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## Effects of currency devaluation on buying power in Algeria

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### Abstract:

The purpose of this study is to elucidate how fluctuations in the exchange rate affect the Algerian dinar's purchasing power as measured by the consumer price index from 2014 to 2023. Following a lengthy period of in-depth examination of the various price and exchange rate indicators, we concluded that the Algerian dinar's diversification and total reliance. Therefore, the elevated inflation rates and the depreciation of the local currency's purchasing power are the primary factors hindering the achievement of economic objectives.

**Keywords:** Price index, exchange rate, currency, purchasing power, inflation.

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### 1. Introduction:

The normal purpose of devaluation is to authoritatively manipulate the exchange rate to equalize the price of national goods with that of foreign goods. It appeared in the inter-World War II period. In many industrialized countries, it was one of the responses to the depression resulting from the 1929 crisis, this period was marked by some particularly emblematic devaluations: the devaluation of the Poincaré franc in 1933, the devaluation of the pound sterling by McDonald in 1931 and the devaluation of the dollar by Roosevelt in 1933.

First of all, pragmatism and monetary stability in order to prevent the risks of exchange rate changes. This allows companies to use their resources optimally, in particular by increasing productivity and creativity, which promotes their competitiveness. All the more so, The link between the national currency's buying power and the exchange rate is reflected in Algeria's economic reality. The Algerian dinar's declining worth in relation to the US dollar and other global currencies is confirmed by the fact that its buying power has dropped to extremely low levels.

The principal factor is the persistent devaluation of the Algerian dinar, which the government has adopted as a necessary strategy to alleviate the repercussions of oil shocks, the significant reduction in foreign exchange reserves, the decrease in oil revenues, and the degradation and insufficient diversification of economic activity. The devaluation and collapse of the currency lead to an immediate increase in prices for imported goods, as well as a rise in the prices of domestically made commodities that incorporate imported components in their production as (raw materials, intermediate goods/equipment, etc.), This results in significantly elevated inflation rates, thereby diminishing the purchasing power of the dinar, with implications for the social and political stability of the nation.

For this, the following main problem arises:

**What kind of connection exists between the Algerian dinars's buying power and the official exchange rate?**

In order to solve this problem and provide the elements of response, we rely on the following global hypotheses:

- **Main hypothesis:** If any devaluation is a decision by public authorities whose objective is to reduce the value of a currency, the results obtained will logically be positive on economic aggregates such as purchasing power and the inflation rate.

**Secondary hypotheses:**

- The exchange rate policy alone cannot exert its influence on purchasing power, there are also additional elements affecting inflation rates.

- The decrease in the value of the currency causes an increase in inflation rates and which automatically imply a decrease in purchasing power.

This study tries to demonstrate the influence of exchange rate policy in altering Algerians' purchasing power. Deduce the function of the exchange rate in the influence of macroeconomic variables, as well as the ongoing depreciation of the Algerian dinar's value in comparison to other currencies. Also discussed are the implications for the current economic and social situation, particularly the high inflation rates and the fall of Algerian purchasing power as a result of the production system's fragility and the lack of control over imports, particularly basic commodities.

In accordance with the nature of the subject of study and the intention to respond to the problem posed, we chose a descriptive approach followed by analytical studies to understand the various concepts related to the study's variables, based on a review of economic and commercial literature.

And to carry out our research, we structured it into three parts:

- Understanding purchasing power and exchange rates.
- Exploring how the exchange rate has affected purchasing power since 2014.
- Analysis of the relationship between exchange rate fluctuations and the consumer product price indicator since 2014.

## 2. Understanding purchasing power and exchange rates

The capacity to purchase marketable goods and services with a specific amount of money is known as buying power in economics. We can differentiate between purchasing power per capita, purchasing power per family, purchasing power per consumption unit, and a nation's wealth (purchasing power).

In order to grasp this concept, we provide a definition of it and a definition of the expense of living. Purchasing power is the "The amount of goods and services that a sum of money can buy. In dynamic terms, the change in purchasing power is the inverse of the price index. A rise in prices is a fall in purchasing power." (Albertini, 2006, p. 132)

Definition of cost of living: "A popular term for either the retail price index or the standard of living of monthly expenses as calculated by standard budgets. Logically, one can only speak of an increase in the cost of living if the price index or the budget level rises by a rate greater than the increase in real overall income." (Albertini, 2006, p. 96).

The exchange rate indicates "the number of units of a currency that must be exchanged to obtain a unit of another currency" (MODHER, 2003, p. 15).

Thus, the exchange rate can be defined as the counterpart of a national currency in foreign currency. It represents the ratio between two currencies, which is used in international trade. So "The exchange rate is the

quantity of foreign currency that can be acquired with a unit of national currency. This ratio expresses the price of one currency to another." (GEHENNE, 1999, p. 164)

Purchasing power is linked to the currency's exchange rate; it falls as the currency depreciates and vice versa, and changes in exchange rates are one of the variables influencing economic inflation or deflation.

We can distinguish two types of purchasing power:

- **Local purchasing power:** it expresses the quantity of goods and services that can be purchased with a monetary unit within the country.
- **External purchasing power:** it expresses the quantity of goods and services that can be purchased with the local currency in other foreign countries.

The real value of any currency is determined mainly by its purchasing power and interacts inversely with the general price level, since prices increase over time due to inflation, which makes the currency lose value and reduces its purchasing power. In addition, purchasing power can be high and strong for all commodities, or it is the opposite for all goods, since this capacity is considered the real value represented by the monetary unit.

### 2.1. Evaluation of purchasing power

The evolution of purchasing power is calculated for all households. It is determined as the disparity between the evolution of the household's earnings (first factor) and the progression of the price index (second element). Statistics on purchasing power are taken from the national accounts. These provide an overall picture of the country's economic activity, harmonized internationally. "The purchasing power used on the market is inversely proportional to the variation of the consumer price index or what is called the cost of living index, which means that if the consumer price index increases, then the purchasing power for the same price decreases, and vice versa" (Pandit, 2017, p. 44).

The evolution of household income is the first factor considered when calculating the evolution of purchasing power. Gross disposable income is the amount of money kept while calculating the evolution of purchasing power.

### 2.2. Factors affecting purchasing power

Purchasing power is influenced by many factors, the most important of which is:

- **Trade balance deficit:** A trade deficit occurs when a country's imports exceed its exports. We then remark that the trade balance is in deficit, implying that the local currency has depreciated against the foreign currency.
- **Employment and wages:** The increase in the minimum wage level has a beneficial impact on purchasing power up to the point where the price index stabilizes.

- **Supply and demand:** Because increased supply indicates decreased prices and so increased purchasing power. On the other hand, when demand increases, so do the prices of goods and services, reducing households' purchasing power.
- **Inflation:** The escalation in raw material prices results in currency depreciation, hence diminishing household purchasing power, which is inversely correlated with the overall price level. The incomes of all segments of society are the most affected by inflationary pressures in the economy. When recurrent price increases cause an increase in the real earnings of some segments in society, including the category of producers and capital holders, given the enormous profits they make, resulting from the increase in demand for their products and the constant variations in their prices. At the same time, the pain of the second category, which constitutes the bulk of society and comprises fixed-income employees and pensioners, that is, the middle and lower class, bondholders and holders of savings deposits and other people whose real incomes decrease due to high inflation rates.
- **Economic forecasts:** the decline in economic indicators leads to a decline in the national currency because development negatively influences the value of its currency.

The political and economic stability of a country affects its currency exchange rate and interest rate. Consequently, some governments such as Algeria are putting in place systems and policies to protect purchasing power by controlling prices and helping to subsidize consumer products such as coffee and flour, it helps reduce fluctuations in the prices of these goods, which would have a positive impact on the purchasing power of households.

### 3. The expected objectives of currency devaluation in Algeria

To address recession and trade imbalances, the state can implement its economic goals through a variety of economic intervention strategies, such as devaluation of national currency, "which is an act of economic policy, and also a change in the legal equivalence between the exchange rate of the national currency and the exchange rate of foreign currencies, and that this operation can only take place in the fixed exchange rate regime and when the currencies are no longer linked to gold" (SCHOR, 1996, p. 98). Knowing that, Algeria is among the countries that practice this kind of action in order to control the economy and protect it. However, it is necessary to distinguish devaluation from depreciation, which is a "phenomenon that sanctions an economic situation without official intervention by the monetary authorities, which results from the fall of the currency on the foreign exchange market (Pierre-Hubert breton, 1993, p. 48)".

Since the first issues of Algerian banknotes in 1964, the Algerian dinar has not recorded any depreciation, since it was at equal parity with the French franc at the time. Then, "it was only in 1974 that the Algerian dinar began to depreciate, with the collapse of the Bretton Woods system. This first experience of depreciation was

followed by a second in the 1980s due to the oil shock with the sudden drop in revenues from the marketing of hydrocarbons” (Meriem, 2015, p. 249).

Algeria, like every other developing nation impacted by the debt crisis of the 1980s, signed a number of agreements with the international monetary fund “IMF” in order to carry out a programme known as the “structural adjustment programme (SAP)”. “This programme was founded on a number of measures, including the complete convertibility of the national currency, the devaluation of the Algerian dinar as a regulatory measure to increase the external competitiveness of goods, the promotion of exports, and the restriction of imports, with the goal of rescheduling a portion of its external debt. In order to eliminate overvaluation and bring the official exchange rate into line with the parallel exchange rate, exchange rate policy during this time involved sliding the exchange rate in a controlled manner in response to the 1986 crisis (following the oil shock) and the deterioration in terms of trade that followed.

A number of macroeconomic goals must be pursued by the devaluation policy in order to balance the country's international commerce. It is a way to fight a persistent deficit in the balance of payments brought on by the nation's declining competitiveness in a setting where the rules of competition control how the global economy operates. Therefore, The devaluation of the currency in Algeria has several objectives, starting with improving competitiveness by improving the trade balance and the current account balance thanks to the stimulation of exports by lowering the price of domestic goods in foreign currencies and slows down imports by increasing the price of foreign goods in national currency. Thus, it encourages import substitution activities by encouraging Algerian companies to produce and consume local products. It then allows the rebalancing of the current account and the revival of the country's growth by:

- Enhancing the standard of living for the populace by lowering imports, increasing exports of products and services, and decreasing unemployment.
- Restoring the balance of payments by promoting the return of foreign-placed capital because the balance of payments deficit increases the demand for foreign currency, this will cause depreciation of the domestic currency and vice versa”. (Patrice Fontaine, 2003, p. 38).

#### **4. The fluctuation of the dinar against the dollar since 2014**

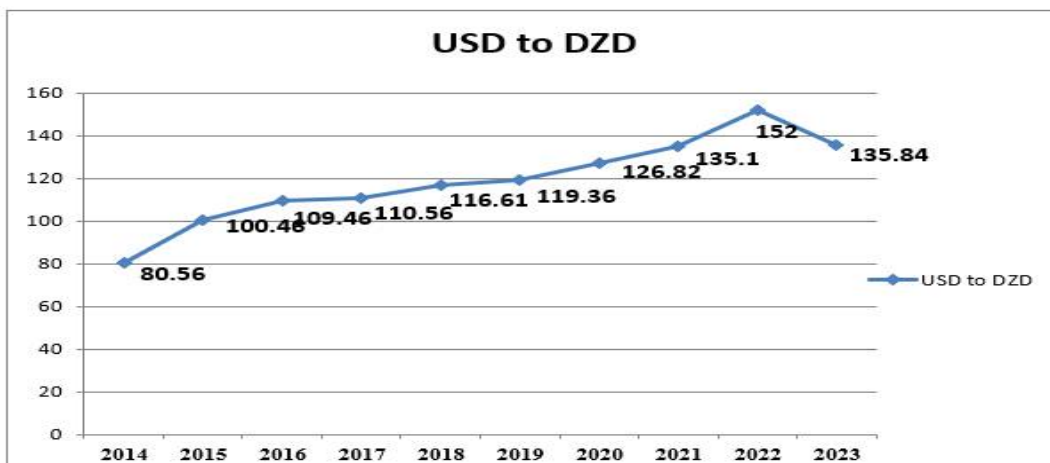
For a variety of economic factors, the Algerian dinar has changed significantly since it was first introduced in 1964. Algeria adopted a fixed exchange rate system based on the French franc upon its independence.

A structural adjustment program, backed by a structural adjustment loan from the World Bank, was implemented to deepen structural reforms, underpin the market economy, and promote Algeria's inclusion into the global economy. These various programs, in addition to the profound changes introduced into the country's economic, financial and social system, led to two devaluations of the dinar, in 1994 and 1995 and the floating of

its rate so that its rate, which was 1 US dollar equal to 24.12 DA in 1993, fixed in the year 2000 at a value of 1 USD = 75.00 DA. The dinar's value collapsed to such an extent, which was equal to 4.93 DA against the dollar at the time of its creation in 1964, fell to 75.00 DA in 2000. This depreciation, which became more pronounced during the 1990s, was not the product of monetary policy or budgetary policy, however, of measures imposed by the IMF and the World Bank.

A sizable segment of the population became impoverished as a result of the enormous drop in the dinar's purchasing power, which was caused by the lack of long-term gains through adjustment measures that would have mitigated its effects. If the situation gradually improved subsequently, it was not because of the adjustment programs or the policy followed by the public authorities, but thanks to the increase in the price of oil and to a certain extent to more favorable rainfall. The price of a barrel based on the annual average rose from 17.19 US dollars in 1999 to 28.5 dollars in 2000 and continued to rise, reaching 100 dollars in 2008. The increasingly significant resources obtained thanks to this increase were certainly used to repay the external debt in advance.

**Figure 01: Progression of the dinar's exchange rate versus the US dollar since 2014**



Source: <https://www.bank-of-algeria.dz/taux-de-change-2/>, 03/12/2024

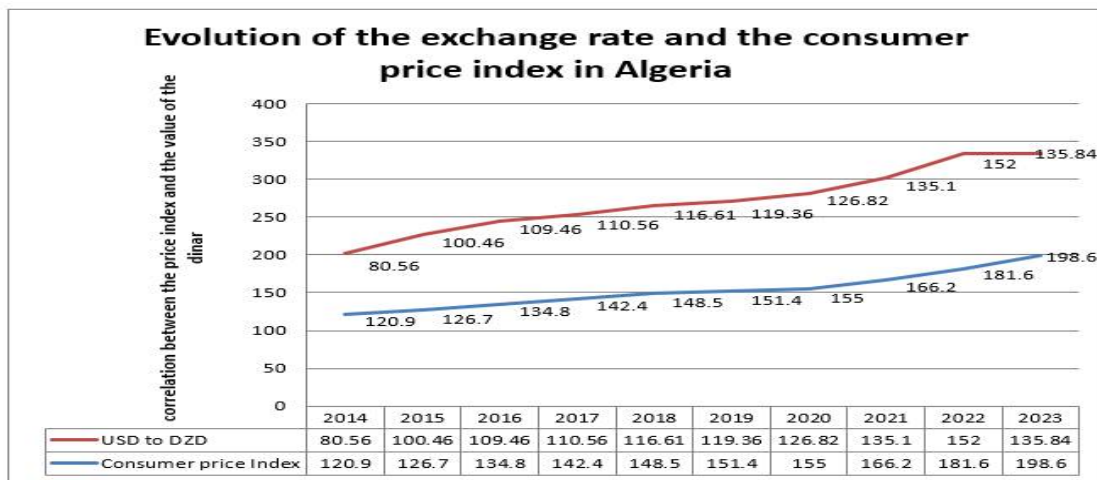
That is to say that, just like the national economy, the dinar is a vulnerable currency. It should be added that a change in exchange rate policy can only be considered the day when national production will make it possible to limit imports and develop the export of diversified and competitive products. One last remark deserves to be made: although it has existed for fifty years, the dinar has not been adopted by Algerians, including officials.

Experience has shown that a devaluation of the dinar only produces disastrous effects. An appreciation will also be of no use; in the current conditions, it will only encourage imports and capital flight. It is obvious that the relative stability of the dinar's official exchange rate can only be maintained if foreign currency resources from oil and gas exports are enough to pay imports and fund the government's expenses. A collapse in the price of oil that would last for some time would certainly lead to the collapse of our entire economy and the dinar with it.

4.1. Analysis of the relationship between exchange rate fluctuations and the consumer product price index since 2014

The continued devaluation of the Algerian dinar against the US dollar and other currencies has effects on the economic and financial situation, especially social, by increasing inflation due to the weakness of the manufacturing system outside the hydrocarbon sector and the elevated prices of consumer goods imports. Given that the consumer price index conveys the currency's purchasing power and explains inflation patterns, we decided to examine the link between the two variables to find out the degree to which the evolution of the official exchange rate affects purchasing power.

Figure 02: Evolution of the currency exchange rate and the consumer price index in Algeria



Source: made by ourselves using data from:

<https://www.bank-of-algeria.dz/taux-de-change-2/>,

03/12/2024 <https://donnees.banquemondiale.org/indicateur/FP.CPI.TOTL?end=2023&locations=DZ&start=2014>,

15/11/2024

The data in this graph show that the exchange rate and the consumer price index change at the same rate and almost in the same direction across the research period. Therefore, a continuous increase in the exchange rate which went from 84.56 dinars/dollars in 2014 to 135.62 dinars/dollars per year in 2023, reaching its highest value of 139.55 dinars/dollars in 2022, and this is what explains the depreciation of the Algerian dinar throughout this period and which directly affects the consumer price index and therefore the purchasing power of Algerians since salaries are fixed. It should be noted that, even though the extremely adverse impacts of the Algerian dinar's decline in value, especially in recent years, the government has continued to rely on voluntary depreciation as part of budget rebalancing with the objective to reduce its deficit, which accumulates yearly as a result of the decline in hydrocarbon prices, a practice that has a significant impact on citizens' purchasing power, particularly those with fixed salaries.

Also, the effects of devaluation of local currency on the trade balance play the role of a majority coefficient of the price of imports and a minority coefficient of that of exports. This modifier has a mechanical effect on the

volume of exports which will increase while imports will decrease. To better understand the effects of devaluation on the situation of the trade balance of a country. *"Because at first the deficit stabilizes, then gradually disappears and finally gives way to a surplus which gradually grows"* (LAKEHAL, 2012, p. 23).

This is why it is imperative for the public authorities to accelerate the taking of the necessary measures to contain this crisis by a real launch of national production and the encouragement of investments and exports outside hydrocarbons and diversification of resources in order to obtain strong currencies, in addition to working to reduce or replace imports, in order to increase the value of the currency and restore confidence in it.

## 5. Conclusion:

Our research seeks to validate or reject the initial hypothesis, as well as to answer our main question, we relied on theoretical research work based on documentation, while focusing on the devaluation of the currency, which is a policy instrument established by the Algerian state whose main objective is to combat the trade balance deficit and the balance of payments. Therefore, we try to address the issue of the extent to which exchange rate fluctuations affect Algerian resident's purchasing power. It concludes that the rentier characteristics of the Algerian economy, coupled with its complete reliance on hydrocarbon export revenues and the lack of economic diversification, have necessitated devaluation of the local currency on numerous occasions to attain various balances. This has adversely influenced the price of the country's currency and its purchasing power.

The management of the Dinar exchange rate and its role resulted in administrative costs in foreign currencies, with any effects on the nation's economic activity, and eventually the exchange rate gradually deviated from economic reality. This forced the situation to adopt the policy of devaluing the Dinar, which was unavoidable in order to deal with economic crisis that rocked Algeria. It was ultimately financially suffocated by the decline in oil earnings. Its service in particular, along with its foreign debt, became an intolerable burden. Therefore, in order to renegotiate its external debt, Algeria had to go through the IMF's Caudine Forks, just like many other debtor nations.

The devaluation of the national currency causes an upsurge in domestic prices due to numerous variables, including the escalation of imported raw material costs, which subsequently raises consumer goods prices, increases the cost of living, and diminishes purchasing power.

## Recommendation:

- Give greater priority to the stability of the Algerian dinar exchange rate and avoid resorting to a continuous devaluation of the local currency, as this procedure would cause residents and non-residents to lose confidence in the local currency, and reflect negatively on internal and external balances;
- Diversify sources of obtaining hard currency and control imports and exports.

- Establishing credibility because companies invest depend on their confidence in the future and, more importantly, on the credibility of public policies. Policies that are not credible will not be able to attract investment from companies. The credibility of a policy can be compromised by many factors, particularly by the temptation for decision-makers to sacrifice rational long-term measures in favour of immediate objectives, such as obtaining personal advantages or winning the favour of certain voters.
- Governments must also ensure that new policy or regulatory proposals do not erode the investment climate by introducing undue burdens or other distortions. Draft laws and regulations are subject to a quantitative assessment of their costs and benefits, which helps ensure that proposals take into account the economy as a whole. These additional reviews also help to detect rent-seeking behaviour.

In summary, the policy strategy to improve investment attractiveness, as an alternative to currency devaluation, must involve three important steps. First, it is necessary to plan for the establishment of location-specific factors that will give firms the opportunity or desire to invest, create jobs, and grow their businesses. Second, policymakers must address the root causes of policy failures that erode the investment climate. This requires measures to combat corruption and other forms of rent-seeking that add costs and distort policies, and to enhance the credibility of government to reassure firms and encourage them to invest. Finally, it is important to recognize that improving the investment climate is a process, not a one-off action. It is not necessary to tackle all the problems at once, and no aspect of public policy is perfect. Significant progress can be made by taking steps to remove barriers that weigh heavily on businesses in order to reassure them that they will invest, and by establishing momentum to sustain this reform action over time.

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