

Measuring and analyzing the effectiveness of monetary and financial policies towards the Iraqi -Iranian trade exchange by using the model (ARDL) for duration (2004-2018)

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Abstract

After 2003, the Iraqi economy had many of the changes in the systems and policies, but economic manifested most important in shaping an independent monetary policy through legislation Law No. (56) for a year 2004M , while experienced a financial sentence policy shifts in legal legislation and in line with the external openness and financial liberalization of oil revenues from the UN sanctions , but these changes are not accompanied by a clear vision and milestones in development planning and building the economy of a real based on the self , it which was reflected in the high degree of exposure of trade towards the outside world and enhanced the race between the partners trade to acquire the Iraqi market who saw In his window to dispose of their products, including Iran.

Keywords: *monetary, financial, policies, Iraqi- Iranian, trade exchange, (ARDL).*

Introduction

Saw t international economic relations during the decades of the last century the recent radical changes in the face of rising competition for opening up the economic front trade movement, as it is a foreign trade factor of influential of the path of achieving economic growth of any country (W, 2015) , And in return lies with the monetary and fiscal policy a pivotal role in stimulating the growth of the productive sectors and seek to balance the internal balance and not reflect negatively on the external balance, but the success of those two policies faced a number of obstacles and complexities of adult, including the effectiveness of each policy and the extent of mutual influence Between them, the soundness of financial management affects the efficiency of monetary policy and vice versa (Ali,2015) .

The importance of research :The monetary and financial policies are among the most important tools of macroeconomic policy through which the elements of the internal and external balance are influenced, hence the importance of identifying the role of each of the two policies and defining their impact on the Iraqi-Iranian commercial relationship.

The research problem :concentrated research problem impacts a year that result from the variation of the path of monetary and fiscal year after the two policies 2003 towards the regional commercial competition on the Iraqi

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market ,as many discussions were raised about the correctness of its tracks and the extent of its ability to build a stable economy.

Research objective : The research aims to trace the course of the monetary and financial policies after one year 2003M and their impact on the Iraqi-Iranian trade exchange through building a standard model that fits the study variables.

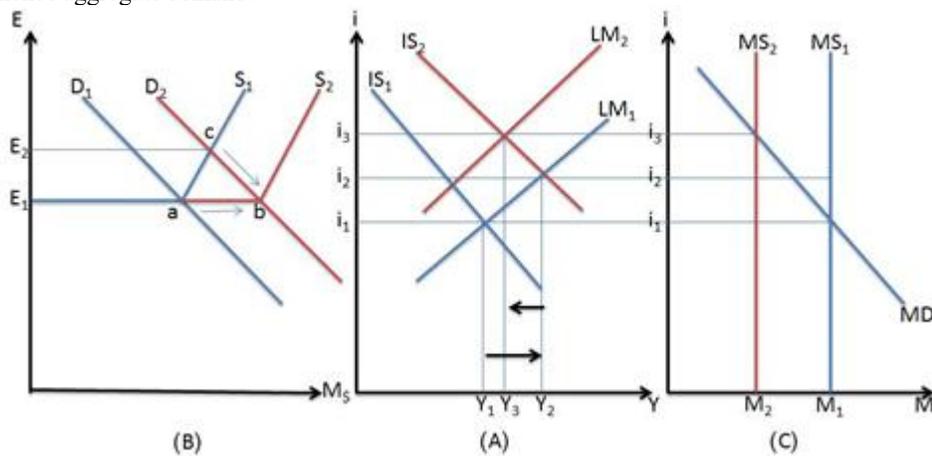
Research hypothesis : The research hypothesis is based on the fact that the monetary and financial policy trends in Iraq were on a diverging path, which reflected negatively on the development of the productive sector and the strengthening of the gap between output and income, which strengthened the race for regional countries to acquire the Iraqi market, including Iran .

1. **Monetary & financial policies and their implications on local economy**

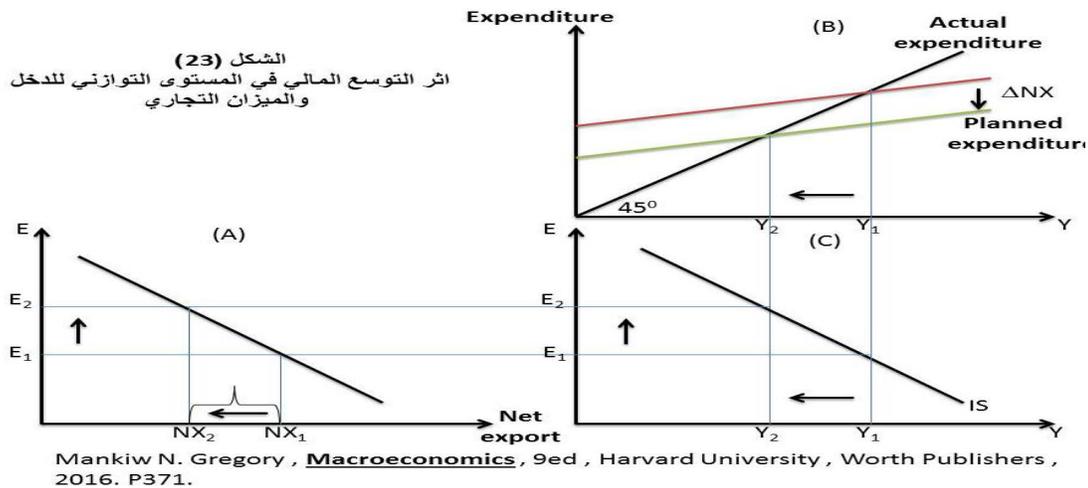
Rising from time to time discussions on the feasibility of monetary and fiscal policy trends in Iraq in the light of a contradiction of each policy path separately and T constitutes an obstacle to achieving economic stability and create an environment conducive to attract investment foreign, which reinforced the structural distortions of T - suffered economy Country. (**Koutsoyiannis, 1977**) In his quest to achieve price stability and raise the real value of the Iraqi dinar introduced the central bank window sell the currency to sterilize the levels of cash flow and the control of inflationary pressures and managed to achieve a rise in the value of local currency and move to real interest rates since decades the country has not witnessed , that such Monetary policy, although it created a favorable environment for investment and savings , but it constituted an additional burden on the country's non-oil sector through two channels. The first (domestic) is undoubtedly that the rise in the value of the dinar and interest rates means higher domestic production costs compared to external costs when translated into US dollars, which is what It implies a deterioration in the competitiveness of local tradable products towards imported products, which not only impedes the expansion of production capacity, but also extends to disrupting the existing production capacity, whether for export or import substitution (**Ali, 2015**) , the second (external) The increase in the value of the Iraqi dinar against the dollar means the addition of purchasing power to the per capita income, which increases the marginal tendency for consumption and increases with it the demand B on the dollar derived from increased import demand as a result of the high competitive ability of for products denominated in private dollars if we know that more imported products come from countries (such as China, Turkey, Iran , Syria) their currencies deliberately or subject to external to the pressure drop against the dollar, and resulting from the decline in the feasibility of investment projects in local production , which stood t ratio of the contribution of agricultural and industrial activities towards manufacturing (5.8%) Of (GDP) during the year 2016 While the share of commercial and service projects amounted to about (40.4% Of GDP) GDP at current prices for the same year. (**Abgmand, 1999**) Contractionary monetary policies aimed at reducing the rate of inflation by neutralizing the money supply and raising both the value of the dinar and the nominal interest rate

cannot be accepted with expansionary financial policies in which the probability of operating expenditures is at a rate of (80%) Of the total public expenditures at the expense of investment expenditures in achieving development of the productive sectors that are responsible for raising the real output of the country and its contribution to alleviating the bottlenecks of total supply and absorbing the rampant unemployment in the labor market, as both policies worked to reduce the cash liquidity in the direction of spending Investment, through the diversion of monetary policy towards managing the amount of money offered and mitigating the spending effects of the fiscal policy on price stability. This matter favored achieving the goal of monetary policy in achieving discipline in levels of monetary liquidity over the supervisory role placed on the central bank towards the banking system in a practical issue Financing the import activity and foreign transfers, after a year 2014As a result of the pressure faced by the central government agencies and bodies regarding the issue of selling the dollar through the currency window, the Anti-Money Laundering and Terrorism Financing Law was issued No. (39) for a year 2015 (**The Iraqi facts, 2015**) , In an attempt to control the sale of the dollar on the one hand, and to strengthen the supervisory role of the Central Bank on the other hand. The Central Bank also recently issued a system (Know Your Customer) in an attempt to verify the list of statements provided by banks to enhance their currency balances through the foreign currency sale window (**The Central Bank of Iraq, 2019**). On the other hand, the spending effect of the fiscal policy enhances the increase of the consumer's food basket, in addition to the high savings rate, and if so to speak, the increase in the hoarding tendency of the foreign currency (the dollar) and the widespread phenomenon of dollarization in domestic commercial dealings The government spending multiplier will be low, as it was estimated at (1.3 - 1.0). This means that when the government increases its expenditures, the spending effect fades quickly as funds either leave the country to buy imported goods or are kept in the form of savings and this dampens the effect of the effectiveness of fiscal policy in enhancing the production cycle (Business cycle) (**Frank, 2013**). And shape (1) explains the impact of the contradiction between monetary and fiscal policies on the monetary sector; through the use of the model IS-LM Explained in Part (A) increased government spending shifts a curve.)IS(To the right)IS 2(Raising both income level to(Y 2) Interest rate to (i 2), This increase in government spending will have an effect on the foreign exchange market described in section (B) By increasing the demand for foreign currency for the purposes of consumption of and savings of and investment external , which leads to the transfer of the demand for foreign currency to (curve D 2)And the rise in the exchange rate in the parallel market to (E 2) This is reflected in the rise in the prices of traded goods and thus the general level of prices, as long as the Central Bank is committed to keeping the exchange rate fixed at the level of(E 1)He will increase the foreign currency supply to satisfy the increasing demand for it by the distance (ab) Explained in the section(B)Thus the exchange rate slopes down the demand curve for the foreign currency(D 2)And return the exchange rate at the level(E 1)As for the Central Bank's desire to keep the exchange rate at (E 2). He will have to

increase the supply of foreign currency by the distance) ac Which is half the distance between (ab), This increase in the foreign currency supply is at the same time a sterilization of the surplus cash liquidity of individuals and thus the shift of the curve (MS) to me (MS 2). As illustrated in the section (C). This leads to a shift in the money market curve (LM) Turn left to (LM 2) Raising the interest rate level to i_3 (And the level of income decreased to Y_3) This is called the displacement effect as shown in the section) We conclude from this that the contradiction between the two policies constituted a waste of foreign financial resources through the depletion of foreign reserves in defense of the stability of exchange rates, as well as the deduction of part of the local financial liquidity in order to achieve price stability, as well as a rise in interest rates and disruption of financing investment projects, as well as The negative feedback on the level of income and hence aggregate demand.



Both expansionary financial policies and contractionary monetary policies have led to an increase in the level of monetary income (as a result of financial policies) and real (as a result of monetary policies), which results in an increase in the overall demand for internationally traded and non-internationally traded goods, and the open-door policy allows for any quantity needed to be supplemented. The local market is of traded goods without restrictions that prevent their flow, and therefore it is characterized by complete flexibility. This commodity flow drives an increase in dollar demand and thus a higher exchange rate of the US dollar. As for non-traded goods and services, which are characterized by being low in flexibility in the local economy, the high volume of demand for them pushes those goods and services to reach their maximum production capacity and at a certain point then the elasticity of these goods becomes very low and their prices start to rise, raising behind them the general level of prices, which constitute pressure to reduce the value of the Iraqi dinar, and this is another reason pushing the exchange rate to rise Dollar (Abdul Hussein, 2020). It also results from the increase in the general level of prices is to make locally manufactured goods more expensive than imported goods that have become relatively cheaper, which causes an increase in imports and a reduction in exports (if any). These shifts in domestic and foreign demand find their impact on the decline in net exports, and through Using the Keynesian model and the (MF) (We can show the effect of the divergence of those two policies on the level of income and trade balance of the country, the part explains) A (From the figure) 23 (The trade balance curve, the decrease in net exports of) NX_1 to me (NX_2) (Leads to an increase in the dollar exchange rate from) E_1 to me (E_2) (These changes are reflected in the downward movement of the total spending function, as is evident in the section) B (Which leads to a decrease in the level of income from) Y_1 to me (Y_2), And the section explains (C) Goods and services market curve) IS (According to the assumptions of the model) MF (Which in turn shows that a decrease in the level of income leads to an increase in the exchange rate of (E_1) to me (E_2)). We conclude from the foregoing that the increase in oil revenues, along with the existing economic policies, constitutes a lever for increasing foreign production on the one hand, and domestic prices on the other hand (Mankiw, 2016).



2. the standard aspect of Iraqi -Iranian trade exchange

▪ First : Description of the study model variables

The description of the model is one of the most important and first steps that must be diagnosed in building a standard model, and in order to reach the desired goal of the description, it is necessary to first define the variables to be interpreted with the diagnosis of the independent variables and the dependent variable, and the table (1) Clarifies the dependent variables in the standard model.

Table (1) Description of the adopted economic variables in the standard model

T	Model variables	Model variables	Symbol variable	Variable type
1	Dollar / dinar exchange rate	Exchange Rate \$ / D	EX _D	Independent
2	Dollar / riyal exchange rate	Exchange Rate \$ / R	EX _R	Independent
3	Interest rate	Interest Rate	IN _S	Independent
4	Government spending	Government Spending	G _N	Independent
5	Customs tax	Tariff Tax	T _X	Independent
6	Iraqi imports from Iran	Imports (Iraq from Iran)	IM _(II)	Dependent

The table was prepared by the researcher

The second step is to determine the mathematical form of the economic variables, and then convert them to the non-statistical formula by inserting the random variable , and taking the variables in the table (1) The formula irrigation Luddite of t the J of : - $IM_{(t-1)} = F (EX_D, EX_R, G_N, T_X) \dots (1)$

For the purpose of showing the effect of monetary and financial variables on the dependent variable IM (II)It was diagnosed with the CAPS Standard Form: $-IM_{(t-1)} = \alpha + \alpha_1 EX_D + \alpha_2 EX_R + \alpha_3 G_N + \alpha_4 T_X + \mu \dots (2)$

▪ Second: The time-series static test

1- Stability of time series according to the (Augmented Dickey-Fuller)

It can be seen from the table (2) The variables of the estimated model of Iraqi imports from Iran (IM (II))(And the exchange rate of the dollar against the Iraqi dinar)EX_D(And the exchange rate of the dollar against the Iranian riyal)EX

R(And interest rate) I N s) And through the test (ADF(Not level static)Level(At a significant level)5, 1,10(%, Excluding government spending)G N(And customs taxes)T X(Which dwelt at significant levels)1, 10)% Respectively, this leads us to accept the null hypothesis , which states the existence of the root of the unit levels of time series, and when taking the first difference became all the variables static and it can QB and for the alternative hypothesis , which states that there is no unit root and be time - series static and An integrated form of the first degree (1) (Damodar, 2009).

Table (2) the estimated time-series sleep of the parameters according to the (ADF)

Variable s	the level			The first difference			Degree integration
	Fixed limit	Fixed boundary and general trend	No fixed boundary and general direction	Fixed limit	Fixed boundary and general trend	No fixed boundary and general direction	
IM (II)	-1.866643	-1.323694	0.735473	-3.031475	-	-	I (1)
EX D	-1.983119	-1.202022	-1.568288	-7.346422	-	-	I (1)
EX R	0.545411	-1.839934	1.993502	-5.349387	-	-	I (1)
G N	-5.737674	-6.722690	-3.145273	-15.36253	-	-	I (0)
T X	-2.704434	-3.28990	-0.693194	-2.856906	-	-	I (0)
IN S	-1.901061	-2.594013	-0.810706	6.545818-	-	-	I (1)
Level (1%)	-3.467205	-4.010440	-2.578018	-3.467205	-	-	
Level (5%)	-2.877636	-3.435269	-1.942624	-2.877636	-	-	
Level (10%)	-2.575430	-3.141649	-1.615515	-2.575430	-	-	

- The schedule was prepared based on the outputs of the program (Eviews-10).

2- Dormancy of time series according to (Phillips - Perron)

Through test (Phillips- Perron) it appears that government spending) G N(Was still at the level)Level(And at a significant level (1%) With a fixed limit while the variables were Iraqi imports from Iran IM (II) The exchange rate of the dollar against the Iraqi dinar Ex D. And the exchange rate of the dollar against the Iranian riyal (EX R(And customs taxes)T X(And interest rate (IN S) Not static at the level, either at a significant level) 5, 1,10 (% With a fixed limit or a fixed limit and a general trend or without a fixed limit and a general trend as shown in the table (3), These results suggest not to the possibility of rejection of the null hypothesis , for the presence of unit root levels time series shown, and when taking the first differences became all the variables static and accept the premise of alternative which provides for the absence of the root of the unit and be time - series static and the specimen integrated class I (0) Therefore, this test will be adopted to evaluate the model parameters.

Table (3) the estimated time-series sleep of the parameters according to the (Phillips- Perron)

Variable s	the level			The first difference			Degree integration
	Fixed limit	Fixed boundary and general trend	No fixed boundary and general direction	Fixed limit	Fixed boundary and general trend	No fixed boundary and general direction	
IM (II)	-2.243592	-0.485424	1.960389	-3.094661	-	-	I (1)

EX _D	-2.161772	-1.325938	-1.704338	10.29745-	-	-	I (I)
EX _R	-3.409703	2.768338	3.936535	21.47849	-	-	I (1)
G _N	-5.829207	-6.448978	-2.879751	-20.80540			I (0)
T _x	-1.873249	-1.892259	-0.113611	-3.061928	-	-	I (1)
INS	1.454853	-2.060240	-0.859830	-13.30072	-	-	I (1)
Level (1%)	-3.466994	-4.0101043	-2.577945	-3.469691	-	-	
Level (5%)	-2.877544	-3.435125	-1.942614	-2.878723	-	-	
Level (10%)	-2.57538 1	-3.141565	-1.615522	-2.575381	-	-	

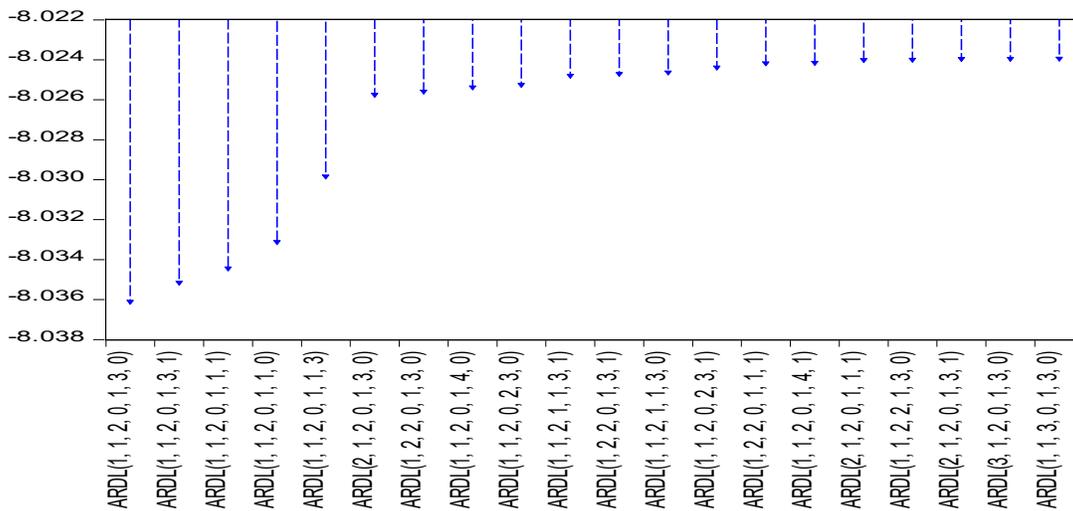
- The schedule was prepared based on the outputs of the program (Eviews-10).

▪ **Second: the estimation of the autoregressive model of the time-lagging gaps (ARDL)**

1- Determine the slowdown period for the estimated model

Notes from figure (2) the optimum slowdown period according to the test (AIC) (1, 1, 2, 0, 1, 3, 0)

Figure (2) Determine the slowdown period according to (AIC)
 Akaike Information Criteria (top 20 models)



- The figure was prepared based on the output of (Eviews-10)

B- The joint integration test for the estimated parameters according to (ARDL)

Notes from table (4) that value (F) Calculated amounted (6.96). It is greater than the upper bound values at any level of significance, that is, we reject the null hypothesis ($H_0: \beta = 0$) Which states that there is no long-term co-integration between the estimated parameters and we accept the alternative hypothesis ($H_1: \beta = 1$) Which states the existence of long-term joint integration and this is one of the indications of the quality of the estimated model.

Table (4) Boundary test (Bounds Test) for the estimated model

F-Bounds Test		
Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif. I (0) I (1)

F-statistic	6.965313	10%	1.99	2.94
K	6	5%	2.27	3.28
		2.5%	2.55	3.61
		1%	2.88	3.99

- The schedule was prepared based on the outputs of the program (Eviews - 10).

▪ **Estimating the model parameters in the short and long term according to the model (ARDL)**

For the purpose of estimating the short-term relationship between the estimated parameters according to a model (ARDL) The error correction methodology is used (ECM), Notes from the table (5(The value of the error correction parameter amounted to about (0.11) in which (11%) Is the corrective power in the shocks that occur in the previous period, which are corrected in the current period in order to restore the long-term equilibrium, in addition to gaining the negative and significant statistical signal (Prob. = 0.000)It is another indication of the validity of the estimated model, and indicates the significance of the parameters)EX D, Tx (The ability to have a short-term relationship between them and the dependent variable) IM (II)), While there was no relationship between the independent variables (EX R , IN S) And the dependent variable (IM (II)) In the short term , but after taking a period of time of one variable (EX R) , And two time delay periods for the independent variable (IN S) , And all the explained variables showed a long-term relationship between them and the dependent variable at a significant level (5, 10)% Excluding government spending(G N) If there was no relationship between it and the dependent variable)IM (II)) In the long term .

Table (5) Model estimation (ECM) in the short term

ECM Regression				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D (DEX _D)	0.000109	4.93E-05	2.207834	0.0288
D (DEX _R)	-2.85E-08	2.62E-07	-0.108787	0.9135
D (DEX _R (-1))	7.29E-07	2.76E-07	2.639586	0.0092
D (DT _X)	1.81E-07	3.91E-08	4.631307	0.0000
D (DIN _S)	- 0.000547	0.000463	-1.180084	0.2398
D (DIN _S (-1))	-0.000964	0.000595	-1.618650	0.1076
D (DIN _S (-2))	-0.001078	0.000487	-2.213653	0.0284
CointEq (-1) *	-0.117073	0.015328	-7.638085	0.0000
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEX _D	-0.001328	0.000489	-2.712069	0.0075
DEX _R	-9.06E-06	4.75E-06	-1.906835	0.0585
G _N	-1.01E-11	1.42E-10	-0.070928	0.9436
DT _X	3.87E-07	1.65E-07	2.346602	0.0203
DIN _S	0.016471	0.008687	1.896065	0.0599
U (-1)	-4.63E-05	1.07E-05	-4.330515	0.0000
C	0.010584	0.004989	2.121699	0.0355

- It has been prepared in the table based on the outputs of the program (Eviews-10).

W - Standard tests for the estimator model according to (ARDL)

1- **Self-correlation test between the rest of the model estimated (Autocorrelation)**

Notes from table (6) the significance level of the value - (F-Statistic) Reached towards (0.6718) it is greater than a significant level) 5%) And therefore reject the alternative hypothesis and accept the null hypothesis, which confirms the absence of the specimen of the form of self - link.

Table (6) Self-correlation test (Correlation Test)

Breusch -Godfrey Serial Correlation LM Test:			
F-statistic	0.398900	Prob. F (2,147)	0.6718
Obs * R-squared	0.885258	Prob. Chi-Square (2)	0.6423

The schedule was prepared based on the outputs of the program (Eviews-10) .

2- Stability test of uniformity of variance (Heteroskedasticity Test)

Notes from table (7) the significance level of the value)F-Stat(Reached)0.3935(It is greater than the level of significance)5%) , Which leads us to accept the premise of nothingness, which provides for the absence of the specimen is estimated of the form of the instability of the homogeneity of variance.

Table (7) Stability test of uniformity of variance (Heteroskedasticity Test)

Heteroskedasticity Test: Breusch -Pagan-Godfrey			
F-statistic	1.065419	Prob. F (14,149)	0.3935
Obs * R-squared	14.92352	Prob. Chi-Square (14)	0.3834
Scaled explained SS	109.2414	Prob. Chi-Square (14)	0.0000

- The schedule was prepared based on the outputs of the program (Eviews-10).

3- Test characterization error for the form of the estimated function (Reset test)

Notes from table (8) The statistical value (F) Calculated amounted (3.031) At a significant level (Prob.= 0.083) As long as it is greater than a moral level)5%), Then we accept the assumption that the form of the dependent half-logarithmic function is correct in the estimated model.

Table (8) Characterization error test (Reset test (For) Ramsey)

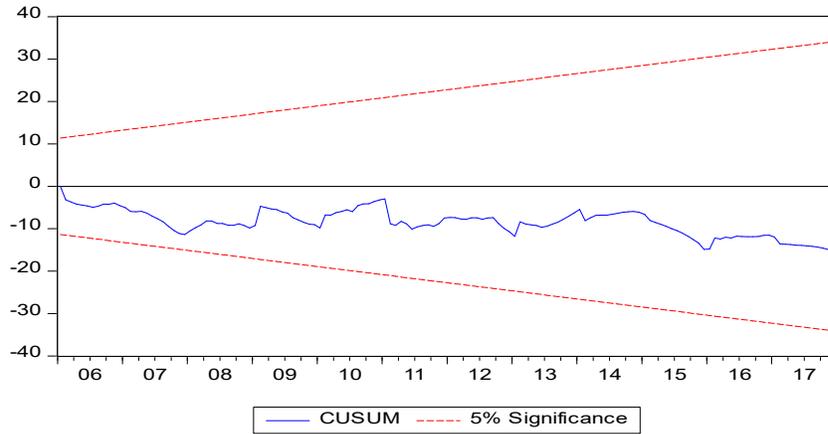
Ramsey RESET Test			
Specification: DLIM DLIM (-1) DEXD DEXD (-1) DEXT DEXT (-1) DEXT (-2) GN DTX DTX (-1) DINS DINS (-1) DINS (-2) DINS (-3 (U)) -1) C.			
Omitted Variables: Squares of fitted values			
	Value	Df	Probability
t-statistic	1.684021	148	0.0943
F-statistic	2.83592 6	(1,148)	0.0943

- It has been prepared in the table based on the outputs of the program (Eviews-10).

4- Structure stability test for the estimated model

Figure (3) Illustrates the estimated model is located at the boundaries of the critical region, which indicates the stability of the estimated model, that is, the estimated parameters are structurally stable during the study period, and this result was consistent with the error correction factor)ECM).

Figure (3) stabilization of estimated structural model

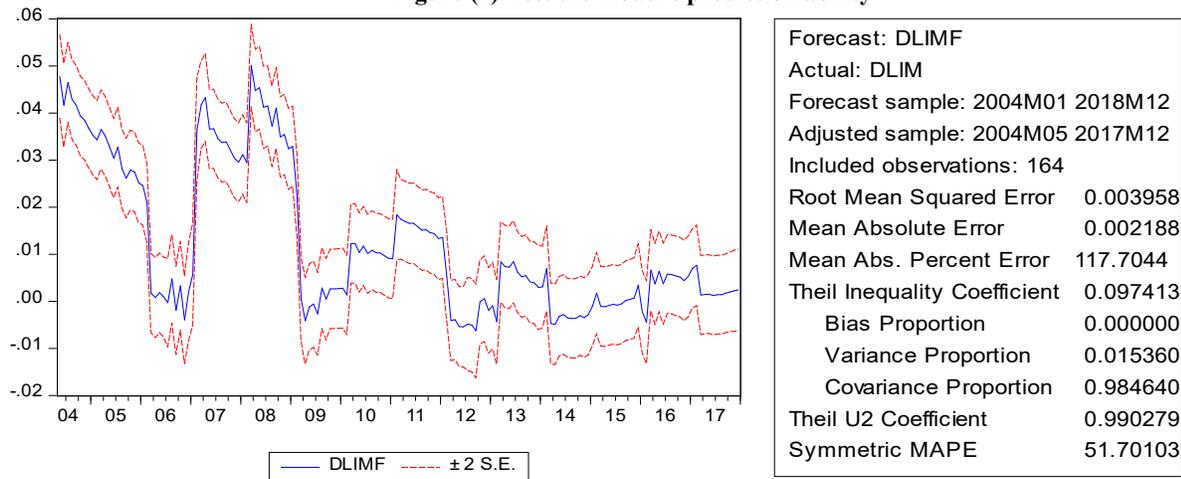


-The figure was prepared by using the program (Eviews-10)

5- The model's predictability test (Theil Inequality Coefficient)

It is noted from figure (4) the value of the coefficient of variance. Theil (Reached 0.09) It is less than one and thus is an indication of the ability of the specimen to predict during the duration of the study, and we can adopt the results of the assessment in the evaluation and analysis and draw a country's economic policies [Koutsoyiannis, 1977].

Figure (4) Test the model's prediction ability



- The figure was prepared by using. (Eviews-10)

Conclusions

- 1- The policy of the Bank of the Iraqi Central in reducing the dollar 's exchange rate tribes have the Iraqi dinar , the raising of the purchasing power of the local consumer and enhances the increase of imports as it runs counter to the measures to protect domestic products from competing foreign products.
- 2- Saw fiscal policy path a year later2003There are many defects, starting with the spending policy directed towards inflating operational expenditures at the expense of investment expenditures, passing through the deterioration of the customs authority’s performance in tightening its grip on border crossings and the collection of financial resources

that target the general budget on the one hand and the formation of a customs wall that works to protect the local product.

- 3- Fiscal policy is not trending after a year 2003M was based on a methodology for diversifying financial sources, but rather worked to strengthen the reinter policy of the economy, which made the general budget lose flexibility in the face of global crises.
- 4- And the existence of a short-term relationship between the variables that explain the exchange rate of the dollar against the dinar (EX D), Customs taxes (Tx) And the dependent variable between Iraqi imports from Iran. IM (IT), While the significance of the parameters did not appear (Dx L, IN S (The ability to have a short relationship between it and the dependent variable)IM (IT)) Until after taking the time slows for them .
- 5- All independent variables showed a long-term relationship between them and the dependent variable, with the exception of government spending. (G N.)

Recommendations

- 1- The necessity of gradual transition to a more flexible exchange system, such as the creeping drainage system, as this system has the ability to absorb external shocks as well as providing space for intervention by the monetary authorities in times of severe exchange rate fluctuations.
- 2- The necessity of reconsidering the general budget resources in general and customs taxes in particular, and working on the direction of the spending policy to ensure the achievement of efficiency in the distribution of financial resources.
- 3- Defining and coordinating the general framework in economic philosophy between the monetary and financial policies, in line with the reality of the changes and fluctuations that the country has witnessed, and to ensure the removal of ambiguity in the Iraqi economic methodology .

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