

Regulation of the Oil Industry:

The Case of Kazakhstan

by

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ABSTRACT

The paper observes the recent trends in the regulation of the oil industry both globally and in Kazakhstan. It covers the evolution of state intervention in the world by giving the distinguishing features of two main regulatory models; current issues of the mineral resource market (such as the peak oil, resource curse and oil price volatility) and possible development policies; and lastly it provides an overview of the state regulation in the oil sector, based on the example of Kazakhstan's economy, including the existing legislation, policies, and current problems.

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INTRODUCTION

In oil-rich countries, a key feature of the oil industry is that it is both the result and precondition of the country's social and economic developments. Crude oil and refined petroleum products are the largest single items in international trade (Hartshorn, 1993). These items are considered to be crucial commodities, which prices are essential economic variables in determining and forecasting the world's economic situation.

Hence, the situation in the local oil sector within a country is a question of major importance for a sustainable economy of almost any country. First of all, oil-producing companies are a major financial source of a country's budget, which means they need to operate effectively to maintain stable revenue inflows to the state. Second, demanding requirements of environmental protection and security of supply are major issues that cannot be managed by hydrocarbon producers themselves. Also, big risks from outside a country (such as oil price volatility, financial crisis, political risks) require sustainable and prompt regulation. And finally, because of high concentration of foreign capital, mineral resource industries need a regulatory authority that would represent domestic interests and control the effectiveness and productivity of these investments. The above reasons justify government intervention in the oil industry. Effective government regulation of the subsurface use is focused on restoration of mineral resources, its management and conservation. It is not only able to provide rapid economic growth, but also preserves raw material resources for future generations.

The paper's objective is to provide an overview of the recent trends in the regulation of the global oil market. The paper is organized as follows. The first section gives a general picture and reviews the major characteristics of basic extractive industries' regulatory models. Furthermore, it includes a concrete explanation of current issues and concerns in the

oil market starting with the causes that have recently occurred and ending with the possible adoption of more effective policy strategies.

The second section provides an overview of the state regulation of the oil industry in Kazakhstan. It involves its current legislation, main terms and conditions of subsoil use contracts, series of taxes charged on subsurface users, and other important barriers in the oil and gas industry. In addition, it describes the essential role of national companies in this particular industry's regulation based on Kazakhstan's National Company KazMunaiGas JSC.

1. CURRENT STATE OF REGULATION IN THE OIL INDUSTRY

1.1 MAIN REGULATORY MODELS

A regulation model of the oil industry, including the entire system of extractive industries, should be chosen according to the development of a country's economy, including its historical and economic backgrounds. A government modifies the regulatory instruments that it uses to encourage further economic development. Efficiency and performance of these direct and indirect instruments are one of the main factors determining economic stability.

In the industrial developed countries, subject to the priority given to financial or institutional mechanisms of government regulation, two main economic models of subsoil management regulation have emerged: the neoliberal and the state-institutional models (Piskarev and Shkatov, 2012). The neoliberal model is primarily presented by the oil industry's regulation in the US, whereas the state-institutional model is mainly applied in Norway. Although there are some countries, including France, Germany, Japan and others, where both public and private subsoil and mineral titles are allowed, only government authorities are eligible to grant permission for subsurface exploration and production regardless of the forms of ownership (Maulenov, 2003).

1.1.1 NEOLIBERAL MODEL

The neoliberal model could be considered as a classical model for a market economy. Through indirect instruments the state governs all subsurface processes that are largely implemented by private companies. The basis of this model lies in the key element of the Keynesian concept – an active government intervention in the fiscal, credit and investment spheres. Thus, the main instruments are legislative acts, the resource payments and the taxation system (Piskarev and Shkatov, 2012).

In general, the regulation of extractive industries in the US includes control of mining resource accessibility, control over prices of certain kinds of mineral resources, depletion allowances, subsidies for research and development activities, public procurements, central accounting and evaluation of mining resources (Nicholson, 2013).

According to the current legislation, the US president and some specialized authorities (such as the Department of Energy, the Department of Commerce, the Department of State, the Department of Agriculture, the Department of the Interior and the Environmental Protection Agency) perform the main functions of regulating the subsoil operations (Korneev, 2004). In addition, there are five specialized agencies at the Department of the Interior, which are involved in the regulation of the mining industries: the Geological Survey, the Bureau of Mines, the Minerals Management Service (MMS), the Bureau of Land Management, and the Administration on Land Reclamation in Open Pit Mining. The Bureau of Land Management and the MMS are mandated to control the land and offshore subsoil resources owned by the federal government respectively (The United Nations, 2011).

Property right of a land where subsurface exploration and production are in plan could be owned by the federal government, state government, municipality, a private individual or private enterprise. The US, apart from any other country, has a private ownership of mineral rights, which means the landowners own their mineral rights (The Asahi Shimbun, 2012). This is the main factor that distinguishes this model from the state-institutional model, where mainly all the mineral rights belong to the state (public authorities).

Moreover, to have an exclusive and unlimited right for activities on the particular oil and gas fields, company-producers are to receive a paid patent in a legitimate way. Nowadays, the Mineral Leasing Act (1920)¹, in accordance by which companies obtain a permit to explore and extract the subsoil resources, determines qualifications for leases,

¹ Amended in 1978.

maximum limits on particular resource territories that can be held by a lessee, and prohibits leasing to foreign producers except through stock ownership of a company. Along with other lease payments, such as periodical rental payments, bonuses, and royalty in the amount of 15 percent of the production cost for the right to develop reserves, lessee's gains are divided in the ways established by the Act: 10 percent of gross revenue goes to the Federal Budget, about 50 percent of gross revenue goes to the Reclamation Fund, and the rest goes to the development of the infrastructure and realization of the social program of the corresponding state.

Oil-producing companies can sign a land-leasing contract for the development of oil and gas fields by participating in an auction or on a sole source basis. The duration of oil and natural gas leasing contracts is generally ten years; however it could be extended in case of existing subsurface drilling and commercial production in that particular area. A landowner who leases a land does not incur the costs of the refining, developing and producing, but is paid for the subsoil usage by the way of royalty. On the other hand, a lessee bears all the charges and risks, nonetheless gains an income from realization of the recovered oil and gas after the deduction of royalty (Mineral Lands Leasing Act, 1920).

As for an access to the offshore areas, licenses without any specific requirements are mainly granted for five to ten years on the shelf and eight to ten years for the depths below 400 meters. The usual size of the area set for a tender is 3 by 3 miles or about 23 square kilometers, however this size could be enlarged in order to create incentives for conducting the geological exploration (The Oil-and-Gas Vertical, 2006).

The main benefits of a state from the oil and gas industry are revenues gained from royalties, bonuses and also taxes. For this reason the state is interested in the sphere of oil and gas exploration and production. At the present time, the mineral tax regime in the US includes privileges like the percentage depletion allowance in oil and natural gas production,

the intangible drilling costs, the enhanced oil recovery credit and other privileges (Korneev, 2004).

Moreover, the federal government always supports production inside of the country to raise its oil and natural gas reserves. For example, with this objective in mind, there are strong incentives for investment and refining activities on the outer continental shelf of Alaska, which include the federal profit tax at the rate of 34 percent and 12.5 percent of royalty, or even no royalties are applied on the first forty five million oil equivalent barrels produced in any field (The Oil-and-gas vertical, 2006).

Thus, the distinctive feature of the neoliberal model is the absence of any direct state financial support of the subsurface deposits' exploration and development. It is focused on dealing with the budgetary-financial tasks and economic growth in general. The regulation process is based on only legislative and economic instruments, and also a developed market infrastructure of the American economy represented by the institutes of public control, the title to the natural resources, the legal protection of private interests, and the financial and stock markets.

1.1.2 STATE-INSTITUTIONAL MODEL

In contrast the basic characteristics of the state-institutional model are special government mechanisms of the regulation of the oil-and-gas industry. The Norwegian government acts as both an objective and subjective party to its national economy, being an owner of the mining resources, in addition to authorising economic regulation represented by the Parliament, Ministries and other state authorities.

After the petroleum activities progressed, Norwegians established the “10 Oil Commandments”, according to which the state participates at all appropriate levels and coordinates national interests in the Norwegian petroleum industry. This is done through state

oil companies aiming to look after the state's commercial interests and to retain reasonable collaboration with domestic and international petroleum interests (Stortingsmelding², 1971).

The Norwegian Parliament, the Storting, frames the legislation system, forms public strategy and controls different economic, social, and environmental aspects of mineral resource development. In addition, parliamentary representatives such as different ministries implement petroleum policies that must be authorised by the higher body, the Storting.

Issues relating specifically to the management of mining resources are under control of the Ministry of Petroleum and Energy (MPE). These issues include a grant of licenses for exploration and production, collection of taxes and resource payments to the budget and other specific compensation funds, formation of strategic reserves, administrative, financial, and overall control of commercial and foreign trade operations. Along with the MPE, there are other specialized ministries that deal with other possible issues encountered in the mineral resources industry, such as the Ministry of Labour and Social Inclusion, the Ministry of Environment, the Ministry of Fisheries and Coastal Affairs, and the Royal Norwegian Ministry of Finance (MPE's website).

An additional important function of the MPE comprises management and control over state direct ownership in a number of subsurface fields, pipelines and other facilities. These assets are organized into the State's Direct Financial Interest (SDFI), which is managed by the state-owned company, Petoro AS. The company's central task is to guarantee the highest possible returns from the SDFI that would benefit Norway as a whole. Also, the state's shares include another fully owned company - Gassco AS JSC, and a partially owned company – StatoilHydro ASA. Thus, through the SDFI, Norway directly participates in the oil and gas sector (MPE Fact Sheet, 2010).

² Unofficial translation by Norwegian Petroleum Directorate (2000).

As to the issues surrounding the organization of the effective oil and gas industry operation, the state owned companies are under the control of the Norwegian Petroleum Directorate (NPD) that is reporting to the MPE and is funded by the Budget. The NPD is a main consultant of the MPE, which is a specialized statistical bureau as well as an economic, judicial, geological and technological unit that takes into consideration all the problems relating to the oil and gas industry (NPD's website).

An essential part of the Norwegian model is its license system. Similarly to the US, licenses for exploration and production are granted by the MPE on a competitive basis. They are issued solely to all potential licensees that signed a joint operating and accounting agreement containing regulations of profit allocation, cost optimization, and day-to-day relationship between partners. Production licenses contain rights and liabilities that apply to producer companies with respect to the state. As soon as they receive a license, they must prepare and present a joint development plan of that particular field to the MPE, where the authorities overview and submit the claim. At first, a license is issued for ten years, and after this period it could be extended if all obligations mentioned in the license are respected (Statoil Annual Report, 2011).

Similar to the US, Norway pays precise attention to the financial issues of the oil and gas industry, particularly to the collection and distribution of oil income (taxes, dividends). For instance, the government receives a major portion of this income from a corporate income tax (28 percent) and a special tax (50 percent). In addition to these taxes, there are also payments for carbon dioxide emission, taxes on hydrocarbon extraction (royalties) and license areas. Due to its large share in the industry, the state introduced another subtraction from income called uplift, which is designed to ensure a normal return on capital to the investor. So, after calculating the corporate tax, but before the special tax, the uplift is

subtracted at the rate of 7.5 percent of the investments throughout four years (Petroleum Tax Act, 2007).

Moreover, due to a high degree of affiliation between buyers and sellers, the state introduced a norm price used in calculating tax receipts. The norm prices are applied to any transaction on oil between non-affiliated parties and determined by the Norm Price Board (NPB), on a monthly basis for each field (Paragraph 4, Petroleum Tax Act, 2007).

A major part of the received earnings is accumulated in the specialized Government Petroleum Fund that invests in the capital of processing industries and securities, particularly those not connected to the oil and gas industry, to maintain economic stability (Royal Norwegian Ministry of Finance).

Thus, being an active player in the oil and gas industry, Norway has developed a number of mechanisms to encourage involvement of producing companies into the social and environmental programs, to control the distribution of oil income and to optimize the operation of the industry through different development programs.

1.2 RECENT CONCERNS IN THE OIL INDUSTRY

Due to the nature of hydrocarbon sectors, government regulation is mainly described by arrangement of fair trading conditions, promotion of sustainable development of energy industry, environmental protection, and adjustment of the corporate rate of return.

However, along with the issues in the foundations of a well-regulated oil market, there are other recent concerns, arising from various factors (including financial, political and ecological factors) that must be considered by a state upon the strategic development of extractive industries.

1.2.1 PEAK OIL

One matter of common concern is in regards to future availability of the capacity reserves at all stages in the oil industry value chain. Many experts predict that there will be crude shortage in the world. This theory is known as ‘peak oil’, suggested by Hubbert (1949). It is based on the fact that oil is a finite resource, and one day its production will reach a maximum point, after which it will gradually decline.

Nowadays, there are still many proponents of peak oil. For instance, the Energy Watch Group (EWG) in its 2007 report claimed that global oil production reached its maximum in 2006 and has been decreasing ever since by some percent per year, which would reduce world oil stock reserves by 2020 to 2030. Similarly, in 2005 the US Department of Energy’s view is that the global peak oil will occur, causing many risk management problems, and that it will require government intervention (US Department of Energy, 2005). Moreover, Aleklett and Campbell (2003) gave scientific evidence for peak oil expectations, stating that the production of oil and gas started diminishing in 2010; however it is impossible to set an absolute accurate date, in the presence of economic recessions and political instability the world could face in the near future.

Nevertheless, the Cambridge Energy Research Associates (CERA) believes that peak oil theory has gaps: based on historical data, the world has already experienced the peak oil five times, and every time new technologies and more oil pool discoveries postpone the reduction (Yergin, 2011). This thought is also supported by the International Energy Agency (AIE), which states that there is no oil shortage, however there are resources that are very hard to retrieve and if successful will be extremely expensive to explore (Mandil, 2005). According to the AIE’s forecasts, in case of insufficient investment in oil fields’ development, the oil peak could occur approximately in 2014 or 2015 (Tanaka, 2009).

Currently, there are some major factors that could disrupt oil supply in the world. One of these factors is a growth of oil consumption. Shell estimates that by 2050 the global demand for petroleum products will triple from 2000's level (Shell, 2011). Similarly, the EIA's forecast states that 90 percent of this trend could be attributed to emerging markets and fast-growing non-OECD economies. In particular, China and India will contribute almost half of a 56 percent growth in the total global energy consumption during the period 2010 to 2040 (EIA's International Energy Outlook, 2013). Therefore, meeting demand in the future will require innovation, investment and exploration of new and more challenging fields.

Another factor is the geopolitical situation in the Middle East and African countries. The presence of the main western oil producing companies (such as ExxonMobil, BP and Shell) engenders discontent among Iraqis, which increases uncertainty about a rise of oil production in Iraq in the next few years (Dahr, 2012). In addition, there are threats around the Strait of Hormuz that appeared because of the relationships between Iran and Israel. The situation in Libya, Nigeria, Yemen, and Syria also causes constant shortfalls in supply (Evans-Pritchard, 2013).

An additional factor that could cause oil scarcity is insufficient investments in technology, facilities and development. Theoretically, after benefiting from high oil prices, oil companies should spend greatly on exploration and production, thereby creating a self-adjustment mechanism by boosting supply (Berman and Tuck, 1994). However, the recent experience of IOCs shows that they have been returning money to shareholders. One of the reasons behind this is that host governments gain the majority of the unexpected income from prices considerably above 30 dollars per barrel (Stevens, 2005).

Furthermore, because of local politics, a number of global reserves in the Gulf Stream and South America are difficult to access, which could negatively affect all stages of the oil industry. For instance, Saudi Arabia and Kuwait do not accept foreign direct investments in

the upstream oil sector, the United Arab Emirates (the UAE) closed its oil sector for all new oil companies, and IOCs in Iran have limited involvement in the Iranian oil industry (The Department of Foreign Affairs and Trade, 2000). As to South America, Venezuela being the owner of the largest oil reserves in the world, failed in developing and exploiting its huge resources because of restrictions over international investments governed by its previous president's politics (Butler, 2013).

To maintain a rise in crude oil supplies, large amounts need to be invested in technology, development, exploration, and production. Oil-producing countries should make amendments in their legislation and introduce tax relief to encourage foreign investment. This would not only attract large international investment, but also make national and international oil companies tie up money in exploration, production and development of already existing and new oil fields. Thus, Mexico has passed an oil reform that is expected to boost average investment in the economy approximately by 2 percent a year and oil production that will reach 3 million barrels by 2018 and 3.5 million barrels a day by 2025 (Banco Bilbao Vizcaya Argentaria's Research, 2013).

Furthermore, after the Gulf of Mexico and Arctic oil reserves were open for exploration and production, and oil shale was discovered in the US, production is likely to increase in the long term. There are also unconventional oil reserves, such as oil sands, which are primarily located in Canada and Venezuela. Some experts consider oil sands to be a good replacement for conventional oil; however, others are against it, arguing that to extract oil from this type of reserve is more expensive (two out of three barrels go to energy expenses) and environmentally detrimental (recovering one barrel of oil requires two tons of sand and large amounts of water and natural gas) (Heinberg, 2003).

Besides, natural gas can be used to produce methanol that can be blended in order to obtain gasoline. This method is already being practiced in China but with the use of coal

instead of natural gas. According to the OECD, the growth rate of natural gas production is going to rise by 2.4 percent a year between 2010 and 2035 because of the rapidly increasing demand for it (Organization of the Petroleum Exporting Countries, 2013). Thus, some countries, such as the US, are trying to make steps towards raising the use of diesel made from natural gas and compressed and liquefied natural gas for their transportation sectors. To succeed, a country needs to maintain a production of flexible fuel vehicles and make amendments to the environmental acts about testing and approving methanol as a fuel (Holfmeister, 2013).

An additional action would be a stabilization of political situations in countries with vast oil deposits, including Iraq and Libya, which would allow increasing access to new acreages; however, it would be hard to manage.

1.2.2 PRICE VOLATILITY

The second key issue in the oil industry is oil price volatility and potential market control in case oil prices remain high. On the downside oil price volatility creates disincentives for investment, productivity and preservation of mineral resources. However, unlike the convenient thought that raising prices are always good for an economy, it could have a negative impact, involving more inflation, rise of expenses on energy, as well as trade deficit (Levi et al., 2012).

The main reason for an increase in oil prices is an oil shortage, which is generally considered to be caused by an insufficient production by OPEC, or a growing demand for oil in countries with a large population, such as China and India. However, there are also other possible causes of high prices, such as an unstable geopolitical environment and wars (Hosseini-zadesh, 2008).

An excellent example of this is the situation in the Middle East, including political turbulences in Iraq, Afghanistan, Syria, and recently Iran. There is evidence that energy

prices jump whenever there is a possible military conflict in the Middle East. For instance, in 2008 after Israel officially announced their thoughts about Iran, a fear of a new collision in the area led New York's main oil futures to escalate to 138.54 dollars per barrel, which was a record increase in crude oil prices (Agence France-Presse, 2008).

There are two feasible ways of forcing prices up through wars and political instability: dollar depreciation and manipulative speculations. Since a war comes along with huge expenses, a country incurs debts that lead to a depreciation of its currency and a rise of commodities prices. Thus, as a result of the war in Iraq, by the end of 2002 the US dollar became weaker against currencies of other countries. Considering that oil trading is mainly expressed in US dollars, when the dollar fell, oil-producing countries asked more of the depreciated dollar per barrel to maintain their oil buying capacity (Harden, 2013).

Thus, a number of experts state that 30-35 percent of changes in oil prices are due to dollar depreciation (GeoTimes, 2008). To verify their results, I tested the relationship between the exchange rate (USD/EUR) and crude oil prices (Brent and West Texas Intermediate (WTI)). The data series for the exchange rate and WTI were not stationary; therefore, it was transformed to the detrended time series using the Hodrick-Prescott filter. After regressing both Brent and WTI on the exchange rate, the results showed a negative relationship in both cases. Although the outcomes are robust, and the goodness of fit is really small, the outcomes are significant with a p-value of less than 5 percent (see Appendix 1). This implies that when the exchange rate decreases (as it did during 2007-2008), the price (in our case crude oil) of oil is more likely to increase (Figure 1). This confirms the experts' claim that about one third of oil price changes is due to dollar depreciation.

However, Azman (2009) provided evidence for a reversed causality: any changes in real oil prices lead to depreciation of the real exchange rate in oil-importing countries in the long run. Nevertheless, his results do not support the suggestion that a rise of oil prices leads

to an appreciation of the real exchange rate in oil-exporting countries. With respect to nominal terms, Beckmann and Czudaj (2012) pointed that an increase in oil prices leads to an appreciation of oil-exporting countries' currencies against the dollar, whereas nominal depreciation could be observed among both oil-importing and oil-exporting countries.

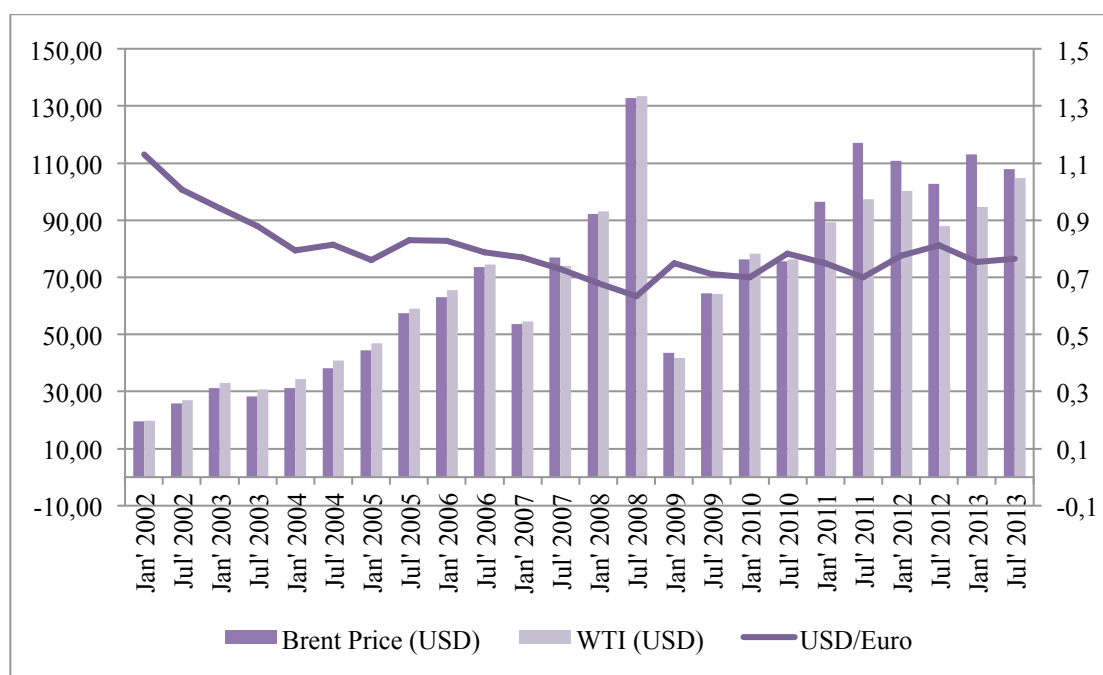


Figure 1. The relationship between USD/EUR exchange rate and crude oil price from 2002 to 2013

Source: US Department of Energy: Energy Information Administration

Although the impact of dollar weakness is significant, the influence of manipulative speculation, precisely the purchasing of crude oil futures against the backdrop of the Middle East's instability and geopolitical turbulences, is larger. Some experts argued that in 2008 this influence accounted for 60 percent of total price change. Although others argued it was 70 percent, they all supported the fact that these skyrocketing prices cannot be explained by the peak oil theory, but only by pure speculation driven by Wall Street and its financial giants. Speculators bought a lot of oil futures contracts, resultantly boosting already high prices (Engdahl, 2008).

Crude oil prices fell to USD35 by the end of 2008, whereas now the prices are above USD100. Once again, the situation is repeating among all markets (such as spot, physical forward, derivative), precisely in futures markets, where oil prices increased dramatically. In today's oil market, everyone, even hedgers, acts as speculators given their fear of unfavorable prices, and supports the idea that not only the demand-supply relationship can affect the price, but also the differential rates of return with investment in other markets. Therefore, a sufficient liquidity and low rate of return in other markets, in addition to supply-demand concerns and fear of a new Gulf war, become the main driving forces of the current oil market (Kabri, 2012).

Besides the ways to solve oil shortages, price volatility stabilization could be achieved by reducing uncertainty through improving data, especially in OPEC countries. It would help to make more accurate analysis of reserves, demand and supply and facilitate prompt investments in development and production. Despite an adverse effect of previous financial agents' actions, hedging could also positively manipulate the paper market in case of its efficient regulation. Since speculation is not a cause of volatility, but rather a side effect, governments could carry required and reasonable reforms against manipulation and fraud that would not act as strict restrictions on financial market participants, (Levi et al., 2012).

1.2.3 RESOURCE CURSE

Finally, in the global oil market there is a problem called 'resource curse' and related to its oil dependence. Although an abundance of natural resources seems to imply some sort of prosperity, it happens that a large number of countries that have enormous reserves within their borders are politically and economically less developed. At first mentioned by Auty (1993), this term was used by a number of economists to link attainable natural resource potential and economic growth.

While, in accordance to economic theory, big oil windfall profits should have a positive impact on the economy, there is a strong evidence of an opposite, so-called ‘Dutch disease’. Large income from oil exports is said to bring a local currency appreciation and a boost of domestic prices for the rest of goods, both of which could consequently reduce the competitiveness of other sectors, particularly in agriculture. Because of a strengthened local currency, imports are more affordable, whereas domestic products become more expensive for foreigners, which leads to a disruption of the trade balance (The Economist, 1977).

As a rule, major petroleum-producing countries have nationalized their extractive industries, and all income received from export goes to the government; therefore, a state puts a lot of effort to keep this wealth. However, by focusing on the development of only one particular industry, a government crowds out other sectors of the economy. An excellent example of this situation is Saudi Arabia: earnings from the oil industry amounts to 80 percent of the state budget, 90 percent of export revenues, and 45 percent of GDP (Central Intelligence Agency, 2013).

Furthermore, there is a risk of public and private debt accumulation due to the government’s expectations of big revenues from mineral sectors, as well as emergence of debt-ridden companies that use large energy income as a collateral for lending. Hence, in the presence of economic instability, a state incurs a risk of price volatility: any significant changes in the oil price (especially downward) affects the state’s earning, expenses and stability of the economy as a whole. This was the case in 2009, when the world faced the challenges that came with the financial crisis and the highly volatile oil prices (Hailu et al., 2011).

There is a common opinion that the resource curse is mainly caused by weak governance: before large subsoil reserves were found, resource abundant countries did not have sufficient regulatory institutions or enough experience to handle the pressure of

petroleum profits. For instance, the discovery of oil deposits made resource-based developing countries suffer from an easy money availability created by a subsurface rent. Since government is more interested in receiving huge amounts of money that require less effort, than in going through difficulties of state building, there are fights for access to these mineral fields. Additionally, the high profitability of the resource industry encourages a brain drain from other sectors, which increases unemployment. As a result, there is a higher level of corruption, internal conflicts, and authoritarian government as everyone wants to benefit at the expense of extractive industries (Shaxson, 2013).

Nevertheless, existence of vast natural resources does not imply economic and political instabilities. Some countries, especially developed ones, have managed the risks and been exploiting high revenues for substantial development programs (Brunnschweiler and Bulte, 2008). Norway, for example, has had good governance prior to the discovery of subsurface reserves and currently is considered to have a relatively stable economy. Despite the fact that the Norwegian petroleum sector accounts for 23 percent of GDP, 30 percent of state revenues, 29 percent of total investment, and 52 percent of total exports, after the recession in 2009, Norwegian annual GDP growth was constantly increasing: in 2010 – 0.6 percent, 2011 – 1.5 percent, 2012 – 3.1 percent; public debt was declining: 33.8 and 30.3 percent in 2011 and 2012 respectively; the inflation rate was stable: around 1 percent in both 2011 and 2012 (Norwegian Petroleum Directorate, 2013; The World DataBank).

Hence, based on such effective world experience, those mineral rich developing countries could try to create their own strategy to solve the consequences of the resource curse, and other countries, where subsoil deposits are about to be found, could try to avoid the arising risks. First of all, Hailu and Weeks (2011) suggested using a series of macroeconomic instruments, such as fiscal and monetary policies, to foster growth and human development. It involves a promotion of public and private investments in the non-

extractive tradable sectors through credit expansion, a maximization of resource profits through sufficient royalties and tax rates, a private sector stimulation to maintain employment, as well as exchange rate management through national banks to improve the competitiveness of the non-extractive sector's exports.

The next step is to stimulate a diversification of the economy by strengthening cross-sectorial linkages in the domestic economy and to support labour intensive productions. This could be achieved primarily through tax relieves for certain operations, such as export of domestic products, innovations, or local content, that are used, for example, in Kazakhstan towards international oil companies (see Section 2).

A support of agriculture and manufacture is also crucial. Since a common consequence of the resource curse is large imports of non-resource products, well-operating agricultural and manufacturing sectors ensure an adequate supply to meet domestic demand and increase their share of total exports. Thus, suffering from low oil prices, Uzbekistan encourages investments in local non-resource industries that have led to a 13 percentage point reduction of food imports (from 22 percent to 9 percent) in the share of total imports and 12 percentage points increase in the share of non-oil exports in total exports (McKinley, 2008).

Another essential policy is an improvement of revenue distribution management to illuminate vertical and horizontal inequalities, which would positively contribute to preventing new internal conflicts. One way is to maintain effective income collection by adopting a royalty-based fiscal regime on subsurface industries. There are three types of schemes in terms of a tax base: income-based (depends on profitability measures), unit-based (depends on material produced), and value-based (depends on production). As global experience shows, the most productive tax regime is a mixture of all royalty regimes. For instance, in British Columbia, the Canadian government introduced not only profit-based, but

also value-based royalties; so oil-producing companies pay either the higher of them, or both of them depending on the government's decision (Otto et al., 2006).

When revenues are being collected, there is supposed to be a sufficient government authority that controls this process, as well as efficiency and productivity of income's allocation. Thus, the Norwegian government founded a Government Petroleum Fund under the Royal Norwegian Ministry of Finance to accumulate oil profits and distribute it according to a substantial economic development strategy (see Section 1.2.2). As an extra policy, a state could require from oil-producing companies, especially international ones, to invest in facilities and other development programs of the region where exploration and production are carried out. Gottschalk and Martins (2008) believe that resource dependence and other issues arising under the resource curse could be solved by public investments in physical assets and human capital. The large oil windfalls should be aimed to fund economic diversification to boost future revenues from other non-resource sectors.

2. REGULATION OF THE OIL INDUSTRY IN KAZAKHSTAN

The Republic of Kazakhstan, a young and perspective country, has vast reserves of mineral resources, especially oil and natural gas. Having the eleventh largest proven crude and condensate reserves in the world, Kazakhstan occupies the eighteenth place among leading oil-producing powers (Central Intelligence Agency).

From the very beginning of its independency, the oil industry has been the main growth driver of the economy, attracting foreign investment to the economy. It provides a significant portion of gross domestic product, and is an important source of budget receipts and currency earnings. Therefore, the government pays a lot of attention to the development and regulation of the oil sector. Kazakhstan tries to pursue a deliberate policy towards its own commercial interests by rational planning of investor relations, using different subsurface regulation and other regulation instruments.

Besides the legislative regulation, the country uses its national companies in order to coordinate the oil and gas sector from inside of the market. Hence, this branch of Kazakhstan's economy has an effective two-level control system over all subsurface users implemented by both the National Company KazMunaiGas and the government authorities.

2.1 OIL AND GAS INDUSTRY AS THE MAIN OBJECT OF THE GOVERNMENT'S ECONOMIC REGULATION³

2.1.1 LEGISLATION

Considering the mineral sector's contribution to the budget (around 45 percent), total export (59 percent), and total investments (49 percent), coordination of this complex sector is an essential part of the government policy and the regulation of the executive power of the Republic of Kazakhstan (Akhunbayev, 2013).

³ The analysis of the oil and gas industry regulation in Kazakhstan is based on the use of the official materials of the Ministry of Oil and Gas and Ministry of Industry and New Technologies.

The Head of the State determines the oil and gas industry government policy and government development programs. The Government, as the highest agency of state power, approves sectorial development programs and lists of sites of subsurface resources that are put up for investment tenders, and passes legislative acts that regulate the whole range of issues delegated by the Legislator (RFCARating, 2010, pp. 23-24).

Subsoil government bodies and other players' activities are governed by the Law on the Subsurface and Subsurface Use⁴, civil legislation and also by branches of public law, such as administrative and financial codes. Since the collapse of the Soviet Union, Kazakhstan's legislation has substantially changed over the years. In the middle of the 1990s, the Government passed the Law on the Subsurface and Subsurface Use, for the first time, which contained a number of privileges for international investors due to the attraction of foreign investments to the country, which had negative incentives for domestic investors.

From that time every few years the state, influenced by its interests, has made some legislative changes tightening subsoil operations more and more, especially for foreign companies. For instance, according to the amendment of 2007, if subsurface users' activities bring about significant changes to the economy and constitute a threat to the national security of the country, the Government is authorized to require modifications to the contract terms. In case of noncompliance with this regulation, the Ministry of Oil and Gas can unilaterally rescind a contract. In 2008, production-sharing agreements were removed from the law⁵. However, no amendments were applied for the agreements executed, before these changes were made (Baker and McKenzie, 2013).

As for the latest amendments of 2012, there were added a new section "Priority rights of the Republic of Kazakhstan's subsurface in the sphere of mineral resources", provisions and functions of existing government structures related to the oil and gas industry, detailed

⁴ Dated 26 December 2012, as amended.

⁵ Dated 12 January 2007 and 31 October 2008 respectively, as amended.

definitions and provisions on the project documentation, etc. Moreover, there were included new requirements that would force oil companies to take part in the development of the industry (KPMG, 2012):

(1) Subsoil users are required to provide funding in the amount of 1 percent of the gross annual income of contracting operations to research, scientific activities and development carried out by Kazakhstan's companies. However, this does not apply to the following contracts⁶:

- a) Exploration and production of underground water;
- b) Exploration and production of commonly occurring mineral resources;
- c) Exploration and production of therapeutic muds;
- d) Construction and maintenance of underground facilities that do not relate to exploration and production.

(2) Companies, engaged in research, scientific activities and development were entitled to enter a contract for exploration and production on the basis of direct negotiations without holding competitive tenders⁷.

2.1.2 CONTRACTS

The Republic of Kazakhstan is the sole owner of all hydrocarbon deposits within the country, following the Norwegian model of extractive industries' regulation. This tendency is also observed in countries, such as Argentina, Brazil, Peru, Mexico, Iran and China, which codified government rights on the subsoil (Maulenov, 2003).

Thus, any access to hydrocarbon reserves either for exploration or for commercial purposes is only permitted under a contract negotiated with government authorities. Only the State, represented by the Government, determines when and what reserves would be put up for tenders, what would be the duration of exploration, when production should start, etc.

⁶ Section 76.1 (12-1) The Law on the Subsurface and Subsurface Use dated 26 December 2012, as amended.

⁷ Section 35.2 (4-1) the Law on the Subsurface and Subsurface Use dated 26 December 2012.

From one point of view, the relevant government body is a party of the contract itself, but, from another, it has authority over another party of a contract.

To be admitted to exploration and production, oil enterprises have to compete in tenders held by the Ministry of Oil and Gas. Among the criteria for tender award decision, the most essential are the amount of signature bonus and the amount of contribution to the local budget to fund social and economic development of the region and its infrastructure. Subsoil contracts are signed with Ministry of Oil and Gas only after final contract negotiations are made and the legal, environmental and economic expert examinations are passed successfully (Yessimkhanov and Yerzhanov, 2011).

The following types of subsoil contracts have been stipulated by the latest Subsurface Law: exploration contracts, production contracts; joint exploration and production contracts; contracts for construction and maintenance of underground facilities that do not relate to exploration and production; and government geological study of subsurface contracts.⁸

Duration of a contract depends on its type, for example, for exploration contracts it is six years, while for production contracts it is determined by the exploration service project. However, the production period could be extended under specific conditions of the existing Law. Under all types of contracts, subsurface companies, among other commitments, must purchase domestic goods and services, hire and train local specialists, and also finance social and economic development of the region where they operate (Grata Law Firm). In addition, there are certain liabilities for any environmental, physical or third party property damages, under which oil firms incur statutory penalty.

According to estimations, this contract system will fulfill the government's objectives to improve the national economy by contributing to the diversification and acceleration of

⁸ Chapter 6, the Law on the Subsurface and Subsurface Use dated 26 December 2012.

economic growth, as a result of cooperative efforts with international oil companies (neftegaz.kz, 2013).

2.1.3 FISCAL REGIME⁹

Subsurface users, while the contract is in force, are obligated to pay different taxes and other mandatory payments to the state and local budgets. All requirements related to payments of taxes and levies charged on oil companies are explicitly stated in the Tax Code¹⁰.

As the Law on the Subsurface and Subsurface Use, the Tax Code has also been significantly modified over time. The New Tax Code was adopted from 4 September 2009, and the latest amendments were made on 6 March 2013. According to the Code, the following are considered main taxes and obligations in the petroleum industry:

Table 1. Taxes and obligations charged on subsurface users

Applicable taxes	Rate
Bonuses	Variable
Mineral extraction tax	0.5% - 18%*
Corporate income tax	20%
Excess profit tax	0% - 60%
Payment for compensation of historical costs	Variable
Rent tax on export	0% - 32%
Excise on crude oil and gas condensate	KZT ¹¹ 0 per ton
Property taxes	1.5%
Environmental fees	Variable
Value added tax	12%
Crude oil export duty	USD40 per ton
Other fees**	Variable
Other taxes and levies	Variable

* If the world price of crude oil is less than 40 USD per barrel, it is paid at zero percent rate.

** Other fees, such as fee for the use of radio frequency spectrum, fee for the use of navigable waterways, etc.

Source: *The Tax Code of the Republic of Kazakhstan dated 6 March 2013*

⁹ The analysis of the fiscal regime in the Kazakhstan's oil and gas industry is based on the use of the official materials of the Ministry of Oil and Gas and the Tax Code of the Republic of Kazakhstan.

¹⁰ Dated 6 March 2013.

¹¹ Kazakhstan's Tenge.

Bonuses

There are two types of bonuses: signature and commercial discovery bonuses. A signature bonus is a lump-sum payment from subsoil users for the right to use the subsurface specified in the contract. For oil exploration contracts, where reserves have been approved, its amount is fixed at 2800 of monthly calculation index (MCI). For oil production contracts where reserves have not been approved, the bonus's amount is fixed at 3000 MCI. Then, if lately reserves have been approved, the bonus is measured by applying a rate of 0.04 percent to the approved reserves and 0.01 percent to provisionally approved reserves, but not less than 3000 MCI¹².

Commercial discovery bonus is a payment charged on subsoil enterprises in case of a commercial discovery on the contract territory. Its amount is fixed at a rate of 0.01 percent of the value of extractable minerals, which is based on the market price determined at the International (London) Petroleum Exchange in Platts Crude Oil Marketwire¹³ (Ernst and Young, 2011).

Mineral extraction tax

The tax base is the value of production, including crude oil, gas condensate and natural gas. The world prices, at which this tax is measured, are based on the information provided by the Platts' Crude Oil Marketwire or the Argus Crude¹⁴, and the Platts' European Gas Daily or the Argus European Natural Gas. The rates at which taxes are paid differ depending on whether it is crude oil and gas condensate or natural gas, and also on the annual volume of production. The rates are listed in Table 2 below:

¹² According to the Law on the Republican Budget for 2011 – 2013 dated 29 November 2010.

¹³ Published by The McGraw-Hill Companies Inc.

¹⁴ Published by The Argus Media Ltd.

Table 2. Mineral extraction tax rates for crude oil and gas condensate

Annual volume of production (thousand tons)	Rate*
Up to 250 inclusively	5%
Up to 500 inclusively	7%
Up to 1000 inclusively	8%
Up to 2000 inclusively	9%
Up to 3000 inclusively	10%
Up to 4000 inclusively	11%
Up to 5000 inclusively	12%
Up to 7000 inclusively	13%
Up to 10000 inclusively	15%
Over 10000	18%

* On 1 January 2011.

Source: *The Tax Code of the Republic of Kazakhstan dated 6 March 2013*

Since the government is supporting the internal market, these rates are lowered by 50 percent for domestic production processes and proceed either by producers or by purchasers. As for natural gas, the mineral extraction tax is paid at a fixed rate of 10 percent for export, whereas for the domestic market it is between 0.5 percent and 1.5 percent depending on annual production.

Corporate income tax

This tax is paid at a rate of 20 percent of taxable income that is measured as the difference between aggregate annual income and deductions (such as interest expenses, expenditures on research, scientific and development works, foreign exchange losses, expenditure on training local specialists and on social and economic development of the region where subsoil users operate, decommissioning fund contributions, the amount and the procedure, which are to be enshrined in the subsurface use contract, etc.).

Excess profit tax

As mentioned previously, the tax base is defined as the portion of net income that exceeds 25 percent of “deductions”. However, for this case, “deductions” are not only the expenditure deductible for corporate income tax, but also additional deductions, such as

accelerated depreciation for fixed assets. “The tax is calculated by applying the following rates to the tranches of excess income, each tranche being allocated the marginal net income determined as a percentage of “deductions” until total net income is allocated” (Ernst and Young, 2011, p.102). The rates, at which oil companies are charged, depend on what percent of “deductions” the net income exceeds. The following table, listed below, shows the excess profit tax rates of Kazakhstan as for of March 6, 2013:

Table 3. Excess profit tax rates

Net income allocation schedule for excess profit tax, % of “deductions”	% for calculating marginal net income allocation for excess profit tax	Rate
Less than or equal to 25%	25	Not set
From 25% to 30% inclusively	5	10%
From 30% to 40% inclusively	10	20%
From 40% to 50% inclusively	10	30%
From 50% to 60% inclusively	10	40%
From 60% to 70% inclusively	10	50%
Over 70%	Any excess	60%

Source: The Tax Code of the Republic of Kazakhstan dated 6 March 2013

The tax is paid annually. However, in case of transforming produced hydrocarbon for sale (i.e. into gasoline), subsoil firms could not pay excess profit tax.

Payment for compensation of historical costs

After adopting the New Tax Code, there was an additional levy added to pay to the Republican Budget – compensations of historical costs. It is a payment for all geological prospecting and development expenses that the government has done on the contract territory before, the subsoil contract is signed.

Rent tax on export

Each calendar quarter, legal entities and individual-entrepreneurs are obligated to pay for export sales of crude oil and gas condensate. This tax basis is the same as for mineral extraction tax, whereas the rates vary depending on market price per barrel. Refer to Table 4,

below, in order for more information on the percentile rates of rent tax on export:

Table 4. Rates of the rent tax on export

Market price	Rate
Up to USD 20 per barrel inclusively	0%
Up to USD 30 per barrel inclusively	0%
Up to USD 40 per barrel inclusively	0%
Up to USD 50 per barrel inclusively	7%
Up to USD 60 per barrel inclusively	11%
Up to USD 70 per barrel inclusively	14%
Up to USD 80 per barrel inclusively	16%
Up to USD 90 per barrel inclusively	19%
Up to USD 100 per barrel inclusively	21%
Up to USD 110 per barrel inclusively	22%
Up to USD 120 per barrel inclusively	23%
Up to USD 130 per barrel inclusively	25%
Up to USD 140 per barrel inclusively	26%
Up to USD 150 per barrel inclusively	27%
Up to USD 160 per barrel inclusively	29%
Up to USD 170 per barrel inclusively	30%
Up to USD 180 per barrel inclusively	32%
Up to USD 190 per barrel inclusively	32%
Up to USD 200 per barrel inclusively	32%

Source: The Tax Code of the Republic of Kazakhstan dated 6 March 2013

Property tax

Property tax is an asset tax calculated at the rate of 1.5 percent. Subject to the latest amendments of the New Tax Code, legal entities implementing strategic investment projects under a subsoil contract, signed in accordance to the current investment legislation, pay property tax at a rate of 0 percent for properties first placed into operation. Moreover, industrial estates are eligible to calculate property tax at a rate of 0.1 percent to the tax base, but at the same time these industrial estates must be set up in accordance to the Law on State Support for Industrial and Innovative Activities¹⁵, as well as fifty or more percent of these

¹⁵ The Law on State Support for Industrial and Innovative Activities dated 9 January 2012.

parks' share capital or stock value has to belong to the National Technological Development Institute.

Environmental fees

As the Environmental Code states, there are two types of environmental fees: fees for the use of natural resources and fees for pollution. The tax base and rates differ according to the specificities of the subsoil users' activities, the size of environmental damage and other factors.

Value added tax

Value added tax is one of the indirect taxes that are applied to subsoil users operating in Kazakhstan. According to the New Tax Code, its rate for crude oil, natural gas, and gas condensate imported or purchased within the country is 12 percent, while sales of crude oil, natural gas, and gas condensate for the export are not charged at all.

Crude oil export duties

Export duties on crude oil are set at the amount of 40 US dollars per ton, which changes each quarter depending on the average market price in the oil world market.

In general, appropriate tax legislation allows for oil and gas companies to maintain either as a profit markup in case of an increase in oil prices, or obtain a positive rate of return at low oil prices. As the State Budget mainly consists of subsoil companies' tax revenues, in the process of budgeting it is important for the Government to maintain a balance between the public treasury growth goals and the oil and gas production increase policy. Thus, the Government of Kazakhstan has become more and more active in making new amendments of tax and other legislations, developing management control system for the purposes of more efficient and integrated use of the country's oil and gas resources, as well as achievement of

its own business interests (Akhunbayev, 2013).

2.1.4 ENTRY BARRIERS

The oil and gas industry is the most competitive branch of the economy of Kazakhstan; therefore, its strategic importance in the development of the country allows regulators to specify economic and technological requirements for the subjects of mineral rights in order to ensure national energy security (RFCARating, 2010, pp. 28-29).

First, from an economic point of view, investors in the mining industry are often faced with the presence of investment risks. In the case of oil-field development, these risks are related to the fact that the project could be unprofitable in terms of poor quality of oil, which, in turn, will increase production, refining and transportation costs, oil market price may change, norms and quotas for drilling and production of energy resources could be introduced, and other risks. These risks may have serious harmful consequences to the financial position and reputation of the petroleum producer as well as negatively affect the environmental, social and economic situations of the region.

Secondly, technology and production technique in the region often determine the strategy of companies, involved in the oil-production sector. Usually the technological aspects of the development of oil fields are associated with future revenues of oil companies, which encourage companies to develop oil production technology by focusing on research and innovation. Furthermore, infrastructure is an integral part of the oil production complex, and is developed by oil companies during the exploration and production of energy resources.

As a whole, technological requirements for oil field development create conditions for the so-called "natural selection" of enterprises and companies that are able to survive under these conditions and to conduct systematic exploration and production works, by reducing environmental risks, improving industrial safety and security precautions from possible "force-majeure" circumstances.

Lastly, it is well known that oil production has caused great damage to the environment, such as water pollution and emissions of sulphur into the atmosphere. To prevent the possible consequences for the region and the country, oil production companies, in addition to internal regulations of life and environment safety, are required to carry out the requirements of the Environmental Code¹⁶, the Law on Protection, Reproduction and Use of Wildlife¹⁷, the Land Code¹⁸, the Water Code¹⁹, and the Forest Code²⁰.

Technological aspects of oil production are closely linked to environmental standards of the subsurface use regulation. In particular, this connection is one of the basic conditions for the development of large investment projects that are related to a substantial increase in the volume of oil exports, such as Kashagan, Tengiz and the Northern Caspian Sea.

Meeting the requirements of environmental codes and oil production legislation is compulsory for all companies involved in energy production within the territory of the Republic of Kazakhstan. Monitoring of this process is conducted by the authorized agency and must be licensed by the Ministry of Oil and Gas on a mandatory basis. Furthermore, the availability of mandatory certification of International Standardization Organization 9001 (ISO) imposes additional liabilities on environmental disposal of oil production to the companies involved in this industry.

However, considering the specifics of oil business in the world, competition among oil companies in Kazakhstan is quite high, despite the entry barriers created by the government through legislation.

¹⁶ Dated 24 December 2012.

¹⁷ Dated 10 July 2012.

¹⁸ Dated 8 January 2013.

¹⁹ Dated 24 December 2012.

²⁰ Dated 10 July 2012.

2.2 NATIONAL COMPANIES AS AN IMPORTANT REGULATION INSTRUMENT²¹

As a matter of fact, in a market economy many countries form national companies inside strategically important sectors of their economies to foster economic stability and strong sustainability to most of their industries. The President of the Republic of Kazakhstan, Nazarbayev N., has chosen specific ways to spur economic development of the state. The first one is to found a National Fund – Samruk-Kazyna – that accumulates the state's income from the oil and gas and other key industries, following Norway's National Oil Fund example. It was created in 2001 and is managed by the Ministry of Finance. The main aims of the Fund are to support the Budget of Kazakhstan in the long run and compensate losses caused by price fluctuations in the global oil market.

The second way is to form a powerful national company that is to have a dominating position in the oil and gas sector. For this reason, through the merger of two large companies, CJSC National Oil Company KazakhOil and CJSC National Company Oil and Gas Transportation, the joint-stock company KazMunaiGaz National Company was founded (Nazarbayev, 2002). Along with other oil enterprises, its activities are regulated by the Law on the Subsurface and Subsurface Use, the Tax Code and other important laws.

The main goals of this company are: (1) to achieve key strategic objectives, such as an improvement of financial and economic parameters of the company, an increase of its hydrocarbon production and reserves; (2) to increase the economic benefit to the State through large and profitable oil and gas projects, in which it is a partner, by developing the infrastructure of different regions and contributing to the development of the petrochemical industry; (3) to increase the share of domestic goods and services provided to the subsoil companies and of Kazakh specialists involved in the oil and gas industry.

²¹ The information contained in this section is based on the use of the official materials of Samruk-Kazyna, the National Fund of the Republic of Kazakhstan, and the National Company KazMunaiGaz JSC.

To this end, under the applicable laws, National Company KazMunaiGas is eligible to participate in the amount of at least 50 percent of all contracts with mandatory equity participation, as well as has the priority rights to acquire disposed mineral rights and interests in subsurface projects. Hence, it has a minority stake in almost all major oil and gas projects within the country and controls the stake of projects actualized since 2000.

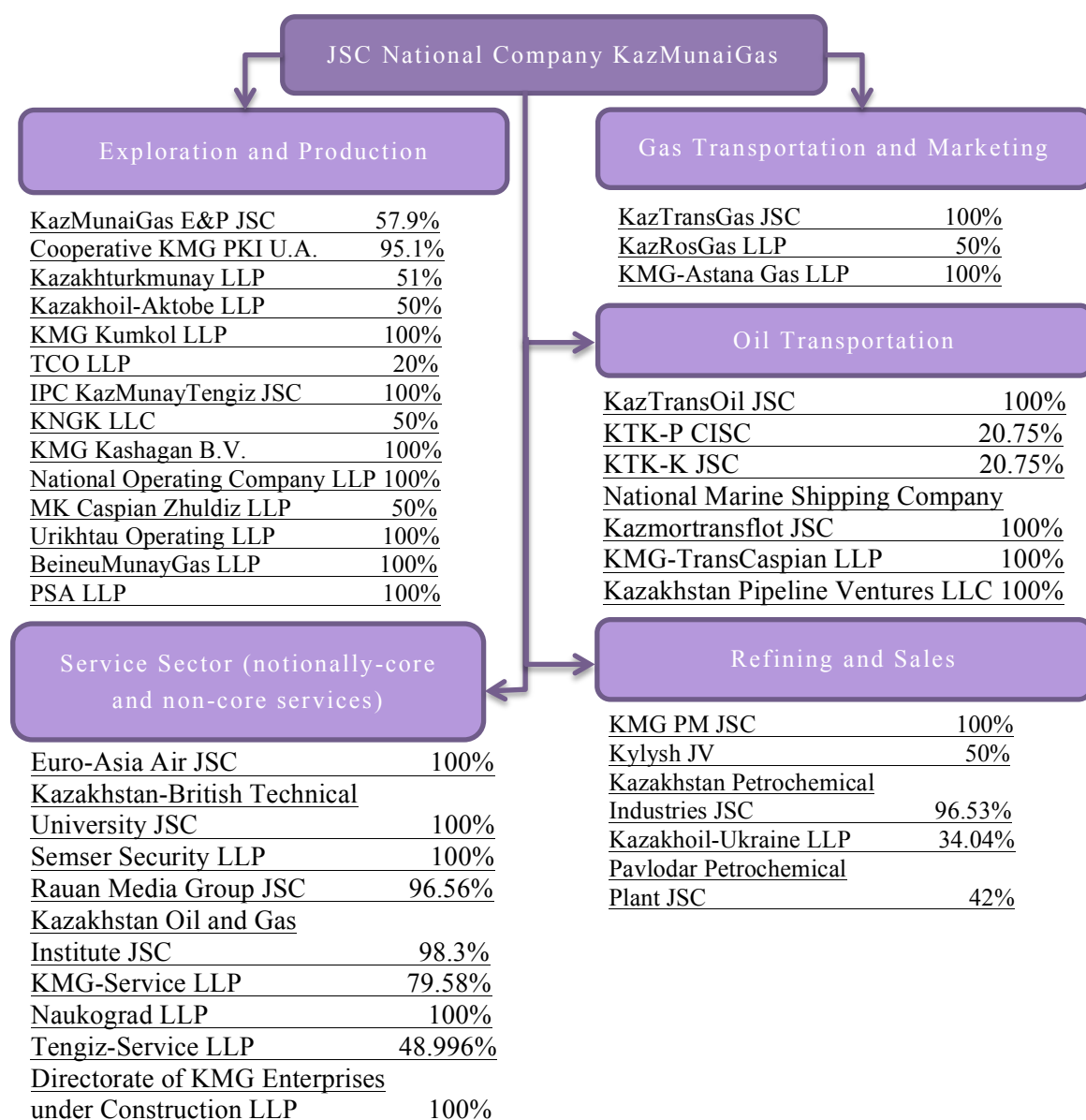


Figure 2. The Asset structure of JSC National Company KazMunaiGas
Source: Annual Report of National Company KazMunaiGas JSC, 2011

Its asset structure consists of many enterprises involved in all up-, med-, downstream sectors. Based on Figure 2, it's clear that through the National Company and its assets, the

government holds the main reins of power in the oil and gas industry. Therefore, any investor who is interested in business in Kazakhstan has to deal, in one form or another, with the KazMunaiGaz, since the company implements a full production cycle, from hydrocarbon production, its transportation and processing to providing specific services.

KazMunaiGas closely cooperates in property management with a large managing holding company – Samruk, owned by the State, and in operation management with specialized government authorities and ministries.

Being the flagship of the Kazakhstan’s business community, it also actively contributes to social development. The annual amount of funds invested by KazMunaiGas in the social sphere exceeds USD100 million (Karabalin, 2008). It is involved in the implementation of the priority state and sectorial social programs, and republican and international level social actions.

In addition, it facilitates a financing of the arrangements of social infrastructure development, youth support, and national human resource development. As part of a regional social partnership programme, KazMunaiGas constructs accommodation units, childcare centers, hospitals, sports centers, and other infrastructural, residential and sports and health buildings. Moreover, the company pays a lot of attention to public health protection, a decrease of negative environmental externalities from its production, and rational exploitation of natural resources. To this end, KazMunaiGas allocates substantial funds, as Table 6 shows:

Table 5. Health and environment expenditures
(USD million)

Expenditures	2011	2010	2009	2008
Occupational health and safety	30.34	18.84	15.43	16.3
Environmental protection	211.83	163.56	47.09	18.73

Source: Annual Report of National Company KazMunaiGas JSC, 2011

Hence, National Company KazMunaiGas JSC is taking seriously the fulfilment of the Government objectives by contributing to the development of the oil and gas sector, but also other sectors of the economy, as well as successfully representing the state's interests in both domestic and global markets by promoting the expansion of the geopolitical influence of the country.

2.3 OIL SECTOR'S POLICY AND ITS PROBLEMS

Oil and gas industry is a strategically important indicator of Kazakhstan's economy; thus, all issues discussed in the first section of this paper are vital questions for the government. Its main policy that is aimed to solve recent problems of the global oil market is investment policy.

First, it consists of an effective application of the financial resources, accumulated from high export inflows, and attraction of investors to the long-term and extensive infrastructure projects, since western enterprises are primarily drivers of modern technologies and vast experience of exploration under different conditions. For instance, the government introduces various programs and strategies for economic development and modernization, such as a transport strategy, involving railway constructions, and an energy sector development program, containing the projects of nuclear generation, hydroelectric and thermal stations.

Secondly, following experiences of some South Korean and Japanese corporations, which, having received their state's support, secured the subsequent technological success, Kazakhstan's government directly funds advanced technology acquisitions for the best projects. To this reason, 30 enterprises with the most ambitious innovational projects were selected to become the basis of the country's technological sector in the future (Strategy of Industrial and Innovative Development of Kazakhstan, 2003-2015²²).

²² Dated 17 May 2003.

In addition, the state created special economic zones (SEZs), where tax levies are applied for those companies that conduct innovative activities. The SEZs, related to the oil and gas industry, are “Maritime Port” located in Aktau (the Caspian Sea) and “National Industrial Petrochemical Technopark” located in Atyrau (close to the biggest oil fields – Kashagan, Tengiz, and others).

Finally, the government uses development institutes to coordinate the realization of the modernization projects. Thus, in 2001 the Kazakhstan’s Development Bank (KDB) was established, later in 2003 the Kazakhstan’s Investment Fund (KIF), the National Innovation Fund, and the State Insurance Corporation for export credits and investments were founded. Each of them has specific objectives. For instance, the KDB focuses on support for entrepreneurship in general, and the KIF is a shareholder of technology-producing companies, as well as responsible for the innovation and development of venture capital funds, which encourage high-tech projects.

Theoretically, these development institutes are supposed to form a common financial service chain for business development, that will identify priority industries for investments, select the most appealing projects in a private sector, and then take equities in the project and fund it.

However, in reality it is a complex structure that is difficult to manage. Although, to control its performance, the government created a Sustainable Development Fund KAZYNA, that is a sole stockholder of all development institutes, there are problems of inefficient and insufficient investment operations. One of the reasons is that some development institutes, particularly the KDB, started acting as commercial banks funding those projects that are to be under the second-tier banks’ support. Another reason is a competition between the development institutes themselves and a high level of corruption, which seems to be widely spread among ministries and regulatory authorities, where decision-making processes are

held. And lastly, they have not been meeting their primarily objectives, which are to invest in the long-term strategic projects. Inversely, development institutes prefer to coordinate those projects that can provide a benefit in the short-term (Sustainable Development Fund KAZYNA, 2006).

Moreover, from the beginning of its sovereignty, Kazakhstan was targeting to attract foreign investments for economic development, which resulted in an active participation of international oil companies in long-term strategic projects. But to achieve this objective, the state had to build a system of incentives, including exclusive concession contracts, tax preferences and privileges within the SEZs. These actions have created disincentives for domestic investors. Most of big local investors are willing to deal with high-yielding and relatively short projects both inside and outside Kazakhstan, rather than the long-term complex modernization projects. As a rule, short projects are those of constructions, participation in energy projects, or support service of primary commodity markets (Ikonnikov, 2007).

To fix it, almost every year the main oil industry's acts and laws are amended, strengthening the state's ability to influence in decision-making processes of foreign investors. Consequently, western investors recently tend to leave Kazakhstan's oil and gas industry. An overregulation of the oil industry, deficiency of long-term guarantees, as well as delays in the startup of projects - these are the main reasons for loss of interest of Western investors in the oil sector in Kazakhstan (Open Dialog Foundation, 2013). Thus, in 2012 a number of big investors opted out of the Caspian shelf projects. For instance, French company Total officially renounced the development project of Zhenis's area, also Exxon Mobil and Royalty Dutch Shell warned about their possible withdrawal from the project if Kazakhstan did not extend the Production sharing agreement to another 20 years (Kapital.kz, 2013).

Despite this negative tendency, Chinese investors are rapidly increasing their share in the Kazakhstan's oil and gas industry: in 2012 12 billions US dollars of the total Chinese investments (14 billion US dollars) in Kazakhstan's economy was accounted for by the energy sector (The Heritage Foundation, 2013). According to independent sources, Chinese companies' share in total oil production could exceed 40 percent by the end of 2013 (Tengrinews.kz, 2013). In the presence of declining interests from Western countries, this situation would result in Kazakhstan's dependency on one country – China.

To offset the power of China and other countries, Kazakhstan could become a member of OPEC, which would strengthen its political significance in the world (Semenov and Dahl, 1999). According to the Minister of Energy and Mineral Resources, Karabalin, the government has been considering this opportunity by analyzing advantages and disadvantages of entering OPEC and scrutinizing OPEC's activities, particularly the decision-making system (Kazakhstan Today, 2001). Joining OPEC could bring pros and cons for the country. First, Kazakhstan will benefit from high oil prices, but it has to accept the quotas, which are harmful for the economy unless a certain level of oil production is achieved. Another advantage is political support of OPEC in joint project realization with international companies; however, this support could scare away foreign investors (Ibadildin, 2001).

In 2001 Kazakhstan received OPEC's observer status, which is beneficial due to the absence of any liabilities and access to more accurate information about strategies and development prospects of both OPEC and the entire world market, as well as enhancing cooperation with other members (Brazhnikov, 2001).

Finally, since most of the companies operating in the oil sector are international oil companies, there is also disparity in pay between foreign and domestic employees, which has recently caused local labour troubles. Throughout 2011 the oil sector's workers in Mangistau region were striking against the repression of the oil industry's employee rights, which

resulted in significant losses both for workers (losses of livelihood, jobs) and the economy as a whole (poor country's image and reduced oil production growth) (Open Dialog Foundation, 2013). Such events confirm that Kazakhstan is a developing country and its democracy level has not reached the level of US and Norway: there is an absence of free media and restrictions of opposition parties.

Hence, nowadays, Kazakhstan faces a lot of doubts. The President and government, as high regulatory authorities, have to place the interests of the citizens ahead of international investors' motives; nevertheless, if outflows of foreign capital continue, this will slow down the fields' development due to a lack of experience in conducting those types of work among domestic companies (Gizitdinov, 2013).

CONCLUSION

This paper summarized the main features of oil regulation both globally and in Kazakhstan's oil industries. It covered the evolution of state intervention in the world, current issues of the mineral resource market, and state development policy.

Oil has become a politically strategic and economically profitable commodity, since it is the most flexible and widely used fuel resource available. The oil industry is characterized by a high complexity of development, large capital intensity (particularly foreign investments), monopolistic nature of activities, and demand for rational exploitation of exhaustible natural resources. Due to these reasons, many countries prefer to preserve the state's mineral rights.

Oil producing countries can be divided into two groups: (1) countries practicing the state-institutional regulatory model, where oil production is owned by the state (such as the Gulf countries, Norway, Mexico, Venezuela, Kazakhstan and others); (2) countries adopting a neoliberal regulatory model, where oil companies are private (the US, Great Britain, Russia and others). The global experience shows that the level of government intervention depends on the historical background, the stage of domestic external sectors' development, as well as the nature and scope of the problems solved by the state. Thus, with the exception of Norway, countries of the state-institutional regulatory model have lower economic and political performance than those of the neoliberal model. For instance, Mexican GDP per capita was 5 times smaller than the US and Canadian ones from 2007 to 2012, as well as Venezuela's GDP per capita was around 4 times less (The World DataBank). Moreover, Canada and US have much higher democracy scores (80 and 78.5 in 2010-2011 respectively) compared with Mexico and Venezuela (56.6 and 48.2 in 2010-2011 respectively) (Campbell, 2012).

Besides fundamental issues of the sector (such as anti-monopoly regulation, environmental protection, and revenue collection), there are other risks to deal with to create

a well-regulated oil market that arise both outside and inside a country. Among the most common problems that are currently considered as crucial are peak oil, resource curse, and oil price volatility. Primary causes of these problems are a constant growth in oil consumption, geopolitical instability within countries' borders, lacks of investment in technology and facilities, and weak governance.

By and large, based on other countries' experiences, countries in difficulty could apply the following economic policies to mitigate the risks: (1) attract investment in technology, exploration, and development of new mineral fields mainly through the taxation system to maintain oil production growth; (2) promote diversification of the economy by boosting private and public activities in the non-extractive industries and building sufficient linkages in local economic sectors to lower the country's oil dependence (Hailu and Weeks, 2011); (3) better revenue accumulation and distribution management to level vertical and horizontal inequalities and prevent future internal conflicts (Gottschalk and Martins, 2008).

The Republic of Kazakhstan, one of the first countries of the Commonwealth of Independent States (CIS) that really set about legal regulation, focuses on strengthening state participation in processes related to the economic and energy security of the country and society.

The government runs the subsurface industry management taking into account its interests as resources owner and subsurface user's interests as an investor. The President of the Republic of Kazakhstan determines oil and gas industry government policy and government development programs. The Government approves sectorial development programs and lists of sites of subsurface resources that are put up for investment tenders, and passes legislative acts that regulate the whole range of issues delegated by the Legislator. All oil and gas industry players' activities are governed by the Law on the Subsurface and

Subsurface Use, civil legislation and also by branches of public law, such as administrative, tax and financial codes.

Under the laws, subsoil use contract's parties are eligible to transfer their subsurface rights or stakes of the authorized capital to the subsoil user engaged in the exploration, production or combined exploration and production of mineral resources within Kazakhstan. Moreover, to provide the Republic with petroleum products they are required to make domestic supplies for crude oil processing at Kazakhstan's factories, as well as to use personnel, goods, works and services' "local content" during all types of subsurface activities (Grata Law Firm).

Thus, since the state gave to the national oil companies the priority rights to acquire disposed mineral rights and interests in subsurface projects, it is reliant on companies' assistance in the development of the economy. To this end, oil national companies play a significant role in the management of the industry as a whole: (1) They not only represent the interests of the state, but as a business entity are an important mechanism for economic rent extraction to the budget; (2) They control the efficient and rational use of mineral resources; (3) Remaining manageable objects in the system of state administration, they accumulate foreign technology and train domestic specialists.

The state increases its market power in the oil and gas industry through the achievements of the National Company KazMunaiGas, the leader in Kazakhstan by output of crude oil. The company, as a main producer of oil and gas, not only provides stability for the strategic industries and real energy security for other sectors of the economy and the population, but also is a key mechanism in relations with foreign investors, since almost all projects and contracts pass through it.

From its foundation KazMunaiGas has successfully performed its role, that is to improve financial and economic parameters of the company, raise its hydrocarbon production

and reserves, increase economic benefits to the State through major oil and gas projects, develop regional infrastructure, raise the share of domestic goods and services provided to the subsoil companies and of Kazakh specialists involved in the oil and gas industry.

Thus, by using the National Company KazMunaiGas JSC as a central instrument in achieving state goals, there is a two-level control system over all oil and gas enterprises implemented by both the National Company KazMunaiGas, from one side, and the government authorities, from the other side.

Furthermore, along with the global oil market's concerns, Kazakhstan faces its own specific problems, such as foreign capital outflows, citizens' unrest, inefficient policy realization and risks of dependence on another country. Hence, the government has a lot to do in order to improve its regulation in the oil industry and to maintain its investment attractiveness.

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APPENDIX 1

The regression of Brent and West Texas Intermediate's oil prices on the USD/EUR

exchange rate (STATA output)

```
. rename var1 ex
. rename var2 brentprice
. rename var3 wti
. gen time = tm(2002m1)+_n-1
. tsset time, monthly
time variable: time, 2002m1 to 2013m7
delta: 1 month
. kpss ex
KPSS test for ex
Maxlag = 13 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel
Critical values for H0: ex is trend stationary
10%: 0.119 5% : 0.146 2.5%: 0.176 1% : 0.216
Lag order  Test statistic
0          2.12
1          1.1
2          .755
3          .585
4          .483
5          .416
6          .369
7          .333
8          .306
9          .284
10         .266
11         .252
12         .24
13         .23
. kpss brentprice
KPSS test for brentprice
Maxlag = 13 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel
Critical values for H0: brentprice is trend stationary
10%: 0.119 5% : 0.146 2.5%: 0.176 1% : 0.216
Lag order  Test statistic
0          .279
1          .321
2          .379
3          .331
4          .323
5          .305
6          .281
7          .256
8          .244
9          .238
10         .227
11         .221
12         .211
```

```

13      .2
. kpss wti
KPSS test for wti
Maxlag = 13 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel
Critical values for H0: wti is trend stationary
10%: 0.119 5% : 0.146 2.5%: 0.176 1% : 0.216
Lag order  Test statistic
  0      .11
  1     .116
  2     .122
  3     .13
  4     .138
  5     .145
  6     .153
  7     .161
  8     .169
  9     .177
 10     .186
 11     .197
 12     .18
 13     .17
. hprescott ex, stub(hp)
. hprescott brentprice, stub(hp)
. hprescott wti, stub(hp)
. corr hp_ex_1 hp_brentprice_1 hp_wti_1
(obs=139)
      | hp_ex_1 hp_brentprice_1 hp_wti_1
-----+-----
      hp_ex_1 | 1.0000
hp_brentprice_1 | 0.1036 1.0000
      hp_wti_1 | -0.0110 -0.1414 1.0000
. reg hp_brentprice_1 hp_ex_1
      Source |      SS      df      MS      Number of obs =   139
-----+-----+-----+-----+----- F( 1, 137) = 1.49
      Model | 74434720.4    1 74434720.4      Prob > F   = 0.2249
      Residual | 6.8625e+09  137 50091298.5      R-squared   = 0.0107
-----+-----+-----+-----+----- Adj R-squared = 0.0035
      Total | 6.9369e+09  138 50267700.1      Root MSE   = 7077.5
-----+-----
hp_brentprice_1 |      Coef.  Std. Err.      t    P>|t|   [95% Conf. Interval]
-----+-----+-----+-----+-----
      hp_ex_1 | 16396.63  13450.79    1.22  0.225  -10201.39  42994.64
      _cons | -1.10e-13  600.3075   -0.00  1.000  -1187.067  1187.067
-----+-----
. kpss hp_brentprice_1 hp_ex_1
too many variables specified
r(103);
. kpss hp_ex_1
KPSS test for hp_ex_1
Maxlag = 13 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel
Critical values for H0: hp_ex_1 is trend stationary
10%: 0.119 5% : 0.146 2.5%: 0.176 1% : 0.216
Lag order  Test statistic

```

```

0      .379
1      .2
2      .142
3      .113
4      .0962
5      .0855
6      .0783
7      .0733
8      .0698
9      .0674
10     .0657
11     .0647
12     .0641
13     .064
. clear
. *(3 variables, 139 observations pasted into data editor)
. rename var1 ex
. rename var2 brentprice
. rename var3 wti
. gen time = tm(2002m1)+_n-1
. tsset time, monthly
    time variable: time, 2002m1 to 2013m7
    delta: 1 month
. kpss ex
KPSS test for ex
Maxlag = 13 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel
Critical values for H0: ex is trend stationary
10%: 0.119 5% : 0.146 2.5%: 0.176 1% : 0.216
Lag order  Test statistic
0          2.12
1          1.1
2          .755
3          .585
4          .483
5          .416
6          .369
7          .333
8          .306
9          .284
10         .266
11         .252
12         .24
13         .23
. kpss brentprice\
\ invalid name
r(198);
. kpss brentprice
KPSS test for brentprice
Maxlag = 13 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel
Critical values for H0: brentprice is trend stationary
10%: 0.119 5% : 0.146 2.5%: 0.176 1% : 0.216
Lag order  Test statistic
0          .365

```



```

1      .19
2      .133
3      .105
4      .0898
5      .0799
6      .0735
7      .0691
8      .0661
9      .0641
10     .0627
11     .0619
12     .0614
13     .0613
. kpss wti
KPSS test for wti
Maxlag = 13 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel
Critical values for H0: wti is trend stationary
10%: 0.119 5% : 0.146 2.5%: 0.176 1% : 0.216
Lag order  Test statistic
0      .699
1      .364
2      .254
3      .201
4      .171
5      .152
6      .14
7      .132
8      .126
9      .122
10     .12
11     .118
12     .117
13     .117
. hprescott ex, stub(hp)
. hprescott wti, stub(hp)
. corr brentprice hp_ex_1 hp_wti_1
(obs=139)
      | brentp~e hp_ex_1 hp_wti_1
-----+-----
brentprice | 1.0000
hp_ex_1 | -0.1725 1.0000
hp_wti_1 | 0.4609 -0.3603 1.0000
. reg brentprice hp_ex_1
      Source |      SS      df      MS      Number of obs =   139
-----+-----+-----+-----+-----+-----
      Model | 4094.17969    1 4094.17969      F( 1, 137) =   4.20
      Residual | 133505.281  137 974.491105      Prob > F   = 0.0423
-----+-----+-----+-----+-----
      Total | 137599.461  138 997.097544      R-squared   = 0.0298
                                         Adj R-squared = 0.0227
                                         Root MSE   = 31.217
-----+-----
brentprice |      Coef.  Std. Err.      t    P>|t|   [95% Conf. Interval]
-----+-----
hp_ex_1 | -121.6047   59.32745   -2.05  0.042  -238.9206  -4.288701
 _cons | 69.72165   2.647778   26.33  0.000   64.48586   74.95745

```

```

-----
. reg hp_wti_1 hp_ex_1
      Source |      SS       df       MS      Number of obs =   139
-----+-----
      Model | 3552.08799      1 3552.08799      Prob > F       = 0.0000
      Residual | 23816.4437   137 173.842655      R-squared      = 0.1298
-----+-----
      Total | 27368.5317   138 198.322693      Adj R-squared = 0.1234
                                Root MSE      = 13.185
-----

      hp_wti_1 |      Coef.   Std. Err.      t    P>|t|   [95% Conf. Interval]
-----+-----
      hp_ex_1 | -113.2684   25.05791    -4.52  0.000   -162.8187   -63.71806
      _cons |  6.83e-17   1.118332     0.00  1.000    -2.211425    2.211425
-----

```