

Analytical study on the economic conjunctural policies applied in Algeria during (1990-2021)**دراسة تحليلية حول السياسات الاقتصادية الظرفية المطبقة في الجزائر خلال الفترة (1990-2021)****Dr. ABBES Amina¹**¹ Djillali Liabes University, Sidi Bel Abbes (Algeria), amina_abbes26@yahoo.fr**Received:** 15/10/2022**Accepted:** 31/12/2022**Published:** 31/12/2022**Abstract:**

As economic policy issues regain credibility in the context of financial crises and various external shocks, this study attempts to evaluate the economic stabilization policies applied in Algérie since 1990, by an econometric and an analytical analysis of the conjunctural policies, and their different instruments in order to promote the national economy.

The results indicate the weak effectiveness of these policies on the country's economic growth, because the funds for fiscal stimulus policy were directed only to promote basic infrastructure and import foreign goods, in contrast, the monetary policy has always considered the money supply as an endogenous variable through printing press and the repeated financing of budget deficits. Thus, we can affirm that the conjunctural policy practiced in Algeria is a victim of a misallocation of resources, which should be directed first to the sectors that create wealth and added value, to not rely only on oil revenues.

Keywords: Economic conjunctural Policy, Economic recovery plan, Resource Allocation, granger causality, impulse response function.

JEL Classification Codes: E52, E62, H3

ملخص:

في عز الازمات المالية وتواتر الصدمات الخارجية، تستعيد مسألة السياسات الاقتصادية مصداقيتها في الأوساط الأكاديمية، إذ تحاول هذه الدراسة تقييم مسار السياسات الاقتصادية المطبقة في الجزائر منذ التسعينات، وذلك من خلال دراسة قياسية وتحليلية للسياسات الظرفية ومختلف أدواتها، بهدف النهوض بالاقتصاد الوطني.

من خلال النتائج، تظهر الفعالية الضعيفة لهذه السياسات على النمو الاقتصادي للبلد، حيث أن الأموال التي جاءت بها السياسة المالية التوسعية لم يتم توجيهها سوى لتعزيز الهياكل الأساسية واستيراد السلع الأجنبية، في المقابل، اعتبرت السياسة النقدية دائما العرض النقدي متغيرا داخليا من خلال طباعة النقود والتمويل المتكرر لعجز الميزانية. بالتالي، يمكننا الجزم أن السياسة الظرفية التي طبقت في الجزائر كانت ضحية سوء تخصيص للموارد، والتي كان من المفروض توجيهها أولا إلى القطاعات الاقتصادية الحية المنتجة للثروة والقيمة المضافة، عوض الاعتماد فقط على عائدات النفط ومداخيل المحروقات.

كلمات مفتاحية: السياسة الاقتصادية الظرفية، خطة الإنعاش الاقتصادي، تخصيص الموارد، سببية فرانجر، دوال الاستجابة.

تصنيفات JEL : E52، E62، H3

INTRODUCTION:

The ultimate goal of any economic policy is to maximize the population's well-being and realize a country's internal and external balances through four indicators: the GDP growth rate, the unemployment rate, the inflation rate and the current account balance. Indeed, confidence in market mechanisms was dominant for a long time, until the 1930s, when the long duration of the 1929 crisis cast doubt on these self-regulating mechanisms through the introduction of public interventions in the form of stabilization policies in the economic sphere. Thus, several stimulus plans were implemented worldwide after the Second World War and even after the last crisis in 2007 to support demand and growth.

Concerning Algeria, since independence, the government tends to build a robust platform allowing it to set up a viable economic base by focusing on the industry and that, thanks to the oil rent, the real source which feeds the Algerian economy. Indeed, following the oil counter-shock of 1986, Algeria is in an uncomfortable situation pushing the government to apply new structural reforms due to the inefficiency of the centralized economy. However, the reforms applied did not lead to the reorganization of a real economic and financial sector and faced with a disastrous situation of the economy marked by an unsustainable debt causing a cessation of payment, the government was obliged to sign agreements with the Bretton Woods institutions by applying a structural adjustment plan which tends towards a break with a centralized economy and the adoption of globalization and free trade. This structural adjustment program aimed to correct internal and external imbalances through:

- the liberalization of foreign trade,
- devaluation of the national currency,
- the cancellation of state subsidies,
- the reform of the public sector and the issue of privatization,
- the liberalization of the banking system,
- the application of counter-cyclical stabilization policies to address imbalances.

This paper is devoted to the last point of the program, namely stabilization policies, given their importance in the current context, marked by economic globalization and multiple systemic crises. Thus, the main goal is to evaluate the economic stabilization policies applied in Algeria since the 1990s, which leads us to try to answer the following questions:

- What are the foundations of economic policies, and what are the conditions of their relevance?
- Which instruments should be used in a counter-cyclical stabilization policy?
- What is the impact of these stabilization policies on the Algerian economic growth?

To begin our research, it is necessary to consider the following hypothesis:

The stability of the national economy owes much to the economic policy pursued by the government.

To answer our problem and verify our hypothesis, we will restructure our work into two parts: the first part will focus on the definition of economic policies, their foundations and

conditions of efficiency. In contrast, the second part will focus on evaluating the economic stabilization policies applied in Algeria during 1990-2021, by an econometric study using Eviews 10 program.

1- Literature review:

Among the closest studies we have:

Kone (2000) attempted to assess the framework within which shocks influence these applied stabilization policies in UEMOA countries. The results showed that national fiscal policies adjust to shocks with little room for maneuver, while the relative effectiveness of monetary policy is manifested through the degree of reaction to shocks affecting inflation, the import rate and the terms of trade. (Kone, 2000)

Daly and Smida (2013) conducted an econometric study to estimate monetary and fiscal policy rules and better understand the policy interactions in Greece. The results indicate that monetary policy has the main role in stabilizing the economy, especially through financing the budget deficit and monetary management. (Daly & Smida, 2013)

In her doctoral thesis, Sidi Mammar Houari Lydia (2021), through an ARDL model, tried to assess the effectiveness and limitations of macroeconomic policies in stabilizing external shocks in Algeria, including the counter-oil shock of 2014. The results indicate the weakness of both monetary and fiscal policies in stabilizing these external shocks. This weakness is explained by the presence of structural rigidities that limit the absorption capacity of short-term policies. (Sidi Mammar Houari, 2021)

2-Conceptual and theoretical framework:

2-1Definition of economic policy

Thinking about economic policies means thinking about the intervention of the State in the market economy and justifying the need for this intervention in several areas due to market imperfections leading to socially unacceptable situations, hence the definition of economic policy which consists of the deliberate manipulation by the State of a certain number of instruments or means to achieve certain ends or objectives (Guy, 2000, p. 09). This definition sheds light on the main components of economic policy, which are:

Objectives: to obtain social welfare, in 1971, Nicolas Kaldor mentioned in his magic square the four goals to be reached and which are: good economic growth (GDP growth rate), full employment of the factors of production (measured by the unemployment rate), stability of prices (through the inflation rate), and finally, the external balance (through the balance of payments)

Instruments: to achieve these objectives, the State has several instruments at its disposal, depending on the type of economic policy advocated, i.e., *either a cyclical or economic stabilization policy* that acts in the short term by taking one-off measures to moderate overheating or to get out of a crisis, thanks to its two main instruments, i.e., budgetary policy and monetary policy, which can also be practiced simultaneously in the form of a mixed

policy. (Pouch, 2006, p. 15) Alternatively, a *structural economic policy* seeks to obtain growth and stability but, this time, in the long term, by modifying the structure of economic life through several instruments, namely: social policy, environmental policy, industrial policy, agricultural policy, transport policy or housing policy. (OECD, 2010, p. 06)

The State: or public authorities, consists of a network of various organizations and institutions that intervene at different levels in the field of economic policy (Guy, 2000, p. 24), including *the government*, composed of all the ministers and even the head of State, *the parliament*, which serves in particular to control economic policy decisions, such as voting on state expenditures and revenues, the administration, such as the central bank and the social security agencies. The courts enforce economic legislation and other legal regulations (such as competition law or price policy).

2-2 The foundations of economic policy:

State intervention in the economy is based on two opposing conceptions: the liberal and the interventionist conceptions. According to the first conception, the State should not intervene in economic activity because, for liberals, only the interplay of supply and demand can determine the equilibrium price. In other words, in a self-regulating market, the State is minimal and must only watch over the need for security felt by any individual who feels threatened by his/her fellow human beings, as well as the functions of justice, defense and foreign policy. It is, therefore, the gendarme State. However, with the crisis of the thirties, it became clear that one could not have total confidence in letting the market regulate itself, and the State had to intervene in the economic activity to guarantee full employment and to place a system of social security, it is thus that the welfare State is born. (Cohen, 2000, p. 01)

The American economist Richard Musgrave, in his theory of public finance (1959), develops a typology of the foundations of government intervention in a market economy by distinguishing three functions of the State, which are: the resource allocation function, the wealth and income redistribution function and the economic stabilization function, where each function tends to remedy a *market failure* through an appropriate economic policy.

2-2-1 The resource allocation function:

The resource allocation function is justified in the following three cases:

- **The effects of increasing returns:** some firms benefit from an increasing return to scale (because unit costs decrease when production increases due to the distribution of fixed costs over the volume of production), making them more efficient on the market to the point of being able to form monopolies and eradicate any potential competitor. In this case, if it is a question of companies working in the field of energy or electricity, the intervention of the State is well founded. It must act so that these companies cannot abuse their increasing efficiency to penalize national competitors by placing protections on the national market, nationalizing them or by capping the degree of openness of the national economy. (Agostino, 2005, p. 04)
- **The existence of externalities** represents the positive or negative consequences of the economic activities of certain agents on the well-being of other agents. In these

conditions, the State intervenes by practicing a fiscal policy to penalize the economic agents at the origin of negative externalities (the principle of the polluter pays, which must be applied to certain companies polluting the atmosphere by their rejection of toxic gas) and tax exemptions for economic agents that generate positive externalities (such as companies that take care of the environment by recycling their waste).

- **The production of collective goods:** these are goods that can be consumed simultaneously by a large number of consumers (everyone can benefit from the good from the moment it is produced), such as public lighting, national education services, health and basic infrastructure, the production of which requires costly investments that may exceed the financial capacity of private investors. Therefore, the State must assume the production of these goods or help the private sector to produce them.

2-2-2 The wealth and income redistribution function:

To achieve the objective of social justice and to correct the distribution of income resulting from the functioning of the market economy for better social cohesion, the State must ensure public transfers between well-to-do and less well-to-do economic agents, in the form of family allowances, housing subsidies, pensions, and aid to students, just as it can modulate public prices according to the income of consumers and their social situation, such as rents for low-cost housing and special transport fares. There are also situations in which economic agents may be deprived of income for reasons beyond their control, such as the ruin of farmers following floods or drought; in such cases, the State must intervene in the name of national solidarity by providing allowances financed by tax deductions from other economic agents. (Agostino, 2005, p. 05)

2-2-3 The function of stabilizing the economy:

To maintain the major macroeconomic equilibria of full employment, price stability and foreign trade balance, the State must intervene in high and low economic situations with fiscal and monetary policies appropriate to each situation. This function is based on the Keynesian logic of effective demand, according to which the State must apply cyclical policies of recovery or rigor to modulate the level of aggregate demand for better growth and, thus, a reduced level of unemployment and stable inflation.

2-3 Conditions for the relevance of economic policy:

Adopting an economic policy requires prior knowledge of the economic environment to better measure the variables used to achieve the desired objectives. From this point of view, the intervention of the State must respect the following rules: (Duthil & Marois, 1997, p. 27)

2-3-1 Tinbergen's coherence rule explains that an economic policy must have at least as many instruments as objectives. In other words, the condition of a minimal coherence of the behavior of the State is that the latter uses in its intervention in the economy several instruments equal to that of the objectives that it wishes to achieve.

2-3-2 Mundell's efficiency rule stipulates that an economic policy must choose the most effective instrument to achieve its objective. That is to say that instruments are more or less effective depending on the objectives, so it is in the government's interest to select the most reliable instruments for achieving its goals.

2-3-3 Avoiding conflicts between objectives: conflicts of objectives are divergences or oppositions that may exist between the objectives targeted by the economic policy; if, for example, the government opts to improve the level of employment while the monetary authorities aim for price stability, knowing that there is an inverse relationship in the short term between inflation and unemployment, in this case, the policies will be faced with a conflict of objectives.

2-3-4 Avoiding conflicts between instruments themselves: there are conflicts between instruments within the same policy, forcing the authorities to make the right choice. For example, in an open economy and a floating exchange rate regime, the central bank must choose between the money supply and the exchange rate, but not both at the same time, because an increase in the money supply leads to a depreciation of the exchange rate and vice versa. (Pebereau & Arvisenet, 1999)

2-3-5 Taking into account delays or response times: the time between when action is warranted for the adoption of a policy and when the policy produces the expected results. For example, in the case of fiscal policy, the policy must first be passed by parliament before it is implemented.

2-3-6 Taking into account crowding out effects, including: (Vidal, 1984)

- **Transaction crowding out:** for example, as a result of increased government spending, aggregate demand increases, leading to an increase in the demand for transaction money, and to maintain equilibrium in the money market, the demand for speculative money must fall by raising the interest rate. As a result, a domestic demand that is sensitive to the rise in interest rates (investment) is curtailed, and thus the increase in income resulting from the expansionary fiscal policy will be lower.
- **Exchange rate crowding out:** the increase in interest rates following the increase in the budget deficit may encourage foreign capital inflows in search of better returns, pushing the domestic currency to appreciate. However, this currency appreciation weakens the competitiveness of exports, and so the initial increase in income following the expansionary fiscal policy diminishes because of the slowdown in exports.
- **Crowding out by expectations:** this is the sense in which Barro considers that taxes and deficits are equivalent in terms of financing public spending because fiscal policy remains ineffective as long as economic agents perfectly anticipate the future levies caused by the increase in public debt. According to the economist Arthur Laffer, any excessive tax policy ends up slowing down activity and growth because beyond a certain level of taxation, people are disincentivized to work by reducing their economic activities, and therefore following this reduction in growth, government revenues will also fall. Hence the expression "*too much tax kills tax*" is relevant in this case.

3- Evaluation of the economic stabilization policies carried out in Algeria:

After the failure of several structural economic reforms and faced with a disastrous situation marked by unsustainable debt, the government was obliged to sign agreements with the Bretton Woods institutions by applying a structural adjustment plan, in which the application of counter-cyclical stabilization policies, i.e., both fiscal and monetary policies, was paramount.

We will present a historical overview of the two economic policies during the period 1990-2021, and then move on to an econometric study on the same period, in order to evaluate the effectiveness of these two policies on the economic growth of Algeria.

3-1 Historical overview of the conjunctural policy of Algeria:

3-1-1 Fiscal policy:

The Algerian government has opted for a fiscal stimulus policy through an increase in public spending, which will impact public consumption and public investment, and consequently on aggregate demand, to address the crisis and restore economic growth.

Table (1): Budgetary expenditures and budgetary incomes (billion DA)

	1990	1995	2000	2003	2012	2014	2019	2021
Bud. Expenditures	136.5	759.7	1178.1	1752.7	7058.1	6980.2	7741.3	8113.3
Bud. Revenues	147.3	578.1	1578.1	1966.6	6339.3	5719.0	6601.6	5327.9

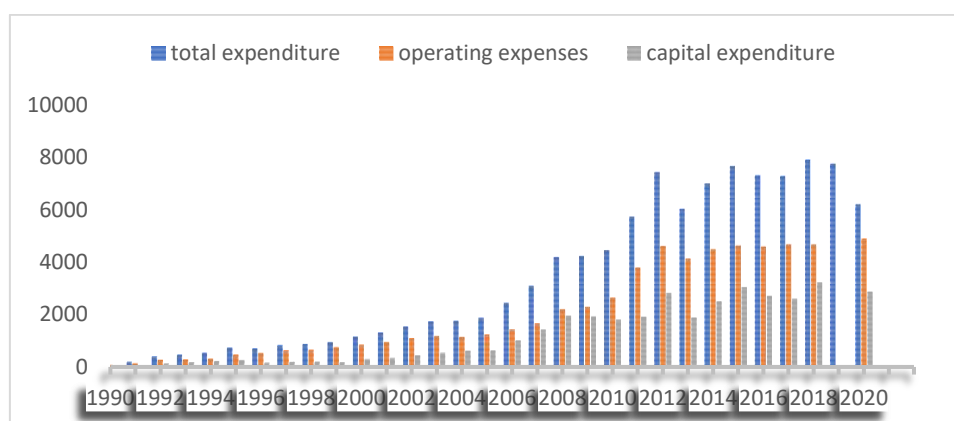
Source: National Statistics office (1990-2021).

A constant increase in budgetary expenditure (operating and capital expenditure) marked the first decade (1990-2000), while during the second decade (2000-2010), overall budgetary expenditure increased by 530%, i.e., an increase of 3288.7 billion DA. However the last decenny (2010-2021) was marked by a certain stability pending the launch of the last economic recovery plan (2020- 2024).

This includes a significant increase in expenditure from 2004-2005, following the various programs put in place by the government for economic and social development, taking advantage of the financial resources available to the country. (Benabdallah, 2007, p. 07)

Consequently, various programs have been set up by the public authorities for economic and social development benefiting from the financial resources available to the country.

Fig(1): Evolution of budgetary expenditure



Source: Author based on National Statistics office.

The first program elaborated in this category is **the program of support to the economic revival** (*Programme de soutien à la relance économique - PSRE*), endowed with an envelope of 7 billion dollars between 2001 and 2004 to revive the economic growth by an expansionist budgetary policy through the increase of the public expenditure of equipment to develop agriculture (the national plan of agricultural development PNDA) or the infrastructures and transport.

A second public investment plan was put in place in 2005 called the **Complementary Growth Support Plan** "*Plan complémentaire de soutien à la croissance*" PCSS for the period 2005-2009 with a budget of 55 billion dollars to consolidate the previous plan, namely the development of the transport sector, public works, agriculture and hydraulics, as well as support for the creation of added value and employment among others. (Guehairia & Zouaoui, 2013, p. 06)

In addition to these two plans, the government launched a **third economic recovery plan** in 2009, at a time when the world was affected by the crisis of 2008, the five-year plan 2010-2014 with a budget of \$ 286 billion to continue the old projects started and other new projects (national education, health, drinking water, housing or knowledge economy (Council of Ministers, 2010)). However, following the oil counter-shock of 2014, budget deficits began to widen more and more during the period 2014-2016 (Smaili & Khelassi,A, 2021, p. 854), pushing the government to fill the gaps through the RRF (revenue regulation fund, which was also sold in 2020), as well as the practice of non-conventional financing in 2017 by mobilizing 6556.2 billion dinars between 2017 and 2019. (Concil of ministers, 2021, p. 125)

Table (2): Distribution of the amount of non-conventional financing

Distribution	Amount
Fund the treasury deficits during 2017, 2018 and part of 2019.	2470.0
Repayment of the public debt to Sonatrach and Sonelgaz	1813.0
Repayment of the bond issue for growth	
To finance the debt of the CNR towards the CNAS	500
Financing the AADL programs	1733.2

To finance the deficit of the CNR and structuring projects	
Total	6556.2

Source: Economic Recovery Plan (2020-2024), available on

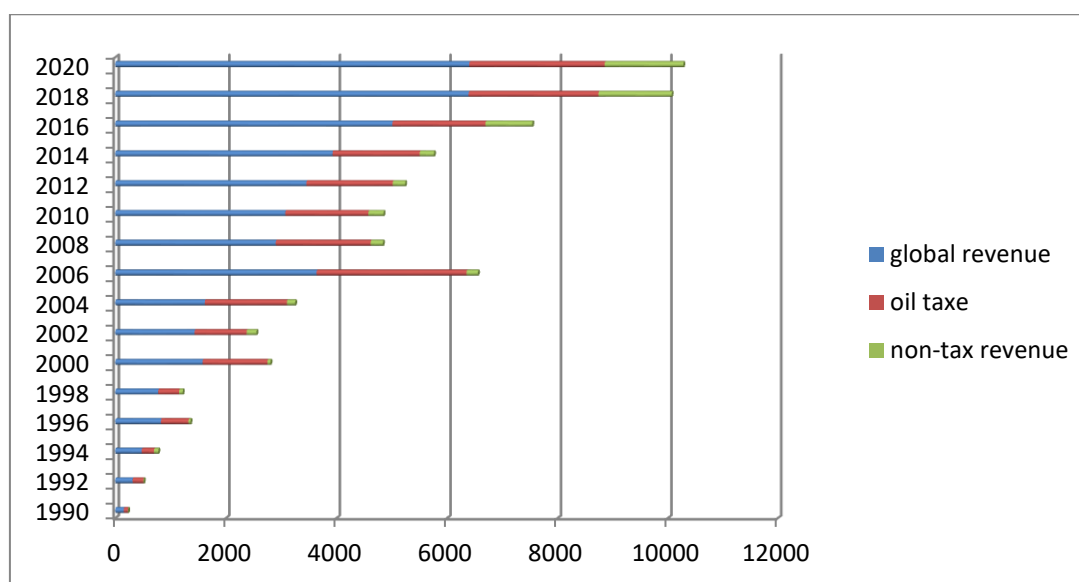
<https://www.energymagazinedz.com/wp-content/uploads/2021/12/Plan-de-relance-economique-2020-2024-fr.pdf>

According to the last Economic Recovery Plan Report (2020- 2024), the amount Investment in the state budget is DA 1,710 billion. These capital expenditure will be devoted mainly to infrastructure (230.6 billion DA), to support access to housing (DA 193.7 billion), communal development programmes (100 billion DA), education and training (94.35 billion DA), Agriculture and hydraulics (DA 46.5 billion), socio-cultural infrastructure (DA 40.9 billion), support for productive services (DA 2.33 billion), Mining and Energy (DA 1.82 billion).

Regarding the budgetary revenues, during the first two decades, the following graph shows an extreme dependence of global budgetary revenues on oil taxation, which itself depends on the price of hydrocarbons on the world market.

Indeed, the proportion of oil taxes in total revenues has reached more than 60% on average, with an increase in revenues in 1996 equivalent to three times that of 1992 (more than 550 billion DA against only 180 billion DA) As a result of rising crude oil prices.

Fig(2): Evolution of budgetary revenues



Source: Author based on National Statistics office.

3-1-2 Monetary policy:

With regard to monetary policy, and in the face of an expansive fiscal policy, the government has applied a restrictive monetary policy to sterilize the existing surplus liquidity following the rise in oil prices in the 2000s to guarantee a certain stability in prices. Several traditional and new instruments (interest rates, reserve requirements, open market, credit auctions, deposit facilities) have been used by the monetary authorities, the most important of which are: the rediscount rate, reserve requirements and liquidity recovery.

3-1-2-1 The rediscount rate:

As a result of the inflation rate overshooting during the 1990s was between 17 and 29%, the rediscount rate was forced to follow the same pace upward to 15% in 1995. However, from the 2000s, this same rediscount rate has gradually decreased from 9.5%, 6%, and 4% to 3.75% in 2019.

Table (3): Evolution of the rediscount rate

year	1990	1994	1995	1998	1999	2000
rediscount %	10.5	11.5	15	11	9.5	6
year	2002	2008	2016	2019	2020	2021
rediscount %	5.5	4	3.5	3.75	3.75	3.75

Source: Quarterly statistical bulletins of the Bank of Algeria (01f,22f, 49f, 52f and 55f bulletins).

This decrease in the rediscount rate does not automatically explain the stability of the general price level, nor the change in the goal of monetary policy (inflation targeting), only from the 2000s. The price of crude oil experienced real increases reflected in the level of existing liquidity, which meant that banks no longer needed to make rediscount operations, and therefore, the monetary authorities did not need to increase it by leaving it stable to the present day.

3-1-2-2 Required reserves:

The Bank of Algeria introduced this instrument in November 1994, requiring banks to constitute an amount of their collected and/or borrowed liabilities in dinars up to 2.5%. Also, a penalty at a rate set by the Bank of Algeria will be applied to banks that totally or partially fail to comply with the requirement to constitute this reserve.

Table (4): Reserve requirement rates

Year	1994	1996	2001	2002	2004	2009
Mandatory Réserve %	2.5	2.5	4.5	6.25	6.5	8
Year	2011	2013	2017	2019	2020	2021
Mandatory Réserve %	9	12	4	10	6	2

Source: Quarterly statistical bulletins of the Bank of Algeria (01f,22f, 49f, 52f and 55f bulletins).

However, as the banking system lacked liquidity, requiring the central bank to set up a reserve, even at a reduced rate, would have increased its illiquidity, so this instrument was not activated until 2001. Given the situation of unprecedented excess liquidity following the fallout of oil resources, this rate has shifted upward with a rate of 4%, then 4.5 according to the instruction No. 06/2001, then to 6.25%, 8%, 9%, until 12% and 10% for the last two decades, with the exception of the year 2017 with a rate of 4% following the 2014 oil shock, when budget deficits began to widen more and more during the period 2014-2016.

So, following the practice of unconventional financing in 2017 and the mobilization of 6556.2 billion dinar between 2017 and 2019, the Bank of Algeria was forced to increase the rate of incorporation to 10% in 2019.

Despite these consecutive increases in the rate of required reserves, the Bank of Algeria has introduced new instruments such as the recovery of liquidity and the auction of credits to ensure that a sufficient proportion of the abundant liquidity on the interbank money market is available for use.

3-1-2-3 fixed-term deposits (resumption of liquidity):

When the liquidity situation remains a concern despite the use of conventional instruments, the monetary authorities can use another instrument called “fixed-term deposits”, which is a more flexible way than the reserve requirements, because it is done on a day-to-day basis and leaves the initiative to the banks without any obligation to constitute or not liquidity back-up by tender, with a rate of remuneration by the central bank

Table (5): Rate of remuneration on fixed-term deposits

Year	2002	2004	2007	2015	2016	2019	2021
7 day recovery %	2.75	0.75	1.75	0.75	0.75	3.50	-
Year	2002	2005	2013	2015	2016	2019	2021
3 month recovery %	-	1.90	1.25	1.25	1.25	-	-
Year	2012	2013	2014	2015	2016	2019	2021
6 month recovery %	-	1.50	1.50	1.50	1.50	-	-

Source: Quarterly statistical bulletins of the Bank of Algeria (01f,22f, 49f, 52f and 55f bulletins).

The Bank of Algeria introduced this indirect monetary policy instrument in 2002 in the form of liquidity resumption at 7 days, then in 2005, the resumption of liquidity at 3 months was introduced, as well as the resumption at 6 months in 2013.

The liquidity recovery has become the preferred means of the bank of Algeria to absorb significant liquidity, largely exceeding the levels required to replenish reserve requirements. But from 2017, the recovery of liquidity at 3 months and 6 months was stopped against the 7-day recovery which was suspended in turn from October 2020.

3-2 The econometric study:

In order to evaluate the stabilization policy on economic growth of Algeria, we will start with a cointegration approach, followed by the Granger causality test, and finally the impulse response test to demonstrate the impact of the variable's shocks responsible for the applied policies on economic growth.

3-2-1 Data and procedure :

- **Study variables :** We will use an annual data covering the period 1990-2021, obtained from World Bank sources, where fiscal policy is represented by the two variables REC & DEP, and monetary policy is represented by M2 & TC as following.

Table (6): the study variables

Source: Author based on World Bank data.

- **Estimation of the structural equation:** The empirical model to be estimated for Algeria adopts a modified version of the St LOUIS model (Aderson & Jordan model (1968)) to test the effectiveness of monetary and fiscal policy on economic activity, using the formula of the following mathematical model :

$$\text{GDP} = f(\text{REC}, \text{DEP}, \text{M2}, \text{TC})$$

Variables	Type of variables	Description
GDP	Endogenous	GDP (Nominal value in current local currency)
REC	Exogenous	Budgetary incomes (Nominal value in current local currency)
DEP	Exogenous	Budgetary expenditures (Nominal value in current local currency)
M2	Exogenous	Money supply (Nominal value in current local currency)
TC	Exogenous	USD/DZD exchange rate

$$\text{GDP}_t = \alpha_0 + \alpha_1 \text{REC}_t + \alpha_2 \text{DEP}_t + \alpha_3 \text{M2}_t + \alpha_4 \text{TC}_t + \varepsilon_t$$

- **Stationary test :** after adopting the ADF test, we have obtained the following results ;

Table (7):stationary test results

Variables	Level			First difference		
	Calcul/ val	Critici/ val	Probab 5%	Calcul/ val	Critici/ val	Probab5%
GDP	-2.414048	-3.562882	0.3656	-5.654960	-3.568379	0.0004
REC	-3.145928	-3.568379	0.1144	-3.696888	-3.568379	0.0382
DEP	-2.478737	-3.562882	0.3355	-5.649928	-3.574244	0.0004
M2	-2.871034	-2.986225	0.0631	-4.232698	-2.963972	0.0025
TC	-0.717919	-2.960411	0.8277	-4.029731	-2.963972	0.0041

Source : Author based on Eviews 10 outputs.

According to the table n 7, all the variables are integrated at the first degree I(1), wich justifies the use of co-integration test.

- **Co-integration test :** By johansen test, we have obtained the following results

Hypoth	Eigen value	Trace Stat	Critici value 5%	Prob	Eigen value	Max-eige stat	Criticalv alue 5%	Prob
None	0.80985	121.587	88.80380	0.0000	0.809851	49.79835	38.33101	0.0016
At most 1	0.72569	71.7893	63.87610	0.0093	0.725691	38.80505	32.11832	0.0066
At most 2	0.44521	32.9843	42.91525	0.3372	0.445217	17.67532	25.82321	0.4025
At most 3	0.29268	15.3089	25.87211	0.5489	0.292687	10.38847	19.38704	0.5774

At most 4	0.15127	4.92051	12.51798	0.6078	0.151272	4.920511	12.51798	0.6078
------------------	----------------	----------------	-----------------	---------------	-----------------	-----------------	-----------------	---------------

Table (8): co-integration test results

Source : Author based on Eviews 10 outputs.

The results indicate a presence of two co-integration relationship (Trace Statistic and Max-eigenvalue statistic are both superior of critical value), it can be interpreted by the existence of a long-term relationship between some study variables.

- **Causality test:** after adopting Granger causality test, we have obtained the following results.

Table (9):Granger causality test result

NullHypothesis:	F-Statistic	Prob.
REC does not Granger Cause GDP	1.46525	0.0462
GDP does not Granger Cause REC	9.08773	0.0054
DEP does not Granger Cause GDP	1.75643	0.1958
GDP does not Granger Cause DEP	10.1071	0.0036
TC does not Granger Cause GDP	1.53644	0.2254
GDP does not Granger Cause TC	3.60263	0.0680
M2 does not Granger Cause GDP	2.26414	0.1436
GDP does not Granger Cause M2	8.07577	0.2515

Source : Author based on Eviews 10 outputs.

The results indicate only two causalities :

- An unidirectional causality of GDP to Budgetary incomes..
- An unidirectional causality of GDP to Budgetary expenditures.
- **Impulse response function test:** it is the best instrument to explain the sources of impulse. and this is done by a VAR model, after estimated the optimal lags.

Table (10): response function test

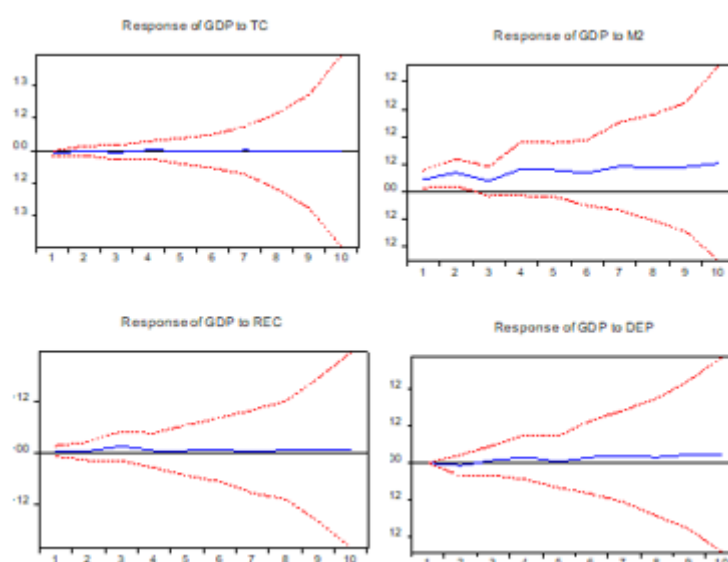
Response of GDP				
Period	DEP	REC	M2	TC
1	0.000000	0.000000	0.000000	0.000000
2	-0.000163	0.000964	0.000451	0.000220
3	0.000143	0.000414	-0.000953	0.000427
4	0.000495	0.000163	0.000348	0.000367
5	0.000220	0.000140	0.000354	0.000295
6	0.000424	0.000183	0.000133	0.000231
7	0.000570	0.000716	0.000377	0.000366
8	0.000454	0.000142	0.000293	0.000287
9	0.000598	0.000176	0.000231	0.000293
10	0.000635	0.000143	0.000345	0.000354

Source : Author based on Eviews 10 outputs.

The results indicate :

- A positive shock of 1% in total expenditure generates an insignificant positive effect on economic growth over the short term, reaching a maximum of 0.00057% in the medium term, then increase of 0.00063% at the end of the period.
- A positive shock of 1% in budgetary revenue generates an insignificant positive effect, reaching a maximum of 0.00096% at the second year.
- A positive shock of 1% in Money supply generates an insignificant positive effect, reaching a maximum of 0.00037% at the seventh year.
- A positive shock of 1% in exchange rate generates an insignificant positive effect, reaching a maximum of 0.00042% at the third year.

Fig(3): Impulse response function test graph



Source :Eviews 10 outputs.

3-2-2 result and discussion:

The econometric study shows that the economic policy applied in Algeria has no concrete effect on economic growth, so the Algerian economy has managed to escape the bottleneck of the 90s, it is thanks to the good situation following the strengthening of crude oil prices that Algeria has experienced from the 2000s.

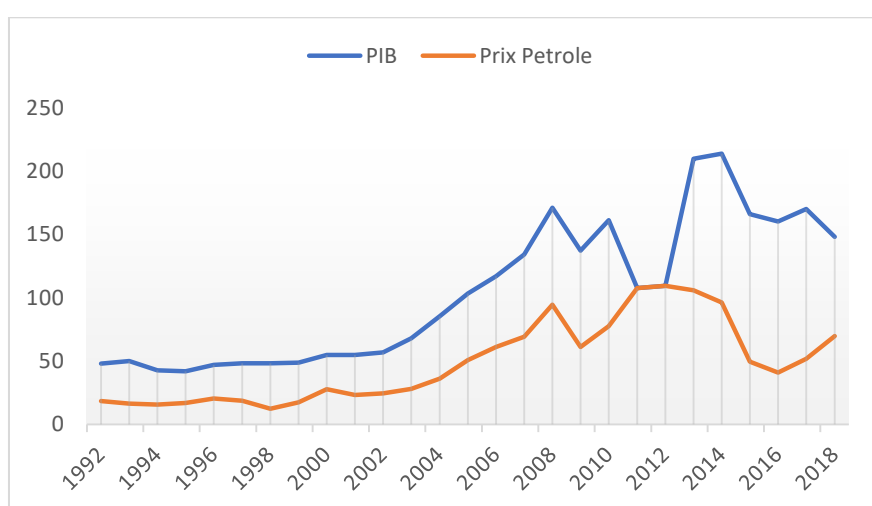
Through the application of stabilization policies, the government aimed to recover the level of economic growth, reduce the inflation rate, and rebalance the external position. Thus, various economic and social development programs were developed, namely the PSRE (2001-2004), the PCSC (2005-2009) and even the latest public investment program (2010-2014), involving nearly 300 billion dollars, especially following the upturn in oil prices that the country has experienced since 2000.

However, all these huge funds that were intended to promote economic growth through the creation of wealth and value-added and the revival of the industrial sector, finally, have been

diverted only to the promotion of infrastructure and imports of foreign goods, the evidence at the slightest drop in oil prices from 2014, the government turned to the printing press by the application of non-conventional financing in 2017 which has mobilized no less than 6500 billion dinars. This proves the relative effectiveness of the fiscal policy on economic growth and that the latter is directly linked to the hydrocarbon situation (Fig 4).

As for monetary policy, in addition to its external objective of exchange rate stability, its other role is to ensure price stability by fighting inflation. Moreover, to achieve this last objective, it is enough to aim at an intermediate objective: control of the money supply led by the central bank. Algeria has experienced a favorable situation since the 2000s thanks to the strengthening of crude oil prices that have increased the official foreign exchange reserves constituting the bulk of the money supply; hence the liquidity ratio (M2/GDP) has increased from 47% in 1999 to 63% in 2007 and up to 69.5% in 2012.

Fig (4): Gross domestic product and oil prices.



Source: Author based on World Bank data.

Consequently, the principal goal of the Bank of Algeria has always been the fight against inflation and the maintenance of price stability, notably through its 2003 report, which included the launch of an inflation target of less than 3%. However, a relevant control of the money supply is only carried out by an independent institution to avoid any pressure from political power, which is incompatible with the planning exercised in Algeria, which has always considered the money supply as an endogenous variable that must imperatively respond to the needs of the economy, thus reducing the true conception of monetary policy.

Conclusion:

This study analyzed the principles of stabilization policies, their foundations and the dilemmas they may face in developing equilibrium. These cyclical policies sometimes come up against important constraints such as the choice of instruments which, according to Mundell's principle, must be assigned to the achievement of the objectives for which they are relatively most effective, conflicts of objectives following the oppositions that may exist between the objectives targeted by the economic policy, such as the one that exists between inflation and unemployment, or the problems of reaction times and crowding out effects that the application of cyclical policies may also generate. However, it has proved difficult to assign this or that instrument to the achievement of this or that objective, given the nature of the relations between instruments and objectives and between objectives themselves, hence the need to think more about the constraints of economic policy and try to make the right choice before committing to their application.

Concerning Algeria, since the oil counter-shock of 1986, the main indicator of serious structural problems in the national economy, the government has been obliged to sign "stand-by" agreements with the IMF with a rescheduling of the external debt, accompanied by a structural adjustment program aimed at correcting internal and external imbalances, particularly through the application of a mixed policy in the form of a fiscal policy of recovery accompanied by a monetary policy of rigor.

As a result, several economic stimulus programs have been put in place following the financial upturn that the country has experienced due to the increase in hydrocarbon prices, involving nearly 300 billion dollars. However, this fiscal stimulus policy has not targeted value-added and productive projects besides promoting basic infrastructure and importing foreign goods. At the same time, the monetary policy that has been practiced has focused on a single objective, namely price stability, in addition to considering the money supply as an endogenous variable, following the financing of budget deficits.

Therefore, our hypothesis (*The stability of the national economy owes much to the economic policy pursued by the government*) is invalid because if the Algerian economy has managed to escape the bottleneck of the 90s, it is thanks to the good situation following the strengthening of crude oil prices that Algeria has experienced from the 2000s, or the fragility of economic stability remains dependent on possible sustained falls in oil prices.

So, to remedy this situation, the government must turn to the diversification of the national economy and the promotion of other non-hydrocarbon sectors, such as agriculture, fisheries and tourism, and especially ensure a better allocation of resources to productive sectors of added value, as well as a good absorption of the oil rent to stimulate economic growth sustainably.

Bibliography List:

- Agostino, S. (2005). *Economic Policy*. Cahiers Français Edition, Paris.
- Benabdallah, Y. (2007). Le développement des infrastructures en Algérie. *Rapport du CEAD, Alger*.
- Cohen, E. (2000). *From reglementation to regulation: History of a concept*. Problème Economique review.
- Concil of ministers, r. (2021). *Economic Recovery Plan 2020-2024*.
- Council of Ministers, r. (2010). *Five-Year Development Program 2010-2014*.
- Daly, H., & Smida, M. (2013). Interaction entre politique monétaire et politique budgétaire : cas de la Grèce. *MPRA Paper n° 45931*.
- Duthil, G., & Marois, W. (1997). *Economic Policy*. Elipses Edition, Paris.
- Guehairia, A., & Zouaoui, H. (2013). *Les formes d'intervention de l'Etat dans l'activité économique*. Ecole nationale supérieure de statistiques et d'économie appliquée (ENSSEA), Alger.
- Guy, Q. (2000). *Economic Policy*. Labor Edition, Paris.
- Kone, S. (2000). l'impact des politiques monétaires et budgétaires sur la croissance économique dans les pays de l'UEMOA. *Revue d'études et recherches n° 509*.
- OECD. (2010). *Countercyclical economic policy, Economic policy note n° 1*. Economics Department, Paris.
- Pebereau, M., & Arvisenet, P. (1999). *Conjunctural Economy Policy*. Dunod Edition, Paris.
- Pouch, T. (2006). *Economy Policy: mondialisation and mutations*. Hamattan Edition, Paris.
- Sidi Mammar Houari, L. (2021). Politique macroéconomiques de stabilisation en Algérie: évaluation et perspectives. *doctoral thesis, Mouloud MAMMERI University*. Algeria.
- Smaili, N., & Khelassi, A. (2021). The relationship between public expenditures and the GDP growth in Algeria: an Empirical study using the ARDL Model. *Journal of Economic Integration*, 09 (04), 854. available on: <https://www.asjp.cerist.dz/en/downArticle/180/9/4/179580>
- Vidal, J. P. (1984). *Eviction Effect*. University of Montreal. working paper, the department of Economics.