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Impact of Non-Oil Export on Economic Growth in Iraq: An Application of the Bound Test Approach

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Abstract

The crucial role of non-oil exports in promoting job creations, investments, productions and even infrastructure improvements is well established in the literature, in Iraq, despite the abundant of non-oil resources, non-oil exports accounts for less than 10 percent of total export receipts. This paper aims to examine the impact of non-oil exports on economic growth in Iraq by employing the ARDL model to investigate the long and short-run effects of non-oil exports on Iraq's GDP. To do so, the annual data of GDP, non-oil exports of manufacture, food and agricultural products, and exchange rates have been collected from World Trade Organization and World Bank from (2003-2020). The results reveal a significant impact of non-oil exports on economic growth in both the long and short run. It's recommended for governments and policymakers that promoting non-oil exports and diversifying Iraq's economy is paramount for faster economic growth, greater job creation, and less economic volatility.

Keywords: Non-oil exports, GDP, ARDL, Bound test, Iraqi Economy

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Introduction

The significant role of exports in economic growth is well established in the literature on international trade and economic growth; however, it remains a topic of interest to economists and policymakers in formulating an effective growth policy. As it backs to the theory of economic growth provided by the classical school of modern economics, and later supported by neo-classical economists, which assumes a strong relationship between exports and economic growth. It emphasizes that any expansion of exports enhances the principle of specialization in export goods. It simply means reallocating resources from low-efficiency non-commercial sectors to highly productive export sectors. Therefore, exports represent an engine of economic growth that could accelerate the expansion of all sectors of the economy.

Exports determine growth in both developed and developing countries. However, the policy trust of the export-led growth hypothesis is non-natural recourse-based goods; still, developing countries cannot produce beyond this. The export-led growth hypothesis is a framework that supports long-run growth in developing economies derived from non-natural resource outputs, although one of the most significant problems of these countries comes from monocularly and their reliance on exporting primary and raw materials, which leaves a negative impact on their economic, social, political and even cultural structures. For instance, oil price rises would potentially lead to positive effects, though their impacts would be negative when the price declines. In terms of economic growth, an increase in oil prices may have positive effects on output in the short-run, while it can induce negative impacts in the long run as it's known as the "resource curse" in economic literature. Oil concentration might negatively affect other sectors and industries and then generate "Dutch Disease".

Iraq is an oil-based economy where a large proportion of its foreign earnings are obtained merely from oil exports. It is more dependent on oil than any other country in the Middle East and Africa (MENA). The implications of the mono-oil- economy are that the dynamic of Iraq's economy is at the caprices and whims of oil prices, which almost have been volatile. This means, that whenever Iraq is exposed to external pressures, it tends to be extremely delicate and fragile at least in the long term. The major fallout of this fragile structure of the Iraqi economy is a situation where the economy is growing without creating jobs and reducing poverty. The economic paradox can be explained by the fact that the oil sector which produces over 90 percent of export receipts is in the hands of less than 3 percent of the Iraq population due to the domination of expatriates and members of political classes who control oil production. It's rightly clear that, for Iraq, promoting non-oil exports is in paramount to enhance new job creations, investments, productions, and infrastructure improvements that can be seen as a key factor to minimize the economic upsets in the country. Non-oil export not only creates job opportunities and facilitate sustainable developments but also, on the international levels, it reduces export imbalances that eventfully smooth external pressures and economic volatility.

Due to the adverse repercussion of over-dependency on oil exports and heightening the need to diversify the Iraqi economy away from oil towards the direction of non-oil export sectors this paper empirically examines the impact of non-oil exports on economic growth in Iraq during the period (2003-2020).

The paper is structured as follow. After presenting an introduction in section 1, the section 2 provides review of the literature. In section 3, data, model specification, and methodology are depicted. A descriptive statistics and empirical findings are shown explained in section 4 which followed by summary and concluding remarks.

2. Literature Review

It is rightly established in the hypothesis that export trade is an engine of economic growth due to its significant role in boosting employment generation through the development of export-oriented industries, rising foreign export earnings which in turn supplies the state budget, improves the balance of payment positions, and making the investment climate even more attractive. Many studies in the literature support the claim that exports enhance the economic growth (see, Balassa; Alhajhoj, 2007; Onayemi and Ishola, 2009, Saad, 2012). In addition, Grossman and Helpman (1991) proposed that export encourage technical knowledge transfer via suggestions and experiences shared by foreign buyers. Moreover, export can enhance the efficiency of production inputs by increasing the level of international competition and expanding the local market sizes (Krueger, 1980; Mohsen, 2015; Malhotra and Kumari, 2016). Proponents of this claim also argue that export is essential to growth as it plays a major role in promoting an economics of scale, smoothing barriers to external trade, and facilitating foreign market integrations (Aljebrin, 2017; Priyankara, 2018).

A bulk body of research has investigated export-led growth hypothesis in both developed and developing economies, they acquire substantial support to emphasize the importance of export activities to economic growth notwithstanding still there is no clear consent in the literature regarding the consistency in the export-led growth strategies, especially in developing countries due to their heavy dependency on natural resource exports rather than others (Gylfason, 2001; Mehlum et al, 2006).

However, major studies imply that countries with a strong export concentration of natural resources receive a negative impact on economic growth (Matsuyama, 1992; Auty, 2001; Hodler, 2006). There are other scholars skeptical about the possible negative impacts of natural resource abundance on economic growth (Boschini et al, 2007; Torvik, 2009; Cavalcanti et al, 2011).

The adverse consequences of primary goods exports and over-dependency on oil production heightened the importance of calling for the promotion of the non-oil sector and economic diversification. Studies have shown that a significant positive relationship between export diversification and economic growth has been established (for example, Herzer and Nowak-Lehmann, 2006; Hesse, 2009). A growing body of literature exists to show the impact of non-oil export on economic growth in oil export countries such as Nigeria, Iran, and the Arab world, and their results vary. Many empirical types of research find significant positive relationships between non-oil exports and economic growth (Usman, 2010; Ude and Agodi, 2014; Mohsen, 2015).

In Iran (Parvin Hosseini and Tang, 2014) apply multivariate cointegration and Granger causality methods to determine the impact of oil and non-oil exports on economic growth from 1970 to 2008. The results imply that non-oil exports have a positive effect on economic growth, but oil exports and imports demonstrated a negative relationship. The Granger causality tests show unidirectional causality goes from both oil and non-oil exports to GDP, which in turn supports export-led growth hypothesis in Iran. Their results are in line with (Mehrabadi et al., 2012) who find a positive influence of non-oil and oil exports on economic growth in Iran. Thus, they encourage issuing policies to promote non-oil exports as well as generating new capital and investing in infrastructure to promote production processes for both exports and domestic needs.

Recently, Ogunsanwo et al. (2020) examine the role of non-oil trade export on economic growth in Nigeria for 33 years from 1986 to 2018 by adopting Johannsen co-integration test and error correction model (ECM) to capture the short and long-run effects. The study uses the explanatory variables of a proxy of non-oil total

trade, the balance of trade, exchange rate and inflation rate. As they have found positive and significant effects of non-oil export in both the short-run and long-run on economic growth, they recommend governments and policymakers to pay full attention to the non-oil sector to make Nigerian production competitive in the international market. In contrast, Uzonwanne (2020) and Zulaihatu et al (2021) find no support for the role of non-oil exports in the economic growth of Nigeria.

In the Arab world, Mohsen (2015) investigate the effects of non-oil exports on economic growth in the Syrian economy during 1975-2010. Johansen cointegration test has been used and followed by a Granger causality test, impulse response functions, and a variance decomposition analysis. The results confirm a significant positive relationship between GDP, non-oil exports, and oil exports with bidirectional short-run causality established between non-oil exports and GDP. Moreover, the results show unidirectional causality moving from oil exports to GDP, thus, Oil exports have a more significant influence on GDP, and the author claims to promote non-oil export activities to increase economic diversity in Syria. His findings are obedient to Aljebrin's study (2020) when he utilizes the Johansen cointegration method with a vector error correction model to determine the long- and short-run relationships between non-oil exports and GDP in Saudi Arabia. In addition, Khayati (2019) investigates the impact of oil and non-oil exports on economic growth in Bahrain over the period (1977-2015) by applying the Johansen cointegration test and vector error correction model. He finds that both oil and non-oil exports have a positive and significant long-run relationship with economic growth, while, oil exports have the biggest effect on GDP. Besides, in the short run, oil exports produce economic growth, whereas non-oil export does not.

It's well documented that non-oil exports play an important role in enhancing economic growth in oil exporting countries, however, surprisingly, empirical research concerning the impact of non-oil exports on economic growth in Iraq is still rare. Some empirical papers have been implemented to analyze and understand the economic diversification in Iraq. For example Faraj (2018) and Al-Taii (2021) have utilized Herfindahl-Hirschman Index (HHI) to measure economic diversification in Iraq, and both of them have calculated high economic concentration on oil production. However, Faraj's study shows that the non-oil sector's contributions to GDP increased in the later periods of the study, 2016, still the crude oil exports account for (98 percent) of Iraq's total exports and the decline in HHI can be seen as an economic illusion that comes from oil price rises. Moreover, Al-Taii (2019) who measures economic diversifications in Iraq from 2003-2019, finds a dramatic decline in the indicators of economic diversifications. He finds that the coefficient of HHI enhances economic growth only by (0.00019) percent. He depicts that Iraqi national development plans still stay inefficient in boosting economic diversification in Iraq when he calculates a high value of the HH index which becomes near to absolute one.

In addition, Sabr and Hama Saed (2021) empirically investigate the impact of agricultural, manufacturing, mining, tourism and crude oil sectors on GDP formulation in Iraq over the period (1980-2017) by applying the ARDL model. They detect that all sectors are positively related to GDP but their coefficients, except crude oil, are relatively small which means that they have a small impact on economic growth. Their findings show oil sector domination in Iraq's economic growth followed by manufacturing products, and then agricultural and other products.

To the best of author's knowledge there is no implemented paper works attempt to investigate the impact of

non-oil exports on Iraq GDP by using non-oil export series. This study differs from the formers by estimating an equation that shows the effects of non-oil products which is sold in international market other than showing the contributions of non-oil sectors in GDP formulation as it's seen in Sabr and Hama Saed (2021) paper for instance.

3. Data, Model Specification, and Methodology

3.1: Data

To examine the impact of non-oil export on economic growth in Iraq, annual time series data from 2003 to 2020 of GDP, non-oil exports, and exchange rates have been collected.

GDP is taken as an index of economic growth. Iraq's non-oil exports represent all those commodities excluding crude oil (petroleum products), which are sold through international trade. Based on the (WTO) data, Iraq's non-oil exports sector is structured into three broad constituents which are agricultural exports, food exports, and manufactured exports.

The following function is used: GDP = F (NONOIL, EX, GFC) where GDP is regarded as a measurement of economic growth in Iraq, NONOIL represents Iraq's total non-oil exports, EX is the exchange rate between Iraq Dinar and US dollar, and a Dummy variable of a global financial crisis (GFC).

The dummy variable of GFC shows the presence of a global financial crisis in the world economy which is equal to one for observations belonging to the GFC period (2008) and its aftermaths in 2009.

Non-oil export is expected to have a positive relationship with GDP where an increase in Iraq's non-oil exports would promote economic growth because the more non-oil products are exported, the greater GDP is generated, and vice versa.

Exchange rate is also expected to have a positive relationship with GDP. To determine the expected sign of exchange rate, we shall explain the effects of currency value changes on both exports and imports. Although theoretically exchange rate increase or currency depreciation encourages exports, the currency depreciation here seems to be relatively unrelated to exports because Iraq is a mono-oil economy and almost 95 percent of its total revenues come merely from oil exports which is not responsiveness to changes in Iraq currency values in a hand. On the other hand, Iraq imports goods and services heavily from neighboring countries and the rest of the world that should be discouraged theoretically by currency depreciation. Thus, any rise in exchange rates or any depreciation in Iraqi Dinar may shrink import bills and consequently improves balance of trade and encourages economic growth.

The empirical model for this study is estimated as follows:

$$\text{Log}(\text{GDP}t) = \lambda 0 + \lambda 1 Log(\text{NONOIL}\ t) + \lambda 2 Log(\text{EX}t) + \lambda 3(\text{GFC}t) + \square t$$

Where GDP represents the logarithm of Iraq's gross domestic product in time t; lNONOIL is the logarithm of non-oil exports, EX refers to the logarithm of exchange rate and lastly, $\square t$ denotes the error term.

3.3: Methodology

The study conducts the following procedures by utilizing STATA software:

- Time series unit root tests.
- Test the co-integration among the variables.
- Autoregressive Distributed Lag Bound Testing Approach (ARDL).

Before estimating the long-run relationship between the variables of the model, the time series properties of each variable are first determined by using the Augmented Dickey-Fuller (ADF) for unit root testing (Dickey and Fuller, 1979; 1981). After identifying the time series properties of each variable, the Johansen multivariate cointegration test is proceeded to establish the long-run relationships among the variables of the study. After detecting the long-term cointegrating relationships among the variables, an ARDL with an error correction model is estimated to determine the interaction among the variables as well as the speed of adjustment of economic growth back to the equilibrium state whenever the explanatory variables are changed.

4. Descriptive Statistics and Empirical Results

4.1. Descriptive Statistics for Indicators

Table 1 provides descriptive statistics for the variables based on STATA software 15. It can be seen from table 1 that the mean for GDP, non-oil exports, and exchange rates are 25.548, 19.035, and 7.117 respectively. On average the median for GDP, non-oil exports, and exchange rates are 25.839, 19.093, and 7.075 respectively. It is clear from the table that the highest value for GDP over the study period is 26.181million, and peak values for non-oil exports and exchange rates are 19.650 and 7.294 million respectively. Whereas, the minimum values for GDP, non-oil exports, and exchange rates in Iraq are 23.810, 18.281million, and 7.061 Iraqi dinars per US dollar respectively.

Table 1. Descriptive Statistics for Variables

Log of Variables	GDP	Non-Oil Exports	Exchange Rates
Observations	18	18	18
Mean	25.54821	19.03567	7.117791
Median	25.83939	19.09361	7.07528
Minimum	23.81074	18.28142	7.061334
Maximum	26.18131	19.65032	7.294377
Std. Dev.	0.7029737	0.3904048	0.0864193
Skewness	-1.183899	-0.3687443	1.34307
Kurtosis	3.320251	2.151977	3.063114
Jarque-Bera	4.282	0.9473	5.414
Probablity	0.11	0.6227	0.0667

Source: STATA 15 outcomes.

Skewness statistic detects that both GDP and non-oil exports are negatively skewed which means that the series is skewed left and have a longer or fatter tail on the left side of normal distribution, whereas the exchange rate series are positively skewed. The Kurtosis statistics show that all variables have a positive Kurtosis which exhibits a heavy-tail distribution. Both GDP and exchange rate have a Kurtosis of bigger than 3, while non-oil export has a small Kurtosis of smaller than 3 which means that it is platykurtic and its distribution is flat relative to normal distribution. Jarque-Bera test for Normality shows that all the variables are distributed normally since their probability or P values are bigger than (0.05).

4.2. Empirical Results

For reporting the results, the paper starts with a stationarity test of variables. Table 2 depicts the results of the ADF unit root test to examine the time series properties of each variable.

Table 2: Augmented Dickey-Fuller Test

Variables	Level	First difference
***(lGDP	-1.871(0)	-2.661(0
***(lNon-oil	0.271(0)	-3.944(0
***(lEx	-0.684(0)	-3.108(0

Notes: lGDP is a log of GDP, lnon-oil is a natural log of non-oil exports, and lEx is a log of the exchange rate. Asterisks (***) indicate a significance level of 1 per cent. The lags are in parentheses and have been selected .based on (FPE), (AIC), (SBIC), and (HQIC) criteria

Source: STATA 15 outcomes.

Table 2 concludes that the null hypothesis for having a unit root is rejected for all variables at the first difference, and the null hypothesis is rejected at a 1 percent significant level for all, indicating that all the variables are integrated of order one, or I(1).

After identifying that, all variables GDP, Non-oil exports, and exchange rates are integrated of order I (1), the next step is to establish the long-run cointegration relationship by conducting the Johansen and Juselius multivariate cointegrating test. Johansen and Juselius's multivariate cointegrating test results have been summarized in table 4. As it's depicted in table 2, given the optimal lag length, lag (0), the paper proceeds to test for the long-run relationship among the variables by applying lag one since STATA does not accept zero lags in estimation models.

Table 3: Johansen and Juselius Multivariate Co-integration Test

.Null Hypothesis	Alternative Hypothesis	Trace Stat.	Max Stat
*(r = 0	r = 1	39.0093(29.68)*	28.7341(20.97
(r ≤1	r = 2	10.2752(15.41)	7.3299(14.07
(r ≤2	r = 3	2.9453(3.76)	2.9453(3.76
--	-- r ≤3		r = 4

Note: r is the number of co-integrating vectors. The critical values are in parentheses and the asterisk (*) indicates significance at the 5 percent level. A dummy variable of GFC is not included in the estimation, because the purpose of the cointegration test is to check whether the variables have relationships in the long run. Hence no .spurious relationship exists, since it is not a continuous variable

Source: STATA 15 outcomes.

It can be seen from table 3, that the results of the Johansen and Juselius multivariate cointegrating test imply that there is one cointegrating vector in the model. The null hypothesis of having a zero cointegrating vector is rejected by both trace statistics and maximum eigenvalue at a 5 percent significance level. Nevertheless, the null hypothesis of at most one cointegrating vector cannot be rejected. Thus, it allows us to admit that a long-run relationship exists among the variables of the study.

Having identified the long-run relationship between the variables, the paper proceeds to investigate the role of non-oil exports on Iraq's economic growth by implementing an ARDL bound test to capture the long-run and short-run effects. The Error Correction Mechanism (ECM) is used to validate the presence of a long-run relationship and incorporate the short-run dynamics into the long-run equilibrium relationship.

Before running the ARDL model and implementing a Bounds test, it is initial to determine the optimal lags for each series. Since, the optimal lag in this study was lag zero, by regressing the ARDL model with a maximum of one lag, STATA will automatically report lag length selection based on (SIC) and (AIC) criteria for each series in the estimated model. Throughout utilizing [matrix list e(lags)] command, the selected lag length is (1 1 0 0) for lGDP, lnonoil, lEx, and GFC respectively.

After identifying the optimal lags for each variable in the study, the next step is to establish the long-run and short-run relationships between variables by conducting the ARDL bound test.

Table 4. ARDL Bounds Testing Results

(Model Estimated:		Model: lGDP = f (lnonoil, lEx, GFC			
(Selected Lag Length:		(1 1 0 0			
F-Statistics		9.684			
(M. H. Pesaran et al. (2001					
Critical Bound Values		Lower Bound Value			Upper Bound Value
5.61		2.72			1%
4.89		3.69			2.5%
4.35		3.23			5%
3.77		2.72			10%

Source: STATA 15 outcomes.

Table 4 illustrates that the variables are co-integrated at a one percent level of significance since the Wald F-statistics, 9.684, is greater than the critical lower and upper bounds which confirm the long-run relationships provided by Johansen and Juselius multivariate cointegrating test.

Table 5 reports the ARDL results for long-run and short-run relationships between the variables as well as the speed of adjustment of GDP to its equilibrium state when non-oil exports and exchange rates are changed.

Table 5. ARDL Model Long-run and Short-run Results

Variables		Dependent Variable: G D P	
	Long-Run Results		
	Coefficient	t-Statistic	Prob. Value
Lnonoil	0.5151536	1.95	0.077
lEx	-4.392028	-4.01	0.002
GFC	-0.1694974	-0.66	0.520
	Short-Run Results		
ECM	-0.4616596	-4.40	0.001
GDP (−1)	0.5383404	5.13	0.000
lnonoil	-0.0044988	-0.05	0.964
lnonoil(-1)	0.2423244	2.59	0.025
lEx	-2.027622	-2.29	0.043
GFC	-0.0782501	-0.63	0.539
C	21.82145	2.40	0.035
Diagnostic Tests			
R-squared	0.9678		
Adjusted R-squared	0.9532		
Durbin-Watson stat	1.972567		
Breusch-Godfrey LM Test	0.2723		
White Test for Heteroskedasticity	0.3856		
Ramsey RESET specification test	0.2572		
Jarque- Bera normality test	0.3696		

VIF Test	No Multicollinearity
CUSUM	Stable
CUSUM- squared	Stable

The long-run regression results at the top of table 5 show that the coefficient of non-oil exports is positively related to GDP and statistically significant at the 10 percent level. Meaning that any increase in non-oil exports by one percent will lead to an increased GDP by (0.51) percent with ceteris paribus. This suggests that non-oil exports can support Iraq's economic growth by providing foreign currency to cover expenses incurred for infrastructure and productivity improvements. The positive relationship between non-oil exports and GDP confirms our earlier expectation about the sign of non-oil exports and the result is in line with previous literature (see, for instance, Mohsen, 2015 and Aljebrin, 2017).

The coefficient of the exchange rate is statistically significant at the 5 percent level and, unexpectedly, identified to have a negative relationship with GDP, thus, when the exchange rate increases by one per cent, GDP declines by (4.39) percent if other variables are constant. This might be due to the fact that Iraq is an importing country, any currency depreciations may causes exhausting the country's general revenues to cover the continuous rise in import bills. The negative coefficient sign of the exchange rate with Iraq's GDP is in parallel with previous studies (see, i.e. Ahmed and Ibrahim, 2019 Saud et al., 2021). Moreover, the coefficient sign of a dummy variable of the global financial crisis (GFC) is also negative and statistically insignificant. Appling that it has no effects on Iraq's economic growth.

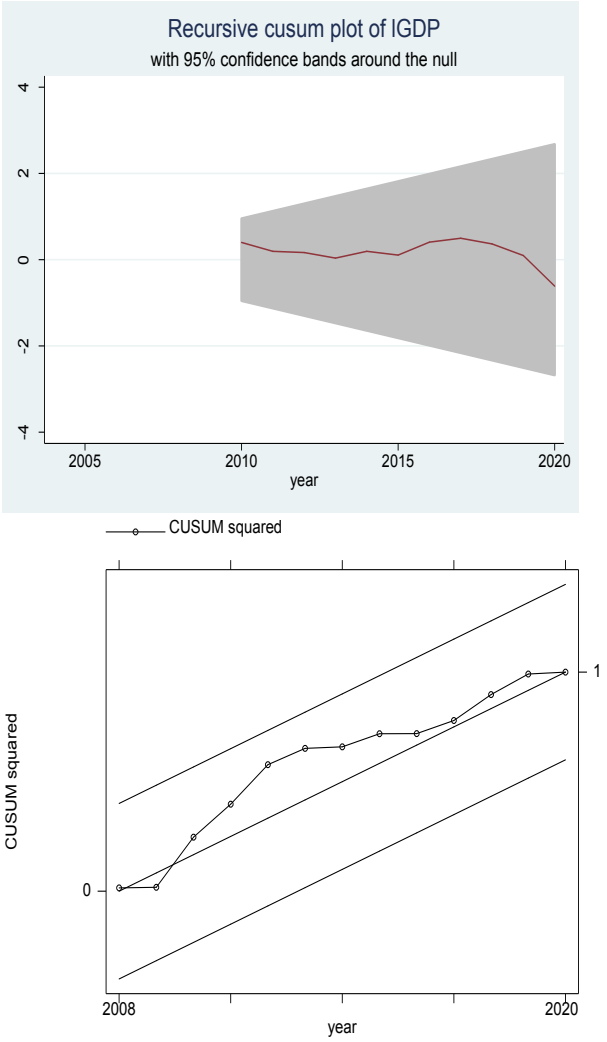
In a lower part of table 5, the short-run regression results are presented and it started by depicting the estimated error-correction term (ECT) which is correctly estimated with a negative sign and statistically significant at a 1 percent level of significance. This result further re-emphasizes that the variables in the model are co-integrated in the long run. The estimated coefficient of (ETC) detects that roughly (46.16) cent of short-run deviations in GDP will be adjusted towards the long-run equilibrium state per annum.

In addition, the results of short-run regression show that GDP has a convincing relationship with its one-period lag value i.e., in the short-run, economic growth depends on its previous value. Meaning that, in the short-term, a one percent rise in GDP at time t-1 is preparatory to a (0.53) percentage increase in growth at the current time. The result also illustrates that current non-oil exports have no significant effect on GDP, while its one-period lag value has a positive and significant effect on economic growth in the short run. This result confirms the positive impact of non-oil exports on economic growth, but such an effect occurs gradually and it appears at a later time. In contrast, exchange rates have a negative and significant effect on GDP in the short run i.e. a percentage increase in the exchange rate causes a (2.02) diminishes in GDP in the short run. Finally, a dummy variable of GFC is not significant and has no impact on Iraq's economic growth in the short run.

From the diagnostic tests at the bottom of table 5, the R-squared of value of 0.96 and the adjusted R-squared value of 0.95 imply that about 96% and 95% percent of the variations in economic growth are explained by the regressors and the adjusted R-squared value of 0.95 indicates that 95% percent of the variations in economic growth is explained by the explanatory variables in the model respectively. The F- Statistic probability value of 0.0000 indicates that all the explanatory variables are jointly significant in explaining economic growth in Iraq in the short term.

It's also clear from table 5 that the model is goof fitted. The Durbin-Watson Statistics of (1.972567) implies that this model is free from serial correlation. The LM test of (0.2723) reveals no existence of serial correlation. The White Test of (0.3856) indicates homoscedasticity, as well as Ramsey RESET test of (0.2572) for model specification, shows that the regressors can explain GDP. The Variance Inflation Factor (VIF) for multicollinearity identifies that there is no multicollinearity in the model since the highest centered VIF is (6.11) in the model and they are all less than (10). Jarque- Bera test of (0.3696) indicates that the residuals are normally distributed. Custom and Cusum- squared test shows that the parameters are stable, as they are illustrated in figure 1.

Figure 1: Parameters stability tests of short-run model



5. Summary and Concluding Remarks

It's well documented that non-oil exports play an important role in promoting economic growth in oil exporting countries, however, surprisingly, there is little empirical research implemented to show the impact of non-oil exports on economic growth in Iraq. In this paper, an (ARDL) model has been utilized to examine the short-run and long-run relationships between non-oil exports and economic growth.

After identifying that all the variables are integrated of order one, or I (1), the multivariate Johansen and Juselius co-integration test has been implemented and it implies that there is one cointegrating vector in the model. This result of a long-run relationship has been confirmed by the Bound test when the Wald F- statistics indicate co-integration between variables at a one percent level of significance. Moreover, the (ARDL) model results reveal that non-oil exports are significantly contributed to economic growth in Iraq both in the short-run and long run. While exchange rate hurts economic growth in Iraq in both the short and long terms.

Iraq's Government should understand the fact that the oil sector merely cannot offer high and real economic growth in a country. Consequently, boosting non-oil exports such as manufacturing, agriculture, food, financial and other selected services, which are tradable and value-adding is centrally important. In a wake of slow and numeric economic growth in Iraq, policymakers have to reap from a dramatic increase in the working population in the economy through successful non-oil sector diversification programs that guarantee job-producing private sector growth to enhance the quantity and quality of jobs. Thus, it's recommended that non-oil export expansion through building well-designed public investments and effective policy reforms is imperative for sustainable development in Iraq.

Moreover, promoting non-oil products and increasing its share in GDP formulation help Iraq's economy to manage its volatility much better than what exists in the case of heavy reliance on the oil sector since it's noticeable that Iraq's economy is at the caprices and whims of oil prices, which almost have been volatile. To do so, it's completely impervious to the government to improve the oil revenue management to be able to allocate some or even most of it to encourage infrastructure and productivity enhancements by saving in a sovereign wealth fund like Norway and other Arab oil-exporting countries such as Kuwait and the United Arab Emirates.

أثر الصادرات غير النفطية على النمو الاقتصادي في العراق: تطبيق منهجية (The Bound Tes

الملخص:

تبحث هذه الدراسة في تأثير الصادرات غير النفطية على النمو الاقتصادي في العراق من خلال استخدام نموذج ARDL بغرض البحث عن الآثار طويلة وقصيرة المدى للصادرات غير النفطية على الناتج المحلي الإجمالي. للقيام بذلك ، تم جمع البيانات السنوية للناتج المحلي الإجمالي ، والصادرات غير النفطية من التصنيع ، والمنتجات الغذائية والزراعية ، وأسعار الصرف من منظمة التجارة العالمية والبنك الدولي من (2003-2020). تكشف النتائج عن تأثير كبير للصادرات غير النفطية على النمو الاقتصادي على المدى الطويل والقصير. اوصت الدراسة الحكومة وصانعي السياسات بتشجيع الصادرات غير النفطية وتنويع الاقتصاد العراقي، وخلق فرص عمل أكبر و انتهاج سياسات اقتصادية فعالة تعمل على تقليل التقلبات الاقتصادية و زيادة معدلات النمو الاقتصادي.

الكلمات المفتاحية: الصادرات غير النفطية، The Bound Test, ARDL, GDP، الاقتصاد العراقي.

کاریگەری هەناردەی نا نەوتی لەسەر گەشەی ئابوری لەعێراق: بە بەکارهێنانی ڕێگای The Bound Test

پوختە:

ئەم توێژینەوەیە تیشک دەخاتە سەر کاریگەری هەناردە نانەوتیەکانی عێراق لەسەر گەشەی ئابوری بە مەبەستی پیشاندانی کاریگەریەکان لەماوەی کورت خایاند و درێژ خایاند. بە(ARDL)بەکارهێنانی ڕێبازی هەناردەی نانەوتی وەک کالای پیشەسازی و خواردەمەنی و کالای وGDPبۆ ئەنجامدانی ئەمە، داتای سالانەی کشتوکالی وە داتای نرخی ئاڵوێری دیناری عێراقی بەرامبەر بە دۆلاری ئەمریکی لە بانکی نێودەوڵەتی و ڕێکخراوی بازرگانی نێودەوڵەتی کۆکراوەتەوە لەماوەی نێوان ساڵانی (٢٠٠٣ بۆ ٢٠٢٠).

دەرئەنجامەکانی توێژینەوەکە دەریخستووە کە هەناردە نانەوتیەکان کاریگەریەکی بەرچاویان هەیە لەسەر گەشەی ئابوری هەم لەماوەی درێژخایاند هەم لە ماوەی کورت خایاند. توێژینەوەکە پێشنیار دەکات کە حکومەت و سیاسەت داڕێژەرەکان پێویستە گرنگی گەورە بدەن بە بەرزکردنەوەی هەناردە نانەوتیەکان و جۆراوجۆر کردنی ئابوری عێراق بۆ بەدەست هێنانی گەشەیەکی ئابوری خێراتر و دروست کردنی هەلی کاری زیاتر و ئابورییەکی جێگیر تر.

ئابوری عێراق , GDP, ARDL , The Bound Testکلیلە وشەکان : هەناردە نانەوتیەکان ،

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Appendix (1) The Data used for estimation

Year	GDP in US dollar	Non-oil Export in US dollar	Exchange rate Iraq dinar per US dollar	GFC
2003	21,921,569,479	204200000	1349.62	0
2004	36,627,901,762	165000000	1453.41	0
2005	49,954,890,353	152000000	1472	0
2006	65,140,147,197	208000000	1467.42	0
2007	88,837,055,195	195000000	1254.61	0
2008	131,614,433,712.25	87000000	1193.08	1
2009	111,657,581,662.35	122000000	1170.03	1
2010	138,516,722,649.57	268500000	1170	0
2011	185,749,664,444.44	197000000	1170	0
2012	218,002,481,737.69	246000000	1166.16	0
2013	234,637,675,128.65	190000000	1166	0
2014	228,415,656,174.96	104000000	1166	0
2015	166,774,109,673.73	108000000	1167.33	0
2016	166,602,488,747.89	145000000	1182	0
2017	187,217,660,050.68	280000000	1184	0
2018	227,367,469,034.03	265000000	1182.75	0
2019	233,636,097,800.34	285000000	1182	0
2020	184,369,797,315.44	342000000	1192	0