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## The Effects of Applying Quantitative Easing Policy and its impact on Economy in Algeria

انعكاسات تطبيق سياسة التيسير الكمي  
وأثرها على الاقتصاد في الجزائر

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### Abstract

This study aimed to shed light on the quantitative easing policy as one of the untraditional monetary policy tools; it was adopted as an emergency solution to contain the financial crisis effects. The methods and results of applying the quantitative easing policy differ from one country to another; while the USA and England are considered as models of this mechanism's success; Japan, the European Union and Venezuela are considered as models of its failure, while Algeria is still anticipating in view of the modernity of this experience, even if some of its accomplished results in a short term are positive, it has severe negative effects on economy, which leads the new Algerian government to let go on money print and unfollow this policy; because of the structural disruption in Algerian economy and the inflexibility of the productive device.

**Key words:** Quantitative easing-international monetary policy-financial crisis-money print-structural disruption

المخلص:

هدفت هذه الدراسة إلى تسليط الضوء على سياسة التيسير الكمي كإحدى أدوات السياسة النقدية غير التقليدية، وقد تم اللجوء إليه كحل استعجالي لاحتواء آثار الأزمات المالية، وقد اختلفت أساليب ونتائج تطبيق سياسة التيسير الكمي من دولة إلى أخرى، فبينما تعتبر الولايات المتحدة الأمريكية وإنجلترا نموذجا لنجاح هذه الآلية، يعتبر اليابان والاتحاد الأوروبي وكندا فنزويلا نموذجا لفشلها، بينما الجزائر لازالت تعيش وضع الترقب نظرا لحدائثة التجربة، ورغم بعض النتائج الايجابية التي حققها في المدى القصير، إلا أنه له آثار سلبية وخيمة على الاقتصاد، وهذا ما يجعل الحكومة الجزائرية الجديدة أن تقوم بالتخلي عن طبع النقود وعدم اتباع هذه السياسة، هذا راجع للاختلال الهيكلي في الاقتصاد الجزائري وعدم مرونة الجهاز الإنتاجي.

**الكلمات المفتاحية:** التيسير الكمي، السياسة النقدية غير التقليدية، الأزمات المالية، طبع النقود، الاختلال الهيكلي.

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## 1-Introduction:

Economy is run through the financial policy managed by the Ministry of finance, and the monetary policy managed by the central bank that does that through a group of traditional tools, especially the profit rates' prices. Nevertheless, this tool, after the international world crisis in 2008, became less effective due to the profit prices drop to low levels; as a result, this tool lost its ability to refresh economy.

After the international crisis in 2008, a new type of monetary policy tools has appeared, mostly the quantitative easing policy tool tagged with an untraditional nature from both theoretical and practical sides; because it had been applied with an unprecedented way in the international monetary history, and

with an exceptional urgent way to contain the financial crisis effects.

This tool was applied in Algeria after the oil crisis in 2014, in the cash and loan law exactly in 2017, after the oil crisis collapse that affected a lot on rentier states, the results of applying this mechanism varied between economies and states.

### **1-1- The problematic:**

Through this study, we will try to highlight the different effects and impacts of the quantitative easing mechanism by extracting its success and failure factors in this tool's application.

Through the precedent points, this principal question can be asked:

- ✓ What are the effects and impacts of applying the quantitative easing policy on the Algerian economy?

### **1-2 The study objective:**

The quantitative easing policy is one of the latest topics in view of its world wide application after being used to solve the financial crisis, and its local application after the oil prices collapse crisis, because the study aims to evaluate this mechanism through searching in its different economic and social reflections, the positive and the negative ones.

### **1-3- The adopted method:**

In view of the modernity and importance of the topic, the deductive method was mainly adopted with both its descriptive and analytical tools; in order to emerge the importance and role of the quantitative easing policy during the modern local and international financial crisis, this process was realized through the different available resources like books, memorandums, scientific letters, conferences, bank reports, official web sites,... etc.

### **1-4- The study structure:**

To answer the problematic and clarify its parameters, we treat the following axes:

First axe: The theoretical frame of the quantitative easing policy.

Second axe: Determinants and channels of applying the quantitative easing policy.

Third axe: The money print operation and its effect on Algerian economy.

## **2- The theoretical frame of the quantitative easing policy**

In which we will talk about the following points:

### **2-1- Definition of quantitative easing:**

Quantitative Easing, briefly QE, is the literal translation of this policy's Japanese nomination, which is one of the newest terms on the level of the monetary policies of many countries.

- **Definition 1:** "One of the modern monetary policy tools, in which the central bank buys government bonds to increase the displayed cash."<sup>1</sup>

- **Definition 2:** "The policy which makes the net profit price equal or close to zero."<sup>2</sup>

- **Definition 3:** "The process of buying long term government bonds by the central bank to pump more monetary block in economy."<sup>3</sup>

- **Definition 4:** "It is a monetary policy applied by the central bank by buying government bonds from financial institutions including commercial banks, the thing that supports the lending process and increases credit, which creates money."<sup>4</sup>

- **Definition 5:** "Untraditional monetary policy (money print) used by central banks to refresh national economy, when the monetary policy is not effective, where the central bank buys the financial findings to increase the amount of flowing money to economy."<sup>5</sup>

From the previous points, we can say that quantitative easing is: "One of the unusual central bank tools, used to maintain the

economy's health in case of great decrease in profit prices, or in case of these prices were close to zero, so that it would motivate consumers to spend money through increasing liquidity and pumping money in economy”.

### **2-2- The emergence of the quantitative easing policy:**

The emergence of the quantitative easing policy or tool goes to the great depression crisis in 1929-1932 when it was applied for the first time in 1932, by the American President Roosevelt, which means that they printed a monetary block with no equivalent in the opponents' side in the federal reserve budget; in order to pump it in the American economy as a process that could reduce the panic crisis in American banks concerning the deposit withdrawal by economic agents 6. However, what marked the quantitative easing operation in this period is that it was applied for the first time in the human and economic history, without having an intellectual background, which means that it was applied without having an economic theory or even an intellectual background, and it appeared in the period of abandoning the monetary system-gold exchange- in 1932 and converting to the free release system, which requires a cover to the monetary block and does not have limits in the monetary paper release. However, some of the economics focus on the extent of central banks, all over the world, to apply the quantitative easing mechanism as an untraditional tool of the monetary policy, whose use was expanded with the internet bubble explosion in 2000 and beyond, where the quantitative easing policy was used with an accompanying policy, which is the profit very low prices policy. Central banks rotated in using the quantitative easing tool for one reason or another, we will detail them later, however, we shall point here that when a central bank in any state uses the quantitative easing

mechanism, it should consider partners and to what extent they use this policy.

The Japanese central bank applied this policy by selling government bonds to the financial sector, including the banking sector, and increasing the mandatory reserve rate, subsequently, increasing loans presented to real economy; in 1990, the Japanese central bank decreased the profit price from 7% to 0% with the end of the same year <sup>7</sup>.

Moreover, the American Federal Reserve declared, with the beginning of the 2008 crisis, adopting the quantitative easing policy as a crisis-treating tool, and after many countries started to apply the quantitative easing policy, the European Union is still trying to apply it since 2008 in view of its particularity, which is dealing with the different governments' members, besides the European central bank being concentrated on keeping inflation under control.

### **2-3- The quantitative easing policy objectives:**

**-Affecting the long-term profit rate:** Central banks buy long-term assets because of the exposed ones being decreased by investors; if we suppose the stability of the increasing demand on them through the quantitative easing programs, which contributes in increasing the long terms assets' prices and decreasing the long-term profit rates. <sup>8</sup>

**-Reducing the risks of bonds' prices:** The bonds' prices are exposed to the risk of changes in the profit price throughout the bond's period, therefore, from the most important considerations of the quantitative easing programs is to reduce these risks on bonds, especially the sovereign ones, which have a positive effect on the commercial and investment bonds yield, the thing that encourages investors to circulate them and create suitable liquidity in market.

**-Neutralizing bankruptcy and not fulfilling financial commitments:** Bankruptcy and incapability of borrowers to fulfill their financial commitments towards lenders are considered as the most important aspects of financial crisis, however, adopting the quantitative easing policy works on neutralizing this effect according to the financial rescue plan it provides to the institutions with bankruptcyability; so that they save their assets from collapse, restore the banking trust of financial markets, and reduce the transition of that matter's ramifications to other areas of the world, in light of financial globalization and international financial markets' correlation.

**2-4- The most important differences between the operations of quantitative easing and the ones of open market:**

Through what was previously exposed about the quantitative easing operations as one of the untraditional monetary policy tools, we found that they differ from the open market operations, which were used previously through the untraditional monetary policy in some points, very importantly<sup>9</sup>:

-The financial value of the quantitative easing programs is much bigger than the one of the open market operations which lasts a short period of time that does not exceed few months or even a week, while the first one lasts for years;

-In normal cases of economy, we depend on open market operations which aim generally to effect short term profit rates with very small values, while the quantitative easing policy is adopted in case of financial crisis when the short term profit rates are in values close or equal to zero (liquidity trap), in order to motivate the total demand and the economic activity;

-Through the open market operations, the central bank buys short term treasury bonds, while, through quantitative easing programs, it buys long term financial targeted paper cash with

high credit degree risk, like financial paper cash guaranteed with mortgage, treasury bonds,...etc, which is done for many years;

-Since long term profit prices tend to be higher than short term rates, quantitative easing could push long term rates to lower levels even when short term rates are close to zero, which open market operations could not realize;

-If the final goal of both policies remains the same, which is motivating economic growth, the mediator goal differs, because when we perform open market operations, this goal will be profit prices, while in quantitative easing policy the goal is monetary block.

### **3- Limitations and channels of quantitative easing policy application**

#### **3-1- Limitations of quantitative easing policy application:**

Quantitative easing policy application requires commitment to a group of standards, otherwise, this policy will transform from a tool that solves the crisis to one that we should be careful from, because it will represent one of the crisis reasons and the biggest risk faced by countries that apply this policy. In times of depression, central banks reduce profit rates, and when they reach 0%, they lose their chance to encourage crediting, therefore, they apply quantitative easing policy as an alternative of traditional monetary policy tools, so, the central bank buys long term bonds and reduces profit rates on commercial banks reserves which it keeps, and that leads to decrease keeping liquidity excess at central banks, as a result, crediting size increases, which helps to invest in real economic sectors.<sup>10</sup>

Therefore, quantitative easing policy is applied through two principal stages:

- ✓ The central bank buys government bonds from commercial banks and other financial institutions, which



increases their prices because of the high demand, therefore, long-term profit prices decrease.

- ✓ Short-term debt tools issue and monetary base expansion in economy through monetary issue.

One of the most important risks of quantitative easing policy application is the risk of prices rising in some assets' value, especially goods and normal shares, this situation contributed in decreasing earnings from investments, which caused an increase in unemployment rates.

The profit rate decrease and the liquidity increase lead to the probability of inflation in the future, considering that there is no accurate way that defines the quantity of pumping the suitable money for economy that does not lead to inflation. In addition, the increase in money print leads to losing the currency value and the audience trust, for that reason, investors rush to get rid of financial assets related to currency, which increases the severity of inflation.

### **3-2- Channels of quantitative easing policy effect:**

The essential objective from applying the quantitative easing policy is to transport this policy's effect to real economy in order to eliminate the economic stagnation crisis or mitigate it; many channels can transport that effect, such as:

- a) **The expectations' channel:** The expectations' channel is based on the possibility of making economic agents respond with future procedures that central banks will follow; this channel shows also how quantitative easing programs contribute in maintaining banking trust during the financial crisis. It also takes in consideration the allusion and trust channels which confirms in turn to investors and consumers that the central bank adjusted its procedures and revised its economic future view, and that it also drafted a monetary policy which matches

their ambitions, in order to regain trust in different markets. So, the only exit from the liquidity trap case is to control the economic agents' expectations, and through applying the quantitative easing policy, economic agents' expectations about the future path of monetary policy can be adjusted; which give it back the necessary effectiveness to exceed the financial crisis despite of registering nominal profit rates very close to zero.

We should mention that the effectiveness of quantitative easing policy remains necessarily related to the commitment degree of central banks to execute the declared procedures, which means the degree of central banks' credibility.

- b) **The money channel:** From the theoretical side of money, the quantitative easing policy is a shock in the monetary displayed, its transit channel can be analyzed through the monetary multiplier principle. According to this principle, every change in the monetary base will change the monetary block size, because the monetary multiplier way of work requires a stability in time and a rapidity in cash turnover, but this special hypothesis (stability of the monetary multiplier) is not always available, because in some cases, change in the monetary base is bigger than what happened in many international economies during the international financial crisis in 2008, such as the Euro area, that is why we say that the monetary multiplier mechanism cannot explain the quantitative easing policy effects on some economies.

What is remarkable is that all the monetary liquidity pumped due to the quantitative easing policy transferred

to accumulations in banking reserves, despite of decreasing the obligatory reserve rate. On the other hand, there is a lot of nonfinancial institutions that refuged to the financial market in order to guarantee their financial needs through the bonds and shares issue without borrowing from the bank financing, this has also contributed in the reserves' accumulation at commercial banks, which pushed monetary authorities to apply negative profit rates on deposits in order to liberate banking reserves.

- c) **Assets' price channel:** According to this channel, the expansive monetary policy rises the assets' prices, due to the increase of capital and bonds' value caused by an extern shock to buy assets. This effect is realized through four channels: expectations' channel indicated previously, liquidity, wallet adjustment, and period channel. Through the liquidity channel, the central bank, on the base of quantitative easing programs, issues cash by the means of paper or electronic money, as what the American Federal reserve bank did during the international financial crisis period in 2008, in order to guarantee the necessary liquidity in markets. In addition, to succeed its effect on assets' prices, there must be an incomplete substitute between money and long-term assets to avoid the monetary hoarding phenomenon. It can also be called loans' channel since it allows facilitating the operation of financing economic agents by improving their assets side value, which allows them to present good guarantees to banks versus loaning.

The operation of buying assets by the central bank contributes in reducing those assets' stock size owned

by investors and financial mediators, which effects their prices even in the medium and long term due to the scarcity effect, then leads to reducing risks and adjusting the structure of investors' wallet, that is called the wallet adjustment channel.

The wallet adjustment channel can be completed by the period of time channel effect, where long term assets buying operation works on reducing the period of time average of the assets stock owned by investors with a low risk degree, the thing that can change quickly the assets' prices through the quantitative easing programs.

- d) **The exchange price channel:** The quantitative easing policy can significantly affect the currency exchange prices, where nominal profit rates were in low levels when it was applied, we especially mention here the quantitative easing operation released by the American Federal Reserve Bank in the open market committee to support the American economy during the year 2008, and it resulted in a huge operation to buy bonds and a great mobility for capitals witnessed by the different world countries, which caused a big flow of dollars in order to benefit from the great growing rates and the rapidity of capital rotation, especially in the nascent economies (around 150 billion dollars every month), the fact that contributed in buying their currencies versus dollar and increasing their demand in the exchange market, therefore, the increase of their value versus dollar, which put the growing countries exports in a weak competitive situation, because, from a theoretical view, the local currency value drop affects positively on the competitiveness of the state exports, on the other hand, there is an increase in the imported goods' prices,

which reinforces the inflation expectations and raises the imported inflation rates.

There is certainly a big competitiveness between the countries' economies, especially the growing ones, concerning the negative profit rates application, in order to decrease their currencies versus dollar and reinforce their exports' competitiveness even if that was at the expense of commercial partners, which is known as the currencies' war, where American authorities threatened, in the Donald Trump rule, to impose customs taxes that could reach 40% on Chinese goods due to the deliberate and constant reduction of the Chinese Yuan.

What can be said is that the effectiveness of this channel is mainly related to the development of the growing economy international rates which were very low during the last international financial crisis, where the petrol prices drop, starting from summer 2014, contributed in reducing the goods and services prices, therefore, this drop limited the creation of positive inflation expectations, which postponed the healing of some international economies from retraction.

#### **4- The money print operation and its effect on Algerian economy**

##### **4-1- The money print operation:**

Before adjusting the cash and loan law in 2017, the quantity of money printed daily by Algeria reached 2 million billion dinars, where the Algerian printing house takes in charge the print operation of national currency, which makes it the first African and Arabic country that owns a special money printing house, because Algeria has evolved in the money print field which reached 2 million billion dinars while it did not exceed 2 billion dinars in 1962. Concerning money print, since 1965, the

finance house uses its special tools in making bank money and printing metal currency in Algeria, where the central bank spent a long time, between 6 and 7 months, to print this money, because of the caution in choosing the different platelets, inks, and colors which cover both currency faces, plus the determination of paper quality that is distinguished with stiffness, because it does not rive unless it was pleated five thousand times, which is the particularity that distinguishes paper cash.<sup>12</sup>

The untraditional financing formula was applied after adjusting the cash and loan law 90-10 under the 17-10 law passed on October 11<sup>th</sup>, 2017 and completed to the 3-11 order passed on August 26<sup>th</sup>, 2003 and later in the official newspaper number 57 on October 12<sup>th</sup>, 2017. The essence of adjustment that touched the cash and loan law appears clearly through the article 45 bis, which states that, regardless of any contrary judgment, the Algerian bank, starting from the beginning of this law's exceptional execution, and for five years, buys, directly from the treasury, financial bonds issued by this latter in order to contribute particularly in:

- Covering the stock financing needs;
- Financing the public intern debt;
- Financing the national investment fund.

According to this new article, this mechanism comes to accompany the execution of the structural economic reforms program and the budget, and it should result at the end of the defined period as a maximum limit to:

- State treasury equilibrium;
- Paying balance equilibrium.

“The mechanism of this finance execution pursuit is defined by the treasury and the Algerian bank through organization”, according to the same article of the law text.

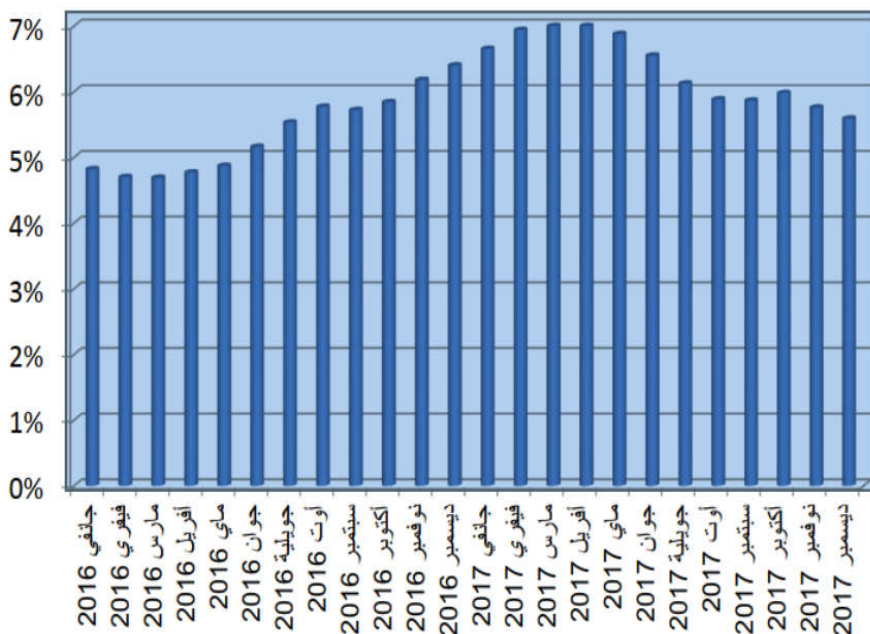
The essential difference between the quantitative easing programs adopted by the different world economies to face the financial crisis in 2008, and the untraditional financing programs adopted by Algeria is that the quantitative easing has appeared as a result to the inefficiency of the traditional monetary policy tools in motivating the economic activity, because the financial markets were trapped in liquidity, therefore, the nominal profit rates were in low levels, while in Algeria the mechanism differs 13, where the quantitative easing is adopted to guarantee an untraditional financing in order to cover the public treasury inability, because it came to face the petroleum shock ramifications and the oil prices drop which drained the state's financial resources, and not because of the inefficiency of the traditional monetary policy tools in Algeria.

#### **4-2- The quantitative easing effect on Algerian economy:**

Printing money with no cover leads to one essential result, which is prices rise, where the monetary supply increases without having in parallel an increase in goods and services, this is the principal result, but there are other negative effects on the whole economy which can lead to the total currency collapse and then the entire economy's, afterwards, people will lose their trust in currency, which leads to a wave of pessimism that makes people get rid of the currencies they have and buy foreign ones, which reduces their value more and more, and at the end they collapse with the entire economy. On the other hand, printing more money could be one of the economic policy tools to refresh economy; in addition, the reality of adopting untraditional financial resources for the public treasury will affect positively its capacity to cover its expenses: salaries, consumables support bills, public investment bills...etc. However, that may cause serious ramifications on the medium and long term, while this operation did not accompany a tight

developmental strategy being based on scientific and economic principles, and we can notice the effect of the money print policy through many signs; most importantly: inflation, buying power at a medium term, and unemployment at a long term.<sup>13</sup>

**Form 1: Prices increase and inflation**



**Source:** Algerian Bank, annual report, economic and monetary development of Algeria, July 2018, p134.

Through the painting, we notice that the inflation level is rising since 2016 until 2017, but on June 2017 it starts to decrease gradually, which led to the non-expansion of the monetary block, controlling inflation since 2017 until the present day knows a remarkable improvement.



**Form 2: Unemployment rates**



**Source:** [WWW.TRADINGECONOMICS.COM](http://WWW.TRADINGECONOMICS.COM) National office of statistics (ONS)

The unemployment rate in Algeria reached 10.5% in 2016, and then it reached its highest level ever, which is 12.3% in the first quarter of the year 2017, in comparison with September 2016 when it was at the limits of 10.5%, therefore, the number of Algerian unemployed persons is 1.508 million persons, with marking an 11.7% rate of rising.

In addition, the quantitative easing policy affects loans offered by commercial banks and deposits, because the central bank deposits are principally based on bought long term government bonds, whose value is equal to the printed paper cash value; plus, reducing the obligatory reserve rate of commercial banks by the central bank due to the profit rate drop leads to increasing liquidity at banks.

The quantitative easing policy also reduces the compositions of investors' financial wallet, liquidity degree in financial markets,

profit rates, and the currencies' value of the states applying this policy because of the monetary displayed rise.

### **5-Conclusion:**

The quantitative easing policy is considered as one of the most important untraditional monetary policy tools; however, this policy has defined conditions which have to be available in reality before applying it so that it has the positive and desired effects; otherwise, it will reflect negatively on economy considering that this monetary block does not have an equivalent, and it shows quickly inflation pressures that are bigger than the realized economic growth, besides, the other negative effects of the monetary block, which shall be directed to the not interchangeable sector in case of non-flexibility of the productive system, which leads to increasing the fatigues of the interchangeable sector that starts to gradually decompose as a result of the demand increase on foreign goods, therefore, it loses its competitiveness gradually. Generally, through this research paper, we reached many results that we mention as follows:

- The quantitative easing was applied in advanced countries to overcome the shrinkage and refresh economy regarding the financial markets crisis, in opposite of developing countries which applied it to provide an untraditional financing resource for the treasury and cover the deficit due to oil prices collapse crisis;
- Quantitative easing policy is similar to deficit financing policy in adopting the principle of taking money from void, but they are radically different considering this money's uses and the benefited economic agents, not to forget its purpose;

- The USA and England are considered as models of quantitative easing mechanism success, as a result of rapidity and efficiency in the endorsement and application of this mechanism, in addition of focusing on consummation spending through supporting the buying power of individuals and families;
- Adopting the untraditional financing in Algeria is considered as a pure politic decision in the shade of excluding the extern economy, which poses the problematic of the central bank dependence and its submission to the country's politic authority;
- The Algerian economy problem is the structural defect not the annual general equilibrium financing or even the economic agents financing. Therefore, applying quantitative easing policy in Algeria is useless in the shade of these circumstances, and this application will have serious negative reflections on Algerian economy.

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