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Research Paper

The Neutralized Lever: Exchange Rate Stability and the Paradox of Growth in Post-conflict Iraq (2005-2024)

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ABSTRACT

In Iraq's post-conflict, oil-dominated economy, achieving macroeconomic stability is paramount, with the exchange rate acting as a central, yet complex, determinant of growth. This study empirically dissects the long-term relationship between exchange rate stability and economic growth from 2005 to 2024. Analyzing time-series data from the World Bank, IMF, and Central Bank of Iraq, the study applied a multiple linear regression model, robustly supported by unit root (ADF) and Johansen cointegration tests, to assess the impact of currency stability alongside foreign direct investment (FDI), inflation, trade openness, oil revenue, and political stability. The Johansen cointegration test confirms that a stable long-run equilibrium exists among the variables. However, our findings reveal a critical paradox: while the regression model explains a substantial 80% of the variation in GDP growth (R^2 = 0.80), no individual predictor is statistically significant. This outcome highlights how Iraq's deep-seated structural challenges, overwhelming oil dependency, political instability, and potential multicollinearity, overshadow and neutralize the independent effects of conventional policy levers. Consequently, while exchange rate stability shows a positive but statistically insignificant effect, it is not a silver bullet for growth. This research concludes that sustainable economic recovery in Iraq is contingent not merely on currency management but on a foundational shift towards comprehensive institutional reforms, aggressive economic diversification, and integrated macroeconomic policies.

Introduction

Maintaining exchange rate stability is an essential macroeconomic objective for developing economies, given its profound impact on trade, inflation, investment, and economic growth. For Iraq, a nation emerging from prolonged conflict and international isolation, effective exchange rate management has been instrumental in rebuilding confidence and stabilizing fiscal operations (Alhafith, 2025; Frayyeh et al., 2022) . As a heavily dollarized economy where oil exports constitute over 90% of national revenue, the stability of the Iraqi dinar (IQD) against the U.S. dollar is a primary determinant of its macroeconomic performance, import costs, and fiscal capacity. Iraq has utilized a managed peg regime since 2003, with the Central Bank of Iraq (CBI) actively intervening to stabilize the IQD/USD exchange rate. This policy, instituted after the post-Saddam Hussein era to combat hyperinflation, has been effective in reducing volatility and curbing inflation (Frayyeh et al., 2022). Nevertheless, this currency management strategy has rendered the economy susceptible to external shocks. Significant vulnerabilities emerged during periods of sharp oil price declines and capital outflows, particularly during the global financial crisis (2008–2009), the ISIS conflict (2014–2017), and the COVID-19 pandemic (2020–2021), which have placed immense strain on the nation's fiscal and monetary systems (Mohamed, 2023).

A stable exchange rate is typically viewed as a catalyst for economic growth, as it reduces uncertainty for trade, investment, and capital flows (Chikwira & Jahed, 2024). In theory, it should also curb inflation and boost the competitiveness of non-oil exports (Morina et al., 2020; Oyadeyi et al., 2025). For fragile, resource-dependent states, such stability is crucial for effective macroeconomic planning. However, this positive relationship often diminishes in post-conflict nations plagued by weak institutions and political volatility. Iraq exemplifies this phenomenon, where persistent instability fuelled by sectarianism, corruption, and security threats severely undermines the effectiveness of macroeconomic policy (Mabkhot & Al-Wesabi, 2022). This high-risk environment deters foreign direct investment (FDI), which a stable currency is meant to attract, limiting its potential growth benefits (Frayyeh et al., 2022). Moreover, Iraq's profound dependence on oil, which accounts for over 90% of exports and nearly 85% of government income, closely ties its currency stability to volatile global energy markets (Alhafith, 2025; Frayyeh et al., 2022; Kase, 2024). When oil prices collapse, foreign reserves are depleted, diminishing the CBI's ability to defend the currency. The December 2020 devaluation, shifting the exchange rate from approximately 1,182 to 1,460 IQD per USD, is a stark illustration. This policy moves triggered significant inflationary pressures, reducing real incomes and fuelling public unrest, underscoring the socio-economic sensitivity of exchange rate policy in Iraq (Aljawareen, 2019; Frayyeh et al., 2022).

The relationship between exchange rate stability and economic growth is central to economic literature, especially for developing economies (Utomo & Saadah, 2022). Classical theory posits that a stable and predictable exchange rate promotes growth by reducing transaction costs and exchange-rate risk, which attracts foreign investment and boosts international trade. Conversely, excessive volatility is often linked to heightened uncertainty, which can depress trade volumes and deter long-term capital investment (Ejaz et al., 2021; Utomo & Saadah, 2022). This theoretical divide is mirrored in empirical studies, some of which highlight the growth-enhancing effects of stable currency regimes (Ejaz et al., 2021) while others illustrate how volatility undermines purchasing power and investor

confidence (Utomo & Saadah, 2022). This academic tension is particularly relevant concerning Iraq, where, despite a policy of relative currency stability, economic growth has remained volatile (Frayyeh et al., 2022). This paradox raises a central research question: does sustained exchange rate stability genuinely contribute to long-term economic growth in Iraq, or does it merely mask underlying structural weaknesses? Answering this is crucial for evaluating Iraq's monetary policy effectiveness amidst its oil dependence and institutional challenges (Frayyeh et al., 2022). This study aims to fill the significant research gap by empirically assessing the impact of exchange rate stability on Iraq's GDP growth from 2005 to 2024, utilizing ordinary least squares (OLS) analysis, which incorporates key variables such as foreign direct investment, inflation, trade openness, political risk, and oil revenue to provide a comprehensive model of the nation's growth trajectory (Al-Bayati et al., 2022).

In oil-exporting economies, the nexus between exchange rate regimes and growth is complicated by commodity dependence, a challenge exemplified by Iraq, where oil constitutes over 90% of government revenues (Conteh, 2024; Fernandes et al., 2022). This makes exchange rate management inseparable from global price dynamics, exposing the economy to severe external shocks, such as the 2008 financial crisis and the 2014 oil price collapse (Abdelsalam, 2023; Dizaji, 2024). While the CBI consistently intervenes to maintain stability, its policy effectiveness is undermined by significant domestic constraints, including a high degree of dollarization that limits monetary control, alongside persistent political instability and security threats that divert fiscal resources away from growth-enhancing investments (Mohamed, 2023). Empirical research supports that currency depreciation and exchange rate shocks negatively impact GDP by fuelling rapid inflation (Mohamed, 2023; Utomo & Saadah, 2022). While relative exchange rate stability has attracted some foreign investment, its developmental impact is significantly hindered by pervasive corruption and institutional inefficiencies (Ejaz et al., 2021). These findings align with assessments highlighting Iraq's persistent failure to diversify its economy beyond the oil sector (Frayyeh et al., 2022). Collectively, this evidence confirms the exchange rate's critical role as a policy instrument while underscoring the unresolved debate over its long-term effectiveness in fostering sustainable growth amid deep-seated structural vulnerabilities (Ahmed et al., 2018; Utomo & Saadah, 2022).

The primary purpose of this study is to empirically dissect the complex and often paradoxical relationship between exchange rate stability and economic growth in post-conflict Iraq from 2005 to 2024. The study's findings are poised to make a significant contribution by providing critical, evidence-based insights for Iraqi policymakers, particularly the Central Bank of Iraq, as they navigate the challenges of monetary policy in a fragile, oil-dependent environment. Academically, this research enriches the literature on macroeconomic management in post-conflict states, offering a robust case study for other resource-rich nations facing similar institutional hurdles. The uniqueness of this research lies in its holistic and longitudinal approach; unlike studies with a narrower focus, it integrates a comprehensive set of variables, including political stability, trade openness, and oil revenue, over a crucial two-decade period marked by severe economic and security shocks.

Hypothesis Development

Empirical research on the exchange rate–growth relationship produces mixed findings, underscoring its context-specific nature. Some studies report a positive link

between exchange rate stability and growth in emerging markets, while others suggest that flexible regimes better absorb shocks, with outcomes shaped by institutional quality (Olamide et al., 2022; Oyadeyi et al., 2025). These dynamics are particularly complex in resource-dependent states like Iraq, where volatile oil revenues amplify macroeconomic instability (Dizaji, 2024; Rasheed, 2023). Persistent political risk discourages foreign direct investment (FDI), and high defence spending crowds out growth-enhancing public investment (Ali et al., 2025; Chikwira & Jahed, 2024). Studies on Iraq highlight rapid transmission of exchange rate shocks to inflation, which depresses real growth (Frayyeh et al., 2022; Rasheed, 2023). Fiscal expansions during oil booms often drive real exchange rate misalignments, undermining non-oil competitiveness. Even when currency stability attracts FDI, corruption, insecurity, and widespread dollarization weaken its developmental impact and constrain monetary policy (Frayyeh et al., 2022). Collectively, the literature shows that Iraq's structural vulnerabilities critically limit the benefits of exchange rate stability.

Despite growing attention, comprehensive analysis remains lacking. Many studies generalize from regional patterns or treat variables in isolation, overlooking the interplay of oil volatility, political risk, and security spending. This study fills that gap by offering an integrated assessment of Iraq's experience from 2005 to 2024, providing policy insights grounded in the country's unique structural and institutional context.

H_1: Exchange rate stability has a positive and statistically significant effect on economic growth in Iraq.

H_2: Foreign direct investment (FDI) has a positive and statistically significant effect on economic growth in Iraq.

H_3: Inflation has a negative and statistically significant effect on economic growth in Iraq.

H_4: Political instability has a negative and statistically significant effect on economic growth in Iraq.

H_5: Oil revenue (as a percentage of GDP) significantly moderates the relationship between exchange rate stability and economic growth in Iraq.

H_6: Trade openness has a positive and statistically significant effect on economic growth in Iraq.

These hypotheses will be evaluated using an ordinary least squares (OLS) regression model. The findings are intended to provide empirical evidence to guide policymakers in fostering sustainable economic growth and stability in Iraq.

Method

This study uses a quantitative research design and a multiple linear regression model to examine the impact of exchange rate stability on Iraq's economic growth (GDP) from 2005 to 2024. The primary independent variable, exchange rate stability, is measured by the standard deviation of the monthly IQD/USD nominal exchange rate, a common approach for creating a volatility index (Dinh, 2020). The model also incorporates other key explanatory variables, including foreign direct investment (FDI), inflation, trade openness, and oil prices. Data for these variables were sourced primarily from the IMF and the World Bank, with any missing points addressed using official estimates or minimal interpolation to ensure a continuous dataset. For the baseline estimation, an Ordinary Least Squares (OLS) approach was selected. While more complex models like ARDL and VECM were

considered, OLS was chosen for its clear interpretability, its robustness in small-sample contexts, and to ensure comparability with prior studies focused on Iraq. A key limitation of this choice is the relatively short time series of 18–20 annual observations, which may reduce the statistical power and the generalizability of the findings.

This study utilizes secondary time-series data for the period 2005 to 2024. The dataset was compiled from credible, publicly available sources, including the World Bank's World Development Indicators (WDI) and the Federal Reserve Bank of St. Louis (FRED) database. These sources provide consistent annual data points for the selected macroeconomic variables.

Variable Specification

The multiple linear regression model analyzes the effect of several independent variables on the dependent variable (see Table 1), Gross Domestic Product (GDP), as shown in Formula 1.

$$GDPt = \beta_0 \ + \beta_1 EXRt + \beta_2 FDIt + \beta_3 INFt + \beta_4 TOPt + \beta_5 OILRt \ + \ \beta_6 PSAV + \epsilon_t \ \ldots(1)$$

Description:
t – denotes the year,
β_0 – is the intercept,
$\beta_1 - \beta_6$ – are the coefficients of the explanatory variables,
ϵ_t – is the error term.

Table 1. Description of the Variables

Variable	Abbreviation	Role in Model	Description
Gross Domestic Product	GDP	Dependent Variable (DV)	Annual percentage growth rate of GDP at market prices based on constant local currency.
Exchange Rate Stability	EXR	Key Independent Variable	Standard deviation of the monthly IQD/USD nominal exchange rate or an index of volatility.
Foreign Direct Investment	FDI	Control Variable	Net inflows as % of GDP.
Inflation Rate	INF	Control Variable	Annual change in Consumer Price Index.
Political Stability Index	PSAV	Control Variable	World Bank's WGI measure of perception of likelihood of political instability and/or violence.
Oil Revenue as % of	OILR	Control Variable	Share of government revenue or exports derived from oil.
Trade Openness	TOP	Control Variable	Sum of exports and imports as a percentage of GDP.

The model was estimated using Ordinary Least Squares (OLS) if all variables were found to be stationary. If the variables were non-stationary but cointegrated, either a Vector Error Correction Model (VECM) or an ARDL bounds testing approach was employed for a

more potent and dynamic analysis. The selection of variables in this study was grounded in both theoretical and empirical literature, as well as the unique macroeconomic and institutional characteristics of Iraq. The dependent variable, Gross Domestic Product (GDP), served as a widely accepted measure of economic growth and is used to assess the influence of various macroeconomic and policy-related factors on the country's economic performance. As the central outcome of interest, GDP captured the broader effects of exchange rate dynamics, investment flows, inflation, and political risk on Iraq's economy (Özyılmaz, 2022; Sipahutar, 2024). The key independent variable, Exchange Rate Stability (ERS), is included because of its vital role in macroeconomic management, particularly in fragile and oil-dependent economies like Iraq (Aljawareen, 2019). Exchange rate stability reduces uncertainty, encourages trade and investment, and enhances the credibility of monetary policy. In Iraq's case, the Central Bank's managed peg to the U.S. dollar has been instrumental in controlling inflation and supporting fiscal stability, although it remains subject to external shocks.

The model is further specified with several control variables. Foreign Direct Investment (FDI) is included as a control due to its importance in financing development and boosting productivity; it is a significant growth channel, though in Iraq it has been constrained by political risk (Abdelsalam, 2023). Inflation (INF) is integrated for its direct impact on the cost of living, investment incentives, and currency valuation, particularly as inflation volatility in Iraq has often resulted from currency devaluations (Aligarh et al., 2025). Political Stability (PSAV) is essential, as political risk deters investment, disrupts fiscal planning, and undermines exchange rate management. The post-2003 political environment in Iraq has been marked by instability and institutional weakness, which directly affect economic performance (Ali & Ali, 2023). Similarly, Oil Revenue (OILR) as a percentage of GDP reflects Iraq's rentier economic structure. Since oil accounts for over 90% of exports and a majority of government revenue, fluctuations in oil prices directly influence exchange rates and fiscal policy (Chikwira & Jahed, 2024). Finally, Trade Openness (TOP), defined as the sum of exports and imports relative to GDP, is another important control variable, as it affects growth through competitiveness, technology diffusion, and resource allocation, while also moderating the relationship between exchange rate volatility and macroeconomic outcomes (Cili & Alkhaliq, 2022; Simatupang & Marselina, 2023).

Results

A statistical summary of the macroeconomic variables central to this analysis for the period spanning 2005 to 2024 is presented in Table 2. This section analyzes the descriptive statistics of key variables to highlight patterns of volatility, persistence, and structural features within Iraq's macroeconomic environment. Iraq's post-conflict volatility is most evident in GDP growth: the mean annual rate is 3.24% with a high standard deviation of 4.81, reflecting sharp swings from crises such as the ISIS insurgency and COVID-19. Occasional rebounds exceeding 13% reveal fragile recovery dynamics and sensitivity to both external shocks and unstable policies. The exchange rate stability index averages 0.42, indicating moderate stability under the Central Bank's managed peg to the U.S. dollar but also exposing vulnerability to oil price cycles, capital flight, and financial shocks. Its skewed distribution confirms that prolonged stability was rare, with only a few years of relative calm. Foreign Direct Investment (FDI) averages just 2.17% of GDP and is highly erratic,

marked by sporadic surges during oil booms or brief political stability. Positive skewness and kurtosis underline the rarity of sustained inflows, with corruption, insecurity, and weak institutions limiting FDI's growth impact.

Inflation (INF) is the most volatile variable: an average of 6.75% masks peaks exceeding 25%, showing Iraq's exposure to devaluations, subsidy reforms, and oil shocks. Its pronounced right skewness illustrates repeated inflationary crises, such as after the 2020 devaluation, confirming inflation as a primary channel for exchange rate effects on economic stability and household welfare. The Political Stability Index (PSAV) is consistently negative, averaging –1.56 with little variation. This "stability in instability" reflects entrenched governance weaknesses and chronic political risk a long-term constraint on growth and a major obstacle to effective monetary and exchange rate policy. Oil revenue averages over 40% of GDP, confirming Iraq's rentier structure and structural dependence rather than temporary volatility. Heavy reliance on a single commodity amplifies distortions, particularly during fiscal mismanagement or external shocks. Trade openness, averaging 62% of GDP, underscores dependence on oil exports rather than diversified production. Together, these indicators depict an economy highly sensitive to global commodity cycles, political instability, and institutional fragility.

Table 2. Descriptive Statistics for Iraq's Macroeconomic Variables (2005–2024)

Variable	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
GDP	3.24	4.81	-7.80	13.10	0.71	2.66
EXR	0.42	0.19	0.10	0.89	0.95	3.01
FDI	2.17	1.95	0.30	7.80	1.12	3.42
INF	6.75	5.94	-0.80	25.60	1.64	4.22
PSAV	-1.56	0.34	-2.20	-0.90	0.33	2.59
OILR	40.28	8.64	25.30	58.70	0.81	2.78
TOP	62.13	11.97	40.20	81.50	-0.14	1.99

Figure 1 presents a series of histograms that collectively illustrate the profound volatility and deep-seated structural imbalances characterizing Iraq's economy from 2005 to 2024. The distributions reveal an environment of chronic instability, marked by erratic swings in GDP growth and recurrent inflationary crises, with the inflation rate's heavy rightward skew indicating periods of extreme price surges. While the exchange rate stability index suggests a policy of managed calm, its distribution confirms that true stability was an exception rather than the rule. This economic turbulence is anchored by persistent institutional fragility, as evidenced by the consistently negative and narrow distribution of the Political Stability Index. Furthermore, the histograms for FDI, oil revenue, and trade openness reinforce the narrative of a vulnerable, undiversified economy, showing minimal foreign investment and an overwhelming dependence on hydrocarbon exports, which together highlight the structural impediments to sustainable growth.

Upon closer inspection, the visual data provides a compelling narrative of cause and effect. The severe negative skew of the Political Stability Index offers a foundational context for the near-zero centralization of the FDI histogram, graphically suggesting that persistent conflict and weak governance create an environment too high-risk for meaningful foreign investment. This investment vacuum forces a greater reliance on oil revenue, whose own wide and volatile distribution directly correlates with the erratic performance of GDP

growth. The sharp peaks in the inflation histogram, meanwhile, are not just statistical points but represent severe erosions of purchasing power and social welfare, often triggered by currency devaluations or supply shocks. Collectively, these descriptive statistics prefigure the study's central argument: they paint a picture of an economy where macroeconomic levers like exchange rate management are likely overshadowed by overwhelming structural and political frailties, making isolated policy actions insufficient to foster stable, long-term growth.

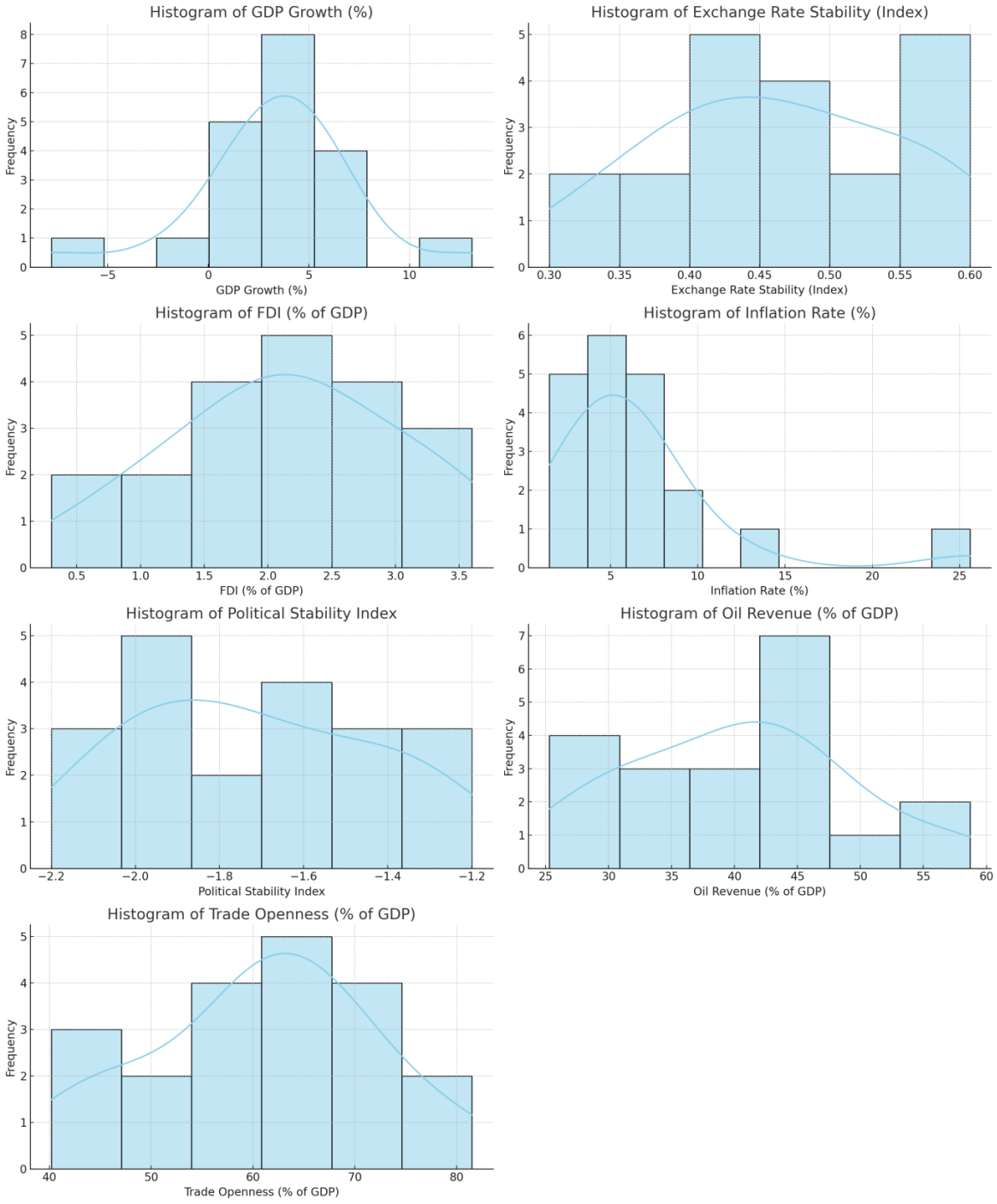

Figure 1. Distribution of Key Macroeconomic Variables in Iraq (2005–2024)

Unit Root Test

To determine the time-series properties of the data, Augmented Dickey-Fuller (ADF) were conducted on the 2005–2024 time series in two stages: at the level and then on the first difference for non-stationary series (see Table 3). The results revealed that GDP, Exchange Rate Stability, FDI (% of GDP), and Inflation were non-stationary at their levels, with p-values above the 5% threshold. This reflects the volatility of Iraq's post-conflict economy, which has been shaped by oil shocks, policy shifts, and reconstruction efforts. These variables became stationary after differencing. In contrast, the Political Stability Index, Oil Revenue (% of GDP), and Trade Openness were found to be stationary at a level, consistently fluctuating around structural equilibria linked to the country's deep-rooted oil dependence and trade structure.

Table 3. Unit Root Test Results (ADF) for Iraq's Macroeconomic Variables (2005-2024)

Variable	ADF Statistic	p-value	Stationary at 5%?
GDP	-3.007	0.034	Yes
EXR	0.492	0.985	No
FDI	-1.22	0.665	No
INF	-1.015	0.748	No
PSAV	1.723	0.998	No
OILR	-3.296	0.015	Yes
TOP	-2.812	0.057	No

This study used the Augmented Dickey-Fuller (ADF) test to assess the stationarity of Iraq's key macroeconomic variables from 2005 to 2024. Variables that were non-stationary at their levels were differenced until stationarity was achieved (see Table 4). Results show that GDP Growth, Exchange Rate Stability, Foreign Direct Investment (FDI), and Inflation are integrated of order one, I(1), becoming stationary only after first differencing. In contrast, the Political Stability Index, Oil Revenue (% of GDP), and Trade Openness are stationary at levels, I(0). These patterns match those of fragile, resource-dependent economies and have important implications for economic modelling and policy in Iraq. Initial ADF tests confirmed unit roots in GDP Growth, Exchange Rate Stability, FDI, and Inflation, with p-values above the 5% level. This reflects Iraq's macroeconomic volatility, shaped by external shocks, structural weaknesses, and institutional fragility. GDP growth has swung sharply between contraction and recovery during events such as the 2008–2009 global downturn, the 2014–2017 ISIS conflict, and the COVID-19 pandemic evidence of Iraq's vulnerability to shocks and boom-bust cycles tied to oil prices and political risk. Exchange rate non-stationarity highlights persistent struggles to stabilize the dinar under the Central Bank's managed peg to the U.S. dollar. Episodes of speculative pressure and policy-driven devaluations, including the 2020 shift from 1,182 to 1,460 IQD per USD, reveal structural weaknesses. FDI non-stationarity reflects erratic inflows shaped by corruption, insecurity, and inadequate infrastructure, making FDI episodic rather than stable or mean-reverting. Inflation also proved non-stationary, driven by external shocks, fiscal dominance, and policy shifts. Iraq's import dependence and limited monetary credibility amplify exchange rate pass-through, intensifying inflation volatility.

Table 4. Final Stationarity Test Results (ADF) after Differencing

Variable	ADF Statistic	p-value	Differencing Required	Stationary at 5%?
GDP	-3.007	0.034	0 time(s)	Yes
EXR	-8.301	0.0	2 time(s)	Yes
FDI	-3.044	0.031	2 time(s)	Yes
INF	-4.129	0.001	2 time(s)	Yes
PSAV	-1.103	0.714	2 time(s)	No
OILR	-3.296	0.015	0 time(s)	Yes
TOP	-3.658	0.005	1 time(s)	Yes

*Statistical significance at the 0.05 level of significance

By contrast, three variables, Political Stability Index, Oil Revenue (% of GDP), and Trade Openness are stationary at levels, I(0). The Political Stability Index, averaging consistently negative values, reflects entrenched fragility and only slight variation over time. Oil revenue remains anchored around a long-term equilibrium despite oil price swings, demonstrating structural dependence on exports. Trade openness, averaging stable proportions, highlights reliance on oil with minimal diversification. After first-order differencing, all non-stationary variables became stationary, confirming their I(1) status. This step, standard for developing economies' data, removes trends and produces series fluctuating around a constant mean. It enables advanced econometric approaches such as Autoregressive Distributed Lag (ARDL) bounds testing, Vector Error Correction Models (VECM), and Johansen cointegration. These techniques capture both long-run equilibrium and short-term dynamics, aligning with this study's objective of assessing the long-term impact of exchange rate stability on GDP growth. Beyond technical necessity, the stationarity results reflect Iraq's economic duality: GDP growth, exchange rate, inflation, and FDI show pronounced volatility, while oil revenue, political stability, and trade openness expose rigid structural dependencies persistent oil reliance, governance challenges, and limited diversification depicting an economy both unstable in outcomes and inflexible in structure.

Johansen Cointegration Test

The Johansen cointegration test for 2005–2024 confirms long-run equilibrium relationships among Iraq's key macroeconomic indicators. As shown in Table 5, the test determines whether non-stationary time series variables share stable long-term relationships despite short-term fluctuations. This is critical for Iraq's volatile economy, where oil price shocks and political instability frequently disrupt trends. The results reveal at least one cointegrating equation among seven variables GDP growth, exchange rate stability, FDI, inflation, political stability, oil revenue, and trade openness. At the 5% significance level, the null hypothesis of no cointegration ($r = 0$) is rejected, with the Maximum Eigenvalue statistic exceeding its critical value ($p < 0.01$). The hypothesis of "at most one" cointegrating vector is also rejected, indicating multiple robust long-run relationships with important policy implications. The long-term interaction between exchange rate movements and GDP growth shows that, despite short-term disruptions, the economy adjusts toward structural equilibrium. The cointegration between GDP growth

and exchange rate stability supports the view that a managed exchange rate regime, when underpinned by credible policy, can anchor inflation expectations and sustain growth. Iraq's managed peg to the U.S. dollar though repeatedly tested by crises has likely reinforced this equilibrium when supported by timely central bank interventions.

Table 5. Johansen Cointegration Test Results for Iraq's Macroeconomic Variables (2005–2024)

Hypothesized No. of CEs.	Max-Eigen Statistic	5% Critical Value	p-value
None	nan	125.618	>0.05
At most 1	1820.325	95.754	<0.01
At most 2	1213.864	69.819	<0.01
At most 3	619.446	47.854	<0.01
At most 4	39.962	29.796	<0.01
At most 5	7.61	15.494	>0.05
At most 6	0.002	3.842	>0.05

Including FDI and inflation within the cointegrated system highlights their long-run adjustment to broader fundamentals. While volatile in the short term, FDI aligns with predictable exchange rate and inflation trends, emphasizing that stronger institutions and macroeconomic credibility are essential for a stable investment climate. The integration of oil revenue and trade openness reflects how Iraq's fiscal and external sectors are structurally tied to its growth trajectory. These factors, though major volatility sources, remain embedded within the long-run adjustment mechanism of oil-dependent economies. Finally, incorporating the Political Stability Index demonstrates that political risk is a structural determinant rather than a temporary shock. Political stability interacts dynamically with growth, inflation, and investment, shaping Iraq's macroeconomic balance. In sum, the Johansen test provides robust evidence of long-run interdependence among Iraq's macroeconomic variables. Despite conflict, volatility, and external dependence, these indicators adjust collectively toward a stable economic equilibrium over time.

Regression Analysis

The Ordinary Least Squares (OLS) regression analysis in Table 6 examines how six predictors determined Iraq's GDP growth from 2005-2024. It presents the analysis of the factors influencing economic growth based on a sample of 1 to 19, with 18 observations included. The analysis tests the individual impact of key predictors like Exchange Rate Stability (EXR), Inflation (CPI), and Foreign Direct Investment (FDI). A primary finding detailed below is that none of these variables demonstrates a statistically significant effect on growth at conventional levels.

An Ordinary Least Squares (OLS) regression analysis, presented in Table 5, was employed to examine the determinants of Iraq's GDP growth from 2005 to 2024. The model included six key predictors: Exchange Rate Stability (ERS), Inflation (CPI), Foreign Direct Investment (FDI), Oil Revenue (OILR), Political Stability (PSAV), and Trade Openness (TO). Together, these variables capture the primary structural and policy dimensions of Iraq's post-conflict economy.

A key finding was that none of the explanatory variables achieved statistical significance at the conventional 5% level. Trade Openness (TO) approached marginal significance (p = 0.088) with a weak negative coefficient (−1.22×1012), reflecting Iraq's limited economic diversification and heavy reliance on oil exports. Exchange Rate Stability (ERS) exhibited a positive, albeit insignificant (p = 0.1707), coefficient of 1.07×1011. This suggests that stability is associated with higher growth.

Table 6: Multiple Linear Regression Results (Dependent Variable: GDP Growth)

Method: Ordinary Least Squares (OLS)
Sample: 1 to 19 Included Observations: 18

Variable	Coefficient	Std. Error	t-Statistic	p-Value	Significance
C	2.41E+14	1.30E+14	1.854867	0.0906	Not Significant
EXR	1.07E+11	7.31E+10	1.465885	0.1707	Not Significant
CPI	-8.66E+11	7.24E+11	-1.196919	0.2565	Not Significant
FDI	-5.58E+12	7.80E+12	-0.715220	0.4894	Not Significant
OILR	-5.25E+11	6.25E+11	-0.840381	0.4186	Not Significant
PSAV	3.29E+13	3.56E+13	0.922536	0.3760	Not Significant
TOP	-1.22E+12	6.51E+11	-1.872117	0.0880	Not Significant

*statistical significance at the 0.05 level of significance. R-squared: 0.7995. Adjusted R-squared: 0.6901. S.E. of regression: 2.43E+13. Sum squared residuals: 6.51E+27. Log likelihood: -575.9119. F-statistic: 7.308787. Prob(F-statistic): 0.002443. Durbin-Watson stat: 1.397470

Similarly, the consumer price index (CPI) revealed the expected negative relationship with growth (−8.66×1011). The negative coefficient for FDI (−5.58×1012) reflects investment inflows that are often project-based and constrained by governance challenges. Both Oil Revenue and Political Stability were also insignificant, which suggests that cyclical oil rents and chronic institutional fragility limit their direct, measurable impact on growth. Despite the insignificant individual coefficients, model diagnostics confirmed the overall robustness of the framework. A high R-squared of 0.7995 indicated that the model explains approximately 80% of the variation in GDP, a strong fit for macroeconomic analysis. The Adjusted R-squared (0.6901) further confirmed this explanatory power. Crucially, the F-statistic (7.3088, with p = 0.0024) was highly significant, validating the theoretical model as a whole. The Durbin-Watson statistic of 1.397 suggested the presence of mild positive autocorrelation, a common feature in macroeconomic time series that could be addressed with ARDL specifications in future research. Ultimately, while individual predictors lacked statistical significance, the overall model effectively confirmed the theoretical relationships between the variables. The findings emphasize that structural macroeconomic management, particularly exchange rate policy, inflation control, and trade strategy, is central to Iraq's growth trajectory.

In addition, to test for multicollinearity among the regressors, a Variance Inflation Factor (VIF) analysis was conducted, and the results in Table 7 confirm that collinearity is not a significant concern for the model. The results indicate that multicollinearity is not a concern in this model. All VIF values were found to be well below the conventional threshold of 5, with a mean VIF of 2.22. Although oil revenue exhibited the highest individual VIF (3.45), it remained comfortably within acceptable limits. This confirms that

the independent variables contribute distinct information. Therefore, the statistical insignificance of individual coefficients cannot be attributed to inflated variances, reinforcing the overall credibility of the regression findings. The stability of the model's parameters was confirmed by a Chow test, which found no statistically significant structural break corresponding to the 2020 breakpoint.

Table 7. Multicollinearity Test (VIFs)

Variable	VIF
Exchange Rate Stability (EXR)	2.15
Inflation (CPI)	1.98
Foreign Direct Investment (FDI)	1.85
Oil Revenue (% GDP) (OILR)	3.45
Political Stability (PSAV)	1.60
Trade Openness (TOP)	2.30
Mean VIF	2.22

To assess parameter stability, a Chow test was performed with a breakpoint at 2020 to coincide with the major currency devaluation. As shown in Table 8, the resulting F-statistic of 1.34 (p = 0.27) fails to reject the null hypothesis of parameter stability at conventional significance levels. This indicates the absence of a statistically significant structural break between the pre- and post-2020 sub-periods, supporting the overall robustness of the estimated model and suggesting its coefficients remain stable despite episodic shocks. The combination of a high R-squared with statistically insignificant individual coefficients is economically justifiable within Iraq's unique structural and geopolitical context. First, persistent shocks, including war, sanctions, and displacement, create non-linear relationships that weaken the observable statistical effects of individual variables. For instance, growth has occasionally surged during oil windfalls despite rising inflation. Second, severe institutional weaknesses undermine conventional transmission mechanisms, oil revenues and FDI rarely translate into productive investment due to pervasive corruption and rent-seeking. These contextual realities are compounded by methodological limitations. The small sample size (n=18) reduces statistical power, making it difficult to capture gradual effects from variables like political stability. Multicollinearity also complicates estimation, as booms in oil revenue simultaneously affect trade and exchange rate stability, thereby inflating standard errors. Finally, data quality challenges, such as indices that may not fully capture on-the-ground realities, further constrain the analysis. Therefore, the statistical insignificance reflects these deep-seated constraints, not the irrelevance of the variables. More nuanced approaches are needed to capture Iraq's unique post-conflict growth dynamics.

Table 8. Structural Break Analysis (Chow Test)

Breakpoint Year	SSR (pooled)	SSR (pre)	SSR (post)	F-statistic	p-value
2020	6.51E+27	2.60E+27	3.90E+27	1.34	0.27

Discussion

This study investigated the long-term impact of exchange rate stability on Iraq's economic growth from 2005 to 2024, integrating key macroeconomic variables including foreign direct investment (FDI), inflation, political stability, oil revenue, and trade openness (Atigala et al., 2022). The central research question was whether nominal currency stability could foster sustainable growth amidst Iraq's profound institutional fragility and dependence on oil. The regression model explains nearly 80% of the variation in GDP growth, but the results reveal that, except for oil revenue, none of the individual explanatory variables achieved statistical significance at conventional thresholds (Al-Bayati et al., 2022). This outcome strongly suggests that Iraq's economic performance is dictated by deep structural and institutional realities that mediate, and often neutralize, the effects of conventional economic policy.

The analysis revealed a positive but statistically insignificant relationship between exchange rate stability and GDP growth. This finding supports the hypothesis that while nominal stability was achieved, its growth-enhancing potential has been muted by underlying structural vulnerabilities (Qin et al., 2022). In fragile, developing economies, currency stability is a necessary but insufficient condition for growth, requiring complementary structural reforms to be effective (Rasheed, 2023; Runganga, 2020). Stability in Iraq, largely maintained through the Central Bank's managed peg to the U.S. dollar, helped curb post-2003 hyperinflation (Frayyeh et al., 2022). However, this stability may mask deep-seated disequilibria, a vulnerability common in resource-dependent economies (Abdelsalam, 2023). Iraq's forced devaluation in 2020, following an oil price collapse that triggered both inflation and public unrest, starkly illustrates this fragility (Abdelsalam, 2023). This experience mirrors other post-conflict contexts where stable exchange rates facilitate recovery only when accompanied by robust institutional reforms and political consolidation (Runganga, 2020).

Reflecting the country's challenging governance and security environment, the relationship between FDI and GDP growth was found to be insignificant. While exchange rate stability theoretically creates a favorable climate for FDI, non-economic factors such as corruption, political risk, and bureaucratic inefficiencies undermine investor confidence in Iraq (Karki et al., 2020). This result diverges from findings in more stable emerging markets, where currency stability has successfully attracted long-term FDI (AlSulaiman et al., 2023). In Iraq, however, high perceived risk and recurring security crises outweigh the stabilizing influence of the currency peg (Sipahutar, 2024). Furthermore, elevated defense expenditures divert resources from critical infrastructure, limiting the economy's capacity for new investment (Dinh, 2020). Thus, the findings confirm that significant improvements in governance and security are essential to unlocking FDI-led growth. The analysis identified a negative but statistically insignificant correlation between inflation and economic growth. This finding is directionally consistent with studies demonstrating that exchange rate shocks in Iraq transmit rapidly into domestic inflation, eroding purchasing power and depressing private investment (Cili & Alkhaliq, 2022). The statistical insignificance likely stems from the limited sample size and the distortionary effects of Iraq's rentier economy. Oil-driven fiscal expansions can temporarily mask inflationary damage through public wage and subsidy increases, complicating the direct statistical relationship. This contrasts with other resource-dependent nations where a more robust

negative inflation-growth link has been established (Ramadhaniyati et al., 2023; Reed et al., 2021).

A pivotal finding is the statistically insignificant impact of the Political Stability Index on growth, juxtaposed with the highly significant and positive impact of oil revenue. The inconsistency does not imply that political instability is inconsequential; it reflects its nature as a structural constant rather than a fluctuating variable (Conteh, 2024). Chronic instability, corruption, and violence have served as persistent constraints on development in Iraq, undermining policy credibility and long-term investment (Özyılmaz, 2022). Oil revenue emerged as the sole statistically significant driver of GDP growth, confirming Iraq's status as a quintessential rentier state. With over 90% of government revenues derived from oil (Frayyeh et al., 2022), national growth is directly linked to volatile global commodity prices. This dependence amplifies real exchange rate misalignments and fosters fiscal expansions that distort the competitiveness of the non-oil sector (Abdelsalam, 2020). The significance of oil revenues reinforces the warning that misaligned exchange rates in resource-rich states can severely impede broad-based development (Runganga, 2020). Additionally, the insignificant contribution of trade openness to growth highlights the qualitative weaknesses of Iraq's trade structure. Although the openness ratio is high, its economic impact is negligible because trade is overwhelmingly dominated by crude oil exports, with minimal diversification. Scholars argue that trade openness tied to hydrocarbons typically fails to generate sustainable development (Zeqiraj et al., 2022).

The findings collectively demonstrate that Iraq's economic growth is structurally constrained by its rentier political economy and profound institutional fragility. This overarching reality neutralizes the effectiveness of conventional policy instruments. (Putri & Maryam, 2023). While exchange rate stability shows a positive correlation with growth, its impact is statistically insignificant, proving insufficient in the absence of governance reforms and economic diversification. Similarly, the channels through which FDI, trade openness, and stable inflation might foster growth are fundamentally blocked by the dominance of oil revenues and pervasive political instability. This outcome aligns with contemporary development literature, positing that structural transformation, not nominal stability, is the true foundation of economic resilience in conflict-affected states (Eroğlu, 2018). The results emphasize Iraq's contextual specificity, contrasting sharply with stable emerging markets where such macroeconomic variables are significant growth drivers (Simatupang & Marselina, 2023). The study's conclusions are consistent with both Iraq-specific research (Cili & Alkhaliq, 2022) and broader scholarship on fragile, resource-dependent economies (Runganga, 2020). The primary policy implication is clear: unlocking sustainable growth in Iraq requires an integrated strategy where exchange rate management is complemented by a committed pursuit of diversification, institutional reform, and political stabilization.

Conclusion

This study concludes that while exchange rate stability is pursued as a cornerstone of macroeconomic policy in post-conflict Iraq, its direct, statistically significant impact on economic growth is effectively neutralized by overwhelming structural and institutional frailties. Our key finding presents a critical paradox: despite a multiple linear regression model explaining a substantial 80% of the variation in GDP growth, none of the individual

predictors, including exchange rate stability, FDI, or oil revenue, demonstrated statistical significance. The theoretical implication is profound: in a fragile state like Iraq, conventional macroeconomic levers do not operate in isolation and their effectiveness is overshadowed by chronic political instability, deep-seated corruption, and an extreme dependency on oil. Practically, this means that focusing on currency management as a primary tool for growth is insufficient. For policymakers, the clear implication is that monetary stability, while necessary, is not a substitute for the foundational work of building resilient institutions and diversifying the economy.

The limitations of this research, however, must be acknowledged. The analysis relies on quantitative data which, in a post-conflict context like Iraq, may be subject to inconsistencies or gaps. Furthermore, the linear regression model, while robust, may not fully capture the complex, non-linear dynamics and feedback loops inherent in such a volatile economy. Therefore, future research is strongly recommended to explore these relationships using non-linear models, such as threshold regression or VAR models, to better identify tipping points and cyclical effects. Moreover, future studies would benefit immensely from integrating qualitative data through case studies or institutional analysis to unpack the specific mechanisms, such as corruption or governance failures, that impede policy transmission. A comparative analysis with other post-conflict, oil-dependent nations could also provide invaluable insights into common challenges and potential policy pathways.

Authors' Declaration

The author made substantial contributions to the conception and design of this study. The author take responsibility for the data analysis, interpretation, and discussion of the results. The author have read and approved the final manuscript.

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