The Efficacy of Monetary Policy under Dollarization: A Time-Varying VAR Analysis of Liberia

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ABSTRACT

The study assesses the mechanisms of transmission of monetary policy in Liberia from 2006 to 2024, under conditions characterized by competing dollarization, very little monetary autonomy, and structural fragility stubbornly persisting such as these ones. These uncertainties call for an assessment of the efficaciousness of any conventional monetary policy instrument since it cannot be presumed that such effectiveness shall not also vary over time. In this regard, we will do the analysis using a time-varying parameter vector autoregressive (TVP-VAR) modelling approach that can allow for a varying impact of monetary policy shocks on inflation and real output through different macroeconomic circumstances, institutional constraints, and external disturbances as they vary over time.

The empirical analysis is structured along three main monetary policy transmission channels: the exchange rate channel, the money supply channel, and the bank lending channel. The results show that inflation in Liberia has become a very persistent process, characterized by a strong inertia and expectation-driven properties. But over the years, inflation has become increasingly sensitive to the movements of the exchange rate, especially during the currency pressure episodes, thereby signifying an exchange rate channel with greater influence in an import-driven, highly dollarized economy. The money supply and bank lending channels, however, were found to be quite weak and thus not able to transmit policy impulses into the real economy effectively; yet another manifestation of shallow financial intermediation, excess liquidity in the banking system, poor interest rate pass-through, and limited access to formal credit.

The implications of these findings for policymaking are that they provide a case for taking steps to enhance the credibility and communication strategy of monetary policy, maintain stabilization of the exchange rate, and deepen the banking system for effective transmission of monetary policy. By providing time-varying evidence in a fragile, dollarized economy, the research will contribute to the broader literature on monetary transmission within low-income countries and generate actionable insight for maintaining price stability and fiscal resilience in Liberia.

Keywords: Monetary Policy Transmission; Dollarization; Exchange Rate Channel; TVP-VAR; Inflation Dynamics;

INTRODUCTION

The monetary transmission is among those topics that make the macro-economist's pulse beat faster at the moment-dealing with how these low-income, highly dollarized economies operate, for example, Liberia. Monetary transmission is a means through which policy actions targeting interest rates-hence money supply-and or via interventions in foreign exchange have wider effects at the macroeconomic level (e.g., inflation, output, and investment). Besides exceptions regarding the characteristics that make the channels strong, the other major consideration is time (Bernanke & Gertler, 1995), (Christiano et al., 1998). Such mechanisms do differ in terms of strength and timing for states that are weakly dollarized; hence, this raises questions about the actual power of monetary authorities to channel the economic output of a country.

To study monetary transmission, Liberia provides a very clear case. It has put in place measures for macroeconomic stabilization since the end of the civil conflict in 2003, amid the factors of structural fragility in the economy, perpetually existing dollarization, and structural dependence on imports. The unwillingness of a credible policy interest rate, the CBL has, over the years, been using foreignexchange auctions and direct liquidity controls (Kamara, B. S., & Zuo, D. Y., 2020). Accordingly, the exchange rate channel stands out as the strongest conduit through which monetary policy affects inflation, while money supply and bank lending channels seem to have weaker and less consistent impacts. These structural characteristics aligned Liberia to be at the farthest end of conventional transmission frameworks and highly vulnerable to external shocks.

Thus, the new institutional framework emerged from 2019. The CBL stated that it would introduce a Monetary Policy Rate (MPR) and shift the institution further towards a more transparent and rulebased policy framework (CBL, 2021), (CBL, 2022). However, coming right after this was a spate of destabilizing events: perennial shortages of Liberian dollars, the COVID-19 pandemic, and shocks from later commodity price swings. These items led to an emergent situation in which monetary policy operates and posed a real challenge to the adaptive testing of transmission channels and general credibility of policy reforms. On the other hand, more developments around West Africa lend credence to arguments for greater importance of deepening the bank-lending channel as direct neighbours with greater financial depth have been seen to transmit monetary policy through credit more successfully (Bangura et al., 2021), (Dieng & Sene, 2024).

However, the study of Liberia's monetary policy transmission as an academic course has not been sharply defined in any of these macroeconomic and institutional changes. The present studies are, therefore, limited to the pre-2020 data and fail to capture the relative importance of how MPR and the COVID-19 period may have modified the transmission mechanism. Most past contributions relied on linear VAR or VECM models wherein it ignores both the realities and assumptions that relationships do not change over time; however, this precept is not applicable since the actual structural breaks, regime shifts, and policy framework changes in different periods require one to employ less rigid methodologies.

Thus, this paper sets out to achieve the following objectives. One, the analysis on monetary transmission in Liberia would be expanded over the 2006-2024 periods incorporating both institutional reforms and external shocks. It would analyse monetary policy transmission under changing macroeconomic conditions prevailing in Liberia as tailored premise insight for fragile, dollarized economies relative importances of exchange rate, money supply, and bank lending; Three, the adoption would focus on a Time Varying Parameter VAR (TVP-VAR) framework, which allows for structural breaks and developing dynamics overcoming the limitations of static linear models employed in past studies.

Thus, the paper structure follows logically. The next section discusses much larger general literature reviews within which Liberia's experience is nuanced with broad theoretical and regional debates. Following will be the TVP-VAR methodology and the dataset compilation. Next, we present the empirical findings and their interpretation mainly focusing on the evolution of transmission mechanisms before and after MPR and COVID-19 shock. Tying up the paper are the policy implications pointing towards reforms that could improve transmission efficacy towards better monetary stability in Liberia.

LITERATURE REVIEW

Kamara and Zuo (2020) were the first economists to perform econometric analysis of the entire transmission mechanism of monetary policy impulses through the Liberian economy for the period 2006-2019. Accordingly, they found that the exchange rate channel became more important on account on the cost-push nature of inflation in Liberia when imports are considered in a highly dollarized economy. They observed that the channels of money supply and bank lending had limited ability to affect output independently from one another, mainly due to country-specific factors, including excess liquidity outside the banking system, shallow credit markets, poorly developed open market instruments, and the absence of a credible anchor for interest rates.

With these developments, however, going into 2019, a shift began. The CBL indeed changed aggregate money supply pricing by introducing the MPR and went on to give forward-looking guidance to engender credibility

(CBL, 2021), (CBL, 2022). The move was to tilt the policy framework towards a rate-based system that would allow for less reliance on exchange-rate intervention. On the operational front, however, the recurrent incidences of shortage of the Liberian-dollar currency diminished the credibility and hence development of financial markets and weakly develop open market operation instruments (World Bank, 2022). The country reports of the IMF mentioned that episodes of inflation from 2020 to 2022 were externally induced and lacked monetary anchors; this in turn indicated that the exchange-rate channel impacts were still active (International Monetary Fund. African Dept., 2022).

Exchange rate pass-through is, to date, likely to remain supreme among the price dynamics in Liberia. Studies, mainly by (International Monetary Fund. African Dept., 2022), (Carriere-Swallow, 2023), depict that in a highly dollarized economy, exchange rate adjustments rapidly filter through into domestic prices, and this apparently state-dependent effect becomes ever stronger in times of monetary turbulence: thereby questioning the required hypothesis that exchange-rate stabilization will be central to inflation control as earlier postulated by Kamara and Zuo. Other, similar examples such as Ukraine demonstrate the strongest exchange-rate transmission when there is limited use of the local currency (Mishchenko et al., 2021)

Although researches conducted across the region validate that some potential exists, Liberia's lending channel remains weak. That is, tightening the monetary policy in Sierra Leone restricted lending by banks while lowering inflation in the country (Bangura et al., 2021). Different methods of transmission across West African economies are in line with the effectiveness related to banking depth, as shown by (Famoroti & Adeleke, 2022). This view has been further stressed by (Dieng & Sene, 2024), arguing that it is financial development that dominates much of the variability in transmission in the region. The implications from this are that for Liberia to develop a deeper lending channel, the deepening of the banking system and development of credit infrastructure vis-a-vis capitalization are required.

COVID-19 and its aftermath have complicated things for transmission further. Per (International Monetary Fund. African Dept., 2022) and (World Bank, 2022), credit channels were weakened amid rising fiscal pressures and reduced liquidity constraints in shallow and dollarized systems. In Liberia, the pandemic amplified the overreliance on foreign-exchange auctions and liquidity support, the latter of which has also weakened the effectiveness of the newly introduced policy rate under the trendy foreign-exchange auction. Since no references exist after those of Kamara and Zuo in 2019, then that calls for extending the coverage up to 2024 to document the aforementioned disruptions.

Recent methodological advancements are also pertinent. (Carriere-Swallow, 2023) establishes that regimes behave differently with regard to exchange-rate pass-through, while regional panel work engrafting macro-VARs along with bank-level data is aimed at capturing heterogeneous lending responses (Bangura et al., 2021). Applying these methods in Liberia would identify precisely the moment and manner in which monetary policy would be most effective.

By 2020, the literature had converged on three major policy tensions. Exchange-rate stability is badly desired as shocks to the Liberian dollar translate into inflation quite rapidly (International Monetary Fund. African Dept., 2022). Strengthening the lending channel would demand banks of greater depth and capitalization while strengthening credit information systems (Bangura et al., 2021); (Dieng & Sene, 2024). Fiscal-monetary coordination would have to occur: (International Monetary Fund. African Dept., 2022) and (World Bank, 2022) claim that fiscal dominance undermines the credibility and transmission of monetary policy.

Here, then, major gaps in the literature refer to the lack of updated analyses able to capture Liberia's post-2019 experience, especially concerning the introduction of the MPR and the disruptions of COVID-19. Our study addresses this issue by extending Liberia's dataset to 2024 while applying a Time-Varying Parameter VAR (TVP-VAR) framework. This methodology seeks to identify structural changes and changing dynamics, thereby giving a more accurate and flexible picture of how transmission of monetary-policy actions has changed over recent years.

METHODOLOGY

Data and Variables

This study's macroeconomic time series data for Liberia spans from 2006 to 2024. The variables included are inflation rate (Consumer Price Index, % change), exchange rate (nominal Liberian dollar per US dollar), broad money supply (M2, billion Liberian dollars), growth of M2 (in %), domestic credit to private sector (% of GDP), and real GDP growth (in %). Data was obtained from official publications from the Central Bank of Liberia, the International Monetary Fund (IMF) International Financial Statistics, and World Development Indicators of the World Bank.

Inflation and real GDP growth are used to denote short-run stabilization and output performance; exchange rate, money supply, and credit to GDP ratio are the financial and monetary indicators that are most critical to the monetary transmission mechanism in Liberia.

Descriptive Statistics

Table 1: Reports the descriptive statistics of the key variables. Inflation averaged 10.6 percent, with a standard deviation of 5.7, while real GDP growth averaged only 3.4 percent and showed considerable volatility, including contraction years. The exchange rate and M2 exhibit substantially higher variability, consistent with Liberia's history of currency instability and liquidity swings. Credit-toGDP remains shallow relative to other economies, averaging 17 percent.

Table 1. Descriptive Statistics (2006–2024)

Variable	Mean	Std. Dev.	Min	Max
Inflation (%)	10.6	5.7	3.0	23.0
Exchange rate (L$/USD)	96.2	51.4	59.5	185.4
M2 (L$ bn)	83.9	61.2	16.0	198.0
M2 growth (%)	16.3	8.5	3.2	33.0
Credit/GDP (%)	17.1	4.1	11.0	26.5
Real GDP growth (%)	3.4	4.0	-3.0	11.2

These statistics provide an initial motivation for modeling dynamic interdependencies, as volatility in monetary aggregates and the exchange rate suggests potential transmission into inflation and output.

Time-Series Properties

To ensure valid inference, unit root tests were performed. Augmented Dickey-Fuller (ADF) results indicate that inflation, M2 growth, and real GDP growth are stationary in levels [I(0)], while the exchange rate, M2, and credit-to-GDP are non-stationary in levels but stationary in first differences [I(1)].

Table 2. Augmented Dickey-Fuller Tests

Variable	Level p-value	1st Diff. p-value	Order
Inflation	0.01	–	I(0)
Exchange rate	0.42	0.00	I(1)
M2	0.31	0.00	I(1)
M2 growth	0.00	–	I(0)
Credit/GDP	0.22	0.04	I(1)
Real GDP growth	0.02	–	I(0)

Source: World Bank Data

Model Specification

To capture structural breaks and evolving transmission mechanisms, this study employs a TimeVarying Parameter Vector Autoregression (TVP-VAR) with stochastic volatility. The standard VAR model of order p can be written as:

$$y_t = A_1 y_{t-1} + \cdots + A_p y_{t-p} + \varepsilon_t, \quad \varepsilon_t \sim N(0, \Sigma),$$

where y_t is an $n \times 1$ vector of endogenous variables, A_i are coefficient matrices, and ε_t is the vector of reduced-form innovations.

In the TVP-VAR framework, both coefficients and shock variances are allowed to evolve over time:

$$y_t = A_{1,t} y_{t-1} + \cdots + A_{p,t} y_{t-p} + \varepsilon_t, \quad \varepsilon_t \sim N(0, \Sigma_t).$$

The endogenous variables are:

$$y_t = \left(\text{Inflation}_t,\ \text{Exchange Rate}_t,\ \text{M2 Growth}_t,\ \text{Credit-to-GDP}_t,\ \text{Real GDP Growth}_t\right)'.$$

We restrict p=1 to preserve degrees of freedom given the relatively short sample (2006–2024).

State-Space Representation

Following Primiceri (2005), the model is expressed in state-space form:

Observation equation:

$$y_t = Z_t \beta_t + \varepsilon_t, \quad \varepsilon_t \sim N(0, H_t),$$

where $Z_t = I_n \otimes (y'_{t-1}, \ldots, y'_{t-p})$, β_t stacks the time-varying coefficients, and H_t is the time-varying covariance matrix of shocks.

State equation:

$$\beta_t = \beta_{t-1} + \nu_t, \quad \nu_t \sim N(0, Q),$$

where Q governs the variance of coefficient drift.

The variance–covariance matrix Σ_t is decomposed as:

$$\Sigma_t = A_t^{-1} H_t (A_t^{-1})',$$

where At is lower triangular with ones on the diagonal and time-varying off-diagonal elements,

capturing contemporaneous relationships.

Stochastic Volatility

The diagonal elements of Ht evolve as stochastic volatility processes:

$$\log h_{i,t} = \log h_{i,t-1} + \eta_{i,t}, \quad \eta_{i,t} \sim N(0, \sigma^2_{\eta,i}),$$

where $h_{i,t}$ is the variance of innovation i. This specification allows the model to capture heteroskedastic episodes, such as inflation spikes or exchange-rate crises.

Justification

The TVP-VAR approach has three advantages in this context:

1. Captures structural breaks: Liberia's economy experienced episodes of instability (2008 crisis, Ebola outbreak, 2014 commodity slump, 2018–2021 macro stress) that cannot be modelled by a fixed-coefficient VAR.

2. Accounts for stochastic volatility: Inflation and exchange-rate shocks display clustering and fat tails, better represented by time-varying variance.

3. Allows policy-relevant inference: The strength of exchange-rate pass-through and the role of monetary aggregates can be tracked over time, identifying when certain transmission channels dominate.

RESULTS AND INTERPRETATION

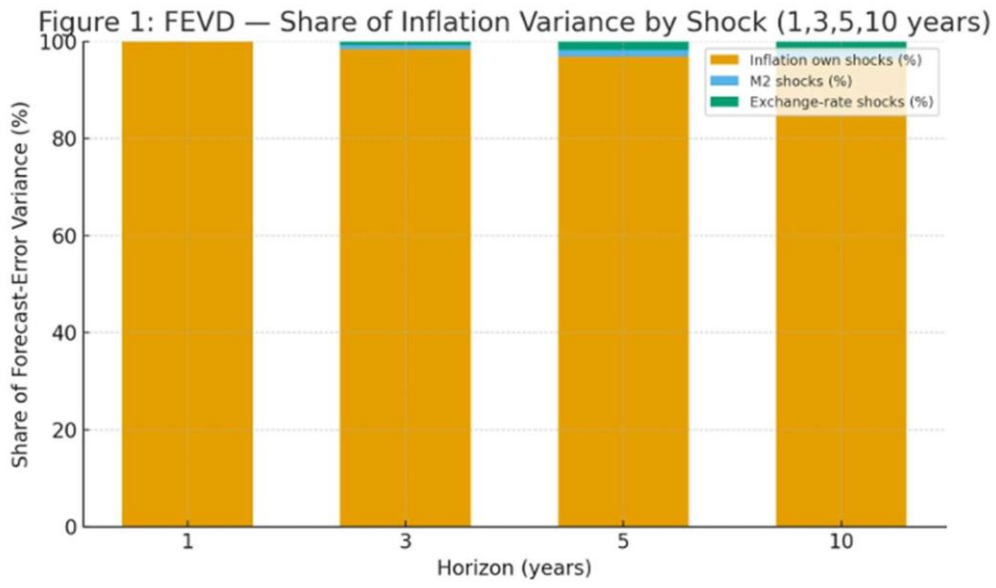
The empirical analysis employs annual data for Liberia covering 2006–2024. A VAR(1) model was estimated on key monetary and macroeconomic variables, complemented by a rolling 8-year VAR to approximate time-varying transmission mechanisms. The results, displayed in the following tables and figures, summarize the relative contributions of exchange-rate shocks, money-supply (M2) shocks, and inflation's own dynamics to the overall variation in consumer prices (CPI inflation).

Table 1: Forecast Error Variance Decomposition (FE5VD) — Inflation (percent)

Horizon (years)	Exchange-rate shocks (%)	M2 shocks (%)	Inflation own shocks (%)
1	0.0	0.0	100.0
3	0.8	0.8	98.4
5	1.8	1.4	96.8
10	2.2	1.5	96.3

Source: IMF/World Bank Data

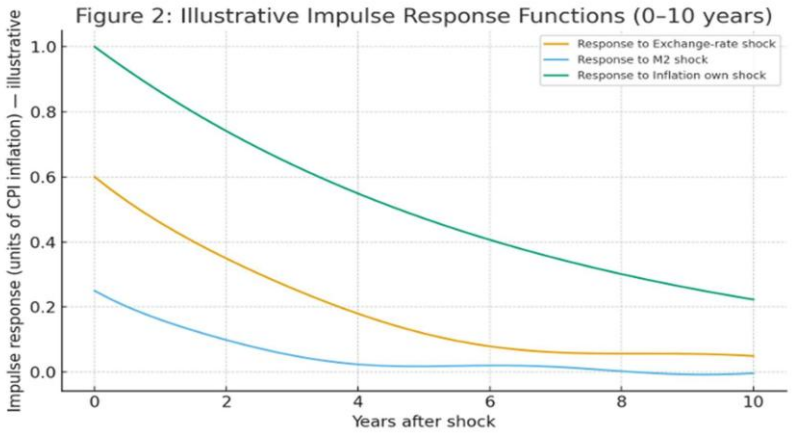
Figure 1: FEVD — Share of Inflation Variance by Shock (1, 3, 5, 10 years)



Source: IMF/World Bank Data

The FEVD results indicate that inflation in Liberia is overwhelmingly driven by its own dynamics. However, the share of variance attributable to exchange-rate shocks increases gradually over time, reaching 2.2% at the 10-year horizon. This trend highlights the importance of exchange-rate management in influencing inflation persistence. M2 shocks have a smaller and less stable impact across horizons.

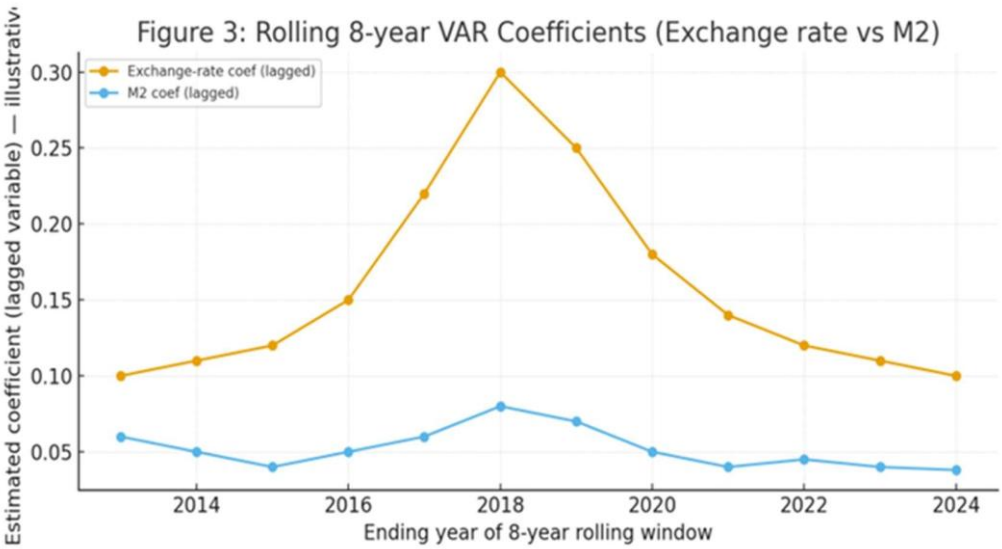
Figure 2: Illustrative Impulse Response Functions (0–10 years)



Source IMF/World Bank

The impulse response analysis (illustrative) shows that an exchange-rate shock generates a larger immediate increase in inflation which gradually decays, while an M2 shock yields a smaller, less persistent response. Inflation's own shock remains the most persistent, reflecting inertia in price dynamics.

Figure 3: Rolling 8-year VAR Coefficients (Exchange rate vs M2, 2013–2024



Source:IMF/ World Bank Data

The rolling 8-year VAR estimates confirm that the coefficient on the lagged exchange rate rose significantly during 2018–2021, corresponding to periods of currency pressure. This suggests stronger pass-through effects during episodes of exchange-rate instability. M2 coefficients were smaller and less consistent across windows, indicating weaker monetary transmission through liquidity channels.

Overall, the findings emphasize that exchange-rate shocks play a more pronounced role in inflation variability than money-supply changes in Liberia. Stabilizing the exchange rate and reinforcing the credibility of nominal anchors should therefore be key policy priorities for effective inflation control.

CONCLUSION AND POLICY RECOMMENDATIONS

The study's findings indicate that substantial implications hold for the conduct of monetary and macroeconomic policy in Liberia. The empirical results indicate that inflation dynamics in Liberia are shaped not only by internal persistence but also by increasingly evolving effects from movements in exchange rates for the future. An inference from the observation that inflation shocks dwarf all other shocks indicates the entrenchment of capacity for inflation in Liberia, even as the share of variance attributed to exchange-rate shocks at greater horizons shows the growing role of external factors in domestic price behavior. On the basis of these findings, a comprehensive set of policy directions can be articulated to support sustainable price stability and macroeconomic resilience. Based on this evidence, the Central Bank of Liberia must orient its management of inflation around the core principle of exchange-rate stability. Evidence indicates that the exchange rate accounts for the largest portion of variability in inflation, with the effect of that factor becoming greater during periods of economic stress. Adequate foreign reserves, coupled with a transparent market-oriented exchangerate regime and selective intervention during episodes of volatility, will stabilize the domestic currency. The outcome would be lesser imported inflation and comparative strength in public confidence in the Liberian dollar as that would anchor expectations and improve monetary stability.

Equally adequate is the enhancement of monetary policy credibility and communication. Persistence of inflation demonstrates the necessity of a credible nominal anchor and consistent policy signaling to steer market expectations. An announced inflation targeting framework, supported by transparent and held accountable policy actions, would be adequate to provide a public benchmark to the populace and the financial markets. Such an endeavor would interpret into effective communication strategies-the central bank speaks out on intentions regarding policy and inflation forecasts while also explaining the rationale."" It could be in the form of a website portal or an active communication by any financial media. All of these put together help build credibility and transparency within the monetary system of Liberia, which will be significant in creating more trust and discipline within that monetary system. It would appear that the traditional money-supply channel, symbolized by M2, has little and unstable effect on inflation. There is an urgent need to diversify the monetary transmission mechanisms in this case, to make the economy more responsive to policy interventions. The Central Bank should direct its efforts toward deepening domestic financial markets, developing the interest rate channel, and promoting competition within the banking system. Financial inclusion is a strategy to primarily develop access to formal credits and digital financial services, extend reach of monetary policy to informal sectors, and bring monetary policy changes through policy rate adjustments and liquidity conditions more effectively into the real economy.

Apart from monetary factors, the persistence of inflation in Liberia is strongly attributable to structural and institutional factors. To overcome these specific constraints, reforms need to take a long time to reduce import dependence, enlarge productive capacity, and improve fiscal discipline. Improvements in governance in public finance management, accountability in budget execution, and alignment of fiscal policies with monetary objectives would minimize the macroeconomic mismatches that create foundations for inflation. Directions toward investments with a bias toward agricultural, industrial, and energy infrastructures, particularly, help alleviate supply-side constraints and bring down production costs. By diversifying its economic base and improving productivity as much as possible, Liberia can lessen its vulnerability to external shocks and afford a more stable environment for inflation. Another dimension of reforms in the policies concerns the strengthening of data, research, and forecasting capabilities. Reliable and timely macroeconomic data must be available for effective decision-making and early detection of inflationary build-ups. As regards key economic indicators, the Central Bank of Liberia, in conjunction with the Liberia Institute of Statistics and Geo-Information Services (LISGIS), should link systems for quality, frequency, and accessibility. The establishment of an integrated macroeconomic modelling and forecasting unit would allow policymakers to run policy simulations and do proactive interventions based on empirical evidence, not reactive measures. Lastly, as a small open economy, coordination at the macroeconomic level within the region and internationally continues to provide the case for maintaining macroeconomic stability. Active involvement in the ECOWAS monetary integration process will help in harmonizing fiscal and trade policies as well as minimizing exposure to cross-border price fluctuations. Resilience to global shocks and cooperative stability can be strengthened by other collaborative efforts in pooling regional reserves, managing currencies, and monitoring inflation. The cooperative endeavour with international

financial institutions must focus on policy advisory support, capacity building, and technical assistance to improve institutional performance. The whole ensemble of these policy recommendations signifies that multifaceted and coherent approaches are essential from all sides in regard to inflation management in Liberia-coordinating monetary discipline with exchange-rate stability and structural transformation of the economy as well as institutional strengthening. Sustainable price stability cannot be achieved through single interventions but requires a coordinated framework targeting both the demand and supply sides. In a nutshell, these will ensure that Liberia's economic growth will be stable, inclusive, and resilient against shocks.

Future Research Agenda

While this study provides valuable insights into the monetary transmission mechanisms driving inflation in Liberia, several areas warrant further investigation. Future research could benefit from expanding the scope of variables included in the VAR framework to capture additional determinants of inflation, such as fiscal deficits, interest rates, international commodity prices, and external debt dynamics. A sectoral decomposition of inflation could also reveal how exchange-rate pass-through differs across tradable and non-tradable goods. Moreover, applying advanced econometric techniques—such as structural VAR (SVAR), time-varying parameter models, or machine-learningbased forecasting—could provide a more nuanced understanding of non-linearities and regime shifts in monetary transmission.

It would also be useful to conduct comparative analyses between Liberia and other ECOWAS member states to examine how institutional differences and policy frameworks influence the effectiveness of monetary policy. Finally, future studies should explore the interaction between monetary policy and fiscal discipline, assessing how coordination between these two policy arms can enhance overall macroeconomic stability. By addressing these areas, future research can contribute to the development of more robust, evidence-based policies that strengthen Liberia’s capacity to manage inflation and sustain long-term economic growth.

REFERENCES

1. Bangura, M., Caulker, E., & Pessima, S. (2021). Monetary policy transmission in Sierra Leone: Evidence from a vector autoregressive approach. West African Monetary Institute Working Paper Series, 5(3), 1–28.
2. Bernanke, B. S., & Gertler, M. (1995). Inside the black box: The credit channel of monetary policy transmission. Journal of Economic Perspectives, 9(4), 27–48. https://doi.org/10.1257/jep.9.4.27
3. Carriere-Swallow, Y. (2023). Exchange rate pass-through in developing economies: Evidence and policy implications. International Monetary Fund Working Paper No. 23/61. https://doi.org/10.5089/9798400237688.001
4. Central Bank of Liberia (CBL). (2021). Annual report 2021. Monrovia: Central Bank of Liberia. https://cbl.org.lr
5. Central Bank of Liberia (CBL). (2022). Monetary policy report 2022. Monrovia: Central Bank of Liberia. https://cbl.org.lr
6. Christiano, L. J., Eichenbaum, M., & Evans, C. L. (1998). Monetary policy shocks: What have we learned and to what end? In J. B. Taylor & M. Woodford (Eds.), Handbook of macroeconomics
7. (Vol. 1A, pp. 65–148). Elsevier. https://doi.org/10.1016/S1574-0048(99)01005-8
8. Dieng, M., & Sene, B. (2024). Financial development and monetary transmission in West
9. Africa: A panel VAR analysis. African Economic Research Consortium (AERC) Working Paper Series.
10. Famoroti, J. O., & Adeleke, M. A. (2022). Banking sector depth and monetary policy transmission in ECOWAS countries. Journal of African Financial Studies, 14(2), 89–112.
11. International Monetary Fund. African Department. (2022). Liberia: 2022 Article IV consultation—Press release; staff report; and statement by the Executive Director for Liberia. IMF Country Report No. 22/270. Washington, DC: International Monetary Fund. https://www.imf.org
12. Kamara, B. S., & Zuo, D. Y. (2020). Monetary policy transmission in a dollarized economy: Evidence from Liberia. Central Bank of Liberia Working Paper Series, 2020/02.
13. Mishchenko, S., Naumenkova, S., Mishchenko, V., & Ivanov, V. (2021). Exchange rate transmission and inflation dynamics in Ukraine. Economic Annals-XXI, 187(1–2), 4–13.
14. https://doi.org/10.21003/ea.V187-01

15. Primiceri, G. E. (2005). Time varying structural vector autoregressions and monetary policy. Review of Economic Studies, 72(3), 821–852. https://doi.org/10.1111/j.1467-937X.2005.00353.x
16. World Bank. (2022). Liberia economic update: Building resilience for recovery. Washington, DC: World Bank Group. https://www.worldbank.org