

Management and Computer Science
Macroeconomics

Petro-Dependence and Diversification;
An Analysis of Iraq's Economic Strategies

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I. Abstract

Iraq's economic trajectory has been deeply intertwined with its petroleum industry, shaping the nation's fiscal policies and development strategies. This thesis, titled "Petro-Dependence and Diversification: An Analysis of Iraq's Economic Strategies", investigates the historical and contemporary economic frameworks that highlight Iraq's reliance on oil revenues and efforts toward economic diversification. Utilizing data from various sources, including the Iraqi Ministry of Planning, Ministry of Oil, and historical economic reports, the analysis delineates the fluctuations in Iraq's GDP, oil production, and sectoral contribution from 1950 to 2023.

The study begins with an overview of Iraq's economic history, emphasizing the role of oil revenues in post-1950s development plans and the nationalization of the oil industry. It explores the shifts in economic strategies, including the impact of the Iran-Iraq War and subsequent UN sanctions in the 1990s, which constrained economic growth.

In the contemporary context, the analysis examines Iraq's GDP growth, the contribution of oil to the national economy, and attempts at diversifying economic activities. Findings underscore the predominant role of oil, accounting for over 65% GDP in 2022, with limited contributions from agriculture, industry, and services.

The thesis concludes by evaluating the effectiveness of Iraq's diversification strategies and proposing policy recommendations to mitigate petro-dependence and foster sustainable economic development.

Dedications

I dedicate this work to the most important people in my life, especially my parents Salam and Rima for their endless support and unconditional love.

Also, my siblings Sara, Mustafa, Dalya, my brother-in-law Ahmed, and my friend throughout this university journey since day one Iraj, as they never left my side and kept supporting me with love.

Also, I dedicate my dissertation to unique and special people, my close friends, who have always been my supporters.

At last, I dedicate this work for Zaid and Misk as a work of inspiration throughout their upcoming academic years.

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I would like to express my deepest gratitude to my supervising professor, Maurizio Iacopetta, for his guidance, support, and encouragement throughout my research journey. I am also grateful to Luiss Guido Carli University for providing the necessary resources, academic environment, and unwavering support.

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II. Introduction

Background and Significance of the Study

The Iraqi economy has mainly relied on petroleum export that has been the key factor in formation as well as implementation of not only fiscal policies but overall development of the country within recent years. High oil prices have resulted in unprecedented prosperity for the country and in the same way, those high prices have exposed the country to vulnerability with respect to political uncertainties and global market shocks. Recognizing how the economic plans of Iraq evolve, especially on the basis of its dependence on oil money and quest for diversification, is a strategic step in the research and implementation of policies with development and economic strategies objectives in mind.

Research Objectives

The premise of the thesis research is assessment of Iraq economic policies with emphasis shifted towards the country's overdependence on oil revenues and attempts for economic diversification. The research intends to analyze the historical information and current data and therefore, the research is progressing to detect the patterns, challenges, and opportunities within the economic system of Iraq. The research aims at shedding light on the role of oil income on the economic policies and development plans of the oil phase. This role will be assessed to understand the effectiveness of diversification strategies used to minimize the risks associated with petro-dependence.

Research Questions

To achieve these objectives, the study addresses the following research questions:

1. How have oil revenues shaped Iraq's economic policies and development strategies since the 1950s?
2. What have been the major economic impacts of the Iran-Iraq War and subsequent UN sanctions on Iraq's economy?
3. How has Iraq's GDP growth and sectoral contributions evolved in the contemporary period (2003-2023)?
4. What are the key challenges and successes of Iraq's diversification efforts?
5. What policy recommendations can be made to enhance Iraq's economic stability and reduce its dependence on oil?

III. Literature Review

Overview of Economic Theories on Resource Dependency

Resource dependence at the level of the countries that are rich in oil has been studied very widely in economic literature. The "resource curse" idea implies that economies with numerous natural resource endowments such as oil often tend to have a much slower economic development rate than the countries that lack resources. This will occur due to many factors that include fluctuations due to volatile prices of commodities, governance problems and reduced incentives for diversification. Iraq has totally sanctioned

the management of the oil industry, which in turn has guided its economic strategies and policies to attain a high growth and a high rate of vulnerability.

Historical Context of Iraq's Economic Development

The economic history of Iraq is a complete case study about resource dependency. The late 1950s witnessed the transformation of the Iraqi economy as the country entered into a fifty-fifty profit sharing agreement with foreign oil companies and received oil revenues. This stage witnessed the setting up of the Development Board responsible for the allocation of 70 percent of the oil revenues to capital development projects. Even though the Development Board with limited mandate took this step, the implementation of a more broad economic policy was not successful leading to underutilization of oil revenues for the comprehensive development of the economy.

The nationalization of the oil industry in the 1960s and 1970s reinforced the state's dominant position with regards to the oil resources. The ascent of The Ba'ath Party in 1968 to power introduced economic and social reforms that focused on strengthening industry, raising agricultural output, and shoring up the public sector. The state's "Big Push" strategy of the 1970s, which mainly depended on oil revenues, and was most prominently executed through the Five-Year Development Plans, was heavily funded by these resources. (El-Naggar S., 1989)

The Impact of Oil Revenues on Economic Policies

Oil revenues have all along performed a primary role of driving economic reforms in Iraq. The increased oil revenues in the 1970s following the nationalization of the oil business resulted in high levels of public investments in infrastructure and social services. Besides that, oil exports accounted for a large percentage of the economy, making it more sensitive to world oil price movements. Iraq experienced severe economic problems during the Iran-Iraq War (1980-1988) and the UN sanctions imposed in the 1990s. This resulted in a dramatic drop in oil revenues and subsequent economic contraction and poverty increasing. (Christoff, 2004)

The Oil-for Food Program (OFFP) that was implemented in 1996 under UN authority targeted at the mitigations of humanitarian stress caused by sanctions. Although the oil-for-food program allowed Iraq to buy limited quantities of food and medicine in exchange for oil, its emphasis on the country's undiversified economy and operating under international sanctions. (Christoff, 2004)

Diversification Strategies in Resource-Rich Economies

Diversification is a vital strategy for oil and gas rich countries to solve risks related to resource consumption dependency. A diversification in the sector that leads to the development of non-oil sectors like agriculture, manufacturing and services can be achieved through positive outcomes. Analyses of the comparative cases of the other resource-rich countries, like Saudi Arabia and UAE, give an understanding of how a targeted investment, competent and efficient governance, and robust institutional frameworks positively affects the economic diversification.

In Iraq the diversification efforts have undergone projects to invigorate the agricultural output, the industrial production and the infrastructural development. These endeavors are greatly affected by political instability, underdeveloped structures and limited money. In spite of the fact that various sectors

like tourism failed to develop, some of the other sectors have an immense potential for growth. Continuing the line of thought, the agricultural sector with improved efficiency through modern technologies and water management facilities holds sway to be able to reduce the import dependency on food and attract more employment that benefits the locals.

Economic Theories Relevant to Iraq

The Resource Curse Theory underpins the problem of Iraq having large oil reserves, which, being the source of enormous wealth, also hinder the growth of sustainable development and diversification. The inrush of oil income concentrated government expenditure on short-term framework and non-oil sector development, neglecting overall economic stability and growth. Due to overdependence on oil, the economy of Iraq is closely connected to the movements of the global oil price. This causes problems for the stability of the economy and the growth prospect.

The Dutch Disease model explains the economical tendencies happening in Iraq, where the oil sector was giving much labor and capital at the expense of non-oil sectors such as agriculture and manufacturing. The outcome of this was an increase in the actual exchange rate appreciation which made non-oil exports less competitive internationally, thus cementing the dependence of the economy on oil. This shift did not only stall the development of a diversified economic base but it also decreased the global competitiveness of the country's non-oil economy. (El-Naggar S., 1989)

The Rentier State Theory helps to look at the political and social aspects of oil dependence in Iraq which are not directly seen from the economic theories. According to this theory, the Iraqi state gets from oil rents without justification of taxing and in turn reduces the role of social contract between state and citizens. As a result, there emerged a governance model that is based on reliance on favoritism and reduced accountability, and, instead of establishing inclusive institutions, a premium is put on making the regime stable through the spreading of oil revenues.

IV. Methodology

The research approaches this topic as a mixed methods research, which is the combination of qualitative and quantitative data sets to assess Iraq's economic strategies in a comprehensive manner. The thesis plan embraces the historical review, statistical discoveries, and case-based analysis. Through these mixed techniques, study aims at profiling recurring patterns, obstacles, and opportunities put forth in Iraq's economic structure centered on oil rents and programs aimed at economic diversification.

Data Sources and Collection Methods

Quantitative Data

Iraq Oil Exports (2021, 2022, 2023): these statistics comprise of the amount of oil that Iraq has exported annually, the revenue it has generated, and the price variations within the past three years. Through this data, a quantitative assessment of oil revenues as a GDP measure can be made and the economic impact caused by the fluctuations in global oil prices can be calculated.

Iraq GDP (2022): detailed data on Iraq's GDP, such as sectoral contributions and economic growth rates, are useful in analyzing the economy and their impact on the economy and the success of this diversification process.

Qualitative Data

Investment Policies in the Arab Countries: this paper aims at giving the historical context of the economic development, policies and strategies of Iraq from the 1950s to the 1989 as a point of reference. It allows for the understanding of different socio-political factors that influence the economic institutions and economics in general.

Economic Policy and Prospects in Iraq: offers a scholarly analysis of Iraq's economic policies and strategies focusing on the period "post-2003", providing theoretical frameworks and case studies relevant to the research questions.

GAO Report on the Oil for Food Program: this report outlines the implementation, as well as the results of the Oil for Food Program that arise in connection with governance, revenue management, and the socio-economic effects of sanctions.

Analytical Framework

Descriptive Statistics: provide a summary and description of the numerical data from oil exports and GDP reports, and also present the measures of central tendency and dispersion.

Time-series Analysis: analyzing variations in oil incomes, GDP levels, and sector input on the timeline. This technique helps to identify repetition and the cyclical trend of Iraq's economy.

Case Studies: intends to do an in-depth exploration of specific diversification activities in Iraq particularly agricultural development programs and industrial projects. Based on the data obtained from the qualitative sources, these case studies provide insights into the achievements and challenges of the initiatives.

Limitations of the Study

The issue of data availability and reliability are the main limitations of the research. Historical data, primarily from politically troubled periods like the Iran-Iraq War and UN sanctions might be either missing or impartial. Government statistics, including the ones on oil production and revenue, could be untruthful as a result of political motivations or accounting practices.

The analysis of diversification initiatives is restricted by the short period within which it is done and the changing nature of economic policies. Some diversification initiatives may not have generated strong enough evidence to prove their efficacy and some projects ongoing may not have been included in this study and so their results may not have been reflected.

Another limitation of the study is its focus on macroeconomic indicators, and it may not capture the microeconomic realities and differences among the regions of Iraq. The implications of various economic measures to certain sectors and communities can be different, and a more detailed analysis can help gain additional insights.

External performances of an increase or decrease of global oil prices, geopolitical events, and international trade policies may lead to great economic changes in Iraq. These factors are beyond the control of national policy makers and make the analysis complicated.

Thus, the purpose of the study is to present a holistic analysis of Iraq's economic policy, offering insight into the trends that are observed, as well as a policy prescription aimed at advancing sustainable growth while moving the country from being petrol dependent.

V. Historical Analysis of Iraq's Economic Strategies

The Role of Oil in Iraq's Economy (1950-1958)

In the early 1950s, Iraq's economy started to change drastically with an increase of oil revenues coming up. With the 1950 "fifty-fifty" profit sharing agreement that gave the Iraqi government a large portion of the foreign oil companies' income, this country's oil income has drastically increased. During this period, the Development Board was created by which 70 percent of petro funds was allocated to capital development projects. The board targeted infrastructure, health, and education as a way of revamping the country to improve the living conditions. The Development Board's specific mandate on the monetary policy became the main issue to its formulation of comprehensive economic development due to the underutilization of oil revenues. (El-Naggar S., 1989)

Nationalization and Development Plans (1958-1968)

The 1958 Revolution, which overthrew the monarchy, resulted in substantial modifications to the economic policy of the country. A new republican government was looking for more control over national resources and the process finished off with the nationalization of the oil industry in the early 1960s. The trait of that time was the conduction of development works which had diversification of the economy as the key objective. The Core Component of Development Plan (1965-1969) is Industrialization, Agriculture, and Infrastructure. Despite these efforts, political instability and regional conflicts limited the effectiveness of those strategies. (El-Naggar S., 1989)

Economic and Social Reforms Under the Ba'ath Party (1968-1980)

The Ba'ath Party, which gained power in 1968, represented another phase of changes in Iraq's economic policy. The new leader carried out economic and social reforms, underlining state authority in natural resources and paying much attention to the planning. Nationalization of the Iraq Petroleum Company in 1972 was a turning point, state revenues rose and the control over oil resources were increased. As a result, the next stage of the 1970s funded an intensive public investment in health, infrastructure, and education. The 'Big Push' strategy, by which the 5 Year Development Plans were implemented, was devoted to rapid industrialization and modernization, indicating dependence on oil revenues in economic expansion. (El-Naggar S., 1989)

The Impact of the Iran-Iraq War (1980-1989)

September 1980 Outbreak of the Iran-Iraq War affected the economic prospects of Iraq in a multitude of ways. The war resulted in a disruption in oil production and exports, leading to a decline in revenue that

was significant. The government reallocated massive sums of budget towards military expenditures thereby making it difficult to invest in non-military sectors such as education, healthcare and infrastructure. This conflict aggravated existing economic problems, the inflation and debt. Although the first eight years of the war led to a brief increase of the oil revenues resulting from the higher prices because of the conflict, profound negative effects of the war, including loss of lives as well as financial and infrastructure destruction, have permanently damaged the country's economy. (El-Naggar S., 1989)

Economic Sanctions and the Oil-for-Food Program (1990-2003)

The invasion of Kuwait and the ensuing Gulf War brought about strict sanctions imposed by the United Nations Security Council. These sanctions led to a paralysis of the Iraqi economy, as a consequence a massive decline in oil production and revenues. During the sanctions period there was a substantial degradation of living standards, infrastructure, and public services is that. To respond to the humanitarian crisis, the UN implemented the Oil-for-Food Programme (OFFP) in 1996, the initiative allowed Iraq to sell small numbers of oil in return for food, medicine, and the supplies that were deemed essential. Although the OFFP addressed humanitarian problems to some extent, it also exposed economic overreliance on oil, as well as difficulties of conducting business under strict supervision of the international community.

Regardless that OFFP decreased the hardship, during the sanction period Iraq was left with a very weak economy which was marked by high inflation rate, unemployment, and the decline in the standard of living. The government's efforts to circumvent the sanctions through smuggling and commissioning of illicit surcharges did not improve the circumstances. The economic slowdown and rising awareness of the need for the structural reforms and diversification in the run-up to the 2003 invasion are the peak of events. (Christoff, 2004)

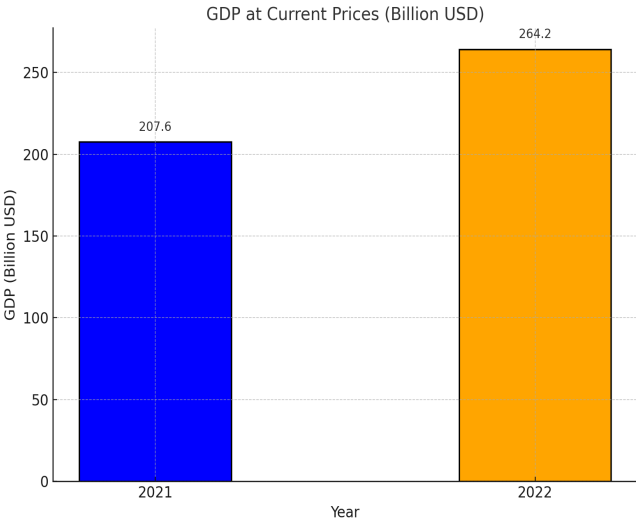
2003 and Beyond: Post-Saddam Economic Reforms

Upon the collapse of Saddam Hussein regime in 2003 the new government headed by L. Paul Bremer transition government initiated broad economic reforms. Their main goal was stability of the economic environment and renewal of the economy. Critical programs involved the substitution of Iraq Dinars, whose credibility has been destroyed, with ones that have been stabilized and amended the opening of the economy for liberalization steps to support more foreign investment, and the rearrangement of inactive State-Owned Enterprises (SOEs). The austerity fiscal policies targeting budget deficits and inflation stability, in addition to the development infrastructures engrossing the energy and transportation sectors while security issues inhibit investment and stagnate business activities. Unlike the vital surgery of the CPA which was being complemented by many international finance programs as well as debt relief agreements, the Iraqi economy would not be stabilized. Oil revenue did not promote long-term expansion of the other sectors of the economy. (Foote, et al., 2004)

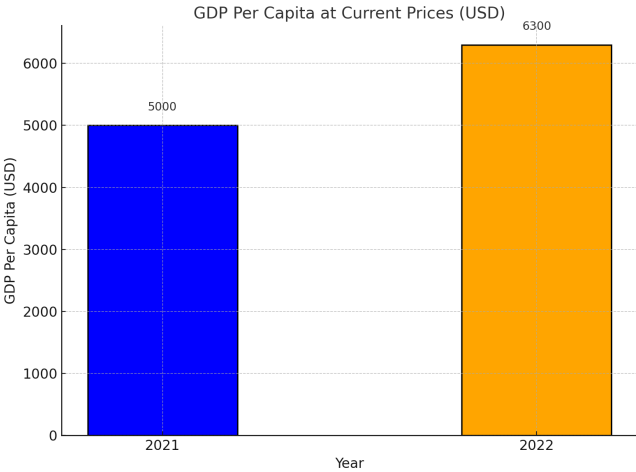
VI. Contemporary Economic Analysis (2003-2022)

GDP Growth

In the years following 2003, Iraq experienced fluctuating GDP growth rates largely influenced by oil productions and oil prices. The oil sector remained the backbone of Iraq's economy, contributing significantly to the GDP. In 2022, the GDP at current prices reached 264.2 billion USD, representing a 27.2% annual growth from 2021. The GDP per capita at current prices also saw a significant growth, rising to 6,300 USD in 2022 from 5,000 USD in 2021, reflecting a 25.1% annual increase.



Graph 1: GDP in 2021 and 2022 at the Current Prices



Graph 2: GDP Per Capita in 2021 and 2022 at the Current Prices

Sectoral Contributions to GDP

Agricultural Sector

Agriculture, which includes forestry, hunting, and fishing, showed modest contributions to the GDP. In 2022, this sector contributed 7,645.2 million USD. While agriculture has potential for growth, its overall impact remains limited compared to other sectors. Investments in modern technologies and irrigation systems are crucial to enhance productivity and reduce food import dependence.

Industrial Sector

The industrial sector, which includes mining and quarrying, plays a dominant role due to the oil industry. In 2022 the data shows that mining and quarrying contributed 151,649.6 million USD, with crude oil alone contributed for 153,547.3 million USD. Manufacturing, although smaller in comparison, contributed 4,796.6 million USD. The heavy reliance on oil underscored the challenges of diversifying the industrial base.

Service Sector

The services sector includes various sub-sectors such as finance, insurance, real estate, business services, transport, communication, storage, social and personal services. In 2022, the services sector made a substantial contribution to the GDP;

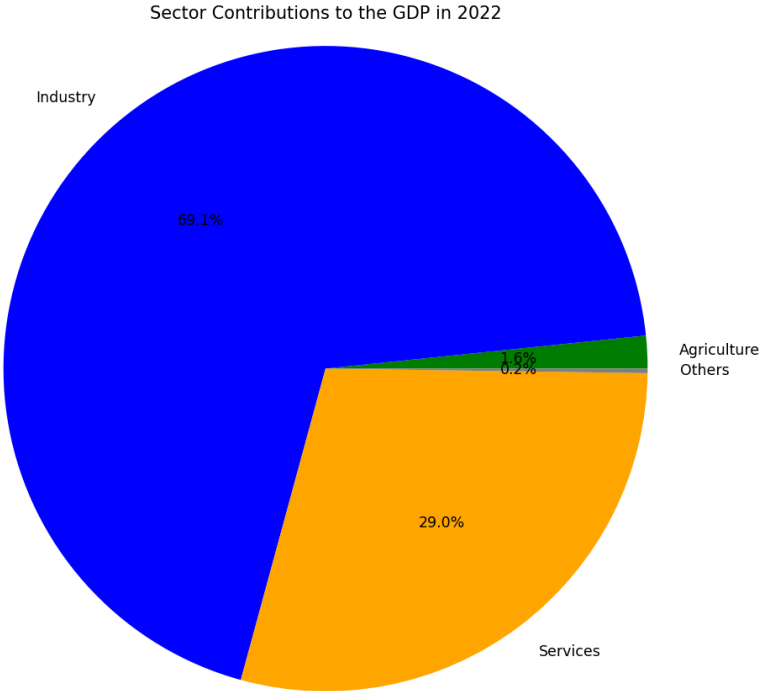
Finance, insurance, real estate, and business services: 13,011.5 million USD.

Transport, communication, and storage: 23,381.2 million USD.

Social and personal services: 40,597.6 million USD.

General government services: 31,598.2 million USD.

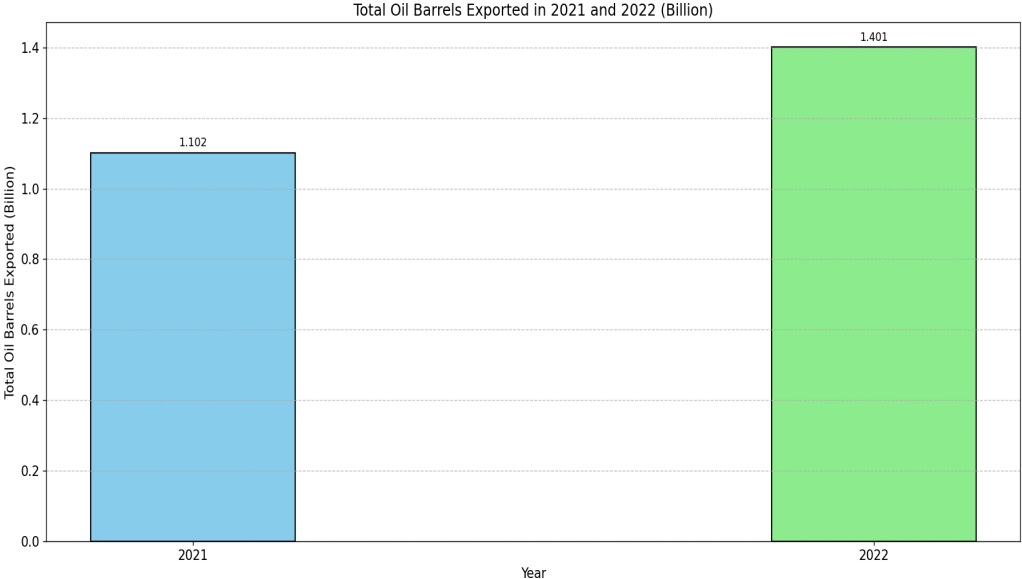
Despite significant contributions from these sub-sectors, the service sector still falls behind the oil industry in terms of overall economic impact.



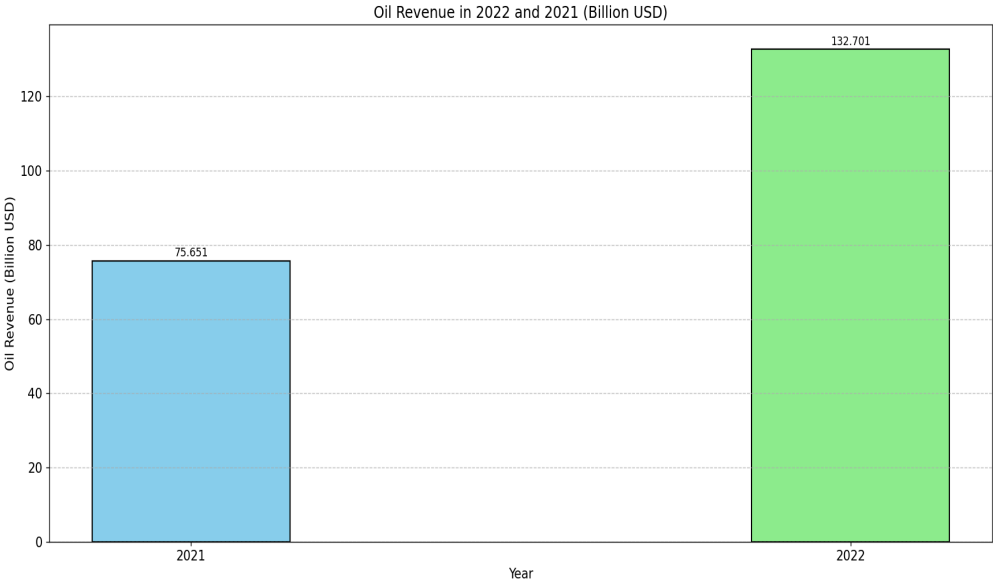
Graph 3: Sectoral Contribution to the GDP in 2022

Analysis of Oil Production and Revenue

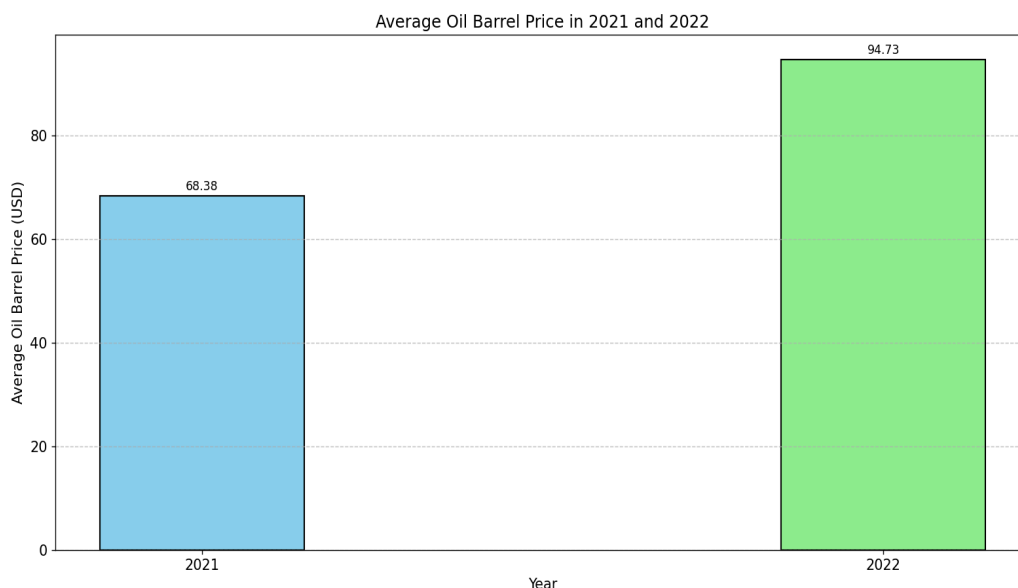
Iraq’s oil production and export activities have been crucial to its economic framework, particularly in the post-2003 period. The country’s vast oil reserves have continued to be a critical source of revenue, influencing economic policies and development strategies. During the year 2022, Iraq exported a total of 1.4 billion barrels of oil. The total revenue from these exports amounted to approximately 132.7 billion USD with an average barrel price of 94.7 USD.



Graph 4: Total Oil Barrels Exported in 2021 and 2022 (Billions of Barrels)



Graph 5: Total Revenue in 2021 and 2022 (Billion USD)



Graph 6: Average Oil Barrel Price in 2021 and 2022

Evaluation of Diversification Efforts

The attempt to diversify the economy of Iraq has already been made but it was not successful. Measures that seek to enhance the agricultural and industrial sectors have demonstrated promise for growth but were, on many occasions, held back by the poor and inadequate infrastructure, the persistent political instability and the rising security concerns. The agricultural sector got improvements in the form of investments in high techs and irrigation systems but it was GDP contribution which remained at low levels. The financial distress of industrial projects was often caused by low level investments and poor supplies of workforce.

Infrastructure Development

Infrastructure development has been one of the priorities of the country's post-2003 economic programme. Sizable investments to restore the destroyed infrastructure have been made with prioritization of power and transport. Infrastructural deficiencies are still the largest problem for economic development. Reconstruction is now an ongoing process which plays a vital role in the creation of a favorable climate for entrepreneurs from other countries.

Governance and Corruption

Iraq's economic development has always been encumbered with both government problems and corruption. Efforts in the direction of transparency improvement and corruption reduction have been contributing to the whole process of governance improvement. Public and private sector corruption still remains as the biggest threat which destabilizes economic sustainability and discourages more foreign

investors. Having strong government and appropriate governance remain as prerequisites to attain economic development which is sustainable.

Security and Economic Stability

Security is still one of the main problems that directly affects the Iraqi economy. Insurgent attacks combined with the resulting instability have disrupted economic activities and discouraged investment. There is a relationship between security and economic stability, with improved security conditions constituting an inevitable prerequisite for a sustainable economic growth. Addressing security problems is the premise for the economic reforms and recovery of the economy in general.

VII. Case Studies of Diversification Initiatives

Agricultural Development Initiatives

After 2003, Iraq made attempts to structure its economy more diversified, where attention was paid to restoring agriculture. The Government implemented a number of measures that combined raised agricultural productivity level and dependence on food import. Such measures entail investment in new irrigation methods, dissemination of high-yield crop varieties, and subsidizing fertilizers and seeds. The agricultural sector's addition to the GDP, despite initial insignificance, has been showing a growth in potential.

Industrial Diversification Projects

Diversifying the industrial sector in Iraq has been one of the key components of the economic program being implemented. Attention was drawn to setting up light industries for internal consumers' needs and to spreading the rest of production over exports. Some of the undertakings are industrial zones development, support for local factories, and collaboration with multinational firms. The manufacturing sector contributed 4,796.6 million USD to the GDP. This contribution highlights the ongoing efforts to expand industrial output buying oil and demonstrates the challenges and opportunities in fostering a diversified industrial sector.

Development of the Services Sector

The service sector has also been a target for growth as a part of Iraq's diversification strategy. This sector encompasses finance, insurance, real estate, business services, transport, communication, storage, social and personal services. In 2022, the services sector made substantial contributions to GDP, with significant inputs from finance and insurance (13,011.5 million USD), transport, communication, and storage (23,381.2 million USD), social and personal services (40,597.6 million USD). Efforts to strengthen the services sector have included regulatory reforms, improving infrastructure, and encouraging foreign investment in these areas.

Infrastructure Development

The development of infrastructure is a determining factor in Iraq's diversification initiatives. Priority has been given to strengthen and introduce technological innovations in the country's infrastructure,

especially in the fields of energy and transportation. The aim is to underpin the growth of economic activities across wide-scale sectors by the new setting. Projects such as building of roads, bridges, and energy plants will occupy a major part of funding which are necessary for establishing counties industrial activities and enhancing the connectivity within the country. These projects help the economic restructuring and foreign monetary inflow.

Education and Human Capital Development

With the critical role that human capital plays in economic diversification, Iraq has made investments in educational and vocational training programs. These programs provide workers with the skills that are demanded for new industries and sectors. Initiatives include such as the creation of technical and vocational training centers, international collaboration with educational institutions and scholarships that students use for studying abroad. These activities aim to produce a skilled workforce that can influence diversified economic activities, spurring innovation and entrepreneurship in a country.

VIII. Discussion

The Dominance of the Oil Sector

The analysis of Iraq's economy from 2003 to 2023 underscores the overwhelming dominance of the oil sector. In 2022, oil exports amounted to 1.4 billion barrels, generating approximately 132.7 billion USD. This heavy reliance on oil revenues makes the economy highly susceptible to global oil price fluctuations. The oil sector's contribution to the GDP remains critical, reflecting a significant dependency that poses challenges to economic stability and diversification efforts.

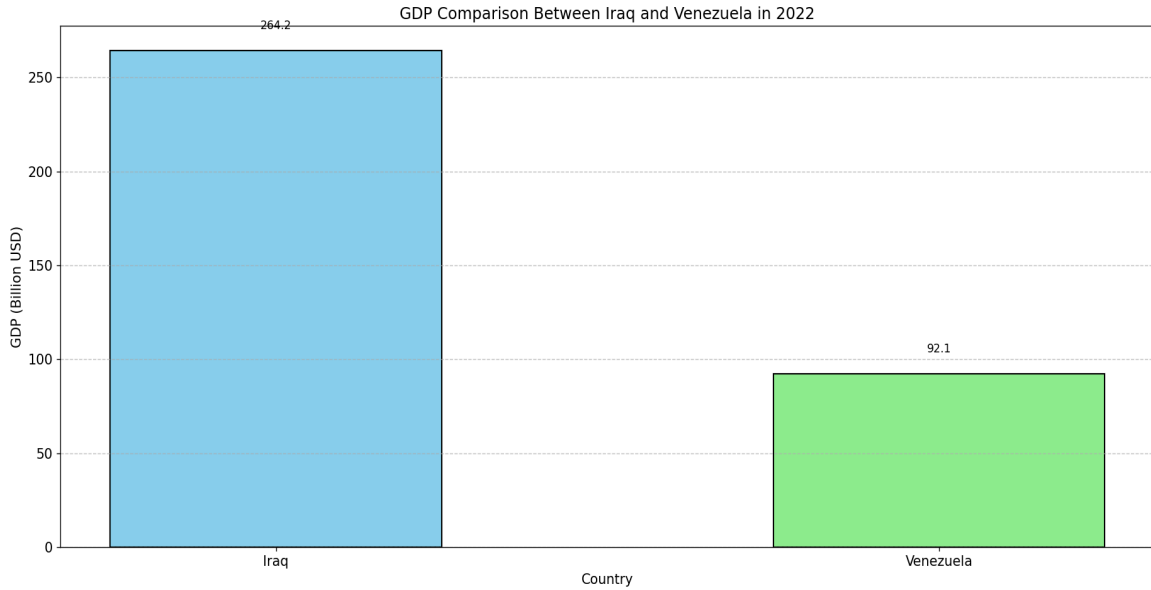
Challenges to Diversification

Efforts to diversify Iraq's economy have been met with numerous challenges. The agricultural sector, while showing potential, contributed only 7,645.2 million USD to the GDP in 2022. The manufacturing sector's contribution was modest at 4,796.6 million USD. In contrast to various initiatives to boost these sectors, issues such as inadequate infrastructure, political instability, and security concerns have impeded progress. The services sector, including finance, insurance, real estate, and business services, made more substantial contributions but still falls behind the oil sector in overall economic impact.

Comparative Analysis with Other Resource-Rich Economies

Venezuela

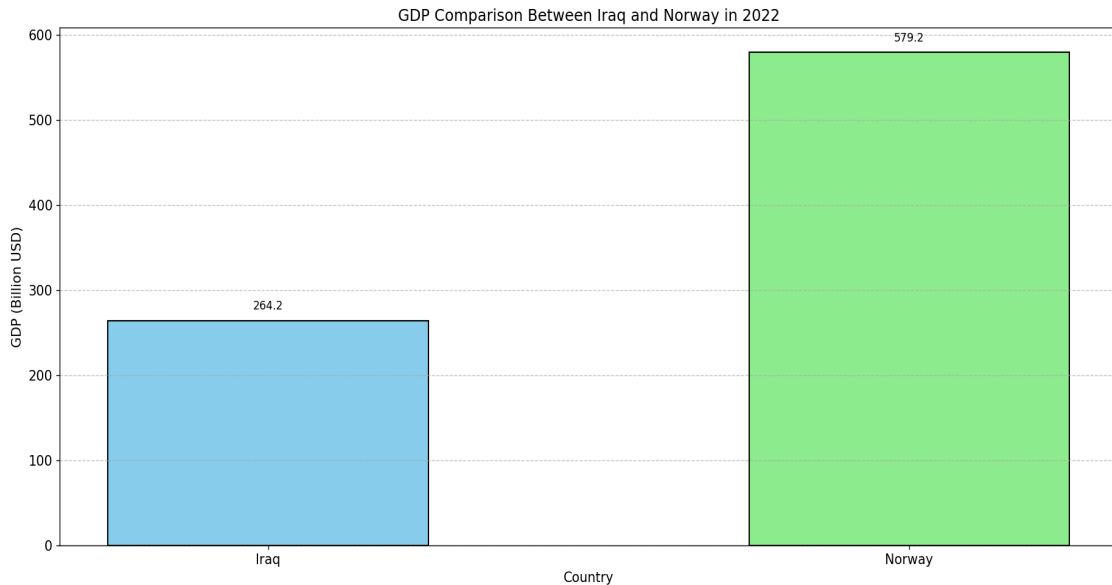
Venezuela, similar to Iraq, has faced significant economic challenges due to its heavy reliance on oil. In 2022, Venezuela's GDP was 92.1 billion USD, with notable growth of 12% from the previous year attributed to increased crude oil prices and production. Venezuela's economic landscape remains more complex, characterized by high inflation and a trade surplus driven by controlled imports and sustained demand for oil. This comparison highlights equivalent vulnerabilities and the critical need for diversification in resource-dependent economies.



Graph 7: GDP Comparison between Iraq and Venezuela in 2022

Norway

In contrast, Norway provides a more successful model of managing wealth, Norway’s GDP in 2022 was 579.2 billion USD, with substantial contributions from both oil and non-oil sectors. The Norwegian economy benefited from strategic economic policies and a strong focus on diversification, the county’s trade balance and nominal GDP growth were strengthened by high oil and gas prices, yet Norway also demonstrated significant growth in its services industries, reflecting a balanced economic structure. This successful diversification strategy implies the importance of robust governance and strategic investments in non-oil sectors.

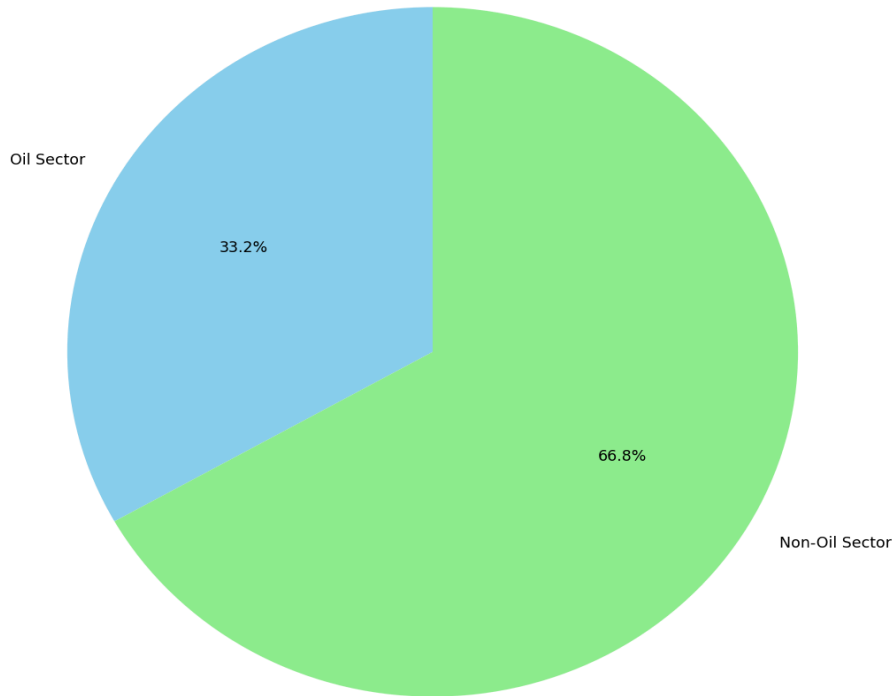


Graph 8: GDP Comparison between Iraq and Norway in 2022

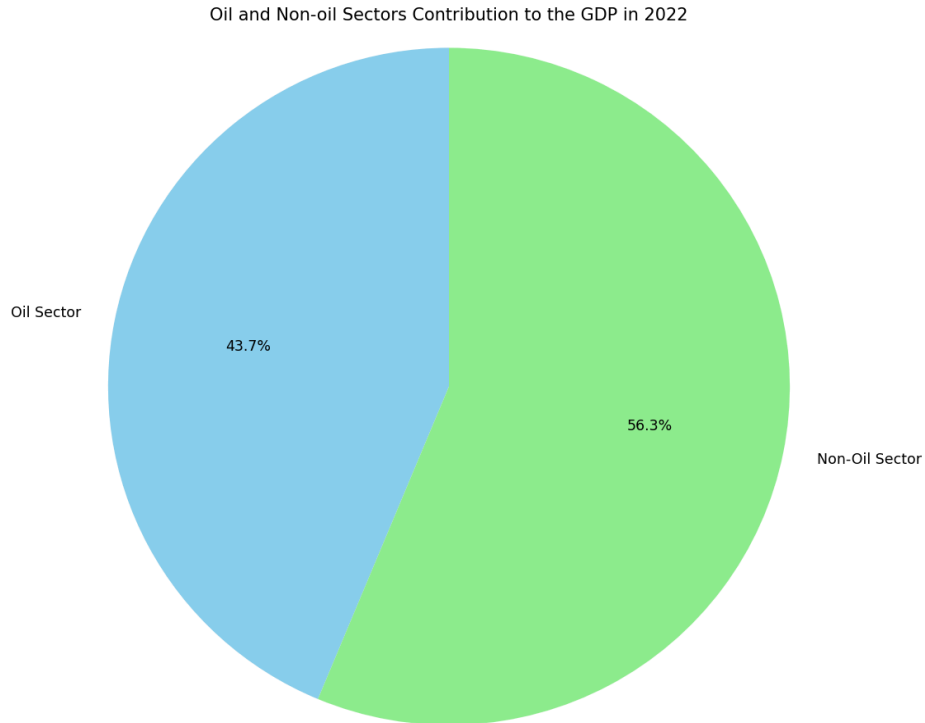
GCC Countries (Saudi Arabia and Qatar)

The Gulf Cooperation (GCC) countries, including Saudi Arabia and Qatar, provide useful comparisons. Saudi Arabia's GDP in 2022 was notable for its diversified nature, with substantial contributions from both the oil sector (34.2% of GDP) and non-oil sector (66.83% of the GDP). Qatar exhibits similar trends, with the oil sector contributing 43.68% of GDP in 2022. These countries have actively pursued diversification through investments in industries such as finance, construction and manufacturing. The GCC model demonstrates the effectiveness of comprehensive economic policies and strategic investments in achieving diversification and economic resilience.

Oil and Non-oil Sectors Contribution to the GDP in 2022



Graph 9: Oil and Non-oil Sectors Contribution to the GDP in 2022 (Saudi Arabia)



Graph 10: Oil and Non-oil Sectors Contribution to the GDP in 2022 (Qatar)

Policy Implications and Recommendations

A comparative analysis with the examples such as Norway, the GCC member countries reveal some hold policy recommendations for Iraq. Sound governance and anti-corruption should be promoted to create conditions where the diversification of the economy could thrive. Institution building and the adoption of domestic frames which will make the country attractive to foreign investment and stabilize the economy.

Strategic government expenditure in infrastructure, education, and human capital development is an important part. Increasing the competencies of the non-oil sector especially in agriculture, manufacturing and service industries can help manage the risks of the oil dependency.

Broadening of entrepreneurial horizons and innovation, via supportive policies and access to finance, can help foster economic development and diversification. Creating the platform for corporate involvement and working with foreign partners for betterment of the economy can also bring change in the economic structure of the country.

IX. Conclusion

The oil based economy of Iraq's economic strategy from 2003 to 2023 reveals several difficulties and attempts to circumvent them. During this period, the oil industry has been both a blessing and a curse for Iraq - a source of impressive income but also volatile international markets which make the economy unstable. This thesis has pointed out the negative consequences of such dependence, demonstrating the necessity of establishing a diverse economic base for more significant and sustainable economic stability.

The results of diversifying the economy have been mixed. Initiatives in sectors such as agriculture, manufacturing and service have created the platform for the development of a more diversified economy. However, these endeavors need to be considerably intensified and supported by strong policies, critical investments, and international collaboration to succeed in reaching the intended outcomes. The cases of agriculture development, industrial diversification, and infrastructure improvement depict the opportunities for economic growth and the barriers that constraint.

Through comparative analysis, Iraq will be able to learn from the experiences of those other resource-rich economies, such as Norway and GCC countries. Those states proved that successful governance, comprehensive economic policy, and strategic diversification can reduce unwanted risks of the heavy dependence on natural resources. The success of Norway and GCC show the advantages of strategic governance, human capital investment, and environment promotion.

Although Iraq attained gains, the road to a diversified and stable economy is still long and it is based on the increased effort and adaptation to the ever changing economic conditions. Institutions should be strengthened, corruption should be combated, non-oil sectors should be invested in, and the business environment should be improved. Iraq can achieve sustainable growth and economic resilience through a holistic approach to economic reform combining smart positioning and management of available resources.

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XI. Appendices

Appendix A: Data Tables

Economic Activities	Q1	Q2	Q3	Q4	Total
Agriculture, Forestry, Hunting & Fishing	1315.0	3693.6	1074.3	1562.9	7645.2
Mining & Quarrying	36043.6	44275.5	40108.1	33267.4	151694.6
Crude Oil	36014.3	44240.0	40074.8	33218.2	153547.3
Other Types of Mining	29.26	35.4	33.3	49.17	147.13
Manufacturing Industry	885.4	1123.5	1612.5	1175.2	4796.6
Electricity & Water	548.5	909.6	1404.2	771.2	3633.5
Building & Construction	1219.2	1477.2	1387.7	2048.9	6133
Transport, Communication, Storage	5435.8	6565.4	6015.6	5364.4	23381.2
Wholesale, retail trade, Hotels & Others	3987.0	4076.0	4081.31	4148.6	16292.91
Finance, Insurance, Real Estate & Business Services	3172.9	3285.7	3283.4	3269.5	13011.5
Banks & Insurance	363.7	440.2	403.4	359.7	13011.5
Ownerships of Dwellings	2809.2	2845.5	2880.0	2909.8	11444.5
Social & Personal Services	9974.3	10180.6	10290.9	10151.8	40597.6
General Government	7769.5	7930.8	8032.0	7865.9	31598.2
Personal Services	2204.8	2249.8	2258.8	2285.8	8999.2
Total by Activities	111772.46	133328.8	122940.3	108448.47	476490.03
Imputed Banks Services Charge	242.2	293.2	268.6	239.5	1043.5
GDP	112014.66	133622	123208.9	108687.9	477533.46

Table 1: GDP by the Economic Activities at Basic Current Prices by Quarters 2022 (Million USD)

HISTORICAL BRIEF												
AVERAGE PRICE (US\$/BBL)	TOTAL		KIRKUK CRUDE						BASRAH CRUDE		MONTH	YEAR
			EXPORT FROM AL-SMOOD REFINERY		EXPORT FROM AL-QAYARA FIELD		EXPORT FROM CEYHAN		AMOUNT DOLLAR	QUANTITY BARREL		
	AMOUNT DOLLAR	QUANTITY BARREL	AMOUNT DOLLAR	QUANTITY BARREL	AMOUNT DOLLAR	QUANTITY BARREL	AMOUNT DOLLAR	QUANTITY BARREL				
53.586	4,765,000,467.77	88,922,697.00	0	0	0	0	162,391,098.23	3,052,194	4,602,609,369.54	85,870,503	JANUARY	2021
60.487	5,013,013,969.82	82,877,757.00	0	0	0	0	212,504,631.49	3,772,428	4,800,509,338.33	79,105,329	FEBRUARY	
63.371	5,786,536,232.94	91,311,929.00	0	0	0	0	194,671,849.32	3,071,745	5,591,864,383.62	88,240,184	MARCH	
62.779	5,549,517,235.88	88,398,319.00	0	0	0	0	176,595,559.30	2,863,403	5,372,921,676.58	85,534,916	APRIL	
65.842	5,917,932,792.99	89,881,268.00	0	0	0	0	199,356,755.27	3,060,913	5,718,576,037.72	86,820,355	MAY	
70.801	6,143,106,713.41	86,765,589.00	0	0	0	0	215,381,184.76	3,075,237	5,927,725,528.65	83,690,352	JUNE	
71.578	6,475,512,038.12	90,467,794.00	0	0	0	0	211,591,354.62	3,012,435	6,263,920,683.50	87,455,359	JULY	
69.235	6,553,762,152.16	94,660,239.00	0	0	0	0	200,363,501.05	3,004,309	6,353,398,651.11	91,655,930	AUGUST	
73.328	6,777,134,232.61	92,422,485.33	16124469.04	275274.328	0	0	210,060,577.89	2,922,857	6,550,949,185.68	89,224,354	SEPTEMBER	
79.274	7,666,495,538.75	96,708,660.32	20959853.77	309768.319	0	0	242,337,767.31	3,011,917	7,403,197,917.67	93,386,975	OCTOBER	
77.51	7,610,850,117.39	98,192,317.00	19598467	299483	0	0	155,095,962.83	2,032,685	7,436,155,687.56	95,860,149	NOVEMBER	
72.768	7,391,749,038.97	101,579,927.00	17983152.03	309542	0	0	194,738,762.00	2,700,095	7,179,027,124.94	98,570,290	DECEMBER	
68.37991667	75,650,610,530.81	1,102,188,981.65										

Table 2: Oil Exports and Revenues for the Year 2021

YEAR	MONTH	BASRAH CRUDE		KIRKUK CRUDE						TOTAL		AVERAGE PRICE (USD/BBL)
		QUANTITY BARREL	AMOUNT USD	EXPORT FROM CEYHAN	EXPORT FROM AL-QAYARA FIELD		EXPORT FROM AL-SMOOD REFINERY		QUANTITY BARREL	AMOUNT USD		
				QUANTITY BARREL	AMOUNT USD	QUANTITY BARREL	AMOUNT USD	QUANTITY BARREL			AMOUNT USD	
2022	JANUARY	96,430,596	8,084,190,793.51	2,545,656	216,423,235.15	0	0.00	309,826	22,065,497.89	99,286,078	8,322,679,526.55	83.825
	FEBRUARY	91,314,828	8,663,568,184.22	1,475,345	145,594,572.70	0	0.00	0	0.00	92,790,173	8,809,162,756.92	94.936
	MARCH	99,130,677	10,746,816,608.31	1,448,935	166,342,329.09	0	0.00	0	0.00	100,579,612	10,913,158,937.40	108.503
	APRIL	98,100,042	10,276,679,366.46	2,991,060	306,095,495.62	0	0.00	299,560	26,477,808.84	101,390,662	10,609,252,670.92	104.637
	MAY	98,946,914	11,108,065,960.99	3,002,133	335,023,461.24	0	0.00	353,973	34,424,582.20	102,303,020	11,477,514,004.43	112.191
	JUNE	97,980,589	10,976,520,861.04	2,910,887	345,738,601.78	0	0.00	299,760	32,284,751.52	101,191,236	11,354,544,214.34	112.209
	JULY	99,965,094	10,111,474,807.03	2,344,536	249,584,939.25	0	0.00	75,419	7,292,640.21	102,385,049	10,368,352,386.49	101.268
	AUGUST	100,750,000	9,587,864,980.70	1,109,528	101,038,380.97	0	0.00	0	0.00	101,859,528	9,688,903,361.67	95.120
	SEPTEMBER	96,445,421	8,652,263,811.57	2,169,180	182,026,862.84	0	0.00	150,552	11,120,824.58	98,765,153	8,845,411,498.99	89.560
	OCTOBER	102,070,427	9,045,339,290.16	2,417,893	209,798,943.85	0	0.00	342,800	26,509,409.60	104,831,120	9,281,647,643.61	88.539
	NOVEMBER	97,204,696	7,970,097,869.31	2,363,020	196,779,031.16	0	0.00	300,313	22,725,585.65	99,868,029	8,189,602,486.12	82.004
	DECEMBER	100,735,151	7,520,905,024.22	2,223,338	166,621,780.28	0	0.00	322,970	21,030,191.55	103,281,459	7,708,556,996.05	74.636
										1,400,607,370	132,700,628,766.96	94.728

Table 3: Oil Exports and Revenues for the Year 2022

Appendix B: Additional Figures and Graphs

1. **Graph 1: GDP in 2021 and 2022 at Current Prices**
Compares the total GDP at current prices for 2021 and 2022, visually representing the growth in economic output over these years.

2. **Graph 2: GDP Per Capita in 2021 and 2022 at current Prices**
Illustrates changes in the GDP per capita, providing insights into economic prosperity per individual over the same period.

3. **Graph 3: Sectoral Contribution to the GDP in 2022**
Breaks down the contribution of different sectors (agriculture, industry, services) to total GDP in 2022, highlighting the economic structure.

4. **Graph 4: Total Barrels Exported in 2021 and 2022 (Billions of Barrels)**
Shows the quantity of oil exported by Iraq in 2021 and 2022, visualizing changes or stability in oil production.

5. **Graph 5: Total Revenue in 2021 and 2022 (Billion USD)**
Depicts the financial outcome of oil exports in terms of total revenue in billion USD, reflecting economic fluctuations.

6. **Graph 6: Average Oil Barrel Price in 2021 and 2022**
Provides information on the average price per barrel of oil exported, which affects revenue calculation and economic strategies.

7. **Graph 7: GDP Comparison between Iraq and Venezuela in 2022**
Compares the GDP of Iraq and Venezuela for the year 2022, providing a comparative analysis of economic performance between two oil-dependent economies.

8. **Graph 8: GDP Comparison between Iraq and Norway in 2022**
Compares the GDP figures for Iraq and Norway, highlighting the different outcomes in economic management and diversification efforts between these oil-rich countries.

9. **Graph 9: Oil and Non-oil Sectors Contribution to the GDP in 2022 (Saudi Arabia)**
Shows the percentage contributions of the oil and non-oil sectors to the GDP of Saudi Arabia in 2022, illustrating successful diversification efforts.

10. **Graph 10: Oil and Non-oil Sectors Contribution to the GDP in 2022 (Qatar)**
Displays the contribution split between oil and non-oil sectors in Qatar's GDP for 2022, serving as another example of economic diversification in resource-rich countries.