Republic of Azerbaijan

Ministry of Education

The role of Foreign Direct Investments (FDI) and government policies in the global petroleum sector

Lamiya Huseynova

UNEC SABAH

University of Economics

May 2018

Abstract

Foreign Direct Investment (FDI) is seen as the main share for a clear and impeccable transnational economic system and a vital mechanism for improving. In this situation, the paper studies the utility of FDI as a main element for lucky and continuously economic development, the influence of FDI in petroleum compartment and government policies in this area. The purpose is to highlight the most vital canals through which FDI makes an important and exclusive influence on the economic growth of the owner countries in petroleum compartment. At the same case, it is significant to acknowledge that, like all things, FDI is not all useful no bad.Besides negotiation is devoted to the potential unfavorable influence of FDI streams on owner economies.

Foreign direct investment (FDI) behaviours play a main role in the economic development of improving countries around the universe. Attracting FDI influxes with conductive behaviours has for this reason become a major battle ground in the appearing markets. The outlook for future of new increasing chances and outsized winnings inspires wide capital influxes across a degree of industry and chance kinds. And this has guided to contest among the states in formulating pliable policies and providing stimulus to instigate personal capitalists to invest more and more.

Most of growing countries have made policies purposed at decreasing FDI impediment. Foreign capital universalization, especially FDI influx is raised considerable in improwing countries, because of the motive that FDI is the most constant and widespread element of external capital streams.

Acknowledgement

The success of my thesis largely depended on the encouragement of various key role-players. I want to express my specific thanks to my thesis adviser Ms. Parvin Mammadzade, Executive Assistant to Chairman at the State Agency on Alternative Energy for support and pieces of advice in research. Moreover, I extend my gratitude in directions of the Dean of SABAH Groups, Mrs. Aida Qulieva. She does not know now and probably will never know how much she supported me on my research and my outlook on life.

Thank to my professors, who have been there continuously for me, and to everyone who has contributed to my advancement during my studies.

Table of Contents

Introduction

Since the nineteenth century petroleum has become the universe's most significant universally traded goods. Petroleum is a vital share of the products we utilize on a diurnal basis. Natural gas and oil have been essential universal energy resources for a lot of decades. Consequently petroleum plays important role in economic development in oil-producing countries, it is major how countries around the universe manage and arrange petroleum resources.

Foreign direct investment has been an engine of economic development in a growthing globalized universe economy, and has been one of the most essential subjects in the study of transnational commerce. Foreign Direct Investment FDI can be clarified as the investment, which is being invested by a capitalist in external countries having curiosity to earn more market share in the transnational competition and having the economies of scale. Foreign direct investment is streaming of capital by a capitalist who purchases an estate /asset in a different country to govern it.

The major aim of the diploma work is to define the infuence of foreign direct investment on economic development and to examine government policies in the universal petroleum compartment**.**

The subject of investigatin is the state maintenance in inspiring investments in exploration, manufacture and transportation network for petroleum and natural gas, in order to addition the local investment as well as endeavors of national oil companies in meeting the increasing requirement of oil and gas and decreasing import dependence.

Problem statement is to carry out the influence of foreign direct investment in economy and reserch of government policies can impact the inflow of foreign direct investment in petroleum compartment.

The investigatin questions are the followings:

- Role of home foreign direct investment (FDI) for improving economies.
- Present universal streams of petroleum FDIs.
- FDI affect on government and economy of improving countries.
- Government policies in universal petroleum compartment.
- Territorial energy roles, potentials and implications.

Research methodology

The study will be mixed two kinds of research in nature. They are employing exploratory and inductive research types. In accordance with exploratory research the qualitative methodology will be look at to gain insights in foreign direct investments.

Following structure is suggested for methodology; in the first phase, various types of scholar articles will be used.Using them we will find the structure and the importance of FDI. In the second part we will be collect documents, interviews, observations of countries which we have chosen them. The study largely will be based on information and experience of leading petroleum user countries, especially developing countries.

The predictive share of the research will be provided by the predictions and generalizing from the analysis of case studies. In this share the influence of FDI on government and government policies in universal petroleum compartment will be forecasted.

2. Theoretical framework

2.1 Theoretical and methodological basis of petroleum FDIs

2.1.1 Foreign Direct Investments (FDI)

Foreign direct investment (FDI) is an investment made by a company or personal in one country in commerce curiosities in a different country, in the form of either creating commerce operations or obtaining commerce properties in the other country, such as possession or managing curiosity in an external company. Foreign direct investment differs from portfolio investments in which a capitalist just buys stocks of external-funded companies. The main characteristic of foreign direct investment is that it is an investment made that creates either productive control of or at least significant impact over, the deciding of an external commerce.Foreign direct investment (FDI) means companies purchase capital and invest in an external country. The major elements that impact foreign direct investment are infrastructure and access to raw materials, communication and transport links, capabilities and salary expenses of labor, wage degrees, labor abilities, tax degrees, transport and infrastructure, measure of economy, political constancy, entry to independent tradeareas[1].

Foreign direct investments are generally made in clear economices, as converse to closely organized economies, that supply a qualified trained workers and over mean expansion expectations for the capitalist. Foreign direct investment often involves more than merely a capital investment. The provision of government or technology may also be included.

Foreign direct investment (FDI) is an investment in commerce by a capitalist from a different country for which the external capitalist has manages over the company acquired. The Organization of Economic Cooperation and Development (OECD) determine inspection as owning 10% or more of the commerce. Businesses that make foreign direct investments are frequently called multinational parrtnerships

[1]Thomas Pollan, Legal Framework for the Admission of FDI, 2006, p.35

(MNCs) or multinational institutions (MNEs). An MNE may make a direct investment by establishing a new external institution, which is called a Greenfield investment, or by the obtaining of an external firm, either called an obtaining or brownfield investment[2].

Table1. Pros and cons of FDIs

Foreign direct investment	
Advantages	Disadvantages
Entry to markets	Loss of taxes and incomes.
Entry to resources	Employment issues.
Reduces cost of manufacturing	Breakup of local manufacture
External capital and increased revenue	Exploitation of local raw materials and laborers.
Development of new industries	Unfavorable Impact on the Home Investment.
Expose to new commerce practices	Modern-Day Economic Colonialism

Source: Prepared by the author based on World Bank annual report 2016

In the context of foreign direct investment, surpluses and deficites are frequently a matter of perspective (table 1). An FDI may supply some very large surpluses for the MNE but not for the external country where the investment is made. On the other hand, occasionally the deal can work out better for the external country depending upon how the investment succeeds. Ideally, there should be countless

[2]S.Z.Isayev, ,Investisiya fəaliyyətinin hüquqi tənzimlənməsi, Iqtisad Universiteti -2011, p.110

surpluses for both the MNE and the external country, which is frequently an improving country. We'll analyze the usefulnesses and deficits from both perspectives, beginning with the usefulnesses for multinational institutions (MNEs).[3]

FDI can be an available direction for you to join into an external market. Some countries may excessively restrict external company entry to their local markets. Obtaining or beginning commerce in the market is a means for you to earn access. FDI is an available direction for you to obtain significant natural resources, such as precious metals and fossil fuels too. Oil companies, for instance, frequently make very big FDIs to improve oil areas. FDI is a means for you to decrease your cost of manufacture if the labor market is inexpensive and the rearrangements are less prohibitory in the target external market. For instance, it's a popular motive that the shoe and clothing industries have been able to strongly decrease their expenses of manufacture by moving operations to improving countries.

FDI suggests some usefulness for external countries too. For beginners, FDI suggests a source of foreign capital and raised income. It can be a very large source of foreign capital for an improving country, which can superintend to economic improvement.[4]

Furthermore, tax income is generated from the products and activities of the factory, taxes imposed on factory employee revenue and purchases, and taxes on the revenue and purchase now attainable due to the added economic activity established by the plant. Improving governments can utilize this capital infusion and income from economic development to establishe and growth its physical and economic infrastructure such as construction roads, communication systems, educational institutions, and subsidizing the emergence of new local industries.

Another privilenge is the improvement of new industries. At times a domestic firm can improve a strategic corporations with an external capitalist to support improve a new industry in the growthing country. The growthing country gets to

[3]. Natiq Sabiroğlu,Qloballaşma və xarici investisiyalari, Baki - 2006, p.62
[4]. Nathan Michael Jensen, Politics and Foreign Direct Investment, 2012, p.205

create a new industry and market, and the MNE gets entry to a new market within its association with the domestic firm.

Eventually, learning is an indirect surpluse for external countries. FDI exposes national and local governments, domestic businesses, and compatriot to new commerce practices; government techniques, economic notions, and technology that will support them improve domestic commerces and industries.

Additionally, a big round of favorable parameters, the unfavorable impact is irrefutable. Every industry, and every country, deals with these negative effects variously, and is impacted in varying rates, so they are not meant to confuse external capitalists in any way too, but every primary enterprise should be aware of these points.

Detriments of taxes and incomes. Most owner countries particularly the increasing ones tend to apply policies that approval external capitalists including tax holidays. This is ordinarily done to encourage the external capitalists and can be completed in detriment of income for the owner countries. Furthermore, in the long run the multinational associations also advantage more from their ventures in the owner countries as converse to the governments and economies.

Employment problems. Most multinational associations tend to change the dynamics of the labor section in order to inferior expenses of manufacture. This is frequently evident in measures such automation which govern to cons of employment.

Breakup of domestic manufacture.Since multinational collaboration frequently has more muscle and ptactice as confront to the regional manufacturers, they frequently end upedging out the nascent domestic companies. This hinders improvement of domestic producers.

Exploitation of domestic raw materials and laborers. Domestic raw materials are ordinarily over exploited by the foreign direct capitalists. This can captain to cons

for the owner countries as their resources can be rapid depleted. A lot of multinational associations have been inculpated of being exploitative in direction of domestic laborers too. This decreases advantages for the local workers.

Unfavorable influence on the Home Investment.The norms that manage external exchange degrees and direct investments might unfavorably have an effect on the investing country. Investment may be prohibiting in some external markets, which means that it is unrealizable to follow an inviting occasion.[5] .

Modern-Day Economic Colonialism.A lot of third-universe countries, or at least those with history of colonialism, is anxious that foreign direct investment would consequence in some type of modern day economic colonialism, which exposes owner countries and depart them undefended to external companies' exploitations.

Investing into a different country's economy, purchasing into a external company or in a different way growing your commerce outside can be greatly financially rewarding and might provide you with the boost needed to jump to a new level of achievement. Nevertheless, foreign direct investment carries hazards too, and it is highly essential for you to appreciate the economic atmosphere comprehensively earlier doing it. Also, it is important to hire a financial expert who is accustomed to working internationally, as he can give you a clear view of the available economic sight in your target country. He can even support you monitor market constancy and forecast future development.[6]

2.1.2 Current global trends of petroleum FDIs.

Foreign capitalists are prone to rise about the Least Developed Countries (LDCs) potential in producing and services, despite oil and gas will sustaine to adjudge FDI in the near future. Long-term streams advertised in Greenfield FDI plans

[5]P. Hofmann, The Impact of International Trade and FDI on Economic Growth and Technological change, 2013, p.89
[6]H. Asano and S. Bando, "Load fluctuation analysis of commercial and residential customers for operation planning of a hybrid photovoltaic and cogeneration system," in Power Engineering Society General Meeting, 2006. IEEE, Los Alamitos, CA, June 2016, p.14

propose that external capitalists are progressively involved in LDCs' services section, especially electricity (including alternative and renewable energy), building, transport, storage and communications. In the production section, Greenfield plans advertised in late years emphasize investment favorable circumstances in food and tobacco; construction and building materials; and textiles, clothing and leather. South-based capitalists maintain to demonstrate a keep curiosity in LDCs. In Ethiopia, for example, a$3.7 billion fertilizer plant plan from Morocco signaled this LDC's potential to attract large-scale production plans in non-garment industries.[7]

In spite of this potentiale for variety, large-scale FDI plans in African LDCs maintain to focus on extractive and connected industries and to adjudge aggregated FDI streams to LDCs. Examples contain petroleum refineries; natural, liquefied and compressed gas manufacturing; and, to some extent, metal and metal products in the producing area. In the services area, development in transport and storage is large-scale plans because of in oil or natural gas and terminals.

Additionally, external capitalists are hoped to take advantage on new oil and gas reserves discovered in Mozambique, Senegal, Uganda and the United Republic of Tanzania. For instance, in the United Republic of Tanzania, where the yearly mean FDI streams stood at $1.5 billion in 2014–2016, the national investment assistance agency set hopes the country's $30 billion liquefied natural gas plan, together with a $10 billion port plan and a $7 billion railway promote, to boost the country's FDI by at least $2 billion a year.[8]

Territorial integration was able to participate to higher FDI streams to LDCs too. For instance, the creation of the ASEAN Economic Community has boosted already favorable capitalist perceptions of the group's LDC economies. As a consequence, foreign investments from China, Japan and other ASEAN economies (e.g. Malaysia, Thailand, Viet Nam) into the ASEAN LDCs are supposed to enlarge

[7]Hwy-Chang Moon, Foreign Direct Investment: A Global Perspective, 2015, p.168
[8]Annual report of the Department of Energy (DoE), IRENA, 2016, p.7

further. Intraregional FDI, particularly from China and India, is probably to develop in Bangladesh and Nepal as well, simplified from India by shared membership in the South Asian Association for Regional Cooperation and from China by mutual treaty.

2.1.3 FDI impact on the Middle Asian energy.

Some countries of Central Asia (Kazakhstan, Turkmenistan) have controlled to attract important quantity of FDI; these economies are among the best investment goals in the universe. Other countries (Tajikistan, Uzbekistan) have been less accomplished at attracting FDI. FDI streams in Central Asia are volatile and do not seem to pursue economic cycles; their dynamics depend more on the fulfillment schedules of great investment plans.

Most investments are in the natural resource sections of the Central Asian economies: subtraction, processing, and transportation of hydrocarbons and metals. A significant driver of these investments has been the increment in transnational prices for energy and other fundamental products. Other vital and expanding destinations for FDI are non-tradable service areas, including real estate improvement, commerce, finance, and communications. The capability of these areas to absorb FDI has improved fastly in late years in general five economies, which have utilized straight or in a roundabout way from the resource boom in their possess economies and those of their neighbors. Labor-intensive manufacturing and infrastructure accepted a much smaller share of FDI while agriculture accepted actually nothing.[9]

The most significant capitalists to Central Asia are the EU, the PRC, and the Russian Federation. The PRC's investments in total economies of the territory have improved very rapidly. FDI comes to the territory in study of natural resources and new markets. The countries of Central Asia seem to be more involved in technologies

[9]Neuhaus, the impact of FDI on Economic Growth An analysis for the transition Countries of central and eastern Europe, 2006, p.33

and speciality supplied by capitalists than in financial resources as some of these countries have quite significant internal savings.

There is an affirmative long-term relationship between FDI and GDP. Vital transmission channels contain exports by institutions obtaining FDI and fees paid by these enterprises. The straight contribution to employment is much smaller, as ordinary FDI comes to capital rather than labor-intensive areas.

One of the determinative elements defining the scale of FDI streams into these economies is the degree of return on investment. There seems to be a great suitable correlation between this degree and the FDI stock collected in economy. In other words, for getting benefit from FDI in the long term, governments must also permit capitalists to profit.[10]

All countries of Central Asia demonstrate alike streams of import FDI by area and by country of origin .By area, there are two key flows. One of them is connected to natural resources, including extraction of oil and gas, metals and non-metallic minerals, geological reconnaissance; services firmly interested to mining, metallurgy, oil, and gas processing (including chemical industry); and, in some years, transport of energy (oil and gas pipelines). The interest of these areas in general FDI influxs in four of the countries is about or to go to etremes 50% of general FDI influxes (Tajikistan is the exception). The manufacture of enterprises supported by these investments is usually exported foreign. Plans in these areas—improving of oil and gas areas or building of pipelines—are mostly large, and their great share of the whole investment portfolios of these countries consequences in the disharmonious FDI dynamics point outed above. The beginning or finishing of such plans guides to very large changes in whole FDI amounts. For instance, oil and gas pipelines built by the PRC in Kazakhstan and Turkmenistan led to a hike in FDI in 2009 (the peak year of building) and a fall in 2010, when building was mostly ended.

[10]Stephen D. Cohen, Multinational Corporations and Foreign Direct Investment: Avoiding simplicity, embracing complexity, 2007, p.194

For countries hosting FDI, there were able to be at least two diversified impulses. One is deficit of local resources to improve their resource base or serve local markets. This impuls is usual for indigent countries with fallen savings degrees. Another motive is absence of technology, marketing links, and expertise essential for creating manufacture and sales systems in investment plans.

The above negotiation of FDI streams and patterns in Central Asia proposes that the main attraction for capitalists in total these economies are the territory's natural resources: oil, gas, and metals. As noted over, plans dealing with extraction and, to a lesser degree, processing of natural resources report for more than 50% of whole foreign investments into the territory. In turn, the influx of FDI into these sectors is related to the speedy development of transnational commodity prices; by International Monetary Fund forecasts, in 2003–2012 energy and metal prices more than threesomed.

The Russian Federation is one of the most spacious capitalists in total these countries; its share is the maximum in Uzbekistan (37% of general FDI), very great in Tajikistan (18%) and Turkmenistan (16%), and smaller but still can be seen in Kazakhstan and Kyrgyz Republic (4% in both countries).[11]

Other great capitalists from abroad the territory, which are existing in some countries of the territory, include the United States, Switzerland, Canada, the Republic of Korea, Iran,Turkey, The United Arab Emirates, and other Gulf countries. Another source of investments to Central Asia is offshore jurisdictions territories (e.g., Liberia, British Virgin Islands, Cyprus, and Seychelles), whereas their role has little by little been diminishing over time. Investments from Singapore and some other Association of Southeast Asian Nations (ASEAN) member states as well as from Japan are exist in Kazakhstan and Uzbekistan, but these countries are not main capitalists.

[11]Kari Liuhto, Sergei Sutyrin and Jean-Marc F.Blanchard, the Russian Economy and Foreign Direct Investment, 2016, p.114

There are plentiful oil and natural gas reserves in Turkmenistan and Uzbekistan.. In accordance with the U.S. Department of Energy, a deficit of enough external investment, geographical objection, insufficient export pipeline infrastructure, and political unbalance have been impediments of both countries becoming necessary energy exporters (Energy Information Agency, 2009). Energy production from Turkmenistan and Uzbekistan has also been diminishing since 2004, while both countries may be seeking to negotiate late deals with transnational corporations, while countries can support alternative export programs abroad by Russia and increase hydrocarbon competitiveness in its territory. The fundamental element has been an absence of new investment and technical capability to fetch new oilfields online. Kazakhstan is more of a favorable story in terms of external investment. The external investment in the oil and gas sectors of the country in line with the EIA of the next years, the landed Central Asian state has recently begun to analyze its tremendous potential for production. With enough export options, Kazakhstan was able to become a main universe energy producer and exporter over the following 10 years. Nevertheless, the country is in great need of investment. The suitable gas export infrastructure will limit the development of the deficit export.

Turkmenistan and Kazakhstan have the greatest FDI stocks (quantity of capital, reserves, keeping profits, and net indebtedness of the affiliates of FDI enterprises). But, in Kazakhstan in last years GDP increase faster than the FDI stock, so the share of FDI stock in GDP diminished by 9 percentage points between 2009 and 2012. A similar diminishes happened in Tajikistan for 2007–2012. This may be either merely a provisional slowdown of the FDI influx, or a consequence of the rising of other GDP progress drivers (this is absolutely the case for Tajikistan, where transfers are much larger than FDI). In the other three countries, the FDI stock's share in GDP demonstrates an open upward stream, meaning that these economies have not

achieved FDI satiation point yet. Outward FDI is significant in Kazakhstan merely, which has the territory's maximum GDP per capital and savings.[12]

Kazakhstan has made spacious endeavors in direction of a full market economy, permiting privatization and decentralization, and the introduction of markets in most compartments. In accordance with to the National Bank of Kazakhstan, a suitable commerce environment and political constancy have contributed to a important influx of foreign direct investment (FDI) over the previous 10 years, up from USD 4.6 billion in 2001 to USD 20 billion in 2011. Most investments in the energy section were in hydrocarbon manufacturing: more than USD 30 billion in the oil and gas compartment since 1993. The major capitalists in Kazakhstan's economy are the United Kingdom, the Netherlands, France, the United States, Italy, the Russian Federation and China.

Since 2015 China has been engaged in a determined programme known like 'Belt and Road' (B&R) to improve land and sea commerce routes as a means of further completing itself into the universal economy. A vital factor of B&R is reviving the old Silk Road through Central Asia.

In Turkmenistan, its second-biggest commerce collaborator in the territory with wealthy down payments of natural gas, China has concentrated its engagement, particularly over the last 10 years. A treaty on Expansion of Natural Gas Offering was signed in November 2011. A treaty signed on August 29, 2008 preceded the founding of the Intergovernmental Cooperation Commission with four subcommittees on economics, commerce, energy, humanities and reliability. This resulted in the building of a 1,830-km gas pipeline, which was finished in December 2009, beginning in Turkmenistan's eastern areas and crossing Uzbekistan and Kazakhstan earlier related with the Chinese grid. A general 46.77 billion cubic meters (bcm) of natural gas had been transfered by the Central Asia–China pipeline with an aggregate

[12]Mashao M., Trends in the consumption of electricity in the Industry. Eskom Holding, 2015, p.201

value of $15.72bn since end of February 2013. Mutual relations between China and Turkmenistan were hoisted to a strategic cooperation grade during President Xi's state visit to Turkmenistan in September 2013. The two parts agreed to further enlarge the gas pipeline in order to boost yearly gas exports to China to 65 bcm per year by 2016.[13]

In Kyrgyzstan, according to the conditions placed at the intersection of geopolitical curiosities in Central Asia and a very important port of entry for oil from Turkmenistan and Uzbekistan, Chinese companies are improving infrastructure, including essential road networks and power lines. The main railway link between China's southern provinces of Kyrgyzstan and Uzbekistan is also in talks. Chinese Foreign Minister Wang Yi said in July 2013 that China will continue to provide "all kinds of support" to Kyrgyzstan for Kyrgyzstan's infrastructure plans.In September 2013, China–Kyrgyzstan relations were improved to a strategic association level. In the past two decades, commerce with China has increased tremendously and China has become Kyrgyzstan's second-largest commerce collaborator, behind Russia. Every small commerce in Kyrgyzstan trusts commercials with China," an old Kyrgyz cabinet minister said." Especially necessary is the re-export of Chinese users' goods to neighboring Uzbekistan and to Kazakhstan and Russia.[14]

In Uzbekistan, China has made significant investments in the strategic sectors of energy, transport, and telecommunications and has become the second-biggest trading collaborator and its greatest capitalist. On June 16, 2004, a Memorandum of Understanding on the Extension of Commerce and Investment and Financial Cooperation was signed and in October 2011 an agreement on the founded of the Intergovernmental Cooperation Commission was signed.Mutual commerce capacity in 2012 achieved $2.87bn, inceasing nearly 50 times since the two countries created politic relations in 1992. In the same year, China had 35 direct investment plans in

[13]World Investment Report 2016 - Investor nationality: policy challenges, p.13
[14] C. Alvstam, H. Dolles, Asian Inward and Outward FDI: New Challenges in the Global Economy ,2014, p.146

Uzbekistan with a whole investment of approximately $4bn. In accordance with the State Statistics Committee of the Republic of Uzbekistan, 347 Chinese capitalist companies, including 100 percent of China's capital and 57 percent of Chinese capital, manage Uzbekistan Uzbekistan's first deputy prime minister has provided in 2012 that the Chinese banks have provided $ 5 billion more resources to suitable debts for industrial plans. Former Chinese President Hu and Uzbek President Islam Karimov signed a joint declaration on 6 June 2012 to create a strategic joint work. During President Xi's state visit in September 2013, the two sides agreed to further amplify their partnership in the energy compartment by ensuring long-term, secure and steady operation of the China–Uzbekistan gas pipeline, promoting joint exploration and improvement of oil, gas, and natural uranium, and enhance the potential for collaboration in renewable energies Covenants to apply plans worth a general of $15bn were reportedly signed.[15]

2.2 Government policies in global petroleum.

2.2.1 Chinese FDI influence on management and economy of developing countries.

Foreign direct investment in oil/petroleum compartment plays an essential role in economic improvement of these countries. Most of the countries inspire FDI in the oil and petroleum compartment forgetting advantages from improved ones, which generates foreign direct investment for own nations. Government plays an important role in direction of FDI for controlling various profits and problem which increases because of it. Government of nations improves various liberalization policies appropriate to the fiscal incentives, investment profits, and duty payment on investment. In a lot of of the countries government frame their manners, rearrangements, legislations and policies as per their liberalization of oil and

[15]Porter M. "Competitive strategy: methodology for analyzing industries and competitors", 3rd edition, 2014,p.64

petroleum commerces. Main aims of the government policies are to increase profits of the FDI in oil and petroleum compartment, diminish different narrowness such as issue suitability to equilibrium of payments, various environmental and labor issues, and etc.

Most of the main investing countries in the universe are improved economies; moreover to making direct investments otherwhere, they tend to be very clear to inward investment. China is extraordinary in that it is an improving country that has emerged as a vital capitalist. China itself is a significant destination for external investment, and opening to the abroad universe has been an essential part of its reform program since 1978. Nevertheless, China's policy is to steer FDI to especial sectors. On the whole, it has welcomed FDI into most but not total of production. But, other sectors of the economy are comparatively linked to FDI, including mining, building, and most contemporary services. It is not surprising that China is less clear to FDI than improved economies such as the U.S. Despite this, it is the case that China is comparatively linked among improving countries too.[16]

China's economy has developed at dual digits over the last thirty years, growing the necessity for energy safety and entry to inexpensive natural resources, since any disruption was able to have results for their improvement model. The country's institutional constancy also rests on its unusual economic record, so China is inspiring companies to put capital foreign as an important element of securing the significant resources and diversifying the income streams that simplify strong economic development**.**

China's outward foreign direct investment reached new heights in 2016, exceed $200 billion, surprising markets and policymakers, and for first 3 quarters of 2017 China exceed $102 billion (table 2). Chinese companies reported for more than 10 percent of universal foreign direct investment streams that year, a notable success

[16]Galina Hale (*Federal Reserve Bank of San Francisco, USA*), Cheryl Long (*Colgate University, USA*) Foreign Direct Investment in China Winners and Losers, 2012, p.25

for a country that 10 years ago reported for less than 2 percent. In motive, combinations and obtainings by Chinese firms in 2016 achieved $140 billion in finished transactions—second only to those of US firms.

Table 2.Chinese Foreign Direct Investment, bln $, 2017

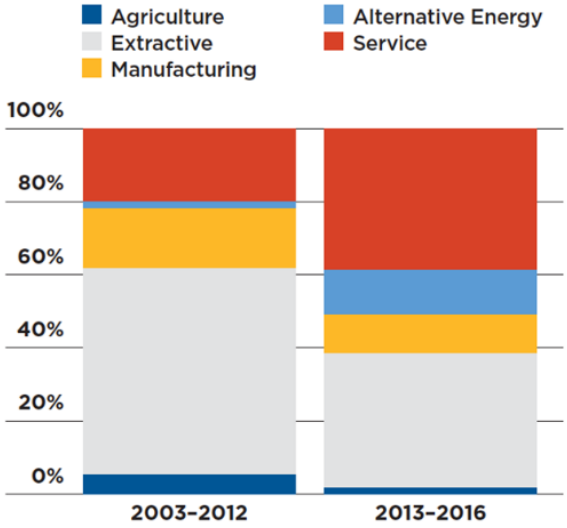
Source: Database of the Ministry of Commerce of thePeople Republic of China

Cumulative streams of Chinese FDI in Latin America have achieved over $110 billion, with $60 billion to Brazil alone. Yearly FDI streams from China have been more than $10 billion in four of the last five years. In 2014 and 2015, China reported for a mean of 10 % of universal FDI streams to Latin America, a striking turn around from the below levels of investment even a few years earlier. Europe is still the territory's greatest source of FDI, but China is approaching.

Chinese companies are now managing a growting share of Latin America's electricity generation and transmission. This type of investment in crucial infrastructure can support make Latin American economies more efficient and vying. Electric power will be progressively generated by Chinese-built renewable energy sources such as hydro, solar, wind, and. And an increasing number of commerce transactions will go through Chinese-owned banks. This, progressively, is the new face of Chinese FDI in Latin America (Table 3).

Chinese companies will play a great role in connecting the following generation of Latin American medium class users to the Internet, with countless deals in telecoms and network equipment approved in the recent few years.

Table3. Chinese FDI in Latin America Shifts in direction of the Service Sector



Source: Atlantic Council ADRIENNEARSHT Latin America Center

The rising financial stream from China to Brazil is expressed by great government loans to the country in 2016 too, with nearly $15 billion coming from China Development Bank, primarily to finance energy plans.

Concerning environmental and social security for infrastructure plans, China has defined a problem that resonates with other improving countries. The World Bank and other multilateral growth banks have been imposing environmental and social standards that express the choices of wealth-country electorates. Growing countries have been voting with their feet and away from those banks have become as essential infrastructure financing sources. In total, they welcome China's infrastructure financing. The response to the proposal of the AIIB, a new infrastructure bank, was especially strong. Asian countries, such as India, Indonesia and Vietnam, who were

not China's special friends, were fast to sign up for the endeavor. AIIB's initiative to improve workable security to address environmental and social hazards but without the long lags and high expenses of existing MDB practices is a significant novelty. This is an attractive example where China may finish changing universal norms to make them arrange better with growthing country preferences. It is unlucky that the United States and Japan have chosen to stay away from the endeavor.[17]

Chinese investment into improving countries such as those in Africa and South America has be distinctly various forms the investment in advance achieved from Europe and the US. The western investments usually came with dense controls and circumstances, some directly connected to the plan, but others frequently tied to some political external policy defended by the investing country. For this reason in the past, foreign investment has been seemed as a type of new colonialism.

Nevertheless, the latest bout of investment in the improving universe, coming from China, has had less strings and circumstances attached. There are still connections related to the contemporary plan, to provide Chinese firms get contracts, but China tends not to place the equal political links on the recipient, allowing the nation to proceed its own local politics in the same direction as earlier.

China has been much censured for this investment manner as well as applauded. A lot of receivers of Chinese investments are satisfied to have external investment with less string and political wrangling attached.Nevertheless, a lot of point to an obvious lack of ethics in the Chinese investment. When western nations pull out of investments on ethical grounds (such as human rights problems in a country), the Chinese are fast to step into the void left. Chinese firms frequently do commerce with nations that the US would embarrass away form such as Iran.[18]

[17]Chunlai Chen, Foreign Direct Investment and the Chinese Economy: A Critical Assessment, 2017, p.152
[18]Michael J. Enright (Abingdon and New York: Routledge, Developing China: the Remarkable Impact of Foreign Direct Investment, 2017, p.49

2.2.2 Tools of fiscal policy in the management of petroleum resources

Resources have been identified as including total amounts of petroleum which are forecasted to be initially-in-place; nevertheless, some users consider just the forecasted retrievable portion to constitute a resource. In these definitions, the amounts forecasted to be at first -in-place are determined as General Petroleum-initially-in-place, Discovered Petroleum- at first -in-place and Undiscovered Petroleum- at first in- place, and the retrievable portions are determined severally as Reserves, Contingent Resources and Prospective Resources. In any event, it should be figure out that reserves constitute a subset of resources, being those amounts that are discovered (i.e. in known agglomerations), remediable, trading and remaining.[19]

Petroleum Resources Management System objective:

- Ensure a total reference for the transnational petroleum industry, including national
- reporting and regulatory disclosure agencies, and to help petroleum plan and portfolio government demands
- Develop openness in universal communications regarding petroleum resources
- Supplement with industry education plans and implementation guides

Petroleum Resources Management System - Main Principles:

- ❖ Comprehend the reservoir and "in place" resources
- ❖ The System is "Plan –Based"
- ❖ Classification on commerciality
- ❖ Base case for future circumstances estimation
- ❖ Granularity for plan government

[19]Michael Ludkovski and Ronnie Sircar, Game Theoretic Models for Energy Production, 2015, p.83

- ❖ Deterministic and/or probabilistic ways of forecasts
- ❖ Reserves /resources prediction as sales products Contractual entitlement of reserves allocation

Petroleum Fiscal Systems apply to the regulations between an owner government and an oil and gas exploration and manufacturing company to explore, improve and produce hydrocarbons. Royalty term is a vital factor of any petroleum fiscal policy and it was able to be fixed-by-terrain or sliding by amount and petroleum price. Nigeria like most countries operates a fixed-by-terrain royalty system. The lacks of such a system cover unconcern of the dimension of the firm and the price of hydrocarbon in defining royalty terms. This is participated by unfavorable shock on profitableness of minor firms and their operations on the one hand and the take statistics of the owner government on the other. For instance marginal area manages find it hard to control under fixed-by-terrain royalty system. Total past investigators on fiscal terms have focused quantitative assessment on influence of fiscal terms on profitableness indexes direct influence on government and contractor take statistics without enhancing to prove reserves affect.[20]

Setting an optimal fiscal policy in oil-producing countries is challenging, on the grounds the exhaustibility of oil resources and imbalance of oil prices. Lately it has become famous among oil-producing countries to create oil income funds, which are trusted to balance the economy and ensure inter-generational redistribution of oil wealth. The efficiency of oil income funds and their project have achieved important thoughtfulness from researchers and policymakers lately.

Oil-producing countries frequently face the "Resource curse" coming from the frivolity, exhaustibility and indefiniteness of resources. Some countries establish an oil income fund (fund) as a mechanism to decrease the affect of volatile income on the government and the economy (Davis, Ossowski, Daniel, & Barnett, 2001). There

[20]P. Pazienza ,The Relationship Between FDI and the Natural Environment: Facts, Evidence and prospects, 2014, p.19

is an idea that oil income funds can support oil-producing countries refrain the "Resource curse".

Various fiscal regulations may be demanded to address the fiscal challenges the country is likely to face as it receives oil incomes. The two extreme regulations are the equilibriumed-budget regulation or what is generally called 'hand-to-mouth' regulation, which demands expenditure whole oil incomes that agglomerate to the state; and the 'bird-in-hand' regulation, which demands the expenditure of interests made on collected net financial assets from oil. The economic distinguish between these regulations is that the hand-to-mouth is useful for countries with great public investments and infrastructure demands which are demanded for increase acceleration. It nevertheless subjects the budget to income volatility since oil prices are unexpected. The bird-in-hand on the other hand favors agglomeration of incomes and assets for future utilization to satisfy the intergenerational fair case. This regulation reports for income volatility but disclaims the economy of much-needed capital. There is the medium-term price regulation too under which oil incomes valued at a medium-term price in the budget are spent whilst the equilibrium is saved.[21]

In nowadays heavy circumstances, oil and gas commerce is challenged with the need of decreasing spending and effective use of loan and equity capital. In past years, because of economic decreasing circumstances it has become tougher for oil and gas institutions to increase borrowed funds. Decline of oil value, roble currency weakening and the US dollar reinforcement initiated a necessary growth in affinity degree on credit. Oil and gas compartment companies are faced with the difficult need to make perfect its capital structure. For this reason, financial planning, one of the most efficient equipments of financial policy, is very important for oil and gas companies.

[21]David M. Marchick, Matthew J. Slaughter, Global FDI Policy - Council on Foreign Relations ,2008, p.166

The target equipment of the company's financial project is firstly supplying important financial funding, of manufacturing, investment and financing activities, as well as determining the rational resources use.

3. Global energy challenges in the modern world.

3.1 Game theories of main energy players.

3.1.1 Regional energy potentials and implications.

China is nowadays the second largest petroleum refining country in the universe because of fast increasing in last years. As the petroleum refining industry is energy-intensive, the fast increasing in petroleum refining and improvement created massive energy utilization. China's urbanization process will warranty continuous development of the industry for a long time. For this reason, it is important to learn the energy protection opportunities of the petroleum industry.

Chad has the 10th largest oil reserves in Africa, forecasted at 1.5 billion barrels of oil in 2013 (EIA, 2013). Chad beganned trading oil manufacturing in 2003, when the 1,070 km Chad-Cameroon pipeline (CCP) was completed, permiting exports from the oil areas in the Doba Basin of southern Chad through Cameroon to a new station at Kribi at the Atlantic shore. The 20,000 bbl/d N'Djamena refinery started providing the domestic market with petroleum products in 2011. Output reached at around 170 kb/d in 2004, but come to a standstill at 130 kb/d in 2013 (OECD/IEA, 2014). Chad exports more than 85 per cent of her oil manufacturing via the Chad-Cameroon Pipeline (WEC, 2013).

Energy request is sustainable growthing. The South East Europe (SEE) is a big importer of the natural gas and oil, while in some countries and electricity. Some countries have opportunities to go to etreme their electricity production requirement

wants. Natural gas and oil sources are mainly out of the European and SEE Territory area. The EU is importer of total energy forms and it is involved to cross over electricity and other energy forms from or through the SEE territory countries. Questions on safety of energy offering are extremely explained. [22]

Natural gas and petroleum pipelines play a very important role in Russia's economy, both in delivery fuel to local industrial users and in helping exports to Europe and countries of the Commonwealth of Independent States. Their composite network coordinates manufacture territorys with actually all of Russia's headquarters of country and industry. Pipelines are particularly essential due to the long intervals between Siberian oil and gas areas and Russia's European industrial headquarters as well as countries to the west (Library of Congress, July 1996).

Transnational pipeline plans either being worked on or considered contain: 1) dilating the pipeline to the Baltics, which is consumed to offer Europe; 2) a route to Murmansk or Indigo on the Barents Sea in the Arctic.

Environmental worries and important domestic reserves have made native gas the speedest-increasing energy source in the EU. Gas reports for 22 percent of EU energy utilization (although oil still report for 44 percent), and Russia has long been the sovereign dealer of European gas. For its share, the EU purchases 62 percent of Russia's all gas exports, this in turn reports for 20 percent of the EU's overall gas utilization. Since 1997, Russia has also been the vital dealer of gas to Turkey, presently report for around 70 percent of its gas imports. The Russian government searches both to growth its exports to Turkey and dual its exports to Europe over the following twenty years through its energy collaboration contract with the EU (Brookings institution yearly statistics, 2017).

There are projects to construct a 2,500-mile (4,150-kilometer) pipeline—the universe's longest— near the Russian port of Nakhodka on the Japan Sea, where oil

[22]Tarcisio Gazzini, Foreign Investment in the Energy Sector: Balancing Private and Public Interests, 2014, p.68

would shipped by tanker to Japan, between Angarsk and Taychet near Lake Baikal in eastern Siberia to the Vostochny. The pipeline will be the longest and most sumptuous ever construct. If the connstruct is three times longer than the trans-Alaskan pipeline, it will carry 1 million barrels per day on a 1.2 meter (four foot) diameter pipe and rise Russia's oil carrying capability by three times.. It was able to take 10 years to finish.The down payment of oil and gas in the Caspian Sea is simply as good as transportation and delivery system that can apply them The pipelines that subsisted after the collapse of the Soviet Union did not have the capacity to carry the whole amount of oil that the Caspian Sea had and the former Soviet republics on the Caspian Sea did not want to trust Russian pipes.One analyst named pipelines the "Great Game" of the oil commerce.[23]

Further the collapse of the Soviet Union the Caspian Sea countries were confirme on Russia's pipelines to activate the oil. This gave Russia a lot of force over other Caspian Sea countries. It was based on the pipelines that were needed to cross the Russian system and to free Russia and create its liberty for countries like Turkmenistan, Kazakhstan and Azerbaijan.

Maps of the Caspian Sea are frequently criss crossed with lines and punctated lines for present and prosed pipelines. A lot of of the present Soviet-era pipelines—addition some that date back Tsarist times—are too decrepit, too obsolescent and must little capability to be of much utilization. Projects construct new pipelines should take into look through a number of challenges: money, bribery, political turmoil, safety and terrorism. Construction a pipeline needs hundreds of millions or billions of dollars. To achieve Europe from the Caspian Sea needs passing through Chechnya, Azerbaijan, Ossetia, Georgia, Armenia or southern Russia— all places that have been racked by illegality and political severity since the breakup of the Soviet Union.

[23]John Burr Williams, "The Theory of Investment Value", 2nd edition, 2014, p.172

Latest analyzes defined that Poland is the country with the largest reserves of shale gas in Europe. The field of shale gas agglomeration is vast, stretching from the northern territory of Pomerania through the central-eastern territorys of Mazovia and Podlasie, to the Lublin territory in the east. Analyzes made have determined three major basins (Baltic, Podlasie and Lublin) in the relevant areas

Ukraine's general shale gas down payments are forecasted at around 7 trillion cubic meters, which places the country at the third place in Europe then Poland and Norway. . In Eastern Ukraine (Donets'k and Kharkiv territories) there are two basic shale gas fields in the Dnipro-Donbas oil basin and in Oles'ka (Yugiv and Ivano-Frankivs'k territorys) in Western Ukraine.) the share of Poland's Lublin gas basin. While the Yuzivska area is said to cover about 2 trillion cubic meters of gas, it is estimated that Oleska's dawn payments are 1.5 trillion cubic meters It is yet unrecognized merely how much of these down payments is technically improvable.[24]

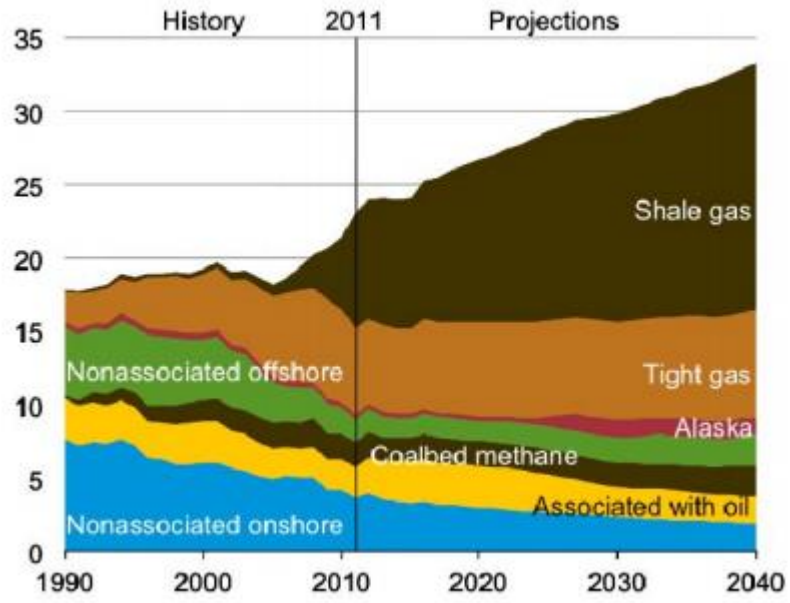
Briefly then the accident of Fukushima in 2011, the Federal Government of Germany started an energy passage process for the whole country.Therefore, total nuclear power plants in Germany will be close until 2022. This project has dramatic results for Germany's energy mix. Whole electricity related by nuclear power plants (22% of the whole gross electric energy output) has to be modified. Natural gas is frequently took into account as an important passage energy source and was able to modify part of the energy from nuclear power plants. In the forward, natural gas as an energy source will be comprehended as more essential, as it is suitable even when the wind isn't blowing and the sun isn't shining.[25]

Shale gas increasing also took place on the west share of the universe. The U.S. Energy Information Administration (EIA) forecasts that about 15.8 trillion cubic feet (Tcf) of dry natural gas was produced straightly from shale and constricted oil

[24]Journal of Game Theory, IRENA, 2015, p.9
[25]R. W. Boom, B. C. Haimson, G. E. McIntosh, H. A. Peterson, and W. C. Young, "Superconductive energy storage for large systems," IEEE Transactions on Magnetics, vol. MAG-11, no. 2, 2015, p.190

resources in the United States in 2016. This was about 60% of all U.S. dry natural gas manufacture in 2016. The shale gas boom, linked with easier entry to new and wide natural gas supplies, has direct the US shale gas production to soar dramatically since 2007. By 2010 shale gas compiled 23 % of US gas manufacture, an essential change from the former year, during which shale gas composed simply 14% of the general country's gas manufacture. The US Energy Information Administration's Annual Energy Outlook Early Release 2013 has foreboded that the US natural gas manufacture will rise from 23.0 trillion cubic feet (tcf) in 2011 to 33.1 tcf in 2040 — a 44 % enhance. This surge is widely because of the expected development in shale gas manufacture (Table 4).

Table4. The USA energy dynamics for 1990-2040.



Source: US Energy Information Administration, Annual Energy Outlook 2013 Early Release

Energy plays sovereign role in total shares of the globe, and Eastern-Asia is not elimination. In spite of the below price of universal crude oil, this compartment stay essential to the country as it contributes between 20 to 30 percent to the country's Gross Domestic Product (GDP). With over 3,500 oil and gas (O&G) companies in

Malaysia, comprising both transnational and domestic companies, the multiplier impact related by this compartment is still quite big and is acknowledged by Petroliam NasionalBhd (PETRONAS, the National Oil Company) and the Government of Malaysia as a strategic and first concern compartment.

Starting in 2015, Malaysia witnessed marginal development in oil manufacture and reserves, while gas manufacture continues to diminish. This going on diminish in manufacture at Malaysia's main not deep water producing oil areas has prompted government endeavors to stimulate investment in Enhanced Oil Recovery (EOR) and improvement of marginal and profound water areas through hazard-sharing covenants. Malaysia's new reserves are found generally off the shore of Northern Borneo between 200 to 1200 meters profound, making it more expensive to extract these resources.

Malaysia's energy safety strategy has been to sell or trade abroad its premium Tapis sweet crude oil and import below-grade oil to purify in its downstream amenities. Nevertheless, Malaysia is gearing up to development its refining capability to become a net oil product exporter The Pengerang Integrated Petroleum Complex (PIPC) in Johor and the Sipitang Oil and Gas Industrial Park in Sabah (SOGIP) will have a purification capability of nearly 588,000 bbl / d to 1,158,000 bbl / da.. [26]

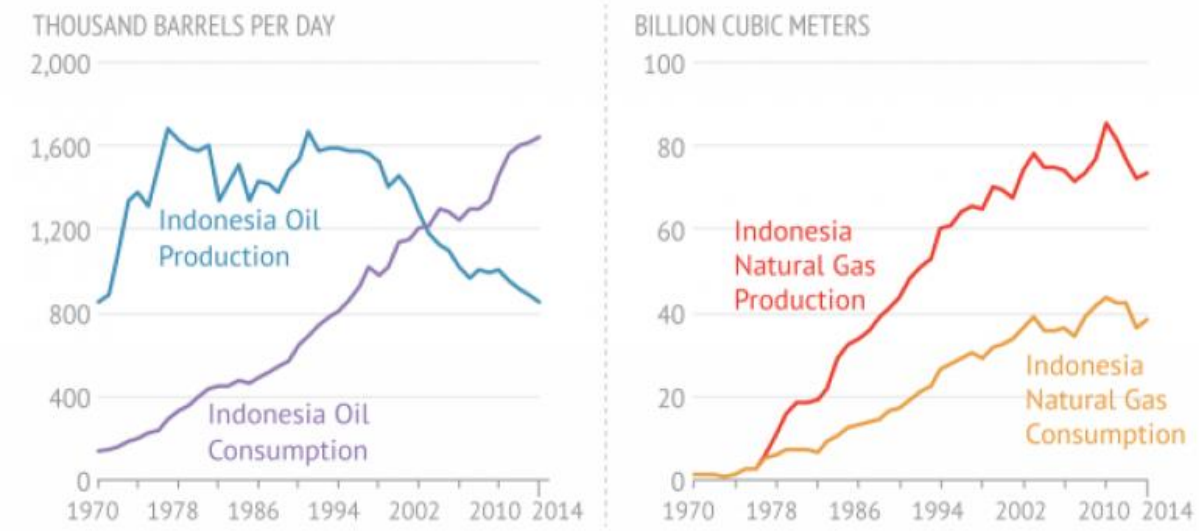
While Indonesia stays a net energy exporter, its imports of oil and oil products have been fastly improving in last years. The archipelago nation with these rich resources is the fourth largest coal producer of the universe and a high coal exporter.Indonesia is Southeast Asia's biggest gas dealer too, with exports reporting for about 45% of its manufacturing. Globally, Indonesia is the tenth largest gas producer and the seventh largest natural gas (LNG) exporter.

[26]Robert Alan Hill, "Portfolio Theory & Investment Analyses", ISBN: 978-87-403-0606-4, 2nd edition, 2016, p.56

Indonesia's significance is underscored by its largish population of 250 million people – the fourth-largest in the universe – and its essential role as a main producer and buyer of energy in local and transnational markets. Indonesia is the greatest economy in ASEAN and a dominant member of the G20, APEC and ASEAN too.

Indonesia and the IEA have built a powerful mutual alliance over the last years. Present cooperation covers a wide series of energy fields with a view to make strong Indonesia's energy policy and to address universal as well as internal energy challenges. At the IEA Ministerial Meeting held in 2015, Indonesia was one of the first countries to act on Agencies with the Partnership status.

Table5. Indonesian oil and natural gas production and utilization



Source: 2016 BP statistical review of world energy

In conclusion, as a consequence of high energy requirement, it is unfeasible to refuse the role of petroleum on the market. The shale gas searching take new practices and directions, alternative energy emergers as contrary to petroleum, financial crisis enforces oil and gas strikes. Political and local collaboration affects on mutually

helpful discussion both advantages and disadvantages too, but the motive of energy inevitability are irrefutable. [27]

3.1.2 Growing power of alternative energy and shale gas.

As coal and nuclear power generation is progressively retreating from the market because of environmental worries, there is room for other renewable resources to complete the gap. We have witnessed important improvement in natural gas utilization in vehicles and power generation which has etremely raised the request for shale gas. Back in 2011, shale was contributing merely over 34% to the all natural gas manufacturing which is hoped to achieve 50% by 2040. The developing U.S. economy will further raise the requirement for energy and, consequently, the requirement for and investment in shale gas will increase too.[28]

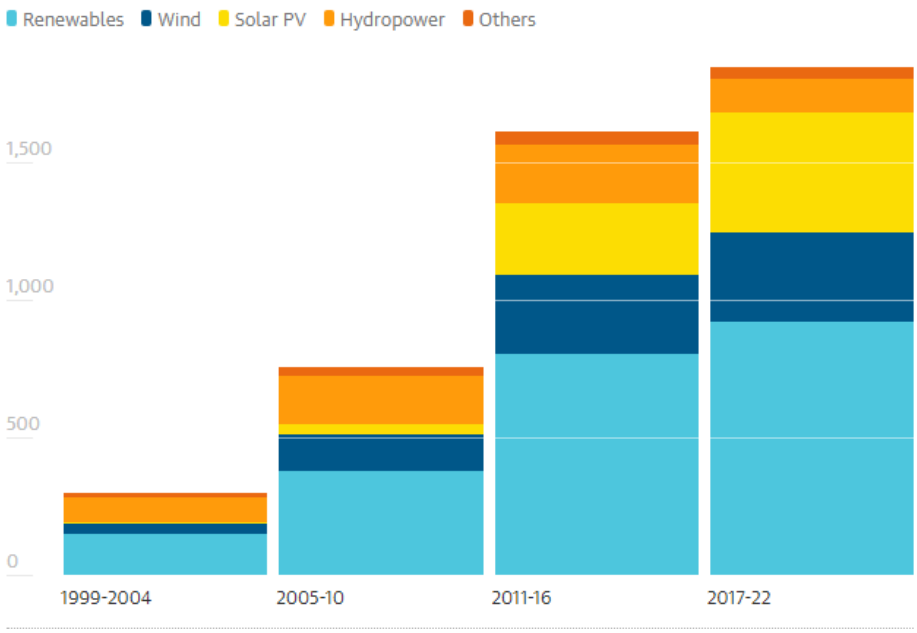
The cause behind the reputation of shale gas is its below cost when confronted to solar, wind and oil. Moreover, it is more environmental friendly than nuclear or coal too. Although the price of LNG is upward, countries are expenditure great on the building of LNG power generation plants. It is hoped that the requirements for natural gas in the electricity generation compartment alone will rise to 22.6 Bcf/d in 2015 from 22 B/d in 2014. The U.S. is trying to include the booming LNG export commerce, stimulated by the upper prices of LNG in Asian and European markets too. Shale manufacturing has supported the U.S. oil and natural gas industries, as it has facilitated the dependence on OPEC regarding the country's energy wants. A 20% growth in natural gas manufacture over the past five years has growthed U.S. energy reserves by 41% for oil and 37% for natural gas.[29]

[27]APFaure, "Investments: An Introduction" /Rhodes University/ ISBN: 978-87-403-0604- 1st edition, 2016, p.68
[28]Jan Wouters, Olivier De Schutter, Johan F. M. Swinnen, Foreign Direct Investment and Human Development: The Law and Economics of International Investment Aggrements , 2012, p.23
[29]Gilman, P. 2012. Thermal Storage Dispatch Control for Physical Trough Model. System Advisor Model − National Renewable Energy Laboratory, US Department of Energy, USA, 2016, p.101

We hope that the supplement of shale to conventional oil and natural gas manufacturing will maintain prices below in the forward, but just to a define extent, as very below prices might make unusual extraction dear and drag shale oil producers in direction of detriments.

Solar power was the fastest-developing source of new energy universal frame past year, outstripping the development in total other forms of power generation for the first time and guiding specialists to hail a “new era” (Table 6).

Table 6: Solar power will dominate growth in the following five years.

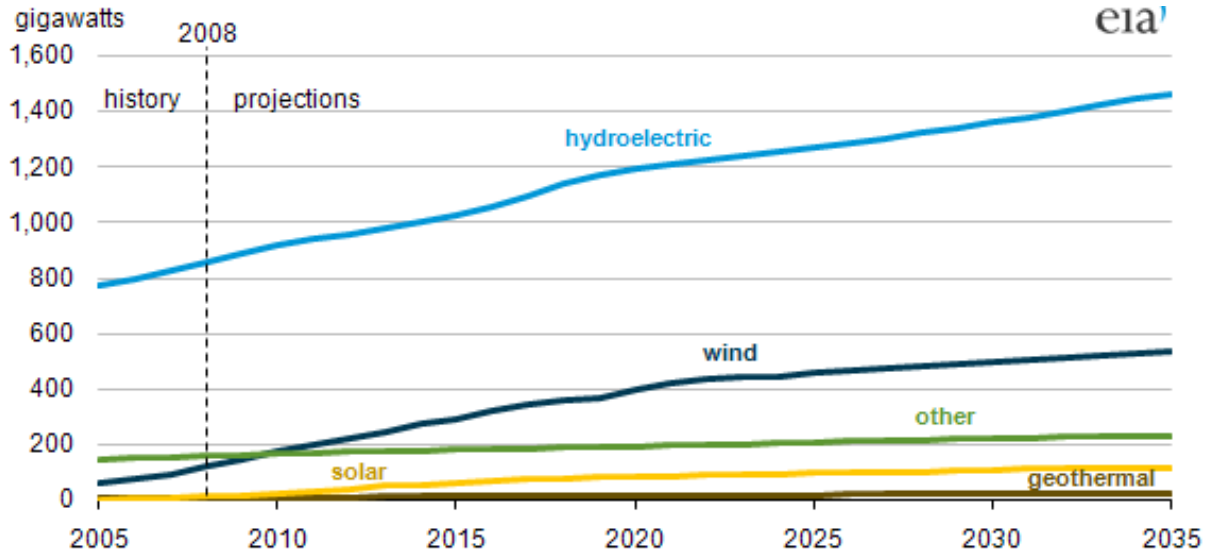


Source: International EnergyAgency statistical annual report 2017

The increase in renewable power will be twice as large as gas and coal integrated over the following five years (Table 6). This will increase renewable energy production from 24% to 30% by 2022, but coal will still be the largest power source.

Among renewables, configure hydroelectric power capability is hoped to rise more than other renewable sources between 2008 and 2035 (Table 7). Nevertheless, configured solar power volume sees the greatest increase degree over the projection period, growing 8.3% per year,followed by 5.7% for wind, 3.7% for geothermal, 2.0% for hydropower, and 1.4% for other renewables such as wood loss, landfill gas, and agronomical by products.[30]

Table 7: Global installed power generation capacity by renewable source



Source: U.S. Energy Information Administration, International Energy Outlook 2014

Moreover to having the maximum yearly magnification degree, renewable energy sources are hoped to report for the greatest share of all installed electric generating capability by 2035, approximately a third at 2,372 gigawatts. Renewables are the fastest increasing energy source for factual electricity manufacture, growthing 3.1% per year too. Nevertheless, as renewable generators have mean usage degrees

[30]Karl P. Sauvant and Lisa E.Sachs,The Effect of Treaties on Foreign Direct Investment: Bilateral Treaties, Double Taxation Treaties, and Investment Flows, 2009, p.142

well low those for other kindes of capability, the level of renewable generation is hoped to stay low that of coal, the influential generation source, and other fuels.

Latest predictions of large shale gas reserves across the globe have increased anticipation for inexpensive energy and upgraded safety of offer, especially because the using of natural gas is hoped to threesome by 2035.It is forecasted that shale gas was able to supplement 7299 trillion cubic feet (tcf) to universal gas reserves; by collation, conventional gas reserves are forecasted at 6614 tcf. A critical element in gas utilization is that 73.5 % of gas is traded (68 % by pipeline and the rest as liquefied natural gas (LNG)), which means that there is a great dependency on imports for a lot of countries. For instance, nations such as Japan and South Korea import general their gas utilization, whereas the UK trusts on imports for 55 % of its requirement. Great dependencies on imports can guidance to high energy prices. For example, the 2012 gas prices in Japan and the UK were US $15.89 and US $8.97 per GJ, respectively. By opposite, the price of natural gas in the US, which is nearly self-contained in this fuel, was US $2.62 per GJ.

In the US, local natural gas manufacture has increased fastly, from 17.8 tcf in 1990 to 24 tcf in 2013, and is forecasted to achieve 33.1 tcf by 2040. Since 1990, some 43 tcf of shale gas has been manufactured and in 2013 it made up over 35 % of general natural gas manufacture. Shale gas reserves are placed in the below 48 states, with manufacturing firstly from six major shale plays: Barnett, Eagle Ford, Fayetteville, Haynesville, Marcellus, and Woodford.The extensive scale and speedy increase of manufacture have established important employment. As shown in Table 8, all straight, indirect, and induced numbers of jobs in 2015, established due to the growth of shale gas, was over 600 000; this was forecasted to go to extremes 800 000 in 2019 and 1.6 million by 2035.[31]

[31]John M. Campbell, "Analysis and Management of Petroleum: Investments Risk Taxes and Time Hardcover" – June, 2nd edition, 2016, p.49

Table8. Contribution of shale gas to the US economy in 2015.

Parameter affected	Contribution			
	direct	indirect	induced	total
employment (no. of jobs)	148 143	193 710	259 494	601 348
GDP (million US$)	29 182	22 283	25 283	76 880
tax revenue (million US$)	9621 [a]	8825 [b]	161 [c]	18 607

[a] Federal tax revenue. [b] State and local tax revenue. [c] Federal royalties.

Source: U.S. Energy Information Administration, International Energy Outlook 2015.

From abroad the USA, shale gas activity is much smaller in scale and backward behind in improvement, so that economic effects in other countries can merely be forecasted. Great oil and gas companies have invested extremely in territorys seen as promising, but just some of these have investigated the economic importance of shale gas. When confronted the predictioned manufacturing cost to the US become equal cost, it can be observed that, in comparison, shale gas is much more costly to manufacture in other countries due to the delay in improvement.

The major impulse for improving shale gas in most territorys is to growth their energy safety. Asia and Europe are the greatest importers of gas, with the Asian market having the maximum gas prices. For this reason, variation of the gas mix is significant for reaching a continuously gas offering. Nevertheless, stimulation is to maintain or expand industrial activity in total or in the case of net exporters, such as Canada, Australia, and Algeria, to accomplish long-term export agreements, in spite of diminishing conventional reserves.

The below gas prices in the US pose hazards to some countries, such as the UK and Germany, due to companies importing feedstocks from the US instead or

migrating there. An instance of this is INEOS, the most spacious chemical company in the UK, which is importing US shale gas ethane for its Grangemouth cleaning device as it is 75 % lower-cost than UK North Sea ethane. Nevertheless, if the UK were to increase shale gas, local ethane manufacture was able to growth, consequence in ethane being lower-cost than US imports, which is the major cause for INEOS's resolution to purchase a £640 million share in UK shale gas licenses. For this reason, it can be viewed that, moreover to energy safety, shale gas can be essential to industrial nations if they are to hold and expand their production capability and capacity too.[32]

To inspire investment into shale gas, some countries have acquainted tax urges. In the UK, the government is nowadays supplying a diminished tax degree for manager to inspire investment, as well as a shale gas fund and society charter. The Chancellor of the Exchequer, George Osborne, proclaim in the 2014 Autumn Statement a "new long term investment fund from tax incomes from shale to hold the economic profits for next generations". More lately, to accelerate the designing process for shale gas improvement, the government has commanded domestic authorities to decide on project implementations within 16 weeks at most or otherwise the designing process will be go out of their hands and centralized. Other nations have changed their energy market to increment foreign investment. For example, in Mexico reforms signify that individual companies can now proposal for oil and gas exploration licenses in 2015 ("Ronda Uno"), ending the state-possess monopoly by the Mexican company PEMEX.

A lot of countries are facing barriers in their improvement of shale gas. Obstacles embrace earning social help as well as different political and technical problems. Countries in which the government manages the gas market, such as China, face the issue of uncompetitive market circumstances due to a monopoly by national collaboration or government-set gas prices being too below. Technical obstacles, on

[32]J. Hatzius, FDI, capital formation and labor costs: evidence from Britain and Germany, 2016, p.13

the other hand, bole from two problems: a lot of nations deficiency the infrastructure, abilities and speciality of the US; and each shale gas well is unmatched and can available certain issues. This makes shale gas growth capital intensive as much analyze and improvement and investigative work is needed for test wells and drilling. Additionally, each well site will demand various instruments for drilling, hydraulic fracturing, gas cleaning, and defective government and in a lot of countries the building of new infrastructure will be needful to improve shale gas favorably. As a result, the capital demand is too loud for a lot of individual companies.

Conclusion

For attracting FDI, countries use such surpluses as large local market, affluent offering of trained and below-wage labor, broad basin of technical professional, second broadest nation, etc. FDI is a cure-all for the economic illnesses of any country. Economic growth mightily depends on FDI. FDI in sectors or activities under automatic itinerary does not demand any preferential confirmation either by the government. Market purposeful policies are increasing economic activity, total round improvement and economic development degree.

The impact of FDI has been grouped into three sights. Fundamentally, it is a worldwide phenomenon that the charges in external companies are louder than local companies. The FDI activity has a favorable impact to the overall charge levels of the owner countries, even though fees spillovers to local companies are not every time present. Secondly, “external companies have great efficiency than local companies” can be assisted by most of the effective studies no matter what evaluates have been used. Even though some findings reflected that domestic firms in improving countries can profit from FDI by efficiency spillovers, in more cases, the efficiency spillovers are not essential, even unfavorable. Thirdly, improving countries can profit from FDI

and reach economic development. Totally, we can get an affirmative result that the owner countries, particularly the improving countries, can advantage from foreign direct investment.

The government, industry, and private company levels should keep going endeavor to realize the developing technological effects of foreign direct investment and should associate their intuitiveness regarding technological additives into the improvement of notions for allied amenability and the government policies of their companies.

Nowadays, nations across the world are acting in direction of a more clear and affirmative attempt relating MNCs and FDI, a stream that has been amplified by latest transnational contracts and new enterprises, such as the World Trade Organization (WTO), the Asia Pacific Economic Cooperation (APEC), and the North American Free Trade Agreement (NAFTA). Both the United States and Japan have essential amenabilities to continue this advancement in direction of clear and progressive commerce and investment along the word.

FDI ensures with constancy in influx of funds, entry to transnational markets, export expansion, transfer of technology and abilities and upgrade equilibrium of payments. More FDI does not significantly warranty loud development degrees. The notional emphasis must shift from an extensive (scatter shot) attempt to one of targeting companies in particular areas. Socially answerable FDI should be inspired through the improvement of national and transnational investment instructions and manners.

In result, Foreign Direct Investment (FDI) is an attractive notion through which company's advancement and entrance into new markets as a consequence of universalization. The suitable argument showes that, in nearly whole cases, foreign direct investment (FDI) is helpful for investing firms and owner countries, and the

significance of multilateral collaboration (MNCs) in the universe economy will sustain to enlarge.

References

1. APFaure, “Investments: An Introduction” /Rhodes University/ ISBN: 978-87-403-0604-0/ 1st edition, 2016

2. Annual report of the Department of Energy (DoE), IRENA, 2016

3. Chunlai Chen, Foreign Direct Investment and the Chinese Economy: A Critical Assessment, 2017

4. David M. Marchick, Matthew J. Slaughter, Global FDI Policy - Council on Foreign Relations, 2008

5.Editors: C. Alvstam, H. Dolles, P. Strom, Asian Inward and Outward FDI: New Challenges in the Global Economy ,2014

6. Gilman, P. 2012.Thermal Storage Dispatch Control for Physical Trough Model. System Advisor Model − National Renewable Energy Laboratory, US Department of Energy, USA, 2016

7. Galina Hale (Federal Reserve Bank of San Francisco, USA), Cheryl Long (Colgate University, USA) Foreign Direct Investment in China Winners and Losers, 2012

8. H. Asano and S. Bando,“Load fluctuation analysis of commercial and residential customers for operation planning of a hybrid photovoltaic and cogeneration system,” in Power Engineering Society General Meeting, 2006. IEEE, Los Alamitos, CA, June 2016,

9. Hwy-Chang Moon, Foreign Direct Investment: A Global Perspective, 2015

10. J. Hatzius, Foreign direct investment, capital formation and labor costs: evidence from Britain and Germany, 2016

11. John Burr Williams, “The Theory of Investment Value”, 2nd edition, 2014,

12. John M. Campbell, “Analysis and Management of Petroleum: Investments Risk Taxes and Time Hardcover” – June, 2nd edition, 2016

13. Journal of Game Theory, IRENA, 2015

14. Jan Wouters, Olivier De Schutter, Johan F. M. Swinnen, Foreign Direct Investment and Human Development: The Law and Economics of International Investment Aggrements , 2012

15. Karl P. Sauvant and Lisa E.Sachs, the Effect of Treaties on Foreign Direct Investment: Bilateral Treaties, Double Taxation Treaties, and Investment Flows, 2009

16. Kari Liuhto, Sergei Sutyrin and Jean-Marc F.Blanchard, the Russian Economy and Foreign Direct Investment, 2016

17. Mashao M., Trends in the consumption of electricity in the Industry. Eskom Holding, 2015

18. Neuhaus, the impact of FDI on EconomicGrowth An analysis for the transition Countries of central and eastern Europe, 2006

19. Michael J. Enright (Abingdon and New York: Routledge, Developing China: the Remarkable Impact of Foreign Direct Investment, 2017

20. Michael Ludkovski and Ronnie Sircar, Game Theoretic Models for Energy Production, 2015

21. Natiq Sabiroğlu, Qloballaşma və xarici investisiyaları, Baki - 2006

22. Nathan Michael Jensen, Politics and Foreign Direct Investment, 2012

23. Porter M. "Competitive strategy: methodology for analyzing industries and competitors", 3rd edition, 2014,

24. Pasquale Pazienza, The Relationship between FDI and the Natural Environment: Facts, Evidence and prospects, 2014

25. Patricia Hofmann, The Impact of International Trade and FDI on Economic Growth and Technological change, 2013

26. Robert Alan Hill, "Portfolio Theory & Investment Analyses", ISBN: 978-87-403-0606-4, 2nd edition, 2016,

27. R. W. Boom, B. C. Haimson, G. E. McIntosh, H. A. Peterson, and W. C. Young, "Superconductive energy storage for large systems,"IEEE Transactions on Magnetics, vol. MAG-11, no. 2, 2015.

28. S.Z.Isayev, Investisiya fəaliyyətinin hüquqi tənzimlənməsi, Iqtisad Universiteti - 201129.Stephen D. Cohen, Multinational Corporations and Foreign Direct Investment: Avoiding simplicity, embracing complexity, 2007

30. Tarcisio Gazzini, Foreign Investment in the Energy Sector: Balancing Private and Public Interests, 2014

31. Thomas Pollan, Legal Framework for the Admission of FDI, 2006

32. World Investment Report 2016 - Investor nationality: policy challenges

Internet resources

1. https://www.brookings.edu/wp-content/uploads/2016/07/China-as-a-Global-Investor_Asia-Working-Paper-4-2.pdf
2. http://www.spe.org/industry/petroleum-resources-classification-system-definitions.php----Society of Petroleum Engineers
3. Global Trends http://unctad.org/en/PublicationsLibrary/diaeia2017d1_en.pdf
4. http://www.energy.gov.za/fil
5. es/petroleum_frame.html
6. http://study.com/
7. http://www.oecd.org
8. https://www.investopedia.com/terms/f/foreign-tax-credit.asp
9. https://ru.scribd.com/
10. https://www.state.gov/documents/organization/228818.pdf
11. http://www.chinadaily.com.cn/bizchina/2017top10/2017/03/content_29175.htm
12. http://www.economywatch.com/foreign-direct-investment/disadvantages.html
13. http://riskmap.controlrisks.com/where-next/china-in-central-asia/
14. http://publications.atlanticcouncil.org/china-fdi-latin-america/
15. U.S. Energy Information Administration—www.eia.gov
16. https://www.export.gov/article?id=Malaysia-Oil-and-Gas-Equipment
17. tps://worldview.stratfor.com/article/fueling-indonesias-regional-strategy