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THE IMPACT OF OIL RESOURCE REVENUES AND NATIONAL SPENDING ON IRAQI LOCAL SAVINGS FOR THE PERIOD (2005-2021) A STANDARD STUDY

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Abstract
The study aimed to verify the extent of the impact of oil resource revenues and national spending on Iraqi local savings. The study used the descriptive analytical approach, the quantitative research method based on (secondary data) time series for the period from 2005-2021 (study sample) were analysed via the(EViews9) program using the ordinary least squares method to show the impact, ADF test statistic to show the stability of the series, Johansen test for joint integration of variables, the study found that there is a strong direct correlation between oil resource revenues and local savings, there is a strong inverse correlation between national spending and local savings, there is a significant impact of oil resource revenues and national spending on local savings in Iraq, there is joint integration between the variables. The researchers recommend addressing issues such as gas flaring and using associated natural gas for power generation or export, using a portion of oil revenues to invest in renewable energy projects, creating a sustainable source of revenue in the long term, allocating funds to projects with the highest economic or social return, and transferring responsibilities for infrastructure investment to the private sector.

Keywords: Oil resource revenues; National spending; Local savings; Iraq

Introduction

Iraq ranks third in the list of oil exporters in the world and has the determination and resources to increase its production widely after concluding many contracts with international companies. The importance of oil as a strategic commodity for producing countries in general and for Iraq in particular is increasing day by day (Birdsall & Subramanian, 2004). International experiences have proven that oil is an important means of achieving economic prosperity and an important tool for achieving sovereignty and national unity for all segments of Iraqi society. There is no doubt that oil is a tool that helps Iraq emerge from poverty, deprivation and the manipulation of political fates, and even contributes to transforming Iraq into an industrial and agricultural country with an economic status commensurate with the historical status enjoyed by Iraq. Energy is indeed the cornerstone of the Iraqi economy, so oil exports represent 95% of government revenues and equal more than 70% of the gross domestic product (GDP) (Rasheed, 2021). Oil is the decisive factor in shaping modern Iraq, its present and future. Since the establishment of the Iraqi state, its deposits have contributed significantly to formulating development programs and plans. Therefore, oil revenues are the basis for national spending in oil-producing countries, especially in rentier economies. On the other hand, oil revenues dominate the largest part of the general budget revenues in Iraq, as they constitute more than 90% of these revenues. Therefore, the volatility of global oil prices plays a role in directly affecting these revenues. As well as on the items of national spending in this aspect (Cordesman

& Sakayan, 2015). Due to the weakness in local savings in Iraq because the Iraqi economy depends heavily on oil revenues, this reduces the need to diversify sources of revenue and strengthen other sectors such as agriculture and industry. Iraq also suffers from volatile political and security stability, which negatively affects the investment climate and the economy in general, and reduces confidence in the financial and banking system, making it difficult for individuals and local companies to achieve sufficient levels of savings (Sanford, 2003). The widespread corruption in the public sector and financial institutions reduces the efficiency of resource management and leads to the waste of revenues and their ineffective direction, which reduces the possibility of achieving sustainable savings (Turki, et al., 2023). The lack of economic infrastructure and basic services such as electricity, water and transportation, which negatively affects the investment environment and the ability of companies to achieve sustainable profits, which reduces their ability to save (Price, 2018). Due to the weakness in Iraqi local savings as a result of the above influential factors, which requires formulating the research problem with the following main question: What is the impact of oil resource revenues and national spending on local savings in Iraq for the period (2005-2021)? The objectives of the study were to determine the nature of the integration between oil resource revenues, national spending and Iraqi local savings for the period (2005-2021). Identifying the extent of the impact of oil resource revenues and national spending on Iraqi local savings under study for the period (2005-2021) represents the main objective of the research and will be answered by analysing the data of the World Bank / Iraq. The research questions crystallize from the research objectives. What is the nature of the integration between oil resource revenues, national spending and Iraqi local savings (2005-2021)? What is the extent of the impact of oil resource revenues and national spending on Iraqi local savings (2005-2021)?

Literature Review

Iraq's Economy and the Importance of Oil Revenues

Iraq's economy is heavily dependent on oil revenues, which constitute a significant portion of the country's GDP and government budget (Yaqub, 2024). This reliance on a single commodity has made the economy particularly vulnerable to fluctuations in global oil prices, leading to periods of economic instability. An overburdened public sector, characterized by state-owned enterprises and inadequate infrastructure, further complicates efforts at economic growth and diversification. As noted, large government spending has not alleviated poverty, reflecting structural imbalances within the economy that stem from overreliance on oil exports (Sanford, 2003). Moreover, the ongoing cycle of external debt has exacerbated the situation, creating an urgent need for effective economic management and sustainable fiscal policies (Aktuğ,et al, 2019). The current landscape underscores the importance of oil revenues not only as a financing mechanism for government services but also as a critical factor affecting domestic savings and overall economic resilience.

The Impact of Oil Revenues on Government Budget Allocations

The relationship between oil revenues and government budget allocations in Iraq reveals critical implications for economic sustainability and domestic saving. As a rentier state, Iraq relies heavily on oil for its fiscal revenues, which largely shapes public spending decisions (Anshasy,2012). The dominance of oil wealth has led to an inefficient allocation of resources, often favouring immediate consumption and imported goods over long-term investment in infrastructure and development projects (Ahmad& Mottu, 2002). This misallocation not only fuels economic instability, but also perpetuates the cycle of dependence on oil revenues, limiting economic diversification and stifling growth. Moreover, the centralization of fiscal resources exacerbates systemic inefficiencies, further complicating budget management and

fiscal planning (Raimi& Newell, 2014). Ultimately, a more strategic budget approach that prioritizes sustainable development would boost domestic savings and enhance economic resilience in the face of volatile oil markets.

The relationship between national spending and domestic saving

The complex relationship between national spending and domestic saving is particularly prominent in oil-dependent economies such as Iraq (Alfatlawi & Alsaedi, 2023). where oil revenues play a pivotal role in shaping fiscal policy. As the government increases national spending, often facilitated by large oil revenues, this can lead to a paradox where domestic savings may diminish rather than grow (Abdalla& Jabbar Naima, 2023). Higher public spending may stimulate immediate economic activity, but it can also lead to lower personal saving rates as households expect government support for social services and employment. Moreover, sustained national spending without corresponding investment in productive sectors risks fuelling inflation, undermining the real value of savings, as illustrated by trends observed in the GCC countries where rapid spending growth has triggered similar dynamics (Al-Yasi, et al., 2024). Thus, while national spending is intended to boost growth, its potential to erode private savings requires careful fiscal management to ensure long-term economic stability and growth in domestic savings in Iraq (Khalaf, et al.,2021).

The impact of government spending on individual and household savings rates

Government spending plays a crucial role in shaping individual and household saving rates, especially in a resource-rich country like Iraq, where oil revenues significantly influence fiscal policy. Increased public spending, often financed by oil revenues, can increase households' disposable income, thus providing a dual effect on saving behaviour (Giavazzi& McMahon, 2012). On the one hand, as households receive more income through direct cash transfers, their ability to save may improve due to enhanced financial security and increased consumption capacity (López-Salido& Rabanal, 2006). Conversely, excessive government spending may contribute to a culture of dependency, where citizens rely heavily on state support, which reduces individual saving efforts (Corbo& Schmidt-Hebbel, 1991). Moreover, the balance between these outcomes is delicate; effective public finance management is essential to fostering sustainable growth in domestic saving rates, ultimately fostering a more resilient economy that can withstand oil price fluctuations and other external pressures.

Methodology and data collection tools

The method used is descriptive analytical time series (Al Hayek,2018). The quantitative research method was followed based on (secondary data) World Bank / Iraq data for the period 2005-2021 (study sample) to explore the impact of oil resource revenues and national spending on Iraqi domestic savings. It was analysed using the (EViews 9) program for economic analysis. The independent study variables included (Revenues): Oil resource revenues % of GDP Currency in dollars, (Spending): National spending % of GDP Currency in dollars. The dependent variable (Savings): Domestic savings % of GDP Currency in dollars, and the analysis was done using the ordinary least squares method to show the impact of the independent variables Oil resource revenues, national spending on the dependent variable Local savings, ADF test statistic model to show the unit root test for variables to show stability, Johansen test for joint integration (Dwyer, 2015).To show the variables and the mathematical formula used for this, where it was represented

Oil resource revenues represent the result of multiplying the total annual oil production by its prices. It represents % of the gross domestic product Currency in dollars

$$\boldsymbol{ORR = TOTAL\ AOP \times OP}$$

National spending national spending and includes: Final purchase of equipment and machinery by business establishments. All establishments, buildings, factories and commercial centres. It represents individual consumer spending, government consumer spending, total domestic investment and represents % of the gross domestic product Currency in dollars.
Local saving is the gross domestic product minus final consumer spending. It is expressed as a percentage of the gross domestic product. It represents the savings of the household sector, the private sector and the public sector

$$GDS = GDP - CS$$

Accordingly, the following hypotheses can be formulated
H0: There is no statistically significant joint integration of oil resource revenues, national spending and local savings in Iraq at a significance level of 0.05
H1: There is a statistically significant joint integration of oil resource revenues, national spending and local savings in Iraq at a significance level of 0.05
H0: There is no statistically significant effect of oil resource revenues and national spending on local savings in Iraq at a significance level of 0.05
H2: There is a statistically significant effect of oil resource revenues and national spending on local savings in Iraq at a significance level of 0.05

Percentage % of GDP Currency (USD) Study sample 2005-2021

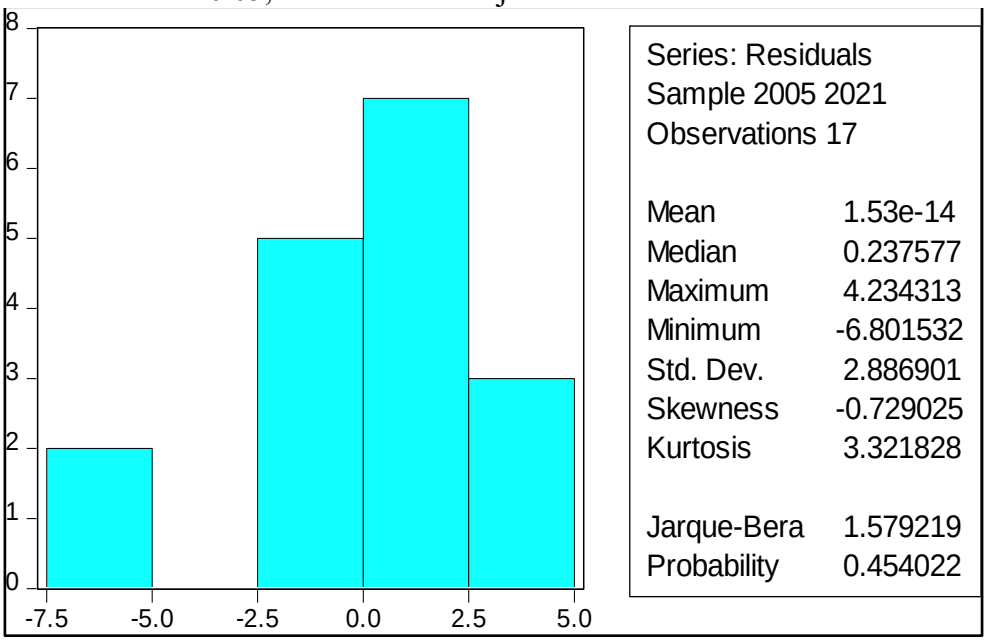
Years	Oil resource revenues	national spending	Local savings
2005	65.1576	79.6482	42.50706
2006	63.55514	71.75981	47.15778
2007	52.92738	66.61509	42.72663
2008	55.37931	63.09368	52.09042
2009	39.11459	84.6062	26.69044
2010	43.25623	79.22969	36.63817
2011	50.92637	71.52266	45.23684
2012	49.6111	69.87568	43.57049
2013	45.33136	76.35673	43.91101
2014	46.60385	78.28491	39.93106
2015	37.25754	94.70481	25.65485
2016	32.96506	93.09948	24.77773
2017	38.92031	85.61286	32.23962
2018	45.76586	77.00304	40.58243
2019	40.23128	85.02334	37.71739
2020	27.035	97.15043	25.19643
2021	42.7871	78.2049	41.3801

https://data.albankaldawli.org/country/IQ

Variables	Mean	Std. Dev.	Jarque-Bera	Probability	Skewness	Kurtosis	Observations
Oil resource revenues	45.69559	10.00759	0.291964	0.864173	0.295550	2.749429	17
national spending	79.51715	9.657704	0.507087	0.776046	0.251296	2.319347	17

Local savings	38.11814	8.363510	1.098644	0.577341	-0.412390	2.066852	17

Where Mean for Oil Revenues (45.69559), National Expenditure (79.51715), Domestic Savings (38.11814). And Std. Dev. (for Oil Revenues, National Expenditure, Domestic Savings in Sequence) (10.00759, 9.657704, 8.363510), Probability represents the statistical significance of the Jarque-Bera coefficient for the variables and all Probability is greater than the significance level of 0.05, so the data is subject to normal distribution.



The residuals represent the difference between the actual value obtained and the value during the analysis of the measures of central tendency, statistical dispersion, kurtosis, skewness and the Jarque-Bera coefficient of the normal distribution, since prob is greater than the significance level of 0.05.

Variables	Oil resource revenues	Local savings
Oil resource revenues	**1**	**0.84322**
Local savings	**0.84322**	**1**
	national spending	Local savings
national spending	**1**	**-0.93456**
Local savings	**-0.93456**	**1**

Reference level of relationships: +1 is a perfect positive correlation, from 1 to 0.5 is a strong positive correlation, 0.5 is a medium positive correlation, from 0.5 to zero is a weak positive correlation, zero is no correlation, and the correlation coefficients (negative) become inverse as in the weighted level of relationships. The correlation between oil resource revenues and local savings was a strong positive correlation because the correlation coefficient was 0.8, and the correlation between national spending and local savings was a strong inverse correlation because the correlation coefficient was -0.9.

Dependent Variable: Local savings
Method: Least Squares
Date: 12/13/24 Time: 20:36
Sample: 2005 2021
Included observations: 17

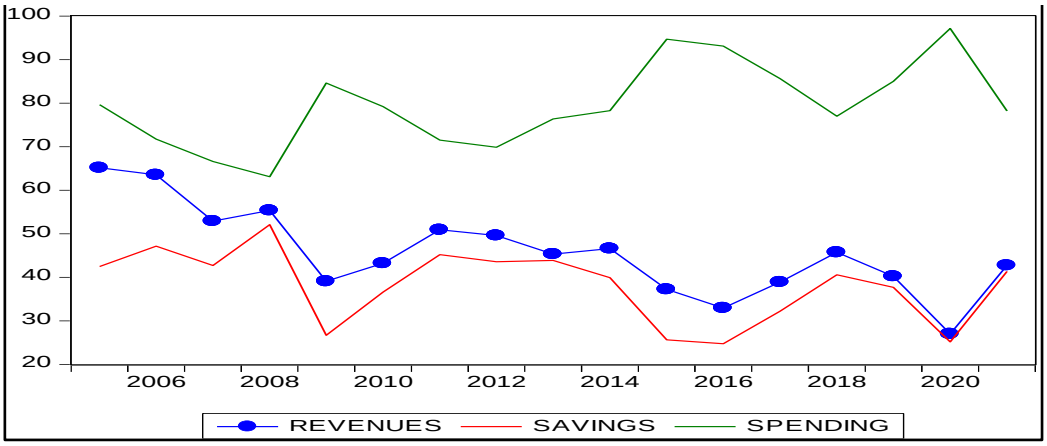
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	77.19342	14.81833	5.209322	0.0001
Oil resource revenues	0.223595	0.122006	1.832655	0.0882
national spending	-0.619899	0.126426	-4.903256	0.0002

R-squared	0.880852	Mean dependent var	38.11814
Adjusted R-squared	0.863831	S.D. dependent var	8.363510
S.E. of regression	3.086227	Akaike info criterion	5.250561
Sum squared resid	133.3472	Schwarz criterion	5.397599
Log likelihood	-41.62977	Hannan-Quinn criter.	5.265177
F-statistic	51.75046	Durbin-Watson stat	1.861486
Prob(F-statistic)	0.000000		

Using the ordinary least squares method to show the effect of the independent variables, oil resource revenues, national spending on the dependent variable, local savings, where the variance of the joint prediction of the independent variables affects by (88%) R2 on the dependent variable (local savings), and the variance supports the value of F 51.75046 because Prob is less than the significance level of 0.05, so the ordinary least squares method is of good quality and the results can be relied upon, and because Prob for F is less than the significance level, so there is no homogeneity, and Akaike at a rate of 5.250561 represents the most predictive models, Durbin-Watson stat represents and represents the closer it is to 2, it represents no problem of the autocorrelation of the model and the residuals and was by 1.86, as for the regression coefficient for the independent variable (oil resource revenues), and because the relationship is directly correlated, so if the independent variable (oil resource revenues) changes by one unit, it will change the dependent variable by 0.223595, and the calculated t with Morale of the independent variables. As for the regression coefficient of the independent variable (national spending), the relationship was inverse and the regression coefficient represented -0.619899, meaning that if national spending changed by one unit, it would lead to a decrease in the dependent variable by -0.619899. Accordingly, hypothesis H2 is accepted, which states that there is a significant effect of oil resource revenues and national spending on local savings in Iraq at a significance level of 0.05, and hypothesis H0 is rejected.

Variables	t-Statistic	level	**The model**	Prob* For the model	Prob* For level	Morale level	Interpretation
Oil resource revenues	-3.395815	Level	Trend and intercept	0.0587	0.0896	**moral**	Stable at Level, constant limit and general trend significant
National spending	-3.406955	2st difference	Trend and intercept	0.4872	0.0938	**moral**	Stable at 2st difference, constant limit and general trend not significant
Local savings	-3.464467	1st difference	Trend and intercept	0.6987	0.0832	**moral**	Stable at 1st difference, constant limit and general trend not significant

The optimal delay degree was chosen for the variable 1 and the significance level 0.05 for the variables to demonstrate the stability of the unit ADF root test statistic according to the model



Trend assumption: Linear deterministic trend
Series: **national spending, local savings**, Oil **resource revenues**

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.871588	43.08633	29.79707	0.0009
At most 1	0.523363	12.29871	15.49471	0.1432
At most 2	0.075881	1.183712	3.841466	0.2766

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Johansen test for cointegration for the presence of more than one independent variable, where the Statistic Trace (calculated) represented an amount of 43.08633, 0.05 Critical Value (table) an amount of 29.79707, and the level of significance Prob.** (0.0009), and since the calculated is greater than the table, then we reject the hypothesis H0 and accept the hypothesis H1 and cointegration is achieved between the variables.

Conclusion

There is a strong direct correlation between oil resource revenues and local savings In line with the study (Temidayo& Taiwo, 2011). while the correlation between national spending and local savings is a strong inverse relationship In line with the study (Pant, 1996). There is a significant impact of oil resource revenues and national spending on local savings in Iraq. Based on the correlation coefficient, if the independent variable (oil resource revenues) changes by one unit, it will change the dependent variable by (0.223595). If the independent variable (national spending) changes by one unit, it will lead to a decrease in the dependent variable by (-0.619899). Johansen's test for joint integration between variables shows that the calculated is greater than the tabular, and therefore joint integration between variables is achieved. To increase oil resource revenues in Iraq and their role in increasing local savings, the government can adopt a multi-faceted approach. By modernizing the refining infrastructure to produce higher value refined products such as gasoline, diesel and petrochemicals, addressing issues such as gas flaring by capturing it and using associated natural gas for power generation or export, using oil and gas resources to provide energy for local industries, create jobs and boost the economy, using a portion of oil revenues to invest in renewable energy projects (Pickl, 2019).creating a sustainable source of revenue in the long term. In order to reduce Iraqi national spending due to its impact on reducing local savings, this is done by working to classify expenditures into essential and non-essential spending to prioritize reductions, eliminating duplication by merging overlapping ministries, departments or agencies, using digital solutions to reduce staff costs and improve efficiency (Gong, et al.,2020). allocating funds to projects with the highest economic or social return, and transferring responsibilities for infrastructure investment to the private sector (Ahmad, et al.,2017).

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