

Economic optimality of the exchange rate regime applied in Morocco

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Abstract. The main objective of this study is to analyze from an economic point of view the optimality of the exchange rate regime applied in Morocco, while basing on a macroeconomic analysis on the gradual flexibility of the Moroccan exchange rate regime and while presenting the conditions of success of the gradual flexibility based on the optimal widening of the band of fluctuation of the exchange rate to +/-5% that have been adopted by the domestic monetary authorities.

Keywords. Band of fluctuation, Optimality, Exchange rate regime, Gradual flexibility, Moroccan economy, Monetary authorities.

JEL. C51, C68, E02, F31, F41.

1. Introduction

The choice of an appropriate exchange rate regime remains an important problematic issue in international finance. In January 15, 2018, Morocco have adopted an exchange rate regime where the parity of the dirham is determined within a fluctuation band of +/- 2.5%, compared to a central rate determined by the Moroccan monetary authorities on the basis of a basket of currencies composed of 60% of the Euro and 40% of the Dollar. Further, on 09 March 2020 this country has applied the second stage of widening the fluctuation band again up to +/- 5%.

The main objective of this work is to study the economic optimality of the exchange rate regime applied in Morocco, while providing elements of answers using theoretical and empirical arguments. The main problematic question posed is the following:

- Is the exchange rate regime currently applied in Morocco optimal?

To answer to this central question, sub-questions have been determined:

- How can gradual flexibility be analyzed from an economic point of view?

- What are the conditions for transition to a more flexible exchange rate regime?

In order to be able to answer our problematic and provide elements of answers, the following plan has been adopted. We will first present the economic analysis of gradual flexibility and then the conditions of transition.

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2. Economic analysis of gradual flexibility

First, the optimal exchange rate regime for a given country has always been a subject of debate among international economic experts, both academic and political. Since the collapse of the Bretton Woods system in the early 1970s and the adoption of the Second Amendment to the IMF's Articles of Agreement, member countries have been free to adopt the exchange rate regime of their choice. Moreover, the first empirical research papers on the choice of exchange rate regime in the modern era were published in the late 1970s: Heller (1978), Dreyer (1978) and Holden & Suss (1979). Each of these studies analyzes the role of the variables suggested by the optimum currency area (OCA), theory in the choice of exchange rate regime. Heller (1978) finds that GNP (gross national product), imports relative to GNP, and trade concentration play the largest role in determining the exchange rate regime. Dreyer (1978) reports that a higher degree of economic openness and greater trade diversification are associated with the tendency for greater exchange rate fixity. Holden & Suss (1979) also find a similar openness effect. These three studies effectively provided some basis for the optimum currency area (OCA), theory to be used as an appropriate conceptual framework for understanding the choice of an exchange rate regime. Three subsequent studies, by Collins (1996), Rizzo (1998), and Bayoumi & Eichengreen (1998), support some of the predictions of the optimum currency area (OCA), theory over a longer period of time. These three papers differ from the previous three in their use of a time dimension as well as a cross-sectional dimension. Rizzo estimates a model for the period between 1977 and 1995 and finds that greater exchange rate flexibility is associated with greater size (measured by GDP), greater economic development (measured by GDP per capita), greater economic openness (measured by the ratio of exports to GDP), higher inflation, and lower geographic diversification (measured as a percentage of the top three export destinations).

The choice of exchange rate regime is one of the most important economic policy decisions for most countries. This is because the exchange rate is a key variable that determines the flow of trade in goods, services and capital, and therefore has a strong influence on the balance of payments, the general price level and other macroeconomic variables. Considerations on the choice of exchange rate regime gained momentum with the establishment of the Bretton Woods system in 1944.

Indeed, the Bretton Woods system established in 1944, i.e. the improved Gold Exchange Standard, advocated that states restore freedom of exchange and capital movements and committed themselves to defending the parity of their currencies by involving exchange stabilization funds. The implementation of this system was criticized by Friedman (1953), who argued that fixed exchange rates generated speculative crises and instability.

But again, it should be noted that Friedman's work took place in a period of low capital mobility. However, Mundell (1960) opposes Friedman's result. According to Mundell (1960), in the case of high capital mobility, the ideal system is that of a fixed exchange rate because the interest rate directly

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influences the balance of payments. But when capital is immobile, he advocates a flexible exchange rate regime.

In an early study, Baxter & Stockman (1989) use a sample of 49 countries to compare the behaviour of a few key economic aggregates (output, consumption, foreign trade and real exchange rates) over a period from 1946 to 1986. The authors find no systematic differences in the behaviour of these aggregates according to the exchange rate regime applied.

But Mundell (1995), compared economic growth in industrialized countries before and after the collapse of the Bretton Woods system. He shows that economic growth was much faster in the first period, when exchange rates were fixed.

Moreover, the optimal exchange rate regime is still an ambiguous subject of study. Indeed, Frankel (1999) even rejects the idea of its existence, while other theorists such as Mundell (2000) and Fisher (2001) recognize the existence of the optimal exchange rate regime but do not identify it precisely. In this framework, Ragzallah (2000) considers that an exchange rate regime is optimal if it guarantees a maximum level of credibility for the monetary authorities. Moreover, Rizzo (1998), Bailliu, Lafrance & Perrault (2001) assume that the optimal exchange rate regime allows for the optimization of the country's economic performance, such as inflation, competitiveness, trade, investment and, above all, economic growth.

Frankel's (1999) consideration of the nature of shocks gives three arguments: flexibility is preferable if the dominant shocks are nominal external shocks, fixity is preferable if the dominant shocks are nominal domestic shocks, and flexibility is preferable if the dominant shocks are external or real domestic shocks. Ripoll (2001) follows Frankel (1999) and Mundell (2001) in developing a list of factors that can help countries choose their own exchange rate regime. These factors include the size and openness of the economy, the level of inflation, internal and external shocks, factor mobility, the degree of price and wage flexibility, the degree of credibility of the monetary authorities, and the price-setting system.

Moreover, Poirson (2001) suggests that when a country suffers from political instability, it has an incentive to float its currency because it is unable to defend the fixed parity. On the contrary, Williamson (2000) and Bénassy-Quéré & Coeuré (2002) consider that the fixed exchange rate regime does not improve credibility, since credibility can be generated by the strong institutional commitment induced by fixity. In this framework, credibility is essentially the result of institutional rigidities and not of the central bank's transparency and strong commitment to achieving its stated objectives. It is a diluted credibility (Razgallah, 2000). These authors recommend intermediate exchange rate regimes to enhance credibility, as these regimes require a stronger institutional commitment.

However, optimal currency area theory is one of several frameworks available for understanding the choice of exchange rate regime. Another branch of the theory focuses on differences in short-run macroeconomic performance across exchange rate regimes. As widely argued in the

literature, a fixed exchange rate tends to insulate an economy better from monetary shocks, while a flexible exchange rate better serves goods market shocks (real shocks). Melvin (1985) finds, as theory predicts, a negative relationship between domestic money market shocks and greater exchange rate flexibility, and a positive relationship between foreign price shocks and greater exchange rate flexibility, even though the variables in the optimum currency area (OCA).

Of course, in practice, the optimal exchange rate regime, especially for developing or emerging market economies, has changed significantly over the past two decades. It was very common in the early 1990s to fix the exchange rate against a strong currency (often the dollar or the deutsche mark), especially in countries that were moving from a command economy to a market economy, which they were trying to stabilize once prices were freed up.

Allegret *et al.*, (2006), in their study, used a model that related the degree of exchange rate flexibility/rigidity to shocks affecting the economy and to economic policy objectives. To this end, their results showed that the degree of flexibility of the exchange rate tends to decline when the impact of the variation of the exchange rate on domestic prices (pass through) is high, the volatility of nominal shocks relative to real shocks is high, and the loss associated with inflation is significant.

Morocco has initiated a first step towards the adoption of a flexible exchange rate regime, by widening the fluctuation bands to +/- 2.5% in relation to a central rate determined by the Moroccan monetary authorities on the basis of a basket of currencies composed of 60% of the Euro and 40% of the Dollar. This decision, which took effect on January 15, 2018, is a first step towards breaking with the fixed exchange rate regime adopted since independence. This transition would allow the Moroccan economy to eventually acquire a macroeconomic instrument that acts as a shock absorber and promotes rapid adjustment at lower cost. In the absence of this mechanism, adjustment to macroeconomic shocks has sometimes required a contraction in demand and, thus, a cyclical slowdown in growth, in order to restore external balances. In addition, the widening of the fluctuation bands is a first step towards a managed long-term floating regime. Thus, the Moroccan monetary authorities have also decided to proceed from March 9, 2020 to a second stage of widening the fluctuation band of the dirham from +/-2.5% to +/-5%.

Regarding the benefits associated with the adoption of the gradual flexibility, the central bank states that the country is motivated by various reasons to move to it:

- Accompanying the opening of Morocco to the international economy;
- Improving the competitiveness of the Moroccan economy and contribute to its improvement;
- Mitigating external imbalances and exogenous shocks;
- Supporting the development of the financial sector;

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- Limiting the pressure on foreign exchange reserves and prevent foreign exchange crises.

There is a broad consensus that moving to a more flexible regime should be made when conditions are right. Moreover, the central bank asserts that Morocco has the necessary prerequisites:

- Sound macroeconomic fundamentals;
- The adequacy of the level of foreign exchange reserves;
- The soundness and resilience of the banking system;
- The change of the nominal anchor (from exchange rate to interest rate) and therefore adaptation of the monetary policy framework to inflation targeting.

Morocco has been engaged in a gradual process of economic opening and liberalization. As a result, its choices in terms of exchange rate policy have always been a strategic importance and the monetary authorities, named the Ministry of Economy and Finance, the change Office and Bank Al-Maghrib, have constantly adapted the exchange rate regime and regulations to the evolution of the country's economic environment since the creation of the national currency in 1959. In fact, the transition to a more flexible exchange rate regime will have to be done gradually and progressively and assumes a number of prerequisites, including the holding of a comfortable level of foreign exchange reserves, the solidity and resilience of the banking system and the control of macroeconomic balances. This transition will help to ensure greater independence for monetary policy and will eventually allow for the adoption of an inflation targeting regime, which would improve the transmission of monetary policy decisions and enhance its effectiveness.

Also, this transition to a more flexible exchange rate regime will take place in a gradual and orderly fashion to allow the various actors to adapt to the different changes. The final objective of this transition is to reach a regime where the prices of the different currencies against the dirham will be set by the market through economic fundamentals, inflation, as well as the evolution of the supply and demand of currencies.

This reform (gradual flexibility based on the widening of the fluctuation band), which is a long process involving several stages, must first satisfy a certain number of prerequisites, which must be met before the reform, during its implementation and after the transition, particularly in terms of the soundness of macroeconomic fundamentals, the adequacy of the level of foreign exchange reserves, the soundness and resilience of the banking system and finally the adaptation of the monetary policy framework to inflation targeting.

Taking into account the importance of the exchange rate today as a factor of regulation and adjustment. By remaining within this framework, Morocco wants to have an optimal exchange rate policy, capable of absorbing both internal and external shocks. However, there is no single exchange rate regime that suits all countries and all circumstances, and progress in financial liberalization is still limited. In other words, while Morocco is open in trade terms, it is not open in financial terms. Neither economic theory nor

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international experience offers a universal answer to what can be considered an ideal or optimal exchange rate regime. What is perhaps important is that it is preferable for a given country to seize the opportunity of a relatively stable situation to make the transition to greater flexibility and not wait for an exchange rate crisis to do so.

It should be noted at this level that since the famous SAP, the Moroccan economy has entered a phase of macroeconomic stabilization favorable to the conduct of reforms and strategies structuring the future of the national economy. In this context, Morocco has long maintained its historical and traditional choice of a peg to a basket of two main currencies, namely the Euro and the Dollar. As a result, the said strategy no longer serves the economic interests of the Moroccan economy, which leads the domestic monetary authorities to build a new model based on the gradual flexibility of the exchange rate of the Moroccan dirham by seeking an optimal exchange rate policy to improve competitiveness. Indeed, to be more effective, it is generally accepted that a set of institutional prerequisites must be met. Among these conditions, there are generally three ingredients, namely a sufficiently developed foreign exchange market, an adequate official reserve management policy, and also a good monetary policy strategy and a choice of a nominal anchor. Of course, the choice of an optimal exchange rate policy for the case of Morocco is closely linked to the importance of the characteristics and particularity of the Moroccan economy in light of the broad orientations of the monetary authorities, as well as the economic stakes of the country.

Indeed, the maximum width of the exchange rate fluctuation band should depend on the degree of exchange rate pass-through to domestic prices. In the study published in 2015 by Bakkou, O, Idrissi, H, and El Mahdi, Z, under the theme (Evaluation of exchange rate pass-through to domestic prices in Morocco), the authors evaluated the degree of exchange rate pass-through to domestic prices (ERPT) over the period from 1979 to 2014, with the aim of exploring the possibility of implementing a more flexible exchange rate system in Morocco. The study found that the Exchange Rate Pass Through (ERPT) in Morocco is low overall, suggesting that the option of implementing a more flexible exchange rate system can be considered in Morocco.

In his book the exchange rate policy specialist Bakkou (2019) was able to explain this topical subject by trying to appreciate the impact of the process of gradual flexibility of the Moroccan dirham on the situation of internal and external macroeconomic balances of the domestic economy. Moreover, it should be noted at this level that the regime applied and adopted following the reform of 2018 is not a floating regime in the sense of free determination by the market of the exchange rate of the dirham against foreign currencies, but simply a regime in which this rate will be called upon to observe more significant variations than those recorded in the previous regime, this fluctuation currently amounts to +/-5% around an exchange rate determined by the Moroccan monetary authorities

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In terms of exchange rate policy, the suggested measure would be to make the exchange rate policy of the national monetary authorities more flexible, i.e., to implement a system in which the overall exchange rate could vary according to changes in the external situation of the Moroccan national economy. This economic decision making could in principle be implemented according to two main modalities, namely, the first would consist in setting up a floating regime, in other words a system in which the exchange rate would be largely determined by the foreign exchange market. The second option would consist of maintaining control over the exchange rate by the State while proceeding with measures to correct this rate according to the evolution of the external situation of the Moroccan economy.

The optimal choice of gradual flexibilization has advantages and limitations. In terms of advantages, the widening of the fluctuation band is likely to contribute to the adjustment of current account imbalances due to the recurrence of real shocks (climatic hazards and increases in the price of energy products on the international market), which shocks are directly linked to the weak diversification of the national economy. As for the limitations, we can cite the volatility and undesirable variations of this exchange rate. Indeed, the volatility of the exchange rate generates costs for exporters, importers, foreign direct investors and entities that contract foreign debt denominated in foreign currency, in the form of hedging costs to protect themselves against the uncertainty generated by the said volatility. Undesirable exchange rate movements relate to the negative impacts of exchange rate appreciation on the overall performance of the domestic economy.

While still based on the book published in 2019 by Bakkou. O under the theme (To better understand the flexibility of the dirham). The author also analyzed the impact of the gradual flexibilization on inflation, the risk of origin of an exchange rate crisis in Morocco and its amplifications on the convertibility of the Moroccan dirham. As far as the effect on inflation is concerned, the elements developed have shown that these impacts (for moderate levels of exchange rate depreciation) remain low overall, due to the historical control of the inflation rate in Morocco and also the relatively moderate degree of trade openness of the Moroccan economy. Thus, regarding the impact of this gradual flexibility on the risk of an exchange rate crisis in Morocco, the author has shown on the one hand, that this risk depends on other structural factors such as other than the exchange rate regime (state of budgetary balances, the inflation rate...) and cyclical factors (economic shocks) and on the other hand, that this decision is supposed to alleviate this risk. Finally, as for its implications on the convertibility of the dirham, the author has shown that flexibility does not automatically imply total convertibility, but that it would require certain well-defined measures of liberalization of exchange controls affecting current operations as well as certain financial operations.

3. Conditions for transition to a more flexible Exchange rate regime

3.1. Degree of openness and trade integration of the economy (trade liberalization and diversification)

The greater the openness of the economy (the weight of tradable goods is immense), the more the fixed exchange rate regime is held. Indeed, exchange rate variations strongly affect the price ratio of goods intended for export more than those that cannot be traded. Moreover, the policy of diversification and openness that Morocco has opted for in recent decades could result in a reduction in the effectiveness of the fixed exchange rate. Indeed, it has embarked on a process of integration into the world economy, this stage is in the process of deepening through the dismantling of tariffs with the EU, the United States and Turkey ... The consideration of a policy of diversification of products and trade partners, is one of the conditions for successful integration into the global economy. In Morocco's case, the productive fabric and exports are not, or are not very diversified, and are more vulnerable to external shocks, and therefore need to let the exchange rate float to adjust to them.

3.2. Financial integration (gradual liberalization of the capital account)

The advantages of fixity disappeared as the country integrated into the global economy. It is necessary for many countries to implement a more flexible exchange rate in order to minimize the risks associated with financial integration, and history shows us the degree to which financial account liberalization would sooner or later be forced to adopt a floating exchange rate regime. However, international financial integration is not compatible with a fixed exchange rate, especially if the country has a well-developed financial sector. In this case, the rigidity of its exchange rate only generates instability and financial risks. However, liberalizing the capital account has a direct effect on the exchange rate, because if this structural reform is accompanied by others to improve the business climate, we can expect a significant improvement in FDI inflows (including transfers from Moroccans living abroad) and of course foreign capital participation and financing of Moroccan companies overall. On the other hand, the gradual elimination of barriers to capital outflows for residents could also lead to a potentially massive capital outflow.

3.3. Monetary credibility (monetary policy autonomy)

The weaker the anti-inflationary reputation of the monetary authorities, the more desirable it is to attach it to the floating exchange rate. The gain in credibility is then costly in terms of flexibility. Thus, the fixity of the exchange rate is an essential instrument for controlling inflation and, above all, for giving the government the price indices to make its commitments to stabilize them. During the history of inflation in Morocco, the government may not need to use a fixed exchange rate. But fixity is also part of inflation

control. It is the set of characters framing the choice of an exchange rate regime, to make an adjustment between the most favorable determinants of the exchange rate and its misalignments in different periods (increase or decrease in GDP...) and the nature of trade relations. Thus, the stage of liberalization is important because, while waiting to lay the foundations for a fully floating exchange rate, it would be appropriate, within a framework of sound macroeconomic policies and moderate macroeconomic shocks, to adopt an intermediate regime of this type. Morocco will have the opportunity to minimize the scope for financing public deficits, in order to better redirect monetary policy toward its objectives, such as targeting risk-free inflation, following the volatility of the exchange rate.

3.4. Structural reforms

The choice of an exchange rate regime is one of the fundamental pillars of a country's macroeconomic management. It is still a major concern of policymakers, especially in developing countries. The future behavior of the real exchange rate also depends on how structural reforms affect the path of economic growth in Morocco. Other structural measures, including those in markets, public enterprises, the legal system, the labor market, and the financial system, have been undertaken or are under consideration. These reforms aim to create an environment that encourages business, which is a prerequisite for improving productivity and growth in the economy, on the one hand, and increasing the performance of the economy by reducing the dependence of economic growth on climatic hazards, on the other. The transition to an optimal exchange rate policy also requires priority reforms of the financial and banking system, as well as the establishment of a rigorous legal and institutional framework to better meet international standards. The adoption of a more flexible exchange rate policy also requires improving market liquidity and efficiency, thus gradually removing the central bank's hand from the market and improving transparency and information dissemination.

4. Conclusion

The main objective of this work was to study the economic optimality of the exchange rate regime applied in Morocco, while presenting the conditions of transition to a more flexible exchange rate regime. Thus, the adoption in Morocco of an optimal economic exchange rate policy would be only a matter of prerequisites to avoid a backward step, this reform is initiated in favorable conditions marked by the soundness of the financial sector and the consolidation of macroeconomic fundamentals, including an appropriate level of foreign exchange reserves and controlled inflation, it will also be supported by the continuation of structural and sectoral reforms. In addition, the objective of the exchange rate policy reform is to strengthen the resilience of the Moroccan economy to exogenous shocks, support its competitiveness and improve its level of growth. It should accompany the

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structural reforms that the domestic economy has undergone in recent years, particularly in terms of sectoral diversification of production structures and exports, openness and integration into the international economy.

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