



Measuring and analyzing the impact of public revenues on the balance of payments in Iraq for the period (1990-2020) according to a methodology ARDL

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Abstract

Public revenues are one of the most important tools that have a clear impact on economic activity, as well as the balance of payments, which is no less important than public expenditures because it reflects the external activity of the national economy. Public expenditures are linked to a wide range of economic variables, including the balance of payments. The balance in the balance of payments if it suffers from an imbalance.

Introduction

The general revenue main engine Of Economic activity in Iraq, as well as a source of incometoA large number of people in the communityIn addition, it is one of the most important indicators of the extent of the authority's intervention in economic activity,The state relies on spending onA major resource isoil.

As for the balance of payments, it is another of the most important economic indicatorsIt is known that the continuation ofhis inabilitylead to deterioration of the reserveyThe country's international,and increase its obligations to the outside,Than force himto take actionexceptional to restrictimports,or perform some actions that dictated from outside,Andsothe casesurplus persistenceLeads toFreezing part of the national incomelooks likeidle assets,AndIn both cases, the imbalance leads toDifficulties and troubleson the economyNational, And thereforeAcquire external balanceIt is extremely important to maintain the economic stability of countries, so it mustto be takenSeriouslyduring Use of fiscal policy in line with the stability of the external situation.



Research importance

The research acquires its importance because of the importance and impact of public revenues on the economic reality in general and on the balance of payments in particular. Public expenditures are the backbone of life, without which all economic activities will be disrupted.

Research problem

The Iraqi economy suffers from several disturbances and imbalances at the internal and external levels during the study period from (1990 - 2020), which affected the structure of the Iraqi economy as a whole, and among those imbalances (imbalance of the balance of payments). Therefore, the research problem is represented by the following question:

- What is the impact of public revenues on the balance of payments in Iraq.

Search objective

The research aims to measure and analyze the impact of public revenues on the balance of payments in Iraq for the period from (1990-2020).

Research Hypothesis

The research stems from the hypothesis that there is a positive relationship between public revenues and the balance of payments.



The first topic

Theoretical frameworks for public revenue and balance of payments

First, the general revenue

crossgeneral revenueonThe sum of money that the state collects from its various sources⁽¹⁾,in order to cover its public expenditures, and for the purpose of achieving economic and social balance.”²⁾, There are several sources of public revenue that the state can obtain from its various sourcesThe most important of them:

1- Taxes:

Preparedamageright It is a manifestation of state sovereignty and one of its most important rights, so imposeHaforciblyAnd of her own will•serveher authorityCairoIn collecting, and in caseViolation of individuals by paying tax, the state resorts to its full authority to obtain it⁽³⁾.

2-Fees:

TCountFees are an important resourcefor revenueThe public that enters the state’s treasury, and is characterized as one of the financial resources that continuously enter the state’s public treasury, and the public authorities useher servantsin financing public expenditures;toAchieving public benefits, AndThe fees paid by individuals are for services obtained from public utilities.⁴⁾.

3-general loan:

Usually the state, institutions and public administrations request loans from members of society; To finance service and production projects, in return for bonds known to the administration or the people’s institution as indebted to the bond holder for the value of that bond, and it is responsible for paying this debt on maturity along with the interest.⁵⁾.

Second: the balance of payments

The balance of payments is defined asA statistical statement that systematically summarizes a country's economic transactions with the rest of the world for a specified period of timeusually benOne yearThey are mostly between residents and non-residents, and include movements of



goods and services, and involve financial claims and national liabilities to the outside world or vice versa."⁽⁶⁾The balance of payments consists of several accounts, namely:

1. Current account:

This account consists of three parts. The first includes the results of visible trade, which includes exports and imports of goods, and it is called (the trade balance). The second includes the results of invisible trade called (the balance of services), which includes the purchase and sale of services, such as banking and insurance services. As for the third account, it is the net transfers from one side⁽⁷⁾.

a. Trade Balance (Visible Trade):

This balance includes the movement of the exchange of goods that can be seen, or that it is looking through its passage through the customs borders of the country, entering and leaving it, for this reason (I call it visible trade).⁽⁸⁾

B. Services Balance (Invisible Trade):

Record in this aspect the proceeds from invisible trade that the state obtains from the other countries' use of their services, as use its companies in the transport of passengers and goods, or the use of insurance companies for foreign goods⁽⁹⁾.

c. One-sided account transfers:

This account includes the operations that take place between the state and countries abroad, but without compensation such as gifts and compensation, or Any other payments, for example, If a country issues a certain quantity of goods (Food or medication), or that the state pays compensation to another state, or that a person transfers a sum of money to a person residing in another state, as a form of assistance, and these cases are done without compensation, that is, they are from one side only⁽¹⁰⁾.

2. account Head money:

In this account, all capital flows entering and leaving the country are recorded, which are represented in shares, bonds, treasury bills, direct investments, or any other securities.⁽¹¹⁾This account includes:

a. short-term capital operations:



TCountof credit instruments payable on demand, with maturities of don't exceedgOne year, including term deposits, current deposits, commercial papers, treasury bills, and other other instruments, and that these instruments enjoy a large degree of liquidity.¹²⁾.

B. Long-term capital operations:

This account includes all variables that occur in the value of assets, owned by individuals residing abroad and at home, and whose term is more than one year, including portfolio investments, direct investments, and long-term loans)¹³⁾.

3. Net international reserves of monetary gold and liquid assets:

In this section, net changes in international liquid reserves are recordedH; For the purpose of making an account settlement (Net deficit or surplus in the balance of payments in economic terms)¹⁴⁾.

4. Error and omission account:

Sometimes the value of the total items of the creditor and debtor in the balance of payments is unequal, which is the result of error or omission, or an inevitability imposed by the national security necessities of the country, such as non-disclosure of some military purchases, and here the need for this type of account appears; This is for the purpose of equalizing both sides.

With regard to where this account appears, it is in the entry of the least value, whether this is on the credit side or the side and the debtor. This account is also called the adjustments account;Because heequivalent tosides of the balance of payments)^{15th)}

Third: The effect of public revenues on the balance of payments

1- The effect of the general tax on the balance of payments

Taxes are relatedclosely related to the balance of payments; and that is through the effectKQuantity taxExporting and importingWhich make up this balance, and what anThe balance of payments consists offourmain accounts which are(The current account, the capital account, and the monetary gold accounterror and omission)And that most of the imbalances appear in the current account, so the impact of these taxes appears directly on this account, and this effect is usually positive; Because imposing it leads to a reduction in the imports(With exports remaining unchanged, which improves the current account



situation)¹⁶⁾ This means that customs taxes affect the balance of payments, as an increase in these taxes leads to a decrease in the imports. Compared with export prices, which find tax exemptions, which leads to a decrease in the prices of locally produced goods, thus increasing consumer demand for them. So, a quantitative increase in the product locally, on the one hand, and the decrease in the consumed quantity of imported goods, on the other hand, this leads to a decrease in the volume of imports, and when you say the imports. With stable foreign exchange rates, Payments for imports are reduced and the deficit is reduced in the current account, thus improving the balance of payments position⁽¹⁷⁾.

2-Relationship of Public Loans to Balance of Payments:

Loans financed from abroad contribute to an increase in overall investment in the countries they enter, and consequently an increase in the growth rates of domestic product, which leads to an improvement in the balance of payments, provided that the volume of the flow of that financing is much greater than the volume of export of interests, installments and profits resulting on those loans.

Many countries suffer from continuous and structural deficits in their balance of payments, and after these debts have reached high and critical levels, the payments for these debt services have become one of the most important factors that cause the deficit in their current accounts (interest on those loans), and in the accounts of operations (installments), so the predicament faced by these countries has become, which is that after borrowing was counted as one of the temporary means to bridge the balance deficit, excessive loans have become one of the fundamental factors causing that deficit, which requires more borrowing, which leads to opening an explosive cycle of external debt to the economy.⁽¹⁸⁾.



The second topic

Results of estimating the impact of public revenues on the balance of payments in Iraq according to the (ARDL)

Or not: a test stability Variables The Stationary):

Before starting to test the autoregressive model of distributed lag (ARDL) we test for the stability of the time series with the unit root test, the extended Dickey-Fuller test. (Augmented Dickey-Fuller) After the test, the results came out as follows:

Table (1)

Variables	Appreciation		gradient shape	Difference level	morale level
	calculated t	Probabilities			
REVNU	-4.170241	0.0190	section	The first difference	1%
BOP	-3.320927	0.0228	section	the level	5%

The extended Dickey-Fuller test for the unit root

a source: from Preparation The researcher based on the results of the estimation using a program Views 12.

Through the data presented in the table (1), We find that the time series to trace Public Revenue on Balance Payments in Iraq and extending from the year (1990 - 2020), through Use of the Extended Dickey-Fuller test demonstrated stability. The independent and dependent variable (REVNU, BOP) At the first level and difference where it was (BOP) (At the level and with a fixed limit, but at a significant level) 0.05%, As for (REVNU) It settled at the first difference and at the level of significance (1%), meaning that all dependent and independent variables are free from the unit root and do not contain a false regression, which means rejecting the null hypothesis ($H_0: \lambda = 0$) which states that there is a



unit root problem, and the alternative hypothesis is accepted ($0 \neq \lambda$: H_1) which states that there is no unit root problem, i.e. static variables. Therefore, the variables will be integrated at the first level and difference.

Secondly: estimating model ARDL:

After testing the stability of economic variables, the model (ARDL) for the balance of payments indicator, as shown in Table (2), considering that (BO) dependent variable and (REVNU) (Independent variable, and the optimal slowdown periods are (4,2,3) building values) Akaike), which gives the lowest value for this criterion, which is determined automatically by the program, as well as the statistical tests of the model show the quality of the model through the value of the coefficient of determination ($0.962 = R^2$), as for the value of ((R^2 Adjusted R-squared) It reached (0.934677), meaning that the independent variables included in the model explain its value (93%) of the changes in the dependent variable and that the remaining value belongs to other variables not included in the model. F-statistic), which was significant at the level (1%), and thus the model is significant, i.e. we reject the null hypothesis ($H_0: B=0$) We accept the alternative hypothesis ($H_0: B \neq 0$), as shown in the following table:



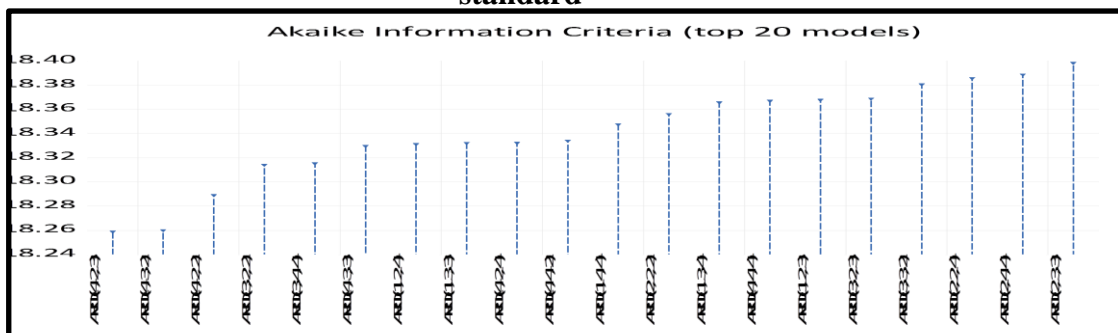
Table (2)
estimating model ARDL To measure the impact of public revenues on the

Dependent Variable: BOP Method: ARDL Date: 01/07/22 Time: 12:13 Sample (adjusted): 1994 2020 Included observations: 27 after adjustments Maximum dependent lags: 4 (Automatic selection) Model selection method: Akaike info criterion (AIC) Dynamic regressors (4 lags, automatic): REVNU Fixed regressors: C Number of models evaluated: 100 Selected Model: ARDL(4, 2, 3)				
Prob.*	t-Statistic	std. Error	Coefficient	Variable
0.0212	-2.572003	0.149351	-0.384130	BOP(-1)
0.7555	0.317101	0.151965	0.048188	BOP(-2)
0.5745	-0.573904	0.087686	-0.050323	BOP(-3)
0.1022	-1.740887	0.076966	-0.133989	BOP(-4)
0.0000	9.513982	0.054797	0.521338	REVNU
0.0159	2.717241	0.080791	0.219529	REVNU(-1)
0.0004	4.553149	0.099983	0.455239	REVNU(-2)
0.5585	-0.598427	582.0445	-348.3108	C
1517,322	Mean dependent var	0.962314	R-squared	
7510.964	SD dependent var	0.934677	Adjusted R-squared	
18.25880	Akaike info criterion	1919,677	SE of regression	
18.83473	Schwarz criterion	55277396	Sum squared resid	
18.4306	Hannan-Quinn criter.	-234.4939	Log likely	
2.397827	Durbin-Watson stat	34.82029	F-statistic	
		0.0000000	Prob(F-statistic)	

source: from Preparation The researcher based on the results of the
Note: p-values and any subsequent tests do not account for model selection.

shape (1)

The time lag determined by the model (ARDL) automatically using the ACAIK standard



source: from Preparation The researcher based on the results of the
Third: The boundary test for co-integration (The Bound Test Approach to Counteraction):

The co-integration test in an autoregressive model is called the distributed lag (ARDL(Bound Test)Bound Test), which measures the



extent to which there is a long-term equilibrium relationship between the independent variables (public revenues) and the dependent variable (balance of payments), and depends on the value of F, which are compared with the upper and lower limits, which are distributed within different moral levels, as shown in the following table:

Table (3)

Boundary test for cointegration according to methodology ARDL

Null Hypothesis: No levels relationship F-Bounds Test				
I(1)	I(0)	Signify.	Value	Test Statistic
Asymptotic: n=1000				
3.35	2.63	10%	15.74150	F-statistic
3.87	3.1	5%	2	k
4.38	3.55	2.5%		
5	4.13	1%		
Finite Sample: n=35				
			27	Actual Sample Size
3.623	2.845	10%		
4,335	3.478	5%		
6.028	4.948	1%		

asource: from Preparation The researcher based on the results of

illustrated by the table (3) There is a co-integration relationship between independent variable (public revenue) and the dependent variable (balance of payments), This confirms the value F-statistic which is (15.74150) (It is greater than the tabular value at all levels, the highest and the lowest, and at a significant level (1%), and thus we reject the null hypothesis, which indicates the absence of joint integration, and accept the alternative hypothesis, which states that there is joint integration between the studied variables.

Fourth: Test for stability of homogeneity of variance (Heteroscedasticity Test):

This model is used for the purpose of detecting the stability of homogeneity of variance by testing the two values F and Prop -Square, where test results indicate in the table (4) The absence of the problem of inconsistency of homogeneity of variance, because the values of F and Prop-Chi-Square Not significant at the level of significance (0.05%), thus we accept the null hypothesis that claims stability Contrast smoothing, as in the following table:



Table (4)

Test the stability of homogeneity of variance according to the

Heteroskedasticity Test: Breusch-Pagan-Godfrey		
Null hypothesis: Homoskedasticity		
0.6568	Prob. F(11,15)0.779052	F-statistic
0.5469	Prob. Chi-Square(11)9.816830	Obs*R-squared
0.7310	Prob. Chi-Square(11)7.801394	Scaled explained SS

source: from PreparationThe researcher based on the results of the

Fifth: Estimating the short-term relationship and the error correction model (ECM):

After making sure stabilityThe studied variables should obtain short-term estimators and error-correction parameter according to the (ARDL), according to the data in the table (5) which shows the parameters of the explanatory variables included in the model in the short term and their significance, it is clear that the relationship between public revenues and the balance of payments is a direct relationship, This is consistent with the economic reality, where it is known that an increase in public revenues has a positive effect on the balance of payments because its increase will lead to an increase in the surplus in the balance of payments, and this means that an increase in (REVNU) by one unit will increase (BOP) by (0.52), And the effect was moral and at morale level (1%) where the probability value is (0.0000), and the error correction parameter is .CointEq (-1) had a negative result as it reached (-1.520254), which is significant at the level (1%), and this indicates the existence of a relationship balance it Among the variables studied in the short term, as the error correction parameter shows that about (152%) of the short-term imbalance in the balance of payments in the previous period (t-1) can correct it In the current period (t) towards the relationship equilibrium Long-term when there is any change or shock in the explanatory variables, This shows that the speed of adaptation in the model is very large, Accordingly, it will be Acceptance of the alternative hypothesis that states that there is a relationship balance it short term and reject the null hypothesis that there is no relationship balance it short The term between the studied variables, as shown in the table following:



Table (6)

Estimating the short-run relationship and error correction model. ECM)

ARDL Error Correction Regression				
Dependent Variable: D(BOP)				
Selected Model: ARDL(4, 2, 3)				
Case 2: Restricted Constant and No Trend				
Date: 01/07/22 Time: 12:33				
Sample: 1990 2020				
Included observations: 27				
ECM Regression				
Case 2: Restricted Constant and No Trend				
Prob.	t-Statistic	std. Error	Coefficient	Variable
0.2852	1.108187	0.122835	0.136124	D(BOP(-1))
0.0240	2.510196	0.073425	0.184312	D(BOP(-2))
0.0571	2.060743	0.065020	0.133989	D(BOP(-3))
0.0000	11.77594	0.044271	0.521338	D(REVNU)
0.0001	-5.207395	0.087422	-0.455239	D(REVNU(-1))
0.0000	-8.692478	0.174893	-1.520254	CointEq(-1)*
-279.7259	Mean dependent var	0.968382		R-squared
8200.126	SD dependent var	0.954330		Adjusted R-squared
18.03658	Akaike info criterion	1752.417		SE of regression
18.46853	Schwarz criterion	55277396		Sum squared resid
18.16502	Hannan-Quinn criter.	-234.4939		Log likely
		2.397827		Durbin-Watson stat

source: from Preparation The researcher based on the results of the p-value incompatible with F-Bounds distribution.

Seventh: Estimating the long-term relationship according to a modelARDL:

After making sure that there is a co-integration between the studied variables, the long-term relationship is now measured according to a modelARDL. Through the data of Table (7), we note the impact of public revenues on the balance of payments, positive and moral from a statistical point of view, if it reached PropIts amount is (0.000000), which is very high and at a significant level of (1%), meaning that an increase of (REVNU) by one unit will lead to an increase in the surplus in (BO) by (0.78%) in the long term, and through the above, the null hypothesis that claims the existence of a long-term equilibrium relationship is rejected, and the alternative hypothesis is accepted. The short term and the long term, which reflects the realism of the estimate and its agreement with the economic logic, as shown in the following table:



Table (7)
Estimating the long-term relationship according to the modelARDL

Levels Equation				
Case 2: Restricted Constant and No Trend				
Prob.	t-Statistic	std. Error	Coefficient	Variable
0.0000	9.225369	0.085284	0.786780	REVNU
0.5529	-0.606975	377.4680	-229.1135	C

EC = BOP - (0.7868*REVNU - 0.8030*EXPEND - 229.1135)

asource: fromPreparationThe researcher based on the results of

CONCLUSIONS

- 1- slowing down growth Revenues the public and not keep up for tunnels general, calendar Accreditation Great on Revenues oil It is known It form More from98%from Total Revenues the public, And because of fluctuation their prices at markets Globalism broke out wiggle Big at size Revenues the public, The accreditation in the form of permanent on This the supplier make Country susceptible to lack supplies finance, Than stir Anxiety growing about prevent and future Economy Iraqi.
- 2- drop Rate Input Revenues tax to me Total Revenues the public at Iraq calendar plenty exemptions tax, and permissions And for reasons many(Policy or economic or social), In addition to me weakness the device tax, and lower Efficiency artistic for the staff tax, and not interest Country by this the system and prepare Revenues derived Of which source secondary and not Basic to pose so Rate Slim Especially for the duration(2003 - 2020).
- 3- suffer Balance Payments Iraqi for the period (1990-2020) from inability big; to drop general revenue and imbalance the structure Productive due to circumstances Which bitter with Country puppy war Gulf the second, and impose Penalties economic, either Duration(2003-2020)Achieve Balance Payments surplus And for a lot of time came This surplus result Accreditation on exports oil raw , Which surplus at trade balance Against a deficit in most of the balance of payments accounts.



- 4- The theoretical and normative analysis proved that there is an impact of public revenues on the balance of payments, and the effect is represented by customs taxes, and because of the decrease in their imposed amounts and as a result of the large number of exemptions, and the inefficiency of the technical staff based on their collection, made their impact weak on the balance of payments, while oil revenues, which constitute more than 98% of total revenues Public revenues, especially after 2003, had a positive impact on increasing the surplus in the balance of payments, and this is consistent with the second hypothesis, which states that there is a positive relationship between public revenues and the balance of payments.

Recommendations

- 1- the work on diversification sources Revenues the public and not the focus on source One for revenue and he(section oil), Which from like it that Makes Economy Iraqi susceptible for fluctuations prices This the supplier, And from here necessity the work from before those in charge on Implementation of Politics Finance at Iraq by finding sources alternative as motivation investment the foreigner and local, building Base investment sober support sectors Producer.
- 2- Return look at the system tax at Iraq on road Legislation legal and more interest and inclusivity, and raise outcome tax, on road Issuance legislation legal expansion Domain Tax and her bowl and taxpayers with and working on limit from evasion and exemption tax for categories certain Without other.
- 3- necessityfollowing Policy protection on Products patriotism, and prevent Entry the goods Which to her alternative at market local, And the imposition of customs taxes high on goods perfectionism and goods consumerism other to encourage production the National, and present the support price For some goods for a purpose exported in order to be her ability on The competition at markets Globalism, For the purpose of supporting the balance commercial(Which depend on exports oil), thus improving the balance of payments position.



- 4- Investing public revenues in the best way in order to build a solid production base, increase local production and reduce dependence on imports for the purpose of improving the balance of payments situation.

Sources

1. PC Jain, The Economics of Public Finance, Second Edition, Atlantic Publishers & Distri, New Delhi, 1989, p1.
2. Suzy Adly Nashed, Fundamentals of Public Finance, Halabi Human Rights Publications, Beirut, Lebanon, 2008, p. 91.
3. Adham Mahdi Amer, Finance the public, company Globalism for printing and publishing, Cairo, Egypt,2001, s24..
4. Hopes Chotri, and thursday my leader, Lectures at Scale Finance the public, College the sciences Economic and commercial and science management, University Mohammed Bashir Ibrahim, Series lectures and lessons undergraduate, s4.
5. Maytham Sahib Ajam, Public Finance, An Applied Study on the Libyan Economy, Arab Development Institute for Scientific Research,Beirut, Lebanon, 1992.p. 36
6. International Monetary Fund, Balance Of Payments Text Book, 1996 ,p1.
7. scorpion congrats, for my chassis Maryam, approaches revision imbalance at Balance Payments-condition Algeria-, magazine diligence for studies legal and economic, folder(10), the number(2),2021, s541.
8. dear slave Hamid Alborai, principles relations Economic International(an introduction at Economy international), College Rights, University Menoufia,2013, s254.
9. Ahmed Jaber Badran, Economy international merger Economic contemporary, center Studies jurisprudence and economic, Cairo, Egypt,2014, s106.
10. Ezzat Abdel Hamid Al Borai, source Already mentioned, p. 259.
11. Hajji sublime, and key Valid, Politics cash and processing flaw Balance Payments The Algerian1990-2014, magazine Studies Economic financial, University the valley, folder(1), the number(9),s65.
12. dear Farida, Curriculum used to correct imbalance at Balance payments, University Saad dolphin(Blida), s204.



13. (1)Dominick Salvatore, Traduction François Contensou (1982),
Economie Internationale, McGraw, Paris, P 102
14. May youth Al-Shammari, and good generous Hamza, Finance
international establish theory and methods analytical, edition first, Dar:
house light for printing and publishing, Najaf the most honorable,
Iraq,2015, s146.
15. ZainabHussein Awadallah,International Economics, New University
House, Alexandria, Egypt, 2004,p.68.
16. Maytham Laibi, Public Finance, Efficiency and Justice Swaps, Dar Al-
Yazuri for Publishing and Distribution,Ammaan Jordan,2016, p. 16.
17. atta slave God Customer, Trading external, Dar: house yazuri for printing
and publishing, Ammaan Jordan,2019, s34-35.
18. dear Farida, Effect indebtedness External on Balance Payments The
Algerian study standard economic(1970-2006), magazine Research
Economic for university Saad dolphin blida, the number(6),2010, s50-51.