The Impact of Public Spending on Imports in Algeria: Econometric Study between the Period 1990 – 2012

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Abstract: *Public expenditure is considered in Algeria as a very important tool for financial policy which essentially involved in the importation. Several studies have been conducted to study the relationship between public spending and imports. In our study we used the co-integration test, Augmented Dickey -Fuller and Johansen and Juselius test, and the error correction model on the annual reports during 1990-2012.*

Key words : Public expenditure , Import, variable stabilization Teste, Co- integration , Error Correction model .

Classification JEL: *C22, F14, H53.*

1. Introduction

Governments are responsible for the economic situation, however, employment, the elimination of unemployment, price stability, wage levels and changes in national economic growth, are now the main objectives of governments.

Governments rely on the outlook on planning as a way to achieve the desired objectives .The Government of tools used to achieve these goals are the different types of taxes , government spending , and subsidies ie , productive or economic subsidies.

The discussions on economic policies, including tax policy, are the subject of various political debates, and their primary role in the economy of the country, why this was treated.

2. Problem of the study

Financial thinking that has been the result of ideas « *John Maynard Keynes* », (*John Maynard KEYNES,1936, P.24*), focused on public spending and regarded it as the most important tools of fiscal policy, and has their effectiveness in achieving economic growth, and under the principle *"CREATES DEMAND OFFER"*. Public expenditure represents the government's request, is a very important incentive for aggregate demand, which generates a response to the supply of much higher so that the gross national product.

Algeria has adopted in this framework since 2001, public expansion policy represented in the three major programs in the heart of the period from 2001 to 2014, the additional program supports the growth from 2005 to 2009, and the program to create the 2009-2014 economic growth, the main objective of this policy is to reactivate the national economy, and expanded economic growth to improve the financial situation due to the rise of the Algerian oil prices continuously recorded during the beginning of the third millennium.

Algeria has followed the economic policies through which tried to achieve stability and promote economic growth.

Among the adopted economic policies, in our study we try to focus on public spending, and the change that can be produced on imports and emphasize its role in the fight against imbalances and achieving economic equilibrium.

Based on the above, we ask the following question:

What is the effect of the change in public spending on imports in Algeria? And what is the degree of correlation between public spending and imports in Algeria during the period *1990-2012*?

3. Effects of public spending on economic

Public spending as an important tool in the political policy has witnessed many phases, theorical and practical answers. In the classical period, governments restrained public spending to a low level and restricted the role of government in spending. According to them, this latter is a waste and unproductive, however within the economic development changes permit to reinforced public spending since it's an important element in the social and economic balance. This is due to the world economic crisis witnessed in 2008 which increased the spending in general, (*WASMONE Bernier,1989, P.33*).

The use of public spending in particular as a tool for financial policy, and as one of the tools of the general economy, Algeria travel the economy has gone through periods of development of the functions of the state. These are the theoretical and practical developments that give importance to this tool. The principle of state policeman was in force during the period of classical point of view, so it was calls to reduce overhead expenses to a minimum, so as to reduce the role of the state and reduced activity Economic and let other forces operating in the economy, which should lead to the balance. The classic set limits on public spending, because they are useless and unproductive and the more passive role in the crowding of people to transfer their savings in unnecessary areas.

Algeria is starting with economic development from the principle of fiscal neutrality, which became responsible for the economic and social balance, this also comes with economic and social crisis in the global economy, especially the Great Depression, which required the intervention of the state and therefore increase the general expenses (*WASMONE Bernier,1989, P.33*).

This development, which ended the classical ideas was given by Professor Lerner (*A.P.Lerner*) having functional financial idea (*Functional Finance*), which eliminated a fundamental principle of classical principle is the neutrality oftool of fiscal policy, such as the neutrality of spending and taxation, and stressed the need for the use of public debt as a tool among the tools of fiscal policy (*ABEDDA Ahmed mahmoud, 1971, P.102*).

When going to the modern financial thinking, when we noticed that (*Myrdal and Lindale*) (*Two Swedish known economists*) found that public spending is a tool to consolidate growth as necessary, though they stressed the need to avoid budgetary measures that precipitated the frequency of depression problems, which was applied during the thirty years of progressive taxation.

The use of any economic policy that is due to know the effects of the economy. Therefore, we believe that fiscal policy begins its work by public spending to control the structure and volume of the economy? The policy of public expenditure in times of crisis and unemployment has created a surplus in the overall effective demand through increased public spending rate directly through the quantitative increase in public spending or indirectly by reducing taxes on consumer spending and tax cuts on profits and encourages investment, while inflation requires fiscal policy to reduce spending, or indirectly to increase tax rates on consumption and try to reduce profits tax rate to reduce expenses of the investment. From this, public spending:

· All the money spent by people in general to meet their needs, (*Al-housin khalef, 2008, P.99*).

· The amount of money out of the treasury of a corporation in order to meet its needs.

Note that from the above definitions, all economists are agreements on the following concept: public spending is primarily the amount of money, and secondly, they are issued by an authority ora public body, and thirdly, they are directed to meet the public's needs.

4. The orientation of imports in Algeria

The Algerian economy is based generally on the import of raw material manufacturers and semi-manufacturers, where there is a direct relationship between public spending and imports, which appear significantly during our analysis of the economic cycle the market, these expenses are mostly based on the collection of oil, which represents the main resource of a higher percentage *90%* of Algerian public budget revenues.

The external trade in Algeria is characterized as other Arab countries and those in developing their relationship with the developed industrial country markets, especially the markets of European countries, is it by imports or exports.

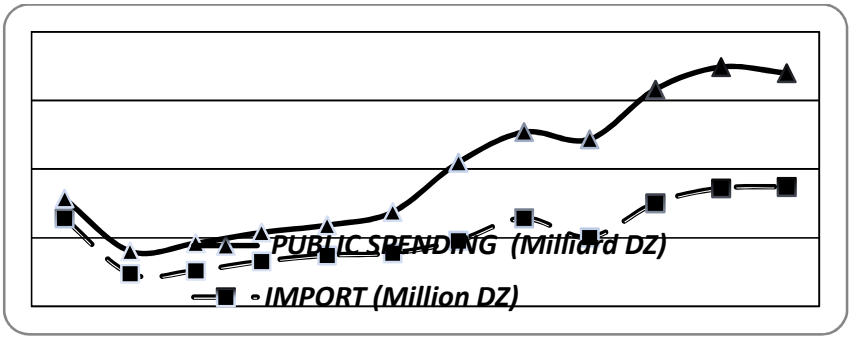
The countries of the European Union are a major supplier and a customer to Algeria, where the average imports of Algeria countries of the European union (*EU*), in the heart of the period *2001-2012* is estimated *54%*, while exports during the same period is about *61.36%*, which indicates the importance occupied European countries in external trade of Algeria.

The situation of Algerian imports did not differ from those of exports, where the European market is also one of the leading suppliers of Algeria. Industrial equipment products are also produced the most important consideration.

3. Causal relationship between the public spending and import in Algeria

Algeria has adopted the Keynesian approach to economic growth, which indicates a weak local or foreign private investment. Algeria needs to prepare a national economy to free a new phase by adopting a strategy to strengthen the infrastructure and training of human capital that is supposed to know each stage, in addition to look so General to improve public services, from the large public expenditures that have contributed to the growth of overall demand. The problem still remains in Algeria is the transformation of this demand abroad, that is to say, the increase in imports, particularly semi-products maker manufacturers and this is due to industry weakness productive (*Boudakhdakh karim and selamna mohammed,2011, P.83*), as shown in the following figure:

Figure *01*. Evolution of public spending and importation in Algeria (*2001 - 2012)*



Source: customs general direction. National institute of computer science and statistics *C.N.I.S*

- ONS: Algeria in some numbers, *2001 / 2011…..*

- ONS: Evolution of the commercial balance of Algeria, period *2001 – 2012*.

Under the above conditions, namely, the existence of massive government spending and the lack of an industrial base capable of accommodating these expenses, and fails the multiplier mechanism, much spending has turned into demand for consumables that can be satisfied by foreign supply and that this reflects the increase in imports of manufacturers which is a stimulation revitalize the economies of other countries.

5. Determination of the model used in the study

Applied Economic literature includes several studies on the link between public spending (*DEP*) and imports (*IMP*) and notes that these studies reach different results inconsistent.

We will apply a ***Co-integration analysis*** and ***model error correction*** vectors on annual data for the *1990-2012* period in order to study the relationship between public spending and imports in Algeria.

But before testing the existence of a long-term equilibrium relationship between imports and public spending and the analysis of the behavior of short-term relationship, it is necessary to analyze the time series for stability over time and determine its degree of integration.

In this study, we will construct a standard model in order to know the importance of public expenditure on imports during the period *1990- 2012* using the model of new-classical growth, which consists of ***5*** variables and particular (*IMP*) as a coordinate variable represents imports, assuming the function of gross domestic product (*GDP*), inflation (*INF*), the price of a barrel of oil (*PBRL*) and public spending (*DEP*), which are assumed variable x-axis.

The model takes the following general mathematical formula:

$$IMP = f(PIB, INF, TR, DEP) \quad (1)$$

IMP: The real inside result

PIB : Real Gross Domestic Product (*real GDP*),((*Including the prices of 1990 and 2012*),Prices into *US* dollars.

INF : Inflation Value Rate, taken as a percentage.

IMP: The value of total imports (*taking the prices of 1990 and 2001*), as measured in *USD* prices and which represents foreign trade.

PBRL: The value of a unit price of a crude oil barrel,measured into *US* dollars

DEP: The public spending in American dollar.

We could have the statistics of the different variables which constitute the international from a basis of information about the indicators of the international sector of statistics and the ministry of finance.

Table *01*. Sample of the development of variability's.

Unit: *million American dollars*

YEARS	PIB (M$)	IMP(M$)	INF%	DEP (M$)	PBRL/$
1990	61900	9684	16,7	10100	24,34
1991	61100	7681	25,9	11000	21,04
1992	62200	8406	31,7	12000	20,03
1993	60900	8788	20,5	12000	17,8
1994	60400	9365	29	12500	16,3
1995	62700	10761	29,8	13000	17,6
1996	65300	9098	18,7	13500	21,7
1997	66000	8687	5,7	13800	19,49
1998	69300	9403	5	14200	12,94
1999	71600	9164	2,6	14500	17,91
2000	73100	9173	0,34	14800	28,5
2001	75100	9940	4,2	15400	24,85
2002	78600	12009	1,42	16200	25,24
2003	84000	13534	2,58	16900	28,96
2004	88000	18199	3,56	17600	38,66
2005	92900	20357	1,64	18000	54,64
2006	94500	21456	2,53	18700	65,85
2007	97000	27631	3,25	19800	74,9
2008	100280	39479	4,4	21600	99,9
2009	10006,7	39297	5,7	22800	62,3
2010	12034,5	40212	3,9	24900	80,2
2011	14480,7	47300	4,5	26800	112,9
2012	20795,5	23031	8,9	28400	113,4

Source: Performed by the author by using following data:

- The national statistics Office: **www. ONS.dz**
- The central bank of Algeria: www.**BCA.org.dz**
- Ministry of finance - Algeria: **www. MF.dz**
- The international bank B.Mondial,
- The general direction of customs.

The model becomes the following mathematical mode.

$$IMP_t = f\left(PIB_t, INF_t, PBRL_t, DEP_t\right) =$$
$$\beta_0 + \beta_1.PIB_t + \beta_2.INF_t + \beta_3.PBRL_t + \beta_4.DEP_t + \varepsilon_t$$

ε: represents the spontaneous mistake limit of the equation (*error term*) and which supposes that its values are distributed in a natural way and with an average equal to zero and a stable differentiation.

These hypotheses are necessary for obtaining impartial potentials characterized by competence to each of the teachers of the modal $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ according to the

economical theory predictions which shows that the effect of the public spending and the effect of the internal strut should be positive:

$$\frac{\partial IMP}{\partial DEP} \rangle 0 \qquad \& \qquad \frac{\partial IMP}{\partial PIB} \rangle 0$$

The standard approach used in the study was based on analysis of the relationship given by the time series (*1990-2012*) including *22* time observations for each variable in the model, this method of analysis is important in the effect of the nature of the relationship between public spending and imports in Algeria.

With this method, we will study the estimate the following model:

$$LnIMP_t = \alpha + \beta_1 LnPIB_t + \beta_2 .LnINF_t + \beta_3 .LnPBRL_t + \beta_4 .LnDEP_t + \varepsilon_t$$

A variants logarithm was used in the modal become a doubled logarithm (*Double-log regression modal*), so that we avoid probable metric problems.

Moreover, the double logarithm modal potentials express flexibility of all variants in regard to the economic growth, the variants flexibility in regard with the economic growth becomes $\beta_1, \beta_2, \beta_3, \beta_4$ successively.

To prove that, admitting that the equation relation in the modal be:

$$IMP = \beta_0 PIB^{\beta_1} INF^{\beta_2} PBRL^{\beta_3} DEP^{\beta_4} e^{\varepsilon t}$$

As DEP flexibility in regard to the importing activities be:

$$E_{DEP} = \frac{\partial IMP}{\partial DEP} \times \frac{DEP}{IMP}$$

When comparing the importing activities *IMP* in regard to the public spending *DEP*, we obtain:

$$\frac{\partial IMP}{\partial DEP} = \beta_4 \left(\beta_0 PIB^{\beta_1} INF^{\beta_2} PBRL^{\beta_3} DEP^{\beta_4 - 1} e^{\varepsilon t}\right)$$

$$= \beta_4 \left(\beta_0 PIB^{\beta_1} INF^{\beta_2} PBRL^{\beta_3} DEP^{\beta_4} e^{\varepsilon t}\right) DEP^{-1}$$

After setting, it becomes:

$$\frac{\partial IMP}{\partial DEP} = \beta_4 \times \frac{\left(\beta_0 PIB^{\beta_1} INF^{\beta_2} PBRL^{\beta_3} DEP^{\beta_4} e^{\varepsilon t}\right)}{DEP}$$

With a simple replacement from the equation relation in the modal, we obtain:

$$\frac{\partial IMP}{\partial DEP} = \beta_4 \times \frac{IMP}{DEP}$$

With replacement of the value of $\frac{\partial IMP}{\partial DEP}$ in the flexible mode above, it becomes:

$$E_{DEP} = \beta_4 \times \frac{IMP}{DEP} \times \frac{DEP}{IMP}$$

After simplification, we get:

$$E_{DEP} = \beta_4$$

So, as for the flexibility of the rest of variants (*PIB، INF، PBRL*)in regard to the economic growth .

6. Results of the study of the impact of public spending on imports in Algeria

Annual data (*1990 – 2012*) of the study variants were represented with (*IMP ،PIB ،INF ،PBRL ،DEP*), have been used to explain the effect of the public spending on the import activity in Algeria, throughout evaluating the modal of the study:

$$LnIMP_t = \alpha + \beta_1 LnPIB_t + \beta_2 .LnINF_t + \beta_3 .LnPBRL_t + \beta_4 .LnDEP_t + \varepsilon_t$$
$$t = 1,2,....., 22$$

This study doesn't accurate results in regard to the time chains, we are going to use the URT (*the Unit root test*) which brings out more accurate results.

We've used in this study ADF (*Augmented Dickey-Fuller*) test.

5.1. Testing the stability of the variants: (*The Unit Root Test*)

The test (*ADF*) is one of quantitative tests in this study so as to detect the variations stability and static or the chronological series whereas the test (*DF*) which is a simple test has been avoided because it doesn't correspond to (*arriver*) or ignores the auto-correlation in the uncertain error thus the sizes (*greatnesses*) of least squares don't satisfy the decline equation of the efficientestimates.

5.1.1. ADF (*Augmented Dickey-Fuller*) test:

The ADF test is given by the following equation as fellow:

$$\Delta Y_t = A_1 + A_2 T + \lambda Y_{t-1} + \sum_{i=1}^{m} \lambda_i Y_{t-m} + U_t$$

By presenting the datum (*pieces of data*) of the test of the root unity (*test ADF*) which are given is table *n° 2*, it clearly appears that all the variations used in this estimate contain (*insert*) the root unity, however we have to accept that the hypothesis of the unity root is useless for all the variations at the abstract level ***5 %*** . That is to say that they are not stable in the general level in the case where it is categorical and without general direction (*Intercept*) and also is the case of its presence category (*Trend and Intercept*) or the in existence and the general chronological direction

Table *02*. Results of the *Dickey-FullerAugmented*

-Dickey-FullerTest Augmented			abstract level and test	caractéristiques	
None	Trend & Intercept	Intercept			
-2.674290 *-1.957204* *-1.608175*	*-4.440739* *-3.632896* *-3.254671*	*-3.769597* *-3.004861* *-2.642242*	**%1** **%5** **%10**	**Critical Values** / **variabls**	
-0.90 *0.3143* *22.64*	*-1.52* *0.7890* *22.69*	*-1.38* *0.5710* *22.67*	**t** **Prob*** **AIC****	**Level**	**Logarithm real GDP (Ln PIB)**
-4.65 *0.0001* *22.73*	*-4.67* *0.0065* *22.85*	*-4.58* *0.0018* *22.81*	**t** **Prob** **AIC**	**1st difference**	
-0.35 *0.5424* *20.05*	*-5.007* *0.0040* *19.68*	*-5.61* *0.0002* *19.61*	**t** **Prob** **AIC**	**Level**	**Logarithm of importation (Ln IMP)**
-2.48 *0.0163* *19.95*	*-1.71* *0.7034* *20.09*	*-2.06* *0.2606* *20.05*	**t** **Prob** **AIC**	**1st difference**	
0.81 *0.8802*	*-2.99* *0.1562*	*-2.36* *0.1632*	**t** **Prob**	**Level**	**Logarithm of inflation**

-9.60	***-9.77***	***-9.70***	**AIC**		**(Ln INF)**
-5.08 ***0.0000*** ***-9.66***	***-5.21*** ***0.0024*** ***-9.59***	***-5.15*** ***0.0006*** ***-9.61***	**t** **Prob** **AIC**	**1st difference**	
2.38 ***0.9937*** ***14.80***	***2.44*** ***1.0000*** ***14.82***	***5.33*** ***1.0000*** ***14.78***	**t** **Prob** **AIC**	**Level**	**Logarithm of public spending (Ln DEP)**
-0.49 ***0.4897*** ***14.97***	***-3.01*** ***0.1505*** ***14.72***	***-1.43*** ***0.5455*** ***14.96***	**t** **Prob** **AIC**	**1st difference**	
1.28 ***0.9447*** ***8.09***	***-1.93*** ***0.6035*** ***7.97***	***0.25*** ***0.9702*** ***8.16***	**t** **Prob** **AIC**	**Level**	**Logarithm of price of a crude oil barrel (Ln PBRL)**
-4.81 ***0.0000*** ***8.21***	***-5.49*** ***0014*** ***7.98***	***-5.26*** ***0.0004*** ***8.18***	***t*** ***Prob*** ***AIC***	***1st difference***	

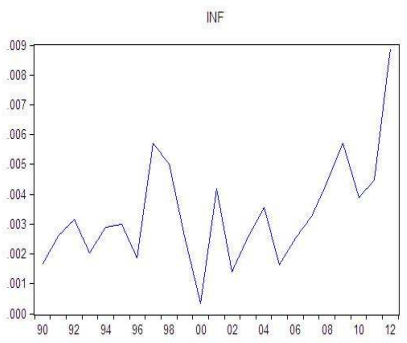
*-Mackinnon ***(1996)*** one-sided P-values.

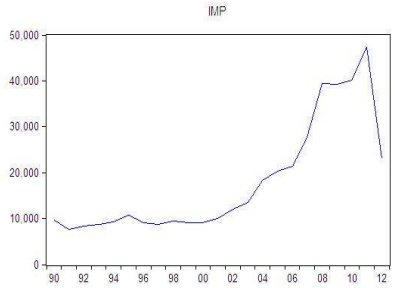
** - (*P = 1*).

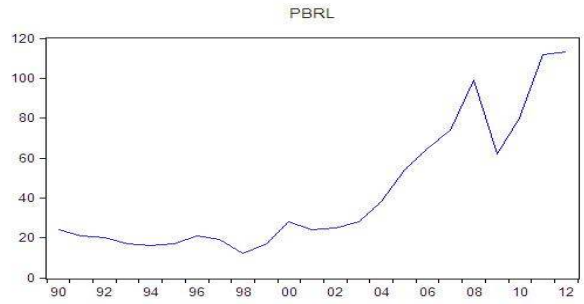
The results given in the table above indicate that the values of (*t*) calculated (in absolute values) are internal to the critical values at *5%*, and taking first differences (*1st difference*) of the variables used in the estimate, is it becoming stable, that is to say, it does not contain a root of unity which meant the rejection of the null hypothesis of unit root, where the values of (*t*) calculated (*absolute value*) higher than the critical values at ***5%*** abstract (*Ln PBRL, Ln GDP*) or *1%* (*Ln INF, Ln DEP*) or *10%* (*Ln IMP*), and thereby, the variables are integrated first order and are stable, why, we proceed to the *Co-integration of the error correction model* .

The curves illustrated in Figure (*02*) shows the time series path of the general level and that to the trajectory of the same series after taking the first differences

Figure 02: Temporal chains in levels and first differences according to ADF test







The graphic of the test

(Eviews.8) have been calculated in function of the realizations by (Eviews 8), used in this study, these values vary according to the number of the greatnesses of the test sample.

5.2. The co-Integration Test according to Johansen and Juselius method .

Regarding that the temporal chains of the model variables are integral from the first class, it was quite important to test the presence of a long-term balance between them, despite of the existence of a disruption in the short-term. According to the testing of the common integration between the variables used in the method (*Johansen, 1988*) and (*Johansen and Juselius, 1990*), which consists of two and more variable and considered as the best one in case of two variable because it allows the mutual effect or the feedback effect among variables being studied and not existing in the method (***Engle-Granger***) (*ELKADIRE khaled ben hamed ben abdellah, 2005, P.110*).

Johansen and *Juselius* method depends on testing the number of the relation of common integration in the *VAR* system vector autoregressive (*VAR*) wish represents the relation of the long-term of variables in the equations system with consideration that all variables are internal in the modal.

The test has been held with (*J.J*) method with rupture and temporal direction in the integration equation and *VAR* test which is shown in table *N° 03*.

Table *03*: Johansen and Juselius Test

Critical Values %5		Critical Values %1		Maximal Eigen Value Statistic	Trace Statistic	Eigen Value	Vector
Test auto-grande vecteur	Test d'impact	Test auto-grande vecteur	Test d'impact				
33.87	***69.81***	***39.37***	***77.81***	***33.44***	***90.44***	***0.796***	$r = 0$ *
27.68	***47.85***	***32.71***	***54.68***	***28.93***	***57.00***	***0.747***	$r \leq 1$
21.13	***29.79***	***25.86***	***35.45***	***18.29***	***28.07***	***0.581***	$r \leq 2$
14.26	***15.49***	***18.52***	***19.93***	***6.75***	***9.78***	***0.275***	$r \leq 3$
3.84	***3.84***	***6.63***	***6.63***	***3.02***	***3.02***	***0.134***	$r \leq 4$

It appears clear from the results of the impact test and self-value in the table above, reject the null hypothesis ($r = 0$) that there is no co-integration among variables at ***5%*** or ***1%***, where the calculated value of the test of impact (λ *trace*) and (*90.44*) higher than the two critical values (*77.81*) and (*69.71*) at *1%* and *5%*, respectively, while for the following value is (*57.00*), lower the critical values of (*54.68*) and (*47.85*), therefore, the test of the great possibility refuses to reject the null hypothesis that is defined by the existence of a single vector to the maximum for the Co-integration. In addition, the self test value (λ *max*) for the same results.

It also appears that (*IMP*) representing imports in Algeria, is a co-*integration* with public spending (*DEP), the (PIB), inflation (INF) and oil prices (PBRL).This means that the results obtained is a sta*tic linear combination between imports (*IMP*) and the variables (*PIB, INF, PBRL, DEP*) despite that these variables are not static, and finally, this result confirms long-term equilibrium relationship among these variables, which means that these variables behave the same way.

The Common co-integration equation can be expressed by the following equation:

$$LnIMP_t = -1.324 - 0.182\ LnPIB_t - 0.556\ LnINF_t - 0.378\ LnPBRL_t + 0.0062\ LnDEP_t$$

(0.19141) (0.4386) (0.69) (0.02432)

$\log \cdot Likelihood = 514.8499$

(*The values in brackets represent standardized errors*)

It is evident from the estimations of the Co-integration vector in the above model that flexibility of the public spending on the importations in a long-term is equal to *0.0062%*, which mean that the increase of equation with *10%* leads to an increase in government with an increase rate of *6.2%*, with a positive sign which goes perfectly with the theory, there's a direct relation of a direct investment of a long term with the importation.

However, the rest of variables came with a negative indication which means that it has a negative effect on importation on the long-term, and that is opposite to the economic theory.

The finding have also shown that the coefficients of the common integration vector, which describes the long-term relation, are significant because the value ***Log Linklihood*** is equal to (*514.8499*).

5.3. Estimating vector error correction model

After testing the variables with unity root test, that certified the stability of the temporal chains after taking the first differences to it, and also testing the common integration, which proves existence of a common integration, another step comes up which consists of designing a *VAR* in a form of first difference to the variables (*[VECM]vector error Correction Model* to estimate the adaptation speed i.e. adaptation of any disruption in the short-term to a long-term balance between the importations and the study variables), and adding a slow time-gap to error correction term. This is implemented by estimating the following model after adding an individual correlation as follows:

$$\Delta LnIMP_t = \alpha + \sum_{j=1}^{k} \beta_j \Delta LnIMP_{t-j} + \sum_{j=1}^{k} \phi_j \Delta LnPIB_{t-j} + \sum_{j=1}^{k} \lambda_j \Delta LnINF_{t-j}$$
$$+ \sum_{j=1}^{k} \rho_j \Delta LnPBRL_{t-j} + \sum_{j=1}^{k} \gamma_j \Delta LnDEP_{t-j} + \omega Ec_{t-1} + \varepsilon_t$$

Where the parameters $\alpha, \beta, \phi, \lambda, \rho, \gamma$ in the equation show that they are parameters of importation functions variables in the short-term, and ω denotes error correction coefficient Ec_{t-1}which include the test of the long-term. In addition to, it measures the disruption adaption fast in the short-term to the long-term balance, where the short-term dynamic differs of the long-term balance, and the slowing following variables are added to be sure that ε_t (*the rest*) is stable or from the (***White Noise)*** [*3] type.

The finding in table (*04*) show that the estimated adaptation coefficients, which are implemented to test the extension of the effect power of the integrated variables in the equation on the importations, where it comprises the weighs through which the common integration vector integrate the mechanism of the short-term, and it measures the response fast of the short-term disequilibrium which occurs in the whole system.

Table *04*. Estimating error correction vectors model

t-statistic	Std.Errors	Coefficients	variabls
4.131	***0.00134***	***0.0555***	*C*

[*3] - **White Noise:** The white noise is a stationary time series or a stationary random process with zero autocorrelation. In other words, in white noise ***N (t)*** any pair of values $N(t_1)$ and $N(t_2)$taken at different moments $t_1$and t_2 of time are not correlated **- *i.e.*** the correlation coefficient $r(N(t_1),N(t_2))$ is equal to null.

-1.51440	***0.015265***	***-0.023***	Ec_{t-1}
0.64	***0.031250***	***0.0202***	Δ *Ln IMP* $_{t-1}$
-4.272	***0.00698***	***-0.029***	Δ *Ln PIB* $_{t-1}$
0.197	***39865.0***	***7864.23***	Δ *Ln INF* $_{t-1}$
3.081	***13.30***	***40.99***	Δ *Ln PBRL* $_{t-1}$
0.331	***0.175***	***0.0583***	Δ *Ln DEP* $_{t-1}$
		0.84	*R2*
		0.028	*S.E*
		12.20	*F - Statistic*
		-136.87	*Log Likelihood*

The table (*04*) shows that the variables shift has help to know possible changes in the (*PIB*) representing the economic growth in Algeria, that is to say, the government expenses lead to importation according to (*Granger*). The variance in the government expenses during the period (*t-1*) by *10%* leads to an increase in the period (*t*) [♣♣4]wish *0.64%* lead to a slight positive effect in the national economy.

The results also show that the impact of the (*PIB*), the inflation and the petrol price in the period (*t-1*) on the importation is due to the compatibility of the *PIB*. (*-0.029*) it is each year decreasing by *2.9%* which led to an economic balance during *9* years.

The correction of the wrong doing in Ec_{t-1}in the (*VEC*) has taken the negative symbol (-) it means that *2.3%* of the economic imbalances are corrected each year.

7. Conclusion

In this study there is a trial to know (*to measure*) the impact of the public expenses on the Algerian importation.

where the analysis of the study using the standard tests (tests of static variations. Co-integration Test the model of error correction) has revealed the following:

1- The results of static variables tests (***A**ugmented **D**icker **F**uller*) showed that all variables of the economic study contain a root of unity that is to say, it is not static ***(unstable)*** in level while becoming stable in the first differences, which means that it is a first-order integration.

2- The Co-integration test how (***J**ohansen and **J**usellus*) showed that there is a vector of co-integration among the variables, indicating the existence of a long-term relationship between public spending andimports.

3- Estimation of the model error correction vectors showed that public spending contributes to imports, but is low in the short term, this is due to the weakness of the rationalization of public expenditures in Algeria, whilethat the result obtained by determining the correction model error was rejected (*or refused*), where it was found that public spending is statistically abstract, while the same model showed that other model coefficients are abstract and influential waypositive in the short-term imports, which is consistent with economic theory.

8. References

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[♣♣]Public spending was missing the period (t) is the application first, and influence on the increase in gross product of period (t + 1), so the problem is the non-compliance Temporal between the cause and the result.

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*-Mackinnon (1996) one-sided P-values.
** - It has been one slowdown period ($P = 1$) awarding to the standard (*AIC*) .