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POLITICAL ECONOMY OF OIL PRODUCTION IN IRAQ DURING 2006-2016

MASTER THESIS

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(163202016)

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December - 2018

SIIRT / TURKYE

SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜ'NE

Siirt Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliğine göre hazırlamış olduğum "**Political Economy of Oil Production in Iraq During 2006-2016**" adlı tezin tamamen kendi çalışmam olduğunu ve her alıntıya kaynak gösterdiğimi taahhüt eder, tezimin kağıt ve elektronik kopyalarının Siirt Üniversitesi Sosyal Bilimler Enstitüsü arşivlerinde aşağıda belirttiğim koşullarda saklanmasına izin verdiğimi onaylarım.

Lisansüstü Eğitim-Öğretim yönetmeliğinin ilgili maddeleri uyarınca gereğinin yapılmasını arz ederim.

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12 / 12 / 2018

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Dr. Öğr. Üyesi Semih Serkant AKTUĞ danışmanlığında, Zavar Salah Ali ALI tarafından hazırlanan bu çalışma 12/12/2018 tarihinde aşağıdaki jüri tarafından İktisat Anabilim Dalında Yüksek Lisans tezi olarak kabul edilmiştir.

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12.12.2018

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ÖZET**YÜKSEK LİSANS****2006-2016 DÖNEMİNDE IRAK'TA PETROL ÜRETİMİNİN EKONOMİ POLİTİĞİ****Zavar Salah Ali ALI****Danışman: Dr. Öğr. Üyesi Semih Serkant AKTUĞ****2018, 64 Sayfa****Jüri üyesi: Dr. Öğr. Üyesi Semih Serkant AKTUĞ****Jüri üyesi: Dr. Öğr. Üyesi Gökhan DÖNMEZ****Jüri üyesi: Dr. Öğr. Üyesi Mehmet DAĞ**

Bu çalışmanın temel amacı, 2006-2016 yılları arasında Irak'taki petrol üretiminin ekonomi politliğini incelemektir. Irak'ta petrol üretiminin artması konusundaki zorluklar geniş ölçüde devam ederken, Irak'ın son on yılda önemli bir ilerleme kaydettiği görülmektedir.

Bununla birlikte, 2018 seçimlerinin ardından Irak ve KBY'deki yeni hükümet ve liderlik için çözülmesi gereken gereken güçlükler hala ortadadır. Çalışmada, Irak'ın petrol üretim eğrisinin son yıllarda, daha önce tahmin edilen seviyelerde olmamasına karşın ve daha olumlu tahminlerle rağmen önemini korumaktadır. Irak, dünyanın dördüncü büyük petrol ihracatçısı konumundadır. Irak, ayrıca OPEC organizasyonundaki ikinci büyük üretici olarak, 2015 yılında ilk kez 4,1 milyon bpd'nin üzerinde üretim gerçekleştirmiştir. Bu dönemde üretilen miktarın yaklaşık %3,5 milyonunu Güney Irak'ta Bağdat'ta merkezi hükümet tarafından üretilmiştir.

Tüm zorluklara karşın, uygun bir şekilde yönetildiği takdirde petrol ve doğal gaz üretimi artmaya devam edebilir, bu durum Irak'ın ekonomik kalkınması ve gelir elde etmesi için önemli fırsatlar yaratacaktır. Irak'ta hükümetler uzun vadeli ekonomik kalkınma hedeflerine ulaşmak için petrolle ilgili projelere de yatırım yapmalıdır.

Anahtar Kelimeler: Enerji, Petrol Üretimi, Politik Ekonomi.

ABSTRACT
MASTERS THESIS
POLITICAL ECONOMY OF OIL PRODUCTION IN IRAQ DURING 2006-2016

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2018, 64 Pages

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The primary purpose of this study is to examine the political economy of oil production in Iraq during 2006-2016. While, the challenges to increasing oil production in Iraq broadly remain, so, Iraq has made incredible progress over the last decade, mostly amid challenging situations should note that while contests to since 2014. However, there are still difficulties to overcome, which should play a significant role to solve for the new government and leadership in Iraq and the KRI following the recent 2018 elections.

The study found that Iraq's oil production curve in recent years has remarkably specified the positions, even if not mainly at the levels estimated in earlier, more positive forecasts. Iraq has developed the world's fourth-largest oil exporter. Moreover, the second major producer in OPEC organization, with production above 4.1 million bpd for the first time in 2015, of the amount produced in this period, almost 3.5 million b/d produced in southern Iraq under the central government in Baghdad.

While challenges continue to achieving the aims of increased oil production and revolving gas from probable to production, there is considerable opportunity for Iraq's resources to produce revenue and pay to broad-based economic development, if managed appropriately. As both Iraq and the KRI headed into an election year, impending new governments both in Iraq and at the helm of the KRG should seize this as an opportunity to target investment to specific projects that contribute to long-term economic development goals.

Keywords: Energy, Oil Production, Political Economy.

ABBREVIATION AND SYMBOLS

<u>Abbreviation</u>	<u>Explanation</u>
BP	: British Petroleum
OGJ	: Oil and Gas Journal
IMF	: International Monetary Fund
IEA	: International Energy Agency
IPE	: International Political Economy
OPEC	: Organization of the Petroleum Exporting Countries
OAPEC	: Organization of Arab Petroleum Exporting Countries
AEC	: The Arab Energy Conference
EIA	: U.S. Energy Information Administration
ISIL/ISIS	: The Islamic State of Iraq and the Levant
TSC	: Technical Service Contracts
NOC	: North Oil Company
MDOC	: Midland Oil Company
SOC	: South Oil Company
MOC	: Missan Oil Company
IOCs	: International Oil Companies
CSIS	: Center for Strategic and International Studies
SPMs	: Single Point Moorings
CSSP	: Common Seawater Supply Project
EIU	: Economist Intelligence Unit

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ACKNOWLEDGMENT

I genuinely express gratefulness to the presidency of Siirt University for providing valuable chance to study post-graduation. Besides, I thank the academic staffs in the department of economics at Siirt University.

I want to express my profound gratitude to my supervisor Asst. Prof. Dr. Semih Serkant AKTUĞ for his valued advice, unlimited and unique direction, academic thought, guidance and most of all for his determination, patience, and thoughtful while conducting this study, hence, it would not be possible without him.

Furthermore, I am thankful for the anticipatory guidance of Assist. Lecturer Mr. Hussein A. Mustafa, at Salahaddin University- Erbil, for his continual instructing on the applied side of the study. I would lastly thank my family members, in a particular my mother and father.

I proudly dedicated this master thesis to my family members, particularly to my father and my beloved mother, so, your life lessons and constant support always valued. I proudly dedicated this thesis to the spirit of my late brother, Sarwar S. ALI, unfortunately, death not allowed him to see this achievement.

I also dedicated to my brothers; you are the pillars that I will always lean on, this master study project would not have completed without your massive support, love, and patience, thank you for your gorgeous and lovely presence, thank you for munificent a sense for life.

Zavar Salah Ali ALI

SIIRT 2018

INTRODUCTION

Oil production is frequently reflected a political commodity. So, since its essential significance as a crucial source of energy, governments are concerned for its continued availability and pursue to minimize import reliance. Hence, the twentieth century was known as the era of oil, which assumed a global position as a strategic economic resource, on which all peoples and in all political fields depend on such as political economy, military, and others economic sectors. Hence, energy and in particular oil is one of the essential elements and pillars of societies and nations. All economic sectors need energy, such as transportation, electricity, household appliances, and so on. Thus, the oil industry has become one of the essential modern industries of the global industrial economy (Haddad, 1989, p. 11).

While oil development took a course in a century-long development (1870-1970), it finally came to a complete circle to embrace the whole world (and global capitalism) and guide the way to the so-called globalization era. So, for oil, the twentieth century is the age of development and maturity, from the faltering capitalism on the cartel's crutch to capitalism, which runs straight, as a social relationship, on its own across the planet (Cyrus, 2013, p. 17).

Though, Devolde (2006, p. 17), mentioned that oil is the main engine of the global economy, it is one of the most important criteria that have a global influence, both economically and politically, and is one of the signs that focus on human civilization, and among all other sources of energy, oil is one of the most strategic commodities in the world. Today, oil is considered the lifeblood, primarily the industrial, in addition to its high degree of safety, unlike other sources.

According to Basri and Al-Sebahi (2013), Iraq is estimated to be one of the fastest developing countries in the region and the country could experience further growth, if oil and gas law and governing reform permitted. So, recent years have undoubtedly revealed that Iraq's socio-economic problems can be attributed to the ineffective use of oil revenues and too weak institutions, which have become a constraint to delivering even essential services. However, according to the Arab Energy Conference AEC (2014, p. 3), oil has

known in Iraq since its early appearance on the surface of the earth, where old Iraqis used it to build and paint boats, as well as to the surface of the earth and burn it as in the eternal fire in Kirkuk. The Babylonians launched the name of the oil on the Kair, which was found in the form of a solid block on the sides of the Euphrates River and knew how to use it in the construction and manufacture of water transport and paving roads. Also used by the Assyrians in their various industries.

Thus, Iraq was subjected to the struggle of foreign countries to obtain the privileges of prospecting in its territory, the states tried to obtain oil concessions from the Ottoman Empire when Iraq was part of the empire did not calm this conflict only after the American companies entered the country (Battat, 2010, p. 66). Following this concession, the granting of another concession to Mosul Petroleum Company and finally the granting of the Basra Petroleum Company's concession and granting Iraq the concession of using oil in the Khanaqin area of the Khanaqin Oil Company. The government ended its franchise in 1958 because the company did not implement its commitments and took the process of producing oil directly from Khanaqin fields (Alnasrawi, 1994).

As, Battat (2010), mentioned that the oil production began in Iraq for the first time in Kirkuk in 1925 on October 15, when the British government (the direct ruler of Iraq) granted a concession to TPC. The oil was extracted in Baba Ghargar and is now one of three domes in the Kirkuk fields. Turkey had agreed the previous year only to the northern region of Mosul and the remainder of the country newly created from Iraq.

The study found that Iraq's oil production curve in recent years has remarkably specified the positions, even if not mainly at the levels estimated in earlier, more positive forecasts. Iraq has developed the world's fourth-largest oil exporter. Moreover, the second major producer in OPEC organization, with production above 4.1 million bpd for the first time in 2015, of the amount produced in this period, almost 3.5 million b/d produced in southern Iraq under the central government in Baghdad. Moreover, 450,000 b/d produced in northern Iraq, most of which were at fields operated by the KRG, besides the rest at fields operated by the NOC of Baghdad.

Thus, collectively with KRG to roughly 4.5 million bpd in 2016. While in 2017, the country also proved a new record for annual exports. However, production levels in 2006 were just 2 million bpd, demonstrating a more than doubling of production during a ten-year. Accordingly, crude oil production averaged nearly 4 million b/d in 2015, which 700,000 b/d more than the daily production level in 2014. Recognizes that Iraq has also planned to expand its export capacity further to meet production targets. Three policymakers have been deployed in the port of Basra for the time being, and the fourth is installed in early 2015 but is inactive. SPM is scheduled to be installed in 2016. Policy makers have a production capacity of 900,000 b/d. While actual shipments are usually much lower, policymakers (SPMs) have added the required cargo to the south, with ports in Basra and Khor al-'Amiyeh running out of capacity after three wars and poor maintenance (Iraq Oil Report, 2014).

According to EIA, (2016) Iraq is undertaking a determined program to improve its oil fields besides to raise its oil production levels. After two licensing rounds over 2008 and 2009, so, the Iraqi ministry of oil signed a dozen long-term technical service contracts (TSC) with international oil companies to improve or re-develop some giant oil fields, most of which were previously producing.

However, these development plans are now in flux because of the economic crisis in Iraq affected by the sustained low oil prices and war against ISIS. In the north Iraqi region, the KRG has also dropped its set production targets. While challenges continue to achieving the aims of increased oil production and revolving gas from probable to production, there is considerable opportunity for Iraq's resources to produce revenue and pay to broad-based economic development, if managed appropriately. As both Iraq and the KRI head into an election year, impending new governments both in Iraq and at the helm of the KRG should seize this as an opportunity to target investment to specific projects that contribute to long-term economic development goals.

KRG, the events of fall 2017, the events of fall 2017 should illustrate the difficulties in their continued reliance on budget transfers in Baghdad or oil exports facilitated by a neighbor that sees the energy in geopolitical terms. The KRG should also focus on diversification, which could lay the groundwork for more sustainable and politically-

insulated economy over the long term. If oil resources in Iraq remain a political football, and it appears likely they will, and the question of exports remains wrapped up in more extensive domestic and regional power politics, the development of a diversified economy that is not entirely dependent on oil revenue would seem to be the only viable path forward for the KRI.

The oil prices have significant impacts on Iraq's revenues and all its economic sectors, over 2006 to 2008 oil price in international markets sharply increases from \$55.60 to \$91.50 in 2008, just before losing its value by nearly 40% in 2009. Once again oil price in global oil markets suddenly increases from \$74.20 in 2010 to \$106.70 in 2012. Due to increases in demands in oil markets particularly more demands in China and India. However, just after the oil price reached the highest level in ten years, it started to decline from \$102.90 in 2013 to \$34.50 in 2016, which lost about 68% of its value.

While the country's energy sectors have and will remain to be an essential portion of the Iraqi economy for many years to come. Hence, oil revenue provides the bulk of the Iraqi national budget, as well as the budget in the KRI, that provides a vital source of revenue and funds for recovery and development, so, the decline in oil prices will lead to significant shortages and created significant problems for Iraqi rebuilding and sustainable economic development.

CHAPTER ONE

POLITICAL ECONOMY

1. LITERATURE RESEARCH

Oil production and oil-related benefits continue to have a weighty influence on the political economy of the Middle East, and in particular, Iraq domestically as well as from the perspective of international relations. Undeniably, it is often hard to resist the attraction to accomplish that virtually everything is related, acclimatized, and justified by oil production. Hence, it is essential to reveal the studies that related to this study's topic as follows:

Basri and Al-Sebahi (2013), this research aims to analyze the political economy of Iraq. So, the researchers argued that Iraq likely to be one of the fastest developing nations in the world and the state could experience further development if oil and gas law and regulatory modification permitted. However, mentioned that recent years have revealed that Iraq's socio-economic problems can be endorsed to the ineffective use of oil revenues and too weak institutions, which have become a restraint in delivering even essential services. However, this research shows that the new energy strategy can make Iraq one of the strongest economies in the region, but that depends heavily on strong institutions. If this is not achieved, the country can move towards what is often referred to as the 'oil curse.'

Ezeibe and Ogbodo (2015), as the researchers mentioned that this study is about to examine the political economy of the US invasion of Iraq, while the researchers claimed that this researcher increases to the continuing discussions on the United States invasion of Iraq. The research which approves the theory of social production and reproduction preserves the United States invasion of Iraq was driven and sustained by the economic interest of Anglo-American oil companies in the Middle East.

However, this research relied on secondary data and observation of the U.S foreign policy in the Middle East, besides, content and discourse analysis. By the research results, recommends that research and development institutions around the globe would search for

the feasibility of alternative energy source rather than oil to divert U.S consideration in Iraq as the alternate in order to guarantee global peace and security.

Dawood (2016), this research is about to analyze the impact of oil revenues on the development of the Iraqi economy. The researcher mentioned that Iraq is remarkably rich in oil, however its economy hurts from severe structural weaknesses. While, Iraq's oil reserves fixed, which amounted to about 143 billion barrel, are among the highest globally, which constitutes the third-largest reserves of traditional oil in the world after Saudi Arabia and Iran.

In addition, the costs of oil extraction, which is characterized by meager production growth since 2003, have contributed to an increase in per capita GDP from \$ 1,300 in 2004 to \$ 6,300 in 2013, and Iraq needs to rebuild infrastructure and rebuild Destroyed by wars, and the revival of productive sectors (such as industry, agriculture and services). As well as the aging of many industrial projects, which need to be reconstructed and modernized. At the same time, the Iraqi economy suffers from a large gap between revenues and expenditures, and insufficient savings to bridge the difference between the necessary investment.

While, the researcher mentioned that oil export revenues will remain the primary source of financing for development in the Iraqi economy for the foreseeable future in order to reduce dependence on oil, and are increasing day by day. However, the booming political economy of Iraq depends on the energy sector as well as the potential for discoveries. These resources can support the social and economic development of Iraq.

Nakhla (2008), examined the future of Iraqi oil: finding the right action framework while arguing that it is widely known that Iraq has one of the largest oil reserves in the world. However, current production levels near 2.5 million barrels per day (bpd) are far below the levels Iraq can easily access. The need for near-term returns is a clear priority for rebuilding the country's economy, improving the well-being and standard of living of the long-suffering Iraqi people, whose living standards are now among the lowest in the world. Hence the desire to increase production levels further to provide the necessary financial resources to achieve this.

Yusuf (2015), in this article, analyzed the political economy of oil and Arab vision of its developments. As the researcher mentioned that, this article focuses on the political economy of oil from an Arab perspective, which offers a kind of biography of the oil in which we address the role of this resource in the world since its discovery to this day. While, a biography of this resource since its discovery, and draw a picture of it, or the throne of energy, and its impact on scientific developments, its entry into the political and economic conflict at the local and international levels. The wars have associated with, and the developmental opportunities and challenges it has brought to the Arab people, especially since the world's dependence on Arab oil since the end of WWII, Associated with this supplier and future expectations about the reserve.

Majid (2006), as the researcher, argued that this research about examines the future role of the oil sector in the reconstruction of the economy of Iraq. While all economic references warn of the risk of dependence on one supplier, Iraq's economy has doubled over the last three decades, as many oil countries have done. Capital reflects as one of the critical factors for economic development. Thus, the primary source of economic growth in Iraq's oil exports revenues will remain shortly to reduce dependence on oil. Besides, the world has seen since the beginning of the third millennium a significant increase in demand for oil, but Iraqi exports of crude oil have become less than the similarities in the seventeenth century of the last century, so the oil sector is still in need of in-depth study.

Zinni (2006), this study is about to analysis the Iraqi economy, current situation and challenges of the future. Since its independence in 1932, Iraq has inherited a low-growth economy dominated by feudal relations and primitive agricultural capacities, which have primarily existed to this day. However, argued that we could describe the backward economy, or, politically correct, the developing economy with all that it entails. So, this description of the usual characteristics of low per capita income, dependence on the export of primary commodities, the preoccupation of the bulk of the labor force in the agricultural sector, low average age, illiteracy, and high population growth rate.

In the 1930s, Iraq dealt with the modest oil revenues that it received as surpluses on the allocation of its public budgets to be used in full in the financing of various capital

projects (productive). During the three decades between the 1950s and 1980s, economic development processes were carried out through the implementation of five-year plans, of which were allocated a total of \$ 60 billion, although it was invested only due to the limited capacity of Iraq during that period. The lack of efficiency of government departments and the many obstacles faced by the country, this economic development campaign resulted in an amazing real growth in GDP which was around 8% annually between 1960 and 1980, when the oil sector grew by 7.6%.

Sanford (2003), this study about examines Iraq's economy: past, present, future, while the researcher argued that for most of their history, Iraq's governments had played a dynamic role motivating and directing the Iraqi economy. So, this shape was most apparent during the recent Iraqi regime, which was at core a directed command economy with some accouterments of market economics and acquaintance capitalism.

While, Iraq's industrial sector was formed, in large part, as an outcome of government efforts to expand the economy through economic growth projects using the earnings from Iraq's oil wealth and borrowed funds. Nevertheless, various of these benefits were not viable without government support. While much of the industrial base has now been damaged or destroyed, either through the direct attack in Iran, Iraq, Gulf wars or through atrophy caused by neglect. Thus, Iraq suffered total failure in GDP, long-standing inflation, a significant devaluation of its currency, almost non-existent foreign investment and the accumulation of an overwhelming debt burden.

Gboyega et al (2011), examined the political economy of the petroleum sector in Nigeria. As the researchers mentioned that the relatively slow pace of Nigeria's development often has qualified to the occurrence of the resource expletive whereby the nature of the rentier state, reduces accountability for the development and political actors can control institutions to sustain poor governance. However, the impact of the political elite's resource control and a portion of revenues on core democratic mechanisms is central to understand the obstacles to development and governance failure.

1.1 The Concept and Definitions of Political Economy

According to Gilpin (2004, p. 24), the existence of the parallel state and market in the modern world and their mutual interaction lead to the creation of a political economy, without which there can be no political economy. In the absence of a state, the mechanism of price or movement and market forces will determine the results of economic activities, which is the real field of the man of the economy. In the absence of the market, the state or its equivalent allocates economic resources, which is the real field of the political world. Although neither field can exist in a completely independent form, the relative influence of the State or market changes over time or in different circumstances.

Thus, the concepts of state and market in the following analysis are what Max Weber called typical patterns. Political economy often refers to multidisciplinary studies that rely on economics, political science, law, history, sociology, and other disciplines to explain the critical role of political factors in determining economic outcomes (Yusuf, 2015, p. 8).

While, according to Gboyega et al (2011, p. 4), historically, there have several aims to adopt a distinct political economy perspective in analyzing one's local and global change. Political economy is concerned with the interaction between politics, society and the economy, and has a long and distinguished history in the social sciences. All thinkers such as Adam Smith, John Stuart Mill, David Ricardo, Karl Marx, Raya Dunayevskaya, and Charlotte Perkins Gilman all made their fundamental observation that politics and economics are intrinsically linked

In this regard Veseth and Balaam (2017, p. 2) argued that political economy, a division of social sciences that examines the relationships between individuals and the community as well as between markets and the state, using a variety of tools and methods derived mainly from economics, political science, and sociology. The term political economy is derived from the Greek *police*, i.e. 'city' or 'state,' meaning 'the person who runs a house or a house.' Political economy can then be understood as a study of how to manage or manage a free household, taking into account both political and economic factors.

According to Giffons (2012, p. 9), political economy is a science that examines the wealth of peoples and the reasons that make the rank of a nation above the rank of another in happiness and welfare. Its purpose is to guide what should be done to reduce the number of poor and needy as much as possible. There is no doubt that there are other sciences that aim at this particular goal, such as machine science, in which we seek to obtain power and how to act in order to highlight the results of actions. Political economy is defined as the interrelationship between the pursuit of wealth and the pursuit of power (Gilpin, 2004, p. 48).

However, according to Daish (2018), political economy is the science that studies the development of society, where it studies the method of production and focuses on social relations in the process of production, class and social status in the production process and production of the production pattern of social and economic composition. Moreover, also examines the relations of production in the context of its development and development It shows us the contradictions in the relations of production that create an evolution of the pattern of production.

While, Badawi (1985, p. 83), mentioned that economic policy generally refers to all decisions related to the choice between the various means that the society has to achieve specific economic and social goals and the search for the best ways to achieve these goals. The French economist Jean-Baptiste Say, in his book "Full Application Lessons in Political Economy," defined the economics of societies as a political economy, and that he used the latter name to match the economists who applied to it (Majid, 2006, p. 11).

1.1.1 The Origins of Political Economy

According to Dweider (1981, p. 17), the term economy (Oikos / Nomos) does not come from Aristotle, that intended to use the science of home economics laws or domestic financial laws. Besides, the term political economy was used only at the beginning of the seventeenth century, which was attained by the French writer Antoine de Montres, in the book that published in 1615, which called (Traité D ' Economie Poli que) in the political sense that it is the laws of the state economy. It also gave the economy the political status of

personal concerns through which it aspires to create a new science (the art of obtaining state revenues (Sakour, 2004, p. 9). The ambiguity confined to the term political economy; it was used by Adam Smith and the traditional economists to denote what is now called economics. Recently, scientists such as Gary Becker, Anthony Downs, and Bromo Frey have defined political economy as the application of the systematic economy model, the rational actor model, to all patterns of human behavior. Others, who use the term political economy, refer to the use of specific economic theory to explain social behavior (Gilpin, 2004, p. 25).

1.1.2 International Political Economy

International Political Economy (IPE) is the speedily new social science field of study that efforts to understand international and global difficulties consuming an eclectic, interdisciplinary array of analytical tools and theoretical perspectives. It is worth mentioning that international political economy (IPE), defined herein as the collaboration and connection of the countries and the markets on a international scale, which structured at present on two levels; one still remaining in inter-state levels and another in the emergent supra-state region-market level (Pang, 2002, p. 8).

According to Balaam and Veseth (2005), the eras of the politics of inter-state relationships defining the national and international markets, which quickly approaching to a close; and the economics of new supra-state, regional, and global marketplaces have redefined the politics of a nation-state. The nation-states ceased to be the “managers” of their economies. So, region-markets and region-states will regulate the economic life of the new millennium (Droyer & Drache, 1996, p. 1).

IPE is a field that thrives on the practice that Joseph Schumpeter called "creative destruction." The growing prominence of IPE as a field of study is in part a result of the continuing breakdown of corrective boundaries among economics and politics in particular and the social sciences generally. Increasingly, the most pressing and interesting problems are those that can best be understood from a multidisciplinary, interdisciplinary, or transdisciplinary point of view. If there is an "IPE Project" its objective is to pull down the

fences that restrict intellectual inquiry in the social sciences so that essential questions and problems can be examined without reference to disciplinary borders (Pang, 2002, p. 122).

While, renewed attention to the international political economy during the seventies of the twentieth century for various reasons, including the collapse of the Bretton Woods system on the rules and procedures that governed international economic relations, at the same time the international détente and the relatively low sense of security threat has been justified by economic cooperation. So, before answering the question of what is the best way to learn about the international political economy, it must be ensured that political and economic interests are strongly linked by how people think about it. Historically, three schools of thought compete to win allegiances in the international political economy: liberalism, mercantilism, and radicalism (Lairson & Skidmore, 1997, p. 9).

However, according to Mustafa (1986, p. 18), some agreed that recognition of the international political economy could achieve through these schools of thought. Liberalism views politics and economics as relatively separate and independent spheres. Marxism sees that economics determines policy and political structure. Marxism is based on the subordination of the economy to the interests of the state, from the interests of internal prosperity to the interests of international security.

1.2 The Economy of Iraq

According to Asadi (2010, p. 45) before the 1950s, there was no economic development in Iraq. Economic efficiency during the next period was dominated by the ruling state, which depended on the agricultural sector, which contributed 9.6% of GDP and 5 of the workforce.

While, Zinni (2009, p. 141) mentioned that after this history and despite the violent and multiple transformations in Iraq's political, economic and social systems, during the 1970s, it achieved significant growth rates resulting from the state's allocation of oil revenues to finance the development process. In 1975, Iraq counted middle-income countries and compared with South Korea or with Portugal, revenues from oil exports, which in 1980 were valued at \$ 26.29 billion, remained the primary source of financing for development programs and government spending.

Besides because of Iraq's dependence on oil acts as the main factor in the revitalization of the economy and the only source of economic growth over the past decades, deepening the dependence of the Iraqi economy to the global economy. Besides, making it more vulnerable to external shocks caused by fluctuations in demand and prices of oil globally, but by the end of the seventies ended hopes to build Iraq a new phase began in which three devastating wars began on September 22, 1980, with Iran, followed by the second Gulf War in 1991. Then the loss of Iraq as a result of these wars by about \$752 billion of massive non-human damage, of which \$ 452 billion in losses the first war. Besides \$ 300 billion losses from the Second Gulf War, followed by economic spikes (1991-2003) that ended with the occupation of Iraq by the United States in 2003, destroying the rest of the economy (Osler, 2006, p. 33).

According to Jazar (2013, p. 1116), Iraq categorized 138th in 2008 out of 162 states in the world, as a country experiencing political instability, rising to 159 in 2014. While Syria was crowned the throne of the most substantial political unrest followed by Afghanistan and then South Sudan followed by Iraq to come after Somalia and Sudan, Political unrest and instability of the six largest countries in the Middle East. The phenomenon of political instability seems clear. As Iraq is suffering in the recent period, especially from several phenomena came as a result of the occupation, and other reasons are visible and not visible.

However, according to Sanford (2003, p. 56), since Iraq's economy has quiet for so long by geopolitical events, it is hard to realize how it will appear in the future. So, one certainty is that oil production will play a leading role in the economy for the predictable future, while a rise in oil prices is prospectively to cause a boom in oil-producing countries and a slowdown in oil-consuming countries.

Conversely, oil is one of the most important discoveries made by humans since 1859. It is the primary source of energy and the focus of all industrial and agricultural production in the modern world and has become a vital element of daily life. Oil is not only the necessary source of energy but also the source of the extraction of at least eleven thousand different commodities in the world (Dawood, 2016, p. 1044).

While, Bayati (2008, p. 215), argued that the emergence of the one political pole has left the Arab countries in general and Iraq in particular under the weight of political problems,

which have become a factor of increasing economic problems and the rise or severity of these problems with the increasing influence of political decision. Since the political decision is the final word, they decide the value of money, the prices of materials, the exploitation of energy, the problems of unemployment and inflation, and they are ignorant of the results of their decisions. The owners of capital do not prefer to invest in their countries, preferring fixed foreign investment or investing in shares or projects results of those actions.

However, Asadi (2010, p. 45), mentioned that before the 1950s, there was no economic development in Iraq. Economic efficiency during that period was dominated by the ruling state, which depended on the agricultural sector, which contributed 32.6% to the GDP and 53% to the labor force. In the 1970s, Iraq was counted as middle-income countries in 1975 and compared with South Korea or Portugal. Thus, revenues from oil exports, estimated at \$ 26.296 million in 1980, remained the primary source of funding for the development and government spending program (Zinni M. A., 2009, p. 141).

In this context, Osler (2006, p. 33), discussed that by the end of the 1970s, hopes had been built for building a stable Iraq capable of providing its people with well-being and protecting them from murder, fear, hunger, disease, and homelessness. A new phase began in which three destructive wars were launched, beginning in 1980 with Iran and ending in 1988, followed by the second Gulf War in 1991, and estimated the losses of Iraq by these wars about 752 billion dollars, not the damage of manpower, including \$452 billion losses of the first war Besides \$300 billion losses in the second Gulf War.

Although Iraq's oil sector is entirely on the internet, as argued above, Iraq is likely to be one of the world's largest oil shipping companies. As long as it does not export much of the oil to reduce global prices to the detriment of it, Iraq is likely to get a substantial income from this source. However, the impact of this oil wealth flow on Iraq's non-oil economy may be less favorable. A scene called 'Dutch disease' often occurs in countries where natural resource exports make up a large proportion of their total exports (Sanford, 2003, p. 49).

In this context, oil no longer merely a transitory commodity, it has become an essential commodity in international trade. It accounted for 33.2% of the world trade in energy in 2008, and no other material has the same commercial and economic importance as oil. Despite the many attempts of the industrial countries to replace other cards, whether the

energies are as depleted as gas, coal, nuclear power or renewable energies such as solar energy, wind power, hydropower and other permanent energies since the first oil crisis of 1973 (International Energy Agency (IEA), 2011).



CHAPTER TWO

OIL PRODUCTION IN IRAQ

2.1. The Concept of Oil

The term oil is one of the most common changes used at the Arab level to refer to oil in its raw form. It believes that the origin of this word is due to the Babylonian word Nabtou or Nefto, which is mentioned in ancient Babylonian texts, 2000 years BC (Al-Ahden, 2000, p. 138). While, according to Abidine (2001, p. 13), the name of the oil dates back to the Latin origin of the word Petra. Petroleum was the most recent oil produced in its composition for at least ten Millions of years, and the oldest crude oil may be due to five hundred million years (Abdulla, 2001, p. 14). Although the word petroleum applies naturally to liquid hydrocarbons, it is synonymous with crude oil; it is also widely used in natural gas.

Also, there is a common denominator between hydrocarbons in general, but the more significant correlation between crude oil and natural gas, where they usually exist together, producing their production together (Afifi, 2003, p. 554). However, natural gas consists of a group of gas substances, mainly methane, ethane, propane, butane, nitrogen, carbon dioxide and sulfur in varying degrees. It is a compound regarding the different properties of its derivatives according to the different partial structure of each (The Petroleum Economy, 1983, p. 8).

So, each material consists of molecules, which are the basic units of their composition. Each part is composed of atoms. The properties of the material determined by the number and type of atoms that are determined to be their molecules and the number and type of bonds that contribute to this union. In each case, it results in an oil product with different properties (Abdullah, 2003, p. 10). Methane has the highest natural gas content, ranging from 70% to 90%. This gas can be filtered at high pressure and temperature levels. Oil also contains some impurities such as sulfur, oxygen, nitrogen, water, salts, as well as some minerals such as gonidium, iron, and sodium (Rassen, 1999, p. 40). While, carbon and

hydrogen are the most critical elements regarding weight and oil composition as shown in Table 2.1, below.

It is noted that there is a range of quantities of these compounds, which reflects the differences mentioned above, and generally the fewer carbon atoms in hydrocarbons, the simpler the material and the less weight and more volatile. The oil comes in different colors ranging from black to brown and green and usually has a degree of viscosity that varies from one class to another and has a bad smell most of the time. Also, oil is usually lighter than water, but some species do not float on the surface of the water (Javad, 1988, p. 192). Also, petroleum generally referred to as all naturally occurring hydrocarbons, but in a narrow commercial sense, the term crude oil refers to liquid substances, the term natural gas to gaseous substances, and the term bitumen or asphalt to solids (Devolde, 2006).

Table 2.1. Average Percentage of Oil Components

Components	Percentage by Weight
Carbon	82 - 87
Hydrogen	11 - 15
Sulfur	0.2 - 4
Oxygen	1
Phosphorus	Less than 1%
Diesel fuel	0.1
Ash	0.11 – 0.05

Source: (Rassen, 1999)

One of the characteristics of oil exploration and production early limits the huge capital funds for exploratory work on new fields surrounding the new oil reserves and costly development expenditures that need to be extended and expanded as soon as they are explored. Therefore, the development of the oil industry has not been and cannot be handled in a mother-and-pop way where capital has not yet turned into a sophisticated process of concentration and centralization (Cyrus, 2013, p. 17).

2.1.1. The Definition of Oil

According to Alnasrawi (1994), there have various definitions and concepts that have launched on the significance energy, which discovered by changing the course of human life, there are those who came to the launch of the term of black gold on oil and this is due to the importance of economic large in the global economy.

Oil is known to be a hydrocarbon that occupies an essential place in our world today and is one of the cornerstones of the 20th century and beyond, oil is the generic designation of a combination of some chemicals called natural hydrocarbons. These compounds are composed of a combination of carbon atoms and hydrogen atoms in molecules of varying size, composition, and the ratio (Haddad, 1989, p. 11).

It is also known as a liquid substance, liquid hydrocarbons, which is called crude oil. This substance has a unique and distinctive smell, and its color varies between black, green, brown and yellow. It is also viscous substance, depending on the specific density of the crude oil. This specific density is suspended and renewed by the ratio of carbon atoms in the crude oil. The higher the proportion of carbon atoms the more significant the density of the quality or weight (Al-Douri, The Petroleum Economy, 1983). Some know oil as a complex mixture consisting of up to 200 or more organic compounds and mostly crude hydrocarbons containing different combinations (Devolde, 2006, p. 17).

According to Campbell et al (2004, p. 15), there is a clear difference in all the developments that revolve around the origin of oil and how it originated and its composition in this nature. There is no clear and precise conception of this subject. The important thing is that oil arose in the context of a process that is very complex and over long periods. However, most scholars have concluded that oil is formed in the ground, on the banks of the sea, at its depths, at different depths and in different geological times. It moves through the sedimentary rocks through its pores, which collected in oil traps.

The human knew the oil for thousands of years, where the elders were collecting oil leaking from the outlets and cracks in the ground, and the Torah said the Prophet Noah used Kair to paint and fill the cracks in his ship, and used the mother of the Prophet Moses peace

be upon him in the paint box and in which the prophet Moses peace be upon him before throwing him in the river (Al-Bar, 1986, p. 7)

The oil era associated with the use of oil in lighting, which base on high-cost whale oil, which led to the search for alternative sources for its use in lighting. In 1847 (Yng) experimented with distillation of oil from coal and succeeded in that and a team of German scientists to the invention of the paraffin lamp and this is the first event in the history of the oil industry. Besides, helped the industrial wealth in England during the second half of the eighteenth century to increase the demand for lubricants (Abuela, 2008, p. 424)

According to IEA (2011, p. 1), oil is one of the most important discoveries made by humans since 1859. It is the primary source of energy and the focus of all industrial and agricultural production in the modern world and has become a vital element of everyday life. Oil is not only the most critical source of energy but also the source of the extraction of at least eleven thousand different industrial commodities in the world. It is no longer just a passing commodity; it has become the essential commodity in international trade, accounting for 33.2% of world energy trade in 2008.

In this context, Capbell et al (2004), argued that most researchers have agreed that oil is created only in rare conditions and in a different geological crisis. Finding it is not easy, so, it is found only in certain areas by moving it through the ground layers and gathering it in specific places. While, Al-Douri, (2003, p. 26), mentioned that the most extensive international companies and American companies, in particular, the first part in the emergence of the oil market because of the birth of the oil industry in the United States of America at the most critical wells. Moreover, was drilled in science and the first commercial discovery in the region of Pennsylvania in the United States in 1859, the well, then known as the Drake, was built by a simple wooden drilling tower to depths of 21 meter.

Because of its versatility and the flexibility of its products, oil has become a strategic commodity that controls the fate and economy of the world. The impact of oil is not confined to the global economic system and international trade but extends to include all aspects of contemporary civilization that are difficult to imagine and devoid of oil. So, this age is the

age of oil, modern societies are oil societies, and modern man is necessarily a hydrocarbon man relative to the hydrocarbon components of oil (Berjas, 2000).

2.1.2. The Oil Production in Iraq

According to Organization of Arab Petroleum Exporting Countries OAPEC (OAPEC, 2008, p. 3) Iraq is one of the oil countries with great capabilities that made it suitable to occupy advanced positions between the Arab countries and the oil-producing world, because it is one of the relevant countries in terms of reserves and oil production and one of the founding members of OPEC.

The Middle East, including Iraq, is one of the world's most productive oil regions, with the world's largest oil reserves. Iraq's proven oil reserves are 115 billion barrels and 220 billion barrels of undetermined reserves, representing 18 percent, 12.4 percent and 9.93 percent of the world's oil reserves. OPEC, OAPEC and world reserves respectively. While, the potential reserves there is a discrepancy in its estimate, but the figure, in any case, exceeds 200 billion barrels (OPEC, 2006, p. 14). Besides a core part of which can be transferred by at least 50% to proven reserves using modern technology in seismic surveys, exploratory drilling, and evaluation, then evolutionary drilling. It ranks third in the Middle East after Saudi Arabia and Iran, and Iraq ranks fifth in the world (Nizar, 2005, p. 38).

The conflict over Iraqi oil began early after the British occupation in the First World War and the following equivalence between the Allies, England, France and America, the formation of the Iraq oil company from competing groups. Besides, its success in the acquisition of privileges, which covered the entire Iraqi soil under the influence of colonial domination and against the opposition of the national forces and the role played by oil brokers in all such as (Gulbenkian). Besides, the impact of this process on the formation of Iraq's political and protection, mandate, then independence and the entry of the league of nations than to determine the Iraqi border in the north-east and south-west and its system the constitution Its economic development and its social development (Abdullah, 2003). Which is one of the underlying chapters in uncovering the reality of events in Iraq and the whole region, has played an essential role for the oil countries much more than the products

produced by other countries, which became the focus of political activities Witnessed by Iraq throughout the previous period (Mahmoud, 1979, p. 159).

As indicated by Brooks (1951, p. 87), the Iraqi oil sector underwent several stages, each stage of which was characterized by a particular type of oil investment. It was the beginning with the Ottoman occupation of Iraq and the assistance of the governor Medhat Pasha (1872-1869) with the German experts to search for oil in Iraq. Later, Sultan Abdul Hamid II (1904) the rights of the oil investment from the Ministry of Mines to himself and then entrusted to the German company (Anna Tulish Eliz Benshen Kzlshavt).

However, the Ottoman Empire saw significant developments during the second half of the nineteenth century led to a great rush of European capital to obtain privileges to exploit the natural wealth of the Ottoman Empire, especially Iraq and its oil, which was and still is the focus of the capitalist (industrial) (Khalil, 1980, p. 335). In order to acquire Iraqi oil, the European interests entered into a coalition that included KA from the Netherlands, Britain, and Germany in 1912 and formed the Turkish Petroleum Company, as revealed in Table 2.2.

Table 2.2. Percentage of Partners in the Turkish Petroleum Company 1912

Oil Company	Percent %
English-Persian Company	50 %
Royal Dutch Company	20 %
Deutsche Bank	20 %
(Gulbankian) As a reward for his service (2.5% of Deterding and the English-Persian company as well as his name of 2.5%). Since that day Gulbenkian named Mr. 5%.	5 %

Source: (Dolonay & Charlier, 1987, p. 21).

Since the discovery of oil in Iraq, oil has become a significant factor in determining the policies and trends of the great powers in the Middle East in general and Iraq in particular. Despite the massive explosion of oil in October 1927 from the Baba Gergar well in Kirkuk governorate, Iraqi oil production delayed for several years until the agreement and then the completion of the extension of the first oil lines westward towards Syria and Lebanon, which

are subject to the French mandate (Sulaiman, 1979, p. 23). So, by the end of 1930, 20 productive wells had been completed. In July 1928, Americans were allowed to enter the franchise, taking some of the Anglo-Persian stakes in a 23.75% stake. In 1929, the Turkish Oil Company reorganized itself as the Iraqi oil company (Anderson & Stansefield, 2004).

Besides, after that Iraq witnessed an extraordinary exploration activity of oil, where it revealed many of the oil fields of enormous, out of its oil fields 77 discovered and resident, was used only 15 fields, and the most significant amount of reserves in a field are Rumaila field in the south and there are 630 wells, In the north is the Kirkuk field. Also, in 1960, in the same year as the Organization of the Petroleum Exporting Countries (OPEC) in Baghdad, the Iraqi government abolished the IPC privilege for 99% of Iraqi territory, from the area of its concession to the plots of land at the time (Maamouri & Al-Bakri, 2007, p. 121).

According to Energy Information Administration EIA (2007), by 1971-72, oil production mostly moved, indicating that the daily production rate was 1.6 million barrels per day in 1971. In 1972, production was at 1.5 million barrels per day. By 1979, production had increased to 3.5 million barrels a day, followed by 1980, when the Iran-Iraq war broke out in September.

In this context, Hamid and Al-Moumen (2009, p. 5), mentioned that by 1981, Iraq was producing only 1 million bpd. While, in 1985, Iraq produced 1.1 million barrels per day. By 1988, Iraq produced 2.0 million barrels per day of oil, after the end of the Iran-Iraq war in 1988 and until Saddam Hussein's invasion of Kuwait in the summer of 1990 (Zedalis, 2009, p. 11). However, oil production in Iraq reached 3.8 million barrels per day, the second highest figure in Iraq's history after 1979 rates. A timely plan prepared by the ministry of oil aimed at reaching a production level of 6 million barrels per day by 1995 (Al-Nuaimi, 2007, p. 178). After that, the reaction of the international community had severe repercussions on the production of Iraqi crude oil to a large extent, where oil production fell by 1991-1992 to less than 500 thousand barrels per day. Iraq's production of crude oil remained between 500,000 and 600,000 barrels per day because of the United Nations economic sanctions imposed from 1991 to 1996. In 1996, the United Nations set up the oil-for-food program (Hamid & Al-Moumen, 2009, p. 6).

According to Basri and Al-Sebahi (2013), at the beginning of 1997, the year when the oil-for-food program launched within the United Nations program, the Iraqi government could export oil in return for what is considered the staple food.

While, Walden (2008, p. 3), the implementation of the program began in late 1996 and early 1997 and ended in 2003. The program aims to allow Iraq to sell oil on the international market in return for lunch, medicine and other humanitarian needs of the Iraqi population without allowing the proceeds to be used to build a military force. The amount of crude oil contracted to export about 39.95 million barrels, including 34.28 million barrels during the overall phases of the oil-for-food program, which amounted to 13 stages in these years. By 2000, Iraq produced nearly 2.6 million barrels a day, the outbreak of Iraq's invasion of Iraq in 2003, and production fell to below 1.4 million bpd (Al-Nuaimi, 2007, p. 180).

However, Iraq's invasion of Kuwait and the Second Gulf War led to the destruction of some 100% of the oil facility. The 2003 events also caused considerable damage to the Iraqi oil industry, which resulted in a series of destruction, aerial bombardment, looting, and burning. The damage caused to the oil facility in the Iran-Iraq War and the Second Gulf War was more damaging than it was (Chalabi, 2006, p. 32).

According to the Ministry of Natural Resources MNR (2017), currently, the Iraqi oil ministry controls all oil production in Iraq (except oil production in Kurdistan since 2004). However, oil fields are operated by international oil companies (except the Kirkuk field) under contracts are known as "technical services" contracts. Technical services contracts set the primary target for oil production as well as the maximum fee per barrel, in addition to compensating the international oil companies for investment and operating expenses and payment fees ranging between 2 and 3 dollars per barrel. Nevertheless, the Iraqi government has set ambitious and ambitious oil production in the coming years and targets, and the original government targets of 12 million barrels per day by 2017 were considered too ambitious (EIA, 2015).

2.1.3. The Economics of Oil

The subject of the oil economy from the fields of modern and contemporary economics, was the beginning since the late nineteenth and early twentieth century, which was the period following the exploitation of oil in a scientific, economic, widely, and the emergence of the status, strength and significance impact of oil wealth in areas of industrial, commercial and energy activity. As well as political, military and international affairs (Al-Douri, 2003).

Therefore, the oil economy was the subject of special care and interest in the scientific and university circles, which became an independent and specialized scientific subject for study and teaching in many universities and scientific institutions (Raszewski, 2018, p. 45).

However, in many developed countries in Europe, such as the French Institute of Petroleum IFP in Paris France, the Arab Petroleum Institute in Kuwait, and the American Institute of Petroleum API. Moreover, after the end of the Second World War expanded and increased interest in the study and analysis of the status and effects of oil wealth economically as well as the social and economic conditions of the international, regional and local economies (Abdullah, 2003).

While this led to the establishment of economic bodies and organizations such as the Organization of Petroleum Exporting Countries (OPEC), the Organization of Arab Petroleum Exporting Countries (OAPEC) and the International Oil Agency (AIE). Most universities in the world have also taught the subject of the oil economy in its departments and branches. Not only that, but formed and emerged from many of the world's specialized institutions among the most extensive international oil institutions such as BP Amoco- Royal Dutch Shell-Aramco - Exxon Mobile, on the subject of oil wealth and means to study and in various aspects and activities Including energy, industry, chemistry, technology, geology, sociology, politics, trade, and environment (Al-Douri, 2003, p. 12).

Therefore, the oil economy in general and the oil industry, in particular, were the subjects of special care and attention in the scientific and academic circles and the various parties that practice this industry and turned into an independent and specialized scientific subject for study and teaching in many universities. Besides scientific institutions such as the

French Institute of Petroleum IFP and the Arab API Institute in Paris And other institutes (Yusuf, 2015, p. 16)

2.1.4. The Importance of Oil

According to Suad (2016, p. 45), the importance of oil in the world today undisputed, due to its growing importance throughout history, as an essential strategic commodity in the modern industrial society, the following summarizes the importance of oil in the economy, industry, and politics:

2.1.4.1. The Economic Importance of Oil

Oil is an international trade commodity of great financial value, where developing countries often sell it and bought by industrialized countries on world markets and thus it has generated profits. Petroleum is considered the artery of the transport sector, where the percentage of quantities used in this sector is estimated at 35% of the total consumed oil in the world (Suad, 2016, p. 45).

While, the economic significance of oil in all sectors of the economy is different, and it varies from one sector to the next. Thus, the economist (Frankel) summarizes the virtues of oil through this critical sentence: oil is the liquid, that the global industrial structure has found, the engines have transformed the pace of life and have begun to be stronger than ever before and faster (Awali, 2016, p. 13). Energy is also a new factor of production, along with land, labor, capital, and regulation. Just as there is no use of capital without work, so, there is no use without energy (Tanir, 1981, p. 6).

Moreover, it is known that industrialized countries are the world's largest and least oil-consuming countries, unlike the developing countries. This discrepancy between the rates of oil production and the demand for it has led to a global trade movement (which has made oil the essential commodity in international trade regarding volume and monetary value). The global oil trade has developed rapidly since the Second World War to this day due to the increasing demand for oil and its products in the advanced industrial countries, especially

in the countries of Western Europe, Japan and the United States of America (Berjas, 2000, p. 79).

However, Sammak (1979, p. 5), mentioned that oil is not only a past and a present but also a future. Oil is an essential resource for economic wealth. It promotes the importance of oil, energy, and ore, in conditions of peace, but extends beyond the conditions of war. Oil is a strategic commodity of particular importance in conflict, political and economic revolutions on the world stage.

The importance of oil in the world's economies has made the oil market not free in the traditional economic sense and is governed not only by the laws of the market but also by the conflicting policies and strategies between the interests of the critical industrial consuming countries and the oil-producing developing countries. The first significant commercial discovery in the Pennsylvania area in the United States of America was the first in the history of the oil industry. Due to the birth of the oil industry in the United States of America 859, where the industry grew and developed in the hands of the capitalist system from the beginning of the twentieth century until the end of the fifties (Alnasrawi, 1994).

2.1.4.2. Industrial Importance of Oil

According to Awali (2016, p. 14), oil has been the place of coal as the primary source of energy since the explosion of industrial wealth in the early twentieth century, all the machinery that embody the modern industrial technology. Which is imported by the world intensively, need large quantities of oil with high thermal capacity and not available in other sources of energy, Except for nuclear energy specified for use.

Therefore, oil is the primary fuel for the operation of industry and the movement of machines in factories and laboratories that occupy people and manufacture products. One-third of the world's oil is devoted to the operation of the industry, which is the mainstay of the modern economy. It could lead to the closure of factories, the interruption of production and the creation of severe crises that destabilize the global economy (Berjas, 2000, p. 80).

In addition to the fact that oil is a source of heat and energy, it is used to feed the metal industry. It also gives the industry lubrication or lubrication necessary for the

continuation of the work of the machine and the continuation of production. Modern industry is only a movement, and where there is movement, there is a monopoly which leads to the end of the destruction of the machine and disables it. So it must be coated with a thin layer of oils to maintain their engines (Dalemont, 1979, p. 20).

According to Hammadi (2009, p. 8), oil characterized as a raw material that can be used only after several operations. The oil industry itself, whether it is extracted or converted, is considered to be a large-scale industrial activity. It occupies an active position in the industrial sector as a whole, as well as industrial activities that depend on petroleum products such as petrochemical industry (fertilizer industry, industrial rubber industry, and Medical) to become the source of many necessary industrial production processes.

The industry, as is well known, needs transportation and an internal and external transport network linking production centers and product markets around the world. The transport and transport sector is the vital artery of the national economy, as it is closely related to all economic sectors. The transport and transport sector is an integral part of commodity production, and an expansion in the production of goods requires a similar expansion in the transport and transport service (Tanir, 1981, p. 7).

The importance of oil in this sector highlighted in two main respects: it is the indispensable source of fuel for various modes of land, sea and air transport. On the other hand, the material used for road paving made from the deposits of oil distillation. Thanks to oil, the technique of the roads since the middle of the twentieth century have made tremendous progress (Berjas, 2000, p. 75).

2.1.4.3. The Political Importance of Oil

The relationship of oil to politics is an old relationship dating back to the date of discovery and exploration by multinational companies. However, oil has become a centerpiece of international politics after it has replaced coal as a significant source of energy, and the world's nations are increasingly dependent on its economic model and development (Berjas, 2000, p. 89).

While, Dalemont (1979, p. 22), argued that oil plays a significant role in political decision-making, and is referred to as the basis of peace in the world because the distribution of oil in the world is unequal. While only industrialized countries in Russia, the United States, Britain and Canada, The Middle East region is one of the wealthiest regions in the world. So this is what made the policy of the industrialized countries towards the developing and productive countries that need to be obtained in any way even by the establishment of wars (Bietam, 2015, p. 88).

2.1.5. Characteristics of the Oil Industry

According to some researchers such as (2003), (Dghairi, 1998), and (Makhlafi, 2014), there are several characteristics of the oil industry, which include a group of industries that rely on natural resources extractive have characteristics different from other mining industries, namely:

- 1 The oil industry requires the provision of significant and substantial capital to exploit the oil wealth due to the diversity and variety of industrial stages and the nature of oil wealth. As the capital of the oil industry varies or fluctuates from one region to another and from one phase to another because of the difference in the location of oil. In addition to the multiplicity characteristics of oil wealth (lack of homogeneity) and how to exploit. Whether natural, chemical, geological or technological (Al-Douri, 2003, p. 24).
- 2 Chemical composition is unique as hydrogen mixed with carbon gives it properties of no other materials. This combination offered by nature free of charge. The man tried to imitate nature in this field, but the costs are very high.
- 3 The high sulfur content in crude oil reduces its quality and reduces its price because its combustion with gasoline leads to pollution.
- 4 Oil derivatives are about 80,000 products.
- 5 Oil is the primary source of energy and is dependent on the modern technological development and rich production (Dghairi, 1998, p. 50).

- 6 Oil is a strategic material influenced by economic factors and politics, which gives an international nature and particular importance. Oil also is a growing source of decreasing use.
- 7 The increase in the ratio of fixed capital to variable capital means that the bulk of the cost consists of fixed costs (machinery, equipment, and construction).
- 8 The rapid technological progress in the industry, which reflected in the possibility of reducing production costs, which increases the oil revenues.
- 9 Low supply and demand elasticity in the short term. Moreover, vertical integration in its stages (Makhlafi, 2014, p. 23).

2.2. The Impact of Oil Production on the Iraqi Economy

The oil sector is the heart of the Iraqi economy, where 95% of the revenues of the state comes from oil production, so oil regarding discovery and the level of reserves, production, oil prices, and exports are also essential for the Iraqi economy (Basri & Al-Sebahi, 2013). The oil industry is the basis on which the Iraqi economy depends, but the destruction that has hit the sector in recent years after 2003 has exposed this sector to looting and sabotage, which targeted the infrastructure of production and export mainly as well as the lack of investment (Alnasrawi, 1994).

Iraq is among the countries with a rich and varied resource base. It is the third largest known global reserve after Saudi Arabia and Iran, with abundant water resources. There is also a sizeable national workforce of more than 7 million people of the Arab oil countries. These resources can, within a decade, bring Iraq back to its former status as a middle-income country, not as it is now. The average poverty rate in Iraq ranges from 8-10% Between 12-15% is prone to decline to a similar level, and regarding services, the proportion of the Iraqi population (Portman, 2005, p. 3). While Iraq in the ranks of the poorest countries in the world despite its unlimited resources. So, this is due to the structural imbalances in its agricultural, industrial, and even oil-producing institutions, which are due to at least war-production levels. Iraq is a country that depends on the outside at a high rate and gives considerable

attention to the public sector without the private, despite the increasing calls in international institutions to pay attention to the private sector (Hammadi I. O., 2010, p. 20).

The Iraqi oil fields divided into four areas: first the southern fields, the second the central fields, the third the northern fields, the fourth the fields of the Kurdistan region of Iraq (according to the Iraqi oil data 2013), the Rumaila field in the southern region has the highest level of production at 1430 million barrels per day. The West Qurna field is the second largest oil field in Iraq located in the southern fields with a daily production level of 550 thousand barrels per day, which consists of about one-sixth of the total production in the southern fields (Oil & Gas Journal, 2016).

According to Hammadi (2010, p. 21), economists also classify Iraq's oil fields as the world's first regarding the low cost of production because crude is close to the surface and the absence of geological obstacles. Which is one of the encouraging characteristics of investment in this sector of the existing fields, where you can imagine the small size of production of Iraqi oil compared to the stock if we know that the wells produced in Iraq range from 1500 to 1700 wells, while the wells are expected to complete the search to at least 100 thousand wells.

In the same regard, Rubaie (2006, p. 6), argued that it is worth mentioning that the majority of Iraq's oil reserves concentrated in large fields. About 40% of the total fixed reserves concentrated in 15 developed fields, where 69% of the reserves concentrated in the first category, which contains more than 5000 million barrels. While about 24% of the reserves concentrated in the second category, which ranges from 1000-5000 million barrels. 58 non-developed fields contain 60% of Iraq's total fixed reserves:

However, according to Manhal (2006, p. 133), the Iraqi economy in the current stage of the economies of one-sided, despite the vast agricultural and industrial potential, but the control of oil revenues on GDP is what made it unilateral.

CHAPTER THREE

3. POLITICAL ECONOMY OF OIL PRODUCTION IN IRAQ DURING 2006-2016

The primary aim of this chapter is to examine the political economy of oil production in Iraq during 2006-2016. Whereas most of the data used for the analysis obtained from Iraq's ministry of oil, (2016). However, the ministry of oil in Baghdad manages the development and production of oil and natural gas throughout the country, as opposed to the Kurdish territories through its operational bodies: NOC and MDOC in the northern and central regions, along with SOC and MOC in the southern regions. In the Kurdistan region of Iraq, the KRG, under the ministry of natural resources, manages and develops oil and gas. International oil companies are very active in Iraq, including the Kurdistan region of Iraq. So, this chapter also maintains the study method and the size of data selection and data analysis.

3.1. Method

This study employed a quantitative method, while the quantitative method employed in the studies that examine numerical data. However, according to (Hughes, 2011) a quantitative method is useful when the examiner efforts to collect a numerical data and examining them, also, it is constructed more on the creative plans and the data results are more willingly and more straightforward to realize. Accordingly, this clearly states that the quantitative method is calmer for examining numerical data than any other method. Whereas, it shares a large size of data and figures. Thus, a conceivable method of this study is quantitative. A further reason for using this method is that the study examines data related to oil production in Iraq which contain the large size of data.

3.1.1. Iraq's Oil Data

To reach the purpose of the study the numeric data related to oil production in Iraq during 2006-2016 are playing a significant role in the study results. While the data is putting

according to the study objectives, however, the primary data used in this study will be about the total Iraqi prove reserves of oil, daily oil production, oil prices, Iraq crude oil exports, domestic consumption, oil revenues, and some other political economy indicators during the period indicated.

However, Iraq is OPEC's second largest oil producer after Saudi Arabia, along with the country's five largest reserves of crude oil in the world after Venezuela, Saudi Arabia, Canada, and Iran. Although most of the major oil fields known in Iraq are produced or still under development, many of their specific hydrocarbon resources have not been fully utilized. However, the recognized Iraqi oil fields are located on land, the main areas in the south have relatively low extraction costs.

Table 3.1. Iraq Daily Oil Production, Price, and Crude Oil Exports (Million Barrels Per Day)

Time Series	Iraq Daily Oil Production B/D	Oil Price Per Barrel	Iraq and KRG Crude Oil Exports B/D
2006	2.0	\$55.60	1,999
2007	2.04	\$63.00	2143
2008	2.29	\$91.50	2428
2009	2.38	\$55.60	2452
2010	2.38	\$74.20	2490
2011	2.65	\$103.6	2801
2012	3.0	\$106.70	3116
2013	3.0	\$102.90	3141
2014	3.1	\$97.00	3285
2015	4.1	\$47.50	4031
2016	4.5	\$34.50	4465

Source: Iraq's ministry of oil, (2016)

While Iraq was a founding member of OPEC, the country always joined its meetings, even after 1991. However, there are many unresolved concerns in an attempt to reliably analyze a future relationship between Iraq and OPEC, although many factors Refer to Iraq's remaining membership in OPEC. In addition to OPEC's participation as a typical situation, there is the fact that Iraq's neighbors are all geographically involved, its share in the global

oil market will grow as exports expand, and OPEC provides a safety cushion for oil prices plus a vote.

Consequently, Iraq's economy is substantially reliant on oil revenues. So, in 2014, crude oil export revenue amounted to 93% of Iraq's overall public budget, according to the IMF, (2015), in 2015, Iraq (excluding KRG) received marginally more than \$49 billion dollars in crude oil export revenue, \$35 billion less than in 2014, despite a substantial increase in export volumes, due to sharply decline in oil price from \$97 in 2014 to \$47 in 2015, as revealed in table below.

In this context, U.S. Energy Information Administration (EIA) (2016), conducted a report on Iraqi energy, mentioned that in early June 2014, ISIL launched an attack in Iraq, as a result, seized Mosul city, one of the major cities in the north of the country, and then other nearby settlements and towns. While ISIL launched attacks affected northern Iraq, but not including the KRG's production and refinery operations, nevertheless it did not affect the country's southern oil production and crude oil exports, that accounted for around 95% of Iraq's total crude oil exports in 2014.

While significant improvement in increasing oil production and smaller but equally meaningful advances in gas development, mainly in the KRI since the fall of Saddam Hussein, difficulties to Iraq reaching its production potential continue. So, to continue to capitalize on Iraq's oil resources and gradually utilize its significant gas resources. In addition to confiscating obstacles to improved production and export progress, maybe the major challenge for Iraq is sustainably managing the resulting resource revenue in a way that serves the country's long-term growth benefits and improves the living conditions for all Iraqis. Sustainable management of resource revenue, along with making the foundation for a more diversified economy, is critically important both for Iraq more broadly and the KRI (Scholl, 2018).

3.1.2. Total Proved Reserves of Oil

According to the BP, (2017) total proved reserves of oil, usually kept to be those quantities that are engineering and geological data shows existing economic and

operating conditions. As Table 3.2, and Figure 3.1, below showed, Iraq seized 112.0 billion barrels of verified crude oil reserves at the end of 1996, while increased to 115.0 billion barrels at the end of 2006, however, held 142.5 billion barrels at the end of 2015 which demonstrating 18% of proved reserves in the Middle East and almost 9% of global reserves, besides Iraq held 153.0 billion barrels at the end of 2016. That is ranked third in the Middle East after Saudi Arabia and Iran, the country also ranking fifth in the world.

Although, the IEA, (2012), valued that the KRI held 4 billion barrels of proved reserves. KRG's evaluation in recent years much higher because it comprises some proved resources like DNO oil company. So, the KRG appraisals that it holds 45 billion barrels, however, this number has not independently proved and likely includes at least some resources in disputed areas, especially Kirkuk.

In this regard, (Frappi, 2016) mentioned that Iraq is one of the world's first areas where the exploitation of oil resources on an engineering scale started. Still, today, a century after the drilling of the first oil well, the country fifth in the world for reserves and second between the OPEC countries for production, while remains a crucial actor in the regional and global energy states.

Even though, since the early of the 1980s Iraq has described by a deep spiral of conflict, which preserves the country in lasting instability. Undoubtedly, the country's instability adversely affected the exploitation of its extractive possible, which remains mostly unexplored. However, the oil sector was not only a sufferer of the cycle of violence, but in many respects the perpetrator behind the conflicts themselves. From this perspective, the critical role played by the energy sector in the domestic and international conflicts that afflicted the country represents the third and last aspect explaining the interplay between Iraq's contemporary energy history, and it is more comprehensive political and institutional evolution.

Table 3.2. Middle East Total Proved Reserves of Oil

	At end 1996 Thousand Million Barrels	At end 2006 Thousand Million Barrels	At end 2015 Thousand Million Barrels	At end 2016 Thousand Million Barrels
Iran	92.6	138.4	158.4	158.4
Iraq	112.0	115.0	142.5	153.0
Kuwait	96.5	101.5	101.5	101.5
Oman	5.3	5.6	5.3	5.4
Qatar	3.7	27.4	25.2	25.2
Saudi Arabia	261.4	264.3	266.6	266.5
Syria	2.5	3.0	2.5	2.5
United Arab Emirates	97.8	97.8	97.8	97.8
Yemen	2.0	2.8	3.0	3.0
Other Middle East	0.2	0.1	0.2	0.2
Total Middle East	674.0	755.9	803.0	813.5

Source: BP, (2017), and Oil & Gas Journal, (2016).

While the oil belongs to the public of the states, so, oil is vital for developed and under developing countries of the world. How can the same calculation establish among producers and customers? Equal to reserve oil as energy for as long as possible, and enables the producing states to overcome their backwardness and catch up with civilization and progress, while continuing the wheel of industry and advance in the states also industrial. Such an equation is not valid unless the OPEC member states accept by the rules of action among them, and especially the Gulf states, through their agreement and unity of their position, their refusal to submit to American will and Western pressure, their interests can be preserved without any threat to the interests of others.

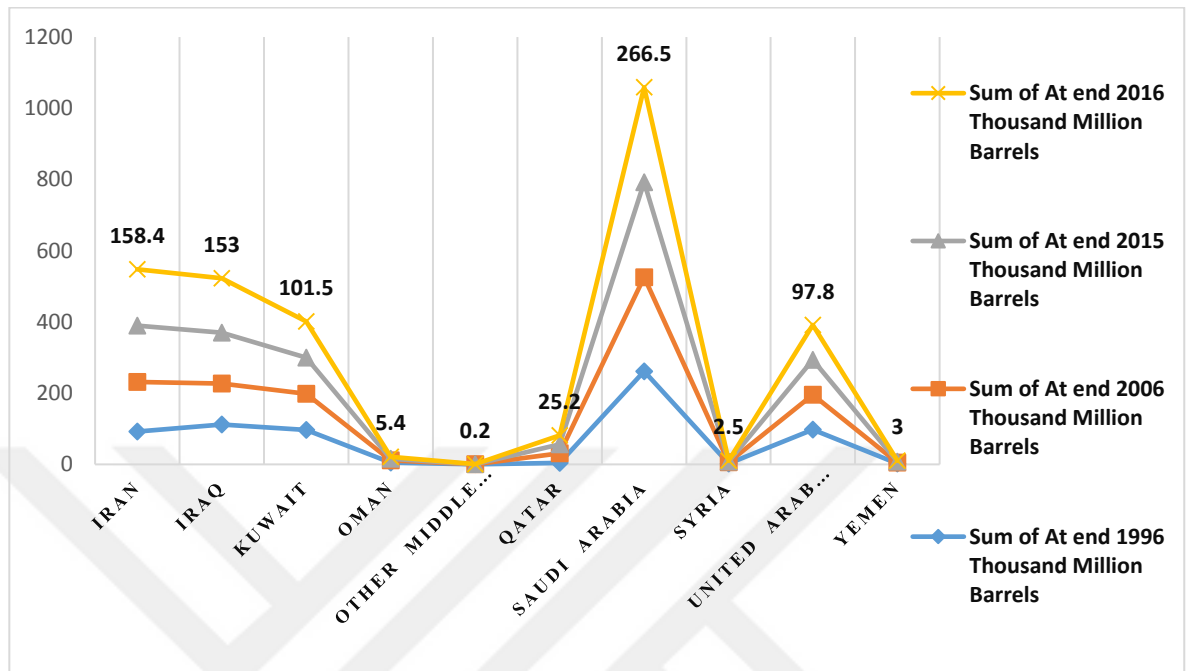


Figure 3.1. Middle East Total Proved Reserves of Oil

Source: BP, (2017), and Oil & Gas Journal, (2016).

3.1.3. Oil Production

As revealed in Figure 3.2, Iraq's oil production curve in recent years has remarkably specified the positions, even if not mainly at the levels estimated in earlier, more positive forecasts. Iraq has developed the world's fourth-largest oil exporter. Moreover, the second major producer in OPEC organization, with production above 4.1 million bpd for the first time in 2015, of the amount produced in this period, almost 3.5 million b/d produced in southern Iraq under the central government in Baghdad. Moreover, 450,000 b/d produced in northern Iraq, most of which were at fields operated by the KRG, besides the rest at fields operated by the NOC of Baghdad.

Thus, collectively with KRG to roughly 4.5 million bpd in 2016. While in 2017, the country also proved a new record for annual exports. However, production levels in 2006 were just 2 million bpd, demonstrating a more than doubling of production during a ten-year. Accordingly, crude oil production averaged nearly 4 million b/d in 2015, which 700,000 b/d more than the daily production level in 2014.

Possible Iraqi oil revenues were production, development and export issues to be fully determined, Iraq could make great wealth from oil exports. Much depends on world oil prices, which have varied from \$10 and \$35 over the past decade. Particular its pre-2003 production capacity of 2.8 mbd, Iraq could export 2.3 mbd (after deducting 500,000 barrels per day for domestic consumption.) Yearly gross revenues would be \$18.5 billion at an assumed \$22 price, and \$23.5 billion at an assumed \$28 per barrel price. Every million barrels per day quantities to \$8.0 billion per year at the weaker end and \$10.2 billion at the high end of that range.

Most significantly after Iraq began marketing Basra substantial separate from Basra light, the country was able to increase production at fields making the heavier oil and expand the quality of Basra light. In northern Iraq, where the remaining 10% of Iraq's oil produced in 2015, the KRG increased the capacity of its independent pipeline, allowing output to increase.

According to EIA, (2016) Iraq is undertaking a determined program to improve its oil fields besides to raise its oil production levels. After two licensing rounds over 2008 and 2009, so, the Iraqi ministry of oil signed a dozen long-term technical service contracts (TSC) with international oil companies to improve or re-develop some giant oil fields, most of which were already producing. However, these development plans are now in flux because of the economic crisis in Iraq affected by the sustained low oil prices and war against ISIS. In the north Iraqi region, the KRG has also dropped its set production targets. Earlier, is scheduled to rise production and pipeline capacity to 1.0 million b/d by the end of 2015 or early 2016.¹⁷ But, the KRG is now targeting that amount for the end of 2016. However, project delays caused by the ISIS attacking and past non-payment of international oil companies for work performed to make it unlikely this goal will be achieved.

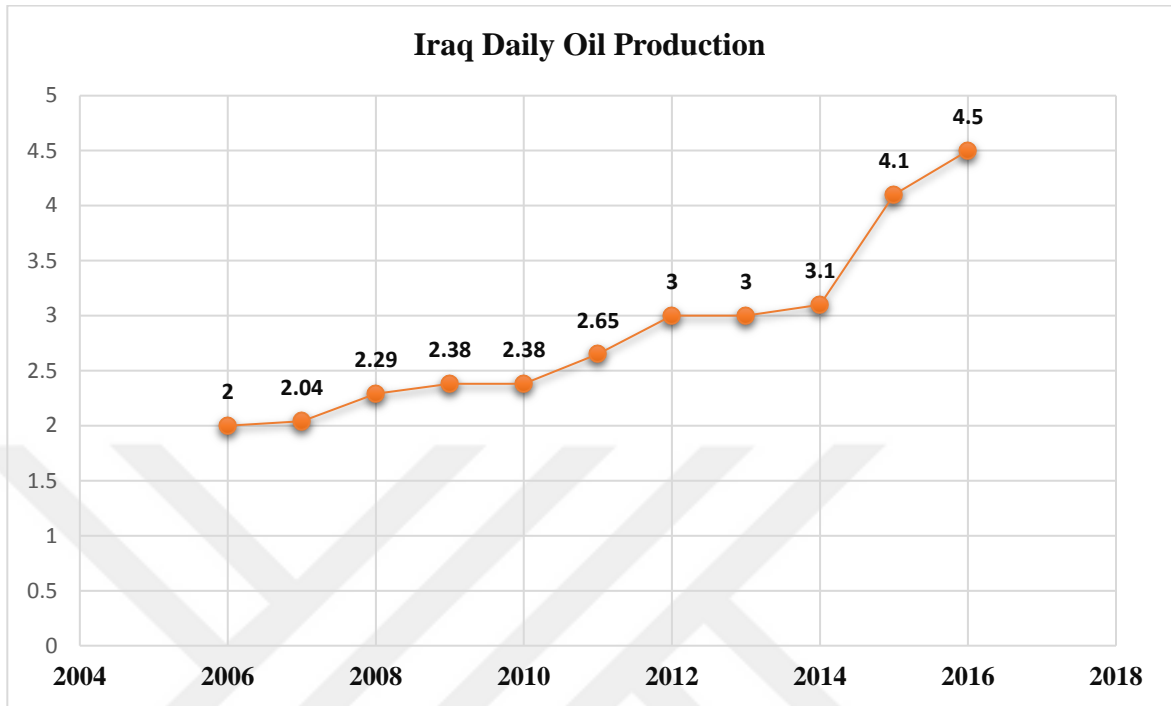


Figure 3.2. Daily Oil Production

Source: Iraq's ministry of oil, (2016)

Consequently, in 2015, the country considerably expanded aground pumping and storage infrastructure in the south of the country. However, Iraq will have to remain to develop infrastructure capacity in the south to support more oil production growth. Iraq has also improved its capacity of southern export facilities in recent years by adding on three single point moorings (SPMs) near the Basra and Khor al-Amaya ports.

Iraq also planned to continue to grow its export capacity to meet to reach production targets. Three SPMs maintained off the Basra port are presently operational, a fourth SPM was installed in early 2015 but is not active, and a fifth SPM is scheduled to install in 2016. The SPMs have a nameplate (project) loading capacity of 900,000 b/d each, although actual loadings are typically much less. The SPMs have added much-required shipping volume to the south, as the Basra and Khor al-Amaya ports are operating well below capacity after continuing three wars and poor preservation (Iraq Oil Report, 2014).

In the same context, Figure 3.3, displays that Gulf war in 1990-91 and Iraq war begins in 2003, dramatically impacted Iraq's oil production capacity, during the Gulf war the

country's daily production decreased from over 2.0 million bpd in 1990 to around 400,000 bpd. Once again Iraq war that begins in 2003 declined the country's levels of production, however, from 2005 the oil production levels in the country gradually increased. However, production growth of the scale intended will also need substantial rises in natural gas and water installation to maintain enough reservoir pressure to intensification recovery rates and boost oil production. Iraq has related natural gas that could use for reinjection. Nevertheless, much of the natural gas is presently being flared.

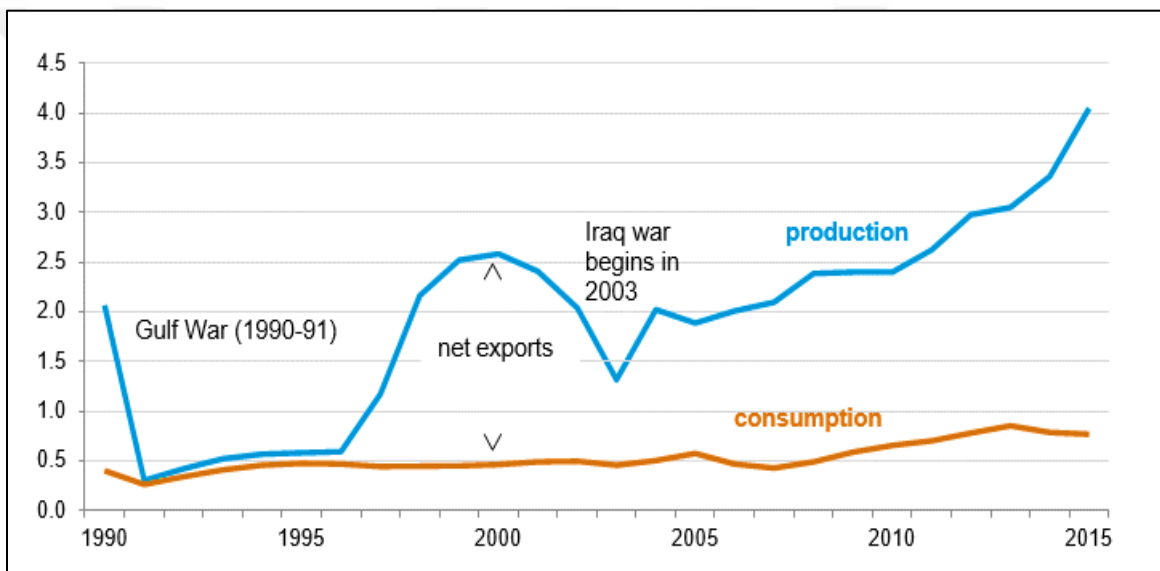


Figure 3.3. Iraq's Total Petroleum and Consumption

Source: EIA, (2016).

The first Gulf War and subsequent sanctions devastated the already exhausted economy. The bombing campaign of 1990-1991 has severely damaged or destroyed many of the oil infrastructure, transport, energy, and industrial infrastructure. The government initially directed its efforts to reform the oil and telecommunications infrastructure and the state security apparatus. A rationing program was introduced to disseminate available food and consumables. However, the Government's policy has a fundamental reaction, since the sanctions regime (and system priorities) has left little to restore and develop the economy. Due to Iraq depends on international trade in oil for the functioning of its economy, the sanctions regime had an immediate damaging effect. So, the oil for food program improved

this situation somewhat, nevertheless shortages, rationing, hyperinflation, and the absence of international trade characterized the Iraqi economy in the 1990s (EIA, 2015).

Oil production in Iraq has not stabilized at a certain level. It has witnessed a significant decline, especially in the 1990s, due to the embargo imposed on the country. Of course, the economic blockade is an exceptional factor. Oil production in all countries of the world is affected by other factors. While the aspects influencing oil production is affected by three factors: exploring the process of new oil fields, as well as raising the level of exploitation of working fields, i.e., the possibility of extracting more significant quantities of oil, also, prices and sources of supply of energy sources.

Regarding the first factor any exploring process of new oil fields, the important is the discovery of vast oil fields that are to lift the country's reserves. As previously mentioned, no fields have exposed in Iraq since 2002. The post-1995 discoveries are very modest compared to the vast oil wealth of Iraq. It should note here that there discovered and untapped oil wells in southern Iraq (the marshes in particular) and Maysan province, so Iraq's problem is the problem of discovery and exploitation together, not just discovery.

The second factor, i.e., raising the level of exploitation of the working fields, is the intention of modern technology, i.e., modern methods of production that raise the capacities of the production well. Third and final factor Regarding prices and other sources of energy supply, the discovery or invention of humanity is a source of energy that is less expensive than oil and easier to obtain.

According to EIA (2016) cited in (Cedigaz, 2015), Iraq was the world's fourth-largest natural gas-flaring country in 2014, behind Russia, Iran, and Venezuela. Iraq is also working with its international partners and the World Bank to reduce gas flaring. The gas will be selected first for power generation. Iraq procedures to rely mainly on water injection to reach future production upland targets. Iraq's South Oil Company (SOC) is undertaking the Common Seawater Supply Project (CSSP), valued to cost from \$4 billion and \$6 billion, which involves considering seawater from the Persian Gulf and then transferring it via pipelines to oil production abilities.

The CSSP will supply 7.5 million b/d of water by the end of the first stage and up to 12 million b/d by the end of the second stage, while the amount of water may change depending on the renegotiated production targets. The water will send to at least five southern Basra fields and one field in the Missan province. Mostly, Iraq's major southern oil fields require 1.5 barrels of water injected to produce 1 barrel of oil (Iraq Oil Report, 2015).

3.1.4. Iraq's Daily Oil Consumption

As Figure 3.3, above indicated the country's domestic consumption slowly increases with some floating particularly in 1991, 2004, and 2013 respectively. So, in 2015, the country consumed 770,000 b/d of petroleum. Iraq's daily oil consumption, which raised by a yearly average of 7% from 2004 to 2013, dropped slightly in 2014, and again in 2015 typically due to the 2014 ISIL attacking in northern of the country.

That led to the closure of Iraq's biggest refinery and fuel deficiencies in northern Iraq. Furthermost of Iraq's petroleum consumption develops from its domestic oil refineries, which are powered by internally produced oil. The country imports typically roughly 100,000 b/d of petroleum products. Iraq also consumes crude oil directly at power plants.

3.1.5. Iraq's Crude Oil Exports

As Figure 3.4, shows Iraqi crude oil exports during 2006-20116, started with the average 1.999 million b/d in 2006. While this amount since the following year 2007 steadily increased from 2.143 million b/d to 4.465 million b/d in 2016. Based on data from Iraq's ministry of oil (2016) the enlargement of onshore pumping and loading infrastructure in the south, expansion in crude quality as Basra light and Basra heavy were promoted separately starting in mid-2015, and a growth to the KRG's pipeline capability in the north all contributed to production improvement in Iraq. However, in 2015, around 85% of Iraq's crude oil exports were shipped from its southern export terminals in the Persian Gulf, which exports both the Basra light and heavy crude oil grades. During this period India was the biggest importer of the country's crude oil, importing slightly more than China.

Thus, under pressure from the ISIS attacks and the sharp decline in oil prices, both of Baghdad and Erbil reached an agreement in December 2014 on oil revenue sharing. Based on this agreement, the KRG dedicated to export 550,000 barrels of oil per day on behalf of the federal government, containing 0.30 million barrels per day from the Kirkuk field over a new pipeline between the KRG and Turkey, and 250,000 barrels per day of new fields in the Kurdish territories.

However, all exports should market by the country oil marketing organization (SOMO), although the federal government restarted transfers from public finance to the cash-strapped KRG, and the KRG's exports by the northern corridor boosted Iraq's total production and exports, so, this improve the revenues of the federal government so that it can fight the organization 'calling.' The KRG also became stronger after the financial situation more viable in the fight against 'ISIS' in the north. If oil retained in its right place in international relations and as the primary source of energy in industrial civilization, it has in the last decades and is still the most significant axis of the struggle among nations in its areas of existence. Substitute alternate sources of energy. With the end of the world war first, the requirement to secure energy sources for military operations and industrial production grew, and oil became one of the essential military objectives and critical criteria in political and economic mapping.

The USA, besides with the Western countries, comprehended that oil is an economic weapon, which is more important and influential than the most significant military weapons in the developed countries. It also realized after the October 1973 war that the Organization of Petroleum Exporting Countries (OPEC) and its pricing. So, the United States from the outset to try to overthrow or weaken this organization; to reduce its role in the global energy market, and managed through the Gulf War and occupation of Iraq, to control the entire region, militarily, economically and politically, reconstruction projects, in Kuwait, Saudi Arabia and Iraq for decades. Helped the international competition for Arab wealth; the subject systems in one way or another foreign will; without taking into account the interests of the people and their rights, what gave way to foreign powers to intervene and impose its control over the national wealth.

While trade played an important role in accelerating the process of economic and social development of developing countries as it contributes to classify the leading features of the economic structure and find the balance and interdependence among all sectors, Iraq was not able to export other goods in significant amount except the crude oil. Thus, the Iraqi revenues depend on oil. Therefore, any floating in oil price or the daily export will impact its revenue and led to the public budget deficit.

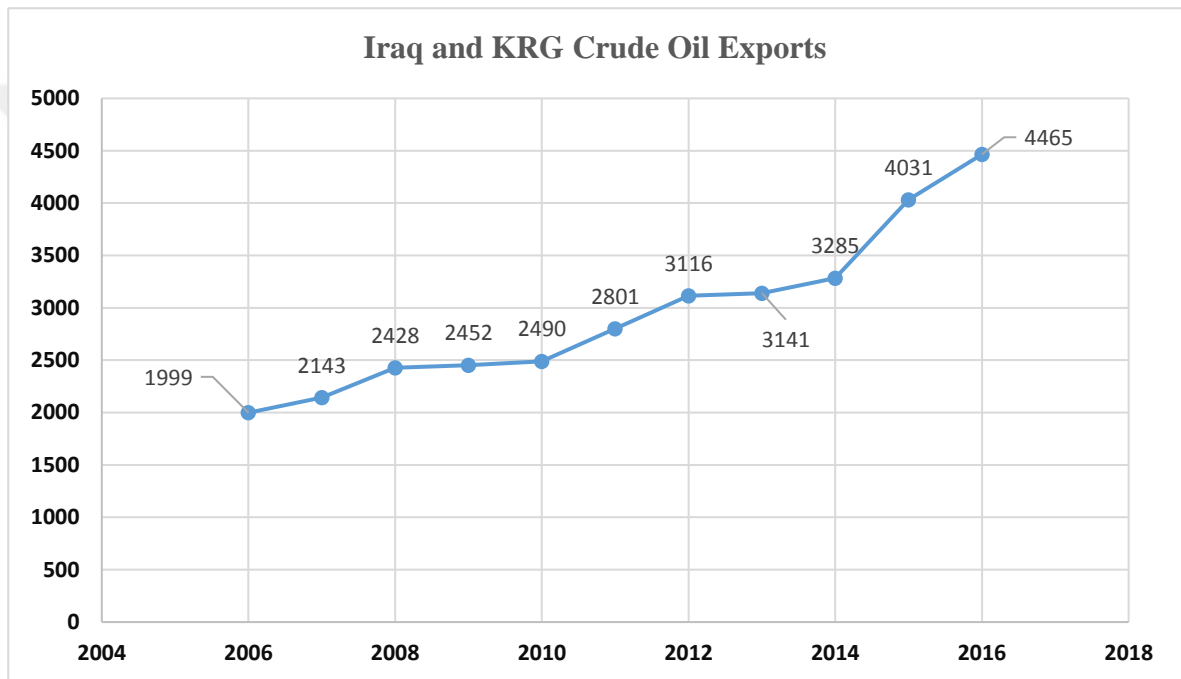


Figure 3.4. Iraq's Crude Oil Exports During 2006-2016

Source: Iraq's ministry of oil, (2016).

In this regard, most of Iraq's leading crude oil pipelines are situated in the north and are currently not practicable. The pipelines have undergone considerable damage since conflict and war in the country, besides restoration would take years and a considerable investment amount. The Iraq quota of Iraq to Turkey (IT) pipeline stopped working in March 2014, subsequent some attacks by militants.

Specified the particularly unstable environment along the pipeline and the scope of the pipeline's damage, processes are unlikely to resume in the anticipatable future. Now, the only working main export-oriented pipelines in northern Iraq are two pipelines constructed

by the KRG and its international partners: KRG's key pipeline and the DNO/Tawke pipeline, both of which linked to the Turkey pipeline to the Ceyhan port. However, some smaller pipelines carry crude oil from other fields to KRG's main pipeline.

3.1.6. The Role of Oil Prices

The oil prices have significant impacts on Iraq's revenues and all its economic sectors, as Figure 3.5, below shows, over 2006 to 2008 oil price in international markets sharply increases from \$55.60 to \$91.50 in 2008, just before losing its value by nearly 40% in 2009. Once again oil price in global oil markets suddenly increases from \$74.20 in 2010 to \$106.70 in 2012. Due to increases in demands in oil markets particularly more demands in China and India. However, just after the oil price reached the highest level in ten years, it started to decline from \$102.90 in 2013 to \$34.50 in 2016, which lost about 68% of its value.

While the country's energy sectors have and will remain to be an essential portion of the Iraqi economy for many years to come. Hence, oil revenue provides the bulk of the Iraqi national budget, as well as the budget in the KRI, that provides a vital source of revenue and funds for recovery and development, so, the decline in oil prices will lead to significant shortages and created significant problems for Iraqi rebuilding and sustainable economic development.

Iraq's oil prices are mainly continuous with the standard price of Dubai's light oil. While the monthly price differential between Iraq's oil and light oil fluctuated over the years, in 2013 and 2014 it averaged \$ 2.5 per barrel and \$ 0.35 per barrel, respectively. The speed of the progress of the organization in the north of Iraq to affect the conditions of the global oil market, the price of Dubai oil in June 2014 by about \$ 2.5 a barrel compared to the prices of May. However, prices quickly returned to the level of May, after July, which is likely due to the decline prospects for the expansion of 'Dahesh' to the south, where the central oil installations in Iraq. Despite the increase in oil exports in 2014, export revenues declined by 7% over the previous year.

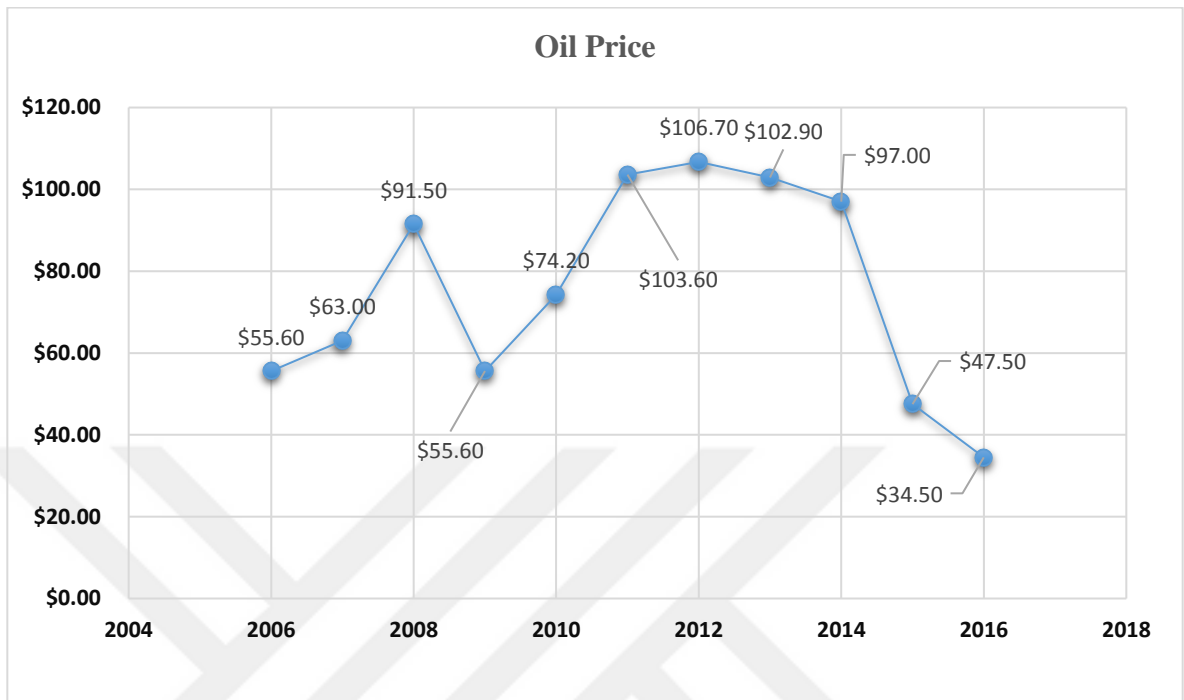


Figure 3.5. Oil Prices During 2006-2016

Source: Iraq's ministry of oil, (2016).

3.1.7. Oil Revenues

As Figure 3.6, summarizes the value of crude oil exports amounted (51.562) trillion Iraqi Dinar in 2016 which is equal to 43.6 billion US dollars, so compared to previous year decrease of (5.5%) with 2015 amounted (57.2) trillion Iraqi dinars in that equal to (49.4) billion US dollars decrease of (41.5%) with 2014 amounted (98.5) trillion Iraqi dinar approximately as (84.5) billion US dollars as development rate at (-12.3%) for 2011, and at (-17.3 %) for 2012.

While the country's economic structural weakness related with a development route that over-dependent on the oil industry, as presented through the double crisis started by the 2014 events particularly ISIS attacks and declining in oil price. So, most since the leading role of oil revenues for the government budget and the high level of unproductive public expenditures exemplify just one aspect, though important, of this structural weakness.

The troubled history of oil prices is a critical part of Iraq's revenue account. Thus, this factor is almost as significant as the volume of Iraqi exports since the Iran-Iraq war. For Iraq's economy, the price and quantity order and volatility provide some real uncertainty about the funds that may be available for recovery and development. These illusions affect the monetary impact of oil on the Iraqi economy. Oil could be a reliable source of revenue, and Iraq could produce and export more oil than in the recent past. What can the future hold for producing Iraqi oil? While there are many uncertainties, has this uncertainty been resolved over time in a manner favorable to developments that support the greater exploitation of already proven reserves, and the future crude oil output may be much higher than the highest levels of production ever achieved in the past.

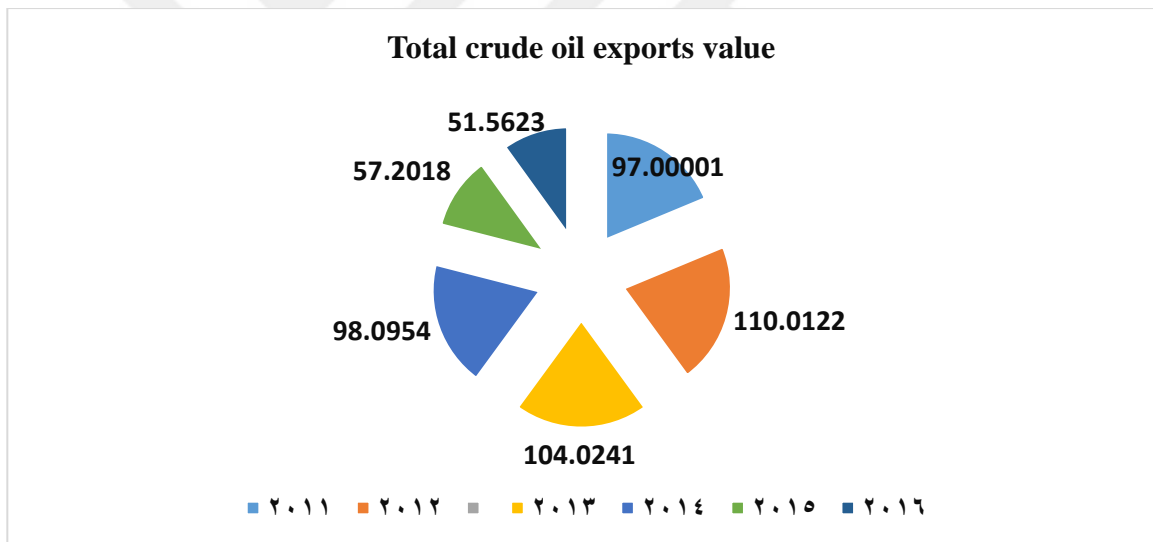


Figure 3.6. Total Crude Oil Exports Value for the Years 2011-2016 (trillion ID)
Source: Iraq's ministry of oil, (2016).

3.2. Political Economy Indicators

As Table 3.3, and Figure 3.7, indicates Iraq depending on oil revenues more any other Middle Eastern countries. As previously mentioned that the country oil production amounted to two-thirds of its GDP. According to (Joseph, 2016) nearly 95% of central government revenues and a production of 99% of total exports are oil. While Iraq total revenues in 2014 accounted for 104 billion US dollars, were 99 billion gained from oil exports. However, the

entire country's expenditures were 119 billion US dollars, which led to a -14% budget deficit. Declining in oil prices led to increases in the budget deficit in 2015, by -26%, due to a decrease in oil price by 48.9%. Even though in 2016 the oil price decline to 34.50% Iraq increased its oil exports to 4.5 mbpd, thus the budget deficit reduced to -17%. So, this result confirms that the critical element for Iraq's economy is that the country depends on oil and 97% of the government revenues from it is oil exports.

The Da'ash attacks have led to pressure on the public budget through increased spending on military and humanitarian needs and threatened the security of oil facilities. Force characterized the impact of the fall in oil prices on the economy because the structure of the Iraqi economy is not diversified and oil is Iraq's only exports. In 2015, the effects of the attacks had been encouraging and the fall of oil prices is entirely unfolding. This study deals with the latest developments in the Iraqi oil sector in light of the double shock and discusses the effects on the outlook for the growth of the oil sector in the short and medium term

According to IMF, (2016) the oil price decline has caused by a substantial decrease in budget revenue, pushing the fiscal deficit to an unsustainable level. Thus, the Iraqi authorities responded to the crisis with a mix of required fiscal adjustment and financing, sustaining their commitment to the exchange rate peg. While the exchange rate peg system offers a main nominal anchor in a highly uncertain environment with policy capability destabilized by the war against ISIS.

Table 3.3. Political Economy Indicators

	2014	2015	2016
Total Revenues	104	63	66
From Oil Exports	99	58	58
Oil Price (per barrel)	\$97.00	\$47.50	\$34.50
Oil Exports	3.1 mbpd	4.1 mbpd	4.5 mbpd
Total Expenditures	119	89	83
Current Expenditures	70	58	66
Budget Surplus/Deficit	-14	-26	-17

Source: Iraq's ministry of oil, (2016).

While, the fiscal policy of Iraqi central government considerably affected by the country's events and crises affecting oil prices in international oil markets, in the case of high oil prices increase the country's revenues mainly from oil and the gaining is growing with them as well as the size of government expenditure. Thus, in the case of low oil prices, the public expenditure declining, which all this back to the country's dependence on a single source of economic growth and of the oil production as becoming the financial policy of the government vulnerable to oil price volatility in global markets.

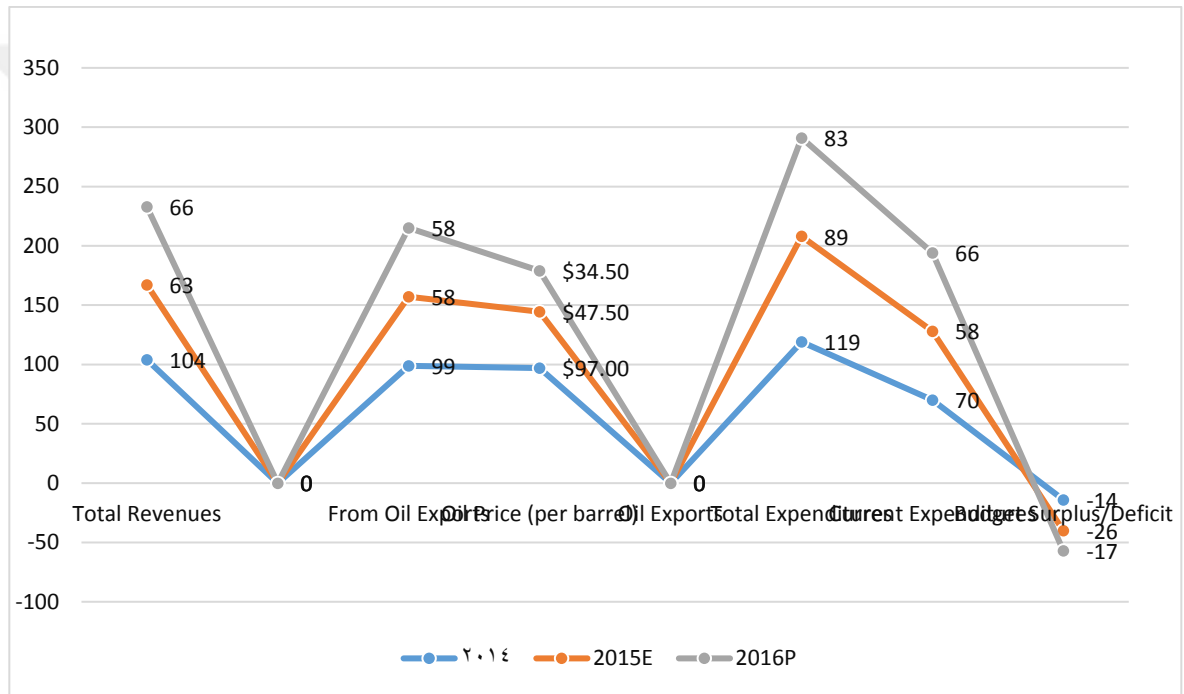


Figure 3.7. Political Economy Indicators

Source: Iraq's ministry of oil, (2016).

3.2.1. Iraq's Foreign Debt and International Reserves

The country's foreign debt remaining high, \$59.3 billion of US dollars in 2013, while international reserves to Iraq reached \$77.83 billion of US dollars in the same year. However, the central bank of Iraq dollar sales accounted for \$53.2 bn based on 1166 ID/\$ exchange rate peg. Accordingly, the collapse in oil prices and the ISIS attacks in 2014 forced the Iraqi government to continue to take the foreign debt and international reserves. So, the estimated

foreign debt for 2016 was \$71.6 bn it means that the country's foreign debt keeps arising while falling international reserves was \$53.4 bn.

While Iraq's indebtedness mainly has the consequence of the war with Iran. Iraq usually had been free of foreign debt and had collected foreign reserves that reached \$35 billion by 1980. These reserves drained in the early stages of the war. One source cites evaluated of Iraqi arms purchases alone during the 1980s as between \$52 - \$102 billion.

Thus, borrowing was intensified by the government borrowed gradually to pursue its economic development strategy. Foreign creditors primarily were willing to provide loans to Iraq in order to preserve access to the Iraqi economy, however as oil prices fell in the mid-1980s investor enthusiasm declined. After the war with Iran ended, Iraq faced a particular concern with its short-term debts, expected at \$35 to \$45 billion, from western creditors.

However, the government was resistant to western efforts to rearrange the debt on terms more favorable to Iraq. So, this stance was, in part, due to its reluctance to engage in greater transparency about its economy. Based on the controls of one source, Iraq has the highest debt burden in the world regarding debt to GDP or debt to exports.

Figures vary widely as to the extent and alignment of the debt. In 1991, at the end of the first Gulf war, Iraq told the United Nations that its debt totaled \$42.1 Billion. This submission stated that this debt had a maturity of five years at 8% interest. This figure excluded interest and funds from the Gulf Cooperation Council. OECD figures indicate that Iraq's outstanding total debt was \$18.4 Billion at the end of 2001. However, these figures only include OECD country bilateral loans and export credits.

The joint Bank of International Settlements/International Monetary Fund/ World Bank debt tables lists the debt as \$26.6 billion at the end of 2001. So, this probably does not include accrued interest. The Economist Intelligence Unit estimated total debt in 2002 to be \$64.3 billion. Of this, EIU estimates \$35 billion is a long-term principal, \$8.5 is short-term principal and \$21.7 billion in interest arrears.⁴⁵ Another estimate placed accrued interest at between \$23.6 billion to \$30.1 billion depending on the whether the interest capitalized. A survey of the debt conducted by the Center for Strategic and International Studies breaks

down public and private debt at more than \$108.1 Billion, \$47 billion of which calculated as interest. The CSIS figures include an estimate of \$30 billion payable to the Gulf states.

Table 3.4. Iraq's Foreign Debt, International Reserves, and Exchange Rate

	Foreign Debt	International Reserves	CBI Dollar Sales	CBI Auction Exchange Rate
2013	\$59.3 billion	\$77.8 billion	\$53.2 billion	1166 ID/\$
2014	\$57.6 billion	\$66.7 billion	\$51.3 billion	1166 ID/\$
2015 estimate	\$67.1 billion	\$53.4 billion	\$40.7 billion	1166 (Jan-Nov)
2016 projection	\$71.6 billion	\$42.7 billion	\$15.4 bn (Jan-Jun)	1182 (Dec) ^a

Source: Iraq's ministry of oil, (2016).

The energy sector as general and oil production mainly had a significant effect on the Iraqi state constructing process, which contributed to formative its economic, institutional and political position. Thus, over the years the country established the characteristic features of a rentier state, i.e., of a state establishing its economy based on income (oil dollar) rather than production.

Hence, the Iraqi budget originating from oil revenues rather than taxation. A state which, furthermore, uses the income as a key “consensus builder,” converting it into mostly unproductive public expenditure. Moreover, the negative impact of the energy sector's significant over other national production sectors, however, Iraq as a rentier state connotation has been no less significant in political and influential terms.

Future production prospects in Iraq contrast commonly. While most experts acknowledge the existence of proven reserves to meet the official target, unlike many regions of the world, geological hazards are virtually non-existent in Iraq, there is a general view that these figures are intended for public consumption. So, this view is realized in official figures as part of an intentional scheme to justify the re-entry of international oil companies into Iraq after nearly four decades of nationalization in the face of the intense national nationalism of the Iraqi people. However, this expansion rate, unprecedented in history this sector will be

subject to continuing obstacles; security, political, and infrastructure obstacles. Skeptics point to the fact that within seven years Iraq could not reach pre-war levels of crude oil.

In 2008, Iraq's oil income rose to more than \$ 60 billion, an increase over the previous year. However, the government spending rate has also risen to a higher level, jumping by an impressive 1% in 2007 and 2008, almost a quarter of this increase is classified as a public investment to rebuild the dilapidated infrastructure. The rest was an increase in current expenditures, especially in salaries, pensions, goods, and services provided by the government.

Iraqi government officials have interpreted spending decisions as a reaction to long-term trends in inadequate investment and insufficient payments from public salaries in Iraq as a result of war, isolation and civil war. In 2009, the budget shrank due to the collapse of the markets, but not as much as the decline in revenues in the world markets, which suffered a substantial decline, and showed a massive fiscal deficit.

In this sense, Iraq has fallen victim to one of the traditional phenomena in the oil-producing countries, namely the growing reliance on oil revenues associated with a highly volatile income situation. In the more extended run, there has been a new spike in spending of up to \$75 billion due to the 2008 boom, which both the government and the IFI expect to continue at least until the end of 2012. The proposal to distribute partial oil revenues is mainly in line with the economic situation of the government of Iraq and the international financial institutions.

It assumes that public spending will rise moderately, just over 2% annually, in line with Iraq's annual population growth over the past few years, allowing public service and public investment to continue at current levels. It also assumes conservatively that revenues from the non-oil sector will rise by about one trillion dinars (\$850 million) per year, lower than the levels achieved in recent years. While ignoring the potentially massive impact of the quota distribution policy itself, these restrictions still allow shares starting at \$222 per citizen in 2012 and rising to \$1,954 for the citizen in 2015, when the current parliament is in the pre-election period. From 2012 to late 2015, \$73 billion in shares will be distributed directly to Iraqi citizens. So, this will be in addition to government

spending, currently set by a public budget. On the downside, some economists are raising concerns that such a cash injection will lead to inflation.

While the Iraqi economy suffers from a severe shortage of capital, even when evaluated according to traditional concepts and works, before any consideration of questions of social inclusion, the World Bank issued a report indicating that state-owned banks own nearly two-thirds of all state assets since the days of the former regime and that they represent the only financial institutions with branch networks throughout the country. The vast majority of these assets, in turn, belong to the state.

Therefore, new governments in both Baghdad and Erbil must recognize that ambiguity at this critical moment for oil markets, and as oil or gas development struggles to gain a position, that could negative to Iraq's standing as a low-cost producer with high potential. Undertaking this issue should a priority as part of their governing command. The KRG, also, should use this motivation to obtain its internal house in order.

While possibly an obvious point, as political understanding remains indescribable, the failure to reconstruct, naturalize, and restoration of the Sunni region affected by ISIS (specifically Mosul) could activate Iraq's next crisis. The United States, examining for a post-ISIS approach, should identify the significance of a comprehensive, forward-looking policy beyond uniting behind a common enemy. Besides lacking a new approach, US policy will remain to encourage collaboration on the grounds of a threat that is declining, while flouting the real threat of political division.

DISCUSSIONS AND CONCLUSIONS

The primary purpose of this master thesis study is to examine the political economy of oil production in Iraq during 2006-2016. Firstly, it should note that although challenges to increasing oil production in Iraq broadly remain, Iraq has made incredible progress over the last decade, mostly amid challenging situations should note that while contests to since 2014. However, there are still difficulties in overwhelmed, which should play a significant role to solve for the new government and leadership in Iraq and the KRI following the spring 2018 elections.

While Iraq is the second main crude oil producer in the OPEC organization after Saudi Arabia, besides the country holds the world's fifth-largest verified crude oil reserves after Venezuela, Saudi Arabia, Canada, and Iran. Although, most of Iraq's main known oil fields are producing or under development, though much of its identified hydrocarbon resources have not fully exploited. Though, a total of Iraq's recognized oil fields is onshore. The major fields in the south have comparatively low extraction costs.

As mentioned that BP (2017) reported that total proved reserves of oil, usually kept to be those quantities that are engineering and geological data shows existing economic and operating conditions. Iraq seized 112.0 billion barrels of verified crude oil reserves at the end of 1996, while increased to 115.0 billion barrels at the end of 2006, however, held 142.5 billion barrels at the end of 2015 which demonstrating 18% of proved reserves in the Middle East and almost 9% of global reserves, besides Iraq held 153.0 billion barrels at the end of 2016. That is ranked third in the Middle East after Saudi Arabia and Iran, the country also ranking fifth in the world.

Accordingly, Iraq's economy is substantially reliant on oil revenues. So, in 2014, crude oil export revenue amounted to 93% of Iraq's overall public budget, according to the IMF, (2015), in 2015, Iraq (excluding KRG) received marginally more than \$49 billion dollars in crude oil export revenue, \$35 billion less than in 2014, despite a substantial increase in export volumes, due to sharply decline in oil price from \$97 in 2014 to \$47 in 2015.

In this context, U.S. Energy Information Administration (EIA) (2016), conducted a report on Iraqi energy, mentioned that in early June 2014, ISIL launched an attack in Iraq, as a result, seized Mosul city, one of the major cities in the north of the country, and then other nearby settlements and towns. While ISIL launched attacks affected northern Iraq, but not including the KRG's production and refinery operations, nevertheless it did not affect the country's southern oil production and crude oil exports, that accounted for around 95% of Iraq's total crude oil exports in 2014.

The present political environment in Iraq proves that the simmering disagreements among government in Baghdad and Erbil on energy resources and revenues still hold the potential to boil over. Further to the point, self-regulating companies and international oil companies equally have sustained to invest in Iraq and the KRI despite the tough security environment and the lack of a political settlement. A lengthy period of improbability, though, could raise the specter of political risk, which, combined with international market conditions that have constrained investment, could significantly dampen investor interest.

In this context, Iraq's oil bonds lie in two broad areas: particularly Kirkuk in the north and around it, besides in the south, in and around Basra and Umm Qasr, close to the Persian Gulf port of Mina al-Bakr. While oil production centered on the Rumaila field – the primary producing field in the south, with 663 producing wells. Also, together with nearby fields, it has shaped more than half of the country's output. In the north, oil production from Kirkuk, the first northern guarantee and satellite fields has accounted for about 40% of Iraq's oil production since it resurrected under the OFFP. So, port services for southern oil were harshly dented during the first Gulf war, however, were satisfactorily repaired to handle the amounts of oil – exceeding one mbd – exported under the Oil for Food Program.

The study found that Iraq's oil production curve in recent years has remarkably specified the positions, even if not mainly at the levels estimated in earlier, more positive forecasts. Iraq has developed the world's fourth-largest oil exporter. Moreover, the second major producer in OPEC organization, with production above 4.1 million bpd for the first time in 2015, of the amount produced in this period, almost 3.5 million b/d produced in southern Iraq under the central government in Baghdad. Moreover, 450,000 b/d produced in

northern Iraq, most of which were at fields operated by the KRG, besides the rest at fields operated by the NOC of Baghdad.

Thus, collectively with KRG to roughly 4.5 million bpd in 2016. While in 2017, the country also proved a new record for annual exports. However, production levels in 2006 were just 2 million bpd, demonstrating a more than doubling of production during a ten-year. Accordingly, crude oil production averaged nearly 4 million b/d in 2015, which 700,000 b/d more than the daily production level in 2014.

According to EIA, (2016) Iraq is undertaking a determined program to improve its oil fields besides to raise its oil production levels. After two licensing rounds over 2008 and 2009, so, the Iraqi ministry of oil signed a dozen long-term technical service contracts (TSC) with international oil companies to improve or re-develop some giant oil fields, most of which were already producing. Nevertheless, these expansion plans are now in flux because of the economic crisis in Iraq affected by the sustained low oil prices and war against ISIS. In the north Iraqi region, the KRG has also dropped its set production targets. Earlier, is scheduled to rise production and pipeline capacity to 1.0 million b/d by the end of 2015 or early 2016.¹⁷ But, the KRG is now aiming that amount for the end of 2016. However, project delays caused by the ISIS attacking and past non-payment of international oil companies for work performed to make it unlikely this goal will achieve.

While challenges continue to achieving the aims of increased oil production and revolving gas from probable to production, there is considerable opportunity for Iraq's resources to produce revenue and pay to broad-based economic development, if managed appropriately. As both Iraq and the KRI head into an election year, impending new governments both in Iraq and at the helm of the KRG should seize this as an opportunity to target investment to specific projects that contribute to long-term economic development goals.

KRG, the events of fall 2017, the events of fall 2017 should illustrate the difficulties in their continued reliance on budget transfers in Baghdad or oil exports facilitated by a neighbor that sees the energy in geopolitical terms. The KRG should also focus on diversification, which could lay the groundwork for more sustainable and politically-insulated economy over the long term. If oil resources in Iraq remain a political football, and

it appears likely they will, and the question of exports remains wrapped up in more extensive domestic and regional power politics, the development of a diversified economy that is not entirely dependent on oil revenue would seem to be the only viable path forward for the KRI.

The oil prices have significant impacts on Iraq's revenues and all its economic sectors, over 2006 to 2008 oil price in international markets sharply increases from \$55.60 to \$91.50 in 2008, just before losing its value by nearly 40% in 2009. Once again oil price in global oil markets suddenly increases from \$74.20 in 2010 to \$106.70 in 2012. Due to increases in demands in oil markets particularly more demands in China and India. However, just after the oil price reached the highest level in ten years, it started to decline from \$102.90 in 2013 to \$34.50 in 2016, which lost about 68% of its value.

While the country's energy sectors have and will remain to be an essential portion of the Iraqi economy for many years to come. Hence, oil revenue provides the bulk of the Iraqi national budget, as well as the budget in the KRI, that provides a vital source of revenue and funds for recovery and development, so, the decline in oil prices will lead to significant shortages and created significant problems for Iraqi rebuilding and sustainable economic development.

Iraq's oil prices are mainly continuous with the standard price of Dubai's light oil. While the monthly price differential between Iraq's oil and light oil fluctuated over the years, in 2013 and 2014 it averaged \$ 2.5 per barrel and \$ 0.35 per barrel, respectively. The speed of the progress of the organization in the north of Iraq to affect the conditions of the global oil market, the price of Dubai oil in June 2014 by about \$ 2.5 a barrel compared to the prices of May. However, prices quickly returned to the level of May, after July, which is likely due to the decline prospects for the expansion of 'Daesh' to the south, where the central oil installations in Iraq. Despite the increase in oil exports in 2014, export revenues declined by 7% over the previous year.

The Da'ash attacks have led to pressure on the public budget through increased spending on military and humanitarian needs and threatened the security of oil facilities. Force characterized the impact of the fall in oil prices on the economy because the structure of the Iraqi economy is not diversified and oil is Iraq's only exports. In 2015, the effects of

the attacks had been encouraging and 'the fall of oil prices is entirely unfolding. This study deals with the latest developments in the Iraqi oil sector in light of the double shock and discusses the effects on the outlook for the growth of the oil sector in the short and medium term.

According to IMF, (2016) the oil price decline has caused by a substantial decrease in budget revenue, pushing the fiscal deficit to an unsustainable level. Thus, the Iraqi authorities responded to the crisis with a mix of required fiscal adjustment and financing, sustaining their commitment to the exchange rate peg, although the exchange rate peg system offers a main nominal anchor in a highly uncertain environment with policy capability destabilized by the war against ISIS.

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APPENDIX

Appendix (1) Curriculum Vitae

PERSONAL INFORMATION		
Name and Surname	Zavar Salah Ali ALI	
Date of birth	18th January 1986	
Address	Malta, Duhok, Iraq	
Phone	+964 750 4597617	
E-mail	zavar.babiry@gmail.com	
EDUCATION AND TRAINING		
Degree	Institution	Time Interval
Diploma of Science	Technical Institute Duhok, Diploma, Accounting, Department of Accounting	2009
Bachelor of Science	Nawroz University Duhok, College of Economic and Administration, Department of Economic	2015
Master of Science	Siirt University, Faculty of Economic and Administration, Department of Economic (TURKEY)	2018
WORK EXPERIENCE		
Ministry	Position and Responsibilities	Time Interval
PERSONEL SKILLS		
Languages	Kurdish Native language	
	Arabic Very Good in Reading, Writing and Speaking.	
	English Good in reading and writing. Basic communication skills in speaking	
Computer skills	MS Word, MS Excel, and MS PowerPoint, Windows, Internet	