

## Foreign Direct Investment and its Impact on the Oil Sector in Iraq

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### Abstract

There is no doubt that FDI has a significant effect on the oil sector in Iraq, mainly when the political system was changed since April 2003. The Iraqi economy has converted from closed economic towards an openness economy. Hence, the Iraqi economic system has been reformulated, which includes investment laws to encourage and attract FDI in all the economic sectors, the petroleum sector particularly. The study aims to demonstrate the role of FDI in developing the oil sector in Iraq and how to increase productivity, besides, whether FDI has negative or positive impacts. With regard to the research hypothesis, indicated that foreign direct investment has a positive role in developing the Iraqi oil sector because it has the availability of financial and advanced technological capabilities when compared with national companies. Consequently, one of the essential conclusions which reached the study is that the foreign direct investment in the oil sector relatively led to increasing the production capacities of crude oil. Therefore, the most significant recommendation in this academic paper is that the Iraqi government should attempt to provide more investment facilities for foreign direct investors in oil sector as well as the warranty of their property rights. However, the economic feasibility studies for oil contracts that are made with the International Oil Companies (IOCs) must be carried before they enter into implementation.

**Keywords:** FDI, (IOCs) International Oil Companies, economic feasibility, investment facilities.

### 1. Introduction

It is well known that one's of the most significant justifications for rising and enhancing economic development in all countries of the world is to extend the growing (maximize) value of economic investments in both (national and foreign). Indeed, the economy of Iraq is considered as one of the countries that own the great oil wealth. Besides, it faced many negative factors that had affected its economic development (such as the war between Iraq and Iran, the Iraqi-Kuwaiti war, and the economic sanctions imposed by the United Nations). Moreover, the change of the political system after 2003. It is clear that all of these factors led to the destruction and disruption of all economic facilities "consumptions, productivities and service", including infrastructure. In addition, Iraq suffered from the inefficiency technical and technological capabilities of national companies. As a result, it has become in need of foreign direct investment in all economic sectors, particularly the investment in the oil sector, In order to obtain substantial financial resources, modern scientific and technical expertise, for the reconstruction of the economic infrastructure.

### **1.1 Aims of the Study**

The main objectives of the study can be shown as follows:

1. Economic Assessment of the FDI to enhance the oil industry in various aspects: exploration, extraction, refining, transporting, during the period from 2003 to 2018, according to contracts and licenses round that took place between the Ministry of Oil in Iraq and International Oil Companies.
2. Analyzing the effect of foreign direct investment in the oil sector on increasing production capabilities in order to maximize oil revenue and its positive reflection on Iraqi economic growth.

### **1.2 Significant contribution of the Study**

There's no doubt that the economy of Iraq depends on crude oil as the main financial source for the public budget, either of its investment and operational aspects, which is estimated at more than 90% of the total public revenues. Therefore, it must be used and invested in the best way, in terms of raising production as well as export capacities through encouraging and attracting FDI in the oil field. It is obvious that Iraq was isolated from the international economic environment in the last two decades of the last century, as a result of that it has experienced a number of regional wars within imposed international sanctions. Hence, all these factors led to the backwardness and obsolescence of the oil sector in Iraq and then the low production capacity of the oil wells. However, after falling of Saddam Hussein's government in 2003, the Iraqi economy has become openness with the world, and it has issued new investment laws. Thus, it led to the entry of the International Oil Companies (IOCs) into Iraq and the holding of contracts for oil licenses agreement with the Iraqi government. Therefore, the study will explain whether these changes have been led to improve the infrastructure of the petroleum industry in different aspects: exploration, extraction, refining, transporting (often by oil tankers and pipelines), and marketing of petroleum products in Iraq or not.

### **1.3 Problems of the Study**

The study problem can be formulated and summarized by the following questions:

- 1- Is the foreign direct investment in the petroleum sector, providing an increase in crude oil production and export in Iraq?
- 2- Is the investment environment in Iraq convenient (in economic, political, and security terms) for conducting long-term petroleum licensing contracts with the International Oil Companies (IOCs) in order to enhance the Iraqi oil sector?

### **1.4 Hypotheses of the Study**

The study seeks to investigate these hypotheses:

- 1- Foreign direct investment (in terms of contracts for oil licenses) contributes to raising the production capacities of Iraq from crude oil, and then it leads to an increase of Iraqi government capacity to grow its oil exports.
- 2- Regarding the investment environment in Iraq, despite the fact of economic and political instability, Iraq economy has attracted foreign investors towards investing in the oil sector.

### **1.5 Methodology of the study**

In order to achieve the objectives of the study and demonstrate the validity of its hypothesis, therefore, the study depends on the descriptive-analytical method, which is being the most widely conducted in the study of economic and social phenomena. The data is obtained through secondary sources such as previous academic studies related to the oil sector, periodicals, and scientific journals. In addition, the study bases on a variety of data

sources, for instance, the reports issued by the ministry of oil in Iraq (Petroleum Contracts & Licensing), The Organization of Petroleum Exporting Countries (OPIC), the Arab Organization of Petroleum Exporting Countries (OAPEC).

## 2. Theoretical Framework of Foreign Direct Investment

### 2.1 Concepts of Foreign Direct Investment

Foreign direct investment means the foreign currency, which is employed for a specific economic activity in another country so that this type of investment accompanies the transfer of technology and technical expertise to the other country (Aharoni, 2011, p. 59). According to The Organization for Economic Co-operation and Development (OECD), FDI is defined that one of the institutions or investors have owned the capital assets to participates in the establishment of capital investments in another country, in which situation the investor has a share that qualifies them to participate in the administration and profits in the host country (OECD, 2002, p. 12).

The researcher provides a comprehensive definition of foreign direct investment as: "It is a partial or total utilize of capital assets in another country, and it is mostly long-term. This type of investment provides many advantages for both countries as the transfer of advanced technology and technical expertise, as well as a distribution of advantages".

### 2.2. FDI in Oil Sector

The petroleum sector has special characteristics and requirements regarding investment such as massive capital, advanced technology, high technical expertise, high risks, and long-term projects. The oil sector is considered the most sensitivity industry to political and economic events (FAHAD, 2014, p. 37). The oil sector has different aspects of investment related to the exploitation of oil and gas resources under and above the ground, initiating from the pre-exploration attempts, exploration, development and production, transportation, refining, gas processing, local distribution, and external marketing, although there are specific requirements, particularly the aspect that regards to capital requirements and the number of employees, type of inputs and outputs, location, and level of risks,..etc., most of the requirement are interrelated and integrated (Lyudmyla Hvozdyk Valerie Anne Mercer-Blackman, 2010, p. 14).

The targets of petroleum companies are to build equity and maximize wealth by finding and producing oil and gas reserves at the lowest cost and highest possible profit margin, and In order to do this, they must search for fields contains huge reserves (Johnston, 1994, p. 157). It worthy to say that for oil companies, the regions where vast fields are likely to be found, including Iraq, are often accompanied by tough fiscal conditions (Johnston, 1994, p. 158) . In general, the drives of investment in the petroleum industry come from a number of needs; finance, experience, technology, efficiency, modern management, also the need to joint with well-known participation, customers and markets (OECD, 2002, p. 45). On the other side, the host country looks to achieve a diversity of objectives, for example, in upstream activities; the Government seeks to maximize wealth from its natural resources and maximize the revenues to meet its economic need (Blanchard, 2008, p.16).

## 3. Foreign Direct Investment in Iraq's Oil Sector

The Iraqi government is attempted to implementing a stable macroeconomic framework in order to obtain dramatic growth in both the oil and gas sector as well as non-oil industries as well. The government of Iraq provides unlimited investment opportunities, which require over \$30bn of overseas investment per annum ( Jiyad,2013). To attract and encourage foreign investors, the list of warranties and privileges has been provided by the government of Iraq which are including the right to repatriate the capital which is brought

from Iraq into the original country, the right of ownership and protection against seizure, tax holidays for 10 years (extendable in some situations), the right to deal on the Iraq Stock Exchange (ISX), ...etc. (Menachery, 2018, p. 1).

### 3.1 A Brief Overview of the Iraqi Petroleum Industry

In fact, the economy of Iraq depends mainly on the oil sector, as the export of crude oil constitutes more than 90% of its inputs from foreign currencies. Because of that, the successive Iraqi governments have been tried hard in terms of increasing Iraq's exports of crude oil, despite the critical circumstances that Iraq witnessed during the past 40 years.

The production of crude oil in Iraq recorded its highest levels in 1979 almost million barrels per day, but it went through volatile stages since then, as it decreased to 900 thousand barrels per day in the beginning of the eighties of the last century due to the Iraq-Iran war and returned to rise at the end of the same time period to reach 3 million barrels per day, however, This rise soon changed, as Iraqi crude oil production fell to less than 300,000 barrels per day in 1991 due to the second Gulf War. After that, the productivity of crude oil has fluctuated continuously as a result of a number of obstacles and reasons have been mentioned before. On the other hand, the Iraqi government is seriously seeking to bring foreign investment and expertise to help in the development of its oil and gas sectors. Wherefore, the negotiation rounds started and led Iraq for a new phase in investment history, after 2003 (Commission, 2019, p. 96). In other words, the Ministry of Oil announced a new investment plan to raise oil and natural gas production and exports relying on foreign direct investment as the main source to achieve this goal and that are through oil bidding rounds (Mills, 2018, p. 14).

It's worth mentioning that the petroleum sector has received a lot of attention from the Iraqi government which resulted in providing its investment opportunities via the announcement of the five bidding rounds. its details will analysis in upcoming parts. In recent decades the ministry of oil in Iraq has signed a number of contracts from 2009 to 2018 with international companies to develop its oil fields to increase the production level to more than (12) million bpd (Mehdi, 2018, P.3). On the other side, it is said that the petroleum industry will continue to attract foreign investment activities in the near future. a wide range of oil and natural gas fields in Iraq are untapped which require much more investments to develop these fields. (Commission, 2019, p. 99). As a result, in order to develop and enhance the oil industry, the Iraqi Ministry of Oil concluded several contracts and licensing rounds of petroleum with foreign oil companies after 2003.

### 3.2 Types of Foreign Direct Investment Contracts in the Petroleum Sector

Generally, there are three main types of foreign investment contracts in the upstream oil sector:

#### 3.2.1 Oil Concession Contracts

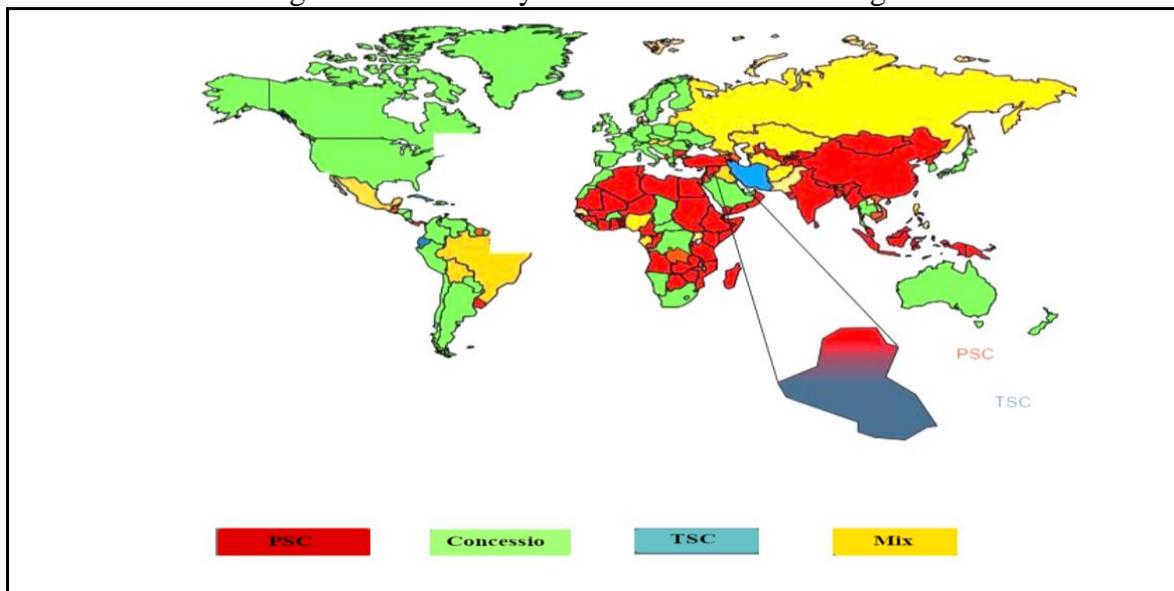
Likosky (2009, P.P.7-8) explained that the government gives concessions to a company or companies to operate in a specific sector, such as to explore for and produce oil, gas or mineral resources, in a specific geographical area. Usually in this type of contract, government profits consist of a specific percentage of royalties and taxes, in addition to social taxes and bonuses. If the government participates through its national companies, the company's share of profit oil will be added to its profit (Glossary, 2020). In the past, the government did not obtain under these contracts the right to appointment, management and supervision. However, at the moment a fair formula has been reached that gives the host country a part of the management, supervision, recruitment employment and then training of its human resources via foreign companies (Glossary, 2020).

### 3.2.2. Production Sharing Contract /Agreement (PSC or PSA)

It defines as an agreement between one or more investment companies and the government in which rights to prospection, exploration, and extraction of mineral resources from a specific geographical area over a specified period of time (Wilburg, 2017, p. 1). In other words, in this type of contract, natural resources are remains owned by the government. Companies have the exclusive right to exploration, development and production (Wilburg, 2017, p. 1). In addition, companies defray the cost of exploration, development and production, and their investments are later recovered from the oil they extract and export. Then companies share profit oil with the host country according to an equation agreed upon previously (Kinetic, 2019). The government's profits also consist entirely of its share of profit oil, royalty and taxes. This type of contract is recognized in the oil sector and rare in the gas sector and is not applied in the mining sector (Kinetic, 2019).

### 3.2.3 Technical Service Contract/Agreement (TSC) or (TSA)

In this type of contracts, the government undertakes all the operations necessary for oil exploration, production, refining and export. However, the government grants the companies that act as the contractor to implement these operations for the benefit of the host country (Likosky, 2009, p. 1). The investors don't share with any of the oil production but obtain an unchanged fee per barrel after reimbursement of the costs it incurs and the duration is often fixed as well. These agreements are less acceptable by the oil companies, because, it is not profitable when compared with the other types of contracts (Wilburg, 2017, p. 2). Therefore, these contracts do not attract in the required foreign investments, because of the lack of guarantee that they will benefit from investing.



**Map 1. Types of petroleum contracts in the world**

**Source:** - The Map is prepared by the researcher based on:-

<https://www.slideshare.net/SauravKumar223/production-sharing-contract-60997117/4>

## 3.2. The economic glance of FDI contracts signed between (IOCs) and the Oil Ministry of Iraq

There are a variety of patterns that characterized the Iraqi upstream oil sector, which has changed a lot, particularly after 2003 (Shaalán, 2016, p. 64). In fact, the Iraqi government has been issued investment laws to attract foreign investment and provide them with rewarding facilities. Hence, it has led to the entry of the International Oil Companies

(IOCs) into Iraq and holding of contracts for oil licenses agreement with the Iraqi government. As a result, it has been concluded agreements in the form of the long term Technical Service Contract (TSC) from 2003 to 2018. Then, it was divided into five license rounds, which have been regarding exploration and extractions of oil and gas.

### 3.2.1 Petroleum Contracts & Licensing Round One

Ministry of oil in Iraq held the first bid round on the middle of 2009 which offered a number of international oil companies (IOCs) (Chalabi, 2009, p. 2). This phase was called the rehabilitation round, which was offered a number of oil fields for investment in 2009. The fields included (Rumiaila, West Qurna 1, Zubair, Missan Fields (Group)). Its fixed reserve is estimated at more than (33) billion barrels, as it is shown in the table (NO. 1). It is investigating that about 120 international foreign companies competed in investment contracts (Merza, 2009, P.2). Whereas, nine foreign companies won Service Contracts which were consisted of (BP, PetroChina, Exxon Mobil, Shell, ENI, Occidental, kogas, CNOOC, TPAO) divided into different countries (UK, China, US, Netherlands, Italy, South Korea, China, Turkey) respectively, using 20-year "technical service contracts." The Ministry of Oil (MoO) in Iraq through these contracts sought to increase crude oil production as well as reaching into peak level (The highest average daily of production which was offered by foreign oil companies in order to obtain the contracts). Accordingly to table (NO.1) and (NO.3), the total production of oil fields increased from (1576) to (2682) thousand barrels per day, during the period 2010-2015. Despite, rising of oil production, it's unreached to the required rate, which contracted with International Oil Companies (IOCs). The target was reaching total oil Production Plateau into (6825) thousand barrels per day. On the other side, the maximum remuneration fee per barrel of oil equivalent (service fee of production for each additional barrel) was between (1.9\$ to 2.3 \$). Table (NO.1). Regarding the percentage of the company from the contracts, each company has been received a different percentage depending on its contracts, types of oil fields and duration of the contract. For example, Exxon Mobil has received a significant share in developing West Qurna 1 field about (60%), and Dutch Shell Company has obtained approximately (15%) in the same oil field. In general, therefore, the Iraq government retains a 25% share in all fields for which service contracts have been awarded (Merza, 2009, P.3).

**Table 1. Petroleum Contracts & Licensing Round one between (IOCs) and the Ministry of Oil in Iraq**

| Bid round  | Field or Licensing block | Field reserves (billion barrels) | Foreign investor company (Contractor) | The nationality of the company | The percentage of the company from the contract | Production Plateau Target (kb/d)for oil | Max. fee* Or Remuneration fee agreed (US\$/barrel) | Fees for Exploration Rights |
|------------|--------------------------|----------------------------------|---------------------------------------|--------------------------------|---|---|--|-----------------------------|
| One (2009) | Rumaiila                 | 17.8                             | BP                                    | UK                             | 38%   | 2850                                    | 2.00 \$  | 500                         |
|            |                          |                                  | petro china                           | China                          | 37%   |   |  |                             |
|            | West Qurna 1             | 8.7                              | Exxon Mobil                           | US                             | 60%   | 2325                                    | 1.90 \$  | 100                         |
|            |                          |                                  | Shell                                 | Netherlands                    | 15%   |   |  |                             |
|            | Zubair                   | 4                                | ENI                                   | Italy                          | 32.81%  | 1200                                    | 2.00\$   | 100                         |
|            |                          |                                  | Occidental                            | US                             | 23.44%  |   |  |                             |
|            |                          |                                  | kogas                                 | South Korea                    | 18.75%  |   |  |                             |
|            | Missan Fields (Group)    | 2.5                              | CNOOC                                 | China                          | 63.75%  | 450                                     | 2.30\$   | 300                         |
|            |                          |                                  | TPAO                                  | Turkey                         | 11.25%  |   |  |                             |
|            | Total                    | 4 Fields (Group)                 | 33                                    | 9 Foreign Contractor           |   |   | 6825   |                             |

**Source:** - The table is prepared by the researcher based on: <http://www.moo.oil.gov.iq>

\* The maximum remuneration fee per barrel of oil equivalent (service fee of production for each additional barrel )

### 3.2.2 Petroleum Contracts & Licensing Round two

Ministry of oil in Iraq announced the second bid round on ton December 11-12, 2009, which intended to develop and explore of 10 oil fields distributed widely throughout the country under the so-called development and production service contract (Chalabi, 2009, p. 2). The foreign investment companies winning a twenty years contract will fully operate the fields on offer, including exploration, development, and production, with the government entity only owning a 25% interest in the contract. (Chalabi, 2009, p. 2). The bid includes West Qurna Phase 2, Majnoun, Halfaya, Gharaf, Badrah, Najmah, and Qayara in the North. With regard to the maximum remuneration fee per barrel of oil equivalent (service fee of production for each additional barrel) was between (1.15 \$ to 6.00 \$), Table (NO.2). The significant fields and the companies that will develop them, which are illustrated in the table (NO.2) and (NO.3):

- The first of the awards was the 12.9-billion-barrel West Qurna Phase 2, which were awarded as a single field to Lukoil/ Statoil, during the auction. Lukoil/ Statoil's contract pledges to increase West Qurna Phase 2's oil production from 244 thousand b/d today to 1.800 million b/d within seven years.
- The second award was the 12.6 billion-barrel Majnoun project, which was given to the Netherlands giant Shell with junior partner Petronas Malaysia in 2009. The Shell group has agreed to increase oil production from 45,000 b/d today to 1.800 million b/d.
- The third award was the 4.9 billion-barrel Halfaya field, in which the China giant CNPC, with partners partner Petronas Malaysia and Franc TOTAL Group. These

groups had agreed to increase production on the Halfaya field from 3,000 b/d to 53500 b/d.

- D. Regarding other awards were combined 16.3 billion barrels (Gharaf, Badrah, Najmah and Qayara), which were given to the foreign companies in various nationalities (Petronas, JAPEx, Gazprom, kogas, TPAO, Petronas, Sonangol). These groups had contracted to raise oil production on the mentioned fields above to 630,000 b/d.

The fields mentioned above have been represented a majority of Iraq's explore and producing area, it is obvious that most of the fields awarded are situated in both Basra governorate and one of the surrounding southern governorates. This has several noticeable impacts. First, the residents of these zones will be looking at the oil foreign companies to provide opportunities for work and to return some of the oil production earnings to them (Abdul-Rahman, 2012). Yet, contrary to the residents' perspective, the agreements and licensing round two are structured that the companies will only improve production, leaving all of the other economic details to the Iraqi government (Abdul-Rahman, 2012, p. 2). Second, the central government in Iraq wants to limit the amount of money that is allocated to these oil-producing provinces in favor of the public budget (Chalabi, 2009).

**Table 2. Petroleum Contracts & Licensing Round two between (IOCs) and the Ministry of Oil in Iraq**

| Bid round  | Project or licensing block | Field reserves (billion barrels) | Foreign investor company ) Contractor( | The nationality of the company | The percentage of the company from the contract | Production Plateau Target (Kb/d)for oil | Max.fee* Or Remuneration fee agreed (US\$/barrel) | Fees for Exploration Rights (US\$ mn) |
|------------|----------------------------|----------------------------------|--|--------------------------------|---|---|---|---------------------------------------|
| Two (2009) | West Qurna 2               | 12.9                             | Lukoil                                 | Russia                         | 56.25%  | 1800                                    | 1.15 \$   | 300                                   |
|            |                            |                                  | State oil                              | Norway                         | 18.75%  |   |   |                                       |
|            | Majnoon                    | 12.6                             | Petronas                               | Malaysia                       | 30%   | 1800                                    | 1.39 \$   | 150                                   |
|            |                            |                                  | Shell                                  | Netherlands                    | 45%   |   |   |                                       |
|            | Halfaya                    | 4.9                              | CNPC                                   | China                          | 37.5 %  | 535                                     | 1.40\$  | 100                                   |
|            |                            |                                  | Petronas                               | Malaysia                       | 18.75%  |   |   |                                       |
|            |                            |                                  | Total                                  | France                         | 18.75%  |   |   |                                       |
|            | Gharraf                    | 4.4                              | Petronas                               | Malaysia                       | 45 %  | 230                                     | 1.49 \$   | 300                                   |
|            |                            |                                  | JAPEx                                  | Japan                          | 30 %  |   |   |                                       |
|            | Badra                      | 0.8                              | Gazprom                                | Russia                         | 30%   | 170                                     | 5.50 \$   | 100                                   |
|            |                            |                                  | kogas                                  | South Korea                    | 22.5 %  |   |   |                                       |
|            |                            |                                  | TPAO                                   | Turkey                         | 7.5 %   |   |   |                                       |
|            |                            |                                  | Petronas                               | Malaysia                       | 15 %  |   |   |                                       |
|            | Qaiyarah                   | 5.4                              | Sonangol                               | Angola                         | 75%   | 120                                     | 5.00\$  | 100                                   |
|            | Najmah                     | 5.7                              | Sonangol                               | Angola                         | 75%   | 110                                     | 6.00 \$   | 100                                   |
| Total      | 7 Fields                   | 46.7                             | 15 (Contractor)                        |                                |   | 4765                                    |   | 1150                                  |

Source: - The table is prepared by the researcher based on: <http://www.moo.oil.gov.iq/>

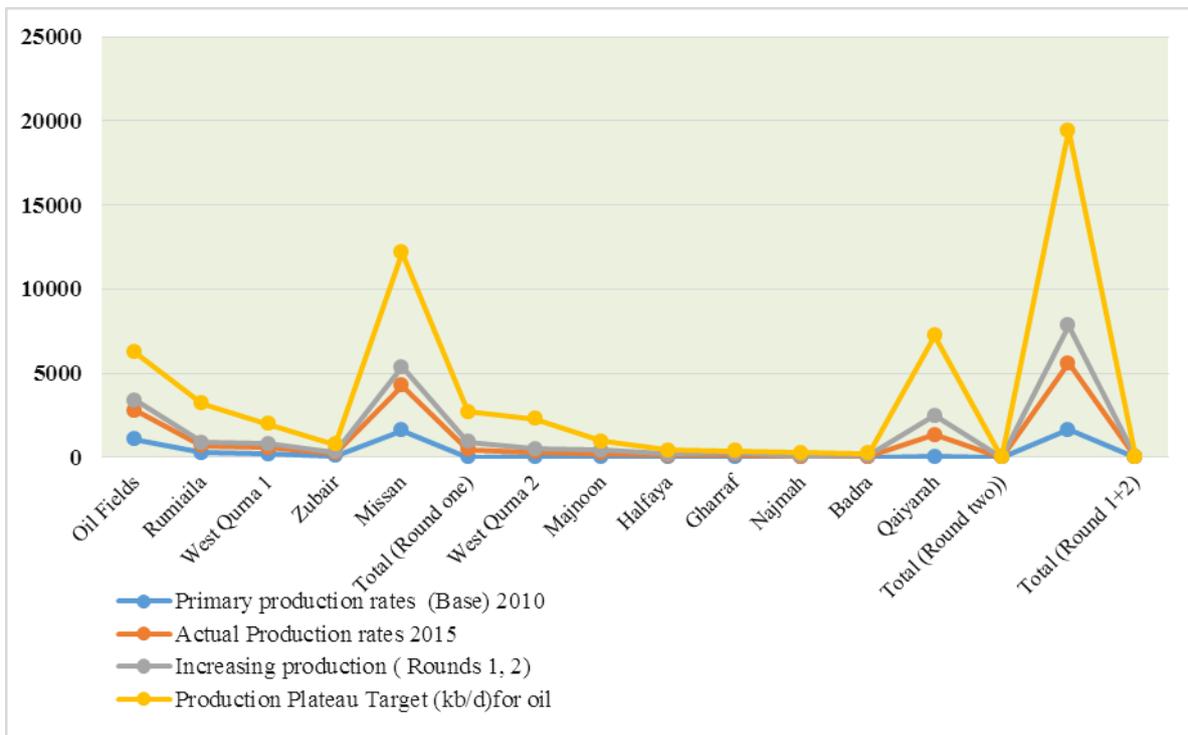
**Table 3. The impact of Petroleum Contracts & Licensing Rounds (one and two) into - Thousand barrels increasing production in the fields of Iraqi crude oil (2010-2015) per day**

| Oil Fields                | Primary production rates (Base) 2010 | Actual Production rates 2015 | Increasing production ( Rounds 1, 2) | Production Plateau Target (kb/d)for oil |
|---------------------------|--------------------------------------|------------------------------|--------------------------------------|---|
| Rumiaila                  | 1066                                 | 1698                         | 632                                  | 2850                                    |
| West Qurna 1              | 244                                  | 442                          | 198                                  | 2325                                    |
| Zubair                    | 183                                  | 397                          | 214                                  | 1200                                    |
| Missan                    | 83                                   | 145                          | 62                                   | 450                                     |
| <b>Total (Round one)</b>  | <b>1576</b>                          | <b>2682</b>                  | <b>1106</b>                          | <b>6825</b>                             |
| West Qurna 2              | Zero                                 | 450                          | 450                                  | 1800                                    |
| Majnoon                   | 45                                   | 245                          | 200                                  | 1800                                    |
| Halfaya                   | 3                                    | 203                          | 200                                  | 535                                     |
| Gharraf                   | Zero                                 | 100                          | 100                                  | 230                                     |
| Najmah                    | Zero                                 | 135                          | 135                                  | 110                                     |
| Badra                     | Zero                                 | 45                           | 45                                   | 170                                     |
| Qaiyarah                  | zero                                 | 46                           | 46                                   | 120                                     |
| <b>Total (Round two))</b> | <b>48</b>                            | <b>1283</b>                  | <b>1130</b>                          | <b>4765</b>                             |
| <b>Total (Round 1+2)</b>  | <b>1629</b>                          | <b>3965</b>                  | <b>2236</b>                          | <b>11615</b>                            |

Source: - The table is prepared by the researcher based on:-

1- <https://asb.opec.org/index.php/data-download>

2- <http://www.oapecorg.org/Home/Publications/Reports/Annual-Statistical-report>



**Figure 1. The impact of petroleum contracts and licensing rounds (one and two) into increasing production in the fields of Iraqi crude oil (2010-2015)**

Source: - The Figure is prepared by the researcher based on the table (NO.3) .

### 3.2.3 Petroleum Contracts & Licensing Round three

One of the main problems facing the development of natural gas reservoirs is the problem of long-term storage for both the producer and the consumer of large natural gas quantities. This requires that the quantities of natural gas produced be compatible with the needs of the demand in the local market first and then for export purposes to global markets secondly. Therefore, the development of natural gas reservoirs is fundamentally different from the development of oil reservoirs (Hisham, 2009, P.74). As its production requires a set of conditions that must be met, starting with establishing projects to liquefy the natural gas and then contracting with a private tanker fleet to export it to the imported global markets. Furthermore, it is required contracting to build a group of tankers whose construction requires high costs and a relatively long time period. In addition to negotiating with importing countries to set up stations Re-gasification in import ports. It is worthy to say, and such advanced infrastructure is not present in Iraq to deal with these enormous quantities of associated natural gas (Hisham, 2009, P.77). The proven Iraqi reserve of natural gas is 112 trillion cubic feet, which makes Iraq ranked tenth among the countries rich in natural gas, but the natural gas industry in Iraq is still underdeveloped compared to its neighbors from the Gulf countries.(ibid, P.78).The Ministry of Oil launched the third licensing round for gas fields in the presence of a number of foreign companies. An invitation by the Ministry of Oil to international companies to rehabilitate and develop three gas fields within the third licensing round, which is the crutch field in the Anbar province, the Mansuriyah field in Diyala and the Sepah field in Basra. Moreover, the Ministry of Oil considered that this step would contribute to raising Iraq's production of natural gas and an attempt to enter it as an important source in the global market through the European Union and the countries of the region.

The Ministry of Oil aimed through the to develop the production of natural gas fields in the third licensing round to achieve gas production of 2.8 million cubic meters/day from the Al-Siba field and 8 million cubic meters/d from the Mansuriyah field and the Akkas field, whose production must be added to them by 11 million cubic meters /day, which means adding natural gas production by 21.8 million cubic meters/da. It means the total annual production of the Al-Siba and Mansoori fields and Akkas should be increased to 7.978 billion cubic meters/year. According to the table (NO.4), first, the field of Mansuriyah was awarded in the third licensing round in 2010 to a group of international oil companies including of Turkey's TPAO (37.5%), Iraq's Oil Exploration Company (25%), Kuwait Energy (KEC) (22.5%), and the Korean Gas Corporation (Kogas) (15%). It holds around 127 billion cubic meters of gas (Lee, 2018, p. 1). Secondly, the field of Akkas was given to two foreign companies, including South Korea's KOGAS (37.4%)and Kazakhstan's KMG (37.5%). Finally, two other companies, Kuwait's energy (45%) and Turkey's TPAQ (30%) won the Siba field in order to its development and extracted natural gas from it. In general, they committed to producing 320 million standard cubic feet of gas a day for (7.50 \$ )per barrel of oil equivalent produced, the maximum the government agreed to pay.

**Table 4. Petroleum Contracts & Licensing Round three between (IOCs) and the Ministry of Oil in Iraq**

| Bid round    | Project or licensing block | Foreign investor company ) Contractor( | The nationality of the company | The percentage of the company from the contract | Production Plateau Target (Mm3/d) for Gas | Production Plateau Target (Mm3/y) for Gas | Max.fee* Or Remuneration fee agreed (US\$/barrel) | Fees for Exploration Rights (US\$ mn) |
|--------------|----------------------------|--|--------------------------------|---|---|---|---|---------------------------------------|
| Three (2011) | Akkas                      | KOGAS                                  | South Korea                    | 37.5%   | 11  | 4.026                                     | 5.50 \$   | 100                                   |
|              |                            | KMG                                    | Kazakhstan                     | 37.5%   |   |   |   |                                       |
|              | Mansuriyah                 | TPAO                                   | Turkish                        | 37.5 %  | 8   | 2.928                                     | 1.90 \$   | 100                                   |
|              |                            | Kuwait Energy                          | Kuwait                         | 22.5 %  |   |   |   |                                       |
|              | Siba                       | KOGAS                                  | South Korea                    | 15 %  | 2.8                                       | 1.024                                     | 7.50 \$   | 100                                   |
|              |                            | Kuwait Energy                          | Kuwait                         | 45%   |   |   |   |                                       |
|              | TPAO                       | Turkish                                | 30 %                           |   |   |   |   |                                       |
| Total        | 3 Fields                   | 7 ) Contractor(                        |                                |   | 21.8                                      | 7.978                                     |   |                                       |

Source: - The table is prepared by the researcher based on:-

<http://www.oapecorg.org/Home/Publications/Reports/Annual-Statistical-report>

### 3.2.4 Petroleum Contracts & Licensing Round four

The ministry of oil in Iraq announced its fourth oil and gas contracts in May 2012 (Wing, 2012, p. 1). The government was attempting to develop new oil fields of the country. The Oil Ministry has prequalified more than forty foreign investment companies to participate in this licensing round. The investors were judged on the basis of five criteria: technical, financial, legal, training and health and safety, which were issued by the petroleum contracts and licensing directorate (Wing, 2012, p. 2). The oil ministry offered 12 oil and gas blocks for auction, which were classified for 7 gas and 5 oil fields. The fields had been expected to add 29 trillion cubic feet of natural gas and 10 billion barrels of oil to reserves of Iraq (MoO, 2012). The blocks were distribute across Ninewa, Anbar, Najaf, Qadisiyah, Babil, Muthanna, Diyala, Wasit, and Dhi Qar, most of these governorates were neglected in previous agreements and licensing round. The round four was also aimed at developing Iraq's reserves rather than production, which had already been achieved with its previous 3 rounds (Wing, 2012, p. 1).

International oil companies participation provided a few indicators. For example, Japanese firms registered the highest participation with other 9 foreign investors, giving the positive impression they would drive to obtain a significant increase in Iraqi petroleum. However, Indeed, one company (Inpex) gained a minority interest of 40% in the oil-prone Block ten (Brown, 2012, P.1). On the other side, newcomers increased the number of IOCs involved in upstream petroleum in Iraq. Pakistan Petroleum, Inpex (Japan), and Dragon Oil (UAE) are among the successful newcomers, while PetroVietnam, Bashneft (Russia), Itochu (Japan), and Premier Oil are among the unsuccessful newcomers (ibid, P.2). The International oil companies which consolidated their positions during this bid round are Lukoil (Russia), Japex (Japan), TPAO (Turkey), Kuwait Energy, Dragon oil (United Arab Emirates ), Pakistan Petroleum and Inpex (US).Remuneration fee agreed in Round 4 are 5.38\$/b for Block 8 and 6.24\$/b for Block 9; and 5.99\$/b, 5.0\$/b for Blocks 10 and 11, respectively, as it is shown in the table (NO.5)

**Table 5. Petroleum Contracts & Licensing Round four between (IOCs) and the Ministry of Oil in Iraq**

| Bid round   | Project or Licensing block | Foreign investor company ) Contractor( | The nationality of the company | The percentage of the company from the contract | Production Plateau Target (kb/d)for oil or (bmc/year) for Gas | Max.fee* Or Remuneration fee agreed (US\$/barrel) | Fees for Exploration Rights (US\$ mn) |
|-------------|----------------------------|--|--------------------------------|---|---|---|---------------------------------------|
| Four (2012) | Block 8                    | Pakistan Petroleum                     | Pakistan                       | 100%  | n/a   | 5.38 \$   | 15                                    |
|             | Block 9                    | Dragon Oil                             | United Arab Emirates           | 30%   | n/a   | 6.24 \$   | 25                                    |
|             |                            | Kuwait Energy                          | Kuwait                         | 40 %  |   |   |                                       |
|             |                            | TPAO                                   | Turkey                         | 30%   |   |   |                                       |
|             | Block 10                   | Lukoil                                 | Russia                         | 60%   | n/a   | 5.99 \$   | 25                                    |
|             |                            | Inpex Corp                             | US                             | 40 %  |   |   |                                       |
|             | Block 12                   | Bashneft                               | Russian                        | 70%   | n/a   | 5.0%  | 15                                    |
|             |                            | Premier Oil                            | UK                             | 30%   |   |   |                                       |

Source: - The table is prepared by the researcher based on:-

<http://www.oapecorg.org/Home/Publications/Reports/Annual-Statistical-report>

### 3.2.5 Petroleum Contracts & Licensing Round five

In 2018, the Iraq Ministry of Oil (MoO) organized its fifth licensing round for the exploration and development of oil and gas fields (Mills, 2018, p. 12). This was overseen by the Petroleum Contracts and Licensing Directorate (PCLD) (Mills, 2018, p. 13). Iraq's fifth licensing round was offering of 11 blocks (Mills, 2018, p. 13). In specific, ten onshore blocks situated along the Iraqi borders with Kuwait and Iran, and one offshore block in the Arab Gulf waters. In the end, six blocks were awarded, while five of the exploration blocks did not receive any bids (Bacci,2018,non). The contract was split the remaining net revenue share with the government according to the percentage established at that time of the bidding round. These are the remuneration percentage bids according to the six awarded blocks which are clarified in the table (NO.6) and map (NO.2).

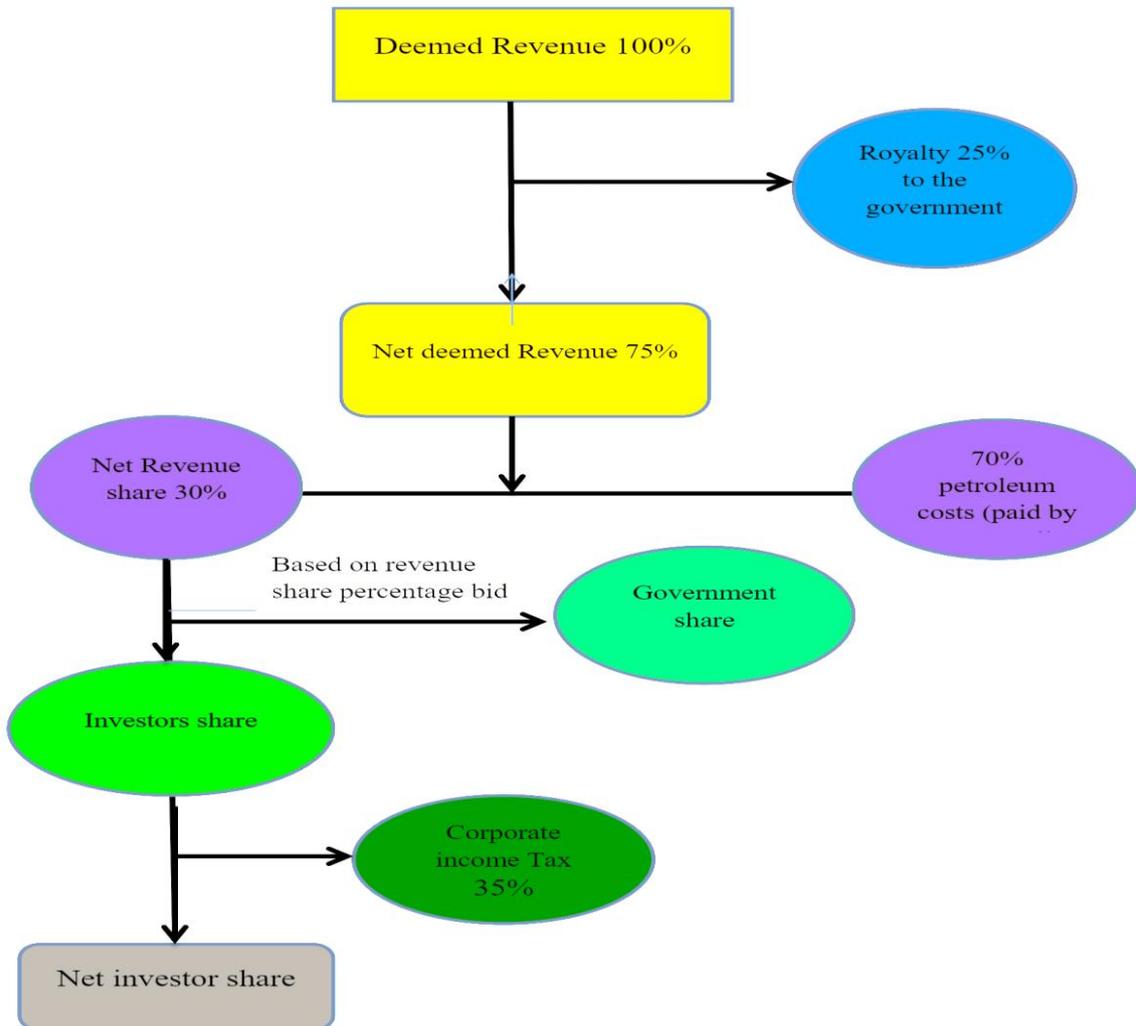
- Diyala Governorate(Khashim Ahmer-Injana,Gas): 19.99%, Crescent Petroleum
- Diyala Governorate( Naft Khana, Oil and Gas): 14.67%, Geo-Jade
- Diyala Governorate(Gilabat-Qumar, Gas): 9.21%, Crescent Petroleum
- Basra Governorate(Khider al-Mai, Oil): 13.75%, Crescent Petroleum
- Missan Governorate(Huwaiza, Oil): 7.15%, Geo-Jade
- Basra Governorate(Sindabad, Oil):4.55%, United Energy Group.

Finally, the investor will pay the 35% corporate income tax on their percentage of net revenue share which is explained in the diagram (NO.1) In accordance with the contracts utilized in the fifth auction round, which illustrates the fiscal framework, Iraq's involved regional oil company (ROC), in any quarter, shall be entitled to a royalty of 25% of the deemed revenue. Therefore, the contractor will recover the petroleum costs according to the oil sale price (ALI, 2018, p. 1).

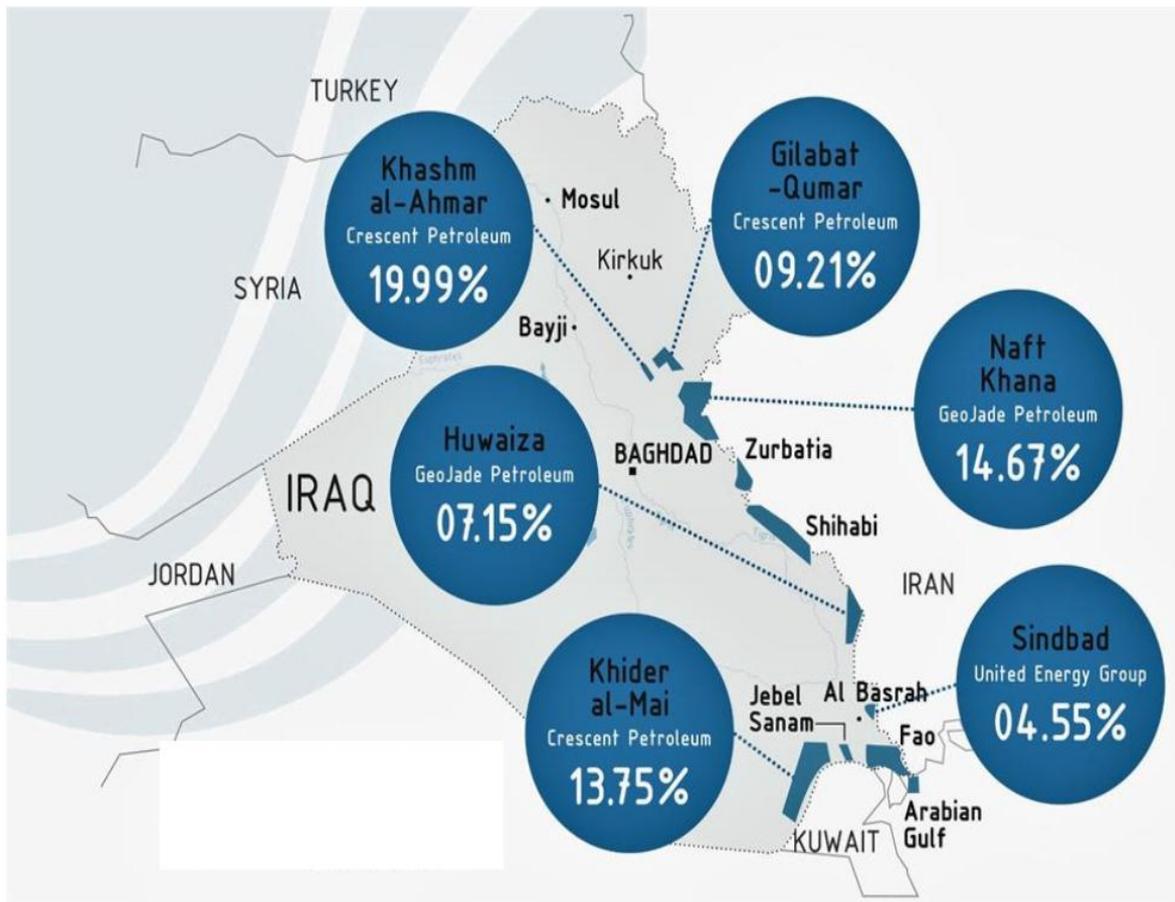
**Table 6. Petroleum Contracts & Licensing Round five between (IOCs) and the Ministry of Oil in Iraq**

| Bid round   | Project or licensing block | Foreign investor company ) Contractor( | The nationality of the company | The percentage of the company from the contract |
|-------------|----------------------------|--|--------------------------------|---|
| Five (2018) | Naft Khana                 | GeoJade                                | China                          | 14.67 %   |
|             |                            | Eni                                    | Italy                          | 21.19 %   |
|             | Huwaiza                    | GeoJade                                | China                          | 7.15 %  |
|             | Sindbad                    | UEG                                    | China                          | 4.55 %  |
|             |                            | Eni                                    | Italy                          | 14%   |
|             |                            | Crescent Group                         | United Arab Emirates           | 4.89 %  |
|             | Khider Al-Mai              | Crescent Group                         | United Arab Emirates           | 13.75 %   |
|             | Gilabat-Qumar              | Crescent Group                         | United Arab Emirates           | 9.21 %  |
|             |                            | GeoJade                                | China                          | 13.15 %   |
|             |                            | ZhenHua                                | China                          | 15.91 %   |
|             | Injana Khashm Al Ahmar     | Crescent Group                         | United Arab Emirates           | 19.99 %   |

Source: - The table is prepared by the researcher based on: -  
<http://www.oapecorg.org/Home/Publications/Reports/Annual-Statistical-report>



**Diagram (1) Fiscal Framework allocation of the 5th Licensing Round**



**Map (2) Petroleum Contracts & Licensing Round five between (IOCs) and the Ministry of Oil in Iraq**

**Source:** - The Map is prepared by the researcher based on:-  
<https://iraqenergy.org/2018/05/19/iraq-5th-bid-round-analysis/>

## 4. Conclusion and Recommendation

### 4.1 Conclusion

- 1- The Iraqi government, particularly after 2003, has sought to attract and encourage foreign oil companies through issuing new laws related to foreign investment, to increase benefit from the expertise and advanced technology that foreign companies are entering into the oil industry in Iraq. Then it leads to increase production as well as oil revenue.
- 2- The licensing rounds and contracts between the Iraqi side and the international oil companies witnessed multiple investment patterns, initiating from the concession contracts before 2003 and passing through the production participation contracts and ending with the service contracts. Hence, each pattern has its proper characteristics.
- 3- The existence of international oil companies to develop oil fields in Iraq, such as Shell, British Petroleum, Exxon Mobil, will contribute significantly to decrease the hesitation of other foreign companies' concerns regarding the political instability and encourage their investment inside Iraq.
- 4- The results of these auctions have been dramatic in terms of oil field development and increased production by the dominance of the International oil companies in the first and second licensing rounds, and regional companies' dominance of the third and fourth licensing rounds.

5- The foreign direct investment, according to licensing contracts in the oil sector and based on the economic indicators analyzed, the study has shown that FDI in the oil sector was not capable in enhancing oil infrastructure in the short term. Therefore, still, Iraq suffers from a rentier economy and mainly depending on the oil revenue, and this makes the Iraqi economy fluctuate with changing that Occurring in the oil market.

6- The process of foreign direct investment in Iraq remains slow and faces several obstacles. As a result, it played to a relatively slight increase in quantities of oil extracted, develop, and explore the new fields. Then, it did not affect to increase oil production to the required level. Therefore, it rejects the research hypothesis.

#### **4.2 Recommendation**

1- The central government must initiate an awareness campaign highlighting the impact of the IOCs in Iraq and the need for the technology and investment they develop in Iraq's fields. So, this must be demonstrated with a transparent policy that spells out precisely how much of the revenues will be returned directly to the producing governorates.

2- There is in need to review the developmental philosophy of refineries and gas investments to address the slow-moving progress, that can be made possible through improving the business environment and granting real incentives to foreign investors.

3- For the national oil company to assume leadership and development of the oil sector and be administratively and financially independent from government and politicians, and to work in a transparent method and the state wholly owns this company and this requires legislation to regulate the company's work.

4-It is necessary to explore alternative uses of petroleum and depending on a new strategy to diversify sources of national income. Furthermore, towards the best utilization of natural gas and sulfur. For instance, using natural gas as an essential source and low-cost for generating electric energy instead of oil, in addition to the possibility of developing iron, steel, and phosphate firms.

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