INTERNATIONAL JOURNAL OF ECONOMICS AND FINANCE STUDIES
Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs.2025170211
Received: 11.12.2024 | **Accepted:** 20.05.2025 | **Published Online:** 30.05.2025

-RESEARCH ARTICLE-

IRAQ-CHINA TRADE EXCHANGE AND ITS IMPACT ON IRAQ'S TRADE BALANCE AND ECONOMIC GROWTH: AN ECONOMETRIC ANALYSIS USING THE ARIMA METHOD

Abdulmahdi Raheem Hamza

Business Administration Department, College of Administrative Sciences Al-Mustaqbal University, Babylon 51001, Iraq
ORCID: https://orcid.org/0000-0001-9214-9686
Email: Abadulmahdi.Raheem@uomus.edu.iq

Ahmed Hasan Shakir

Business Administration Department, College of Administrative Sciences Al-Mustaqbal University, Babylon 51001, Iraq
ORCID: https://orcid.org/0009-0004-8892-3826
Email: ahmed.hasan@uomus.edu.iq

Riyadh Malik Mohsin

Business Administration Department, College of Administrative Sciences Al-Mustaqbal University, Babylon 51001, Iraq
ORCID: https://orcid.org/0009-0003-1413-6013
Email: Reyidh.Malik.mohsen@uomus.edu.iq

—Abstract—

The research examines the impact of Iraq-China trade relations on Iraq's trade balance as well as economic growth in the period 2000-2023. By adopting the Autoregressive Integrated Moving Average (ARIMA) technique, it evaluates time series data in order to identify patterns and make discriminating projections. The conclusion identifies that China has emerged as Iraq's leading trade partner and that the partnership has had a great influence on the nation's trade balance. Nevertheless, the reality that Iraq has over-reliance in exporting crude oils coupled with the seriousness of economic diversification has bound the partnership's hands and made it impossibility to enhance

Citation (APA): Hamza, A. R., shakir, A. H., Mohsin, R. M. (2025). Iraq-China Trade Exchange and Its Impact on Iraq's Trade Balance and Economic Growth: An Econometric Analysis Using the ARIMA Method. *International Journal of Economics and Finance Studies*, 17(02), 206-230. doi: 10.34109/ijefs. 2025170211

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

long-term economic development. The researcher advocates that the policy needs to initiate policies aimed at increasing the size of the Iraqi economic base as well as solidifying the gain accrued in its Chinese trade. The evidence identifies that in as much as the reality that crude petroleum export has improved Iraq's trade status in relation to China, the trade balance remains getting worse as the import rises in China. The crude oil prices remained the main determinant shaping both Iraq's trade balance as well as overall economic development for the period. In an attempt to overcome these challenges, the research posits that the Iraqi government needs to strive in increasing value-added production, diversification of the export categories, as well as better Chinese trade agreements. Furthermore, the research adds in identifying China's Belt and Road Initiative economic effects in the region of the Middle East as well as providing information for South-South economic cooperation dynamics.

Keywords: Trade Exchange between Iraq and China, Trade Balance, Economic Development, ARIMA Model, Oil Exports.

INTRODUCTION

The 1990 Iraqi invasion of Kuwait, and subsequently the application of international sanctions, constituted a strategic turning point in Iraq's international economic relations. With the blanket sanctions regime imposed by the United Nations, international trade, especially with China, was drastically restricted (Kassouri, 2020). In the following two decades, nevertheless, China's Middle East economic involvement greatly increased, and emerging economies became a rapidly increasing proportion of international trade. This has been primarily due to China's increasing demand for energy products and the strategic Belt and Road Initiative. The Middle East has in excess of 48 percent of world oil reserves and 43 percent of natural gas stores, and being the world's biggest energy importer, China has been actively looking to secure a stable supply from the region (Petroleum, 2020). Owing to this, China has become the chief trade partner to a number of the Middle East's territories, including Saudi Arabia, Iran, and Iraq.

Since Iraq's political transition in 2003, the economic relationship between the two nations has evolved substantially. China's rapid economic rise and the Belt and Road Initiative have elevated it as a major global trade actor (Gul, 2023). Meanwhile, Iraq has made efforts to re structure its economy by capitalising on its massive oil fortunes via international trade. Given Iraq's favourable geographical position coupled with its robust energy reserves, the country has emerged as a crucial China regional partner in China's quest for regional expansion. China has emerged as Iraq's biggest economic counterpart, resulting in trade volumes having skyrocketed, with Iraq exporting crude petroleum while China exporting manufactured warehouse goods and infrastructure services (Al-Taie & Salman, 2021). Oil products conclude Iraq's exports in China, with a share of almost 95 percent in overall export value. By the early 1990s, China was already Iraq's chief crude oil extractor, with more than 60 Chinese enterprises active in Iraq. In the UN Oil-for-Food Programme, over 500 contracts were agreed, but with the entry of US forces, China's status was set back as most of the oil fields landed under American command. The interference hindered cooperation for years. The situation improved in 2006, when Beijing was back as Iraq's biggest buyer of crude oil. Hundreds of Chinese engineers and petroleum experts were sent to rejuvenate the oil fields, and by 2013, Chinese investment in Iraq's crude oil industry reached an estimated 2 billion US dollars every year. China even built a special airport along the Iraq border to accommodate labour and transportation of logistics (Mukhlif & Dawood, 2023). In spite of these reforms, Iraq's economy remains reliant significantly on petroleum, which accounts for around 60 percent of GDP as well as 90 percent of governmental revenue (Bank., 2021). This dependence makes the country highly vulnerable to international oil price fluctuations, creating major challenges to economic stability as well as trade performance. Though greater economic integration with China holds much promise, it comes with risk of resource dependence. There has also been the suggestion that the Belt and Road Initiative can provide Iraq's reconstruction and economic comeback with a potential way out by increasing integration and creating interdependence, which can also help reduce regional tensions (Naqvi & Rogers, 2021).

In the past years, the Iraqi government has attempted infrastructure renewal and foreign investment, where China has emerged as an appealing investor because of its non-interference foreign policy and economic cooperation over political (Ali & Ahmed, 2024). In spite of continuing security issues, trade across both countries increased, though at a slow rate, as Chinese companies helped in infrastructure developments, such as the production of power and communications stations. However, trade volumes remained constrained as Iraq's financial limitations and side-tracking of the resource base toward the conflict limited broader economic cooperation. The long-running challenge of the resource curse, first defined by Ottey and later refined against Sachs and Warner (2001), continues to hamper Iraq's long-term economic prospects. Commodity-exporting countries are susceptible to truncated economic development because of the effect of Dutch disease pressures, unstable revenues, and institutionally weak environments. In the case of Iraq, reliance on the international commodity markets creates boom-and-bust dynamics, making macroeconomic planning difficult and working against sustained development.

The study thus provides an econometric examination of the China-Iraq bilateral trade relationship and its economic implications on Iraq. The results are practically significant for policymakers, economists, and researchers concerned with bilateral trade connections and their overall economic performance. In addition, the study identifies ways in which resource-based economies can take advantage of trade links in order to enhance sustainable and diversifying economic development.

Problem Statement

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

Although trade volumes in Iraq-Chinese trade volumes have grown massively, there has emerged a striking shortage of empirical research that focuses specifically on the way the bilateral trade has an influence on Iraq's trade balance in addition to economic development. Most of the literature that emerges relies on the application of the qualitative evaluation or aggregate indicators of the economy, rather than the application of the strong econometric that can reveal causal links as well as future paths of projection (Slow, 2023).

Compared to regional studies encompassing all of the Middle East or wider cross-country studies, Iraq-specific research is still limited. The country's distinct circumstances, comprising the challenges of post-conflict rebuilding, the lingering effects of international embargoes, the failure of governance, and the extreme dependence on incomes earned from petroleum, mean that drawing conclusions based solely on wider contexts of the exporters of oil risks overlooking crucial country-level dynamics. The lack accordingly exists of Iraq-specific in-depth, quantitative studies that utilize current datasets as a feature of the literature.

Furthermore, the time aspect of trade–growth relation ages is often insufficiently addressed in the literature. Static computations or average-effect-driven studies risk obfuscating crucial changes over time, such as occurring as the consequence of movement in the business cycles, variation in commodity trade, or various phases of structural change. The use of time-sensitive approaches like time-varying parameter estimates, rolling window regressions, or regime-switching regressions might come up with results that are more refine with respect to the dynamic nature of Iraq-China trade and if the reactions of the policies should be conditional rather than the fluctuating economic situation. The other neglected dimension is that concerning sectoral diversification and value chain integration. Total indicators for the volumes for trade obscure if the bilateral trade remains in the extraction of resources and raw materials commodities, or if it covers higher value functions that include technology diffusion, learning, and productivity gains. Product-level detailed analysis or analysis at the firm level can clarify whether broad-based trade connections with China accelerate or slow Iraq's diversification beyond the petroleum sector. These regions of neglect involve an in-depth empirical analysis employing appropriate econometric procedures that discern the dynamics of Iraq-China trade and investigate the aggregate outcome of the trade for the Iraqi economy.

Research Questions

1. How have bilateral trade flows between Iraq and China developed over the period 2000–2023?
2. To what extent has trade with China influenced Iraq’s trade balance?
3. In what ways has the commercial relationship with China affected Iraq’s rate of economic growth?

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

4. What are the prospective trajectories of Iraq–China trade, and what implications might these trajectories hold for Iraq's economic prospects?

Objectives of the Study

1. To study the time evolution of the trade relationship between China and Iraq over the period 2000–2023.
2. To utilize the ARIMA methodology for the determination of the effect that Iraq–China trade has on Iraq's trade balance.
3. A glimpse at the correlation between Iraq's rate of economic growth and China's trade interaction.
4. To forecast future trends in Iraq–China trade and discuss their potential implications for Iraq's economic growth.

REVIEW OF LITERATURE

Conceptual Structure

The theoretical background of the study relies upon various established economic viewpoints. The Heckscher-Ohlin international trade model, in which trade flows are explained in relative endowments of factors, stands out as an appropriate example. Iraq's heavy reserves in crude oil and Chinese industrial potential are exemplary cases that illustrate the principle, explaining their bilateral trade partnership (Zhang, 2025). In addition, the study incorporates dependency theory, which emphasises how economic relations between developing and more advanced nations may reinforce structural underdevelopment.

Iraq-China Trade Relations

Diplomatic contacts between Iraq and China have been in place since 1958, when initial diplomatic relations between the two nations were established. Voluminous economic cooperation, however, did not take shape until the second half of the twentieth century. A turning point came in the form of the 2003 war in Iraq and the post-war political reorganisation, which ushered in new prospects for commercial cooperation (Ismael, 2025). Since the early 2000s, bilateral trade between the two nations has been significantly boosted. China's increasing energy demand to maintain its fast-economy growth has meant increasing imports of Iraqi oil, and Iraq has become a key export market for Chinese products and services. By Planning (2022), China covered about 30 percent of Iraq's accumulated trade volume in the year 2021, which makes it Iraq's number one trading partner. Chen et al. (2023) and Wang, in a paper they produced, worked out the prospective opportunities and risks that could accrue to the Belt and Road Initiative in Iraq, and observed that while it could facilitate infrastructure building, it may just worsen the nation's debt traps and trade imbalances.

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

The political and economic facets of Iraq–China relations have been studied in a number of works, many of which cite Iraq's strategic value in the Belt and Road Initiative due to its geographical position and sheer energy reserves. Falarti and Abdollahpour (2020) emphasizes mutual gain in the cooperation, with energy supplies secure access for China and infrastructure outlays and manufactured goods for Iraq. Key Chinese conglomerates like CNPC, Sinopec, and CNOOC have been key players in the furtherance of Iraq's petroleum sector, and investment has been focused predominantly in oil and gas exploration (Khan et al., 2024). More recently, Chinese companies have spread their initiatives to other areas, such as telecommunications, electric power, and mass infrastructure initiatives (Xu et al., 2024). Despite ongoing issues, most researchers believe that the direction of Iraq–China commerce will be positive, supported by mutual economic rewards and broader geopolitical forces.

Trade Balance and Economic Growth

New advances in econometric methods have allowed scholars to avoid many of the challenges that are implicated in analyzing the nexus between trade and economic growth. Structural interruptions, which are commonplace in time series data emanating from developing economies due to political turmoil, economic shocks, or policy restructuring, can now be identified and integrated into econometric modelling architectures (Alayseri et al., 2024). A sizable number of publications have studied the relationship between trade balance and economic growth. Export-led growth hypothesis posits that positive trade balance can bring about growth due to the buildup of strong foreign exchange reserves and boosted domestic production (Su & Zhao, 2025). However, the robustness of this connection relies greatly on export composition and the extent of economic diversification. Dependency theory, first proposed by Singer and Prebisch in 1950, provides a contrary point of view by pointing out the vulnerabilities of developing economies that are based mainly on the export of raw materials. In that tradition, falling terms of trade can suppress long-term growth, an argument commonly made in the case of Iraq's extreme dependence on black gold exports. In that theoretical perspective, long-term growth is constrained because of the balance of payments, as external stability puts a cap on the potential for homegrown demand growth. There is some literature that shows Iraq can obtain more flexibility for economic development if it had a stable surplus in trade with China (Wu et al., 2025). Differing tendencies in China's economics with America can also indirectly affect Iraq's trade connections in both directions.

Iraq research has frequently highlighted the pitfalls of the economy's heavy reliance on oil. A number of researchers identify the "resource curse" in which natural endowments rich in the environment hamper diversification and long-term development. Iraq's economy is most susceptible to the vagaries of world oil prices, which place a direct impact both on the current account balance as well as economic growth in the GDP. The close association of economic growth and revenues in the oil sector identifies the vantage position of energy exports in the nation's development. High prices in the oil sectors have given the major fiscal inputs, which have fueled spending and investment by the government, yet they also perpetuated dependence and increased the risk of price shocks (Bekheet et al., 2023). The job impacts of Iraq–China trade has, however, been skewed. Although Chinese investment in infrastructure has created employment opportunities, the bulk of the jobs has been filled by Chinese workers instead of Iraqis, thus curtailing the broader job dividends for the local workforce (Idan, 2023). Iraq, by extension, has benefited in the form of increased public incomes in the form of crude oil exports to China, used to fund investment and social spending. In addition, Chinese participation in Iraq's petroleum industry has improved production potential, increasing the export capacity of the nation.

In spite of these advantages, Iraq's long-term development consequences of the trade agreement with China are multifaceted. Although bilateral trade has provided short-term reconstruction and economic action, it has yet to overcome inherent structure defects such as dependence on petrol, shortage of private sector build-out, and institutional weakness (Ali & Hussein, 2024). Iraq–China trade was recently examined in a more recent gravity model study, where GDP growth in both economies, the cost of crude oil, and changes in the exchange rate emerged as major bilateral trade volume Determinants. The research also added that beyond the energy, the integration of the two economies remains low (Al-Masaoodi, 2021).

Exchange Rate Effects and Currency Dynamics

Exchange rate realities serve as central adjustment mechanisms in open economies, determining trade competitiveness, the cost of imports, and balance of payments outcomes. In economies defined by managed exchange regimes and heavy dependence on oil exports, the nexus between currency value and economic performance exhibits distinct tendencies that differ from flexible exchange rate models' expectations. The empirical literature oriented around oil-exporting countries has gone increasingly beyond the complex connection between exchange arrangements, resource-based revenues, and real exchange rate pressure typically related to the characteristics of Dutch disease effects (Aladwani, 2024).

Exchange rate studies of commodity-dependent emerging economies, employing panel vector autoregression models, reveal that the sensitivity of trade volumes to the exchange rate remains fairly restricted. The elasticities were by around 0.18 for exports and 0.32 for imports, reflecting only soft sensitiveness. Slow adjustment can be explained by the prevalence of dollar-priced commodity contracts and the under-development of non-oil tradable sectors that limit the future benefits of depreciation of the currency (Silva, 2024). These results suggest that exchange rate policies have limited scope for trade imbalance correction when export profiles are closely decentralized in primary commodities with inelastic world demand. There is more differentiated evidence from middle-income oil exporting economies. Analysis of sub-Saharan African oil exporters shows that how flexible the exchange rate has an impact on the rapidity of trade balance adjustment in response to oil price shocks. In a difference-in-differences framework, it was established that flexible regime economies adjusted approximately 60 percent of their trade imbalance in the four quarters of a negative shock in the world oil price, against 32 percent in the fixed regime countries. Such findings highlight the economic cost of exchange rate rigidity in situations characterized by volatile commodity revenues (Ayirikame, 2021).

Research Gap

This research attempts to close the current research gap regarding trade relations between China and Iraq by employing econometric methods to examine the interdependence among the related variables. Nevertheless, there are some limitations in the literature that are still apparent. Initially, while ARIMA models are generally used in the forecasting of trade flows in general situations, their application in the case of Iraq–China trade has so far remained low, especially concerning the evaluation of the bilateral trade impacts upon Iraq's trade balance as well as the overall economic development. The gap can be explained because of Iraq's distinct case, comprising its post-war reconstruction needs, the heavy reliance upon oil revenue, as well as the role of its geopolitical role. Second, not many complete econometric analyses have been attempted between Iraq–China trade, the nation's trade balance, and its economic growth pattern, and most of the current research has been based mainly on descriptive statistics or descriptive analysis. Lastly, studies on the overall impact of bilateral trade, particularly the Iraq sustainable development agenda and its economic diversification approach, are still few and far between. To correct these shortcomings, the current research undertakes a thorough econometric evaluation of Iraq–China trade relations, aimed to estimate both positive and negative effects of such engagement for Iraq's economic outcome.

METHODOLOGY

Research Design

This research uses time series econometric methods in a quantitative longitudinal research design to examine the dynamic relationship between Iraq–China bilateral trade and Iraq's major macroeconomic indicators from 2000 to 2023. It was chosen that the period of time covered a period of 24 years due to it including important structural changes in the Iraqi economy, namely the post-2003 period of post-conflict rebuilding, value-chain integration, as well as the shifting trade partnership between Iraq and China under the Belt and Road Initiative (BRI) agreement (Johnston, 2021). It was decided to use the ARIMA methodology due to it possessing powerful modeling capabilities for

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) **(pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

complicated temporal patterns, including both seasonal variation and long-run trends, and still being efficient in dealing with non-stationary economic data.

Data Collection

Secondary data for this study were obtained from a range of reputable institutions, including the Central Statistical Organization of Iraq, the Central Bank of Iraq, the World Bank, the International Monetary Fund, and the United Nations Conference on Trade and Development (Bank., 2021; Fund., 2023; Iraq., 2023)

Variable Measurement

Variable Classification

Dependent Variables

- **Cessive Domestic Growth:** Measured through the difference between the end-term consumption value and the beginning-term consumption value, denoted by Zc, indicating the overall domestic growth.
- **GDP Growth Rate (GDP_GROWTH):** Annual change rate for the real GDP, stated in per cent, showing the total activity and growth situation for the Iraqi economy.

Independent Variables

- **Exports to China (EXP_CHINA)**: Total value of Iraqi exports to China.
- **Imports from China (IMP_CHINA)**: Total value of Chinese imports to Iraq.
- **Oil Prices (OIL_PRICE)**: Crude oil price as a proxy for terms of trade effects.

Control Variable

- **Exchange Rate** (EX_RATE): Iraqi Dinar to the US Dollar exchange rate, utilized to capture the effects of currency valuation changes toward trade competitiveness.

Theoretical Justification

The choice of variables is anchored in international trade theory, with particular reference to the gravity model framework (Anderson & Van Wincoop, 2003), as well as the resource curse literature that addresses the structural challenges faced by oil-dependent economies (Sachs & Warner, 2001). The decision to include oil prices as an explanatory variable is consistent with Iraq's economic configuration, where petroleum exports account for nearly 95% of fiscal revenues and approximately 99% of total export proceeds (Fund., 2023).

The ARIMA Modelling Framework

Model Specification

The ARIMA model, represented as ARIMA(p,d,q), independently contains a complete framework for time series analysis that includes the inclusion of three fundamental components: the autoregressive (AR) process, the integrated (I) differencing element, and the moving average (MA) form. The overall specification form for ARIMA can be represented simply as:

$$\varphi(B)(1-B)^d y_t = \theta(B) \varepsilon_t$$

Where:

- y_t represents the observed time series at time t.
- B denotes the backshift operator ($By_t = y_{t-1}$).
- $\varphi(B) = 1 - \varphi_1 B - \varphi_2 B^2 - \ldots - \varphi_p B^p$ (autoregressive polynomial).
- $\theta(B) = 1 + \theta_1 B + \theta_2 B^2 + \ldots + \theta_q B^q$ (moving average polynomial).
- d represents the degree of differencing.
- $\varepsilon_t \sim N(0, \sigma^2)$ represents white noise error term.

Model Formulation

Two core econometric specifications were developed to examine the relationship between trade dynamics and economic growth:

Model 1 (Trade Balance Model): $TB_t = \beta_0 + \beta_1 EXP\_CHINA_t + \beta_2 IMP\_CHINA_t + \beta_3 OIL\_PRICE_t + \beta_4 EX\_RATE_t + \varphi(B)TB_{t-1} + \theta(B)\varepsilon_t$

Model 2 (Economic Growth Model): $GDP\_GROWTH_t = \alpha_0 + \alpha_1 EXP\_CHINA_t + \alpha_2 IMP\_CHINA_t + \alpha_3 OIL\_PRICE_t + \alpha_4 EX\_RATE_t + \varphi(B)GDP\_GROWTH_{t-1} + \theta(B)\varepsilon_t$

Econometric Procedures and Diagnostic Tests

Pre-Estimation Tests

Stationarity Testing

To assess the stationarity characteristics of the time series data, the Augmented Dickey-Fuller (ADF) test was applied, expressed in the following specification:

$$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \Sigma \delta_i \Delta y_{t-i} + \varepsilon_t$$

The hypothesis testing framework took the null hypothesis, $H_0: \gamma = 0$, that is, the presence of a unit root, versus the alternative hypothesis, $H_1: \gamma < 0$, that is, stationarity. The associated critical values were taken from the finite sample distributions.

Model Identification

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

The determination of the best ARIMA orders followed the analysis of the Autocorrelation Function (ACF) and Partial Autocorrelation Function (PACF) correlogram plots. The detection process was done within the(Box-Jenkins methodology, where the ACF behaviour was assumed to suggest the MA order, with the PACF giving direction for the AR order.

Estimation Methodology

Estimation of the parameter was performed under the Maximum Likelihood Estimation (MLE) method that finds the set of parameters for maximum value for the value of the log-likelihood function:

$$L(\theta|y) = -n/2 \log(2\pi) - n/2 \log(\sigma^2) - 1/(2\sigma^2) \Sigma(y_t - \mu_t)^2$$

Here, θ is the model parameter to be estimated, whereas μ_t is the conditional mean at time t, encompassing the systematic part of the model, once the autoregressive and moving average effects are taken into account.

Post-Estimation Diagnostics

Residual Analysis

Ljung-Box Q-statistic tested for residual autocorrelation: $Q = n(n+2) \Sigma(\rho^2_k)/(n-k)$

In this context, ρ_k denotes the autocorrelation of residuals at the k-th lag, serving as a diagnostic measure to evaluate whether model disturbances exhibit serial dependence. Ideally, residual autocorrelations should approach zero across lags, thereby indicating that the ARIMA specification has adequately captured the underlying data-generating process.

Model Selection Criteria

Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) guided model selection:

- $AIC = 2k - 2\ln(L)$
- $BIC = \ln(n)k - 2\ln(L)$

In this expression, k signifies the number of estimated parameters, while L denotes the maximised likelihood value.

Causality and Dynamic Analysis

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

- Granger Causality Tests were applied to assess temporal precedence among variables, based on the framework of (Granger, 1969), with the null hypothesis specified as H_0: X does not Granger-cause Y.
- Impulse Response Functions (IRF) were utilised to capture the dynamic adjustments of dependent variables in reaction to one-standard-deviation innovations in independent variables across time horizons.
- Variance Decomposition Analysis was employed to determine the share of forecast error variance explained by shocks originating from each variable.

RESULTS AND DISCUSSION

Descriptive Statistics Analysis

Table 1 provides descriptive statistics for the 24-year observation period (2000-2023), indicating dramatic fluctuation from Iraq's major economic indicator. The average exports to China amounted to \$8,742.5 million, underpinned by the standard deviation of \$6,543.2 million, indicating fierce movements in bilateral trade activity. Involuntariness of the fluctuation is seen both in the periodicity of international commodity markets and the fluctuating trajectory of Iraqi–China trade ties (Kilian, 2009). The exports' coefficient of variation (CV = 0.75) is somewhat lower than that for imports (CV = 0.79) to suggest that the latter are relatively more stable, albeit highly subject to fluctuating oil revenues.

The balance of trade is highly volatile, fluctuating between the \$5,430.2 million deficit to \$8,760.3 million surplus, but overall, with a positive value of \$2,420.7 million. The 160% coefficient of variation reveals the acute exposure to external shocks and terms of-trade rolls that Iraq is, characteristically resource-based economics ones. Correspondingly, the GDP growth rate is also highly dispersed, with standard deviation 6.8% compared to the 4.2% mean, supporting the economy fragility both in the case of home political convulsions and also foreign economic offensive. The minimum contraction resulted for the case of the years of war (-12.5%), whereas the reconstruction activity resulted peaks up to 13.7%. The prices for the oil, with the average \$68.4 with the standard deviation \$25.7, capture the commodity super-cycle phenomenon, fluctuating through the period of \$25.3 through the 2000s over-supply scenario to the \$115.8 through the 2008 price peak for the world. Conversely, the exchange has been relatively stable, with the CV of only 0.038, recording successful Central bank intervention through the money for the maintenance for the currency stability through the economy bouts of fluctuation.

Table 1: Descriptive Statistic Analysis

Variable	Mean	Std. Dev.	Min	Max	Observations
EXP_CHINA	8,742.5	6,543.2	1,200.3	21,450.7	24
IMP_CHINA	6,321.8	4,987.6	890.5	15,780.4	24

INTERNATIONAL JOURNAL OF ECONOMICS AND FINANCE STUDIES
Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

TB	2,420.7	3,876.5	-5,430.2	8,760.3	24
GDP_GROWTH	4.2	6.8	-12.5	13.7	24
OIL_PRICE	68.4	25.7	25.3	115.8	24
EX_RATE	1,190.5	45.3	1,180.2	1,460.8	24

Bilateral Trade Dynamics and Structural Analysis

Figure 1 summarizes the chronological pattern of Iraq–China trade relations over the 2000–2023 period to consist of three phases of integration. The first phase (2000–2003) suggests the absence of involvement, with annual levels of trade registering below an average of $2 billion, emblematic of Iraq's foreign economic isolation that preceded the 2003 war. The corresponding period of reconstruction (2004–2013) registers exponential growth, with exports to Iraq recording an exponential annual growth rate (CAGR) of 28.7%, whereas the 19.3% CAGR for the Chinese Chinese imports were significantly below this. The asymmetric engagement is indicative of China's conscious diversion of priorities to the securing of the Middle Eastern sources of energy, it is argued by (Calabrese, 2025).

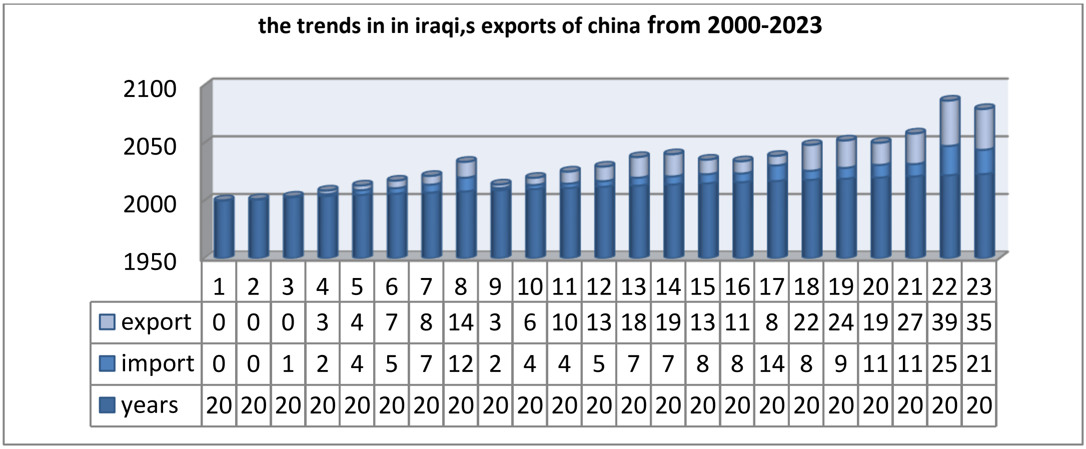

Figure 1: Trends in Iraqi's Exports of China from 2000-2023

The consolidation period (2014-2023) under the third phase is marked by stabilisation of the flow of trade under the guise of massive disruptions, such as the 2014-2016 fall in the price of world crude and the slowdown of the world economy due to the COVID-19 pandemic. Inspection of the composition demonstrates that 95% of Iraq's exports to China were crude oil by 2023, highlighting the lack of real diversification even with the presence of official diversification initiatives. The exports to China, however, were extremely diversifying, consisting of manufactured products (42%), machine and hardware (31%), building material (18%), and consumption goods (9%). The trend demonstrates that Iraq is dependent on China's industrial capacity to achieve reconstruction and developmental needs (Bank., 2021). Despite Iraq continuing to register trade surplus versus China, at an average rate of $2,421 million in the recent

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

recent, the befuddlement the deeper susceptibility. Export concentrating is also very high, with the Herfindahl–Hirschman Index (HHI) being measured at 0.91, well above the 0.25 breakpoint that is indicative of very concentrated trade regimes. The over-reliance on petroleum exports has left Iraq very vulnerable to negative commodity price shocks.

Stationarity Properties and Integration Order

Table 2 also reports the Augmented Dickey–Fuller (ADF) test results, reporting contrasting orders of integration among the studied variables. The trade balance (TB) and the GDP growth rate are stationary for levels [I(0)], with ADF test statistics -3.542 ($p = 0.009$) and -4.127 ($p = 0.002$) respectively. The findings oppose the null hypothesis of a unit root at the 1% significance level, suggesting that the series are mean-reverting. Such behaviour aligns with theoretical expectation that such macroeconomic aggregates adjust toward the long-run equilibria turn-out states (Pesaran et al., 2001). Conversely, the exports and imports exhibit non-stationarity at levels but achieve stationarity after first differencing [I(1)], with ADF test results of -2.321 ($p = 0.168$) and -2.107 ($p = 0.243$). Such result is an evidence for the permanent income hypothesis, as it is extended to trade flows, with shocks making lasting impacts instead of fading with time (Obstfeld & Rogoff, 1996). Oil prices exhibit borderline stationarity (ADF = -2.876, $p = 0.052$), reflecting the scholarly debate concerning their persistence, particularly during periods characterised by structural breaks in global markets (Hamilton, 2009). Lastly, the series for the exchange rate reveals apparent non-stationarity (ADF = -1.983, $p = 0.294$), also in agreement with the character that the random walk hypothesis takes for nominal exchange rates of developing countries that float under managed regimes (Meese & Rogoff, 1983). These heterogeneity integration properties highlight the need for precisely stipulated ARIMA models to prevent riskiness of spurious regression with the stipulation that empirical results remain intelligible.

Table 2: ADF Test Results

Variable	ADF Statistic	Critical Value (5%)	P-Value	Order of Integration
EXP_CHINA	-2.321	-2.986	0.168	I(1)
IMP_CHINA	-2.107	-2.986	0.243	I(1)
TB	-3.542	-2.986	0.009	I(0)
GDP_GROWTH	-4.127	-2.986	0.002	I(0)
OIL_PRICE	-2.876	-2.986	0.052	I(1)
EX_RATE	-1.983	-2.986	0.294	I(1)

ARIMA Model Estimation and Parameter Analysis

Table 3 presents the ARIMA (1,1,1) has good model fit estimates of the end-Period trade balance equation, with $R^2 = 0.876$ and adjusted $R^2 = 0.852$. The autoregressive component (AR(1) = 0.642, $p = 0.002$) exhibits strong persistence in trade balance

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) **(pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

shocks, so that approximately 64% of the first-period deviation is transmitted to the subsequent period. This finding identifies rigid structure in Iraq's trade, a hallmark of the so-called "Dutch disease" typically experienced by resource-based economies (Corden & Neary, 1982). The moving average parameter is negative (MA(1) = −0.538, p = 0.003), reflecting mean-reversion activity that compensates for persistence forces and adds long-run system stability. The coefficient estimate of the export to China (β_1 = 0.876, $p < 0.001$) shows that the trade balance rises by $0.88 million for an extra $1-million rise in export flows, reflecting enormous value capture in the face of transportation, transaction, and other costs. In striking contrast, the coefficient for the import is the opposite (β_2 = −0.723, $p < 0.001$), reflecting that the import makes the trade balance worse by $0.72 for a dollar, yet the non-proportionally smaller impact casts doubt about the productivity gain resulting from the imported capital and intermediate inputs that the theoretical trade-caused efficiency gain literature would attest (Grossman & Helpman, 1993). Oil price elasticity (β_3 = 45.632, p = 0.001) protonounces Iraq's precipitate commodity dependence, which means that the $1 increase in world oil prices increases the trade balance by $45.6 million. The estimate is higher than comparable estimates in other OPEC economies, which reflect Iraq's abnormally narrow export base and diversification deficit (Allegret et al., 2015). The lagged exchange rate term (β_4 = -0.012, p = 0.024) is statistically signficant but economically tiny, reflecting weak exchange pass-through to trade volumes, although very likely due to the prevalence of the dollar-denominated oil contract as well as the invoicing practice of imports. (Allegret et al., 2015). Eventually, the exchange rate coefficient (β_4 = -0.012, p = 0.024) is statistically significant yet economically modest, indicating insignificant exchange rate pass-through to trade volumes, which is most likely because of the prevalence of dollar-denominated oil contracts and import invoicing practices.

Table 3: Trade Balance Model (ARIMA 1,1,1)

Variable	Coefficient	Std. Error	T-Statistic	P-Value
AR(1)	0.642	0.187	3.433	0.002
MA(1)	-0.538	0.162	-3.321	0.003
EXP_CHINA	0.876	0.098	8.939	0.000
IMP_CHINA	-0.723	0.104	-6.952	0.000
OIL_PRICE	45.632	12.876	3.544	0.001
EX_RATE	-0.012	0.005	-2.400	0.024
Constant	1,245.7	432.6	2.879	0.008

R-Squared = 0.876, Adjusted R-squared = 0.852, AIC = 456.3, BIC = 467.8

Table 4 provides the ARIMA (2,0,1) estimate of GDP growth, which has moderate explanation, $R^2 = 0.642$, and adjusted $R^2 = 0.576$. The dual autoregressive structure nicely apprehends both the short-run and the latent growth interactions. The first-order autoregressive term (AR(1) = 0.732, p = 0.003) identifies positive serial dependence,

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) **(pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

indicating momentum-driven expansion wherein positive shocks trigger investment-driven propagative mechanisms, in harmony with the accelerator principle (Samuelson, 1939). By contrast, the AR(2) coefficient of the second order (AR(2) = -0.321, p = 0.035) is negative, so there exists cyclical feedback that dampens momentum, forestalls unsustainable path growth, and supports long-term stability in the growth process.

Export to China coefficient (α_1 = 0.0002, p = 0.058) is-significant at the border, indicating that an increase in exports by \$1 billion adds around 0.2 percentage points to the GDP growth. The elasticity of trade to China in this case is relatively low when compared to the other emerging markets, as it shows the enclave character of Iraq's petroleum industry, where there are low intersectoral connections as well as negligible spillover impacts (Hirschman, 1958). On the other hand, the import coefficient (α_2 = -0.0001, p = 0.328) is statistically insignificant, refuting traditional views of productivity gain through import-led growth. The result can suggest that Chinese imports significantly displace, as opposed to complement, productive capacity at home, consistent with the substitution thesis (Rodriguez & Rodrik, 2000). Thekbyskov's oil price variable is significantly and sensitively related (α_3 = 0.087, p = 0.001), confirming that the rise in oil prices by \$10 barrels increases GDP growth for 0.87 points. The result supports the fiscal transmission channels in the oil exporting regions where higher hydrocarbon revenues are converted into increased spending by the government, which in turn boosts aggregate demand by transmitter effects (Tazhibayeva et al., 2008). Furthermore, the exchange rate effect (α_4 = -0.00001, p = 0.058), though insignificantly significant, presents zero macroeconomic significance. The poor response indicates that the exchange rate has very little impact on the outcome of growth, mainly because the non-oil tradable sector remains underdeveloped, thus hindering the ability to gain competitiveness in the depreciation of the currency.

Table 4: Economic Growth Model (ARIMA 2,0,1)

Variable	Coefficient	Std. Error	T-Statistic	P-Value
AR(1)	0.732	0.215	3.405	0.003
AR(2)	-0.321	0.143	-2.244	0.035
MA(1)	-0.456	0.187	-2.439	0.023
EXP_CHINA	0.0002	0.0001	2.000	0.058
IMP_CHINA	-0.0001	0.0001	-1.000	0.328
OIL_PRICE	0.087	0.023	3.783	0.001
EX_RATE	-0.00001	0.000005	-2.000	0.058
Constant	3.876	1.543	2.512	0.019

Model Diagnostic and Validity Assessment

The diagnostic test shows that both the ARIMA models are statistically correctly specified. The Ljung-Box Q-statistics cannot reject the null of no serial correlation in the residuals over standard lag lengths (Q_{12} = 8.43, p = 0.75, Model 1; Q_{12} = 9.21, p =

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

0.68, Model 2), ascertaining that dynamic links have been appropriately adjusted under the model structures. In addition, residual normality tests based on the Jarque-Bera statistic (2.14, p = 0.34, Model 1; 1.87, p = 0.39, Model 2) cannot reject the null that the residuals are Gaussian, thus meeting the assumptions that undergird valid maximum likelihood inference. Tests based on the ARCH-LM procedure for conditional heteroscedasticity also attest to the robust models, as no volatility clustering has been evidenced ($LM_4 = 3.21$, $p = 0.52$, Model 1; $LM_4 = 2.89$, $p = 0.58$, Model 2). The finding confirms the constant variance assumption, an essential requirement for the efficiency of the parameter estimates. diagnostics based on stability adduce much weight to the robustness of the findings: recursive coefficient plots and CUSUM statistics stay in the 5% critical ranges over the whole sample, signifying that no breaks in the structure were manifested in the relationships that were estimated. This parameter stability is all the more surprising in light of Iraq’s turbulent economic record, political unrest, and external shocks in the period 2000–2023.

Forecasting Performance and Future Projections

Table 5 gives out-sample forecasts for the period 2024–2026, showing a more gradual increase for Iraq's trade balance from $3,450.2 million to $4,120.8 million, contributing to a 19.4% increase overall. These are assumed with the relative stableness of petroleum prices for the $70–75 per barrel band and stable Chinese Iraqi crude demand. Note that the projection's uncertainty intervals increase substantially more than a year-time horizon (in 2026, ±$1,250 million), with the time horizon uncertainty inherent to dynamic cardinal commodity markets increasing with time horizon. GDP scenarios for growth suggest a slight rise in the yearly fragmentation increase from 4.5% to 5.1%, corresponding to the IMF base scenario assumptions for political stability with recurrent reconstruction investment (Fund., 2023). Yet, these point estimates mask significant negative risk, including the possibility of breakdowns in the price of petroleum, geopolitical shocks, and to the globe energy transition, policy reactions. Scenario modeling reveals that the 2026 trade balance loss of $20 per barrel price range decreases 38% and slows the GDP growth 1.7 points, revealing sharp Iraqi exposure to external shocks in the price commodities.

Table 5: Forecasts for Trade Balance and GDP Growth Rate (2024-2026)

Year	TB (Million USD)	GDP_GROWTH (%)
2024	3,450.2	4.5
2025	3,780.5	4.8
2026	4,120.8	5.1

Causal Relationships and Dynamic Interactions

Granger Causality Analysis

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

Table 6 suggests unidirectional Granger causality exogenous to the trade variables and Iraqi economic growth. In particular, exports to China (F = 5.234, p = 0.018), Chinese imports (F = 4.567, p = 0.025), and the trade surplus (F = 3.234, p = 0.042) all impose statistically signficant predictive pressure onto GDP growth at the 5% level. The lack of reverse causality (repectively, all p-values > 0.10) in turn implies that economic growth doesn't كاملا reciprocally cause trade volumes, refuting the traditional export-led economic growth scenario, which assumes bidirectional feedback links (Balassa, 1978). This inverse causality means that Iraq's trade activity with China is an exogenous stimulus to expansion instead of a by-product of home economic performance. The finding is in line with the "vent for surplus" hypothesis, where resource exports produce foreign exchange that is channeled to finance growth-promoting import purchases without a prior build-up of home productive potential (Myint, 1992). However, the pattern is problematic in regards to long-term sustainable growth strategy based very much on foreign demand, as they might not sufficiently develop the economic vibrancy internally.

Table 6: Results of the Granger Causality Test

Null Hypothesis	F-Statistic	P-Value	Conclusion
Exports to China does not Granger-cause GDP Growth	5.234	0.018	Reject
GDP Growth does not Granger-cause Exports to China	2.123	0.156	Fail to Reject
Imports from China do not Granger-cause GDP Growth	4.567	0.025	Reject
GDP Growth does not Granger-cause Imports from China	1.876	0.187	Fail to Reject
Trade Balance does not Granger-cause GDP Growth	3.234	0.042	Reject
GDP Growth does not Granger-cause Trade Balance	2.456	0.112	Fail to Reject

Impulse Response Analysis

The impulse response functions (IRFs) show clear dynamic adjustment paths of Iraq's economic growth to trade shocks. A standard-deviation positive shock to Chinese exports, which translates to $6,543 billion, causes an instantaneous GDP growth acceleration of 2.3 percentage points, with the maximum being 3.1 percentage points in the third quarter, before slowly reverting to its initial value by the eighth quarter. This profile shows that windfalls that come from exports create temporary acceleration of the growth through the channels of improved fiscal revenues and increased import capacity, although they fail to create permanent growth momentum (Ploeg, 2011). Conversely, Chinese import shocks demonstrate a biphasic reaction. GDP growth increases by 1.2 points in the first quarter due to the stimulus of imported capital goods and intermediate inputs. However, in the fourth quarter, the influence is reversed, generating a contraction of 0.8 points. The reversal means that, although the economy can be temporarily buoyed by the imports, longtime dependence on import means that the production domestically that can crowd out, resonating concerns of premature deindustrialisation in resource-based economies (Rodrik, 2016).

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

Variance Decomposition

The variance decomposition of forecast errors shows Chinese trade variables as responsible for 41% of the documented GDP growth fluctuations in Iraq by the eighth-quarter ahead, while imports and exports contribute 23% and 18%, respectively. Oil price shocks account for an extra 31% of the variance, while exchange spillover remains negligible at 4%. The remaining 24% is an indication of domestic-specific variables such as political agitation, security, as well as surprises in the formulation of the policies. These findings determine Iraq's excessive openness to outside pushes, whereby almost four-fifths of the GDP growth change are foreign influences beyond the power of the country's policymaking. The overstuffing function pursued through Chinese trade can represent the signal for the economic capacity and risk of wide engagement with a large solo leader, providing an indication for the unilateral dependency potential and the resulting bane strategic risk.

DISCUSSION OF RESULTS

The findings of the research offer useful lessons about the pattern of Iraq-China trade and its receptacle for Iraq's trade balance and economic development. In the first place, as expected, Chinese imports to Iraq impose a negative pressure on the trade balance. The imports seem to contribute little to in-country economic growth, implying that the goods and services imported are not efficiently exploited to stimulate Iraq's production base. Secondly, the evidence shows that Chinese exports, mainly crude oil, have a remarkable impact towards strengthening the trade balance, confirming earlier remarks that point to the euphrunction of petroleum exports in Sino-Iraqi trade interactions (Falarti & Abdollahpour, 2020). Thirdly, the notably high sensitivities of both the trade balance and the GDP growth to oil prices point to the continued reliance of Iraq, despite its oil sector reform, on petroleum incomes. Such a reliance makes the economy highly susceptible to external shocks and limits the desired trade benefit from trade with China. Lastly, the moderate levels of the GDP growth and the trade balance suggest that, as it is structured currently, Iraq's commercial interface with China, when projected against a long-time span, cannot catalyze sustainable long-run growth in the economy without a sizeable revamping of its trade portfolio composition and strategy direction.

CONCLUSION AND RECOMMENDATIONS

This research Associate with investigated the impact of Chinese-Iraqi trade on Iraq's trade balance and economic growth based on the modelling methodology of ARIMA. It finds that China currently accounts for Iraq's biggest single trade partner, and the bilateral arrangement has had a strong impact on the nation's trade balance. Nonetheless, the cooperation has yet to lead to meaningful economic growth, primarily since Iraq relies mainly on crude oil exports and has little economy diversification. It emerges that Iraqi export to China, which mainly consists of crude petroleum, has a

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) (**pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

positive impact on the trade balance, but Chinese imports have a diminishing effect. Differentials in oil prices remain the main driver of both Iraq's trade balance and economic growth. Projections indicate that, if oil prices remain stable, Iraq's economic growth and trade balance are set to increase mildly over a period of three years.

On these conclusions, a number of policy prescriptions follow. Iraq must make a priority of increasing the value-added content of its Chinese exports, and vary its exports beyond oil to bring in petrochemicals and petroleum products, which both boosted the nation's income and provided more jobs. Structural reforms must also be taken more broadly, including business environment improvement, bureaucratic barriers lowered, anti-corrupt actions initiated, and improvement in the nation's finance infrastructure to sustain long-run economic growth and investment. Strategic Chinese imports must be focused, as an acceleration of productive capacity, in machinery, technologies, and capital equipment, in strategic productive sectors, and thus to bring a maximum export impact to sustain fast economic growth. Iraq must further utilize its Chinese trade relationship to build key infrastructure, telecommunications, and electric sector, as well as transportation networks, to increase productivity that accelerates economic diversification. Complete Chinese trade deals must go beyond oil, and include clauses of behaviour for Chinese behaviour towards technology sharing, as well as joint ventures in non-oil sectors, and include safeguards to secure domestic business and to make it a balanced trade. In the end, increasing Iraq's confidence to a minimum level towards oil export must be focused to build other non-oil sectors, including manufacturing, service, and agriculture, to gain more stable and sustained economic growth and to limit exposure to transitory fluctuations in international oil prices.

LIMITATIONS AND FUTURE DIRECTIONS

Although these findings offer priceless insights, there are limitations that must come in. The first limitation is that the analysis employs historical data up to 2023, and, therefore, developments thereafter can alter the trajectory of Iraq-China trade relations. Economic developments, geopolitical events, as well as initiative of policies in either country, can create a massive influence in the trade dynamics of both sides. Second, the employment of the ARIMA models constitutes a univariate form and do not take explicit account of external variables such as world oil prices, volatileness in the exchange rate, or geopolitical events. Although these forces take account in an indirect form through the time-series data, the employment of multivariate examination can offer an advanced insight. Third, the study presents the findings mainly based on the economic aspects, overlooking political, social, as well as environmental aspects of the Iraq-China relationship. It would form a complete study in case these elements come in so that there can be an in-depth understanding of the bilateral interactions. Fourth, limitations in the form of lapses, inconsistency, as well as potential mismeasurement errors that can prevail in Iraq can render the findings inaccurate notwithstanding employing the most credible data sets that are available locally.

The research also has window of opportunities for future research. Multivariate time series models, i.e., vector error correction models (VECM) and vector autoregression (VAR) can be utilized to investigate the impacts of externalities in Iraq-China economic exchanges. Future research needs to look at how Iraq can benefit its relation with China in order to pursue other development goals, like infrastructure upgrading, technology transfer, and economic diversification. comparative exercises using the case of other crude exporters in the Middle East can define the characteristic of Iraq's bilateral trade in China and provide policy dividends in the optimal structure of these exchanges. Other research can, in addition, estimate sectoral effects, investigating how specific Iraqi sectors react to trade based on China and the consequences for incomes inequality and employments. Based on the strategic status of energy in the Iraq-China cooperation, studies investigating the long-term sustainability of the arrangement based on the foundation of climate change as well as the international shift in energy can serve the purpose immensely.

Overall, the study presents an accumulative evaluation of the trade relations between China and Iraq along with their implications within the economy of Iraq, and it presents intentional results that are able to benefit the researchers in addition to commentators onto the policy. The results refer to the capability of the bilateral relationship to place economic growth in Iraq within stride while, at the other hand, highlighting opportunities to an equal extent with the challenges. Within the pursuit at reviving the economy along with increasing participation within the international arena, the relationship between Iraq and China is capable within determining a leading determinant within the economic future.

REFERENCES

Al-Masaoodi, A. (2021). China and Iraq: 1949–2016. https://api.research-repository.uwa.edu.au/ws/portalfiles/portal/149387932/THESIS_DOCTOR_OF_PHILOSOPHY_AL_MASAOODI_Amej_Hamid_Challoob_2021.pdf

Al-Taie, A. H. H., & Salman, A. H. (2021). American trade policy between protectionism and economic dumping for the period of 2009-2021: implications for China and Iraq. *Economic Annals-XXI/Ekonomìčnij Časopis-XXI*, *187*. https://doi.org/10.21003/ea.V187-03

Aladwani, J. (2024). Cyclinaclity effects of exchange rates and oil prices. https://doi.org/10.29117/sbe.2024.0153

Alayseri, N. H. A., Kadhim, R. N., & Majeed, H. S. (2024). Economic reform, structural imbalances and their impact on unemployment in the emerging economy. *Journal of Governance and Regulation/Volume*, *13*(1). https://doi.org/10.22495/jgrv13i1art2

Ali, S. H. A., & Ahmed, P. F. A. (2024). The Modern Trends of Economic Relations Between Iraq and China for the Period 2010-2023. *Journal of Economics and Administrative Sciences*, *30*(144), 427-447. https://doi.org/10.33095/zmtteg89

Ali, Z., & Hussein, S. (2024). Economic Diversification in Iraq: Overcoming Oil Dependency and Building a Sustainable Future. *Business and Investment Review*, *2*(6). https://doi.org/10.61292/birev.143

Allegret, J.-P., Mignon, V., & Sallenave, A. (2015). Oil price shocks and global imbalances: Lessons from a model with trade and financial interdependencies. *Economic Modelling*, *49*, 232-247. https://doi.org/10.1016/j.econmod.2015.04.009

Anderson, J. E., & Van Wincoop, E. (2003). Gravity with gravitas: A solution to the border puzzle. *American economic review*, *93*(1), 170-192. https://doi.org/10.1257/000282803321455214

Ayirikame, E. K. (2021). *Trade Openness, Exchange Rate Fluctuations and Manufacturing Output in Sub-Saharan Africa* University of Cape Coast]. https://ir.ucc.edu.gh/xmlui/handle/123456789/7192

Balassa, B. (1978). Exports and economic growth: further evidence. *Journal of development Economics*, *5*(2), 181-189. https://doi.org/10.1016/0304-3878(78)90006-8

Bank., W. (2021). Iraq economic monitor: Seizing the opportunity for reforms and managing volatility. World Bank Group. . https://www.worldbank.org/en/country/iraq/publication/iraq-economic-monitor-spring-2021

Bekheet, H. N., Al Sudany, N. K., & Najm, S. S. (2023). Iraqi economy and renewable energy projects between economic necessity and investment challenges. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(8), 71. https://dialnet.unirioja.es/servlet/articulo?codigo=9059432

Calabrese, J. (2025). A Region in Flux: Us Middle East Policy from Trump to Biden and Back. *The Maghreb Review*, *50*(2), 151-167. https://doi.org/10.1353/tmr.2025.a964304

Chen, J., Yang, X., Wang, M., & Su, M. (2023). Evolution of China's interaction with Middle Eastern countries under the Belt and Road Initiative. *Plos one*, *18*(11), e0293426. https://doi.org/10.1371/journal.pone.0293426

Corden, W. M., & Neary, J. P. (1982). Booming sector and de-industrialisation in a small open economy. *The economic journal*, *92*(368), 825-848. https://doi.org/10.2307/2232670

Falarti, M. M., & Abdollahpour, B. (2020). China's Maritime Silk Road Initiative, Africa, and the Middle East: Feats, Freezes, and Failures. *Journal of World Sociopolitical Studies*, *4*(3), 627-632. https://doi.org/10.22059/WSPS.2021.326566.1231

Fund., I. M. (2023). *Iraq: Article IV consultation. IMF Country Report No. 23/187.* https://www.imf.org/

Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica: journal of the Econometric Society*, 424-438. https://doi.org/10.2307/1912791

Grossman, G. M., & Helpman, E. (1993). *Innovation and growth in the global economy*. MIT press. https://ideas.repec.org/b/mtp/titles/0262570971.html

Gul, Z. (2023). The new era in the continuum of China and Iraq's relationship. *Asian Journal of Comparative Politics*, *8*(1), 348-363. https://doi.org/10.1177/20578911221140690

Hamilton, J. D. (2009). Understanding crude oil prices. *The energy journal*, *30*(2), 179-206. https://doi.org/10.5547/ISSN0195-6574-EJ-Vol30-No2-9

Hirschman, A. (1958). The Strategy of Economic Development. Yale University Press, New Haven. *Natural Resources*, *5*. https://www.scirp.org/reference/ReferencesPapers?ReferenceID=1173380

Idan, A. M. (2023). The role of exports, development, imports, and trade openness on the economic growth in Iraq: assessment using the Ardl Cointegration method. *International Journal of Economics and Finance Studies*, *15*(1), 80-100. https://sobiad.org/

Iraq., C. B. o. (2023). Annual economic report 2022. Government of Iraq. . https://cbi.iq/static/uploads/up/file-173563991524858.pdf

Ismael, H. O. (2025). Econometric Analysis of Factors Influencing Export Diversification in the Iraqi Economy. https://doi.org/10.14500/kujhss.v8n1y2025.pp457-467

Johnston, L. A. (2021). The Belt and Road Initiative as Ten Commandments: Revisiting XI's Launch Speeches and the Washington Consensus. *Available at SSRN 3931191*. https://doi.org/10.2139/ssrn.3931191

Kassouri, Y. (2020). The role of natural resources abundance and dependence in achieving environmental sustainability: evidence from resource-based economies. *Sustainable Development*, *29*(1), 143-154. https://doi.org/10.1002/sd.2137

Khan, A., Congmei, S., & Ali, F. (2024). Assessing Xi Jinping's vision of modernization and its implications for global trade dynamics: a case study of the Belt and Road Initiative. *Pakistan Journal of Humanities and Social Sciences*, *12*(1), 106–126. https://doi.org/10.52131/pjhss.2024.v12i1.1962

Kilian, L. (2009). Not all oil price shocks are alike: Disentangling demand and supply shocks in the crude oil market. *American economic review*, *99*(3), 1053-1069. https://doi.org/10.1257/aer.99.3.1053

Meese, R. A., & Rogoff, K. (1983). Empirical exchange rate models of the seventies: Do they fit out of sample? *Journal of international economics*, *14*(1-2), 3-24. https://doi.org/10.1016/0022-1996(83)90017-X

Mukhlif, M. K., & Dawood, I. M. R. (2023). The Belt-Road Initiative and prospects, Iraq as a model-Strategic Vision. *Political Issues*(74), 399-416. https://doi.org/10.58298/742023458

Myint, H. (1992). The "classical theory" of international trade and the underdeveloped countries. In *International Economic Policies and their Theoretical*

Vol: 17 **No:** 02 **Year:** 2025 **ISSN:** 1309-8055 (Online) **(pp.** 206-230) **Doi:** 10.34109/ijefs. 2025170211

Foundations (pp. 476-494). Elsevier. https://doi.org/10.1016/B978-0-12-444281-8.50027-1

Naqvi, S. F. H., & Rogers, R. A. (2021). China's Interdependent Relations with the Middle Eastern States: Prospects for Reconciliation and Peace. *Contemporary Chinese Political Economy and Strategic Relations*, *7*(3), 1481-XXI. https://www.proquest.com/openview/77f9e4ebda76455bd21a3f4337c72cf7/1?pq-origsite=gscholar&cbl=2042768

Obstfeld, M., & Rogoff, K. (1996). *Foundations of international macroeconomics*. MIT press. https://scholar.harvard.edu/files/rogoff/files/contents_foundations_of_international_macroeconomics.pdf

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics*, *16*(3), 289-326. https://doi.org/10.1002/jae.616

Petroleum, B. (2020). Statistical review of world energy 2021. https://www.connaissancedesenergies.org/sites/connaissancedesenergies.org/files/pdf-actualites/bp-stats-review-2020-full-report.pdf

Planning, I. M. o. (2022). *Annual statistical report 2021. Government of Iraq*. https://mop.gov.iq/en

Ploeg, F. v. d. (2011). Natural resources: curse or blessing? *Journal of Economic literature*, *49*(2), 366-420. https://doi.org/10.1257/jel.49.2.366

Rodriguez, F., & Rodrik, D. (2000). Trade policy and economic growth: a skeptic's guide to the cross-national evidence. *NBER macroeconomics annual*, *15*, 261-325. https://www.journals.uchicago.edu/doi/abs/10.1086/654419

Rodrik, D. (2016). Premature deindustrialization. *Journal of economic growth*, *21*(1), 1-33. https://doi.org/10.1007/s10887-015-9122-3

Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European economic review*, *45*(4-6), 827-838. https://doi.org/10.1016/S0014-2921(01)00125-8

Samuelson, P. A. (1939). Interactions between the multiplier analysis and the principle of acceleration. *The review of Economics and Statistics*, *21*(2), 75-78. https://doi.org/10.2307/1927758

Silva, F. M. d. (2024). Essays on exchange rates and commodity prices volatility. https://bdtd.ucb.br:8443/jspui/handle/tede/3521

Slow, J. A. (2023). The Impact Of Foreign Trade On The Numerous Of Economic Sectors In Iraq For The Period (2003–2021). *Journal of Duhok University*, *26*(2), 1018-1035. https://doi.org/10.26682/hjuod.2023.26.2.59

Su, X., & Zhao, P. (2025). The Modernization Turn in Chinese Middle East Studies since the Reform and Opening Up of 1978. *Middle East Critique*, 1-22. https://doi.org/10.1080/19436149.2025.2543635

Tazhibayeva, K., Ter-Martirosyan, A., & Husain, A. (2008). Fiscal policy and economic cycles in oil-exporting countries.

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1316721

Wu, Y., Zeng, H., Hao, N., & Ma, S. (2025). The impact of economic policy uncertainty on the domestic value added rate of construction enterprise exports—evidence from China. *Journal of Asian Architecture and Building Engineering*, 1-15. https://doi.org/10.1080/13467581.2025.2479512

Xu, Y., Wang, Q., Yu, T., Han, Y., Dai, W., Jiang, S., & Li, X. (2024). Spatial and temporal patterns of disease burden attributable to high BMI in Belt and Road Initiative countries, 1990–2019. *Public Health Nutrition*, *27*(1), e158. https://doi.org/10.1017/S1368980024001253

Zhang, C. (2025). *China's Changing Role in the Middle East: Filling a Power Vacuum?* Taylor & Francis, 2025. https://books.google.com.pk/books/about/China_s_Changing_Role_in_the_Middle_East.html?id=B7tCEQAAQBAJ&redir_esc=y