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Reflection of Quantitative Easing Policy on Government Spending in Algeria 2017-2021

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Abstract

This study shows the role and importance of the quantitative easing policy in raising the volume of government spending, by following direct and indirect mechanisms and methods that are compatible with the characteristics and requirements of the economy.

This study includes a theoretical aspect that explains the general framework of quantitative easing policy and government spending, As well as an applied aspect through which the role played by the quantitative easing policy in raising the volume of government spending in Algeria for the period from 2017 to 2021 is clarified.

- ✓ **Keyword :** Quantitative easing. Government spending**.**

1. INTRODUCTION

The set of tools and measures used to regulate and control the money supply in the economy is called monetary policy. In order to achieve its ultimate goals, it intervenes by increasing or decreasing the volume of the money supply through various traditional tools (direct, indirect, and unconventional). However, with the tremendous evolution in various fields and the emergence of new problems in the economy, most decision-making executive bodies have turned to finding effective solutions to confront these developments. Resorting to quantitative easing policy as a remedy for the crisis is one of the theoretically available solutions, and its results cannot be guaranteed. Nevertheless, its application in several economies around the world, including the United States, Japan, and the United Kingdom, has proven its economic effectiveness despite some negative effects inherent in any remedy for any problem.

The main problem of this research paper is:

"How does the quantitative easing policy contribute to influencing government spending in Algeria?"

To address the study's problem, we propose the following plan:

1- General framework of quantitative easing policy

2- General framework of government spending

3- Prospects for the implementation of quantitative easing policy in Algeria in light of structural adjustments

4- Applied study.

1.1 HYPOTHESES

Quantitative easing policy contributes, through increasing the money supply, to creating an economic dynamic that influences the increase in government spending in Algeria.

1.2 Importance of the study

The importance of the study lies in elucidating the role of quantitative easing in influencing government spending in Algeria for the period extending from the year 2017 to the year 2021.

1.3 Study Objective:

This study aims to introduce quantitative easing and its application mechanisms. Additionally, it seeks to define government spending by specifying its concept and types. The main objective of the study is to investigate how the quantitative easing policy impacts government spending in Algeria, providing a strong boost to the national economy by supporting various sectors and contributing to the creation of economic dynamism.

2. General Framework of Quantitative Easing Policy

2.1. Concept of Quantitative Easing:

With the onset of modern economic crises, non-traditional solutions began to be sought to address various economic problems and prevent them. In the face of new challenges, quantitative easing emerged as a rescue tool for most global economies. Quantitative easing is defined as a monetary policy where the central bank increases its financial base to expand the money supply by issuing new currency. The central bank utilizes this new money to purchase assets from other banks, thereby increasing liquidity in those banks. Consequently, they become capable of providing more loans to those in need (Si Mohamed, 2008, p. 8).

It is also known as one of the tools of monetary policy used in times of crises. Quantitative easing involves creating money out of thin air, where the Federal Reserve, for example, increases the monetary base in the United States and uses it to purchase government bonds from financial institutions. These institutions are expected to use this increase in the monetary base in lending operations, increasing the credit volume. This leads to a multiplication of the money creation process, depending on the value of the money multiplier (Luqman, 2014, page 187). Others define it as the creation of a cash mass by the central bank without any corresponding value. This cash is injected into the economy by purchasing distressed debts and/or government bonds. After the economic activity recovers, these bonds are resold, and the injected money disappears (destroyed by the central bank) as it was initially created (Dimitri, 2013, p. 3). In summary, quantitative easing can be defined as an emergency remedy applied according to the conditions of each economy.

2.2. Purpose of Quantitative Easing Policy:

The purpose of quantitative easing is to revive the economy by providing financial liquidity to commercial banks, enabling them to lend again. It involves large-scale purchases of government and non-government bonds, causing their prices to rise significantly and interest rates to decrease. Commercial banks prefer lending over investing in bonds, providing a boost to the economy with self-sustaining momentum. Additionally, quantitative easing may be employed exceptionally and in rare cases to finance the annual general budget of the state or to fund long and medium-term development plans (Madjda M., 2019, p. 3).

2.3. Reasons for Adopting Quantitative Easing:

This tool is effective only in times of economic contraction, aiming to stimulate economic growth, provided that the inflation rate is below 2%. The introduced money has no counterpart at central banks and thus constitutes inflation. Quantitative easing also requires that the money supply be directed to economic agents to stimulate investment and consumption rather than going as profits to commercial banks and large financial institutions that the government must rescue as an engine of the economy. Consideration of trading partners and their use of this tool and their economic situation is essential to avoid entering currency wars or destructive protectionist policies. The process of quantitative easing is essentially a devaluation of the currency, which necessitates a similar devaluation by trading partners to prevent economic growth from being stolen from them as a result of this process (Katla Ásgeirsdóttir, 2014, p. 3).

2.4. Mechanism of Quantitative Easing within Monetary Policy and Its Significance:

Monetary policy is "a set of tools and measures through which the regulation and control of the money supply in the economy are carried out to achieve the ultimate objectives of monetary policy" (Abdul Matlub, 2003, p. 9). Monetary authorities intervene through monetary policy by increasing or decreasing the volume of the money supply through various traditional tools (direct, indirect, and unconventional) to achieve final objectives. These tools include:

2-4-1. Traditional Tools (Direct and Indirect):

Traditional tools include direct and indirect instruments, categorized as follows:

Indirect Instruments: The central monetary authority uses indirect tools to influence the credit volume. These include open market operations, reserve requirement ratio, and discount rate. They are effective mainly in times of economic expansion. Although these tools enable central authorities to provide financial liquidity to commercial banks to support their lending capacity, they cannot force economic agents to borrow from banks. Therefore, their effectiveness is limited, except during economic booms, to impact interest rates or target inflation.

Direct Instruments: Unlike indirect tools that focus on influencing the credit volume, direct tools aim to affect the type of credit. They also restrict the freedom of commercial banks in certain financial activities. Examples include moral persuasion, maximum interest rate on deposits, credit rationing, and other banking operations. However, direct tools may not receive a response from commercial banks and financial institutions, especially those with diverse funding sources and specialized uses, limiting their effectiveness.

2-4-2. Modern Tools (Non-Traditional):

Quantitative easing is considered a non-traditional tool in monetary policy. It has specific uses and applications, similar to other monetary policy tools. Quantitative easing is designed to overcome the drawbacks and failures of traditional tools when they are unable to achieve their goals or are impractical due to economic conditions, such as economic expansion or recession. In such cases, quantitative easing becomes an effective non-traditional tool.

2-4-3. Non-Traditional Measures of Monetary Policy:

Central banks work towards achieving ultimate objectives of monetary policy, which include price stability (inflation), full employment, high economic growth, balance of payments equilibrium, and combating cyclical fluctuations. The tools, both traditional and non-traditional, aim to increase aggregate demand to reach the stage of economic recovery. However, the speed of money circulation, being a psychological factor related to the preferences of consumers and investors, remains uncontrollable. Monetary authorities, using traditional and non-traditional tools, must resort to measures that influence the psychological aspects of economic agents, directing them towards spending, a strong behavioral phenomenon challenging central banks to control and guide it effectively.

2-4-4. Methods of Evaluating Quantitative Easing Policy:

These methods include the following elements:

Recovery from Wealth Effect: The initial feeling of overcoming economic problems and rising again.

Fear of Inflation: Cautionary measures to prevent and control inflation, keeping vigilance within targeted limits.

Statements: Reports and communications to reassure the public, provide comprehensive information, and prevent the spread of rumors.

3. General Framework of Government Spending:

In examining the general framework of government spending, we will begin by defining the concept and types of government expenditures.

3-1. Government Spending:

The concept of public expenditure has evolved in tandem with the development of the state's economic role, ranging from neutrality to active involvement in economic activities. Public expenditure has become crucial in influencing economic, political, and social aspects of life, representing a significant tool in modern financial theories.

3-2. Definition of Government Expenditure:

Government expenditure has various definitions, including:

Public expenditure is defined as all cash amounts spent by a public entity to meet a public need.

It is also seen as government intervention and assuming public burdens by the state or its public entities, serving as a tool for economic policies. Public expenditures represent the total uses in the state's budget.

Others define it as cash amounts approved by legislative authorities for a public person to spend on providing public goods and services, achieving social and economic goals.

3-3. Classifications of Public Expenditures in Algerian Legislation:

The Algerian legislator divides government expenditures into two main categories:

3-3-1. Operational Expenditures:

Operational expenditures are directed towards the normal and routine functioning of the state. They are further divided into four sections: public debt burdens, allocations for public authorities, means of interests, and public interventions.

3-3-2. Investment Expenditures:

Investment expenditures represent the government's spending on fundamental economic facilities such as ports, roads, railways, water and sanitation networks, electricity, gas, hospitals, and schools.

3-4. Elements of Government Expenditure:

3-4-1. Government Expenditure as a Cash Amount:

This element requires government expenditure to be a cash amount, justifiable by the predominance of cash transactions in modern economic exchanges. It ensures neutrality, impartiality, and ease of financial control.

3-4-2. Government Expenditure Leaving the Government's Financial Responsibility:

It is a fundamental condition that the cash amount exits the government's financial responsibility, spent through its ministries, institutions, or various entities.

3-4-3. Government Expenditure Aimed at Achieving Public Benefit:

The primary goal of government expenditure is to achieve public benefit, serving the collective well-being rather than benefiting specific individuals or groups.

3-5. Economic Effects of Government Expenditures:

The evolution of the state's role in public life, especially in economic activities influenced by Keynesian theory, underscores the significance of government spending as a financial tool. The precision in using government spending is crucial as it has multi-dimensional effects on various economic variables:

Direct effects of government spending on financial gains.

Direct effects on national income.

Effects on the redistribution of national income.

Direct effects on national consumption.

Indirect effects on national income (via the multiplier and accelerator mechanisms).

Indirect effects on national consumption.

3-5-1. Nature of Spending:

Government spending can be investment-oriented or consumption-oriented. The impact and effectiveness of spending depend on the level of economic activity, whether it is at full employment or below full employment.

Implementation of Quantitative Easing Policy in Algeria amid Structural Adjustment:

Algeria has embarked on an economic revitalization policy following the completion of the structural adjustment program, encompassing both stability and structural consolidation, fully funded by the proceeds of the thriving sector. The objective is to stimulate the economy through an expansive fiscal policy implemented through the annual budget. However, this consistently results in financial deficits year after year, mostly financed through advances from the central bank, amounting to around 10% of the previous year's revenues in the general budget. These advances are limited to a duration of 240 days and are to be repaid.

4- Quantitative Easing Policy in Algeria:

The policy of financing through deficits shares common ground with the quantitative easing policy in printing money without a counterpart. However, they differ fundamentally in the uses and destinations of these funds, the economic agents benefiting from them, and their purpose. Therefore, we refer to the legal framework for printing money and its counterparts in the monetary mass.

Algeria adopted the quantitative easing policy as a form of financing the general budget in 2018 through the issuance of the Currency and Credit Law 10/17 dated 2017/10/11. This law contains a single and repeated Article 45, amending Articles 46 and 47 of Order 11/03 dated 2003/08/26, which, in turn, amends Law 10/90 dated

1990/04/14 related to currency and credit. Examining Order 11/03 concerning currency and credit and preceding it, Law 10/90, reveals that the central bank has the authority to finance the government's general budget through two fundamental provisions, or in other words, there are two methods for financing the general budget in Algeria, as follows:

The Central Bank of Algeria can finance the general treasury in the form of advances by overdrawing on its current account, with financing not exceeding 10% of the previous year's revenues. The duration of these advances cannot exceed 240 consecutive or non-consecutive days and should occur only once a year.

The Central Bank of Algeria can purchase government treasury bonds up to 20% of the previous year's revenues, with a maximum maturity of 6 months. It also has the option to use the bonds as collateral for the Treasury's accountants or deduct them for the benefit of the treasury accountants with payment due within 3 months.

Particular contributions include:

Covering the financing needs of the public treasury.

Financing domestic public debt.

Funding for the National Investment Fund.

5- Application of Quantitative Easing Policy in Algeria:

Analyzing the practical implementation of quantitative easing in Algeria for economic revitalization through supportive monetary policy involves several considerations for its effectiveness:

The financial market, including both the securities market and banks, must be large enough to activate the quantitative easing mechanism. However, in Algeria, the weak securities market and lack of public trust in banks undermine the application of this mechanism.

The concentration of commercial banks on state projects funded by major economic entities challenges the effectiveness of quantitative easing. Additionally, the inflexibility of Algeria's production system hampers the effectiveness of any fiscal or monetary policy.

The efficacy of quantitative easing is more pronounced during economic contraction to stimulate economic growth, provided that the inflation rate remains below 2%, allowing control over the monetary supply.

6- Practical Study:

In the practical application of quantitative easing in Algeria from 2017 to 2021, theoretically, the policy involves purchasing stocks and bonds, increasing the money supply for lending institutions. This liquidity stimulates lending for projects and investments, creating economic dynamics across various sectors. The result is increased economic activity, internal and external trade, and state revenues through taxes and duties. The accumulated revenues then inform expenditure policies, directing funds towards priority sectors and projects based on economic priorities. The government plays a crucial role in controlling spending, determining priorities, and regulating the economic system as either an intervening or overseeing state.

Table 1: Quantitative Easing Amounts vs Government Spending in Algeria

Years	2021	2020	2019	2018	2017	2016	2015	2014
Quantitative Easing	4005	3621	3276	2983	2761	0	0	0

(QE)								
Expenditure at Constant Local Currency (GNE at Constant LCU)	17115.0	16584.8	18056.3	18008.1	17626.0	17085.8	16729.2	16224.4
Expenditure at Current Local Currency (GNE at Current LCU)	21977.9	20347.1	21809.1	21687.1	20774.5	19998.3	18944.1	17490.5
Total National Expenditure (% of Gross Domestic Product)	99.80%	110.68%	106.38%	106.34%	110.06%	114.18%	113.35%	101.52%
Gross Domestic Product (GDP)	22021.5	18383.1	20501.1	20452.3	18876.2	17514.6	16712.7	17228.6
Money Supply vs. Gross Domestic Product	18,19%	19,70%	15,98%	14,59%	14,63%	0,00%	0,00%	0,00%

Source: Compiled by the researchers based on data from the Ministry of Finance, General Directorate for Evaluation, and Policies.

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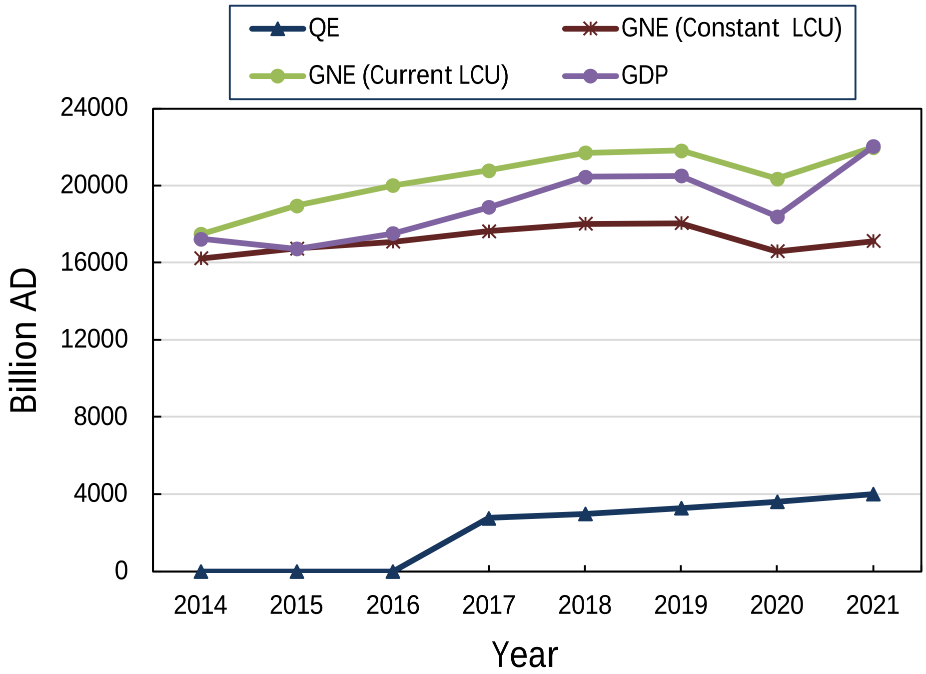
Through the previous table, we can deduce the following analysis:

The first phase from 2017 to 2019 was characterized by a strong contribution of quantitative easing to the total value of Algeria's gross domestic product (GDP). This period marked the normal state of the Algerian economy without any internal or external pressures.

The second phase from 2019 to 2020 witnessed a calm nature imposed by the overall pace of the global economy. Due to the prevailing pandemic conditions, starting from March 2020 with the initiation of health lockdowns in Algeria, the country faced a pandemic situation, entering into the unknown. This phase was marked by a complete recession in all sectors, making it challenging to predict or obtain results for any study under these extraordinary circumstances that affected the Algerian economy.

The third phase, beginning in 2021, was characterized by the return to normal life after the availability of vaccines and the resumption of rising fuel prices. This led to the initiation of investments and economic recovery.

Figure 1: Quantitative Easing vs. Government Spending in Algeria



Source: Prepared by the researchers based on the data from Table (01).

Based on the previous chart, we observe that the implementation of the quantitative easing policy in the Algerian economy began in early 2017, specifically in October. There is a significant impact of the quantitative easing policy on the level of public spending until the year 2019. Towards the end of 2019, we notice a decline in the government spending curve, which can be explained by the general economic shutdown due to the COVID-19 pandemic. Additionally, we observe a resurgence in the government spending curve at the end of 2020, following the containment of the pandemic. This marks the return to normal economic conditions in Algeria with the availability of vaccines, global economic recovery, and the reopening of all maritime, aerial, and land sectors.

Table 2: Study of the correlation between quantitative easing and other variables

Period	Variable	Coefficient	Value	P-value	Correlation Coefficient (r)
2014-2021	GNE_Constant_LCU	c	16780	6,01E-09	0,5057
		QE	0,1919	0,201	
	GNE_Current_LCU	c	18850	3,47E-08	0,8299
		QE	0,7338	0,0108	
	GDP	c	17110	1,50E-07	0,8417
		QE	0,8921	0,00877	
2017-2021	GNE_Constant_LCU	c	20190,0	0,00168	-0,6466
		QE	-0,8146	0,23832	
	GNE_Current_LCU	c	20250	0,00504	0,2232
		QE	0,3216	0,71825	
	GDP	C	15496,3	0,0533	0,4684
		QE	1,367	0,4262	
2017-2019-2021	GNE_Constant_LCU	C	19470,0971	0,00498	-0,6755
		QE	-0,5432	0,32446	
	GNE_Current_LCU	C	19080	0,00597	0,7678
		QE	0,7629	0,23221	
	GDP	C	13230	0,0205	0,9370
		QE	2,221	0,063	

Source: Prepared by the researchers based on the data from the Ministry of Finance and the General Directorate for Estimation and Policies.

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The previous table illustrates the correlation between government spending and quantitative easing policy. We observe that the correlation coefficient is high, indicating that quantitative easing policy influences an increase in government spending under normal conditions.

From the above, we can see that the effectiveness of the quantitative easing policy in increasing government spending was rapid and efficient, indicating the success of the monetary policy in implementing quantitative easing. This is evident in the normal conditions of the Algerian economy. Moreover, the non-traditional monetary policy applied during the previous period in the national economy demonstrated that the response to the quantitative easing policy was significant across all sectors that constitute the overall national economy.

Table 3 : Quantitative Easing Amounts versus Gross Domestic Product (GDP)

Year	2017	2018	2019	2020	2021
Quantitative EasingAmountsPumped	2761	2983	3276	3621	4005
Gross Domestic Product (GDP)	17514.6	18876.2	20452.3	20428.3	18856.0
Pumped Amounts as a Percentage of Gross Domestic Product	15,76%	15,80%	16,01%	17,72%	21,23%

Source: Prepared by the researchers based on data from the Ministry of Finance, General Directorate of Estimation and Policies.

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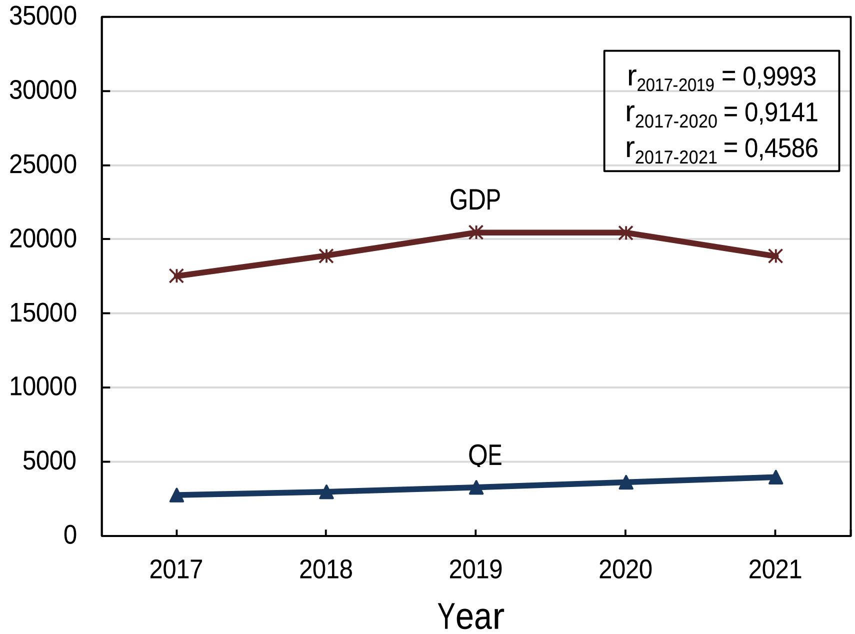
The table above represents the amounts of quantitative easing injected into the national economy, as well as the amounts of gross domestic product (GDP) during the previous years, along with the percentage of quantitative easing compared to GDP.

It is worth noting that the Algerian government did not utilize all the funds allocated for the quantitative easing policy, with the percentage increasing from 15.76% in

2017 to 21.23% in 2021, representing an increase of 5.49%. This is a significant percentage for the Algerian economy.

Figure 2: Quantitative Easing vs Gross Domestic Product (GDP)



Source: Prepared by the researchers based on the data from Table No. (03).

From the previous table and figures, we observe that the contribution ratio of the quantitative easing amounts increased from 15.76% in 2017 to 21.23% in 2021. This explains the trend towards creating an effective contribution for the quantitative easing policy to promote the economy and create a conducive growth environment. This percentage is significant, indicating the strength of the injected amounts in the Algerian economy as a whole, affecting the gross domestic product.

The financing of public spending is limited to three main methods or resources: sovereign resources (taxes and fees, among others), credit resources (borrowing), and economic resources (state ownership of public economic projects). Taxes and fees remain the best and largest ways to finance public spending. Therefore, as the coverage rate of public spending approaches one, it indicates the effectiveness of the tax system applied in a country, and vice versa.

The real indication of the quantity of amounts used in the quantitative easing policy lies in the results it produces in the short and medium term. The contribution to the gross domestic product at the national economy level reflects the ability of the quantitative easing mechanism to address temporary economic imbalances and generate dynamic energy for the economic growth process within the framework of a new monetary policy.

7. CONCLUSION

The research paper aimed to highlight the contribution of the quantitative easing policy in increasing the value of government spending in Algeria from 2017 to 2021. The results indicate that the quantitative easing policy, by injecting a significant amount of money into the market, contributes to increasing borrowing capacity and, consequently, investment. This results in tax revenues used for government spending across various sectors and public utility projects.

The observed inverse relationship between quantitative easing policy and government spending in Algeria during the specified period was influenced by exceptional conditions such as the global pandemic and the resulting economic downturn. When implementing a quantitative easing policy, it is crucial to study the components and interventions in the economy, precisely determine the value of the monetary mass involved in the market, update the information system for optimal control of economic variables, monitor inflation and keep it at the targeted level. Otherwise, the spending volume may double without benefiting from it. The focus should be on identifying areas of spending and directing towards investment spending as the basis for the development process.

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