]	0.662581 (0.19544) [3.39012]
C	-0.009305 (0.05338) [-0.17431]	-0.003308 (0.03305) [-0.10010]	4.95E-05 (0.00670) [0.00738]	-0.004186 (0.02233) [-0.18742]
R-squared	0.236450	0.557300	0.387526	0.751651
Adj. R-squared	0.127372	0.494058	0.300029	0.716173
Sum sq. resids	4.087300	1.566568	0.064361	0.715356
S.E. equation	0.341731	0.211563	0.042882	0.142964
F-statistic	2.167706	8.812080	4.429048	21.18615
Log likelihood	-10.90989	8.749563	74.18819	24.81872
Akaike AIC	0.824873	-0.134125	-3.326253	-0.917986

Schwarz SC	1.075639	0.116642	-3.075487	-0.667220
Mean dependent	-0.005526	-0.003436	0.000278	-0.004449
S.D. dependent	0.365822	0.297434	0.051255	0.268349

Determinant resid covariance (dof adj.)	4.66E-08
Determinant resid covariance	2.48E-08
Log likelihood	126.3325
Akaike information criterion	-4.796706
Schwarz criterion	-3.626461

Source: Author's own creation

According to table 6.4.1 it can be concluded that deviations in lrgdp, lrer and lmanufacturing will be corrected in the long run. For lcrudeoil correction is not significant, means that deviation caused by taking difference will not be corrected in the long period of time. According to coefficients it can be indicated that each quarter of the year 38%, 4% and 46% of deviations are corrected in lmanufacturing, lrer and lrgdp respectively.

6.5 Impulse-Response Function results

As it stated before Impulse Response Function is available tool for interpreting the relationship among Vector Autoregressive model variables. The main idea of this function is to show how change in one of the series impacts the others. Depending on sample variables different Impulse Response Functions can be implemented. Appropriately to regression every variable can be used as impuls or response variable. In this thesis for investigating Dutch Disease problem, the impact of innovations in crude oil export on other variables is studied. Since, impulse variable is crudeoil in this example. It means that remaining variables are responses.

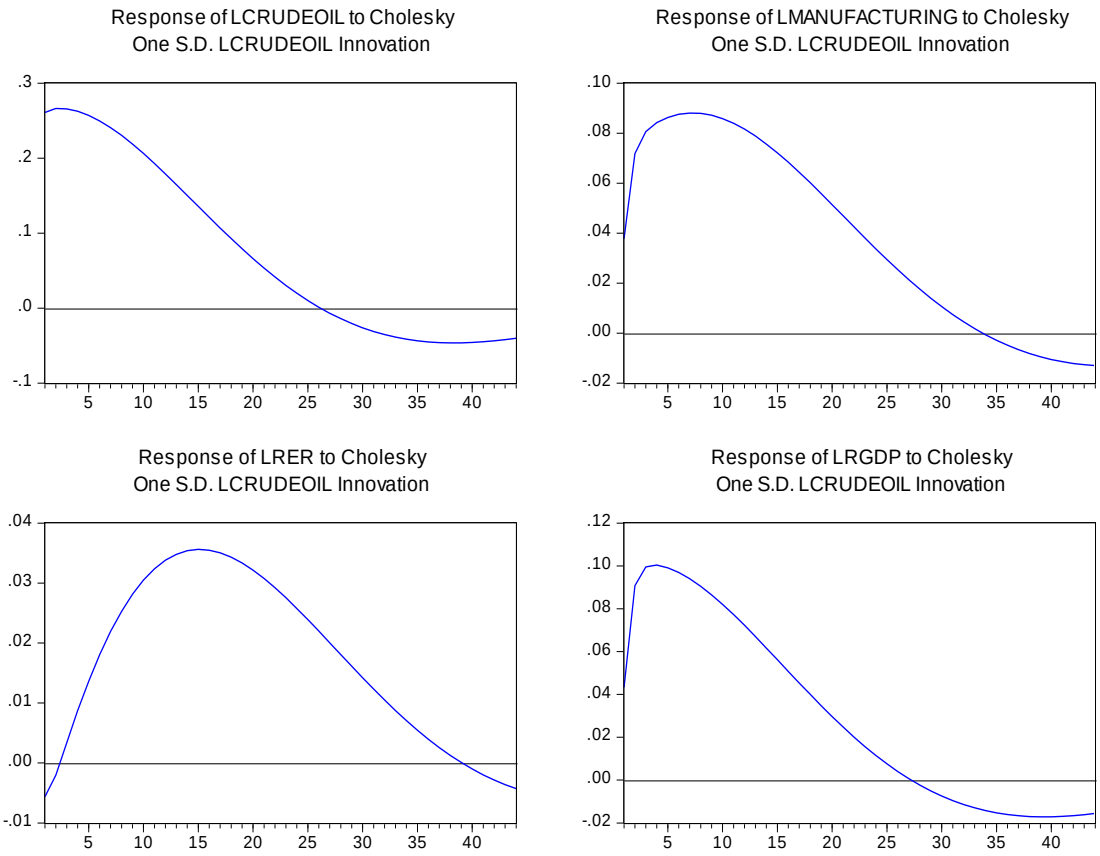


Figure 6.5.1 Impulse Response Function results
Note: Author's own creation

According to Dutch disease theory, decline in manufacturing sector and real exchange rate appreciation caused by natural resources are main signs of Dutch disease. Therefore, in Impulse Response Function relationship between these variables are more important in terms of detecting Dutch disease in Azerbaijan economy. From figure 6.5.1 it is seen that manufacturing sector growth a short period of time and then sharply declines. The increase in manufacturing sector during first periods can be explained by structure of quarterly data and with fact that the main signs of oil boom showed itself from 2005. From figure it is also observed that crude oil slowly impacted the manufacturing sector and after some time a sharp decline showed itself. But, in case of real exchange rate our expectations are not satisfied. According to Dutch disease theory it is known that natural resources cause real exchange rate to appreciate. But in Impulse Response Function this trend is not

observed. However, other reasons such as special government policies and etc could can be shows as the reasons of exchange rate depreciation in Azerbaijan currency.

6.6 Variance Decomposition results

The main idea behind the Variance Decomposition is that variance in regression is contributed among variables. In other words, this method gives us opportunity to investigate the changes in variables for every period and determine the level of roles of other variables in this variation. In this thesis changes in manufacturing and real exchange rate variables are more important for concluding about existence or absence of Dutch disease in Azerbaijan economy. The graphical results of Variance Decomposition for manufacturing variable are given in figure 6.6.1.

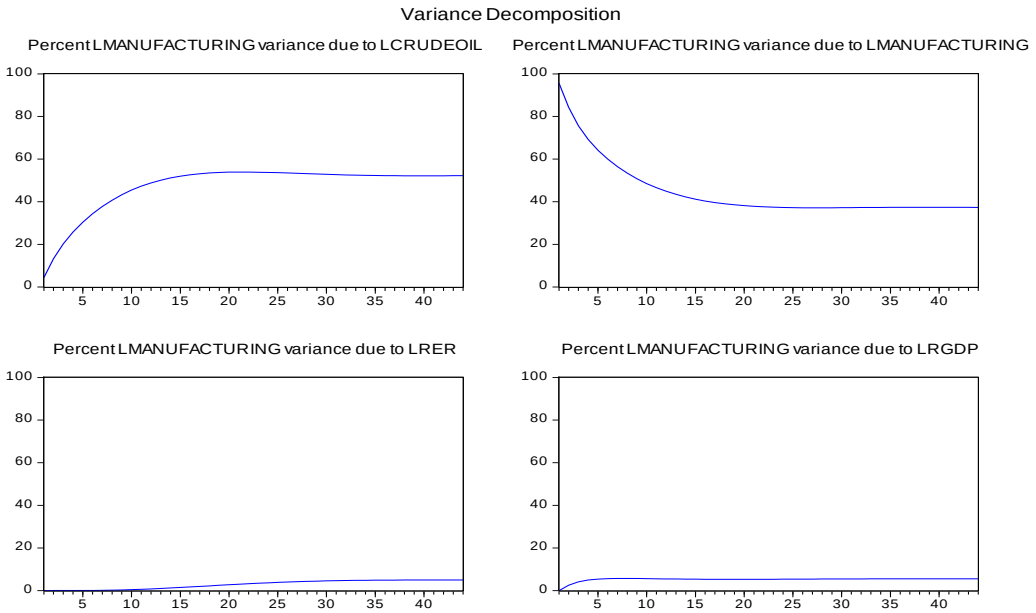


Figure 6.6.1 Variance Decomposition results
Source: Author's own creation

From figure 6.6.1 it is seen that more than 50% of variance in "lmanufacturing" variable can be explained by "lcrudeoil" which can be accepted as a strong suspect about the existence of Dutch Disease in Azerbaijan economy. The other factors are

not so important in this mean. Same operation is repeated also for real exchange rate variable which results are introduced in figure 6.6.2.

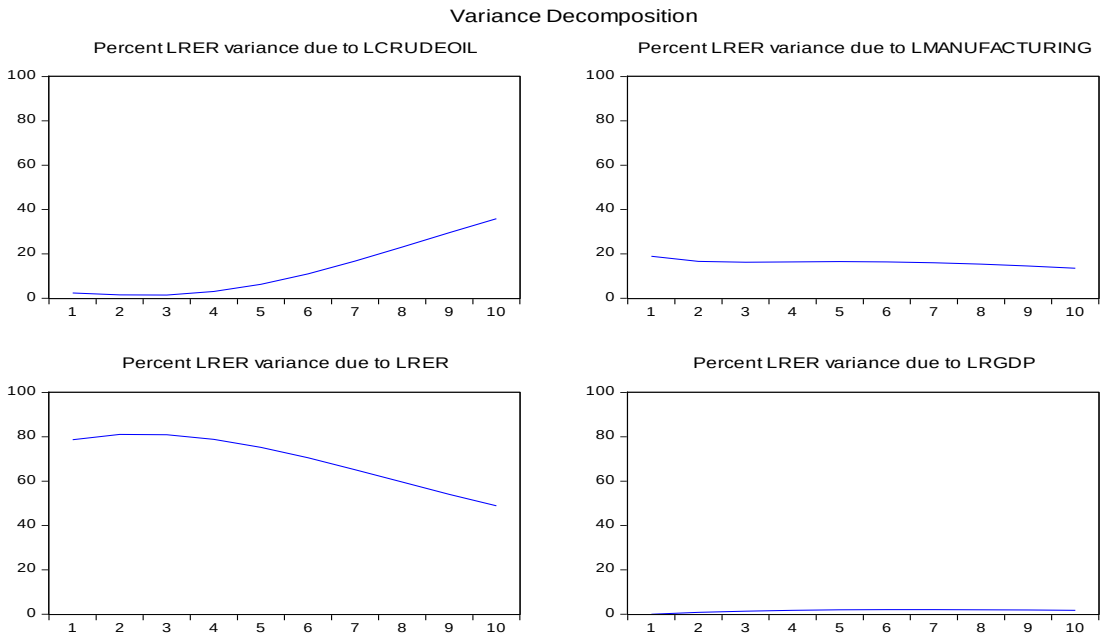


Figure 6.6.2 Variance Decomposition results for real exchange rate
Note: Author's own creation

Unlike case of manufacturing, there is not a significant sign for concluding about the role of crude oil export on variation in real exchange rate. But it is seen that after some time period impact of crude oil export on a variation of "lreer" is increasing. This is not strong sign, but can be accepted as suspect of Dutch disease. The tables 6.6.1 and 6.6.2 also confirm our outcomes.

Table 6.6.1 Variance Decomposition results for manufacturing

Variance Decomposition of LMANUFACTURING:

Period	S.E.	LRER	LCRUDEOIL	LMANUFACTURING	LRGDP
1	0.179752	20.94017	2.008224	77.05161	0.000000
2	0.223184	19.42395	9.579818	68.52438	2.471847
3	0.254388	18.35501	15.88882	61.65274	4.103425

4	0.279701	17.72043	20.97146	56.34612	4.961983
5	0.301302	17.36010	25.21319	52.03324	5.393472
6	0.320317	17.17931	28.83264	48.39304	5.595011
7	0.337392	17.12771	31.94393	45.25834	5.670017
8	0.352919	17.17689	34.61441	42.53367	5.675033
9	0.367140	17.30898	36.89182	40.15666	5.642535
10	0.380209	17.51115	38.81575	38.08126	5.591837

Source: Author's own creation

Table 6.6.2 Variance Decomposition results for real exchange rate

Variance Decomposition of LRER:

Period	S.E.	LRER	LCRUDEOIL	LMANUFACTURING	LRGDP
1	0.036395	100.0000	0.000000	0.000000	0.000000
2	0.048541	98.64070	0.350467	0.231159	0.777669
3	0.057066	96.24776	2.154576	0.221134	1.376528
4	0.063996	92.34109	5.720449	0.175836	1.762625
5	0.070147	87.00262	10.84191	0.171818	1.983653
6	0.075934	80.62066	17.08941	0.213872	2.076063
7	0.081577	73.68274	23.96246	0.284495	2.070307
8	0.087189	66.65284	30.98901	0.363682	1.994461
9	0.092813	59.90445	37.78558	0.436061	1.873911
10	0.098449	53.69645	44.08092	0.492520	1.730106

Note: Author's own creation

Results of tables 6.6.1 and 6.6.2 support our findings. From tables it is seen that both in manufacturing and reer variations are mostly explained by crude oil export. In terms of real exchange rate this number increases sharply. But for manufacturing this is looks like stable or increasing in lower levels.

6.7 Dutch disease results

After taking the results from previous subsections we can make some predictions for our Vector Autoregressive model. As it mentioned before this model is a collection of linear regression models and it can be understand as different linear regression models. However, for the Dutch disease we are interested more carefully with impact of crude oil export on real exchange rate and manufacturing. It is expected negative

sign for crude oil in explaining manufacturing, but positive sign in case of real exchange rate, means that crude oil export negatively impacts the manufacturing sector but, positively correlated with the real exchange rate. Before applying Vector Autoregressive model, graphs showing relations between crude oil export and manufacturin, also link between crudeoil and real exchange rate is introduced in figure 6.7.1.

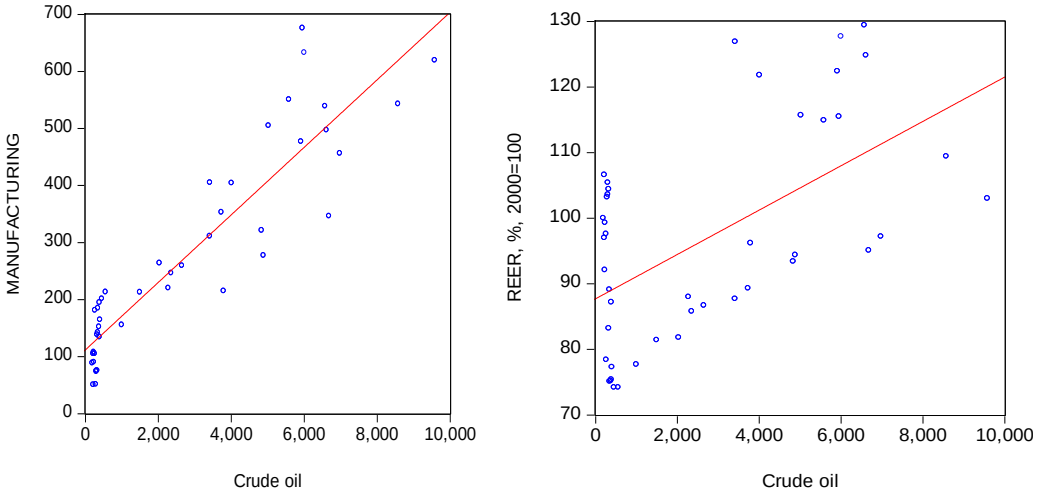


Figure 6.7.1 Relationship between crude oil export , manufacturing and real exchange rate

Source: Author's own creation

According to first graph crude oil has positive effect on manufacturing sector, which can be accepted as negotiation of Dutch disease assumption. Second graph shows positive relationship betwen crudeoil and real exchange rate that can be undestand as support of Dutch disease theory. However this relationship is not clearly reflected in figure 6.7.1. According to graph results, it can not be conclude about perfect signs of Dutch disease in Azerbaijan economy. For making correct interpretations it is necessary to conduct Vector Autoregressive model which results are presented at table 6.7.1.

Table 6.7.1 Vector Autoregressive model results

Vector Autoregression Estimates
Date: 03/04/14 Time: 23:39
Sample (adjusted): 2000Q3 2010Q4
Included observations: 42 after adjustments
Standard errors in ( )

	DLCRUDEOIL	DLMANUFACTURING	DLRER	DLRGDP
DLCRUDEOIL(-1)	0.031937	0.098374	0.015667	0.193555*
	(0.16963)	(0.12392)	(0.02636)	(0.11117)
DLMANUFACTURING(-1)	-0.012079	-0.416331	-0.015486	-0.380684
	(0.44040)	(0.32173)	(0.06844)	(0.28863)
			[-0.22626]	[-1.31891]
DLRER(-1)	-0.725067	-0.973888	0.306673*	-0.738953
	(1.11062)	(0.81135)	(0.17260)	(0.72790)
DLRGDP(-1)	-0.121623	0.162160	0.038380	0.096611
	(0.47275)	(0.34536)	(0.07347)	(0.30984)
C	0.078033*	0.071755**	0.001994	0.046897
	(0.04614)	(0.03371)	(0.00717)	(0.03024)
R-squared	0.014313	0.092116	0.094670	0.146852
Adj. R-squared	-0.092248	-0.006033	-0.003204	0.054619
Sum sq. resids	2.703430	1.442768	0.065293	1.161238
S.E. equation	0.270307	0.197468	0.042008	0.177158
F-statistic	0.134316	0.938528	0.967266	1.592194
Log likelihood	-1.989301	11.19781	76.20189	15.75642
Akaike AIC	0.332824	-0.295134	-3.390566	-0.512210
Schwarz SC	0.539689	-0.088269	-3.183701	-0.305345
Mean dependent	0.072539	0.059782	0.005072	0.042968
S.D. dependent	0.258640	0.196875	0.041941	0.182203

Determinant resid covariance (dof adj.)	3.04E-08
Determinant resid covariance	1.83E-08
Log likelihood	135.7843
Akaike information criterion	-5.513539
Schwarz criterion	-4.686078

Note: * and ** are significance level of 10 and 5%
Source:Author's own creation

Unlike expectations there is only four significantcoefficient in our model which two of them is related with constant term. One of the significant coefficients at 10% level implies that 0.19% increase in DLRGDP will cause DLCRUDEOIL(-1) to increase by 1%. Other coefficient which also significant only at 10% indicates that 0.3%

increase in DLRER will lead to 1% increase in DLREER(-1). Other coefficients are not meaningful in our model.

The results of Vector Autoregressive model indicate that our independent variables have not significant effect on dependent variable. In other words independent variables in this model has no effect in explaining dependent variable. These results do not provide us with enough support for concluding existence or absence of Dutch disease problem in Azerbaijan economy. For getting better results two different linear regression models are also applied. In first regression dependent variable is manufacturing output. Relationship between manufacturing output and crude oil export is more on focus. One of the properties of Dutch disease theory indicates that increase in resource export cause the manufacturing sector to decline. Since, it is expected negative sign for crude oil. For real exchange rate, also negative relationship is predicted. When there is Dutch disease real exchange rate appreciates and it accompanies with decline in manufacturing sector. However, this is not a strong assumption and is not always true. In terms of RGDP, positive sign is prognosed.

Table 6.7.2 Linear regression model results for manufacturing

Dependent Variable: MANUFACTURING

Method: Least Squares
Date: 03/11/14 Time: 22:44
Sample: 2000Q1 2010Q4
Included observations: 44

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-194.7253	67.36817	-2.890464	0.0062
CRUDEOIL	-0.016467	0.012910	-1.275537	0.2095
RER	1.482639	0.630058	2.353177	0.0236
RGDP	0.125904	0.021557	5.840610	0.0000

R-squared	0.912806	Mean dependent var	273.1220
Adjusted R-squared	0.906266	S.D. dependent var	178.1889
S.E. of regression	54.55424	Akaike info criterion	10.92278
Sum squared resid	119046.6	Schwarz criterion	11.08498
Log likelihood	-236.3011	Hannan-Quinn criter.	10.98293

F-statistic	139.5822	Durbin-Watson stat	0.390288
Prob(F-statistic)	0.000000		

Source:Author's own creation

From table it is seen that our expectations are not justified. Though, crude oil has a negative sign, it is meaningful in none of significance levels. The other finding is that there is positive relationship between real exchange rate and manufacturing. In case of RGDP one unit increase in this independent variable causes manufacturing to increase 0.12 units. Excluding crudeoil, all of the coefficients are significant in different levels.

In second model real exchange rate variable is used as dependent variable and remaining variables are as independent variables. In this model in terms of signs of variables expectations are same with previous one. But, relationship between crude oil export and real exchange rate is more important for concluding about Dutch disease. According to Dutch disease model, export of natural resources cause real exchange rate to increase, means that there is positive correlation between resource export and real exchange rate. Results are given at table 6.7.3.

Table 6.7.3 Linear regression model results for real exchange rate

Dependent Variable: RER
Method: Least Squares
Date: 03/11/14 Time: 23:00
Sample: 2000Q1 2010Q4
Included observations: 44

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	98.48972	7.809896	12.61089	0.0000
MANUFACTURING	0.082017	0.034854	2.353177	0.0236
CRUDEOIL	0.006503	0.002922	2.225778	0.0317
RGDP	-0.014219	0.006525	-2.179209	0.0353

R-squared	0.418888	Mean dependent var	96.92500
Adjusted R-squared	0.375305	S.D. dependent var	16.23415
S.E. of regression	12.83109	Akaike info criterion	8.028127
Sum squared resid	6585.473	Schwarz criterion	8.190326

Log likelihood	-172.6188	Hannan-Quinn criter.	8.088278
F-statistic	9.611195	Durbin-Watson stat	0.362456
Prob(F-statistic)	0.000066		

Source:Author's own creation

Results indicate that increase in crude oil export variable cause the real exchange rate to raise. However, this effect is not strong with number 0.0065. Also sign of manufacturing is questionable. In terms of significance, all variables are meaningful at 5 and 10% levels.

6.8 Results of linear regression models for political life

For investigating impact of natural resources on political life of Azerbijan three different linear regression models are applied. In first model , dependent variable is government effectiviness. GDP per Capita, GDP per Capita(-1), oil rent as share of GDP and FDI are independent variables. In this model negative signs for gdppcap, oilrent and FDI are expected. According to resource curse theory oil rent inflows cause government efficiency to decline. Except this, it is known that in as other resource abundance countries also in Azerbaijan most of the FDI is directed to oil sector which is suspected to strength authority and decrease government efficiency in country. GDP per Capita is also expected to be negatively correlated with government efficiency. It can be explaining with that GDP per Capita is one of the determinants of citizens' wellbeing. But in case of natural abundant countries high GDP per Capita means high resource revenues which is sign of non-efficient government rule.Gdppcap(-1) is also added to regression because of suspects that dependent variable also affected by previous year's GDP per Capita. Unlike, gdppcap, positive sign for gdppcap(-1) is expected.

Before regressing the model the relationship between dependent and independent variables are graphically shown in figure 6.8.1.

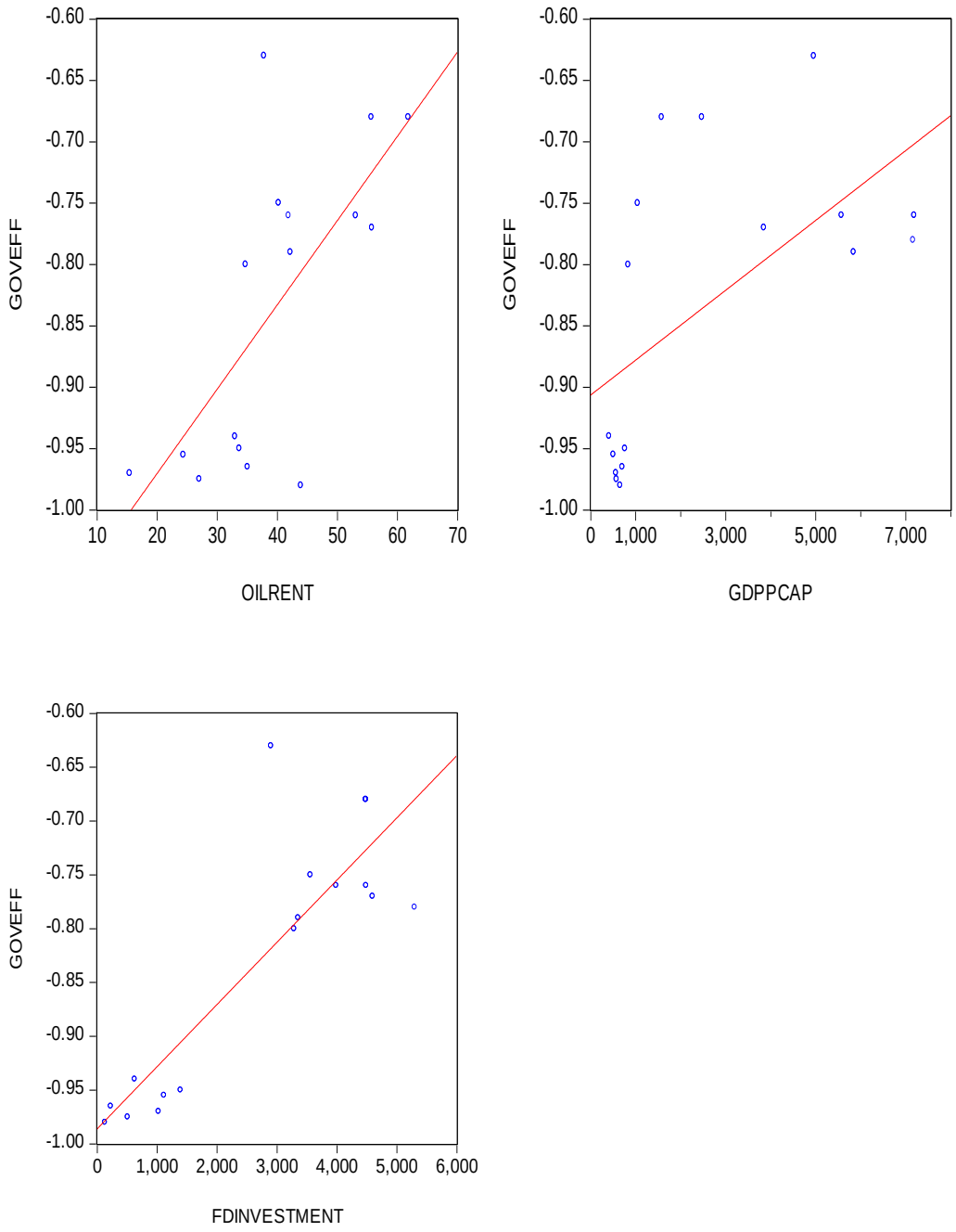


Figure 6.8.1 Graphical analysis of political side of resource curse
Source:Author's own creation

Graphical results show that expectations in terms of relation between dependent and independent variables are not satisfied. Graphs does not present exact appearance , but it is seen that government efficiency is positively correlated with independent variables, means that increase in "oilrent", "gdppcap" and "FDI" cause the government efficiency to increase which is opposite with our prognosis. For geting

better results, three different linear regression models are conducted. Results are presented at table 6.8.1

Table 6.8.1 Results of first linear regression model for political life

Dependent Variable: GOVEFF
Method: Least Squares
Date: 03/09/14 Time: 16:51
Sample (adjusted): 1997 2011
Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.105561	0.027836	-39.71642	0.0000
GDPPCAP	-0.000105	1.58E-05	-6.687306	0.0001
GDPPCAP(-1)	0.000121	1.70E-05	7.153214	0.0000
OILRENT	0.003052	0.000880	3.467780	0.0060
FDI	6.47E-05	7.31E-06	8.849899	0.0000

R-squared	0.965761	Mean dependent var	-0.827667
Adjusted R-squared	0.952065	S.D. dependent var	0.124955
S.E. of regression	0.027358	Akaike info criterion	-4.098435
Sum squared resid	0.007484	Schwarz criterion	-3.862419
Log likelihood	35.73826	Hannan-Quinn criter.	-4.100949
F-statistic	70.51591	Durbin-Watson stat	2.077515
Prob(F-statistic)	0.000000		

Source: Author's own creation

From table 6.8.1 it is seen that results are completely different than our expectations. First of all, it became clear that "oilrent" and "goveff" are positively correlated. Oneunit increase in independent variable causes "goveff" increase by 0.003 units. The other finding shows that there is positive relationship between FDI and "goveff". In case of positive relationship between oil rents and government effectiveness sign of FDI is not surprising. Because, if oil stimulates the government effectiveness to become better off, FDI also takes part as stimulator in this process. Unlike, first two independent variables Gdppcap and Gdppcap(-1) justified prognosis. Gdppcap's negative impact on dependent variable is not so large. Results state that one unit increase in independent variable increases dependent variable by 0.0001 units. With opposite sign same is true also for gdppcap(-1). In terms of significance levels

results at table 6.8.1 show that all t and F statistics are meaningful at 1, 5 and 10 % levels.

For investigating this problem in second model FDI(-1) and regulatory quality variables are also added to regression. It is expected that FDI(-1) impacts the goveff negatively. In resource abundand countries such as Azerbaijan FDI is one of the important tools for strength authority. For "regqual" variable opposite is prognosed. If this variable increases it causes to better government efficiency. Results are given at table 6.8.2.

Table 6.8.2 Results of first linear regression model for political life

Dependent Variable: GOVEFF
Method: Least Squares
Date: 03/09/14 Time: 21:03
Sample (adjusted): 1997 2011
Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.563239	0.135804	-4.147442	0.0020
GDPPCAP	-2.49E-05	9.97E-06	-2.499044	0.0315
OILRENT	-0.001103	0.001490	-0.740013	0.4763
FDI(-1)	4.44E-05	1.48E-05	2.994712	0.0135
REGQUAL	0.420566	0.125648	3.347169	0.0074

R-squared	0.907063	Mean dependent var	-0.827667
Adjusted R-squared	0.869888	S.D. dependent var	0.124955
S.E. of regression	0.045073	Akaike info criterion	-3.099877
Sum squared resid	0.020316	Schwarz criterion	-2.863860
Log likelihood	28.24908	Hannan-Quinn criter.	-3.102391
F-statistic	24.39980	Durbin-Watson stat	2.013081
Prob(F-statistic)	0.000038		

Source: Author's own creation

As the previous one, also in this model expectations are mostly not satisfied. The main difference between first and second models is the sign of oilrent variable. Differently from first one in this regression oilrent and goveff are negatively correlated. But it is meaningful at none of significance levels. FDI(-1)'s sign is also different than prognosis. According to table 6.8.2 one unit increase in FDI(-1)

increases the goveff 4.4 units. But after first regression model it must not be surprising. GDP per Capita variable has same sign as we expected. The other prognosis is verified by relationship between regqual and goveff, meaning that increase in regulatory quality results with rise in government effectiveness. In terms of significance levels as it stated before oilrent is not significant, gdppcap and FDI is significant at 5 and 10% levels. Only regqual is meaningful in all significance levels. As it mentioned in previous chapters sudden revenue inflows can damage not only government efficiency, but also increase the corruption level in high political bureaucrats. For considering this, control of corruption variable is used as dependent variable in third regression. The independent variables are gdppcap, oilrent and FDI. Also goveff(-1) is added to regression as independent variable. Negative sign for gdppcap, FDI and oilrent, but positive sign for "goveff" variables is expected. The results are presented at table 6.8.3.

Table 6.8.3 Results of third linear regression model for political life

Dependent Variable: CONTCORR
Method: Least Squares
Date: 03/09/14 Time: 21:46
Sample (adjusted): 1997 2011
Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.736437	0.208043	-8.346531	0.0000
GDPPCAP	-1.08E-05	6.86E-06	-1.566559	0.1483
OILRENT	0.003962	0.001330	2.978618	0.0138
FDI	3.61E-05	1.25E-05	2.879233	0.0164
GOVEFF(-1)	0.516146	0.190619	-2.707732	0.0220

R-squared	0.745750	Mean dependent var	-1.075333
Adjusted R-squared	0.644050	S.D. dependent var	0.068517
S.E. of regression	0.040878	Akaike info criterion	-3.295246
Sum squared resid	0.016710	Schwarz criterion	-3.059229
Log likelihood	29.71434	Hannan-Quinn criter.	-3.297760
F-statistic	7.332851	Durbin-Watson stat	2.121459
Prob(F-statistic)	0.005024		

Source: Author's own creation

Results show that gdppcap variable is negatively correlated with contcorr variable. However this is not significant in any level. Unlike our prognosis oilrent variable and FDI are positively correalted with control of corruption, means, increase in share of oil rents in GDP and foreign investment inflows cause to better control over corruption. Sign of Goveff(-1) is same with our expectations. Results indicate that one unit increase in goveff(-1) causes contcorr increase by 0.5 unit. As it stated before, excluding gdppcap, all remaining variables are meaningful at 5 and 10% significance levels.

6.9 Results of linear regression models for social life

For investigating impact of resource abundance on social life of Azerbaijan two different type of linear regression models are applied. In first group of models impact of oil revenues on education sector is studied. There are three different linear regression models for this purpose. In second group of regressions health sector is on focus.

6.9.1 Results of linear regression models for education sector

According to resource curse theory one of the negative effects of resource abundance show itself in education system of country. Before implementing linear regression models, relationship between independent and dependent variables are graphically presented at figure 6.9.1.

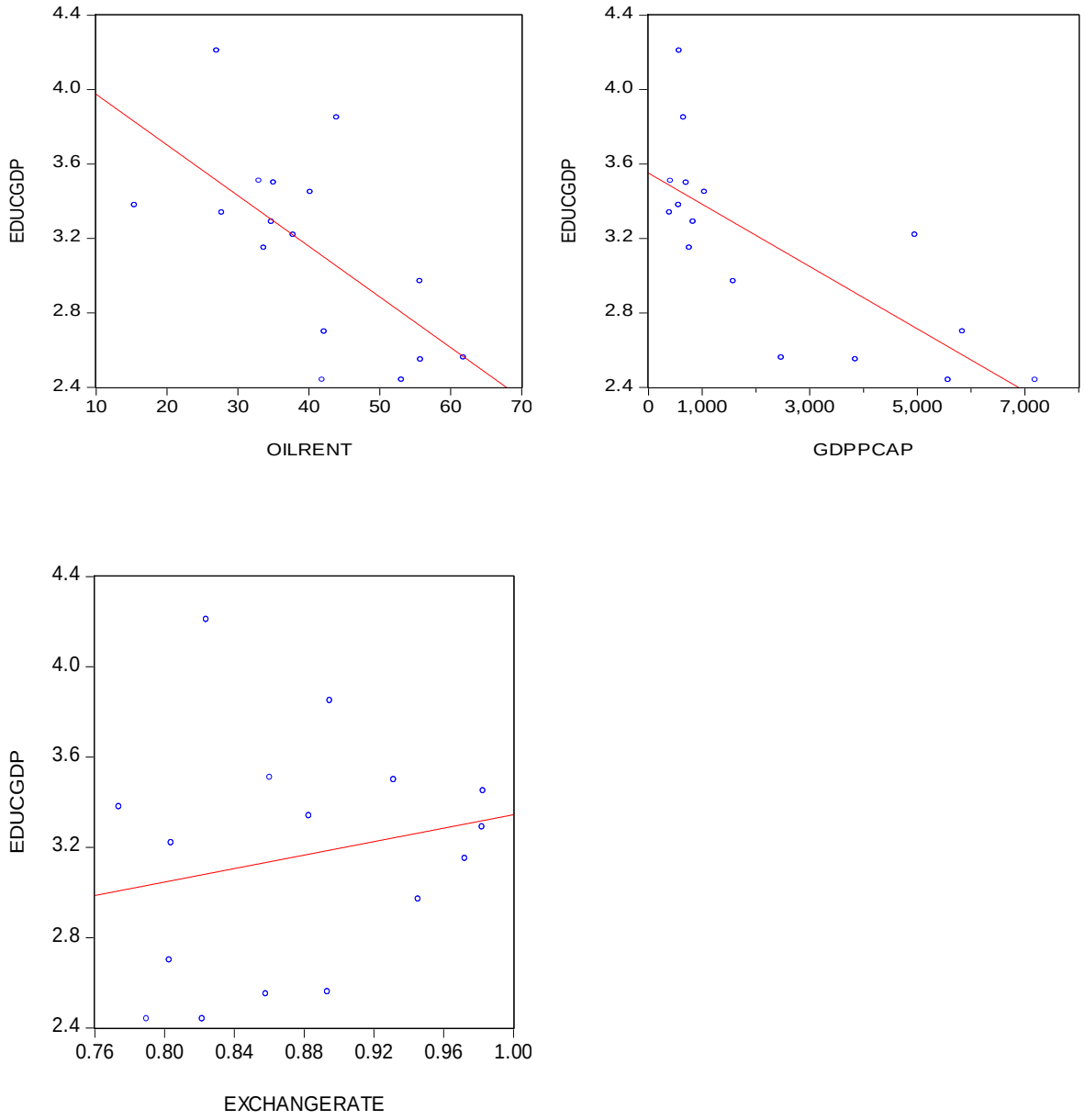


Figure 6.9.1 Graphical results for educgdp
Source: Author's own creation

Graphs do not present exact results. In case of relationship between oilrent and educgdp and also correlation between gdppcap and educgdp negative link is observed. But, this interpretation is not enough for concluding about opposite relationship between dependent and independent variables. This conclusion is same also for gdppcap. In third graph there is not any exact relationship between exchangerate and educgdp.

After invesgitigating the relationship between independent variables and educgdp graphically , same is done for educgov at figure 6.9.2.

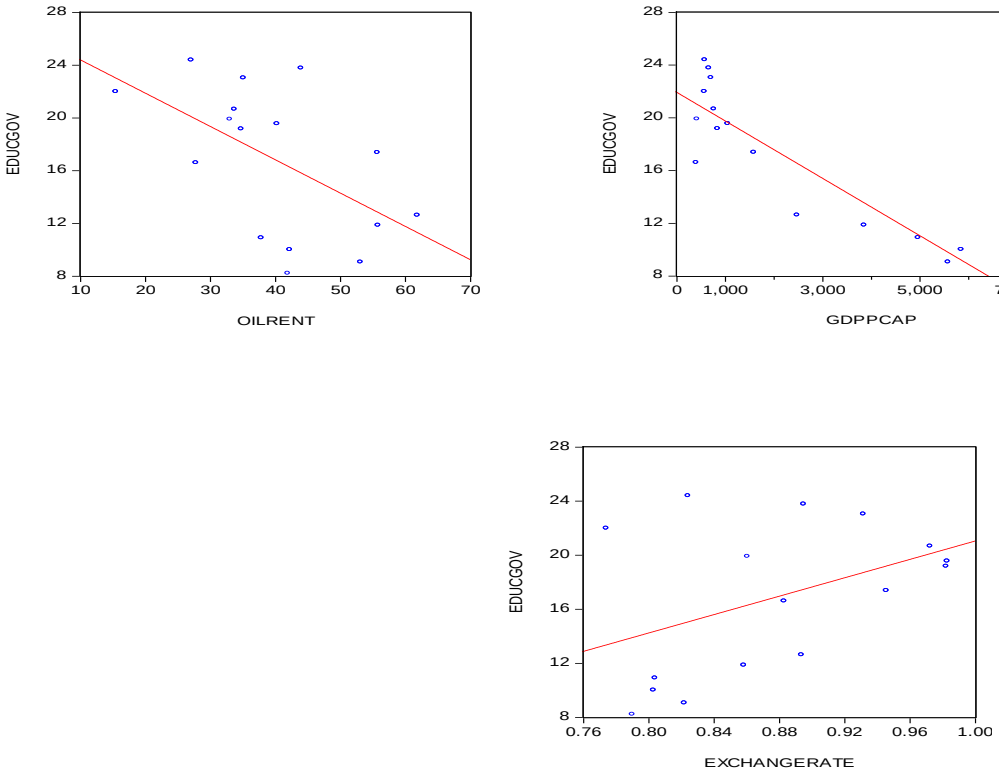


Figure 6.9.1 Graphical results fer educgdp
Source: Author's own creation

Graphs indicate that there is not precise relationship between dependent and independent variables in these models. According to figures it is not impossible concluding about negative relationship between oil rent and educgov. This is also true for other variables. After taking all outcome into account it is necessary to use linear regression models for determining real situation about link between natural resource abundance and education sector. In first model variables are in log form. Dependent variable is log of public education as a share of total GDP which is denoted as leducgdp.. As independent variables lgdppcap, loilrent , lexcrate is used.

It is suspected that leducgdp is also impacted by lgdppcap(-1). That is why, this variable is also added into regression. It is suspected about impact of time trend on leducgdp. Since, time trend is also used in the first linear regression model. It is expected negative relationship between loilrent and leducgdp because of resource curse suspect. Sign for gdppcap is also prognosed to be negative. Because for case of oil revenues gdppcap will increase, however, this will happen due to resource abundance and it negatively correlated with education. But in terms of lgdppca(-1) positice sign is expected. Because, last years gdppcap is push for development in original way and it can show itself also in social life, especially in education. According to Dutch theory which is one the economic symptoms of resource curse exchange rate appreciation is main sign of resource curse in economy. For this reason, there is opposite relationship between this independent and dependent variable is expected. Results for first model are given in table 6.9.1

Table 6.9.1 Results of first linear regression model for education sector

Dependent Variable: LEDUCGDP
Method: Least Squares
Date: 03/10/14 Time: 00:42
Sample (adjusted): 1996 2011
Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.128194	0.782226	3.999094	0.0031
LGDPPCAP	-0.915682	0.210859	-4.342628	0.0019
LGDPPCAP(-1)	0.418741	0.152099	2.753082	0.0224
LEXCRATE	-1.453172	0.716594	-2.027887	0.0732
LOILRENT	0.261783	0.126139	2.075350	0.0678
T	0.064360	0.034131	1.885664	0.0920

R-squared	0.894251	Mean dependent var	1.133316
Adjusted R-squared	0.835502	S.D. dependent var	0.170127
S.E. of regression	0.069001	Akaike info criterion	-2.220220
Sum squared resid	0.042850	Schwarz criterion	-1.937000
Log likelihood	22.65165	Hannan-Quinn criter.	-2.223237
F-statistic	15.22147	Durbin-Watson stat	1.551489
Prob(F-statistic)	0.000367		

Source:Author's own creation

Results show that only sign of loilrent does not satisfy our expectations. It can be understand as the positive effect of oil rents on education, which rejects resource curse effect on education sector. According to outcomes 1% increase in lgdppcap causes leducgdp to decrease 0.91%. In case of lgdppcap(-1) 1% increase results with 0.41% increase in educgdp. Results for lexcrate indicate that 1% increase in lexcrate decreases the leducgdp by 1.4%. Time trend also has positive coefficient, means that every time period leducgdp shifts by 0.06 units. Among the variables only lgdppcap is significant in all levels.Lgdppcap(-1) is meaningful at 5 and 10% significance levels. Remaining variables are significant only at 10% percent which means that they have not so strong significance they.

In second regression dependent variable is public expenditure on education as share of government expenditure. Explanatory variables are gdppcap(-1) , exchangerate , exchangerate(-1) and oilrent. There is only exchangerate is new added variable to regression and it is expected negative sign for it. Table 6.9.2 presents results for this regression.

Table 6.9.2 Results of second linear regression model for education sector

Dependent Variable: EDUCGOV
Method: Least Squares
Date: 03/10/14 Time: 01:16
Sample (adjusted): 1996 2011
Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	29.17262	5.497883	5.306155	0.0003
GDPPCAP(-1)	-0.002131	0.000235	-9.062177	0.0000
EXCRATE	46.92156	10.99305	4.268294	0.0016
EXCRATE(-1)	-51.28803	11.12911	-4.608457	0.0010
OILRENT	-0.100202	0.036397	-2.753024	0.0204

R-squared	0.966945	Mean dependent var	16.85733
Adjusted R-squared	0.953722	S.D. dependent var	5.771254
S.E. of regression	1.241525	Akaike info criterion	3.531760
Sum squared resid	15.41385	Schwarz criterion	3.767776
Log likelihood	-21.48820	Hannan-Quinn criter.	3.529246
F-statistic	73.13059	Durbin-Watson stat	2.363346
Prob(F-statistic)	0.000000		

Source:Author's own creation

Results indicate that there is negative relationship between gdppcap(-1) and educgov. But with 0.002 units decrease in educgov by every unit increase on gdppdac(-1) is not a high number. Unlike first regression exchange rate variable is positively correlated with dependent variable. According to table 6.9.2 it can be concluded that 1 unit increase in excrate variable causes to 46.9 unit rise in educgov. Differently from excrate, excrate(-1) is negatively correlated with dependent variable. The main independent variable oilrent negatively impacts educgov. Results show that 1 unit increase in oilrent cause educgov to decrease 0.1 which can be undestand as presence of resource curse. All variables are meaningful in every significance levels. Only oilrent is significant at 5 and 10%.

In third model leducgov is used as dependent variable. Lgdppcap, lexcrate, loilrent are independent variables. Also time trend is added to regression.

Table 6.9.3 Results of third linear regression model for education sector

Dependent Variable: LEDUCGOV
Method: Least Squares
Date: 03/10/14 Time: 01:31
Sample: 1995 2011
Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.072096	0.759218	10.63212	0.0000
LGDPPCAP	-1.047135	0.190894	-5.485432	0.0002
LEXCRATE	-1.834032	0.801138	-2.289283	0.0428
LOILRENT	0.260318	0.153903	1.691440	0.1189
T	0.131346	0.032085	4.093722	0.0018

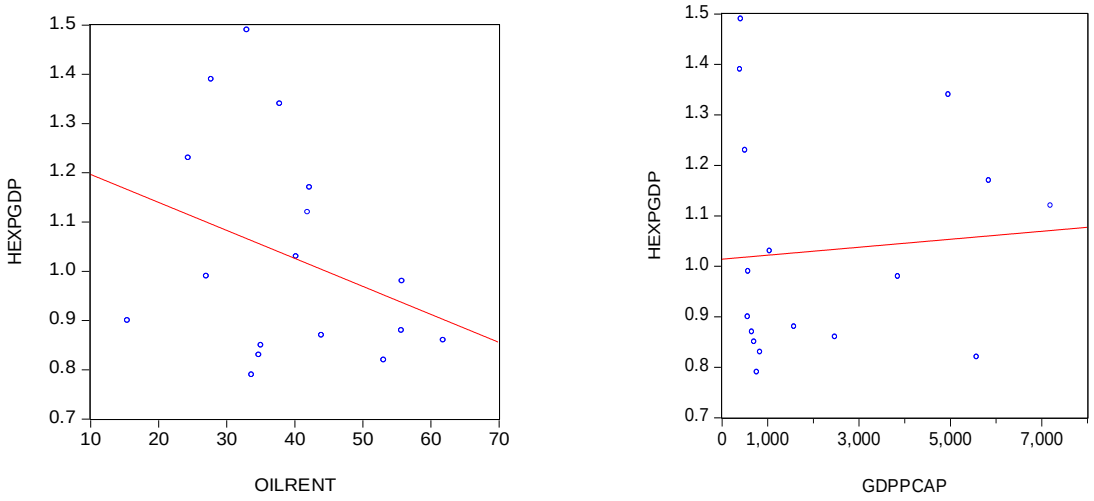
R-squared	0.947945	Mean dependent var	2.764758
Adjusted R-squared	0.929016	S.D. dependent var	0.368253
S.E. of regression	0.098113	Akaike info criterion	-1.555091
Sum squared resid	0.105887	Schwarz criterion	-1.313657
Log likelihood	17.44072	Hannan-Quinn criter.	-1.542727
F-statistic	50.07904	Durbin-Watson stat	1.220638
Prob(F-statistic)	0.000001		

Source:Author's own creation

Except loilrent signs of all variables are similar with prognoses. Results indicate that 1% increase in lgdppcap results with 1.04% decrease in leducgov. Also dependent variable declines 1.83% after 1% rise in lexcrate. Time trend coefficient shows that at every time period leducgoc increases by 0.13 units. But, unlike our expectations oilrent is positively correlated with leducgov. It's coefficient indicates that 1% increase in loilrent causes leducgov to rise by 0.26%. The other problem with loilrent is it's significance level. From table 6.9.3 it is seen that this variable is significant only at 12% level. For case of, lgdppcap and time trend are meaningful in all levels. Lexcrate is significant at 5 and 10%.

6.9.2 Results of linear regression models for health sector

For measuring impact of natural resource on health sector firstly graphical analyses is conducted. Results are presented in figure 6.9.3.



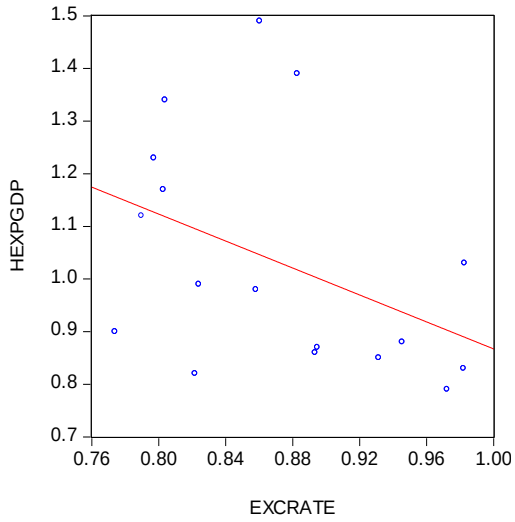


Figure 6.9.3 Graphical results for hexpgdp
Source: Author's own creation

Graphical results for relationship between hexp and independent variables such as oilrent, gdppcap and excrate are not perfect. From figures it is seen that there is positive relationship for case of oilrent and gdppcap, negative correlation with excrate is observed. But, however these relationships are not clear in graphs. In second group of graphics which is given in figure 6.9.4 same operation is done for hexpgov. The purpose of this operation to determine the relationship between new dependent variable and old independent variables.

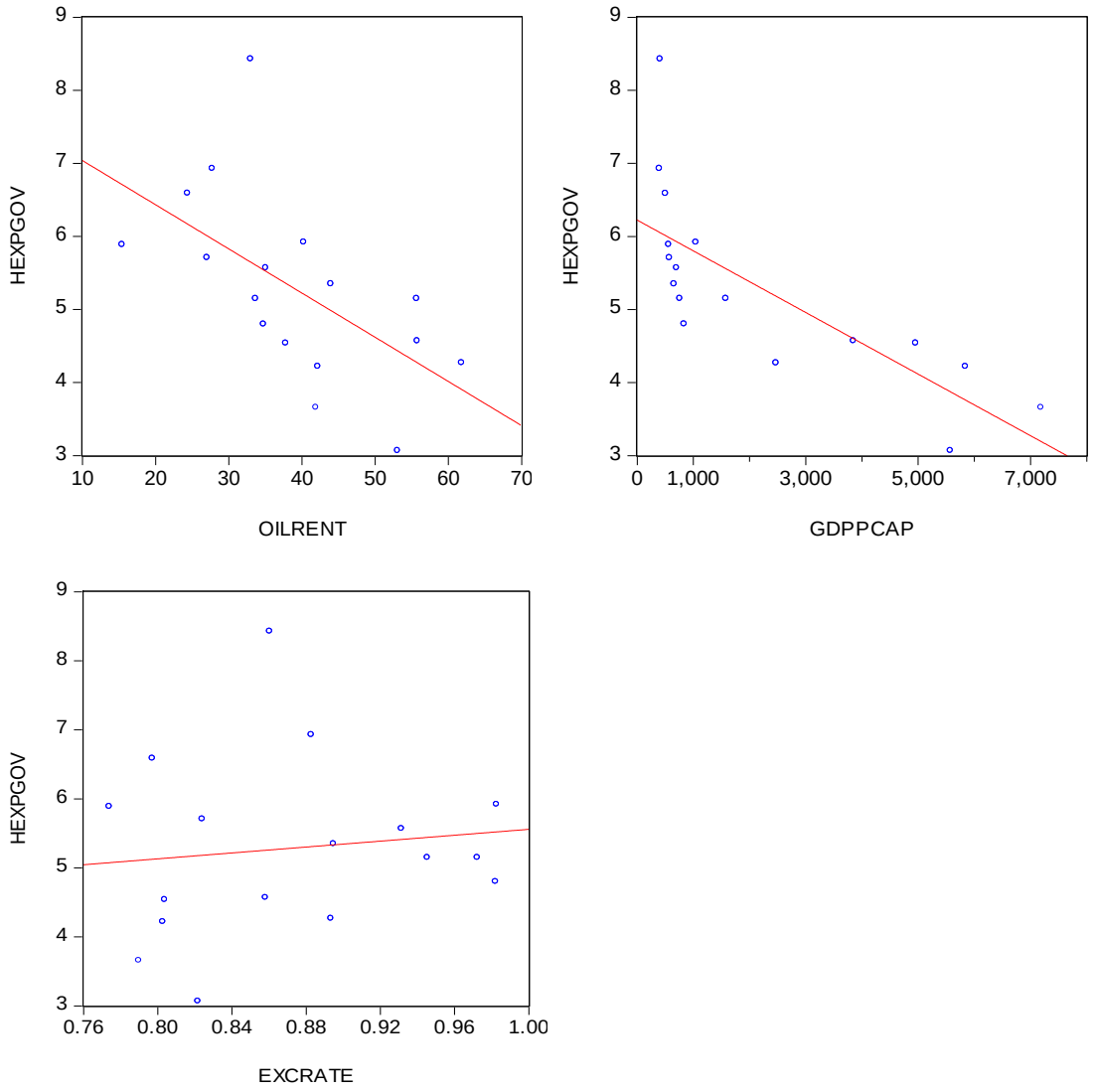


Figure 6.9.4 Graphical results for hhexpgov
Source: Author's own creation

Results of figure 6.9.4 are similar with previous graphical findings. For two graphs it can be concluded about negative relationship between dependent and independent variable. However, it is not true for third one. For understanding the relationship between dependent and independent variables it is necessary to apply linear regression models.

For investigating impact of resource abundance on health system of Azerbaijan two different linear regression models are applied. In first model dependent variable is lhexpgdp. Independent variables are lgdppcap, lgdppcap(-1), lexcrate, lexcrate(-1) and loilrent. Expectations are same with previous models. It is expected negative sign for lgdppcap, lexcrate and loilrent. Positive relationship between lgdppcap(-1) and lexcrate(-1) is expected. Table 6.9.2,1 gives results.

Table 6.9.2.1 Results of linear regression model for lhexpgdp

Dependent Variable: LHEXPGDP
Method: Least Squares
Date: 03/10/14 Time: 02:31
Sample (adjusted): 1996 2011
Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.011614	0.505931	-1.999510	0.0734
LGDPPCAP	-1.247288	0.347271	-3.591687	0.0049
LGDPPCAP(-1)	1.153792	0.328550	3.511770	0.0056
LEXCRATE	-4.263916	1.108321	-3.847184	0.0032
LEXCRATE(-1)	2.916868	1.045571	2.789736	0.0191
LOILRENT	0.463196	0.207927	2.227689	0.0500

R-squared	0.683045	Mean dependent var	-0.008638
Adjusted R-squared	0.524567	S.D. dependent var	0.191638
S.E. of regression	0.132138	Akaike info criterion	-0.929949
Sum squared resid	0.174604	Schwarz criterion	-0.640228
Log likelihood	13.43959	Hannan-Quinn criter.	-0.915112
F-statistic	4.310041	Durbin-Watson stat	2.073155
Prob(F-statistic)	0.023719		

Source: Author's own creation

Results show that expectations are mostly verified. Excluding loilrent, signs of all remaining variables are same with our expectations. According to table 6.9.2.1 results 1% increase in lgdppcap and lexcrate will cause hexpgdp to decrease respectively 1.25 and 4.26 %. Also 1% increase in lgdppcap(-1) and lexcrate(-1) rise hexpgdp in order 1.15 and 2.92 %. For loilrent our expectations are not justified. Results indicate that 1% increase in loilrent will cause hexpgdp to increase 0.46%,

which is opposite to resource curse theory assumptions. In terms of probabilities only lexcrate(-1) and loilrent are not significant at 1%. Remaining variables are meaningful in all levels.

In second regression lhexpgov is taken as dependent. Dependent variables are same with previous model. Expactations are not different with other regressions in this applied for same purpose.

Table 6.9.2.2 Results of linear regression model for lhexpgov

Dependent Variable: LHEXPGOV
Method: Least Squares
Date: 03/10/14 Time: 02:57
Sample (adjusted): 1996 2011
Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.610756	0.465411	5.609571	0.0002
LGDPPCAP	-0.823894	0.319458	-2.579039	0.0275
LGDPPCAP(-1)	0.566417	0.302236	1.874085	0.0904
LEXCRATE	-2.267335	1.019556	-2.223847	0.0504
LEXCRATE(-1)	1.860406	0.961831	1.934234	0.0819
LOILRENT	0.251536	0.191274	1.315056	0.2178

R-squared	0.825503	Mean dependent var	1.618456
Adjusted R-squared	0.738254	S.D. dependent var	0.237592
S.E. of regression	0.121555	Akaike info criterion	-1.096908
Sum squared resid	0.147756	Schwarz criterion	-0.807187
Log likelihood	14.77526	Hannan-Quinn criter.	-1.082072
F-statistic	9.461506	Durbin-Watson stat	2.638319
Prob(F-statistic)	0.001500		

Source: Author's own creation

Results are very similar with previous regression for health sector. The main difference between two tables is significiance levels. Results of table 6.9.2.2 show that significance levels are low compare with 6.9.2.1. But, in terms of signs expectations are satisfied. Only as the first case sign of loilrent is different, which indicates that there is positive relationship between loilrent and lhexpgov. However, this relationship is not significant. Unlike the previous model there is not any

variable which is significant in all levels. Lgdppcap and lexcrate are meaningful at 5 ant 10% levels. The remaining variables lgdppcap(-1) and lexcrate(-1) are significant only at 10%.

Chapter 7

CONCLUSION

The main purpose of this thesis is to analyze the resource curse issues in Azerbaijan. As it mentioned in previous chapters resource curse and Dutch disease theories indicate that abundance of natural resource may create problems in economic, politic and social lives of countries. Since, these fields of Azerbaijan were on focus in this thesis. It is claimed that above mentioned sectors are suffering from resource curse and Dutch disease. In other words oil has negative effect on economic, political and social lives of country. For investigatint these issues Vector Autoregressive and linear regression models were conducted.

The economic aspects of natural resource abundance firstly studied by applying Vector Autoregressive model. After this, two different linear regression models are used. The purpose of conducting this model was to determine impact of variables to each other and also to answer the question whether there is Dutch disease exists or not in Azerbaijan. Before conducting Vector Autoregressive model various methods are applied for determining the real situation about this problem. Pairwise Granger Causality test results showed that crude oil export is Granger cause of real exchange rate and manufacturing output. Interesingly for case of RGDP this cause did not satisfy. Results of Johansen Cointegration Test stated that there is cointegration among variables in the long run, which can strength suspects about Dutch disease. Impulse Response Function results presented positive relationship between decrease

in manufacturing sector and crude oil export. However, this relationship is not enough for concluding about Dutch disease in economy. On the other hand, in case of real exchange rate it is seen opposite trend in Impulse Response Function. According to theory Dutch disease causes real exchange rate to appreciate. However, Impulse Response Function results indicate that after some period of time real exchange rate depreciates. Variance Decomposition graph results are also questionable. From figures it is seen that changes in manufacturing mostly arise from innovations in crude oil export. In case of real exchange rate the main source of change in this variable generated from crudeoil. But, this is not in so high level. The Vector Autoregressive results for investigation of Dutch disease in Azerbaijan economy showed that independent variables have no effect on explaining dependent variable. In other word we can not measure Dutch disease with this model for case of Azerbaijan. Namely, approximately all of the variables gave insigficant coefficients. For understanding the relationship between variables better additionally two linear regression models were implemented. Manufacturing and real exchange rate were used as dependent variables in these regressions. As a result opposite relationship between crude oil and independent variables is found.

After colletcing all results it can be concluded that crude oil export has positive effect on manufacturing sector, also little, but significant influence on real exchange rate, means that we could not find evidence for Dutch disease in Azerbaijan economy.

Results for impact of resource abundance on political and social lives of Azerbaijan also introduced different outcomes. According to results it can be indicated that there is not curse of natural resources in political life of country. Also it became clear

that oil is acting as stimulator for better government efficiency and available tool for increasing the control over corruption. Results also report that oil rents and FDI impacts the health and education sectors positively. Government efficiency is better of with revenue inflows from natural resources.

After taking all information about results into account it can be stated that data do not confirm claims about existence of resource curse in Azerbaijan economy.

7.1 Policy recommendations for Azerbaijan Republic

Results of this thesis indicate that oil has positive effect on economic, political and social lives of Azerbaijan.

Though this thesis concludes about absence of resource curse and Dutch disease problems in Azerbaijan economy, politics and social life there are serious suspects about it. Moreover, it does not mean that Azerbaijan will not face with this problem in future years. For escaping from negative impacts of natural resource abundance, policymakers must implement reforms and made number of amendments to laws and regulations.

As we know, the main problem of most natural resource abundant countries is high level dependency from natural resources. In case of Azerbaijan this problem is related with oil. According to estimations of different national and foreign organizations Azerbaijan's oil production will decrease in future. It means that if government can not prepare economy for this situation, country may face serious difficulties during coming years. For overcoming this danger policymakes must apply policies for increasing share of non-oil sectors and decrease degree of oil dependency. First of all, economy must be diversified. The other problem links with FDI. It is clear that investment inflows help the economy to develope. But in

condition of existence resource curse this investment mostly flows to resource abundant sectors and investors are not interested to invest in other fields. The other negative effect of FDI shows itself in political life. In most cases authority benefits from these revenues for strengthing authority and providing durability of it's power. For escaping from such negative situations first of all, government must attract foreign investors to non-oil sectors. In order doing this all obstacles and barriers must be abolished for free business condition. For developing economy independently from natural resources non-abundant sectors must be developed. Small and middle size foundations have to be supported by government. Policymakers also must struggle with monopolies and inverventions of bureaucrats to economy. Illegal tax audits by the high rank officials also one of the sources of lack in private sector. Since, unfair competition in market shows itself and results with decreasing number of firms. For ensuring growth of private sectors government must struggle with such cases resolutely.

The oil funds plays an important role in development of economy in resource abundance countries. Establishing of SOFAZ in Azerbaijan can be accepted as progressive step in this term. But, the high level remittances from oil funds to budget is real danger for Azerbaijan. That is why, first of all transferrs from oil funds to budget must be decreased. Also transparency in spending revenues must be ensured by for escaping from negative cases. The role of society and Non-Governmental Organizations (NGO) in this process must be increased.

Regions are crucial factor for escaping threats of resource curse. In Azerbaijan only some big cities, especially capital Baku plays an important role in economy. For getting away from economic catastrophes, other regions and rural zones also have to be developed with different state programms.

Corruption is one of the factors impacting the development process negatively. For solving this problem government have to implement strict policies such as applying of punishment methods for this cases.Reforms in government institutions important too. Some of these institutions must be combined or if there is need, new ones must be establisthing. For stimulating non-oil sectors costs have to be decreased, businessmen must receive different subsidies and other type of supports by government.

For developing social sector, number of reforms in education and health system is important. Education and health associates must be sent to different trainings and seminars held in developed countries. Also, government must increase number of schools and hospitals. The network of such facilities must cover all regions and zones of country. Enterprises must be provided with new technological innovations.In previous chapters it is stated that average wages in social sector are lower than other fields of country. For abolishing this difference wages must be increasing.

REFERENCES

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

ADB.(2007). Asian Development Bank Reports, http://www.adb.org/Documents/Reports/Consultant/40038-REG/40038-REG-TACR.pdf).

Ahmadov , I., Mammadov, J. & Aslanli, K. (2013). Assestment of Institutional Quality in Resource – Rich Caspian Basin Countries. *MPRA Working Paper.* 47430.

Ahmadov, I., Aslanli K,. & Musabeyov, R. (2010). The Impact of the Oil and Gas Revenues to the social tension: Case of Azerbaijan. *FEF* & *PFMC* book.

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.

Atmaca , T. (2002). Azerbaycan Petrolleri Hazarın Statüse ve Güç Dengesi. *Strategic Research File.* 3:12, 1 – 19.

Auty, R. M. (1993). Sustaining Development in Mineral Economies. *London,*

Routledge.

Auty, R. M. (1994). Industrial Policy Reform in Six Large Newly Industrialized Countries: the Resource Curse Thesis. *World Development*, 12, 11 – 26.

Aydin , M.(2000). Geopolitics of Central Asia and the Caucasus; Continuity and Change since the End of the Cold War. *The Turkish Yearbook, 32, 168 – 216.*

Bank, W. (2009). worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/01/07/000333037_20100107230943/Rendered/PDF/443650ESW0A.

Bank, W. (2013). http://www.worldbank.org/en/country/azerbaijan/projects/all?qterm=&lang_exact=English&os=20 (Reached at December 19, 2013)

Bayramov , G. , & Conway, P. (2010). The Azerbaijan Producers Survey: Dutch Disease and Financial Crisis.

Bayramov , Q. (2001). Özəlləşdirmənin Nəzəri – Metodoloji Problemləri və Retrospektiv İqtisadi Təhlil. *Bakı , Elm və Həyat*.

Bayulgen, O. (2003). Facing the Dilemma of Global Capitalism: the Case of

Azerbaijan. *Central Asian Survey,* 22:2/3, 209 – 220.

Bayulgen , O. (2005). Foreign Investment , Oil Curse and Democratization : A Comparison of Azerbaijan and Russia. *Business and Politics,* 7: 1, Article 3.

Bildirici , M, E., & Kayıkçı , F. (2012). Effects of Oil Production on Economic Growth in Eurasian countries: Panel ARDL Approach. *Energy Journal*, 49 (2013), 156 – 161.

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

CESD. (2012). Azerbaijan Economy Since Independence: Independent View.

Clemens. M. (2007). Azerbaijan Between Resource Curse and Foreign Direct Investment. *International Working Paper.*

Collier, P. On the Economic Consequences of Civil War. (1999). *Oxford Economic Papers* 51, 168 – 183.

Corden , W. M & Neary , J.P (1982). Booming Sector and De – Industrialisation in a Small Open Economy. *Economic Journal*, 92:368, 825 – 845.

Corden , W. M.(1984). Booming Sector and Dutch Disease Economics: Survey and

Consolidation. *Oxford Economic Papers*, 36, 359 – 380.

EBRD. (2009). Financial sector analysis for South Caucasus. London, UK. Retrieved from http://www.ebrd.com/country/sector/etc/fi nsec.pdf).

Edwards , S. (1985). A Commodity Export Boom and the Real Exchange Rate: the Money – Inflation Link. *NBER Working Paper Series* , 1741.

Eldaroglu, Ekber. (2001). Neft Fondunun Vesaitleri Hansı İstiqamete Yöneldilmelidir? *Azerbaycan Milli Demokratiya Fondu, Azerbaycan Bulleteni,* 25:145.

Esanov , A., Raiser. M., & Buiter , W. (2001). Natures's blessing or nature's curse: The Political Economy of Transition in Resource – Based Economies. *EBRD Working Paper,* 65.

Egert, Balazs. (2012). Dutch Disease in the Post-Soviet countries of Central and South West Asia: How contagious is it? *Journal of Asian Economies,* 23 (2012), 571–584.

Falkingham, J. (2005). The End of Rollercoaster? Growth, Inequality and Poverty in Central Asia and Caucasus. *Social Policy* & Administration, 39:4, 340 – 360.

Fardmanesh , Mohsen. (1991). Dutch Disease Economics and the Oil Syndrome: An Emprical Study. *World Development,* 19:6, 711- 717.

Franke, A., Gawrich, A. & Alakbarov , G. (2009). 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, 109 – 140.

Gelb, A. (1988). Oil Windfalls: Blessing or Curse? *New York, Oxford University Press.*

Gojayev, V. (2010). Resource Nationalism Trends in Azerbaijan, 2004 – 2009. *RUSSCASP Working Paper* , March.

Gregorio, J.D & Wolf, H.C. (1994). Terms of Trade , Productivity and the Real Exchange Rate. *NBER Working Paper* , 4807.

Gylfason , T. (2001). Natural Resources, Education and Economic Development. *European Economic Review,* 45, 847 – 859.

Habibov, N, N. & Afandi, E, N. (2011). Self – Rated Health and Social Capital in Transitional Countries: Multilevel Analysis of Comparative Surveys in Armenia, Azerbaijan and Georgia. *Social Science & Medicine*, 72, 1193 - 1204.

Habibov, N. & Fan, L. (2007). Social Protection and Poverty in Azerbaijan, a Low

Income Country in Transition:Implications of a Household Survey. *International Social Security Review,* 60:4.

Harhay, M, O., Harhay , J, S. & Nair, M, M. (2013). Education , Household Wealth and Blood Pressure in Albania, Armenia , Azerbaijan and Ukraine: Findings from the Demographic Health Survey, 2005 – 2009. *European Journal of Internal Medicine,* 24, 117 – 126.

Hasanov, F. (2010). The Impact of Real Oil Price on Real Effective Exchange Rate: The Case of Azerbaijan. *DIW BERLIN Discussion Paper,* August.

Hasanov, F. (2013), Dutch Disease and Azerbaijan Economy . *Communist and Post Communist Studies.* (2013), 1-18.

Hausmann, R. & Rigobon, R. An Alternative Interpretation of the "Resource Curse": Theory and Policy Implications. *WBER Working Paper* 9424.

Hoffman, D. I. (1999). Oil and Development in Post – Soviet Azerbaijan. *NBER Analysis,* 19:3, 5 – 29.

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

Ibadoglu, G. (2006). Özəlləşdirmə: Müxtəlif Effektler Üzrə Retrospektiv Təhlil və Perspektiv Baxış. Collection "Gələcək 10 İl. Azərbaycanda Demokratik İslahatların Başlıca Məqsəd və Vəzifələri.", 2, Bakı Adiloğlu, 71 – 88.

Ibadoglu, G. (2014). Azerbaijan's Economic Model and it's Development Since Independence. http://azerireport.com/index.php?option=com_content&task=view&id=2981&Itemid=55

Ibn – Khaldun . (1384.1967). The Muqaddimah: An Introduction to History. *Princeton, NJ: Princeton University Press.*

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

Kalyuznova , Y. (2002). Energy in the Caspian Region: Present and Future. *London, Palgrave Press.*

Kalyuznova, Y. (2006). Overcoming the Curse of Hydrocarbon: Goals and Governance in the Oil Funds of Kazakhstan and Azerbaijan. *Comparative Economic Studies.* 48 (2006), 583 – 613.

Kendell – Taylor , A. (2012). Purchasing Power: Oil, Elections and Regime Durability in Azerbaijan and Kazakhstan. *Europe – Asia Studies.* 64:4,

737-760.

Lane, P. R. & Tornell, A. (1996). Power , Growth and the Voracity Effect. *Journal of Economic Growth,* 1, 213 – 241.

Lange, Samantha. (2009). The Impact of Natural Resource Dependence on Human Rights Practices in the Former Soviet Republics.

http://blog.stetson.edu/inkwell/wp-content/uploads/2011/02/slang-paper.pdf.

Lenchowski, G. (1997). The Caspian Oil and Gas Basin: A New Source of Wealth? *Middle East Policy,* 5:1, 111 – 119.

Luong , P, J. & Weinthal , E. (2001). Prelude to the Resource Curse : Oil and Gas Development Strategies in Central Asia and Beyond. *Comperative Political Studies*. 34:4, 367 – 395.

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, 131 – 147.

Mehlum, H., Moene , K. & Torvik, R. (2006). Institutions and the Resource Curse. *The Economic Journal*, 116, 1 - 20.

Ministry of Economy and Industry of Azerbaijan Republic. (2011). http://www.econ omy.gov.az/index.php?option=com_content&view=article&id=91:% C9%99 sas-kapitala-y%C3%B6n%C9%99ldil%C9%99n-investisiyalar& catid=17:in vestisiyalar&lang=en.

Nankani , Gobind . (1980). Development Problems of Non Fuel Mineral Exporting Countries. *Finance* & Development, 17.

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.

O'lear , S. (2007). Azerbaijan's Resource Wealth: Political Legitimacy and Public Opinion. *The geographical Journal.* 173:3 , 207 – 223.

Rosenberg, C.B ., & Saavalanien, T. O. (1998). How to Deal with Azerbaijan's Oil Boom? Policy Strategies in a Resource – RichTransition Economy. *IMF Working Paper. 98:6.*

Ross, M. (2001). Does Oil Hinder Democracy? *World Politics* 53, 325 – 361.

Rosser, A. (2006a). Escaping the Resource Curse. *New Political Economy* , 11:4.

Rosser , A. (2006b). The Political Economy of Resource Curse. *IDS Working Paper*, 268.

Rzayeva , S. (2013). Oil and Health Care in Post – Soviet Azerbaijan. *European Journal of Sociology,* 54:1, 33 – 63.

Sachs , J. D. & Warner, A. M. (1997). Sources of Slowth Growth in African Economies. *Journal of African Economies,* 6:3, 335 – 376.

Sachs , J. D. & Warner, A. M. (1999). The Big Push, Natural Resource Booms and Growth. *Journal of Development Economics,* 59:1, 43 – 76.

Sachs , J. D. & Warner, A. M. (2001). The Curse of Natural Resources. *European Economic Review*. 45:4, 827 – 838.

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.

Shleifer , A. & Vishny, R. W. (1993). Corruption. *The Quarterly Journal of Economics,* 108:3, 599 – 617.

Singh R ., & Laurila, J. (1999). Azerbaijan: Recent Economic Development and

Policy Issues in Sustainability of Growth. *BOFIT Discussion Paper 5.*

SOFAZ. http://www.oilfund.az/?page=sual-cavab&hl=en_US

SSCAR. (2001). Azerbaijan in XX Century. Part II , Baku. State Statistics Committee.

SSCAR. (2009). Retrieved from http://www.azstat.org.

SSCAR. (2010). Retrieved from http://www.azstat.org.

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

State Program on Social – Economic Development of Regions of Azerbaijan Republic for the Years of 2004 – 2008.

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

Sultanov , M . (2011). Health Expenditure Efficiency in the Commonwealth of Independent States: A Data Envelopment Analysis Approach. *Transitional*

Studies Review, 18, 384 – 404.

"The Dutch Disease" (1977). *The Economist* , 82 – 83.

The National Budget Group. (2009). http://www.nbg.az/news_index.php?lang=en&news_id=410.

Tsalik, S. (2003). Caspian Oil Windfalls: Who Will Benefit? *Open Society Institute, Central Eurasia Project.*

Valiyev, A. (2012). The Quest for Political Reform in Azerbaijan: What Role for the Transatlantic Community? *IAI Working Papers , 12:12.*

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

Wheeler, D. (1984). Sources of stagnation in sub-Saharan Africa. *World Development* , 12:1, 1-23.

Wijnbergen, S. (1984). The "Dutch Disease": A Disease After All? *The Economic Journal,* 94:373, 41 – 45.

Yunusov , A. (2011). Twenty Years of Independence in Azerbaijan , South Caucasus 20 Years of Independence, Friedrich – Ebert – Stifhung, 60 – 77.

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

Zulfugarli, M. (2009). Referendum. AVCIYA Paper.