

Asymmetric Effects of Exchange Rate Fluctuations on The Public Revenue Mobilization Gap in the DRC: An Analysis Using the NARDL Model

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ABSTRACT: This article studies the asymmetric effects of exchange rate variations on the gap in public revenue mobilization in the Democratic Republic of Congo (DRC) between January 2022 and December 2024. The analysis relies on a NARDL model, which allows for the simultaneous examination of short-term and long-term adjustments and the testing of potential differences between phases of exchange rate appreciation and depreciation change.

Estimates indicate that both positive and negative exchange rate shocks do not induce a significant structural effect on the gap in public revenue mobilization, their impacts being progressively absorbed by the adjustment mechanisms of the Congolese economy. In the short term, however, foreign exchange movements temporarily disrupt the revenue mobilization process, before attenuating under the effect of the error correction term. Furthermore, Wald tests do not lead to the rejection of the symmetry hypothesis, which indicates that appreciations and depreciations produce, on average, statistically comparable effects, both at both short and long term. The results also highlight the central role of structural factors, notably the level of public spending and fluctuations in global copper prices, in the evolution of the observed gap.

These findings suggest that the sustainable strengthening of public revenue mobilization in the DRC relies less on stabilizing the rate of change than on improving the capacities of financial administrations, rationalizing public spending, reducing inefficient expenditures and better capturing revenues from the mining sector. They thus support the implementation of institutional reforms designed to increase the effectiveness of the policy of mobilizing internal resources in a strongly dollarized economy dependent on raw materials.

KEYWORDS: Exchange rates, public revenue mobilization, NARDL, asymmetry, cointegration, DRC.

JEL Classification: C32, E62, F31, H20, H68.

INTRODUCTION

Since the pioneering analyses of Mundell (1963) and Fleming (1962), the exchange rate has been considered a key channel for the transmission of macroeconomic imbalances in open economies. In developing countries, where the economy is heavily dependent on imports, where the productive base is not very diversified, and where exports to foreign currencies are high, exchange rate fluctuations influence not only inflation, domestic prices, and external competitiveness, but also budgetary balance and the state's ability to mobilize resources necessary for financing development (Edwards, 1989; Calvo & Reinhart, 2002). This question arises acutely in sub-Saharan Africa, where taxation remains structurally weak and largely tied to foreign trade as well as to income from natural resources.

The IMF (2023) indicates that tax revenues in developing countries represent on average less than 16% of GDP, compared to more than 34% in advanced economies. This underperformance is explained in particular by the weight of the informal sector, the fragility of tax administrations, the persistence of e-commerce and the strong vulnerability to external shocks (Gupta, 2007; Keen, 2012; Drummond et al., 2012). In such a context, exchange rate movements can weigh on the mobilization of public revenues, particularly when a large part of tax and customs levies are denominated or indexed in foreign currency.

The DRC constitutes a particularly illuminating case study due to the high dollarization of its economy. For several decades, the American dollar has become the dominant means of payment in commercial transactions, bank deposits and numerous operations financial. According to the Central Bank of the Congo (BCC), the degree of financial dollarization regularly exceeds 80%, which reduces the effectiveness of traditional monetary policy instruments. At the same time, public finance is largely based on customs duties, import

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VAT and mining taxes, the base of which is mainly made up of operations carried out or indexed in foreign currencies. This institutional architecture gives the exchange rate a determining role in the conversion of public revenues into national currencies and, subsequently, in the execution of the budget.

The current macroeconomic trends illustrate these issues well. Between 2010 and 2023, the exchange rate rose from less than 1,000 Swp per dollar to more than 2,700 CDF/USD. Annual inflation reached 23.8% in 2023, before falling to around 11.7% in 2024 due to the effect of monetary tightening carried out by the BCC. At the same time, public revenues have increased significantly thanks to tax reforms, the digitalization of collection procedures and the strengthening of controls of financial administrations. According to the Ministry of Finance, in 2022 revenues and donations actually collected exceeded budget forecasts by more than 33%. However, this improvement masks a more nuanced dynamic. From 2022 onwards, the strategy to support the Congolese franc, based in particular on the rise in the key interest rate, the increase in required reserves and more active liquidity management, has contributed to curbing the depreciation of the exchange rate. However, in an economy where a significant part of tax and customs revenue is collected in foreign currency, a relative appreciation of the Congolese franc mechanically reduces its counter-value in national currency, even though budgetary targets have often been set on the basis of more depreciated exchange rate assumptions. This can result in discrepancies between budget forecasts and actual results, and an increase in the State's financing needs.

Despite the importance of these questions, the links between exchange rate fluctuations and the mobilization of public revenues remain little empirically studied. The literature has mostly focused on inflation, growth, foreign consumption or investment (Rodrik, 2008; Aghion et al., 2009), while Fiscal and budgetary dimensions remain secondary. Furthermore, the few studies on public finance most often rely on linear models that implicitly assume that appreciations and depreciations have symmetrical effects. Such an assumption is questionable in highly dollarized economies, where transmission mechanisms can vary according to the direction of exchange rate fluctuations. As Shin, Yu and Greenwood-Nimmo (2014) remind us, linear models can obscure non-linear behaviors, hence the interest of econometric approaches capable of separately identifying the effects of positive and negative variations.

This study aims to fill this gap by evaluating the impact of fluctuations in the rate of change on the gap in mobilization of public revenues in the DRC using a NARDL (Nonlinear Autoregressive Distributed Lag) model. Compared to usual approaches, this method distinguishes short-term and long-term effects of appreciations and depreciations and allows for formal testing of the existence of asymmetries in their transmission to revenues. To our knowledge, this is one of the first applications of NARDL to the analysis of interactions between monetary policy and the mobilization of public revenue in a heavily dollarized sub-Saharan African economy. The contribution is twofold. On the one hand, it enriches the understanding of the macroeconomic determinants of the mobilization of internal resources by explicitly integrating the non-linear dimension of the variations of change. On the other hand, it provides useful empirical results to strengthen the coordination between monetary and budgetary policies in a framework where the stability of the exchange rate remains a central objective of the monetary issuing institution.

Based on monthly data covering the period from January 2022 to December 2024, the objective is to identify the extent to which fluctuations in the rate of change influence the gap in public revenue mobilization and to verify whether the effects of appreciations and depreciations differ according to the temporal horizon. Beyond the scientific interest, the expected results offer operational avenues for the conduct of economic policies in the DRC, both for budgetary programming and the mobilization of domestic resources, and for the articulation between monetary and budgetary authorities, in an environment characterized by high dollarization and persistent dependence. to income from the extractive sector.

I. REVIEW OF EMPIRICAL LITERATURE

The empirical literature largely agrees to consider variations in the exchange rate as a major factor in public finances, particularly in developing countries where tax revenues depend heavily on foreign trade and foreign exchange transactions. The seminal works of Tanzi (1977) highlighted that macroeconomic instability, particularly inflation and collection delays, erodes the real value of revenues and reduces the efficiency of tax administrations. Along these lines, numerous studies underscore the role of the exchange rate as a vector for transmitting external shocks to government revenues. On a panel of 22 sub-Saharan African countries estimated by the generalized moment method, Agbeyegbe, Stotsky and WoldeMariam (2006) show that exchange rate fluctuations influence trade-related revenues have increased significantly, reflecting the high dependence on customs duties and import taxes. Gupta (2007) and Drummond et al. (2012) also indicate that revenue mobilization depends as much on macroeconomic performance as on the productive structure, the degree of openness, the quality of tax institutions and the stability of the macroeconomic framework. Keen (2012) completes this diagnosis by highlighting that institutional constraints, the size of the informal sector and the low efficiency of administrations strongly limit the capacity to mobilize domestic resources in developing countries. Overall, his work converges towards the idea that the impact of the exchange rate on public revenues occurs mainly through its interaction with economic structures and institutionelles. They are, however, mostly based on linear models which assume that appreciations and depreciations produce identical effects, an assumption which may prove restrictive in heavily dollarized economies.

This limit is particularly crucial where the US dollar occupies a central place in transactions. In analyzing the Fear of Floating, Calvo and

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Reinhart (2002) show that many countries with a flexible exchange rate regime regularly intervene in the foreign exchange market to mitigate fluctuations, taking into account their effects on inflation, financial stability and the sustainability of public finances. In these circumstances, movements in the exchange rate directly modify, in national currency, the value of revenues and public expenditure, due to the high share of foreign exchange transactions. This configuration is common in resource-rich economies, where a large fraction of exports, imports and tax levies are indexed to the dollar. The effects of foreign exchange on public finances are therefore more complex than suggested by linear models, because the transmission channels depend on both the structure of the revenues, the degree of dollarization and the adjustment capacities of financial administrations.

In this perspective, part of the recent literature uses econometric methods capable of taking into account possible non-linearities in relationships macroeconomics. Shin, Yu and Greenwood-Nimmo (2014) present the NARDL model, which non-linearly extends the ARDL of Pesaran, Shin and Smith (2001). This tool allows simultaneous estimation of short-term and long-term relationships while distinguishing the effect of increases and decreases of an explanatory variable via a partial sum decomposition. Since its introduction, this approach has been widely applied to questions of exchange rates, inflation, growth, foreign trade and financial markets, with contrasting conclusions. Bahmani-Oskooee and Fariditavana (2015) show that appreciations and depreciations do not affect trade balances with the same intensity, confirming the existence of asymmetric responses in several emerging economies. Conversely, other studies highlight effects close to symmetry when effective institutional mechanisms allow for the rapid absorption of change shocks. These divergences indicate that asymmetry cannot be assumed and must be empirically verified with regard to the specific characteristics of each economy.

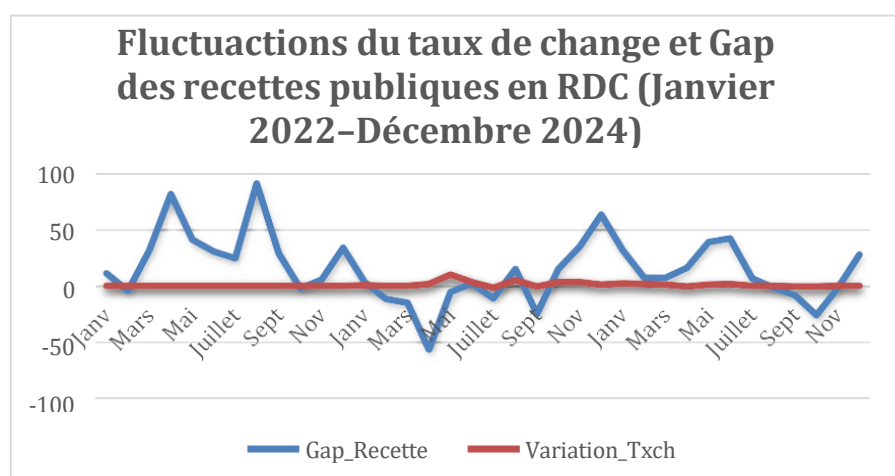
Despite these advances, several limitations persist. First, most research on exchange rate fluctuations focuses on their impact on inflation, growth, exports or investment (Rodrik, 2008; Aghion et al., 2009), while the impact on the mobilization of public revenue remains less analyzed. Secondly, the available studies often focus on aggregate revenues without distinguishing between highly dollarized economies, where transmission mechanisms differ significantly from those of weakly dollarized economies. Thirdly, the application of NARDL remains limited in the field of public finance, particularly in sub-Saharan Africa.

Finally, in the DRC, empirical work focuses mainly on the links between exchange rates, inflation, dollarization and macroeconomic stability, while the interaction between exchange rate fluctuations and mobilization of public revenues has not, to our knowledge, been addressed by a non-linear estimation. This gap is all the more crucial as the DRC presents marked institutional and macroeconomic specificities, including high dollarization, a pronounced dependence on mining and customs revenues and a strong sensitivity to international commodity prices. This is precisely the object of the present research, which mobilizes a NARDL model in order to examine whether fluctuations in the exchange rate generate differentiated effects on the gap in public revenue mobilization in the DRC between January 2022 and December 2024.

II. JOINT DYNAMICS OF EXCHANGE RATES AND PUBLIC REVENUE MOBILIZATION IN THE DRC

Before looking at the econometric links between these variables, it is necessary to first examine their common trajectory in order to identify the major stylized facts specific to the period studied. This descriptive approach allows us to grasp the dynamics of fluctuations in the exchange rate and the gap in the mobilization of public revenues, expressed in relative terms to neutralize the effect of the nominal growth of budgetary aggregates. It thus provides an initial overview of the interactions between these variables and serves as an analytical basis for the interpretation of econometric results.

Figure on the evolution of the exchange rate and the gaps in public revenue mobilization in the DRC (January 2022–December 2024)



Source: Authors' calculations

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The joint examination of the gap in mobilization of public revenues and the movements of the rate of change over the period 2022-2024 highlights a strong instability of the two series, revealing a macroeconomic context subject to both internal and external shocks. In 2022, the mobilization gap remained generally positive, with particularly high levels from April to August, the period of major tax deadlines, during which receipts clearly exceeded projections. This performance is achieved through the continuation of tax reforms, the expansion of the digitalization of collection circuits, reinforced control within financial administrations and there good performance of mining revenues. At the same time, fluctuations in the foreign exchange rate remain moderate, which implies that the gains observed are primarily due to institutional improvements rather than to the dynamics of the foreign exchange market. This result is consistent with the findings of Gupta (2007) and Drummond et al. (2012), who highlight the decisive importance of the quality of tax institutions in developing countries.

The situation evolved significantly in 2023, a year marked by high exchange rate volatility and several episodes of depreciation of the Congolese franc. At the same time, the mobilization gap turned negative for several consecutive months, indicating that performance fell short of initial targets. This configuration reflects the difficulties in adjusting budget forecasts in the face of foreign exchange market disturbances within a highly dollarized economy. However, from the fourth quarter onwards, the gaps narrow and turn positive, thanks to the strengthening of monetary stabilization measures, a recovery in mining revenues and more rigorous monitoring by financial administrations. It emerges that, if movements in the exchange rate temporarily affect public revenues, their impact depends closely on the ability to adjust budgetary policies and monetary.

In 2024, the exchange rate stabilized relatively, due to actions by the Central Bank of Congo (BCC) aimed at containing inflation and supporting the value of the Congolese franc. Despite this monetary stabilization, the mobilization gap remained contrasting, with several negative observations between August and November, followed by a recovery at the end of the year. This development shows that exchange rate stabilization alone is not sufficient to sustainably improve public revenue mobilization. Budgetary results remain contingent on structural factors such as the evolution of international copper prices, the level of imports, the efficiency of financial administrations, and the quality of budgetary programming. These descriptive findings highlight the complexity of the interactions between rate of change and mobilization of revenues and justify the use of an approach non-linear econometric of the NARDL type, even able to distinguish between short and long-term effects and to test for possible asymmetries (Shin et al., 2014).

III. EMPIRICAL RESULTS AND DISCUSSION

The empirical study of the effects of exchange rate variations on the mobilization of public revenue is part of the ongoing work analyzing the relationship between monetary policy and public finance in open economies. Existing research shows that the exchange rate affects state revenues through several channels, including customs duties, import VAT, the taxation of exports and the conversion into local currency of revenues collected in foreign currencies (Agbeyegbe et al., 2006; Drummond et al., 2012). In countries heavily integrated into international trade and dependent on natural resources, a depreciation tends to increase the value in national currency of receipts denominated in foreign currency, while an appreciation or stabilization of the exchange rate generally leads to the opposite effect. This dynamic is particularly marked in highly dollarized economies where, according to Calvo and Reinhart (2002), exchange rate shocks quickly impact macroeconomic balances in general, and budgetary balances in particular.

In this perspective, the analysis proposes an approach that departs from approaches using the level of public revenue as an indicator of budgetary performance. The dependent variable is based on the gap in public revenue mobilization (GAPREC), defined as the relative difference between the cash receipts actually collected and the amounts recorded in the budget forecast. This choice makes it easier to assess more precisely the administration's ability to reach its revenue targets, while limiting the influence of the nominal growth of budget aggregates and price variations. In a context of strong macroeconomic, and especially monetary, volatility, this indicator thus offers a more relevant measure of the performance of public revenue collection.

$$GAPREC_t = \frac{REAL_t - PREV_t}{PREV_t} * 100$$

Or:

- $REAL_t$ represents the revenue generated;
- $PREV_t$ refers to revenue forecasts;
- $GAPREC_t$ measures the relative gap between actual and projected revenues.

Drawing on the work of Gupta (2007), Drummond et al. (2012) and Agbeyegbe et al. (2006), the functional relationship of the model can be expressed as follows:

$$GAPREC_t = f(TXCH_t, IMP_t, INFL_t, MM_t)$$

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However, recent work suggests that the impact of rate of change movements may be asymmetric, with depreciations and appreciations not always affecting macroeconomic variables with the same intensity (Shin et al., 2014; Bahmani-Oskooee & Fariditavana, 2015). To account for this possible asymmetry, the exchange rate is split into positive and negative components:

$$TCH_t = TCH^+ + TCH^-$$

Or:

- TCH^+ represents the depreciation of the Congolese franc;
- TCH^- captures monetary appreciation or stabilization phases.

The final econometric equation to be estimated is written as follows:

$$GAPREC_t = \beta_0 + \beta_1 TCH^+ + \beta_2 TCH^- + \beta_3 IMP_t + \beta_4 INFL_t + \beta_5 MM_t + \varepsilon$$

Or:

- β_0 represents the constant;
- β_i the coefficients to be estimated;
- ε_t the term error.

In this context, a depreciation of the exchange rate is theoretically assumed to strengthen budget execution by increasing the value in national currency of revenues collected in foreign currency, which leads to anticipating a positive sign for. Conversely, an appreciation or a period of monetary stabilization can degrade budgetary performance when the objectives set for financial administrations have been defined based on weaker exchange rate assumptions. TCH^+

Table 1. Summary of the results of the automatic frequency distribution (ADF) test

Variables	ADF Statistics (Level)	p-value	ADF statistic (1st difference)	p-value	Order of integration	Decision
GAPREC	-2.9955	0.0038	–	–	I(0)	Stationary at level
GAPDEP	-3.272	0.0018	–	–	I(0)	Stationary at level
VARTXCH	-4.014	0.0002	–	–	I(0)	Stationary at level
IMPORT	2.103	0.99	-2.5479	0.0124	I(1)	Stationary in first difference
VARPMP	-5.2236	0	–	–	I(0)	Stationary at level

Source: Author, based on results obtained under EViews 10.

The ADF test shows that GAPREC, GAPDEP, VARTXCH and VARPMP are stationary in level and therefore come under a zero-order integration, I(0). Conversely, the IMPORT variable is not stationary in level, but becomes so after a first differentiation; It is therefore integrated of order one, I(1). This combination of series I(0) and I(1), in the absence of any I(2) variable, satisfies the conditions for using the NARDL approach. It is therefore relevant to carry out the cointegration test at the terminals, then to estimate the asymmetric relationships in the short and long term.

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Table 2. Results of the NARDL model estimation: long-term effects, short-term effects, and validation statistics

Variables	LT	CT	p-value
TXCHPOS	0.6651	3.5561	0.0202**
TXCHNEG	71,747	24,1442	0.0833*
TXCHNEG(-1)	—	-40.3603	0.0121**
TXCHNEG(-2)	—	-55.4104	0.0038***
TXCHNEG(-3)	—	-54.3475	0.0034***
GAPDEP	1.4078**	0.6245***	0.0005***
IMPORT	6.7112	23,4311	0.0025***
IMPORT(-1)	—	10,911	0.1313
IMPORT(-2)	—	-2.1208	0.725
IMPORT(-3)	—	12,1644	0.0485**
VARPMP	10.0575*	3.0210***	0.0001***
VARPMP(-1)	—	-3.615	0.0016***
VARPMP(-2)	—	-3.47	0.0010***
VARPMP(-3)	—	-2.5061	0.0021***
ECM (-1)	—	-0.7458***	0.0000***
R ²	0.861		
adjusted R ²	0.7466		
Durbin-Watson	2.1583		

Source: Author, based on estimates made using EViews 10.

Notes: * p < 0.10; ** p < 0.05; *** p < 0.01.

Long-term estimates show that exchange rate movements are not a structural determinant of the public revenue mobilization gap in the DRC. Whether rising or falling, these variations do not have a lasting impact on the State's capacity to raise revenue, as their coefficients are not statistically significant. This indicates that their effects are progressively neutralized by the adjustment mechanisms of the economy. This neutralization is explained in particular by characteristics specific to the Congolese economy, marked by a high dollarization, a strong dependence on mining revenues and a significant share of tax and customs levies denominated or indexed in foreign currency. In this context, fluctuations in the Congolese franc change little, over a long period, the revenue actually collected. On the other hand, variables of a structural nature emerge as the main drivers of the gap in revenue mobilization. The widening of the public spending gap reinforces mobilization difficulties, revealing persistent shortcomings in the coordination between budgetary policy and recovery capacities. Furthermore, the favorable effect of international copper cores confirms the strong contribution of public finance to the sector's performance extractive, while imports do not seem

to have a lasting influence, undoubtedly due to numerous exports, undervaluation practices and the limits of control customs officer. In the short term, the configuration evolves significantly. Positive exchange rate events produce an immediate and positive impact on the revenue mobilization gap, which reveals a marked sensitivity of tax and customs revenues to cyclical variations in the foreign exchange market. Conversely, negative shocks initially generate a relatively moderate effect, then lead to negative adjustments in subsequent periods. These differentiated responses nevertheless reflect more of a process of gradual adaptation of financial administrations than a true asymmetry, in line with the Wald test which does not allow us to reject the hypothesis of short-term symmetry. This reading is consistent with the functioning of financial administrations in the DRC, where liquidation, control, recovery and regularization operations require a delay before producing their effects on revenues. The results thus indicate that the disturbances linked to fluctuations in the rate of change are mostly temporary and end up being absorbed by institutional revenue management devices.

This diagnosis is supported by the behavior of the control variables, which show that the real factors remain the main determinants of short-term losses. Budgetary tensions rapidly amplify mobilization gaps, while imports directly feed revenues via customs duties and import taxes, both immediately and with delay. Likewise, variations in global copper prices quickly have repercussions on mining revenues, before being gradually corrected over the following months. which underlines the strong dependence of Congolese public finance on international raw materials markets. Finally, the error correction term (ECM = -0.7458) highlights a rapid convergence towards long-term equilibrium, with approximately 74.6% of the imbalances induced by economic shocks being resolved each month. This capacity for adjustment demonstrates a certain resilience of the public revenue mobilization system, even if it remains

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structurally dependent on the mining situation, the quality of budgetary governance and the efficiency of financial administrations.

Table 3. Results of Wald symmetry tests

Hypothesis tested	Wald's statistic (F)	Probability	Decision	Interpretation
Long-term symmetry ($H_0: \beta^+ = \beta^-$)	1.1369	0.3091	Honot rejected	Positive and negative variations in the exchange rate produce statistically symmetrical effects on the long-term public revenue mobilization gap.
Short-term symmetry ($H_0: \Sigma\beta^+ = \Sigma\beta^-$)	2.3128	0.1565	Honot rejected	Short-term reactions to appreciations and depreciations of the exchange rate do not differ statistically significantly.

Source: Author's estimates under EViews 10.

Notes: H_0 denotes the null hypothesis of symmetry of the exchange rate effects. The Wald statistic follows a Fisher distribution (F). The rejection of H_0 at the 5% threshold would have indicated the presence of a statistically significant asymmetry.

Wald's statistics indicate the absence of a significant difference between the impact of exchange rate appreciations and depreciations on the gap in public revenue mobilization, both in the long and short term. The hypothesis of symmetry therefore cannot be dismissed. Clearly, even if the NARDL model introduces a non-linear decomposition, the data from January 2022 to December 2024 do not reveal a distinct response to public revenues depending on whether the Congolese franc appreciates or depreciates against foreign currencies. The movements of the rate of change thus seem to influence the mobilization of revenues in a generally similar way, regardless of the direction of the shock.

Several structural features of the Congolese economy shed light on this result. First, the composition of public revenues remains largely dominated by import levies, mining taxes and revenues denominated in foreign currencies. However, between 2022 and 2024, the main tax provisions applicable to mining imports and exports remained stable, without reforms of a nature to generate a differentiated response from administrations to appreciations or depreciations of the exchange rate. Next, the high degree of dollarization reduces the asymmetric transmission of exchange rate variations to taxable bases. A substantial portion of transactions, particularly in the mining, oil and major import sectors, is denominated or indexed in US dollars, which cushions the gap between positive and negative things.

The absence of asymmetry is also consistent with the macroeconomic context from 2022 to 2024. The Congolese franc has experienced relative stabilization under the effect of interventions by the BCC, the strengthening of international reserves and the good performance of mineral exports, in particular copper and cobalt. In this context, fluctuations in the rate of change have remained contained and have undoubtedly not reached thresholds likely to modify differently the behaviour of taxpayers, importers or financial administrations. Adjustments to public revenues therefore appear to be determined more by the level of activity, import volumes and the evolution of international commodity prices than by the sign of exchange rate variations.

In terms of public policies, these elements imply that the improvement in the mobilization of revenues in the DRC depends less on the nature of fluctuations in the exchange

rate than on structural factors such as the expansion of the base, the efforts of the financial administrations, the formalization of the economy and a better valorization of the income of the extrasector. In other words, the stability of the exchange rate remains useful for the preservation of the monetary framework, but it does not constitute, on its own, a sufficient lever for sustainable growth. public revenues. It is therefore appropriate to favour institutional and financial (fiscal, non-fiscal and customs) reforms capable of strengthening the resilience of public finances in the face of external shocks, regardless of the direction of the movements of change.

CONCLUSION AND ECONOMIC POLICY IMPLICATIONS

This research examined, for the period from January 2022 to December 2024, the extent to which the movements of the rate of change asymmetrically affect the gap in public revenue mobilization in the Democratic Republic of Congo, using a non-linear autoregressive model with staggered lags (NARDL). The estimates confirm the existence of a co-integration between the variables, which reflects a stable long-term trajectory. On the other hand, whether positive or negative, fluctuations in the exchange rate do not generate a significant structural effect on this gap. In the short term, exchange rate variations produce a transitory impact on the mobilization of revenues, then the imbalances are quickly resolved by the error sorption mechanism. The Wald tests do not allow us to reject the symmetry hypothesis, which suggests globally similar responses to appreciations and depreciations, both at the horizon short than long horizon. The analysis also highlights the determining weight of structural factors, notably the level of public expenditure

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and the evolution of international copper prices, in this area. dynamics of the mobilization gap.

Taken together, these results indicate that the performance of revenue mobilization in the DRC depends primarily on the quality of budgetary and fiscal institutions rather than on the vagaries of the foreign exchange market. In a highly dollarized economy, where public revenues largely come from mining activities, foreign trade and levies denominated in foreign currency, exchange rate shocks are progressively absorbed by economic and administrative adjustments. On the other hand, the low level of recovery, the persistence of inefficient operations, the practices of fraud and undervaluation on imports, as well as the strong dependence on mining revenues, maintain the gap between the tax potential and the revenue actually collected.

In terms of public policy, it appears a priority to direct action towards strengthening the capacities of financial administrations, modernizing control and recovery mechanisms, rationalizing

tax expenditures and broadening the tax base. Better governance of revenues from the extractive sector, combined with diversification of the productive and fiscal base, would help to reduce the vulnerability of public finances to variations in international commodity prices. Finally, even though maintaining a stable exchange rate remains an important objective of macroeconomic policy, the results show that it cannot, on its own, guarantee a lasting improvement in public revenue mobilization. This depends primarily on the quality of institutional reforms, the efficiency of financial administrations, and the strengthening of public financial governance.

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