

Impact of the quantitative easing in Algeria

Rafika Sebbagh^{1*}

Sidi Bel Abbès University (Algeria),

rafika_sebbagh@univ-sba.dz 

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Abstract:

The aim of our research paper is to analyze the pros and cons of Quantitative Easing that Algeria pursued after the collapse of oil prices in the second half of 2014. Although, Quantitative Easing is a solution to solve the budget deficit without resorting to external debt, yet it has many negative effects on the Algerian Economy.

The most important of these effects are the high internal debt, the high rates of inflation, and the unemployment rate. As a result of these effects, comes a significant decrease in the purchasing power of the citizen, as well as the low value of the national currency in comparison to foreign currencies, the erosion of exchange reserves, the deficit of the trade balance and the balance of payments.

Keywords:

Reserve;
Inflation;
Quantitative Easing;
Bank liquidity;
Budget deficits.

JEL Classification Codes: H61, H62, H72.

* Corresponding author

1. INTRODUCTION

Algeria's longstanding needs to diversify its economy away from hydrocarbons has gained fresh urgency since oil prices started falling dramatically in 2014. New financial realities have rendered the preceding decade's high spending unsustainable, rapidly emptying state coffers and increasing the deficit (Crisis group, 2018). Algeria is over-dependent on hydrocarbons revenues. Oil and gas accounted for 97 per cent of total exports, two thirds of state revenues and one third of gross domestic product. But a rentier economy has downsides., protected a private sector in which state contracts are awarded based on personal connections rather than merit or efficiency, and propped up internationally uncompetitive industries.

Quantitative easing policy is one of the policies that succeeded largely in many countries such as Japan, the United States and Britain in containing the crises that afflicted them. This is what made Algeria follow their example by pursuing this policy as a result of the severe crisis it has witnessed since the second half of 2014 to the present day, because of the decrease in oil prices by 50% starting from mid-2014. (International Monetary Fund ;2013)

2. LITERATURE REVIEW:

Hadjer Ould Hennia (2019). **Budget Deficit and Unconventional Financing in Algeria** .Management & Economics Research Journal. Vol. 1 No. 2.

The aim of this study is to analyze the relationship between budget deficit and Quantitative Easing in Algeria, and the study concluded that the decline in oil prices in mid-2014, and to implement a new alternative financing tool, which is unconventional internal financing.

Stéphane Alby (2019) **Unconventional financing: a strategy under control**; Bnp paribas.

The study concluded that Algeria is running the risk of a painful medium-term macroeconomic adjustment, either via the exchange rate or the compression of imports. Given the weakness of the industrial base, both options would have a severe impact on inflation.

Dr Abdulrahmane Mebtoul (2017). **Impact of non-conventional Finance in Algeria MENA forum** .

The purpose of this contribution is to analyze the operationality of the adopted Quantitative Easing in Algeria that appears to be not a suitable response at this conjecture. This method of finance is by the way applicable to a structured competitive market economy, with idle production factors, i.e., underemployed equipment and skilled labor whereas Algeria suffers from structural rigidities with a dieback productive

fabric and a total dependence on the volatile price of oil, hence the risk of printing more money, with a consequent inflationary process.

- Mohamed Loukal (2018) **gouverneur de la Banque d'Algérie: entretien; oxford businessgroup;**

The dramatic fall of hydrocarbon prices has had a considerable impact on the economy. It has generated high fiscal and external deficits. Since 2016, the country has showed great resilience in facing the challenges, thanks to the prior accumulation of net budget saving in the Revenue Regulation Fund and international reserves. Quantitative Easing has three main objectives: covering the fiscal deficit, financing the internal public debt and providing funds for the National Investment Fund.

3. DEFINITION OF QUANTITATIVE EASING:

- Quantitative Easing, a rather unconventional monetary policy, has found widespread use in recent times. Many major central banks, such as the Federal Reserve, Bank of Japan, and the European Central Bank, have resorted to this policy to kick start economic growth (forbes ;2015);
- Quantitative easing is a form of monetary policy in which the Federal Reserve conducts large-scale asset purchases of mainly long-term securities including Treasuries. (Matthew Quinn Rubino;2015);
- The true meaning of quantitative easing expression, introduced by Werner R A in 1995, is
to increase the net credit creation in the four possible ways in Werner (2009):
 - * By increasing bank credit,
 - * By increasing trade credit,
 - * By increasing central bank credit, and
 - * By increasing credit created by the government. (Dimitri, Victor,2013)
- QE is a policy consisting of large, sustained, and publicly announced programs of open market operations (The Economist, 2014). QE is not money creation; it's more accurately described as reserve creation. A central bank buys securities and pays for them with bank reserves (liabilities of the central bank and assets of commercial banks), thereby increasing the central bank's balance sheet and the reserves of its member banks. When banks seek to increase their capital and borrowers strive to pay down their debts, QE does not increase the money supply and therefore does not cause inflation. (Chris Brightman,2015).

4. ECONOMIC CONDITIONS FOR THE APPLICATION OF QUANTITATIVE EASING MECHANISM IN ALGERIA:

We will try to identify the effects of the decrease in oil prices on the Algerian economy and the most important measures taken to counter their effects.

Impact of the quantitative easing Algeria

A- The decrease of oil prices, June 2014:

After three years of relative stability in the price of an oil barrel at the threshold of \$ 100 per barrel, oil prices have taken a different curve to turn towards a continuous decline since mid-2014;(Aasim ;2015 (, as shown in the following table.

Table N° (01): Evolution of the average annual price of Brent oil during the period (2009-2018)

Years	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Average annual oil price	62.26	80.15	112.94	111.05	109.55	99.48	53.60	45.00	54.84	71.2

Source: Prepared by the researcher, based on the Central Bank of Algeria reports.

The average monthly price of oil moved from \$ 109.74 a barrel in January 2014 to \$ 57.98 a barrel in December of the same year. It has dropped again to \$ 37.41 a barrel in December 2015 to drop further to \$ 31.10 a barrel in January 2016. Since then, the prices of an oil barrel began to rise to reach \$ 65.74 a barrel in December 2017, with an annual average of \$ 54.84 a barrel in 2017 and \$ 71.2 a barrel in 2018. (The Central Bank; 2018).

B- The effect of low oil prices on the Algerian economy:

The effect of low oil prices on the Algerian economy We summarized in this table.

Table N° (02): The effect of low oil prices on the Algerian economy

The indicator	2010	2017	The analysis
Gross Domestic Product (GDP)	٪ 3.6	٪3.1	The decline in oil prices in Algeria has clearly affected the proportion of the country's gross domestic product, as industrialization in the country outside the oil and gas fields, represents only 5% of GDP.
Budget balance (One Billion dinars)	178,2-	-2131.41	The continuous decrease in oil prices led to a continued decrease in hydrocarbon revenues by an estimated rate of about 25% in 2016, as the revenue shrank led to an increase in the budget deficit.

R. Sebbagh

Revenue Adjustment Fund (One Billion dinars)	5634.2	0	It has reached the legal minimum level of 740 billion dinars by the end of February 2017, and it run out fully by May 2017. Its global ranking moved from 25th in 2015 to 32nd in 2018.
Foreign exchange reserves (One Billion Dollars)	162,22	97.33	This reserve represents less than 20 months of imports, after it has represented 36 and 28 months of imports during the years of 2010 and 2014 respectively.
Balance of payments (One Billion Dollars)	+ 15.58	21,85-	After more than 15 years of surpluses, the balance of payments recorded a deficit in 2014 due to the sharp decline in oil prices.
Trade balance (One Billion Dollars)		-14.17	This deficit was recorded despite the decrease in imports of goods by (-17.1%).
Liquidity (One Billion dinars)	2549.7 1	512	The decrease in liquidity was by the order of 69.9% during the period of (2014-2017), because public bank deposits are also determined by the oil rents.
The dinar value against the euro	102,21 54	125.32	This decrease is due to: <ul style="list-style-type: none"> • The decline in Algerian exchange reserves, which led to the instability of the national currency; • The rise of the prices of the dollar and the euro in global markets; • Algeria is almost completely dependent on financial revenues for hydrocarbons, which exceed 97%, besides the weak economic diversification.
The dinar value against the dollar	74,319 9	110.96	Among the factors behind the decrease in the price of the dinar against the dollar, Algeria's Central Bank in July 2017 decided to reduce the value of the Algerian dinar, compared to the US dollar, by 20%.

Source: Prepared by the researcher based on Central Bank reports of Algeria during the period.

C- Procedures adopted before applying Quantitative easing mechanism:

As a result of the low oil prices, the reduced revenues and avoiding foreign debt, Algeria has resorted to several mechanisms and procedures that we will try to address in what comes next:

Impact of the quantitative easing Algeria

Table N° (03): Policy adopted before applying Quantitative easing mechanism

Policy type	Policy content
Monetary Policy	<ul style="list-style-type: none"> • Reducing the compulsory reserve ratio from 12% to 8%; • Reducing the rebate rate from 4% to 3.5%; • The Bond loan: It is the national loan given to support economic growth, for a six-month subscription period, with bonds at fixed interest rates, according to the repayment period. Three-year repayment period at an interest rate of 5%, and a five-year repayment period at an interest rate of 5.75%. It was launched on April 17th, 2016 and it has expired by October 16th. This loan permitted the collection of 568 billion dinars, a very modest income.
Fiscal policy	<p>Increases in fees and taxes. For example, in 2017, Algeria has:</p> <ul style="list-style-type: none"> • raised the value-added tax from 17% to 19%; • Increased the fees on real estate transfers "sale - buy - rent"; • raised the value of building permits and conformity certificates; • increased import duties for luxury goods, cigarettes and SUVs; • raised fuel prices; • raised the fees for home appliances; • established a 1.000DA for renewing the biometric card and 10.000DA for the passport; • established a new tax on truck and car wheels.
Trade policy	<p>The encouragement and the protection of Algerian products. Among the mechanisms applied is the ban on imports. The country's economic policies, starting in 2015, aim to contain the excessive rise in imports.</p>

Source: Prepared by the researcher, based on the Central Bank of Algeria reports and International Monetary Fund.

Therefore, the government's exhaustion of traditional financing formulas has prompted it to search for new, unconventional and innovative ways of financing economic activity as a result of the ineffectiveness of traditional monetary policy tools.

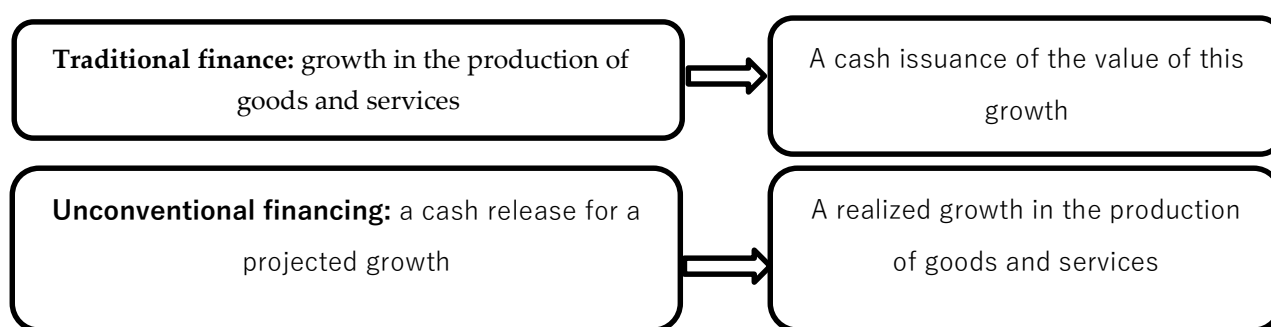
5. QUANTITATIVE EASING IN ALGERIA:

We will try to present the definition, goals and effects of Quantitative easing policy on the Algerian economy.

A- The content and objectives of the Quantitative Easing policy:

The Quantitative Easing formula entered into force in Algeria after amending the Cash and Loan Law 90-10 according to the Law N°. 17-10 of October 11, 2017, completing the Order N° 03-11 issued on August 26, 2003 that was published in the Official Journal N°57 of October 12, 2017. The meaning of Quantitative Easing in the government's program is relying on financing by printing money bills without coverage after amending the cash and loan law. The Bank of Algeria's precedents for the treasury each year did not exceed 10% of the state's regular revenue in the previous fiscal year. The program showed that based on unconventional financing, the Central Bank lends to the Public Treasury directly without a credit ceiling and with more affordable terms in order to finance the state budget deficit, the financing of the internal public debt, and the provision of financial resources to the National Investment Fund. This money borrowed by the Public Treasury from the Bank of Algeria is not aimed for consumption but rather for public investment financing. (Stéphane Alby, 2019).

Figure N° (01): The difference between conventional and unconventional financing



Source: hamza ramli (2018) *Non-traditional financing in Algeria according to changes in the law of money and credit ... Is it a quantitative easing?*; milev journal of research and studies; Volume 4, Numéro 1, Pages 219.

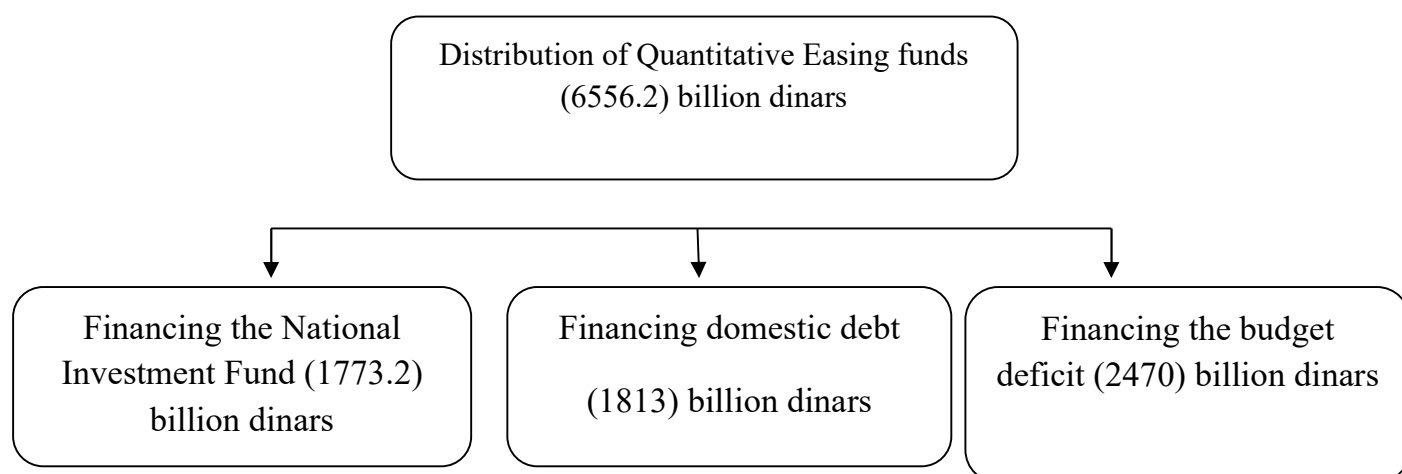
Note that this financing will be limited to a maximum period of five years and accompanied by economic and financial reforms. A package of accompanying measures was already adopted within the framework of implementing the Quantitative Easing by

Impact of the quantitative easing Algeria

the Executive Decree N°. 86-16 of March 5, 2018, which sets out mechanisms for following up measures and structural economic and financial reforms for a maximum period of five years, aiming at (Mohamed Loukal ;2018):

- Restoring the state's treasury balances (State financial reform);
- Restoring the balance of payments balances;
- Financial structural reforms;
- Economic structural reforms.

Figure N° (02): Distribution of Quantitative Easing funds



Source: sudhorizons(2019) Bank of Algeria: half of the unconventional funds have been pumped into the economy; available at: <https://www.sudhorizons.dz/ar/2016-10-15-18-14-14/2016-04-28-21-27-38/45442-2019-04-02-09-14-04> visited.(2021/01/19) .

The Quantitative Easing funds represent 2470 billion dinars that were used to fund the budget deficit for the years 2017 and 2018. Besides the sum of 1813 billion dinars, in which the debts of public institutions were paid, and the financing of the bond loan payments for the growth by 1773.2 billion dinars that was directed to finance the National Investment Fund, in addition to 500 billion dinars allocated to the National Pension Fund. (Algeria press service ;2018). Note that the most important projects funded by the National Investment Fund are structured projects and AADL projects for social housing. It should be noted that this policy was abandoned as of the end of January 2019. (International Monetary Fund ;2018, p09).

B- The objectives of the Quantitative Easing policy:

- ✓ Avoiding external debt;
- ✓ Avoid the disruption of development projects and support the National Investment Fund;

- ✓ Ensuring the coverage of the state's economic, administrative and social expenses;
- ✓ Covering the treasury's needs by financing the budget deficit;
- ✓ Financing the internal public debt.

Table N° (03): Similarities and important distinctions between the quantitative easing policies undertaken by the world’s leading banks and the monetary policy adopted by the Bank of Algeria.

	the quantitative easing policies undertaken by the world’s leading banks	the quantitative easing policies adopted by the Bank of Algeria
similarities	Both involve expanding a central bank’s balance sheet to purchase sovereign bonds, increase liquidity in the banking sector. This policy that has been to lead to a surge in inflation	
important distinctions	<ul style="list-style-type: none"> - the purchase of sovereign bonds by global central banks was done on the secondary rather than the primary market, meaning those central banks were not directly financing the government or quasi-governmental agencies; - Reducing interest rates. 	<ul style="list-style-type: none"> - the purchase of sovereign bonds by the Bank of Algeria was done on the primary market; -interest rates were not already at zero in Algeria, so it is difficult to view this approach as a purely monetary policy measure

Source: oxford business group (2018) Changes to Algeria's macroeconomic strategy, available at:

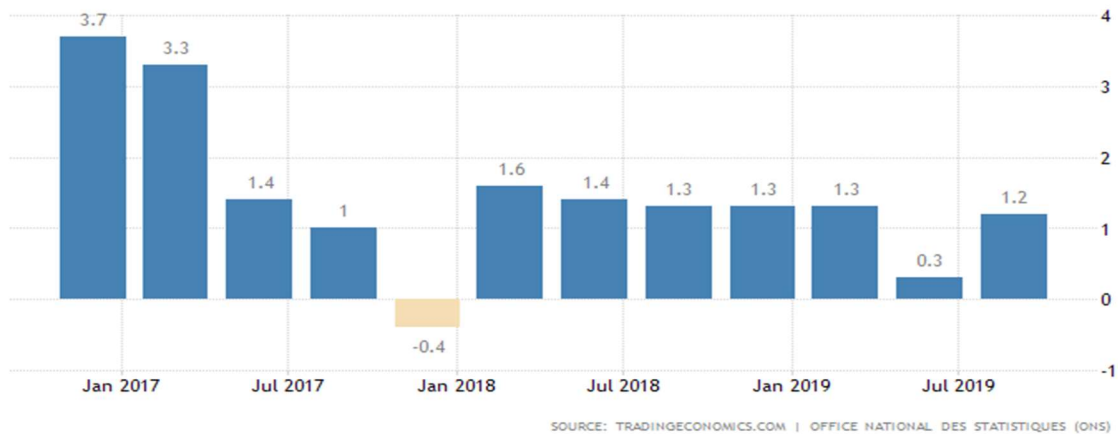
<https://oxfordbusinessgroup.com/analysis/quantitative-easing-closer-look-new-macroeconomic-strategy-and-its-impacts>; visited.(2021/01/18) .

6. The effects of the Quantitative Easing policy:

Until now, we notice that through the Quantitative Easing policy, the bond loan policy, and even the raising of customs duties, are all policies that have led to a high rate of inflation, as well as an increase in the ratio of domestic debt to gross domestic product, in addition to the deterioration of the value of the Algerian dinar.

Impact of the quantitative easing Algeria

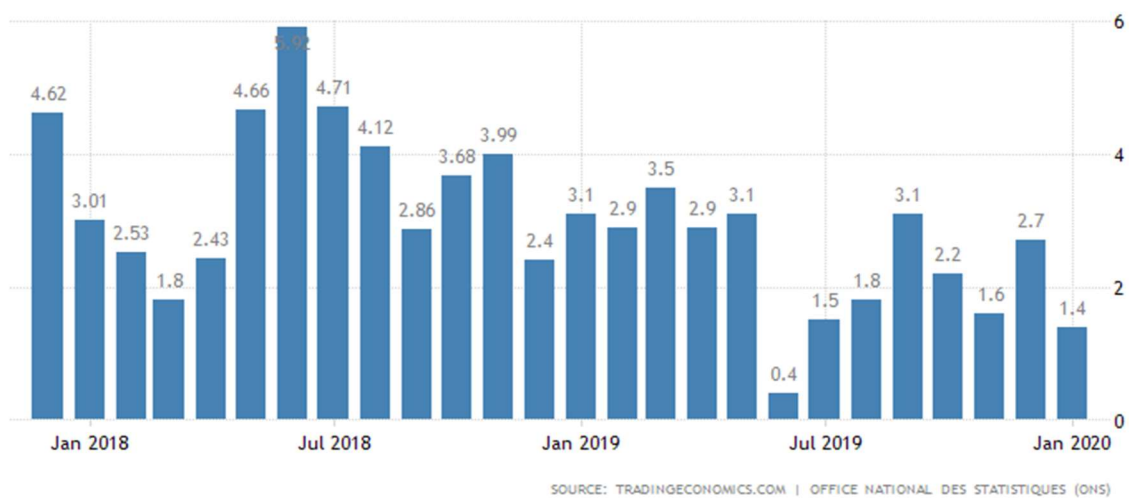
Figure N°. (04): GDP in Algeria during the period (2017-2019) in percentage (%)



Source :Trading economics "Algeria GDP Annual Growth Rate " available at: <https://ar.tradingeconomics.com/algeria/gdp-growth-annual> ;visited.(2021/01/19) ..

The International Monetary Fund warned against the effects of the Quantitative Easing policy on the rate of growth of the Algerian economy. It has suggested external borrowing instead of internal borrowing, expecting that within five years of applying this policy the growth rate would not exceed 2%. This is what we have observed through the previous figure since we recorded a negative growth rate of 0.4%, directly after applying this new mechanism, and at the end of 2019 this rate did not exceed 2%.

Figure N°. (05): inflation in Algeria during the period (2017-2019) in percentage (%)



Source :Trading economics "Algeria Inflation Rate" available at: <https://ar.tradingeconomics.com/algeria/inflation-cpi>. , visited.(2021/01/19) .

Consequently, to the difficult economic situation that Algeria went through due to low oil prices, inflation rose from 2.9% in 2014 to 4.8% in 2015 and to 3.5% in 2019. It

should be noted that experts expected that the effects of Quantitative Easing policy do not appear directly on the rate of inflation but rather they would appear after (35-40) months. The International Monetary Fund expected that the rate of inflation would exceed the rate of 10% after five years.

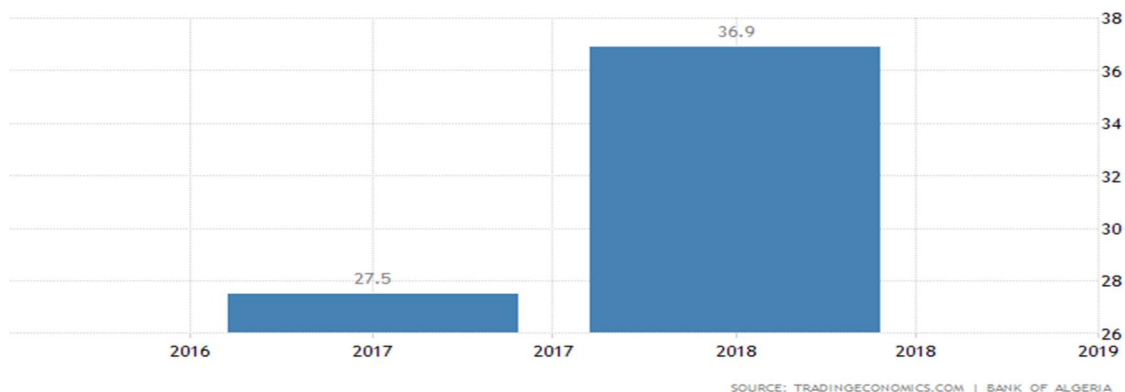
Figure N° (06): The development of exchange reserves in Algeria during the period (2017-2019) million US dollars



Source :Trading economics :”Algeria - Foreign exchange reserves”; available at: <https://ar.tradingeconomics.com/algeria/foreign-exchange-reserves> , visited : .(2021/01/17)

The foreign exchange reserves declined from about 194 billion dollars in 2013 at the time of financial fortune to only 62 billion dollars, representing approximately 17 months of imports. This reflects the fragility of the Algerian economy in the face of external shocks.

Figure N°. (07): The evolution of the government debt to GDP ratio in Algeria during the period (2017-2018) in percentage (%)

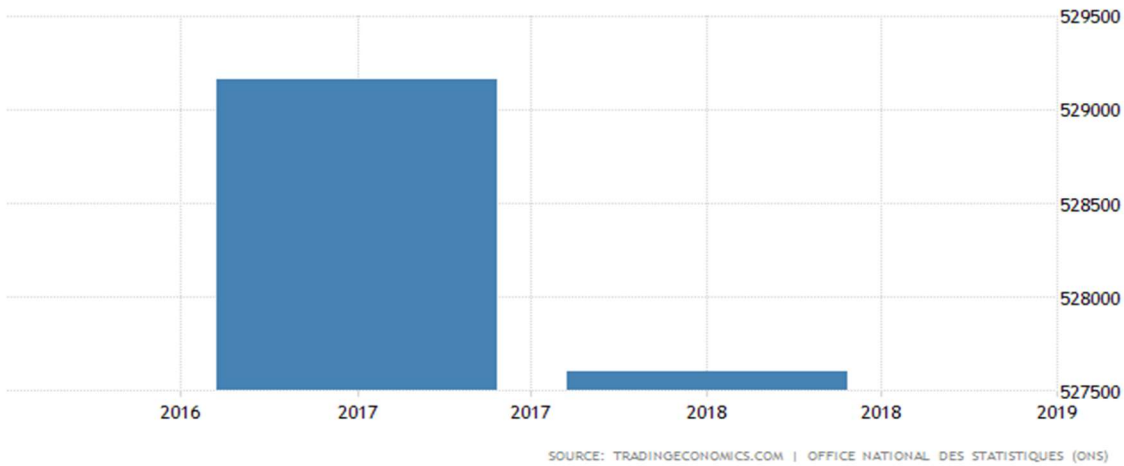


Source: Trading economics "Algeria - Government debt to GDP ;“ available at: <https://ar.tradingeconomics.com/algeria/government-debt-to-gdp> , visited:(2021/01/19) .

Impact of the quantitative easing Algeria

The aforementioned policies led to an increase in Algeria's internal debt compared to GDP, from 8.2% in 2009 to 22.9% in 2016, to 36.9% in 2018 Central Bank of Algeria;2019)

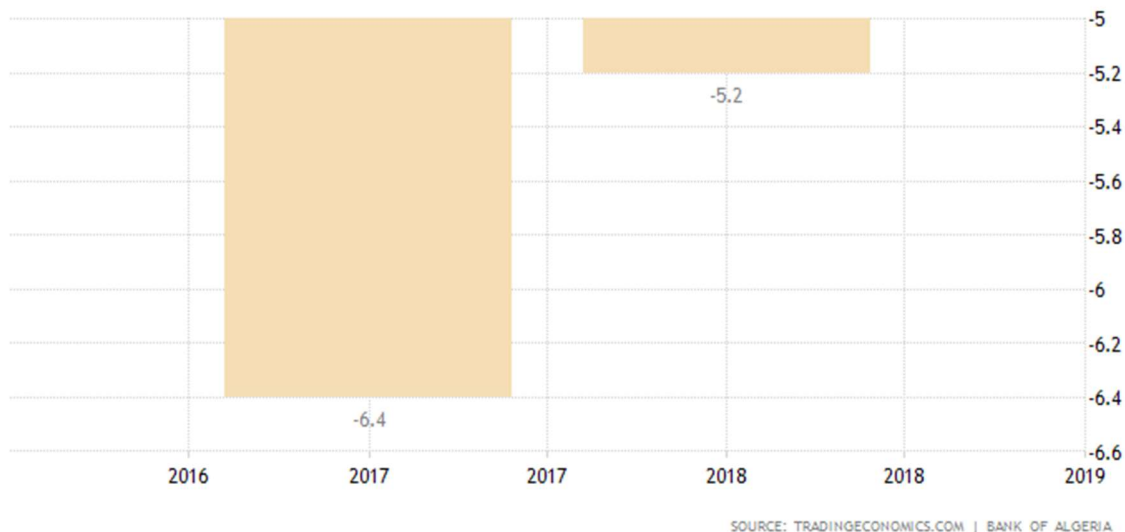
Figure N°. (08): Government spending in Algeria during the period (2017-2019) million dollars



Source: Trading economics "Algeria - government spending" (available at: <https://ar.tradingeconomics.com/algeria/government-spending> , visited:.(2021/01/19)

The outcome of state policies aiming at reducing and rationalizing expenditures was that government spending has declined from 712.707.40 million dollars in 2015 to 85.906.60 in 2018. The Algerian government stressed on the need to finance investment spending, not consumer spending. . (Trading economics ;2019)

Figure N°. (09): The percentage of the government deficit to GDP increased in Algeria during the period (2017-2019) in percentage (%)



Source: Trading economics "Algeria - government budgets", available at: <https://ar.tradingeconomics.com/algeria/government-budget> ; visited:(2021/01/19) .

Due to the Quantitative Easing policy, which aimed primarily to cover the budget deficit after the decline in oil prices, the ratio of the government deficit to the gross domestic product in Algeria decreased from -6.4% in 2017 to -5.2% in 2018.

In a circumstance marked by the resumption of refinancing of operations by the Bank of Algeria and with the introduction of unconventional financing, since November 2017, bank liquidity increased by the end of December 2017, after it decreased significantly after the oil shock. (Trading economics ;2019).

RESULTS:

Many challenges may face Quantitative Easing policies in Algeria, the most important of which are:

- Unconventional sources of financing need a strong economy in order to become fruitful, and the Algerian economy is too weak to be the incubator of such advanced mechanisms;
- The risk for Quantitative Easing in Algeria is the behavior of the country's spending with an exaggerated social dimension in economic development policy;

Impact of the quantitative easing Algeria

- The solution is not to introduce new lending mechanisms for the Public Treasury, but rather to create real financing sources;
- The fundamental difference between the Quantitative Easing policies adopted by various economies in the world to confront the financial crisis of 2008 and the Quantitative Easing programs adopted by Algeria is that this policy emerged as a consequence of the ineffectiveness of the traditional monetary policy tools in stimulating economic activity. Unlike Algeria, which came to ensure Quantitative Easing to cover The Public Treasury's deficit, as it came to face the repercussions of the oil shock and the oil prices that drained the state's financial resources;
- Quantitative Easing has succeeded in the countries in which it worked to stimulate the internal demand of economic agents. It was a mere complementary method in order to **correct** and not a basic method aiming to **control**.
- This type of modern financing formulas in order to be effective requires having an active financial market, which is not currently available in the Algerian economy. This reduces the chance of its success, at least in the short and medium term.
- This policy represents a danger to the independence of the Central Bank. Various studies have shown that the more the central bank is independent, the more it contributes to raising the rate of economic growth and curbing inflation rates;
- This policy may result in a deterioration of the credit rating of the sovereign debt and the difficulty of external borrowing.

7. CONCLUSION:

We concluded the following points:

- Increased expenditures and declining revenues are among the main reasons that led to the increase in the budget deficit in Algeria. The country resorted to internal financing in order to avoid foreign borrowing, after seeking the resources of the Revenue Control Fund, and adopted a set of policies, the most important of which is the bond loan, Quantitative Easing of the public treasury ...
- The Quantitative Easing mechanism was adopted to ensure the continuity of financing the economic development in light of the exacerbation of the oil shock pressures;
- The failure of the Quantitative Easing policy lays in in the fact of financing consumption at the expense of investment. This may have serious repercussions resulting from the use of traditional methods that rely on the interest rate and inflationary financing to cover its public budget deficit;

- The high deficits in the Algerian budget, especially in the years of 2014, 2015 and 2016, revealed the weakness of the regular tax and the excessive growth of public expenditures. Algeria resorted to unconventional methods of financing the budget deficit, which are expected to have negative effects in the medium and the long term, and perhaps the most important of these effects is an increase in inflation.

STUDY RECOMMENDATIONS:

So, in light of the depletion of the state's net financial savings and in the prospect of low oil prices, it becomes necessary to:

- Rationalize public expenditures and develop the tax system to combat tax evasion and tax fraud, thereby increase the contribution of ordinary taxation to total revenue.
- Algeria must strive to move from the Rentier economy to the competitive productive economy, by stimulating productive investment and by rebalancing the structure of the national economy that encourages the development of agriculture, industry, and production services in order to impose itself and reduce petroleum dependence. Economic diversification outside the hydrocarbon sector remains subsequently, the primary and only way to achieve economic efficiency;
- Modernizing the Algerian banking system in a way that allows the supervisory and the controlling role of the Bank of Algeria to be strengthened, to accomplish the effectiveness of the implemented monetary policies.

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