The role of Algeria's exchange rate policy in absorbing the impact of external shocks: The Case of the 2014 Oil Shock

دور سياسة سعر الصرف في الجزائر في امتصاص تأثير الصدمات الخارجية: دراسة حالة الصدمة النفطية لعام 2014.

Manal Rehioui [1,*], Tahar Djellit [2], Abdelhamid Merghit [3]

[1] *University of Jijel, (Algeria). Email :Manal.rehioui@univ-jijel.dz*
[2] *University of Jijel, (LEODD) Laboratory , (Algeria). Email: T.Djellit@univ-jijel.dz*
[3] *University of Jijel, (LEODD) Laboratory, (Algeria). Email : A.merghit@univ-jijel.dz*

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Abstract:

This study aimed to highlight the importance of using exchange rate flexibility in oil-exporting economies as an effective tool to absorb the negative impacts of external shocks, with a special reference to the case of Algeria, which has faced difficult challenges resulting from the shock of the collapse of oil prices that has continued since June 2014 ,and its severe repercussions on the country's overall economic performance, notably the slowdown in economic activity, the widening of fiscal and the current account deficits. The study concluded that the devaluation that the Bank of Algeria allowed in the external value of the dinar, in the aftermath of the oil shock, has not facilitated the suitable external adjustment of the Algerian economy.

Keywords: *Exchange policy; Oil shock ,Exchange rate Flexibility; Shock Absorption; Bank of Algeria.*
Jel Classification Codes:*E6; F4; F39*

ملخص:

استهدفت هذه الدراسة إبراز أهمية استخدام مرونة سعر الصرف في الاقتصاديات المصدرة للنفط كأداة فعالة لامتصاص التأثيرات السلبية للصدمات الخارجية ، مع إشارة خاصة إلى حالة الجزائر التي واجهت تحديات صعبة ناجمة عن صدمة انهيار أسعار النفط المستمرة منذ جوان 2014 وتداعياتها الوخيمة على الأداء الاقتصادي الكلي للبلد، لاسيما التراجع الكبير في وتيرة النشاط الاقتصادي، وتزايد حدة العجز في المالية العامة والحساب الجاري.وقد توصلت الدراسة إلى أن التخفيضات التي سمح بها بنك الجزائر في القيمة الخارجية للدينار في أعقاب الصدمة لم تساهم بالشكل المطلوب في تسهيل تكيف الاقتصاد الجزائري مع تداعياتها.

الكلمات المفتاحية: سياسة الصرف –الصدمة النفطية – مرونة سعر الصرف –امتصاص الصدمات - بنك الجزائر.

* **Manal Rehioui**

Introduction

Exposure to external shocks is one of the most important characteristics of developing countries, especially those that rely on export of one major commodity, such as oil. Hence, the lack of traditional mechanisms to absorb or mitigate shocks, such as stabilization policies for macroeconomic in addition to deep and diversified financial markets, increases macroeconomic volatility and instability, posing significant risks to their economies.

In this context, the sudden collapse of oil prices in 2014, long after a record-breaking rise in oil prices that lasted for more than a decade, was a strong external shock to oil-exporting countries. The price of a barrel went down 110 $ to around 30$ at the beginning of 2016.Accordingly, revenues in all oil countries decreased, resulting in a significant increase in budget deficits and external accounts, and a slowdown in economic growth rates.

In addressing the repercussions of this shock, many of these countries have adopted economic policies to reduce the impact of this continuing shock on their economies. One of these policies is the use of exchange rate policy measures and precisely “exchange rate flexibility” as a tool to help facilitate adjustment and absorb some of the negative effects on their balance of payments.

Given the nature of the Algerian economy, which is one of the least diversified countries in its exports, it can be classified as one of the countries that rely heavily on the export of one basic commodity, fuel, with an average of more than 95% of its exports. Oil taxes also account for more than 60% of the state's general budget revenues, which is a situation that makes the Algerian economy highly sensitive and vulnerable to changes in the oil market.This has really happened since 2014, when Algeria faced difficult challenges resulting from the shock of the continued oil price collapse and its serious implications for macroeconomic performance, in particular, the sharp decline in the pace of economic activity, and the increasing deficit in public finances and current account. As the shock becomes increasingly serious and sustained, the Algerian authorities have taken a series of urgent measures to adapt to it and mitigate its impact on the national economy.

Research problem

Exchange rate policy is one of the tools that Algeria used to facilitate its adaptation to the 2014 oil shock. In this study, we will try to present and evaluate the role of this policy by answering the central question that follows:

How effective is Algeria's exchange rate policy in absorbing the negative effects of the 2014 oil shock?

To answer this central question, we will resort to the following sub-questions:

- What are the main causes and repercussions of the 2014 oil shocks?

- How can the exchange rate be used as a tool to absorb external shocks?

- What role has Algeria's exchange rate policy played in dealing with the repercussions of the 2014 oil shock?

Hypotheses

This study is based on the following two hypotheses:

- The flexible exchange system in the oil economies allows the exchange rate to play its role in absorbing part of the effects of external shocks by allowing it to decline and thus to increase non-oil exports and reduce imports.

- Exchange rate flexibility alone is not enough to address the repercussions of the oil shocks in Algeria, so it must be strengthened by a package of structural reforms that support economic diversification.

Objectives of the study

This study aims to achieve:

- Presenting the causes and implications of the 2014 oil shock on the Algerian economy.

- Highlighting the role of exchange rate flexibility in absorbing external shocks through both the impact of income and the impact of shifting the direction of expenditure.

- Assessing the effectiveness of Algeria's exchange rate flexibility in facilitating adjustment to the oil shock and minimizing its negative effects on the national economy.

Importance of the study

The importance of this study lies in highlighting the significant role of exchange rate flexibility regarding oil economies in facilitating its adaptation to the external and renewable shocks it faces from time to time, as well as accelerating the treatment of external imbalances, and thereby demonstrating that a flexible exchange system is the best choice for an economy based mainly on oil exports.

Research methodology

In order to address all the various aspects of the topic, the "descriptive analytical approach" will be followed, which is based on the description and analysis of the phenomenon in question, depending on the available data and statistics for the purpose of reaching the desired results from the research.

Previous studies

Given the theoretical and practical importance of external shocks and its policies of confrontation in oil countries,many researchers have enriched this topic.Here is a summary of some scientific contributions in this field:

- The study of (Abdurrahman, 2015) entitled "The oil shock effects of 2015 on the Algerian economy and the government dealing mechanisms". This study aimed to find out the extent of the financial imbalances for 2015, the effect of oil prices collapse and how the actions taken by the Algerian government contributed to reducing the consequences of the crisis.The study concluded that the 2014 crisis has led to a large fiscal deficit. Despite the rationalization of spending and the economic diversification efforts that the authorities have tried to undertake, these measures have had limited impact.

- The study of (Murad and Nassima, 2017) entitled "The impact of the 2014 oil shock on some Algerian macroeconomic indicators".This study aimed to highlight the effects of the oil shock and the most important challenges facing the Algerian economy as a result. It concluded that the collapse in oil prices had disrupted the Algerian economy causing an erosion in foreign exchange reserves, economic growth deterioration, a budget deficit, and a social imbalance.Accordingly, the study recommended the need for Algeria to diversify its internal resources and create national capital to reduce fluctuations and dependence on fuels through several measures such as encouraging investment and promoting small and medium-sized enterprises.

- The study of (Jose & Irum, 2016): This study attempted to compare how authorities handled the 2009 and 2014 oil shocks. The study found that the severity and time length of the second shock compared to the first shock prompted the authorities to take monetary and fiscal policy measures to contain its negative repercussions. The latter was achieved through tightening monetary policy and adopting fiscal control measures at the level of public finances, in addition to allowing the nominal exchange rate of the dinar to fall versus both the dollar and the euro.

-The study of (Boubellouta & Lian, 2020) which explores the relationship between nominal and real effective exchange rates (REERs) using time series data over the period 1994-2018_for_Algeria. The autoregressive distributed lag (ARDL) and error correction method have been employed to test the long run and short run relationship. The estimations indicate that the nominal devaluation not only leads to real devaluation in long-run but also in the short-run. However, this relationship has become unstable after the collapse in oil prices and higher international food prices in the past few years.

- The study of (Boubellouta & Shahbaz, 2021) examines the impact of nominal effective exchange rate on real effective exchange rate in Algeria, using autoregressive distributed lag bounds test approach with monthly time series data from 2008 to 2017. Results shows that reducing the import through devaluation of the dinar led to a significant increase in import prices. However, the study shows that taking into account all of the structural problems of the Algerian economy, the devaluation of the dinar may lead to more severe inflation than anticipated by the Algerian government.

Research plan

To answer the problem of the research and reach its objectives, this study will be divided into three axes where the first axis deals with: an overview on the causes and repercussions of oil prices collapse concerning the shock of 2014. The second axis examines the role of the exchange rate as a tool for absorbing external shocks. The third and final axis aims to assessing the effectiveness of the actions taken by the Bank of Algeria. Hence, the axis presents the overall measures taken by the Bank of Algeria as part of its exchange rate policy in order to deal with the oil shock.

I- The oil shock of 2014: Causes and Repercussions

In this axis, we will address the causes of the 2014 oil shock and some of its implications, but before going into that, we will address the clarification of the term “oil shock”, by referring to some of the definitions provided to it. The most important of which are:

- According to the researcher Assad Allah Daoud, “The oil shock is a sudden imbalance in the oil market that leads to a sharp drop or rise in prices extending over a period of time, and it is the result of the impact of supply or demand determinants or both at the same time, or other factors such as capital movement or geopolitical changes.”[1] (Assad, 2013, p. 34)

- The researcher Jean-Pierre defines it as “a constant rise in oil prices, while the reverse oil shock is its continued decline”[2] (Jean, 2009, p. 12).

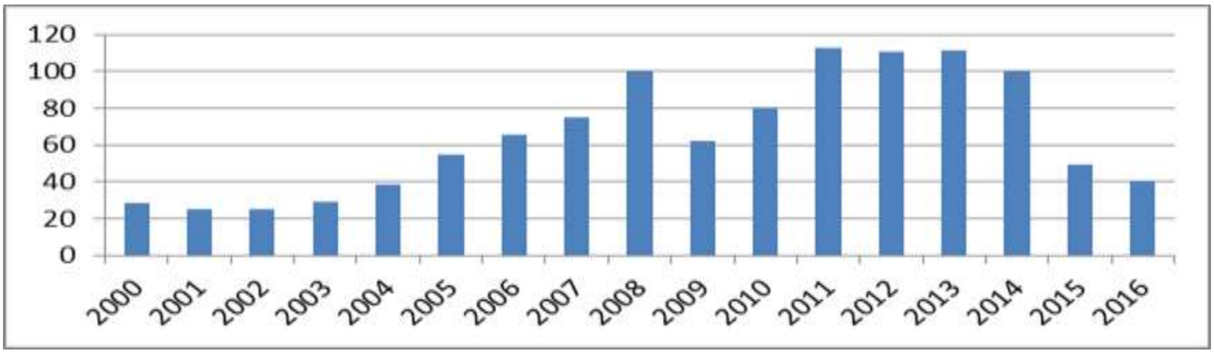
- Baumester and Peersman define it as “sudden and sharp movements in oil supplies and basic demands during a given period.”[3] (Ine, 2012, p. 14)

From previous definitions, it can be said that the oil shock is every sudden event in the oil markets, resulting in sharp and unexpected movements in oil prices both up and down.

I.1. Causes of the 2014 Oil Shock

After more than a decade of high record in oil prices as shown in the figure below, the global economy since mid-2014 has experienced a price collapse, falling from an average of 112$ between 2011 and the first six months of 2014 to settle at 40$ per barrel at the end of 2016.

Figure1 :Oil prices (2000-2016)



Source: **International Monetary Fund Statistics**.

On the causes of this oil shock, a study by (Arezki & Blanchard, 2014) emphasized the role of both supply and demand factors in explaining the price collapse, which can be put as follows (Rabah & Olivier, 2014):

- The emergence of shale oil production: Shale oil production in North America has experienced a quantum leap, with significant growth in the development of hydraulic fracturing and horizontal drilling technology.This new source added about 4.2 million barrels per day to the crude oil market, contributing to the global supply.

- Change in the strategic behavior of the Organization of Petroleum Exporting Countries (OPEC): It is considered as the world's biggest actor in the global crude oil market. The organization has recently experienced a change in its strategic behavior by focusing on maintaining its market share at the expense of prices.OPEC also surprised everyone by deciding to increase production in 2014 despite the global oversupply, which led to a new drop in prices. This decision was the exact opposite of what the Organization had done during the global financial crisis (2008-2009) that followed the collapse of oil prices, which it reduced production, helping to recover again.

- Increase in Iranian exports: This is after the lifting of economic sanctions imposed on Iran by the West after the nuclear deal was reached between them, which means an increase in the world oil supply.

- Decline of global demand: particularly from emerging markets such as China, which alone consumes two-thirds of the global oil consumption. At this time, China experienced economic difficulties, with a significant collapse in its exports and investments, which account for two thirds (2/3) of its Gross Domestic Product (GDP). This is mainly due to the decline of its competitive ability in international markets due to the significant rise in its domestic wage rates in recent years.

- The continued decline in oil consumption in the USA: especially in the light of other alternatives.

I.2. The repercussions of the oil shock

As a result of the collapse in oil prices, the global economy in general and Algeria in particular have suffered differentiated repercussions that can be summarized as follows:

I.2.1. For the global economy:

-The Organization of Petroleum Exporting Countries (OPEC) has been particularly vulnerable to this shock, as most of its revenues come from oil exports. For example, in 2015, these countries lost 360 billion dollars, and half of them experienced a deficit of more than 10% of their GDP[5] (Masood, 2016, p. 34).

-The Eurozone, one of the most essential importers of oil, benefited from this shock by reducing its import bill for fuels, and thus reducing the deficit in its external accounts[6] (Bourbon & Dancer, 2015).

-The United States of America is a producer of some of its oil needs, and therefore the collapse of oil prices has had mixed repercussions on the U.S. economy such as: a decline in revenues of shale oil exports and consequently a decline in investments in this field, as well as a decline in the shares of oil companies listed on the U.S. stock exchanges. In contrast, American households benefited from this shock through the fall in oil derivatives prices[7] (Bourbon, 2015).

-India and China are among the world's largest oil importers, and have benefited greatly from the collapse in oil prices by reducing the cost of oil-based production.[8] (Rabah & Olivier, 2014)

I.2.2. The impact of the oil shock on the Algerian economy:

It was affected by this shock as follows (Banque D'Algerie, 2016, pp. 2-13):

- The deterioration of public finances:

The budget deficit increased from 1.4% of GDP in 2013 to 15.7% in 2016. In response to the decline in oil revenues and public expenditures, the government has resorted to withdraw from the Revenue Control Fund, whose resources have fallen sharply, with a decline of 3,668 billion DZD between the end of December 2014 and the end of 2016.In addition, the net financial situation of the state deteriorated towards the banking system from a "net creditor" of 1992 billion DZD at the end of 2014 to a "net debtor" of 2730 billion DZD at the end of 2016.One of the reasons for this is the government's resort to borrowing from banks, in which the latter acquired 158.9 billion DZD in national borrowing.

- The deterioration of the external accounting situation:

Oil export revenues dropped nearly to the half, with only 14.91 billion dollars in 2015 compared to 27.35 billion dollars in 2014; a decrease that reached 45.47%. There was also a sharp expansion in the current account deficit of 7.78 billion dollars in the first half of 2015 due to a decline in exports and an increase in imports. Accordingly, export coverage of imports fell to 71% instead of 111% in the first half of 2014, while exchange reserves fell from 194 billion dollars in 2013 to 108 billion dollars in 2016.

- Decreased liquidity of banks: The adverse oil shock of 2014 resulted in the emergence of the structural (not circumstantial) need for liquidity as a result of the reduction in the volume of bank liquidity due to the decrease in demand deposits and the increase in the volume of legal money outside banks, and accordingly, the liquidity of banks gradually decreased during the years 2016 and 2017 from 2731 billion DZD at the end of 2014. To reach 1833 billion DA at the end of 2015, then 821 billion DA at the end of 2016, a decrease of 69.9% over the entire period.

-Slowdown in economic growth: The real growth rate in the non-oil sector, which mainly consists of agriculture, industry, construction and commodity services, slowed under the impact of public spending cuts, as the growth rate moved from 7.1% in 2013 to 2.9% in 2016.

Based on the above, it is clear that the collapse in oil prices and the very significant decline in export revenues, in addition to the notable decline of economic activity, and the increasing deficit in public finances and current account, calls on oil-exporting countries to consider certain strategies to adapt to this shock in order to reduce their negative repercussions and ensure sustainable financial conditions.

Although these countries usually have (preventive) foreign exchange reserves, they still need to use a mix of economic policies at their disposal to help adjust to the direction of this shock. An important policy in this regard is the exchange rate policy that we will address in the next axis.

II: Exchange rate policy as a tool to absorb external shocks in oil economies

Developing countries, particularly commodity exporters, are the most vulnerable to external shocks. Perhaps the most important applied study on this subject is the study of (Housman & Gavin, 1996).The study have found that these countries experienced a significant exposure to the trade shocks, which usually have a significant impact on their output fluctuations.

Therefore, to cope with these shocks, particularly those caused by the collapse in oil prices and to ensure sustainable financial conditions in oil-exporting countries, they must reduce their imports, increase their exports, or apply a combination of both.

To facilitate the achievement of these objectives at the lowest possible cost to the economy and society, oil countries that apply flexible exchange systems can rely on exchange rate flexibility as one of the important means of helping to smooth and mitigate the effects of these external shocks easily. This is by allowing its currencies to fall versus strong foreign currencies in order to achieve two very important objectives:

- Reducing the demand for imports, which its prices will rise when it is assessed in the national currency, thereby encouraging the replacement of these imports by compensating them with locally produced and manufactured goods.

- Promoting non-oil exports: their prices will fall in international markets, which will increase foreign demand.

Economists usually refer to the positive effects of the depreciation or devaluation of the national currency with the effects of “revenue” and “expenditure switching”, which can be defined as follows (Yan Carriere-Swallow ,et al .,2017,p.25):

1/ Revenu Effect

In the light of an oil shock, the significant decline in the export revenues of the oil-exporting country will make it poor, thus weakening its purchasing power abroad (or its import capacity).In response to this difficult situation, the country will have to reduce its domestic demand for imports, and therefore reduce its trade deficit.

2/ Expenditure –switching effect

The devaluation of the currency leads to relative prices movement, and then switches the expenditure direction, as imported goods become less in demand. Hence, domestic consumers turn to cheap local national goods as an alternative to supporting domestic production, in return, export products become cheaper when valued in foreign currency, leading to an increase in foreign demand. In other words, the switch in expenditure is achieved through a policy of devaluation, as exports increase due to its lower prices and similarly imports decrease due to the higher prices of imported goods. This will increase the country's foreign exchange revenues and thereby reduce the deficit from the balance of payments (Oya celasun, 2003, p. 09).

It should be noted that many economic literature supports the importance of applying flexible exchange rate systems in oil economies because of their advantages, especially its ability to facilitate adaptation to external shocks. The most important of these studies are:

- The study of (Borda C., 2001):

This is a standard study on the effectiveness of various exchange rate systems in isolating the economy from trade rate shocks in developing countries. The study showed the importance of exchange rate flexibility in the face of negative trade rate shocks. In addition, flexible systems are accompanied by reductions in the real exchange rate of the currency and a weak loss of output growth compared to fixed exchange systems.

- The study of (Oya Celasun, 2003):

It focused on the considerations of choosing the appropriate exchange system in an oil economy, taking Iran as a case study. The study confirmed that it is the function of the authorities' objectives in any economy that determines the degree of flexibility of its exchange rate system. If the objective is to control the inflation rate (particularly imported inflation phenomenon) which is done by reducing nominal exchange rate fluctuations, then it is preferable to use a fixed exchange system where the exchange rate serves as a nominal basis for the price level. Whereas if the objective is to reduce output fluctuations in the face of the various shocks that encounter the economy, then the authorities must allow the nominal exchange rate to move, i.e. adopt a flexible exchange system. In general, the study defends the importance of adopting a flexible exchange system in oil economies as it plays an important role in facilitating real exchange rate adjustment in the wake of a surge in commodity prices, such as oil. In addition, adopting a precautionary fiscal policy based on paving and easing the domestic demand over time, thereby reducing the useless specialization of non-tradable goods to international countries.

- The study of (Brad Sester, 2007) :

The paper highlighted the disadvantages of fixed peg to the US dollar in light of the asymmetry of economic cycles between the United States of America and the oil countries that link their currencies to the dollar, whose value declines when oil prices rise and rises when oil prices fall. In addition to the problems arising from the improvement of the real exchange rate in these countries, and the widespread phenomenon of imported inflation under the adoption of fixed exchange systems. The study generally recommends the importance of adopting exchange rate flexibility in oil-exporting economies as it helps to cope with the economic difficulties caused by the fixed peg of their currencies to the US dollar.

III: Assessing the role of Algeria's exchange rate policy in the face of the oil shock

In this regard, we will highlight the exchange rate policy measures taken by the Bank of Algeria to counter the shock, and then we will discuss the presentation of these measures results to assess their effectiveness.

1. Exchange rate policy measures to counter the oil shock 2014

Since October 1994, Algeria's exchange rate policy has been reformed by abandoning the fixed rate exchange system since independence and shifting towards a flexible exchange system. According to the Bank of Algeria, Algeria’s flexible exchange system is a “managed float” of the dinar versus the currencies of Algeria's main trading partners (Banque d’Algerie, 2011, p. 45). It is the same classification given by the International Monetary Fund (IMF) in its annual report: “Exchange Arrangements and Restrictions” to monitor developments in the exchange systems of its member countries. Hence, IMF classifies Algeria within the category of “other arrangements for floating without a pre-announced exchange rate path.” (IMF, 2008, p. 05).

This is the category under which the Central Bank does not adhere to any nominal exchange rate target, but it paves the way for the impact of its volatility by intervening in the foreign exchange market and setting the interest rate on its facilities. Under these arrangements, some central banks also direct the exchange rate to protect medium-term competitiveness (Jubili and Kramarenko, 2003, p. 5).

The Bank of Algeria considers that the floating system directed at the dinar has allowed the exchange rate to play its role as a tool to counter external shocks of oil prices and facilitate the process of adjustment (Jose & AL, 2016). Following the shock of the collapse in oil prices in the second half of 2014 and its prolonged continuation as well as the resulting decline in oil tax revenues, the Bank allowed the nominal exchange rate of the dinar, for example, in 2015 to decline by about 20% versus the Us dollar and 3.8% versus the euro, given that exchange rate flexibility is the first line of defense in the face of the collapse of oil revenues.

In this regard, we can read the reports of the Bank of Algeria (Banque d'Algerie, 2017, p. 07):

« *...Il est à noter que face à la chute des recettes pétrolières, le recours à la flexibilité du taux de change, constitue la première ligne de défense. En effet, la flexibilité du cours de change du dinar et les interventions de la Banque d’Algérie sur le marché interbancaire de changes, ont permis au taux de change du Dinar de jouer, dans une large mesure, son rôle d’amortisseur de chocs externes…* »

The following table shows the evolution of both the oil price and the exchange rate of the dinar versus the euro and the dollar during the period (2013-2019).

Table (01): The evolution of the oil price and the exchange rate of the Dinar versus the Euro and the Dollar during the period (2013-2019)

Years	2013	2014	2015	2016	2017	2018	2019
Oil price	97.98	100.2	53.1	45	54.1	71.3	57.05
Dinar VS Dollar	79.38	80.56	100.46	109.4654	110.96	116.61	118.60
Dinar VS Euro	105.3	106.90	111.44	121.17	125.32	137.68	134.80

Source: Bank of Algeria.

It should be noted from the table above that the Bank of Algeria allowed a continuous decline in the value of the dinar versus the dollar and the euro during the above period, which was accompanied by the continuation of the oil shock as follows:

- The official exchange rate versus the dollar moved from 79 DZD per dollar in 2013 to 118.60 DZD at the end of 2019; a decrease of 33.34%.

- The official exchange rate versus the euro moved from 105.43 DZD to 134.80 DZD in 2013. That is a decrease of 22.23%.

The purpose of these devaluation which have affected the value of the national currency, is to: (Abderrahman Ayya, 2016, p. 08)

- Reducing import operations in terms of volume and value as the prices of imported products usually rise in value when the exchange rate of the local currency falls. Consequently, domestic demand for foreign currencies declines and importers reduces their external operations as their profits decline, which is affected by the decline in the value of the dinar exchange.

- Raising the money supply by issuing more legal money covered in hard currency, which helps the government to compensate for the decline in the oil tax that is used to finance public expenditures.

2. The effectiveness of the exchange rate policy measures in absorbing the impact of the oil shock for 2014

In this part, we will try to assess the effectiveness of the exchange rate flexibility in Algeria in facilitating adjustment to the oil shock and minimizing its negative effects on the national economy. This is achieved by monitoring and analyzing the response of external accounts that are directly affected by the exchange rate changes summarized in the following table:

Table (02): Evolution of the external accounts of Algeria (2013-2019) (billion dollars)

Years	2013	2014	2015	2016	2017	2018	2019
Non-oil exports	1.05	1.66	1.48	1.39	1.36	1.58	2.58
imports	54.98	59.67	52.64	49.43	48.98	45.76	41.93
Trade balance	9.39	0.32	-18.08	-20.13	-14.17	-4.53	-6.11
Balance of payments	0.13	-5.88	-27.48	-26.03	-23.30	-15.82	-16.6
Exchange reserves	194.71	178.94	144.13	114.17	86.08	82.12	72.6

Source: Bank of Algeria

Through the table above, we can come up with the following observations:

- The value of non-oil exports fluctuated from year to year to record the lowest value in 2017 at 1.36 billion dollars due to the weak diversification in exports outside the hydrocarbon sector.

- In terms of imports, despite the measures to reduce imports, the rate of decline was modest, moving from 52.64 billion dollars in 2015 to 49.46 billion dollars in 2016 and 45.76 billion dollars in 2018 to 41.93 billion dollars in 2019.

- Regarding the trade balance, it recorded a deficit of 18.08 billion dollars in 2015 as energy revenues declined following the fall in world oil prices. Despite the decline in total imports of goods, the trade balance deficit increased by 2.04 billion dollars to reach 20.13 billion dollars in 2016 and 18.08 billion dollars in 2015. It is the second consecutive deficit in more than 18 years of repetitive excesses, and the deficit was 6.11 billion dollars in 2019, up from 5 billion dollars in 2018.This is the result of a decline in exports from 41.79 billion dollars in 2018 to 35.82 billion dollars in 2019 despite the decline in import values from 45.76 billion dollars in 2018 to 41.93 billion dollars in 2019. This in itself is a good indicator of the possibility to control imports significantly.

- The balance of payments recorded a deficit of 5.88 billion dollars in 2014. The deficit continued to decline significantly from 27 billion dollars in 2015 to 26 billion dollars in 2016, and then 23 billion dollars in 2017. In 2019, it declined to 16.6 billion dollars. This is due to the decline of imported goods.

- A significant decline in exchange reserves due to the successive deficit in the balance of payments, which fell to 178.94 billion dollars in 2013 to reach 72.6 billion dollars in 2019. This is due to the collapse of oil prices and export revenues on the one hand and the high levels of imports on the other hand.

Based on the above analysis , it is clear that the positive effects of the dinar depreciation as an adjustment tool in the face of external shock for 2014 are mainly apparent in the impact of income, which is reflected in the fall of domestic demand for imports, given the significant decline since 2014.On the other hand, the second supposed effect behind the decline of the dinar, which is the effect of switching the direction of spending, has not been achieved due to the absence of a significant development in the earnings of exports outside the fuels sector in response to the decline in the value of the dinar.

It can therefore be said that the effectiveness of exchange rate policy in absorbing the repercussions of external shock has been very limited. It is also unreliable, because the overuse of exchange rate flexibility as a major shock absorber will result in a continued deterioration in the value of the dinar, which will lead to undesirable adverse effects, particularly the phenomenon of imported inflation.

Therefore, there is an urgent need to strengthen the exchange rate policy with a package of structural reforms supporting economic diversification by addressing the fragility and vulnerability of the Algerian economy, particularly its excessive dependence on hydrocarbon exports, and the strong and dangerous dependence of the economic activity on public spending.

This requires the implementation of structural reforms aimed to strengthening the economic fundamentals (such as combating inflation, improving productivity and increasing the capacity to export outside the oil field). The latter will reflect on the diversification and improvement of the economy, and thus increasing its ability to cope with external shocks at the lowest possible cost on various macroeconomic variables such as growth, employment and the exchange rate.

Conclusions

It is certain that the real problem which threatens the Algerian economy for decades is undoubtedly its excessive dependence on hydrocarbons, given that, the income generated by the exploitation of these resources constitutes the bulk of the export revenues, a substantial share of its fiscal revenues, and a significant percentage of the country wealth flow (GDP). This situation reveals a high vulnerability of the Algerian economy to external shocks, as the volatility of the oil price is translated into more macroeconomic and financial instability.

However, since June 2014, the major oil-exporting countries including Algeria, have suffered a severe and persistent oil price shock, where the price of a barrel has plunged from around $ 110 to nearly $ 30 a barrel by the early 2016. Subsequently, the Algerian economy was in a very delicate economic and financial situation, due to the slowdown in its economic activity, and the widening of fiscal and the current account deficits.

This paper attempted to highlight and evaluate the role of exchange rate policy in the face of the negative effects of the oil shock that has been going on since mid-2014 on the national economy. It reviewed the measures taken by the Bank of Algeria to reduce the impact of this external shock on the balance of payments.

In general, the study found that the exchange rate policy, despite its modest contribution to mitigating the external shock by allowing for a significant decline in imports (or what is known as the effect of income), did not contribute to the revival and revitalization of exports outside the fuels sector (the effect of switching the direction of expenditure).

This requires the authorities to adopt measures that are more economically effective to reduce the negative effects of the continued oil shock. In this context, the study recommends:

- ✓ Not to overuse the exchange rate flexibility as a key tool to absorb and adapt to the shocks of oil prices collapse. This is due to the adverse effects of the continuing deterioration in the value of the dinar on the economy and society.
- ✓ Giving priority to how to achieve fiscal control to restore the balance and sustainability of public finances on the one hand and on the other hand, to reduce external imbalances.
- ✓ Addressing the fragility and vulnerability of the Algerian economy through the implementation of large-scale structural reforms aimed to diversifying the economy. In addition to supporting the private sector development to be the main driver of economic growth, thereby increasing the capacity of the national economy to absorb external shocks at the lowest possible cost.

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