

## Corruption Perceptions and Their Impact on Macroeconomic Performance in Iraq: Institutional Transmission Channels and ARDL Evidence from the Model (2010–2022)

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### Abstract

The paper structurally analyzes the impact of perceived corruption on Iraq's macroeconomic performance during the period 2010–2022. More specifically, it attempts to determine the elasticity of major macroeconomic variables exchange rate, inflation, and gross domestic product with respect to changes in Transparency International's Corruption Perception Index (CPI). Annual time series data is used within an autoregressive distributed lag (ARDL) framework after checking stationarity through Augmented Dickey Fuller (ADF) test and bounds testing approach toward cointegration. Long-run equilibrium association between corruption and economic performance is found to be highly significant by this study. Administrative perception explains a substantial proportion of variation of GDP as well as 65% variation in exchange rate explained by perceptions on administration. There exists strong negative association where higher-level administrative type - corruption directly associates with declining GDP besides depreciation over local currency's purchasing power. It found outcomes attributable to the dependency of the Iraqi economy on oil revenues and weak institutions in the country. Therefore, this study has assumed that transparency shall be improved and corruption reduced within public offices by implementing urgent policy interventions as a prerequisite for economic stability together with diversification of an economic base away from a rentier state model.

**Keywords:** Corruption Perceptions Index, Exchange Rate, Inflation, GDP, Iraq.

**JEL Classification:** D73, O10, E31, F31, O53

### 1. Introduction

The quality of institutional performance, the efficacy of economic policies, and the stability of the macroeconomic environment are all intricately connected to economic development. A multitude of Arab and international scholars argue that the presence of weak governance structures and institutional disparities impedes a nation's capacity to attain stable and sustainable development (Ajamiya, 1983; Ajamiya & Al-Laithi, 2001; Halawa & Saleh, 2009). Corruption is one of the main structural obstacles to development because it distorts economic incentives, and markets, weakens

public administration, and reduces the efficiency of government spending (Khairallah, 2004; Mohammed, 2013; Nassira, 2022).

Iraq is a clear example of an economy deeply devastated by corruption which interlinks fiscal policy, monetary performance, and macroeconomic stability. Since 2003 the country has been undergoing major structural economic and institutional reforms characterized mainly by upheavals, volatile oil revenues, and repeated economic shocks. According to Transparency International (2021), Iraq always figures among the countries perceived to be most corrupt reflecting weak institutions, limited regulatory effectiveness, and popular concerns regarding misuse of public funds that seem to persist (Khuraysan, 2022).

Summary of the Macroeconomic Institutional Challenges is in the main indicators as earlier national and local studies have shown (Hassan, 2012; Hassan, 2019; Ministry of Planning, 2022). These include persistent inflation accompanied by instability in exchange rates with low growth and variation in aggregate demand. Economic theory also supports such findings which state that corruption reduces economic efficiency meanwhile disturbing both channels of monetary as well as fiscal policies to transmit their intended effects hence instability of prices with investment reduced output. (Mandour et al., 2004; Al-Wadi et al., 2013).

This issue really matters, but there's a pretty big shortage of solid evidence.

on the direct impact perception of corruption has with key macroeconomic indicators in Iraq, using modern econometric analysis. Previous studies largely applied a descriptive methodology, focused specifically either on aspects relating to inflation or growth, or have ignored long-run relationships between corruption and macroeconomic outcomes (Shawkat & Abdul Khader, 2019; Al-Anzi, 2013). This lack of empirical evidence restricts the ability for policymakers to understand the relationship between corruption, inflation dynamics, fluctuations in exchange rates and GDP performance within the Iraqi economy.

Due to these gaps, the current study aims to provide a comprehensive empirical analysis of the impact of corruption perceptions on Iraq's macroeconomic indicators between 2010 and 2022. The ARDL approach shall be applied to determine effects in the short run as well as in the long run hence contributing to better understanding regarding corruption and its macroeconomic impacts. Most of the recent research works related to Iraq are more concerned with economic issues such as inflation, public debt, and investment performance. Corruption is rarely highlighted as a core economic variable in these analyses. The bulk of this literature remains at a descriptive level and lacks any empirical methodology through which the effects of corruption on GDP or employment or prices or investment can be analyzed. International studies emphasize the importance that governance quality has for economic results but this relationship has not been pursued much in detail in the case of Iraq. A methodological gap appears since most previous studies on Iraq always depend on simple statistical analysis without applying modern econometric models that can check both short- and long-run

impacts. Therefore, there is still no specific empirical study undertaken to investigate the impact of corruption on main macroeconomic indicators in Iraq using updated data for the period 2010-2022.

This research seeks to examine the impact of corruption on significant macroeconomic indicators in Iraq from 2010 to 2022. The primary aims are:

1. To ascertain whether there is a relationship between the level of corruption and growth rates by using annual data at the country level.
2. To ascertain the impact of corruption on inflation, unemployment and investment.
3. To ascertain whether the impacts of corruption are transitory, permanent or both by using modern econometric techniques.
4. To present evidence-based implications that may guide reforms in Iraq's economic policy and governance.

Together, these objectives aim to bridge the empirical and methodological gaps currently present in the literature.

## 2. Theoretical Framework and Transmission Channels

This section develops theoretically the logic through which corruption can lead to poorer macroeconomic outcomes and development performance, linking these (argument in institutional and development economics) to testable pathways in line with Iraq's macro. For example, looking at Iraq's macro indicators (GDP grow, inflation and ex rate) linking up to 2010 we can be sure was experienced in 2010, and the drop in GDP growth is a clear textual indicator of this.

### 2.1 Conceptualizing corruption within development economics:

In development economics, corruption is generally viewed as an institutional failure which undermines the state's ability to effectively allocate resources, and to create and enforce rules promoting growth (Ajamiya, 1983; Ajamiya & Al-Laithi, 2001). In this view, corruption introduces uncertainty, raises transaction costs and results in a less effective set of public policy instruments—key to long run development (Al-Quraishi, 2007; Al-Quraishi, 2010). The institutional environment is particularly important in those economies where the role of the public sector in spending, contracting and regulation is prominent, an accurate description of the case of Iraq (Ministry of Planning, 2022).

A second theoretical underpinning takes the rent-seeking view: when public authority is exploited for private advantage, resources flee from productive activities towards non-productive competitions for access to political power, undermining allocative efficiency and the degree to which public expenditures contribute to growth (Khairallah, 2004; Mohammed, 2013). In oil-reliant economies, the stakes can be greater both because large, concentrated, revenues create an incentive for their capture and non-transparent allocation, making quality of governance a determinant of

macroeconomic stability and development playback (Khuraysan, 2022; Transparency International, 2021).

In this paper, we use the Corruption Perceptions Index (CPI) as a measurable proxy for perceived governance quality. Higher CPI scores indicate lower perceived corruption, which indicates stronger governance and institutional performance (Transparency International, 2021).

## 2.2 Transmission channels linking corruption to Iraq's macroeconomic outcomes:

Building on these foundations, corruption is able to impact development outcomes via three macroeconomic channels as indicated below; these correspond with the variables used in the empirical model in this study.

### (i) The growth and productivity channel (CPI → GDP growth):

Corruption can adversely impact growth by hampering the efficiency of investment and public spending, by discouraging the private sector to participate in investment, and by lowering the overall productivity of the economy by misallocation (Ajamiya & Al-Laithi 2001; Al-Quraishi, 2017). In practice, this implies that when public contracts/projects are allocated according to informal payment or political connections, the economy earns on capital at lower rates, leading to weaker long-term performance of the economy. This implies that when corruption is higher (CPI lower) the GDP growth performance will be weaker (Ayub et al., 2013; Halawa & Saleh, 2009).

### (ii) The price stability channel (CPI → inflation):

Corruption may aggravate inflation by increasing the inefficiency of public expenditure, the lack of fiscal discipline, and the inefficiencies of the market's watchdog (Roffia & Zaghini, 2007; Mandour et al., 2004). By distorting subsidies and procurement prices, corruption also exerts an additional effect on inflationary dynamics. Hence, poor governance is expected to be associated with high inflation dynamics.

### (iii) The external confidence / exchange rate channel (CPI → exchange rate):

A weak institutional context may undermine investor confidence and trigger unsupportable currency pressures—due to capital flights, weaker non-oil investment, or stronger veering to USD as a hedge against shale-shock uncertainty (Al-Samarrai, 2006; Al-Jumaili, 2005). In these contexts, governance issues accentuate the instability of the exchange rate, especially in the presence of shocks. One can thus link corruption to depreciation pressure (higher IQD/USD).

This section develops the theoretical logic explaining how corruption can affect macroeconomic outcomes and development performance. It links institutional and development economics arguments to testable pathways that match Iraq's macro indicators (GDP growth, inflation, and exchange rate) over 2010–2022.

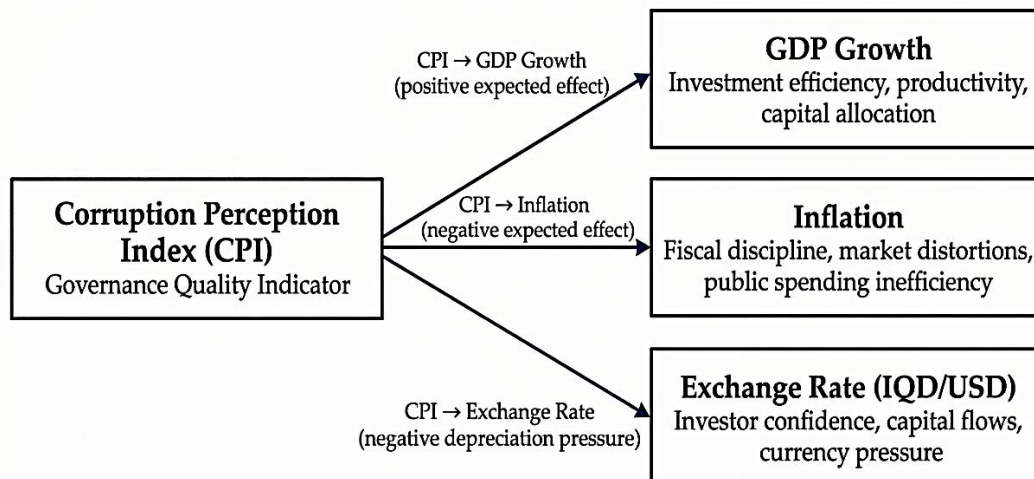


Figure (1). Conceptual Framework: Corruption transmission channels to macroeconomic outcomes in Iraq (2010–2022).

### 3. Literature Review

Economic development is conventionally perceived as the uninterrupted growth of a country's productive capacity and levels of income, as well as its welfare. The development concepts have tenets on capital formation, institutions, and public policy as the conditions for successful growth (Ajamiya, 1983; Al-Quraishi, 2007).

Institutions provide the rules within which investment takes place, markets operate and economies are stabilized or protected against frail instability which leads to inefficiency and slow progress in developing eventually (Halawa & Saleh, 2009).

A basic condition for development is macroeconomic stability by which one would mean controlled inflation, a balance in public finances, and a sound policy environment. Instability leads to the erosion of investor confidence, productivity remains at a standstill, and long-term economic planning is put into risk (Al-Wadi et al., 2013). These therefore provide the theoretical basis from which governance factors, most especially corruption can have- even wield over-reaching influence on macroeconomic performance.

Corruption is widely recognized as the key constraint to economic development. It reduces the efficiency of public institutions, in-creases transaction costs and re-allocates resources from productive sectors (Mohammed, 2013). At the macro level, corruption weakens the mobilization of public revenues, distorts government expenditures and reduces the effectiveness of fiscal and monetary policies. Such distortions can have an impact on inflation, investment, employment and economic growth (Mustafa & Abdul Rahman, 2014; Chandrashekar et al., 2018).

Corruption in public expenditure and administrative procedures reduce government investment on infrastructure, education, and productive sectors that support long-term development and also

confidence of the private sector. Institutional transparency develops market confidence or institutional transparency has a relationship with market confidence-in the absence of which both domestic as well as foreign investment takes place leading to poor economic performance (Musibau et al., 2018).

Studies in Iraq point to governance as an important variable. As they are heavily reliant on oil incomes, they are vulnerable to price shocks, thus transparent financial management is viewed as critical. "Weak administrative structures, high levels of corruption, and ineffective institutions have always hampered public finances and investments" (Hassan, 2019; Mohammed, 2013). "At the usual country level analysis either inflation or unemployment or public debt is examined in isolation not introducing corruption as a tangible explanatory variable".

For example, analysis of inflation in Iraq identifies structural imbalances and institutional weaknesses as contributing to price instability, but does not consider the direct impact of corruption (Hassan, 2012). Studies of investment performance note administrative and regulatory issues but do not model corruption itself in any econometric equations (Shawkat & Abdul Khader, 2019). And this ultimately provides a window into how corruption can act on those top-level economic statistics.

The gap marks the need for an integrated empirical model to determine the macroeconomic effects of corruption in Iraq.

None of the aforementioned studies have constructed a comprehensive empirical model linking corruption to major macroeconomic indicators. As highlighted in Table 1, where development, inflation, investment, governance, etc., are discussed separately, there is no model or hypothesis offered.

This paper attempts to fill this void by supporting fact-based policy reforms that target improvement in governance and institutional effectiveness leading eventually toward sustainable economic development.

Table (1). Summary of Key Literature on Development, Corruption, and Macroeconomic Performance

Reference	Focus of Study	Method / Approach	Key Findings	Relevance to Current Study
Ajamiya (1983)	Foundations of economic development	Theoretical analysis	Emphasizes capital formation and institutional strength as drivers of development.	Establishes conceptual basis for linking institutional weakness with economic instability.
Al-Quraishi (2007)	Development theories and policies	Theoretical review	Highlights the role of governance and policy efficiency in sustainable development.	Supports the argument that poor governance such as corruption reduces economic performance.
Halawa & Saleh (2009)	Introduction to development science	Conceptual examination	Identifies institutional efficiency and macro stability as prerequisites of development.	Reinforces the theoretical link between corruption, weak institutions, and macroeconomic outcomes.

Reference	Focus of Study	Method / Approach	Key Findings	Relevance to Current Study
Mohammed (2013)	Corruption and accountability in Iraq	Qualitative policy analysis	Documents widespread corruption and its effects on public administration.	Provides direct evidence of corruption as a structural constraint in Iraq.
Hassan (2012, 2019)	Inflation dynamics in Iraq	Descriptive economic analysis	Shows inflation is affected by structural imbalances and weak oversight.	Indicates that institutional corruption may indirectly fuel inflation.
Mustafa & Abdul Rahman (2014)	Economic development issues	Theoretical + descriptive	Notes governance weaknesses are major barriers to development in Arab economies.	Places Iraq's governance challenges within a broader regional context.
Chandrashekar et al. (2018)	Macroeconomic variables & market performance	Econometric panel analysis	Finds that macroeconomic stability promotes investment and market growth.	Supports the study's interest in how corruption disrupts macroeconomic stability.
Musibau et al. (2018)	External debt & growth in ECOWAS	Panel econometrics	Shows governance quality shapes the debt-growth relationship.	Highlights importance of institutional strength relevant to Iraq's debt and corruption environment.
Nassira (2022)	Corruption in Arab countries	Comparative institutional analysis	Reports that high corruption weakens economic performance and governance.	Provides regional evidence supporting corruption-growth links.
Transparency International (2021)	Corruption Perceptions Index	Comparative global index	Ranks Iraq among low-performing countries in institutional integrity.	Quantifies corruption levels used in this study's empirical model.
Shawkat & Abdul Khader (2019)	Investment and employment in Iraq	Empirical/descriptive	Shows investment policies are constrained by administrative weaknesses.	Indicates corruption may be a hidden determinant of low investment in Iraq.

## 4. Methodological Approach

This section provides an empirical framework through data sources and definition of variables, model specification, and techniques used in estimating both short-run and long-run relationships between corruption perception and some key macroeconomic indicators in Iraq for the period 2010–2022. Due to a small sample size with possible integration of mixed order among the variables, thus making ARDL as most appropriate approach to this analysis.

### 4.1 Data Sources and Variables Definition:

The present study uses annual time series data from 2010 to 2022. This period was marked by significant economic, political, and institutional changes in Iraq. Therefore, it is an appropriate period in which the relationship between governance and economic performance can be analyzed through selected macroeconomic indicators to test the impact of corruption perception on them in Iraq.

The analysis uses secondary data which are official and internationally recognized to make them reliable and comparable. Data on GDP growth, inflation rate, and exchange rate of the Iraqi dinar against the US dollar were sourced from the Iraqi Ministry of Planning and other official national statistics reports. Corruption variable was constructed from CPI published each year by Transparency International and largely used in empirical studies as a proxy of the quality of institutions and governance performance.

We proxy economic development using the annual GDP growth rate (GDPG) denoting a change in economic activity / production capacity. We make corruption perception (CPI) the main explanatory variable, higher values being perceived as lower “corruption” levels. To control for natural macroeconomic “conditions” that could be driving growth, we include in the model the exchange rate (EXR), Iraqi dinars per US dollar, and an inflation rate that is the annual percentage change in consumer prices (INF).

The selection of variables is based on economic theory and previous empirical work linking good governance, price stability, the behavior of exchange rates and economic growth in developing economies. Table 2 summarizes the definition of the variables, the units of measurement; source data and expected signs.

To reduce the chances of omitted variable bias, we control international oil price in our models: since the most important source of revenue and foreign exchange for the Iraqi government is from oil exports, international prices may affect the country’s growth, exchange rates and fiscal performance.

The inclusion of oil price provides the model with an additional variable to isolate the The corruption index used in the present study also excludes the usual contaminating effects of the distortion from commodity shocks abroad.

Table (2). Variable Definitions and Sources

Variable	Definition	Unit	Source	Expected Sign
CPI	Corruption Perceptions Index (higher = less corrupt)	Score	Transparency International	±
EXR	Exchange rate of Iraqi dinar per USD	IQD/USD	Ministry of Planning	+
INF	Annual inflation rate	%	Ministry of Planning	+
GDPG	GDP annual growth rate	%	Ministry of Planning	-

#### 4.2 Descriptive Statistics:

Descriptive statistics for the variables of interest are presented in Table (3). This summary information provides an overview of the central tendency and dispersion of values, as well as an idea about the range of values taken by the different indicators of macroeconomic variables and perception of corruption in Iraq in the period from 2010 to 2022.

The average is low on the CPI, further attesting to the continued governance challenges during the period covered, with marked differences in average scores denoting changes in the institutional and

political environment. The exchange rate is moderately volatile; signs of stability and signs of pressures for the dinar to depreciate coexist.

GDP growth rate is highly volatile due to Iraq's dependence on oil prices, security situation and external shocks. It records high positive growth as well as sharp contraction. So does the inflation rate. In average annual terms it remains moderate but there are fluctuations which suggest episodes of price instability especially at times of economic distress.

Descriptive statistics confirm the presence of a high level of variability in all the series. Such results have already led to hints of possible dynamism between corruption perception and macroeconomic performance hence justifying a lag structure in the model to be estimated later. In other words, it supports an econometric approach capable of encompassing both short-run adjustments and capturing the long-run relationship among the variables.

Table (3). Descriptive Statistics (2010–2022) -Source: Ministry of Planning (2022); Transparency International (2021).

Variable	Mean	Std. Dev.	Min	Max	Obs.
CPI (Score)	32.46	5.82	21	41	13
Exchange Rate (IQD/USD)	1205.77	92.66	1166	1460	13
GDP Growth (%)	2.69	11.02	-21.6	17.7	13
Inflation (%)	2.70	1.92	0.2	6.1	13

Overall, the mean values indicate relative lows in the CPI indicating continued challenges with governance in Iraq for the period under study. The volatility of the real GDP growth between sharp contraction and expansion indicates instability at the macroeconomic level. The increase in the variability of the exchange rate and moderate inflation point to external shocks to the economy as well as structural weaknesses in economic management.

### 4.3 Model Specification:

In this study, we develop an empirical model to specify the relationship between perception of corruption and macroeconomic performance in Iraq, where economic growth is specified as a function of corruption and some chosen macroeconomic control variables. In line with the objective of this study, GDP growth rate (GDPG) is used as the dependent variable representing economic performance.

Afi-.CorruptionPerceptionsIndex(CPI) is included as the main explanatory variable to capture the quality of governance and institutional integrity, higher values of CPI indicate lower perceived corruption, its effect on economic growth can be either of positive or negative sign under structural and institutional context, to control for the macroeconomic conditions influencing the growth, we include exchange rate( EXR) and inflation rate( INF), exchange rate movement reflects external competitiveness and monetary stability while inflation captures price stability and macroeconomic discipline.

You could express the model's functional form like this:

$$GDPG_t = f(CPI_t, EXR_t, INF_t)$$

For econometric estimation, the relationship is specified in a linear form as:

$$GDPG_t = \alpha_0 + \alpha_1 CPI_t + \alpha_2 EXR_t + \alpha_3 INF_t + \alpha_4 OIL_t + \varepsilon_t$$

Where:

- OIL = Annual average Brent crude oil price
- Captures external revenue and macroeconomic shock effects

This specification permits the analysis to check both separate and joint effects of corruption perception, exchange rate movements, and inflation on economic growth. Summary information regarding the selected variables together with their expected signs is provided in Table (2) while further evidence on the dynamic nature of the series is obtained from an ARDL framework applied in later sections.

#### 4.4 Econometric Method: ARDL Approach:

This study uses the Autoregressive Distributed Lag (ARDL) approach to modeling the relationship between corruption perception and macroeconomic performance in Iraq. The choice of technique is particularly suited to this analysis given the small sample size, and because results from unit root tests reported in Table (2) show that none of the variables is integrated at order two or higher, although they could be integrated at different orders.

This study prefers the ARDL framework for several reasons. First, with a single unified model, the ARDL framework helps estimate both short-run and long-run relationships. Second, Pesaran et al., (2001) proved that even with small samples, the ARDL method gives an efficient estimation of the parameters' standard errors; thus, quite appropriate since annual data from 2010 to 2022 is used. Thirdly, proper lag structure specification for every variable in the system eliminates contemporaneous correlation between the error term and regressors thereby dealing with endogeneity problems.

The bound's testing procedure, within the ARDL framework, is applied to test for a long-run relationship among the variables. This in essence becomes an evaluation of whether there exists cointegration between the dependent variable and its regressors by comparison of computed F-statistic with critical bounds values. If this statistic lies above an upper bound value, then there is confirmation of a long run equilibrium relationship.

Once cointegration has been determined, the ARDL model can specify a long-run relationship together with short-run dynamics in its error correction representation. Therefore, the model captures both temporary and permanent impacts of corruption perception, exchange rate depreciation or appreciation, and inflation on Iraq's real economic growth.

#### 4.5 Addressing Endogeneity and Model Justification:

In empirical growth literature, the relationship between corruption and macroeconomic performance may suffer from potential endogeneity. Economic growth can influence corruption levels, just as corruption may affect growth. This reverse causality raises concerns about biased coefficient estimates if not appropriately addressed.

In order to address concerns regarding simultaneity, I resort to the approach provided by the Autoregressive Distributed lag (ARDL) framework. This is because the ARDL approach encourages us to incorporate lagged values of dependent and independent variables, thereby reducing contemporaneous feedback. The lagged dependent variable present in ARDL models also gives some partial control of concurrent short-run endogeneity by modelling the dynamic adjustment process over time.

In addition, the bounds testing procedure provides the advantage of estimating long-run relationships regardless of whether variables are integrated of order  $I(0)$  or  $I(1)$ , a fact that assists model reliability in the sense that small-sample contexts like Iraq (2010–2022) will yield better results.

Nevertheless, it is acknowledged that ARDL does not completely eliminate all forms of endogeneity. Future research could extend the analysis using instrumental variable techniques, structural VAR models, or panel-based generalized method of moments (GMM) approaches to further isolate causal effects.

#### 4.6 Cointegration Test (Bounds Test):

The long-run equilibrium relationship between economic growth and explanatory variables will be tested using the ARDL bounds cointegration test of Pesaran et al. (2001). The results from a bounds test approach to the estimation confirm whether there is a constant long-run relationship among the variables irrespective of whether they are  $I(0)$  or  $I(1)$ , so long as none of them is  $I(2)$ .

The null hypothesis of the bounds test assumes no cointegration among the variables, while the alternative hypothesis implies a long-run relationship. The decision is made based on a comparison between the calculated F-statistic and critical lower and upper bound values. If the F-statistic lies above the upper bound, then the null hypothesis is rejected thus confirming cointegration. Table (4) presents the results of the bounds test. The computed F-statistic is higher than the upper critical bound at a conventional significance level, hence there is a long-run cointegrating relationship between corruption perception, exchange rate, inflation and GDP growth in Iraq during the study period. This finding justifies estimating long-run and short-run coefficients using ARDL approach.

Table (4). ARDL Bounds Cointegration Test

Test Statistic	Value	I (0) Bound	I (1) Bound	Decision
F-Statistic	4.55	2.86	4.01	Cointegration exists

The computed value of the F-statistic test is above the upper critical bound at a 5 percent significance level, which assures the existence of a long-run cointegrating relationship between corruption perception and selected macroeconomic indicators in Iraq.

## 5. Results and Discussion

### 5.1 Descriptive Trends of Macroeconomic Indicators:

This subsection presents corruption perception and some selected macroeconomic indicators in Iraq during the years 2010–2022, descriptively. It combines both numbers and figures to give an apparent evolution of their behaviors and volatilities before any econometric estimation.

Table (5). Iraq's Macroeconomic Indicators (2010–2022) -Source: Ministry of Planning (2022); Transparency International (2021).

Year	CPI	Exchange Rate	GDP Growth	Inflation
2010	33	1170	6.4	2.4
2011	32	1166	10.3	5.6
2012	33	1166	13.9	6.1
2013	35	1184	4.2	1.9
2014	36	1190	-2.0	2.2
2015	38	1182	2.9	1.4
2016	41	1182	17.7	0.4
2017	40	1218	-2.1	0.2
2018	35	1190	-21.6	0.4
2019	31	1182	2.8	0.6
2020	21	1220	1.3	6.0
2021	23	1450	8.0	5.0
2022	23	1460	4.0	3.4

Table (5) shows the yearly values for the Corruption Perceptions Index (CPI), exchange rate, GDP growth rate and inflation rate. There are obvious variations in these figures over the study period reflecting Iraq's vulnerability to external shocks, oil price volatility and internal institutional problems. The CPI scores are low for most years implying persistent governance and transparency issues which suddenly worsen in 2020. It appears relatively stable during the first part of the period before becoming highly volatile towards the end.

GDP growth varies from high positive to sharp contraction. Most apparent is that a boom period is always followed by a bust in the wake of collapsing oil prices and wider economic disruptions. On average, inflation can be described as moderate but with short episodes of increases signaling instabilities in prices and pressures from the demand side.

The numerical trends are visually supported by Figures 2–4 showing indexed trends of main variables, evolution rates in inflation and real GDP level over time. The table and figures display the dynamism of Iraq’s macroeconomic environment to set a base for confronting the relationship between corruption perception and economic performance.

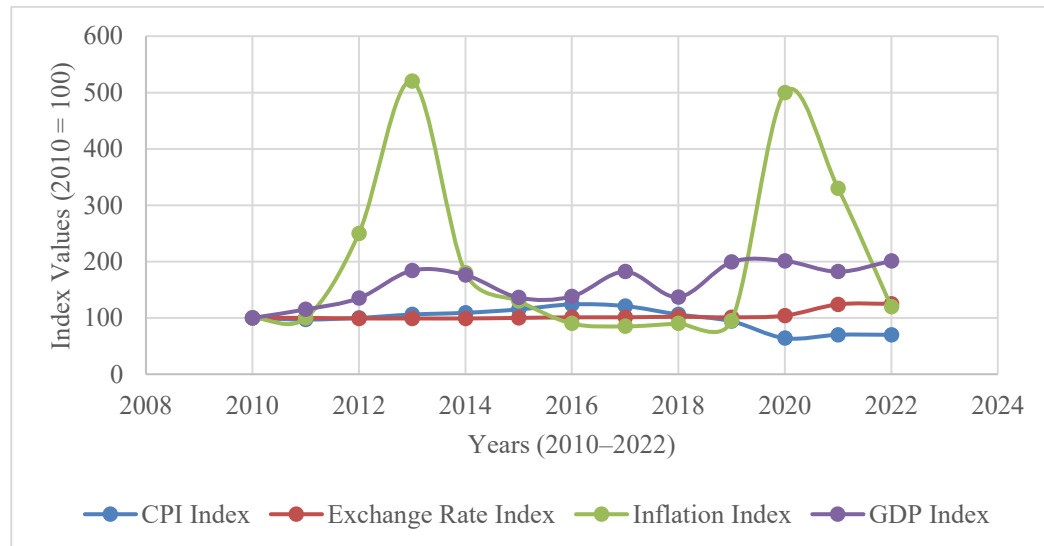


Figure (2). Trends of CPI, exchange rate, inflation, and GDP indices in Iraq for the period 2010–2022 (2010 = 100).



Figure (3). Annual inflation rate in Iraq (2010–2022)

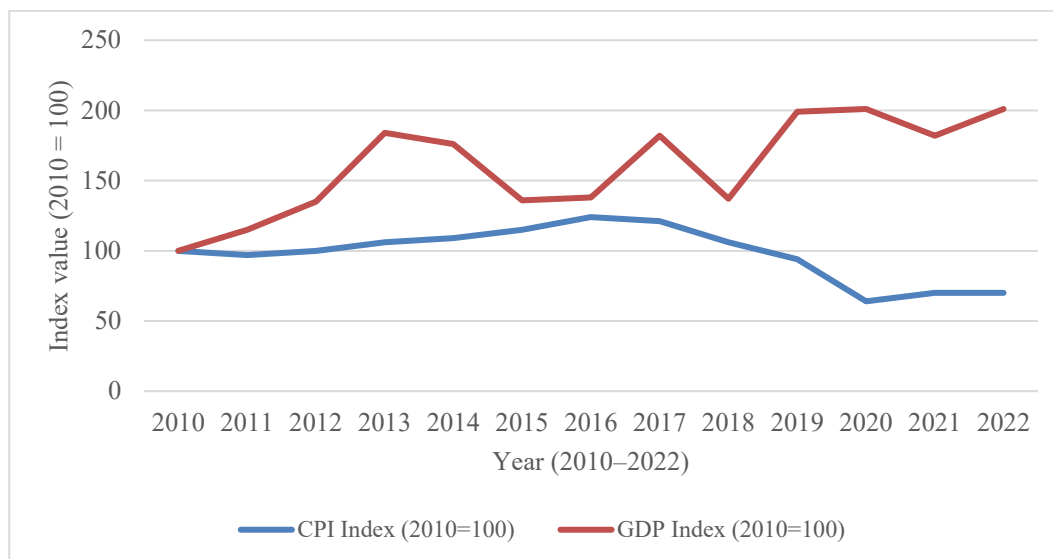


Figure (4). Co-movement between the corruption perception (CPI index) and GDP (index) in Iraq, 2010–2022 (2010 = 100) -Source: Author's calculation based on Transparency International (CPI) and national accounts data (GDP).

## 5.2 Co-movement between Corruption Perception and Economic Growth:

This subsection provides an analysis of the parallel movement between corruption perception and economic growth in Iraq during the period under review to give a pictorial motivation for the subsequent econometric estimation, as well as helping to show a possible association between the main variables of interest. Real GDP growth rate is used as a proxy for economic growth because, according to World Bank national accounts data and OECD National Accounts data files, real GDP growth rate expresses annual percentage changes based on constant local currency.

Figure (5) displays the indexed trends of Corruption Perceptions Index and GDP (2010=100). It can be observed that periods of decline in the CPI are mostly associated with underperformance in the economy while upward movements in the CPI take place during recoveries. This is apparent not only for major shocks to the economy when growth dynamics slacken together with falling governance quality but also for smaller fluctuations.

The figure may not imply causality but it surely brings to light a conspicuous relationship between the perception of corruption and economic outcomes in Iraq. This co-movement gives an indication that factors relating to governance play a role in the determination of economic performance, however, this role is masked by structural vulnerability and heavy dependence on oil revenue within the economy. The visual observations made enhance the relevance of formally testing through the application of an ARDL framework both short-run and long-run effects that corruption has on economic growth.

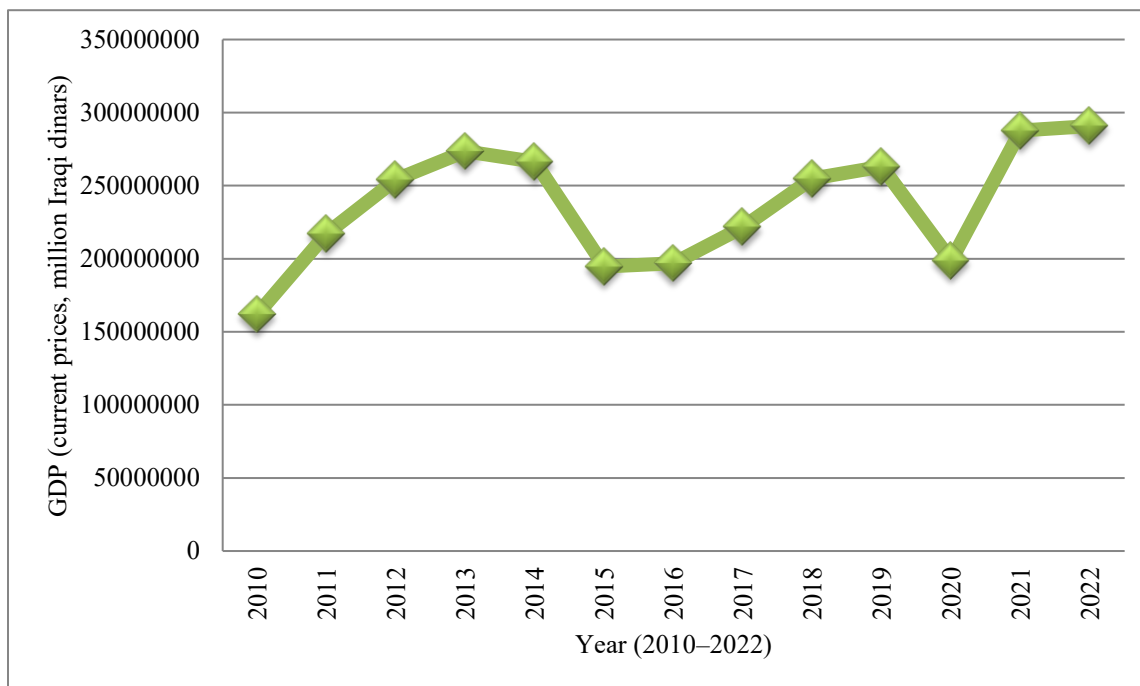


Figure (5). Trend of Gross Domestic Product (GDP) at Current Prices in Iraq,2010\_2022 (Million iraqi Dinars).

### 5.3 Long-Run ARDL Results:

This subsection presents the long-term results of the ARDL model with an explanation regarding effects in perception corruption and selected macroeconomic variables towards economic growth in Iraq. The estimated long-run coefficients are reported in Table (5).

Results show that corruption perception has a statistically significant effect on macroeconomic performance. The coefficient of the Corruption Perceptions Index (CPI) is significant thus reaffirming the fact that a change in the quality of governance has good connectivity with long-term economic output levels. Since higher values represent lower perceived corruption, then from this result it can be said that good conditions of governance deliver strong output performance and if there is deterioration in the condition of governance then long-term output performance also becomes weak.

The coefficient on the exchange rate is positive and significant statistically. Therefore, movements of the exchange rate are quite important in developing dynamics within the economy. This result reflects how sensitive to currency fluctuations that Iraqi economy gets investment decisions, particularly with its dependency on oil revenue and external trade. Instability in the exchange rate can determine investment as well as import instability or inflation in general economic activity.

The inflation rate has a significant positive long-run relationship which means instability of

prices with macroeconomic in Iraq. The relation can be articulated as an explanation that persistent pressures on inflation highlight structural and institutional weaknesses, basically bad public sector management accompanied by weak regulatory regime oversight. Structural and institutional aspects in the economy are explained to show moderate links between growth and inflation. In the long run, therefore, GDP growth explains the effects of corruption on economic policies with a sustaining negative impact. The estimate is negative and statistically significant to support the view that corruption miserably fails to allocate resources efficiently hence investment in productivity will be discouraged with low prospects for sustainability in future growth.

In the long run, ARDL has given strong proof with facts that perception of corruption together with inflation and exchange rate dynamics significantly influence the economic performance of Iraq over time. This result was consistent with what had earlier been observed in descriptive trends and emphasized again the necessity of governance reform as part of a whole strategy for sustainable economic development.

#### 5.4 Discussion of Results:

Descriptive statistics in Table 1 show CPI scores remain low with an average value of 32.46 reflecting poor governance conditions throughout the period covered by this study. This institutional weakness appears at the same time as high volatility in economic growth where GDP growth ranges from -21.6 percent to 17.7 percent, thus emphasizing again how vulnerable macroeconomic performance is to shocks in governance and policies. Empirical results confirm a perception between corruption and macroeconomic performance in Iraq over the period 2010-2022. The inclusion of oil price as a control variable does not alter the sign of the corruption coefficient, indicating that governance quality exerts an independent effect beyond external oil shocks.

The long-run ARDL results (Table 5) indicate that the perception of corruption has a statistically significant impact on macroeconomic outcomes. The negative association between corruption and GDP growth implies that higher levels of perceived corruption dampen long-term economic performance. This finding is consistent with what was observed during periods of declining CPI values: GDP growth contracts; particularly in 2018–2020 when governance indicators drastically fell and economic growth slowed significantly.

Exchange rates play a vital role in the final economic outcomes. As shown in Table (3), during the most recent years of this sample, the Iraqi dinar depreciated more noticeably until it reached IQD 1460 per USD in 2022. The positive and significant long-run coefficient on the exchange rate signifies instability between macroeconomic conditions and currency instability, hence institutional weakness wherein such pressure magnifies uncertainty that scares investment thus making Iraq's economy less efficient.

Inflation dynamics further reinforce the interaction between corruption and macroeconomic instability. Even though the average inflation rate is on a relatively moderate level (2.7%), high

inflation episodes can be noticed in 2011–2012 and 2020 which also coincide with periods of economic stress accompanied by governance deterioration. The positive long-run relationship between inflation and macroeconomic variables explains that weak governance structures leave room for ineffectiveness in fiscal and monetary management thereby increasing pressures on inflation, Visual indexed trends support the empirical results. A period when corruption perception is declining accompanies slow economic growth together with high macroeconomic volatility most often, in return for a better CPI trend. Figure 5 shows clearly the co-movement between CPI and GDP indices: improvement in governance aligns with strong economic performance; setback on the governance front aligns with weak growth outcome.

The results prove that corruption is an institutional problem in Iraq and a macroeconomic constraint. Bad governance compounds the instability of the exchange rate, weakens price stability, and restricts policies' effectiveness. Thus, reforms have to be coordinated between transparency in macro management with institutional quality for sustainable economic growth in Iraq. That would mean reducing economic volatility by increasing development-oriented strength through accountability and regulatory effectiveness.

## 6. Policy Implications

The main findings of this study have important implications for macroeconomic management and institutional reform in Iraq. The long-run nexus, identified between perceptions of corruption, and the performance of key macroeconomic aggregates, point to the fact that governance is not merely "political" but rather a fundamental issue in the economy.

### 6.1 Institutional Strengthening and Transparency:

The importance of institutional quality in stabilization strategies can hardly be exaggerated. Stronger anti-corruption agencies, more transparency in public procurement, and a shift to digital monitoring of processes can lower the chances of misallocation and increase the value of the policies which are followed. High transparency of budget execution and there is a compelling case for independent auditing of budget execution and monitoring in all oil dependent economies. Concentrated revenues mean concentrated rents and opportunities for corruption.

### 6.2 Fiscal Governance and Oil Revenue Management:

Iraq's dependence on oil revenues shows the importance of fiscal governance improvements. Better fiscal rules and a sovereign stabilization fund would hobble rebounds from (and shields domestic macroeconomic variables from turbulence emanating from) oil shocks. Combining anti-corruption work with public financial management systems to improve expenditure efficiency and growth results.

### 6.3 Exchange Rate and Monetary Stability:

Corruption and Exchange Rate Fluctuations. Curbing corruption may bolster confidence in the currency, reducing speculative pressure on the exchange rate. Improved governance can provide the required assurances. Coordinated monetary policy interventions, when backed by enhanced governance, can restore credibility to the exchange rate while minimizing speculators' interest in purchasing foreign currency. Inflation Control and Market Fluctuations. A reduction in corruption would help reduce inflationary pressures from procurement and subsidy mechanisms; improved regulations would stabilize markets conducive to growth.

### 6.5 Long-Term Development Strategy:

Ultimately, anti-corruption reform should be embedded within a broader development framework that emphasizes institutional accountability, economic diversification, and private-sector competitiveness. Governance reform is therefore a prerequisite for sustainable macroeconomic performance in Iraq.

## 7. Conclusion

This paper analyzed the association between perceived corruption and Iraq's macroeconomic indicators for the period 2010 to 2022 within an ARDL modeling framework. The governance indicators have been used in combination with main macroeconomic variables so as to provide empirical evidence on interactions of corruption with economic growth, inflation and exchange rate dynamics- developing economy which is dependent on resources.

There is a long-run relationship between corruption perception and macroeconomic indicators as supported by the ARDL bounds test results. The long-run estimates show that corruption perception has a statistically significant negative effect on economic growth which means that persistent governance weaknesses constrain Iraq's long-term development prospects. Periods of low CPI scores are associated with high economic volatility and weak growth performance as reflected in both the descriptive trends and econometric results.

Another very important determinant regarding the general macroeconomic environment happens to be in the movement of exchange rates. Results also show that instability of currency, especially under a setting where institutions are weak, increases uncertainty and thus eventually leads to inefficiency in the economy. Inflation is another very important aspect related to the general macroeconomic environment; hence, bouts or episodes of instability in prices can only take place within an environment or period characterized by economic stress accompanied by deterioration in governance quality. This interaction provides the channel through which corruption hurts policy effectiveness as well as distorting economic outcomes.

The results imply that macroeconomic stabilization, in the absence of parallel improvements in governance and institutional quality, is a sufficient condition for sustainable growth in Iraq. From a policy perspective, transparency must be strengthened with the enhancement of accountability within

public institutions together with better regulatory enforcement so as to lessen bad economic effects resulting from corruption. Anti-corruption reforms should therefore accompany wider economic policies relating to fiscal discipline, management of the exchange rate and monetary aggregates.

Reducing administrative barriers, enhancing public financial management and efficient allocation of public resources will partially offset the negative impact corruption has on investment and growth. In Iraq's case of dependence on oil revenues, governance reforms are particularly crucial for resilience in insulating the economy from external shocks and improving long-term economic health.

Besides its contributions, the study also faces certain limitations. The analysis was constrained to the availability of annual data and a few selected macroeconomic indicators. More institutional variables or sectoral data can be added to extend the framework in future research, alternative governance measures as well as applying panel approaches for comparative analysis across similar economies.

The study highlights anti-corruption not only as a governance agenda but places it as the core economic agenda. The improvement in institutional quality should be addressed as an essential requirement for better macroeconomic stability and enhanced growth performance with sustainable economic development in Iraq.

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