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Resource curse: a comparative study*

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Abstract

Weak economic performance of most oil rich countries states that natural resources are more curse than blessing for these countries. Resource curse theory examines the negative effects of rich natural resources on economic growth from an economic and political perspective. Since 1960s appreciation of real domestic exchange rate (Dutch Disease) was explained as the main reason for poor economic performance of oil rich countries. But since 1990s, other causes such as long lasting ineffective institutions, corruption and rent seeking are considered to be other major political reasons behind backwardness of most resource rich countries. These political features are the corner stone of Resource Curse theory. In this paper we examine the viability of Resource Curse theory for Iran, Russia and Norway to see whether natural resources are curse or blessing for these countries. Furthermore, we compare main macroeconomic and good governance indicators from 2000 to 2010 of Iran with Turkey and Russia with China to illustrate the negative effects of oil revenue on economic performance. The result of this research shows that institutional quality has vital role in sustainable economic development. Norway as a successful oil rich country shows that efficient institutions can turn natural resource into blessing; while Iran's and Russia's experiences are a clear example of resource curse.

Keywords: Resource Curse, Dutch Disease, Iran, Russia, Norway, China, Turkey

JEL Classification: O11, O52, O53

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1. Introduction

It is a common belief that oil revenue can help countries to accelerate economic growth and development. However, by looking at the economic situation of the most oil rich countries, slow growth and poor performance are observed. A research study by the UNDP in 2008 showed that during 1975-2005, the average annual per capita GDP growth rate of oil exporters was close to zero (0.03 percent), while this rate for oil poor countries was 3.4 percent on average.

Oil exporting countries have experienced massive windfall gains since 2005, and despite the fall of oil prices since mid-2008 their oil revenue still is very high compared to 1980s and 1990s. These countries would like to use the revenue of exporting natural resources to finance their development projects and pave the way to a sustainable economic growth. Yet, oil price hikes may hinder the economic development in these countries. In fact, increases in the earnings of oil exports during the last three decades were associated with a decline in growth rates of most oil exporters (Askari, 2006). The Dutch Disease literature emphasizes the effects of economic factors, especially the real exchange rate appreciation, as the major cause of poor economic growth of resource-based economies. The intertwined political and economic factors, a high rate of corruption, rent seeking and weak institutions can create deep and long lasting negative effects of oil revenues in these countries. A focus on existence and effectiveness of institutions as vital role in development is emphasized by resource curse literatures (Karl, 1997; Auty, 2001 and 2004; Humphreys et al., 2007).

Rich natural recourse countries such as Norway and the Netherlands with a high level of development and sustainable economic growth raised different questions for economists regarding how these countries manage their economy. Is their success due to preventing currency appreciation, or the existence of effective institutions?

Comparing economic performance of oil exporting and non-oil exporting countries, this paper looks at macroeconomics and good governance indicators of Iran and Turkey (because of their similarity in population and geographical area), Russia and China as big countries. Norway is also chosen as a successful oil rich country with sustainable development that has been ranked first on the world by Human Development Index (UNDP, 2012).

This paper consists of six sections. The second section, after the introduction, reviews theories about Dutch Disease and the Resource Curse and studies the related literatures. Section 3 presents Iran's and Turkey's historical background, policies, institutions and compares the economic performance of these countries in the last decade. Section 4 studies Russia's and China's economic and institutional performance. Section 5 investigates Norway's policies and looks at the differences and similarities of institutional arrangements in Norway compared to Iran and Russia. The last section concludes.

2. Theoretical debate

There have been several approaches in the literature to account for the poor economic performance of oil rich countries. Dutch Disease and Resource Curse are the most important theories for explanation of weak economic performance of resource rich countries.

2-1. Dutch Disease

The first is associated with the notion of the Dutch Disease. The term 'Dutch Disease' was coined in the late 1970s after Economist identified a link between the discovery of large deposits of natural gas in the Netherlands and the decline of the manufacturing sector (Economist, 1977).

The 'Dutch Disease' happens when discovering of rich natural resource such as oil and natural gas led to improving their exports. If the oil and/or natural gas revenue spend direct or indirectly in domestic market, it will increase the aggregate demand which will led to inflation and improving real domestic currency. Strong domestic currency could decrease the competitiveness of tradable sectors (especially manufacturing commodities) of oil exporting countries in international trade. Dutch Disease literature puts emphasize on spending effects and resource movement effects after increase in oil revenue as two main channels which have negative effects on tradable sectors.

Spending effects: If natural resource revenue spends in non-tradable sectors such as real estate market, the price of these sectors will increase more than tradable goods which lead to improve of real exchange rate of the oil exporting country. The latter will harm

the competitiveness of tradable sectors in international markets and decrease their exports.

Resource movement effects: In line with improving the demand for a non-tradable sector, wages in this sector will increase and therefore absorb workers from other sectors. This effect will decline the production and resource for tradable sectors (Corden and Neary, 1982).

Extraction of natural resources sets in motion a dynamic that gives primacy to two domestic sectors, the natural resource sector and the non-tradable sector, such as the construction industry, at the expense of agricultural and industrial investment, production and exports (Bruno and Sachs, 1982; Wijnbergen, 1984a).

The Netherlands was a developed country that suddenly faced massive job problems in the 1970s because their industries could not compete with international rivals. The country quickly changed its economic policy and regained competitiveness in tradable sectors again. Yet, the problem of Dutch Disease has for decades plagued resource rich developing countries.

The combination of demand push inflation and appreciation of the real exchange rates results in an often dramatic decline in the competitiveness of non-oil exports and erosion of diversity and balance in the domestic economy (Wijnbergen, 1984b).

The Dutch Disease symptoms which accompanied the oil windfall lead to overvaluation of the domestic currency and increases in nominal wages, creates a movement of resources, including labor, from the tradable (agriculture and manufacturing) sectors into the non-tradable (construction and services) sectors. Increasing production costs, while the real exchange rate is appreciated, weaken the competitiveness in the international markets. A decline in traditional exports and inflows of cheaper imported goods destroy a high proportion of job opportunities (Corden, 1984).

2-2. Resource Curse

Evidence of Dutch disease has been identified in almost all countries where petroleum exports play a major economic role (Corden, 1982; Corden and Neary, 1982). However, it can't explain why there is no tendency towards changing policies, even when these policies led to a drastic decline in production and employment. These surprisingly unsuccessful outcomes cannot be fully understood separate from institutional

development. Many empirical studies have approved this idea that combined economic and political factors cause natural resource wealth to become a curse (Karl, 1997; Auty, 2001 and 2004; Humphreys et al., 2007).

In 1993 Richard Auty created the term "Resource Curse" and argued that Dutch Disease is not the only reason for poor performance of oil rich countries. Weak institutions, corruption, rent seeking, and wrong policy making of government have more negative effects than Dutch Disease in these countries (Bulte and Wick, 2006). Dependence on oil shapes social classes, regime types, institutions, the framework for decision-making, and the decision calculus of policymakers (Karl, 1997). The experiences of the past four decades show that oil wealth negatively affects the quality of institutions, and institutional quality is in turn an important determinant of economic growth. Various oil exporters such as Venezuela, Iran, Nigeria, Algeria and Indonesia demonstrate striking similarities in macroeconomic performance. Auty (2001) argues that resource-rich countries, especially oil exporters, tend to be dominated by factional and predatory oligarchic polities and suffer from policies that postpone the transition to competitive industrialization and diversification of the economy. Political fragmentation, recurring conflicts, and authoritarian rule hamper the development of democratic institutions and remain major obstacles to economic reform.

Ross (2001) states that growth failures are the outcome of strong associations between resource wealth and the likelihood of weak democratic development. In most oil exporting countries political parties are often weak and formed around charismatic leaders while military intervention in politics are common and political support derives from systems of patronage. The short-horizon politics of competition for power and state-allocated resources gives rise to unstable policy regimes and non-transparent mechanisms of rent distribution, encouraging the development of clientelistic networks and rent-seeking behavior throughout state and society. Elections can be rigged using the oil revenues when governments are not accountable to the public. Non-democratic governments sometimes can also count on acceptance and support from the governments of oil-consuming countries to prevent any democratic transfer of power. Politicians with an uncertain hold on power have an incentive to spend sooner than later to leave no opportunity on the table for future political opponents. Huge oil revenues allow governments to mollify dissent and avoid accountability, insulating governments from pressures for institutional reform. Resistance to transparency and accountability

may pose risk to the long-term sustainability of development strategies. The politically unstable, predatory autocracies, which typically have very short policy horizons, have negative effects on macroeconomic performance in oil rich countries.

Mehlum et al. (2006) found that oil revenues hinder growth in countries with weak legal and political institutions. For a given increase in resource rents, this negative effect is more likely to offset the positive effect of the resource boom. Governments of oil exporting countries often own the companies that export the primary products. They receive windfall revenue from the international markets which allow them to take part of this revenue as rents. They argue that countries rich in natural resources can improve public welfare through transparent distributional mechanisms, creation of elite arenas of competition, or underpin corrupt governments. So, the poor growth of oil exporters is political rather than economical and can be linked to the capacity of governments and society to respond to extraordinary large rents from natural resource production.

Askari (2006) argues that oil revenues becomes a crutch to avoid reforms, destroying the work ethic, fuelling corruption and keeping unpopular governments in power in most oil exporting countries. Furthermore, the evolving role of government, spending a huge amount of money for sustaining political support, generates rising and inflexible expenditure commitments, including subsidies, high levels of public employment in low-capacity, overstaffed bureaucracies, and protected, inefficient enterprises, which in the long-run will constrain the scope for investments. In most cases, these revenues are wasted rather than productively invested because of the lack of supervision of strong civic institutions. Individuals, be they private or public sector actors or politicians, have incentives to use political mechanisms to capture the rents. In other words, distribution of oil revenues by government and unsound policies encourage rent seeking behavior and corruption, distort the motivations for entrepreneurship and drive many bright minds away from productive investment and into the rent-seeking activities, which cannot generate long lasting jobs and sustainable economic growth. Askari states that Middle East and North Africa (MENA) has been one of the regions of the world with the worst economic performing over the past 30 years and that the oil revenue is the major cause of this unfavorable economic performance.

2-3. Literature review

Existing literatures and empirical studies about resource curse shows that natural resources and especially oil and natural gas are curse more than blessing. Several empirical studies using cross-countries data for at least two decades stated that most of oil rich countries had lower economic growth compares to non-oil countries (Sachs and Warner, 1995; Sala-i-Martin et al., 2003; World Bank, 2006; Rahimi and Golestani, 2009). Another group of researchers believed that weak institutions in oil rich countries are the main reason for resource curse (Kolstand, 2009; Yang, 2010).

Corruption and rent seeking are most important reasons for weak economic performance which is emphasized by Karimi and Samimi (2009) for Iran and by Treisman (2009) and Oomes and Kalcheva (2007) for Russia. Dobrynskaya and Turkisch (2009) don't accept the notion of Dutch Disease in Russia.

However, natural resources are not always curse and they can be blessing and lead to high economic growth and efficient economic performance for countries with strong institutions such as Norway (Larsen, 2006).

This paper tries to analyze macroeconomic factors as well as institutional quality in oil rich countries in comparison with non-oil countries in order to narrow the gap in existing literature about resource curse.

3. Comparison of Iran and Turkey

3-1. Iran

Dependency on oil money was a main characteristic of Iran's economy since the discovery of oil. It's not surprising that at least 60 percent of government revenues come from oil exports (Farzanegan, 2011).

Being a theocratic regime with Islamic ideology, the Islamic Republic of Iran was established in 1979 after the Islamic revolution (IMF, 2012). The transition from the Pahlavi dynasty that ruled country as dictatorship kingdom, like every revolution, led to huge chaos and social unrest. In addition, it created internal economic difficulties for nearly one decade. The kidnapping of US embassy personnel led to economic sanctions and destroyed political relations between Iran and USA. Eight year Iran-Iraq war caused

about 500,000 deaths on Iran's side, along with heavy damage to the economy. A lot of infrastructure was totally destroyed (Arjomand, 1988). After the war the government tried to design and implement new policies to restart the engine of economic growth. Dominating state owned entrepreneurs with low productivity and high reliance on oil revenue led to a small and weak private sector. In addition price controls, subsidies and a high amount of imports weakened the potential growth of the private sector (World Fact Book, 2012). Furthermore, government mismanagement, liquidity growth and high inflation worsened the economic situation (Safdari et al., 2011).

Natural resource poor countries during 1975-2005, such as Bangladesh and Pakistan, have increased the share of manufacturing in their total exports to 82 and 90 percent respectively and their average annual GDP growth rates was more than 2 percent. During this time the record of annual GDP growth rate of Iran, with huge oil and gas reserves, was -0.2 percent. In 1990-2005, her average annual GDP growth rate has been lower than that of Bangladesh (UNDP, 2008).

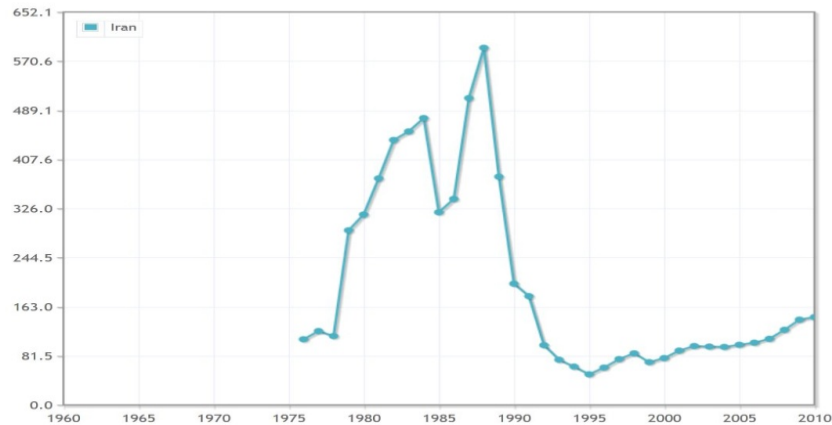
Major objectives of the Islamic Revolution were radical changes in economic and political systems of the Shah regime and to achieve social justice. Yet it was an irony that the Islamic state reproduced the previous systems. Relatively high income inequality remained within big cities and between regions. High corruption in all parts of society, in addition to rent seeking culture, decreased the private sector incentive for productive investment. According to Transparency International (2009), Iran fell from 141th to 172th among 180 countries which shows the dramatic situation of corruption in Iran (Bland, 2009).

Iran is the fifth biggest oil producer and fifth biggest oil exporter of the world by about 2.295 million bbl/day. In natural gas reserves Iran is second country in the world (World Factbook, 2012). Petroleum consists about 80 percent of total exports of the country. Other exports are: technical services (11 percent), chemical and petrochemical products (4 percent), fruits and nuts (2 percent), cars (2 percent), carpets (1 percent), which shows revenues from exporting crude oils has the biggest share in the Iran's exports (IMF, 2012).

As Figure 1 shows, fluctuations in the real exchange rate that is pegged against the oil price harmed tradable sectors in Iran and decreased the export of non-oil commodities through increasing the real exchange rate during period of high oil price. These

fluctuations led to an increase in imports and a decrease in exports of non-natural resource sectors. Although the government tried to devalue and prevent the rise of Rial by creating an oil stabilization fund (OSF) in 2000, mismanagement and wrong policies led to Rial appreciation during 2001-2008.

Figure 1: Real exchange rate of Iranian Rial 1976-2010 (2005=100)



Source: indexmundi.com

The decrease in competitive advantages of domestic production weakened the industrial sector. Deindustrialization due to appreciation of Iranian rial and misallocation of oil money led to increasing imports of consumption and intermediate goods and a 14.1 percent unemployment rate in 2011 (IMF, 2012).

3-2. Turkey

Turkey is Iran's neighbor. The political regime of Turkey is republican parliamentary democracy. Nearly all of the population of Turkey, similar to Iran, is Muslim (World Factbook, 2012). Having boundaries with Europe and a historical background of Ottoman Empire provide a big incentive for Turkey to become accepted as a European country. It has tried to become a member of EU for many years. According to Turkey's request for EU membership they must make many changes in their laws and institutions.

In the 1980s Turkey started to liberalize the economy and moved toward a market based economy with a liberalized financial market. Due to financial market imperfections, weak institutions, corruption, and unsustainable domestic debt dynamics Turkey faced currency crisis and double digit inflation from 1980s until mid-2000s (Cepni and Kose, 2006).

The Turkish economy bounced back and became one of the fastest growing economies in the OECD, after its 2001 economic crisis, thanks to the comprehensive reform agenda implemented and the favorable international environment. The main economic reforms took place at the end of 2001 in several key areas, such as fiscal, regulatory and monetary policy. According to these reforms, foreign investment became simpler and foreign companies could compete with domestic firm in fair environment. In addition, Turkish government increased the reserve requirement for banks to prevent crisis in the banking sector. Furthermore, opening financial markets to foreign companies increased M&A in banking industry and decreased number of banks in Turkey from 81 to 54 during 1999-2002. For monetary policy, they gave more independency to the central bank for inflation targeting and they moved to floating exchange rate regime which exchange rate should determine via supply and demand condition in foreign exchange market. The main fiscal reforms in this period were privatization of public assets as well as stated-owned companies and tightened fiscal policy between 2001-2005. Furthermore for the spending side Turkish government established a new Financial Management and Control Law (PFMC) which enacted in 2003 in order to control fiscal public management. It is worth to state that significant liquidity increase in global financial market helped Turkey to improve its economy after 2001 crisis (Uckun and Doerr, 2010). In 2005 Turkey introduced the New Lira, knocking 6 zeros from its currency. It was one of last steps in stabilization of Turkey economy (World Factbook, 2012). After economic reform, Turkey started to grow fast and became the 15th biggest country in PPP GDP in the world and was marked as an emerging economy by economists (World Factbook, 2012).

Due to poor natural resources, Turkey has tried to increase their competitive advantages in the industrial sector. About 95 percent of Turkish exports consist of manufacturing products. Significant growth and increasing industrial investment led to high demand of oil that makes Turkey one of the biggest oil importers in the Middle East. However, being a member of Euro-Mediterranean partnership has helped Turkey to increase its exports to Europe. Nonetheless, still there is some problem in type of FDI which is more concentrated in real estate sector and weak controlling of inflow and outflow of capital that make Turkey's economics relatively fragile, which shows its effect on Turkey's GDP growth after financial crisis in 2007 (Saglam and Yalta, 2011). Yet, the

country faces a 77 billion US dollar current account deficit in 2011 that shows imports from other countries still are much bigger than exports (IMF, 2012).

3-3. Comparison of macroeconomic indicators between Iran and Turkey

Iran and Turkey have more or less same population (about 75 million in 2010). As mentioned above, Iran is a natural resource rich country but Turkey is poor in oil and gas natural reserves. So, a comparison of economic performance of these countries can highlight the positive or negative effects of oil revenues.

- **Total GDP**

As Table 1 shows, GDP in both countries has increased during 2000-2010. Yet, Turkey had higher GDP compared to Iran. It shows that Turkey had a better economy performance. Between 2000 and 2010, Iran had experienced severe fluctuation in GDP growth rate. Turkey suffered from the decline in GDP because of the financial crisis in the mid of the 2000s. Due to increasing oil price from 2004 to 2009, Iran experienced high GDP growth that shows the dependency of Iran to oil revenues. However, in 2010 GDP growth rates for Iran and Turkey were 1.8 and 9 percent respectively.

Low GDP growth illustrates mismanagement in allocation of oil revenues and unsound economic policies. For instance, "Iran's Management and Planning Organization" which was responsible to monitor economics policy and government budgeting was abolished by government in 2007. Although Turkey faced financial crisis in 2005, it was successful to increase its GDP much more than Iran, with windfall oil revenues.

- **GDP per capita**

During 2000-2010, GDP per capita has increased in Iran and Turkey. According to Table 1, the average annual growth of GDP per capita in Iran was more than in Turkey; yet Turkey has had higher GDP per capita than Iran in all years (in absolute terms). Turkey's per capita income in 2010 (USD 10,015) was 55 percent higher than Iran (USD 6,445).

- **Gini coefficient**

The Gini coefficient is an indicator for the degree of personal income distribution within a country. The indicator is a number between 0 and 1. 1 represents the country's

complete wealth being owned by one person, 0 represents complete equality in wealth distribution. Turkey's Gini coefficient has been lower than Iran's in the studied period. While the Gini coefficient remained unchanged in Turkey, it increased from 0.441 to 0.445 in Iran between 2000 and 2005 during the raise of oil revenues. There is a big debate about Iran's coefficient after 2005, since the data has not been published anywhere; yet, economists believe that inequality has significantly increased since 2005. In general, high income inequality is one of the characteristics of developing countries, but oil rich countries, due to high level of rent seeking and corruption, suffer from higher income inequality (OECD Factbook, 2010).

- **Inflation**

Inflation in Iran was in the double digits in the 2000s, with high fluctuations. The inflation rate dropped from 16 percent to 13.5 percent in the first half of the 2000s due to prudent fiscal policy. After a rapid raise of oil prices, the government started to inject liquidity into the economy that triggered inflation. On the other side, Turkey managed to decrease the inflation rate from 39 percent in 2000 to 8.1 percent in 2005 and kept it more or less stable during the rest of the decade.

- **Unemployment**

During times of high global demand for oil that led to high oil prices, Iran did not adjust its nominal exchange rate despite its high inflation rate. Real rial appreciation hampered the competitiveness of Iran's industries. The high unemployment rate in Iran shows clearly the correctness of Dutch Disease and Resource Curse theories, despite high oil revenues unemployment has increased since 2005. As mentioned earlier, for controlling inflation rates, government encouraged the imports of various commodities to meet raising domestic demand. In other words, government supported exports of job opportunities in agriculture and industries, especially textile, clothing and leather industries, to other countries. So, in 2010, while the unemployment rate in Turkey was 12.4, in Iran it was 14.6 percent (Table 1).

- **Exports**

In the 2000s Turkey's exports were higher than Iran's. Regarding the export structure, more than 94 percent of Turkey's exports are manufacturing products with higher value added than Iran's crude oil exports while more than 80 percent of Iran's total exports

consists in crude oil. In 2010, with high oil exports, Iran's total value of exports was USD 78.5 billion. The value of Turkey's exports was more than USD 117 billion in the same year.

Table 1: Macroeconomic indicators of Iran and Turkey

Country	Iran			Turkey		
Year	2000	2005	2010	2000	2005	2010
Population (million)	65.3	69.7	73.9	63.6	68.1	72.7
Total GDP (billion USD)	96.5	188	496.2	266.5	482.7	817.3
Real GDP growth (%)	4.6	5.1	1.8	6.7	8.4	9
GDP Per Capita (USD)	1,550	2,754	6,445	4,189	7,088	10,015
Gini coefficient	0.441	0.445	n.a	0.4	n.a	0.4
Inflation Rate	16	13.5	14.6	39	8.1	8.6
Unemployment Rate	11.8	12	14.6	7.3	9.3	12.4
Total Exports (billion USD)	25	38.8	78.7	26.9	69.6	117.4

Source: World Bank (2012) and IMF (2012)

3-4. Comparison of good governance indicators of Iran and Turkey

The process of design, formulation and implementation of policies is called governance (UNESCAP, 2012). International organizations such as World Bank, IMF, UN and various school of thinking, emphasize the importance of institutions in economic performance. "Good Governance" describes the performance of institutions that are influential in public affairs, management and planning of public resources.

After the economic crises in Latin American countries in end of 90s which caused by Washington consensus's advises such as privatization and deregulation of markets, the Washington consensus changed its traditional way of advising from liberalization of market to put more stress on reinstruction of institutions (Stiglitz, 2006).

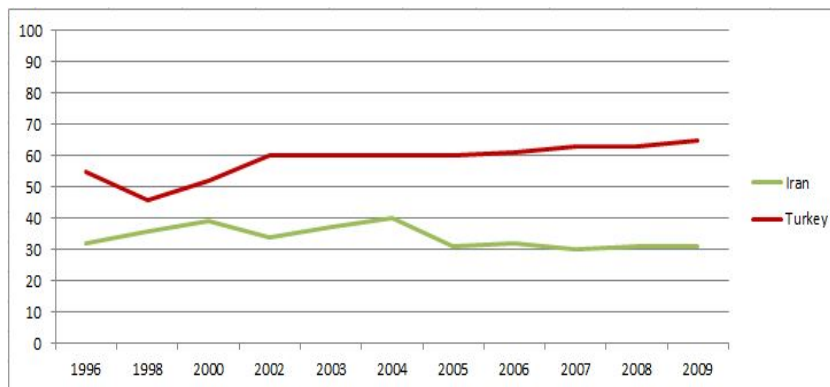
The Worldwide Governance indicators presented in 1996 for the first time by the World Bank included six indicators: accountability, political stability and lack of violence, government effectiveness, regulatory quality, rule of law, and control of corruption

(World Bank, 2012). In this paper four good governance indicators (government effectiveness, regulatory quality, rule of law, and control of corruption), are used to examine the effects of institutions in economic performance of oil rich and oil poor countries.

- **Government effectiveness**

The government effectiveness indicator shows the quality of designing and implementing policies and the quality of public or civil services and independency of them from political pressure. Figure 2 illustrates the government effectiveness in Iran and Turkey during 1996-2009. As the figure shows, Turkey benefitted from higher government effectiveness although the indicator experienced sharp decrease between 1996 and 1998. After 2000 and reform in its institutions the indicator had a stable upward trend. On the contrary, government effectiveness declined in Iran after the oil price jump in 2004 and remained low afterwards.

Figure 2: Government effectiveness in Iran and Turkey (1996-2009)

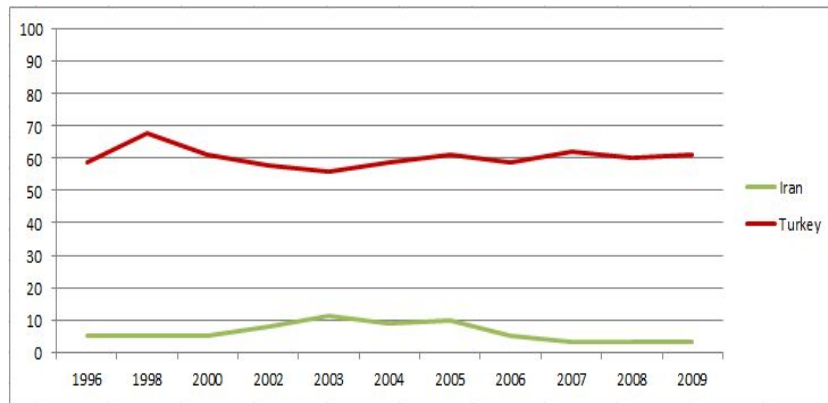


Source: Good Governance Indicators, World Bank (2012)

- **Regulatory quality**

This indicator shows the ability of government to formulate and implement sound policies that permit and promote private sector. Regulatory quality in Turkey has been much higher than Iran and has remained relatively stable during 1996-2009. As Figure 3 shows, Iran has had one of the lowest regulatory qualities in the world. While the indicator rose slightly in Iran between 1996-2003, it started to decline in 2004, during the sharp oil price hike and dropped almost to zero in 2008. This trend also explains the downsizing of the private sector in Iran.

Figure 3: Regulatory quality in Iran and Turkey (1996-2009)

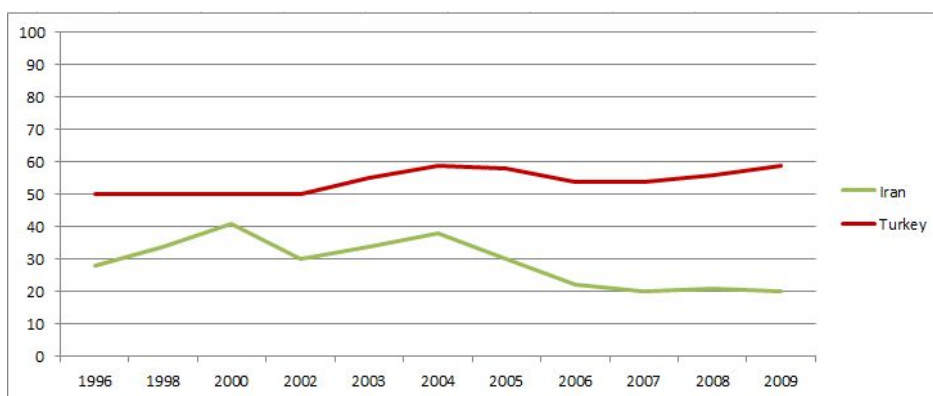


Source: Good Governance Indicators, World Bank (2012)

- **Rule of law**

Rule of law indicator stresses government accountability and people's trust to legal system for defending their rights in society. As Figure 4 illustrates, rule of law in Iran had a fluctuating trend until 2004 and after 2004 it experienced a sharp decline. For Turkey the indicator experienced an upward trend since 2002 with some fluctuation. In sum, while the rule of law is weakened clearly in Iran during 1996-2009, this indicator has improved in Turkey. Undoubtedly, the Iranian government used oil revenues to cover the weakness of legal institutions instead of putting more effort to improve the rule of law and according the trend of figure it seems that there is no incentive to do so from Iranian government.

Figure 4: Rule of law in Iran and Turkey (1996-2009)



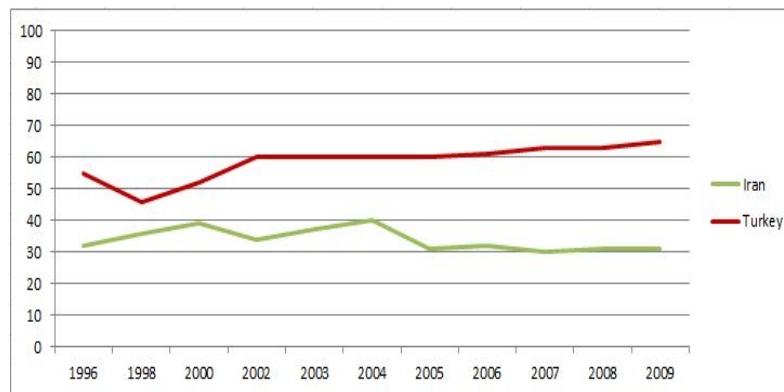
Source: Good Governance Indicators, World Bank (2012)

- **Control of corruption**

This indicator shows the reaction to corruption between individuals, elites and public institution managers. After 1998, Turkey started to combat corruption and experienced

lower corruption compare to the 1990s, but after 2002 it had a relatively stable situation. Corruption and rent seeking are big problems in Iran and most other oil rich countries. As Figure 5 shows, control of corruption has declined in Iran since 2004 with increasing the oil price; and in 2009 the level of corruption in Iran had been higher than 1996, while during 1996-2009, the control of corruption in Turkey clearly had been improved.

Figure 5: Control of corruption in Iran and Turkey (1996-2009)



Source: Good Governance Indicators, World Bank (2012)

Independence of natural resource wealth and existence of better institutions led to the higher GDP growth rate, higher export especially manufacturing goods in Turkey compare to Iran during 2000-2010 (see Table 1). Turkish governments learned big lessons from economic and currency crisis in the 1990s and started to reconstruct its institutions. It set more stricter regulations on financial markets. By implementing medium and long term policies, Turkey increased its competitive advantages and benefitted from access to the EU market. Sound domestic policies which mentioned above and be member of Euro-Mediterranean partnership international relationships helped Turkey to increase its share in export markets while Iran lost its competitiveness due to appreciate currency and a risky economic environment.

Macroeconomics and good governance indicators show that natural resources were a curse rather than a blessing for Iran. Using more than 100 billion USD of oil revenues not only doesn't led to economic growth in Iran but also decreased its pace (see Table 1), short sighted policies, and weak institutions led to Iran's poor economic performance in the last decade.

Appreciation of the real exchange rate decreased demand for Iranian products in non-oil sector. The volume and value of exports such as petrochemicals and copper bars

increased due to generous subsidies. The shrinking private sector, expansionary fiscal policy, high inflation, and deindustrialization led to decline in employment, and household income. Ineffective and weak institutions couldn't monitor major economic problems in Iran and the government tried to hide them by using oil money. Turkey accelerated its growth rate through institutional reforms and sound economic policies.

4. Comparison of Russia and China

4.1. Russia

The Russian Federation is the world's biggest country with a territory of 17,075,400 square kilometers. It was established in 1991 after the collapse of the Soviet Union. In 2010 Russia had a total population of around 142 million, having slightly declined since its peak in 1991 when it reached almost 149 million (World Bank, 2012). The country inherited a geographically highly unbalanced economic structure from the Soviet times. Capital accumulation and industrial concentration were a result of central planning, which aimed to locate key industries in a small number of regions. The gap between more prosperous regions, such as Moscow and St. Petersburg, and less developed ones has not been reduced after the establishment of the Russian Federation. The sudden transition from a planned economy system to capitalism with free market made this gap even bigger. (Dabla-Norris and Weber, 2001) One of the main problems of society in Russia's transition period that increased economic inequality was corruption. Inefficient institutions led to corruption in all parts of society, both at the top government and bottom non-government levels (Sakwa, 2008). These imbalances in economic conditions accompanied with corruption in all layers of society created huge disparities in per capita revenue across Russia's 89 regions. (Dabla-Norris and Weber, 2001) Russia experienced a big internal financial crisis in 1998 that led to high inflation and had severe consequences for its economy in the following years. In the early 2000s inflation was stabilized and the economy has grown ever since. When the East Asian financial crisis break out in 1997, prices for Russia's two most valuable sources of export earnings, energy and metals, plummeted. Given Russia's fragile economy, the rapid decline in the value of those two sources of foreign reserves resulted in an economic chaos in the country (Feridun, 2004). Negative economic effects were reflected on the annual GDP growth that fell from 1.4 percent in 1997 to -5.3 percent in

1998 as well as total unemployment that increased from 11.8 percent in 1997 to 13.3 percent in 1998 (World Bank, 2013).

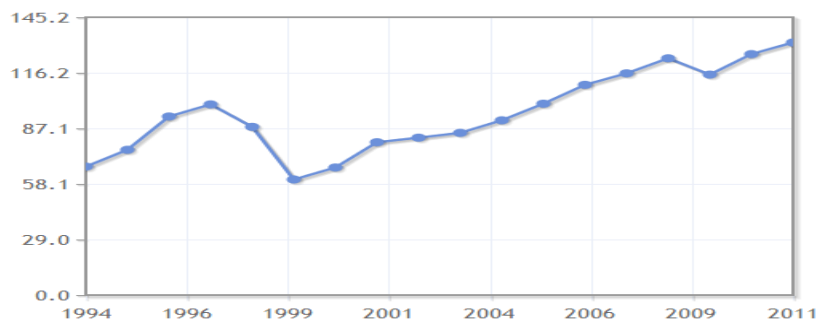
In order to understand the economy and the current situation of Russia it is important to look into the structure of the industry and exports, and in addition government policies, regulations and actions. In 2010 Russia had a labor force of 75 million people of which 63 percent were employed in the service sector, 27 percent in industry and 10 percent in the agriculture sector. In the same year estimated GDP composition by sector was 59 percent from services, 37 percent from industry and 4 percent from agriculture. Russia is the second world's biggest oil exporter, the world's biggest natural gas exporter, the biggest renewable energy producer and also the third biggest electricity producer. In 2010 it had a total export value of 400 billion dollars compared with a total import value of only 192 billion dollars. 70 percent of total value of exports came from oil and mineral commodities, 13 percent from metals and precious stones, 6 percent from chemical sector products, 5 percent from machines, clothes and transport vehicles and 6 percent from all other products (World Bank, 2012).

When looking into the structure of exports it is clear that the economy is based on oil and mineral commodities. This indicates the danger and possibility of the Dutch Disease in Russia. In order to examine a possible case of Dutch Disease it is necessary to look into government policies and regulations regarding oil and mineral exports. Furthermore, it must be examined if there is a correlation between the fluctuation of the currency and the change in prices of exported commodities.

The value of the ruble has directly followed the prices of oil from the 1990s to the present time. In 1997, due to Asian crisis, the declining global economic activities slowed down the demand for oil. In order to make up for the fall in revenues the OPEC members exceeded production quotas which furthermore increased supply and pushed down oil prices. The year 1998 brought the lowest annual average oil price since OPEC began, selling at only 12.28 per barrel (Mtsiva, 2003). The same year Russian ruble was devalued and lost 60 percent of its value against the US dollar (Hardt, 2003). In addition to this, the hyperinflation combined with huge foreign debt inherited from the Soviet Union forced Russia to default on its foreign debt in 1998 (Roche, 2011). The 9/11 shock in 2001 severely increased the price of oil that continued to increase in the following years. The ruble followed the same trend as the oil prices which can be seen

in its sharp appreciation that started in 2001. Ruble's value increased until end of 2008 when it reached its highest point of 23.12 to one US dollar. The global recession that occurred in late 2007 made a huge impact on all economies and again the demand for oil plummeted. In less than half year the ruble depreciated almost 37 percent against the dollar (Indexmundi, 2012). The central bank of Russia spent one-third of its \$600 billion international reserves, the world's third largest, in late 2008 to slow the devaluation of the ruble (Forbes, 2012). The correlation between ruble value oil price is obvious. The appreciation of the ruble will directly lower the competitiveness of Russian non-oil industries. Russia's Finance Minister Alexei Kudrin has recommended the change of the government's overall budget structure and strategy, putting more focus on social needs and limiting the deficit in the non-oil budget. The government is aware of the country's dependency on these key resources but has so far not used revenues to effectively help develop competitiveness in other non-oil and non-mineral sectors (Sergi, 2009). The appreciation and depreciation of the ruble from 1990 to 2010 can be seen in Figure 6, where year 2005 was taken as the base year.

Figure 6: Real exchange rate of Russian Ruble 1990-2010 (2005=100)



Source: www.indexmundi.com

4-3. China

The People's Republic of China is the world's most populous country with around 1.3 billion people. The country is 4th largest by size with 9.5 million square kilometers. Since its establishment in 1949 the People's Republic of China has been ruled by the Communist Party of China (World Factbook, 2012). The one party policy gave its government unlimited and unquestioned control over all aspects of Chinese society. The Mao Era (1949-1976) first introduced the five year plans for economic development based on the Soviet model. This period was characterized by unsuccessful attempts to modernize and industrialize China over night. One of these disastrous attempts was The

Great Leap Forward that led to economic failure and starvation of millions (Lee and Yang, 2007). After Mao's death in 1976 China was going through a period of changes and internal desire for opening up to the West. In 1978, the newly elected General Secretary of the Communist Party of China, Deng Xiaoping announced the open door policy that would liberalize the country in the coming years and eventually modernize it. The aim was to attract more foreign direct investment (FDI) and companies that would bring know-how and technology to China (Kornberg and Faust, 2005).

The following years, up until today, showed three waves of FDI in China. During the first wave in the 1980s investment took mostly the form of joint ventures (JV) with strict regulations for the foreigners, allowing them to enter market only in the JV form with a local Chinese company. The second wave occurred in the 1990s when government regulations were loosened up and foreigners entered the country mostly in the form of wholly foreign-owned enterprises. The third wave started after China joined the World Trade Organization (WTO) in 2001 and is still lasting. This period is characterized mostly by cross-board mergers and acquisitions (Peng, 2009).

The strict government regulations and the mainly planned economy with some private businesses led to a successful modernization and stable and high economic growth rates. In the last decade China made fast progress switching from low value adding labor intensive jobs to more high tech and service jobs. With 796 million people able to work China has the world's biggest labor force. In 2010 out of total labor force it had employed around 36.7 percent employed in agriculture, 34.6 percent in the service and 28.7 percent in the industry sector. When looking into GDP composition by sector in the same year agriculture brought 10 percent, service 43 percent and industry 46 percent. More than 50 percent of the country's exports are electrical and other machinery. Although China is the world's biggest manufacturer in a number of industries it has a lack of natural resources, especially oil. In 2011 country produced 4 and consumed 9.4 million barrel of oil per day (World Bank, 2012).

In the end of 2009 China overtook Germany and became world's biggest exporter with 1.2 trillion dollar of total export value. (NY Times, 2010) The Chinese share of global exports of manufacturers increased from seven percent in 2000 to 20 percent in 2010. During the years China imported much less than it exported which led to huge trade imbalances and current account surpluses. In the end of 2010 total exports amounted to

1.5 trillion US dollars and imports to 1.4 trillion US dollars. (WTO, 2013) China is currently country with the biggest foreign reserves. The Chinese government is using these foreign reserves to keep the yuan undervalued, effectively subsidizing local industries, making them globally more competitive. In addition, the government is also spending foreign reserves by investing abroad, buying needed resources for economic growth and trying to reduce dependency on oil imports from other countries by buying shares of oil companies in other developing countries such as Brazil. These actions, along with capital controls in the local financial system, are keeping the Chinese currency Yuan fixed to the US dollar (China Global Trade, 2011). In the case of China it can be seen that country with no natural resources can develop and have sustainable economic growth with intervention of strong government and strict regulations and policies.

4.4. Comparison of macroeconomic indicators between Russia and China

The following chapter compares Russia and China by looking into macroeconomic indicators such as total GDP, real GDP growth, GDP per capita, Gini coefficient, inflation, unemployment and total export value. Furthermore, in this chapter we will examine the effectiveness of institutions in both countries using good governance indicators, comparing government effectiveness, regulatory quality, rule of law and control of corruption. Table 2 shows figures of all macroeconomic indicators for three years: 2000, 2005 and 2010. This is being done in order to present an economic comparison and indicate the presence of a trend if there is one.

- **Total GDP**

A comparison of total GDP of the two countries shows the sheer size of their economies. As it can be seen in the Table 2 in the year 2000 China's total GDP was 4.6 times higher than Russia's. Although by the year 2005 this gap decreased to 2.9, in the year 2010 China's total GDP was 3.9 times higher than Russia's. Both economies experienced a huge increase in total GDP during a ten year period between 2000 and 2010. While Russia was recovering from the late 1990s financial crisis they managed to increase total GDP about 4.6 times from 259 to 1199 billion US dollar. On the other side China, after joining the WTO in 2001, as well had a high increase in total GDP during the same ten year period. From 1199 billion US dollar in 2000, China managed to increase total GDP nearly six times to reach 5931 billion US dollar in 2010. In 2010

China overtook Japan and became the second largest economy in the world just behind the US (Bloomberg, 2010).

The following indicator will better explain the growth of individual economies through the same decade from 2000 to 2010. Russia's recovery from internal financial crisis and hyperinflation in 1998 was reflected in the following decade as average GDP growth rate was 7 percent, real disposable incomes doubled and the middle class emerged. The Russian economy, however, was one of the hardest hit by the 2008-09 global economic crisis as oil prices plummeted. (World Factbook, 2013) China experienced high real GDP growth rate of 8 percent in 2000, 11 percent in 2005 and 10 percent in 2010. There are many reasons and economic sectors that make Chinese real GDP growth high, however, growing consensus is that growth model was heavily reliant on exports and investment. (Lee et al., 2013) In addition, China's growth rates are based on manufacturing sectors while Russia's mainly on oil and other natural resources.

- **GDP per capita**

Both Russia and China had an increase in GDP per capita from 2000 to 2010. Although there is a huge difference in total population between two countries, Russia's GDP per capita is on average twice as China's. The table also shows that Russia has a declining trend in the rise of the GDP per capita while China has a trend of continuous rise. The year 2010 shows Russia with a GDP per capita of USD 10,440 and China with a GDP per capita of USD 4,429. Since GDP per capita does not take in consideration wealth distribution these numbers cannot be used to compare living standards of two countries.

- **Gini coefficient**

In order to better examine the economic situation and living standards in Russia and China, the comparison of Gini coefficients will be presented. In 2010 Russia had a Gini coefficient of 0.42 while China's was 0.47 (World Bank, 2012). The number close to 0.50 is very high and represents that inequality in both societies is present and serious. Although Russia has a better situation than China, its number above 0.40 is also concerning. In the year 2000 Russia had a Gini coefficient of 0.399 and during ten years it increased by 5.26 percent which means inequality has increased. On the other hand, China had a Gini of 0.412 in the year 2000 that increased by 24.51 percent through only five years, reaching the 0,513 in the year 2005. The following five years showed a slight

decrease of 8.38 percent. In addition to these high inequalities represented by Gini coefficients both countries have huge internal differences among regions and cities. As mentioned before Moscow and St. Petersburg, where Russia's industry is mostly located, have much higher living standards. A similar situation persists in China, where the Eastern coast is historically much more developed and until today, with the concentration of industry in that area, has remained the wealthiest part of China (Goddard, 2007).

- **Inflation**

Inflation in Russia was very high in the end of 1990s caused by the financial crisis. Although the economic problems were stabilized the high inflation was still evident in the year 2000 when it was 20 percent. The following five years, inflation decreased by 36.5 percent to the inflation rate of 12.7 percent. Inflation in Russia continued to drop and reached 6.7 percent in the year 2010. Chapter 4.1 explained the close bond between Ruble and oil prices which in addition shows dangers of inflation in Russia whenever oil prices drop. China, however, showed constant low inflation under 3.5 percent through 2000s and even had deflation problem in the beginning of decade which reflected rapid productivity growth and appreciation of the effective exchange rate in the wake of the Asian financial crisis (Ha et al., 2003). Mostly due to government regulations of capital market China was keeping the Yuan low, regardless of US complaints that it is undervalued and damages the competitiveness of other countries' industries (Krugman, 2010).

- **Unemployment**

Unemployment in Russia in 2000 was 11 percent which is relatively high. Although in the following 5 years total unemployment decreased to 7 percent, by the year 2010 it slightly increased to 8 percent. The increase in unemployment in the late 2000s was caused by the global financial crisis which forced some Russian companies to reduce workforce in order to boost efficiency. (Randstad, 2012) The figures from the table show that China had constantly low unemployment rates of below 5 percent for the entire decade. In 2000 it was only 3.1 percent and then slightly increased to 4.2 percent in 2005 where it remained until 2010. These numbers cover only urban areas and in the case of China, where transparency of government reports is often questionable, reliability of the numbers must be taken with reserve.

- **Exports**

Both countries had an increasing trend of total export value in the period from 2000 to 2010. When comparing the two countries in the year 2000 China's exports were more than twice the size of Russia's. However, through the years China's total export value was increasing much faster than that of Russia. A notable divergence happened during the period of 2005-2010 when China's exports increased dramatically from 583 to 1506 billion US Dollar, while Russia's exports increased only from 245 to 377 billion US dollar. As mentioned in chapter 4.1 Russia's export is based mostly on oil and therefore depends directly on the changes in global oil prices, while export structure of China does not depend on natural resources but on manufacturing goods.

Table 2: Macroeconomic indicators of Russia and China

Country	Russia			China		
Year	2000	2005	2010	2000	2005	2010
Population (million)	146	143	139	1,261	1,306	1,330
Total GDP (billion USD)	259	764	1487	1,199	2,257	5,931
Real GDP growth (%)	10	6	4	8	11	10
GDP Per Capita (USD)	1,775	5,337	10,440	949	1,731	4,429
Gini coefficient	0.399	n.a.	0.42	0.412	0.513	0.47
Inflation Rate	20	12.7	6.7	0.4	1.8	3.3
Unemployment Rate	11	7	8	3.1	4.2	4.2
Total Exports (billion USD)	105	245	377	232	583	1506

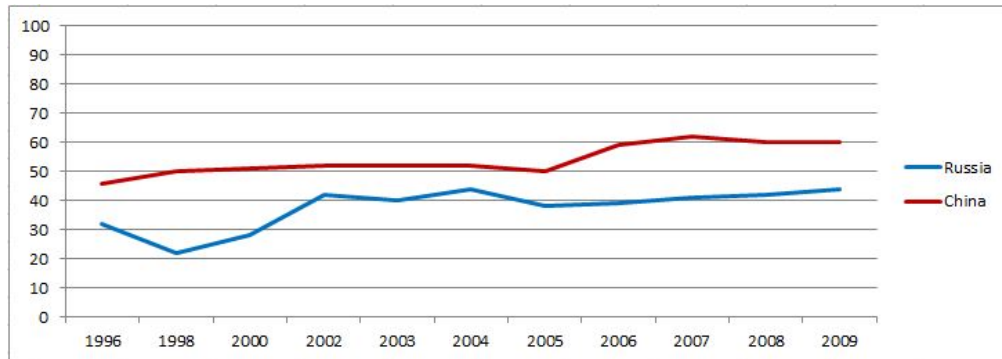
Source: World Bank (2012) and IMF (2012)

- **Government effectiveness**

From the chart it is clearly seen that in Russia government effectiveness fell in 1998 at the time of financial crisis and was improved by almost 100 percent in the following four years, jumping from 21 percent in 1998 to 41 percent in 2002. The following years the value was stable at around 40 percent. On the other hand we have China with a strict communist government that for more than 10 years had around 50 percent, always more than Russia. In 2005 Chinese government effectiveness even increased to 60 percent

where it remained until 2009. The chart clearly shows that overall China's government was more effective than Russia's in the observed period.

Figure 7: Government effectiveness in Russia and China

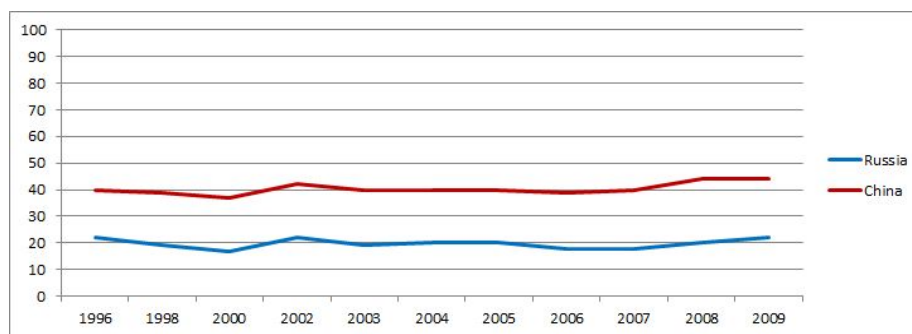


Source: Good Governance Indicators, World Bank (2012)

- **Regulatory quality**

Both Russia and China have constant regulatory quality through the entire period of 1996 to 2009 with just slight changes. However, regulatory quality in China is always as twice as high as that of Russia. China has regulatory quality always at around 40 while Russia's is at around 20. This shows that rules and regulations of the Chinese government are more effective than government regulations in Russia's.

Figure 8: Government effectiveness in Russia and China



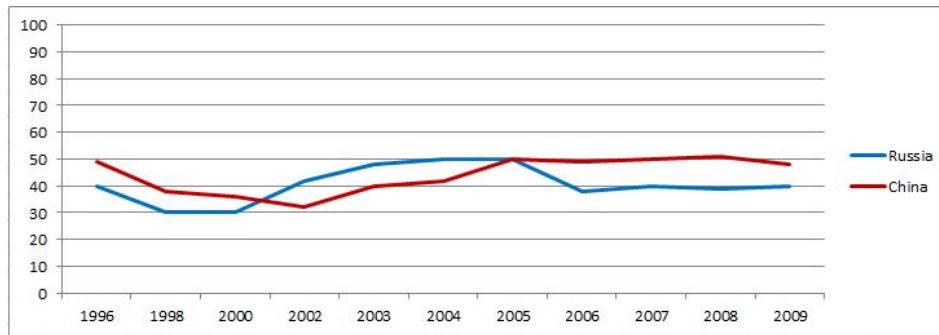
Source: Good Governance Indicators, World Bank (2012)

- **Rule of law**

Rule of law is the only good governance indicator where Russia had at one point a better situation than China. From 1996 to 2000 rule of law in both countries was declining. Russia then started improving which is due to solving internal crisis and one can see correlation in improving situation in the following four years same as in government effectiveness. China's rule of law was at the lowest in 2002 when it started

rising and it reached the same level as Russia's in 2005 when it was exactly 50 percent. Although China's rule of law stayed on the same line for the following four years, Russia's rule of law dropped by 10 percent from 2005 to 2006 where it remained in the following years as many cases of criminal corruption involving bureaucrats have been uncovered by the Federal Security Service. (IRBC, 2007)

Figure 9: Rule of law in Russia and China

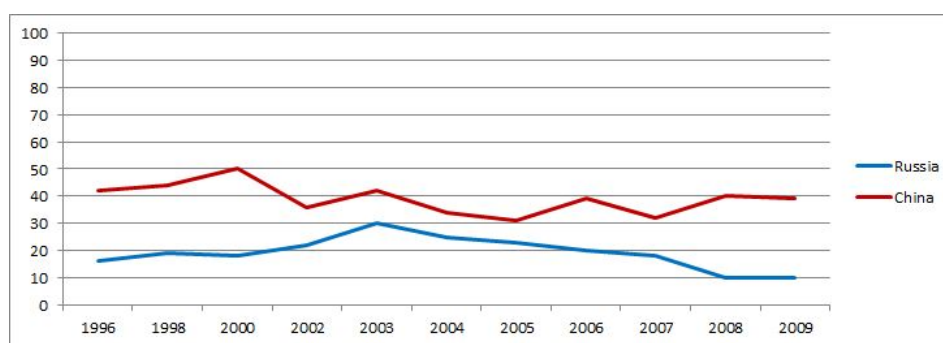


Source: Good Governance Indicators, World Bank (2012)

- **Control of corruption**

Control of corruption is very important to examine in countries with a relatively high Gini coefficient. Countries with high a Gini coefficient usually tend to have lower rule of law and less control of corruption. In this case we can see that Russia had a really low control of corruption that in the 1990s was a really big issue caused by sudden shift from communist Soviet to new capitalist system. Weak institutions in this chaotic transition period created high levels of corruption and rent seeking. Government was fighting to control corruption but until 2003 the chart shows a trend of declining control. It can be related also with the price of oil as the corruption rose at the same time that prices were rising in the 2000s. China on the other hand has a slightly better control of corruption but still scored always below 50 percent. The government is trying to fight corruption in all parts of society but it is known that many government officials were involved in corruption scandals. Such example is the case of Bo Xilai when he was dismissed as Chongqing party chief on the charge of corruption in March 2013 and month later suspended from the Central Committee and its Politburo. (FlorCruz and Shadbolt, 2013)

Figure 10: Control of corruption in Russia and China



Source: Good Governance Indicators, World Bank (2012)

The prior chapter introduced Russia and China and indicated that there are big differences among them including geographical, social, historical, economical and governmental aspects. The economies of both countries are export oriented but their export structures differ. While Russia's exports are mostly comprised of oil and other natural resources China's exports are based on manufacturing goods. Chapter 7 showed Russia's close reliance on oil exports and the dangers that come with it. There exists a close direct relation between oil prices and the value of the ruble that means dangers of currency appreciation and depreciation in Russia are present. Whenever there is a sudden increase in global oil prices the ruble appreciates and other non-oil industries in Russia become uncompetitive. Furthermore, the analysis of good governance indicators indicated there is a relation between oil prices and corruption in Russia. Whenever oil prices increase corruption increases and government rule in Russia worsens. This indicates weak institutions and government inefficiency to distribute wealth in country accordingly. Furthermore, this is the typical case of Dutch Disease where other non-oil industries suffer because of government inefficiencies. On the other hand, China is a country whose exports do not rely on natural resources and that has strong government with strict rules and regulations. Control of the financial market and an undervalued currency has seemed to bring economic stability and constant high growth rates in China. Although the Gini coefficient is higher than Russia's and is most probably even increasing China does not face any dangers of Dutch Disease and the manufacturing sectors are developing accordingly.

5. Norway

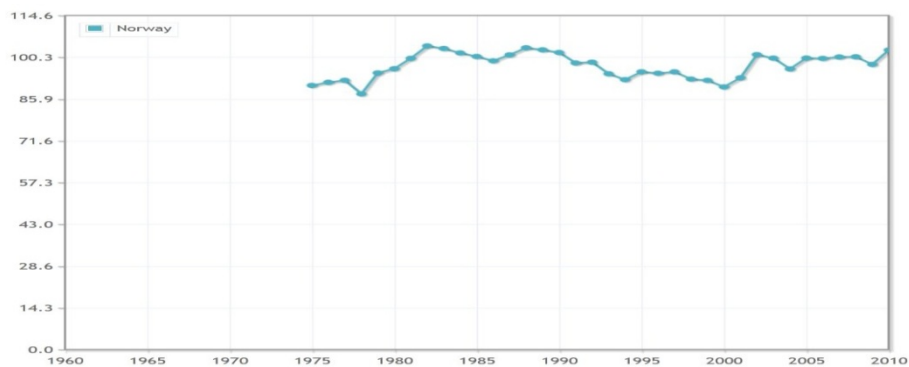
Norway is a relatively small European country located on the Scandinavian peninsula with total area of 323,802 square km and a total population of 4.7 million. The country held already two referenda for joining the EU in 1972 and 1994 which were both rejected by Norwegians. In 2011 the country's total GDP was 414.5 billion US dollar. The GDP composition by sector in the same year comprised of the agriculture sector that was 2.9 percent, the industrial sector that was 21.1 percent and service sector that accounted for 76 percent. With 159.8 billion US dollar total export value and 92.63 billion US dollar total import value Norway is an export based economy. The country's export structure is based upon oil and mineral fuels that accounted for 64 percent in 2010, fish accounted for 6 percent, boilers, machinery and nuclear reactors together accounted for 5 percent and export of other goods accounted for 25 percent (World Factbook, 2012).

The country is currently the third largest oil exporter, after Saudi-Arabia and Russia, so its reliance on oil is of great importance for the economy and the country in general. Norway's economy was historically dependent on its fisheries until oil was discovered in 1969. The subsequent extraction of it started in 1971. (Larsen, 2004) In the 1960s Norway was still lagging behind its Scandinavian neighbors Sweden and Denmark, as it had for decades. The discovery, extraction and finally export of oil have put Norway on the fast track of catching up. Norway's GDP per capita in the period from 1975-1996 grew much faster than its neighbors' and in 1981 it surpassed Sweden's. Few years later, in 1988, it surpassed Denmark's. The fast growth of GDP per capita slowed down in the late 90s and beginning of 2000s when the average annual growth was around 2.5 percent. (Larsen, 2004) Since Norway started exporting oil in 1970s the value of its national currency, the Norwegian crown, was becoming increasingly correlated to crude oil prices. Although revenues from oil exports created a potentially dangerous situation and a possibility for country to fall into Dutch Disease, the Norwegian government was implementing a number of preemptive policies and regulations that prevented this from happening. The centralized wage formation system limits general wage increases at the magnitude of productivity increases in the manufacturing sector. This system helps coordinating income of oil and non-oil sectors. The government established also a petroleum fund ("oljefondet") that uses revenue from oil exports and invests in different

projects abroad. This way it shields the domestic economy from excessive demand and real appreciation that could possibly reduce the competitiveness of the non-oil tradable goods sectors. In addition, the government channels resources into education, research and development. It invests in oil research and expertise in off shore oil extraction so it minimizes reliance on foreign experts (Larsen, 2004). All these government policies benefit and help to sustain a non-rent seeking society in Norway.

As Figure 11 shows, all sound policies and petroleum Fund in Norway led to stable real exchange rate.

Figure 11: Real exchange rate of Norwegian Krone 1960-2010 (2005=100)



Source: www.indexmundi.com

5-1. Comparison of Norway's macroeconomic indicators

The following chapter will look into macroeconomic indicators of Norway through period 2000-2010. It will provide an outlook of economic situation of the country by looking into total GDP, GDP growth rate, GDP per capita, Gini coefficient, inflation, unemployment and total export value, figures that can be seen in Table 3. Furthermore, in the chapter we will look into good governance indicators of Norway.

- **Total GDP**

Total GDP of Norway increased from 168.3 billion US dollar in the year 2000 to 417.7 billion US dollar in the year 2010. However, total GDP showed signs of declining growth when the period from 2000-2005 is being compared to 2005-2010.

Real GDP growth of Norway was only 0.7 percent in the year 2000. In the year 2005 it increased to 2.6 percent and continued positive trend in the following five years to reach 3.3 percent in the year 2010. The entire observed decade showed that Norway's economy has very low real GDP growth with trend of slight increase.

- **GDP per capita**

Norway's GDP per capita increased from 37,473 in 2000 to 65,767 US dollars in 2005. This increase of 75.51 percent showed high and positive GDP per capita growth that continued in the following years. In 2010 it reached 85,443 US dollar per capita, making it total of 29.92 percent increase since year 2005. In sum, Norway's GDP per capita has been above average through all observed years and is continuing to rise despite already being world's 8th highest (World Factbook, 2012).

- **Gini coefficient**

The Gini coefficient of Norway in 2000 has been much below average, only 0.26. This shows that the country has a really equal wealth distribution and hence inequality in society is low. The country even improved in the following ten years and the Gini coefficient dropped to 0.25, making Norway country with world's 5th lowest GINI coefficient (World Factbook, 2012).

- **Inflation**

The inflation rate in Norway in 2000 has been 2.9 percent and was decreasing in the following years. In the five year period, the inflation rate dropped to 1.6 percent. In the period 2005-2010 inflation rate increased for 50 percent, reaching total of 2.4 percent. Although inflation rate in Norway during observed ten years had small fluctuations it always remained low and caused no threat or danger to their economic stability.

- **Unemployment**

The unemployment rate of Norway constantly remained low, around and below 4 percent. In the year 2000 unemployment was 3.6 percent and until 2005 it slightly increased to 4.2 percent. The following years showed again a slight drop of unemployment to 3.8 percent. The unemployment rates in the period 2000-2010 show constant and stable situation of labor market in Norway.

- **Exports**

Total export value increased from 59.2 billion US dollar in 2000 to 76.64 billion in the year 2005. It showed increase of 29.46 percent that was mainly due to increase in oil prices. In the following years total export value jumped up by 78.76 percent, reaching a

total value of 137 billion US dollar. It is evident that Norway has a positive trend of increase in total export value. As mentioned earlier in chapter 8, Norway's export structure is based on oil.

Table 3: Macroeconomic indicators of Norway

Country	Norway		
Year	2000	2005	2010
Population (million)	4.4	4.5	4.6
Total GDP (billion USD)	168.3	304	417.7
Real GDP growth (%)	0.7	2.6	3.3
GDP Per Capita (USD)	37,473	65,767	85,443
Gini coefficient	0.26	n.a	0.25
Inflation Rate	2.9	1.6	2.4
Unemployment Rate	3.6	4.2	3.8
Total Exports (billion USD)	59.2	76.64	137

Source: World Bank (2012) and IMF (2012)

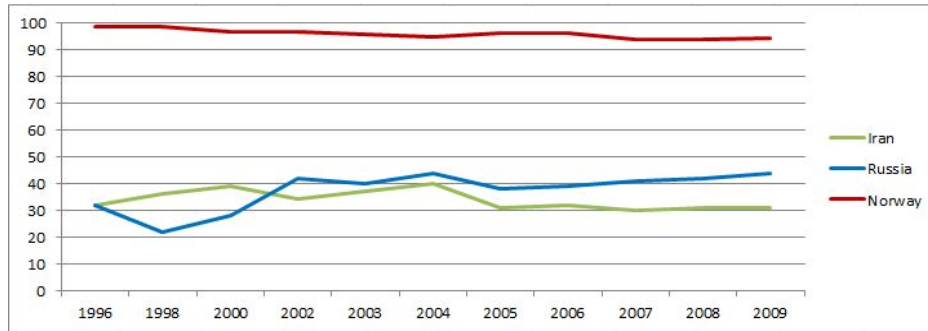
5-2. Comparison of Norway, Iran and Russia

Examination of economic structures of Norway, Iran and Russia showed that all three countries are export oriented countries. Moreover, all three countries have more than 60 percent of their exports related to oil production. This is the first sign of existing danger of Dutch Disease in countries. Furthermore, prior chapters explained how currencies of all three countries were affected by changes of the oil price. In the case of Iran and Russia these changes directly influenced appreciation or depreciation of their currency. With poor government regulations, an appreciation of the currency caused non-oil sectors to become uncompetitive. On the other hand, Norway's good, preventive government policies and regulations resulted in an effective control of their currency. Establishing the Petroleum Fund Norway created an external shield that prevented the appreciation of its currency. In the following part of the chapter the three countries will be compared by their good governance indicators to furthermore examine their government effectiveness, regulatory quality, rule of law and control of corruption.

- **Government effectiveness in Norway, Iran and Russia**

Figure 12 shows that Norway has one of the highest government effectiveness in the world, always close to 100. This constant high number between 90 and 100 gains even more importance when compared with other oil rich countries such as Russia and Iran that have much lower government effectiveness, always between 20 and 45.

Figure 12: Government effectiveness in Norway, Iran and Russia

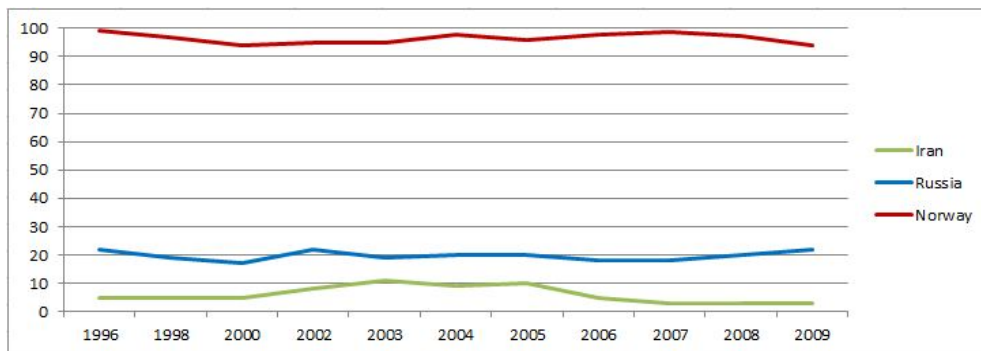


Source: Good Governance Indicators, World Bank (2012)

- **Regulatory quality in Norway, Iran and Russia**

The regulatory quality difference between Norway, Iran and Russia is clearly seen from the Figure 13 and it shows the state and efficiency of institutions in the country. All three countries tend to have a similar trend in their regulatory quality but while Norway has always between 90 and 100, Russia has a much lower regulatory quality always around 20 and Iran has a critically low regulatory quality always below 10. Although all three countries have oil, Russia and Iran even more than Norway, regulatory quality clearly show the state of institutions and regulatory systems in countries where Norway seems to be way ahead.

Figure 13: Regulatory quality in Norway, Iran and Russia

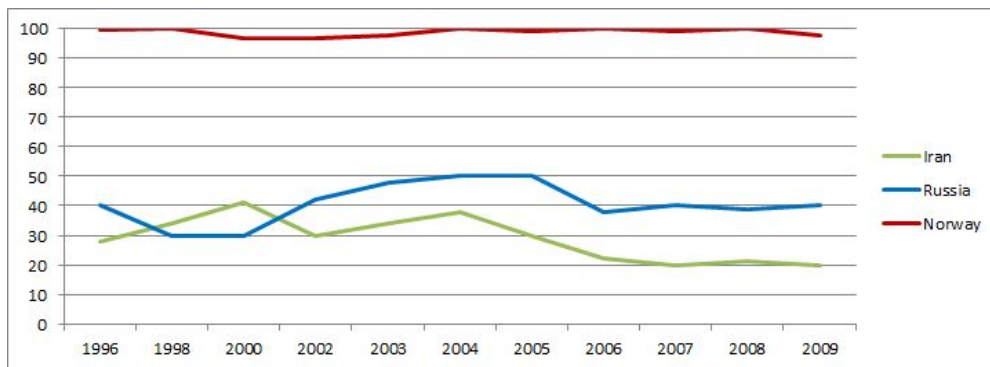


Source: Good Governance Indicators, World Bank (2012)

- **Rule of law in Norway, Iran and Russia**

The law system and rule of law in Norway is again much better than in Iran and Russia. Nearly always at 100, Norway seems to be country with an almost perfect law system. On the other hand, the quality of law systems in Russia and Iran fluctuate and often goes down with rising oil prices. Once again Norway seems to have the better institutions, adding to social and economic stability and fairness in country.

Figure 14: Rule of law in Norway, Iran and Russia

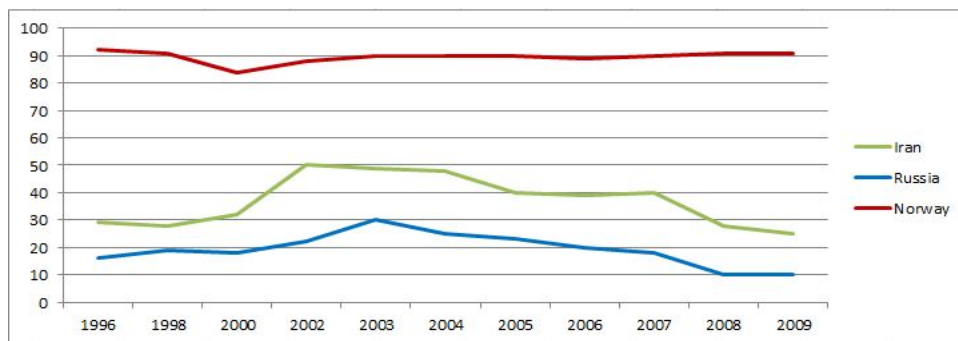


Source: Good Governance Indicators, World Bank (2012)

- **Control of corruption in Norway, Iran and Russia**

One of the typical indicators of a rent seeking society is control of corruption. As it can be seen in Figure 15, Norway has very good and efficient control of corruption, always around 90. This shows there is no rent seeking culture present in Norway’s society. On the other hand, control of corruption in Iran and Russia as low. Both Iran and Russia have their economies depended on oil exports and their currencies heavily tied with crude oil prices. High corruption and rent seeking trend creates dangerous environment in that increases inequality in society.

Figure 15: Control of corruption in Norway, Iran and Russia



Source: Good Governance Indicators, World Bank (2012)

6. Conclusion

The purpose of this paper was to indicate if having natural resources is a curse or blessing for a country, in other words does it benefit or damage a country's economy and society. After explaining the theory and dangers of Dutch Disease as well as resource curse the paper presented and compared five countries. The purpose of this comparison was to see differences in countries that have an abundance of natural resources with those who don't. Oil rich Iran was compared with a similar sized country that does not have natural resources, Turkey. In the second case, the second biggest oil exporter in the world Russia was compared with world's biggest exporter of manufactured goods by total value, China. Finally, fifth presented country was relatively small but oil rich Norway.

In most of the previous resource curse literature the trends in macroeconomic indicators in oil rich developing countries have been examined. Other literatures looked at solely on institutional qualities in these countries. In this paper we tried to illustrate the linkage between weak economic performance and institutional quality of Iran and Russia. The paper showed that in most cases countries without natural resources economically performed better. In addition, it showed that countries without oil based their economy on the manufacturing of goods and with their government policies and regulations managed to achieve better economic growth rates. Finally, findings show that in most cases having natural resources is more curse than a blessing.

Most oil rich countries were affected by Dutch Disease. Their economies were closely tied to crude oil prices and an increase of crude oil price would directly lead to appreciation of their currency. This effect leads to a decreasing competitiveness of all non-oil sectors. In addition, countries affected by the Dutch Disease showed presence of a rent seeking culture and high corruption that furthermore create increasing wealth inequalities in their society. However, the case of Norway shows that with good government policies and government regulations having natural resources can lead to positive effect on the country. The example of Norway showed that this can be done and that whole economy and society can benefit from export of natural resources. It is of great importance for the government to regulate and manage oil revenues in a way that non-oil sectors do not lose their competitiveness. Also it is suggested that countries with natural resources help all non-oil sectors, supporting them to develop and increase their

competitiveness. As mentioned before, one of the most important things for country to deal with dangers of Dutch Disease is to invest into and improve its institutions. In addition, countries should follow Norway's example by investing in education, technology and training, providing more equality for entire society and minimizing rent seeking culture and corruption. Finally, if countries manage to follow these steps they will overcome the resource curse and transform it into a resource blessing that will benefit entire economy and society.

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