Impact of Monetary Expansion on Inflation: The Moderating Role of Central Bank Credibility, A case study on a sample of countries in the Middle East and North Africa region

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Abstract :
This study examines the impact of monetary expansion on inflation and evaluates the moderating role of central bank credibility in shaping this relationship. Using a quantitative approach based on Partial Least Squares Structural Equation Modeling and primary data collected through a structured online questionnaire, the analysis demonstrates that monetary expansion has a strong and statistically significant positive effect on inflation. The results also reveal that central bank credibility significantly moderates this relationship, with higher credibility reducing the inflationary impact of monetary expansion by anchoring expectations and enhancing confidence in monetary policy. The structural model explains more than half of the variation in inflation, highlighting the importance of both monetary conditions and institutional factors. These findings underscore the need for credible and transparent monetary institutions to ensure effective inflation control, particularly in contexts characterised by uncertainty and evolving economic conditions.

***Keywords*:** Monetary Expansion, Inflation, Central Bank Credibility, Moderating Effect, PLS-SEM, Survey Data.

JEL Classification : E52, E31, O53

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Introduction:

Monetary expansion remains one of the most widely used tools for stimulating economic activity, yet its inflationary consequences continue to be a central topic in macroeconomic analysis. Traditional monetary theory posits a strong and direct relationship between money supply growth and price levels, but empirical evidence across countries and time periods shows considerable variation in this relationship. This inconsistency has drawn attention to institutional factors—particularly central bank credibility—as potential determinants shaping how economic agents respond to monetary policy announcements and actions.

Despite the theoretical expectation that credible central banks can anchor inflation expectations, many economies continue to experience inflationary pressures even under moderate monetary expansion. This highlights a key research

problem: Does central bank credibility alter the strength or direction of the relationship between monetary expansion and inflation? Understanding this moderating effect is essential, especially for developing and emerging economies where credibility challenges may weaken the effectiveness of monetary policy. Therefore, this study investigates how credibility interacts with monetary growth in shaping inflation outcomes.

Based on this problem, the study seeks to answer the following questions: To what extent does monetary expansion influence inflation? And how does central bank credibility moderate this relationship? Accordingly, the main objectives of the research are to evaluate the direct impact of monetary expansion on inflation and to determine whether higher credibility dampens or amplifies this effect. By addressing these objectives, the study aims to provide empirical insights that support more effective monetary policy design and strengthen institutional trust in central banking systems.

I. Literature Review:

1. Monetary Expansion :

Monetary expansion refers to the increase in the money supply within an economy, typically implemented by a central bank to stimulate economic activity. This policy aims to enhance aggregate demand by encouraging spending and investment among consumers and businesses. The effects of monetary expansion can be both beneficial and detrimental, depending on its magnitude and context.

Definition and Mechanism:

Increase in Money Supply: Central banks increase the amount of currency in circulation, which can lead to lower interest rates and increased borrowing(Djambak, 2010).

Impact on Aggregate Demand: Empirical studies indicate that monetary expansion positively influences aggregate demand components, including consumption, investment, and government spending(Djambak, 2010).

Historical Context:

Great Monetary Expansion: The early 21st century saw unprecedented monetary easing globally, utilising various instruments like repurchase operations and outright security purchases(Angeloni, 2023).

Speculative Risks: Historical instances show that excessive monetary expansion can lead to speculative bubbles, as seen in events like the tulip mania and the South Sea Bubble(Kindleberger & Bernstein, 2000).

Economic Development:

Investment Financing: A controlled monetary expansion can finance investments, thereby increasing production without causing permanent inflation(Ezekiel, 1967; Romero, 2000).

Surplus Labour Utilisation: Some models suggest that monetary expansion can effectively utilise surplus labour for capital goods construction, minimising inflationary impacts(Romero, 2000).

Conversely, while monetary expansion can stimulate growth, excessive or poorly timed expansions may lead to inflationary pressures and economic instability, highlighting the need for careful policy implementation.

2. Inflation :

Inflation refers to a sustained increase in the general price level of goods and services, leading to a decline in the purchasing power of money. It is a complex phenomenon influenced by various factors, including monetary policy and social pressures. Understanding inflation is crucial as it affects economic stability and individual well-being.

Definition and Measurement

- Inflation is characterised by a continuous rise in prices, which can be measured by comparing the cost of a set of goods over time(Khatoon, 2015).
- It is often expressed as a percentage increase in the price level, indicating a decrease in money's value(Laidler & Parkin, 1975).

Causes of Inflation

- Theories on inflation's causes include monetary-driven perspectives, which emphasise the role of money supply, and social pressures that can drive costs upward(García, 2023; Zijlstra, 1975).
- Inflation can arise from demand-pull factors, where demand exceeds supply, or cost-push factors, where production costs increase(García, 2023).

Economic Impact

- High inflation levels are generally detrimental to the economy, leading to uncertainty and reduced investment(García, 2023).
- It can erode savings and disproportionately affect lower-income individuals, highlighting its social implications(Zijlstra, 1975).

Conversely, some economists argue that moderate inflation can stimulate economic growth by encouraging spending and investment, as individuals are incentivised to purchase goods before prices rise further. This perspective suggests a nuanced view of inflation's role in economic dynamics.

3. Central Bank Credibility:

Central bank credibility refers to the belief that a central bank will do what it says, particularly in terms of achieving its inflation targets. This credibility is crucial for effective monetary policy, as it influences public expectations and economic stability. A credible central bank can better manage inflation expectations, which in turn affects macroeconomic variables and the overall economy. The concept of central bank credibility is multifaceted. It can be measured in various ways, including the alignment of inflation expectations with targets and the central bank's ability to influence these expectations through policy decisions.

Importance of Central Bank Credibility:

- Central bank credibility is essential for the success of monetary policy, as it affects individuals' expectations about future inflation rates(Weber, 2014).
- A credible central bank can stabilise macroeconomic variables, reducing endogenous volatility and the cost of disinflation(Park, 2018).

- Credibility is linked to the central bank's ability to influence inflation expectations towards its targets through interest rate decisions(Çakmaklı & Demiralp, 2020).

Measuring Credibility:

- Traditional measures of credibility often rely on the deviation of inflation expectations from targets, but these can be inadequate in certain contexts, such as chronic inflation environments(Çakmaklı & Demiralp, 2020).
- Alternative measures, such as those using survey data on inflation expectations, compare these beliefs with explicit targets to assess credibility("Central bank credibility and inflation e...", 2022).
- Numerical measures of credibility can be incorporated into economic models to analyse the impact on macroeconomic stability(Park, 2018).

Challenges and Considerations:

- Central banks may face challenges in maintaining credibility, especially when their actions are perceived as overstepping mandates or when political pressures are present(Çakmaklı & Demiralp, 2020) (Weber, 2014).
- Trust in central banks can be affected by their policy measures, as seen in the European Central Bank's experience during the financial crisis(Weber, 2014).

While central bank credibility is crucial for effective monetary policy, it is not solely determined by the alignment of inflation expectations with targets. Other factors, such as political pressures and public trust, also play significant roles. Understanding these dynamics is essential for assessing and enhancing central bank credibility in various economic contexts.

4. Review of relevant prior research and scholarly works:

4.1. The relationship between Monetary Expansion and Inflation :

The relationship between monetary expansion and inflation is a complex and multifaceted topic, with evidence suggesting a generally positive correlation, particularly under certain conditions. The quantity theory of money posits that increases in the money supply lead to proportional increases in price levels, a relationship that has been observed across various historical contexts. This overview will explore the dynamics of this relationship, the conditions under which it holds, and the implications for economic policy.

Correlation Between Money Supply and Inflation:

- Studies indicate a one-for-one relationship between money growth and inflation, particularly in high-inflation regimes(Borio et al., 2024)(Benati, 2021).
- Historical data from 27 countries support the notion that this relationship has remained consistent over time, despite changes in monetary regimes(Benati, 2021).
- The recent post-pandemic period saw significant monetary expansion, which preceded notable inflation spikes, particularly in countries with the highest money growth rates(Borio et al., 2024).

Conditions Affecting the Relationship:

- The correlation weakens in low-inflation environments, suggesting that the effectiveness of monetary policy may diminish when inflation is already low(Borio et al., 2024).
- The velocity of money circulation and the central bank's control over the money supply are critical factors that influence this relationship(Moosa, 2024).

Implications for Economic Policy:

- Central banks often rely on the quantity theory to guide monetary policy, but the assumption that they can control inflation solely through money supply adjustments is debated(Moosa, 2024; McCallum & Nelson, 2010).
- Financial innovations can obscure the direct relationship between money growth and inflation, complicating policy responses(McCallum & Nelson, 2010).

Conversely, some economists argue that inflation can also be influenced by factors beyond monetary expansion, such as supply chain disruptions or fiscal policies, indicating that a singular focus on money supply may not capture the full picture of inflation dynamics.

First hypothesis (H1): There is no statistically significant relationship between Monetary Expansion and Inflation at a 5% significance level.

4.2. The relationship between Central bank credibility and the relationship of Monetary Expansion to Inflation :

The relationship between central bank credibility and the impact of monetary expansion on inflation is significant, as credibility influences the effectiveness of monetary policy. A credible central bank can manage inflation expectations more effectively, allowing for lower interest rate adjustments to control inflation. This relationship is explored through various dimensions of credibility, including transparency and the anchoring of inflation expectations.

Central Bank Credibility and Inflation Control:

- Interest Rate Adjustments: Higher credibility enables central banks to control inflation with smaller increases in interest rates, as evidenced in Brazil's monetary policy context(Lima & Moreira, 2022).
- Expectations Management: Credibility enhances the ability to shape public inflation expectations, which is crucial for the success of inflation targeting systems. As credibility increases, the public's expectations align more closely with the central bank's targets(Güler, 2021).

Effects of Credibility on Monetary Policy:

- Policy Effectiveness: Central bank transparency significantly amplifies the effectiveness of monetary policy, improving outcomes in various areas, including conventional policy and foreign exchange interventions(Cepeda et al., 2025; Villamizar-Villegas, 2023).
- Volatility Reduction: A credible central bank experiences lower volatility in its monetary policy instruments, reducing the need for drastic policy shifts to achieve inflation targets(Levieuge et al., 2015).

Conversely, some argue that excessive focus on credibility may lead to complacency, where central banks might underreact to emerging inflationary pressures, potentially destabilising the economy in the long run. This highlights the need for a balanced approach to monetary policy that considers both credibility and responsiveness to economic conditions.

Second Hypothesis (H2): There is no significant role for Central bank credibility in the relationship between Monetary Expansion and Inflation at a 5% significance level.

5. Gaps in existing literature :

Despite extensive research examining the relationship between monetary expansion and inflation, several gaps remain that justify further empirical investigation. First, while many studies validate the classical quantity theory of money—showing a strong positive correlation between money supply growth and inflation, especially in high-inflation regimes—this relationship appears weaker or inconsistent in low-inflation environments. Existing research does not fully explain why monetary expansion sometimes triggers significant price increases and at other times does not, particularly in modern economies characterised by financial innovation, fluctuating money velocity, and unconventional monetary policies. This inconsistency signals a gap concerning **contextual and institutional factors** that may condition the inflationary effects of monetary expansion.

Second, although central bank credibility is widely recognised as a critical factor for inflation control, its moderating effect on the relationship between monetary expansion and inflation remains underexplored. Prior studies examine credibility in relation to inflation expectations, interest rate decisions, and policy transparency, but very few explicitly test whether credibility *weakens or strengthens* the impact of monetary expansion on inflation. Most research examines credibility as an independent determinant of inflation rather than as an interactive variable. As a result, the literature lacks a robust empirical evaluation of how credibility interacts with monetary growth to influence inflation outcomes, especially in emerging economies where credibility challenges are more pronounced.

Third, existing studies tend to focus on individual factors—monetary expansion on one side and credibility on the other—without integrating them into a unified analytical framework. This fragmented approach limits understanding of the full transmission mechanism through which monetary policy affects prices. Additionally, limited cross-country or panel evidence accounts simultaneously for policy credibility, monetary aggregates, and inflation dynamics. Therefore, there is a methodological gap concerning empirical models that incorporate credibility as a moderator in the monetary expansion–inflation relationship.

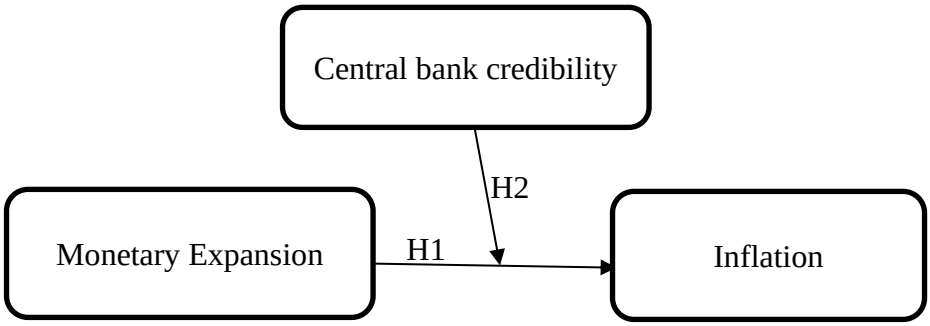
Given these gaps, this study contributes to the literature by empirically testing whether:

5.1. Monetary expansion significantly influences inflation across varying economic conditions (H1), and

5.2. Central bank credibility moderates this relationship, potentially altering the magnitude or direction of the inflationary effect (H2).

By addressing these underexplored dimensions, the research provides new insights into the institutional and policy factors that shape inflation dynamics in contemporary economies.

Fig. 1: Theoretical framework



II. Methodology:

1. Research Design and Approach:

This study adopts a quantitative research design based on Partial Least Squares Structural Equation Modeling to examine the direct and moderating relationships between monetary expansion, inflation, and central bank credibility.

PLS-SEM is particularly suitable for this study due to its ability to simultaneously estimate complex relationships between latent constructs and to test interaction effects within a structural framework. Unlike traditional econometric techniques, PLS-SEM does not impose strict distributional assumptions and is appropriate for relatively small to medium sample sizes. Furthermore, the method allows for the assessment of both the measurement model (reliability and validity of constructs) and the structural model (hypothesis testing), making it a comprehensive analytical approach for this research.

The moderating effect of central bank credibility is examined through the interaction term between monetary expansion and credibility, enabling a deeper understanding of how institutional factors influence the transmission of monetary policy to inflation.

2. Data Collection Methods:

The study utilises primary data collected through a structured online questionnaire. The survey instrument was designed to measure respondents' perceptions of monetary expansion, inflation, and central bank credibility using multiple indicators for each construct. The questionnaire was distributed electronically across selected MENA countries, and the collected data were prepared for analysis using SmartPLS 4.

3. Rationale for the Chosen Methods:

The methodological choice of Partial Least Squares Structural Equation Modeling is justified by the nature and objectives of this study, which seeks to analyse both direct and moderating relationships among latent constructs, namely

monetary expansion, inflation, and central bank credibility. Unlike traditional econometric approaches such as multiple regression or panel data models, PLS-SEM enables the simultaneous estimation of measurement and structural models, thereby accounting for potential measurement errors and enhancing the reliability of the results.

Moreover, PLS-SEM is particularly appropriate for examining interaction effects, as it allows for the explicit modelling of moderation through interaction terms within a structural framework. It is also well-suited for studies with relatively small to medium sample sizes and does not require strict assumptions regarding data normality. These advantages make PLS-SEM a robust and flexible analytical technique for capturing the complexity of monetary policy transmission mechanisms and the role of institutional credibility in shaping inflation dynamics.

In this study, the analysis is conducted using SmartPLS 4, which facilitates comprehensive evaluation of construct reliability, convergent and discriminant validity, as well as hypothesis testing within the structural model.

III. Data Presentation and Analysis:

Study Context: Middle East and North Africa (MENA) Region:

The current study was conducted using a sample of countries from the Middle East and North Africa (MENA) region, a geographic area characterised by diverse economic structures, varying levels of institutional development, and distinct monetary policy frameworks. This regional focus provides a valuable context for examining how monetary expansion influences inflation under different macroeconomic conditions. The MENA region also presents significant variation in central bank credibility, making it an appropriate setting for investigating how institutional trust moderates the transmission of monetary policy.

Sample Size and Data Characteristics:

The empirical analysis is based on primary data collected through a structured online questionnaire distributed across selected countries in the Middle East and North Africa (MENA) region. A total of 85 valid responses were obtained, representing individual perceptions of monetary expansion, inflation, and central bank credibility. Each observation corresponds to a single respondent, making the dataset cross-sectional in nature and suitable for analysis using Partial Least Squares Structural Equation Modeling.

The survey was administered electronically and targeted participants from multiple countries, including Algeria (25 responses), Tunisia (13 responses), Libya (2 responses), Egypt (19 responses), Jordan (3 responses), Saudi Arabia (11 responses), Qatar (5 responses), Iraq (1 response), Syria (1 response), Oman (3 responses), and Kuwait (2 responses).

Table 01: Distribution of Survey Responses

Country	Number of Responses	Percentage (%)
Algeria	25	29.41%
Tunisia	13	15.29%
Libya	2	2.35%
Egypt	19	22.35%
Jordan	3	3.53%
Saudi Arabia	11	12.94%
Qatar	5	5.88%
Iraq	1	1.18%
Syria	1	1.18%
Oman	3	3.53%
Kuwait	2	2.35%
Total	**85**	**100%**

Source: Compiled by researchers based on the outputs of SPSS23.

1. Assessment of the measurement Model:

1.1. Convergent Validity:

Table 02: Results of the Stability and Composite Reliability Test for the Model:

variables	Items	Loadings	Cronbach's Alpha	Composite Reliability	Average variance extracted AVE
ME	**ME_1**	0.837	0.844	0.895	0.680
	ME_2	0.795			
	ME_3	0.838			
	ME_4	0.829			
Inflation	**I_1**	0.786	0.858	0.894	0.585
	I_2	0.691			
	I_3	0.797			
	I_4	0.749			
	I_5	0.780			
	I_6	0.781			
CBC	**CBC_1**	0.927	0.891	0.932	0.822
	CBC_2	0.911			
	CBC_3	0.880			

Source: Compiled by researchers based on the outputs of Smart PLS4.

The results presented in Table 01 indicate that all constructs in the model exhibit strong reliability and internal consistency, confirming the stability of the measurement model. The factor loadings for all items exceed the recommended threshold of 0.70, demonstrating that each indicator adequately represents its respective latent variable. Cronbach's Alpha values for Monetary Expansion (0.844), Inflation (0.858), and Central Bank Credibility (0.891) all surpass the minimum acceptable level of 0.70, confirming high internal reliability. Composite Reliability

(CR) values are also robust—0.895 for Monetary Expansion, 0.894 for Inflation, and 0.932 for Central Bank Credibility—indicating strong overall construct reliability. Furthermore, the Average Variance Extracted (AVE) values for all variables (0.680, 0.585, and 0.822, respectively) exceed the 0.50 threshold, confirming adequate convergent validity. Overall, these results demonstrate that the measurement scales used in the study are both reliable and valid, supporting their suitability for subsequent structural analysis.

1.2.Discriminate Validity :

Table 03: Fornell-Larcker Criterion

variables	CBC	Inflation	ME
CBC	0.906		
Inflation	0.577	0.765	
ME	0.668	0.683	0.825

Source: Compiled by researchers based on the outputs of Smart PLS4.

The Fornell–Larcker results in Table 02 demonstrate that the model meets the criteria for discriminant validity, indicating that each construct is empirically distinct from the others. The square root of the Average Variance Extracted (AVE) for each variable—shown on the diagonal—is higher than its corresponding correlations with other constructs. Specifically, Central Bank Credibility (0.906) exceeds its correlations with Inflation (0.577) and Monetary Expansion (0.668); Inflation (0.765) is greater than its correlations with Central Bank Credibility (0.577) and Monetary Expansion (0.683); and Monetary Expansion (0.825) is higher than its correlations with the other variables. These results confirm that each construct captures unique variance not explained by other constructs in the model, thus supporting satisfactory discriminant validity and strengthening confidence in the structural relationships to be tested.

Table 04: the heterotrait-monotrait ratio of correlations (HTMT)

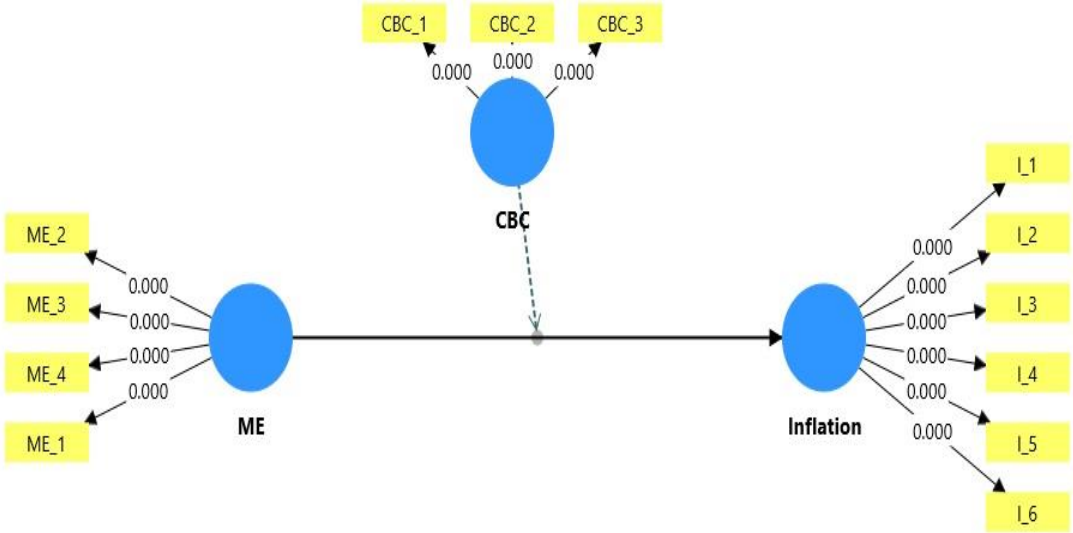
variables	CBC	Inflation	ME
CBC			
Inflation	0.652		
ME	0.777	0.790	
CBC x ME	0.156	0.034	0.199

Source: Compiled by researchers based on the outputs of Smart PLS4.

The HTMT results in Table 03 further confirm that the model exhibits strong discriminant validity. All HTMT values fall well below the conservative threshold of **0.85** and even further below the more lenient threshold of **0.90**, indicating that the constructs are clearly distinguishable from one another. The HTMT ratios between Central Bank Credibility and Inflation (0.652), Central Bank Credibility and Monetary Expansion (0.777), and Monetary Expansion and Inflation (0.790) all demonstrate acceptable levels of separation between constructs. Moreover, the interaction term (CBC × ME) shows very low HTMT values with all variables—0.156 with Central Bank Credibility, 0.034 with Inflation, and 0.199 with Monetary Expansion—indicating that the moderator construct is statistically unique and does not overlap excessively with its components. Overall, these HTMT values

strongly support the discriminant validity of the measurement model and confirm the appropriateness of the constructs for subsequent structural analysis.

Figure 2: General Structural Model for the Study



Source: Compiled by researchers based on the outputs of Smart PLS4.

2. Testing the Internal Model (Structural Model)

2.1. Validity of the Structural Model:

Table 05: Validity of the Structural Model

Variables	Coefficient of Determination (R2)	Explanatory size (F2)
Inflation	0.514	/
ME	/	0.353
CBC	/	0.057

Source: Compiled by researchers based on the outputs of Smart PLS4.

The results in Table 04 indicate that the structural model demonstrates acceptable explanatory power and meaningful effect sizes. The coefficient of determination (R^2) for Inflation is 0.514, meaning that Monetary Expansion and Central Bank Credibility together explain 51.4% of the variance in inflation, which represents a moderate to strong level of predictive accuracy in macroeconomic research. Regarding effect sizes (F^2), Monetary Expansion shows a substantial effect on Inflation with a value of 0.353, confirming that it is a key predictor in the model. Central Bank Credibility, with an F^2 of 0.057, demonstrates a small but meaningful effect, suggesting that while credibility contributes to explaining inflation variations, its influence is more modest compared to that of monetary expansion. Overall, these results support the structural relationships proposed in the model and indicate that both Monetary Expansion and Central Bank Credibility play statistically relevant roles in explaining inflation dynamics.

2.2. Discussion of testing the study hypotheses

a. Hypotheses:

a.1. First hypothesis (H1): There is no statistically significant positive relationship between Monetary Expansion and Inflation at a 5% significance level.

a.2. Second Hypothesis (H2): There is no significant role for Central bank credibility in reducing the relationship between Monetary Expansion and Inflation at a 5% significance level.

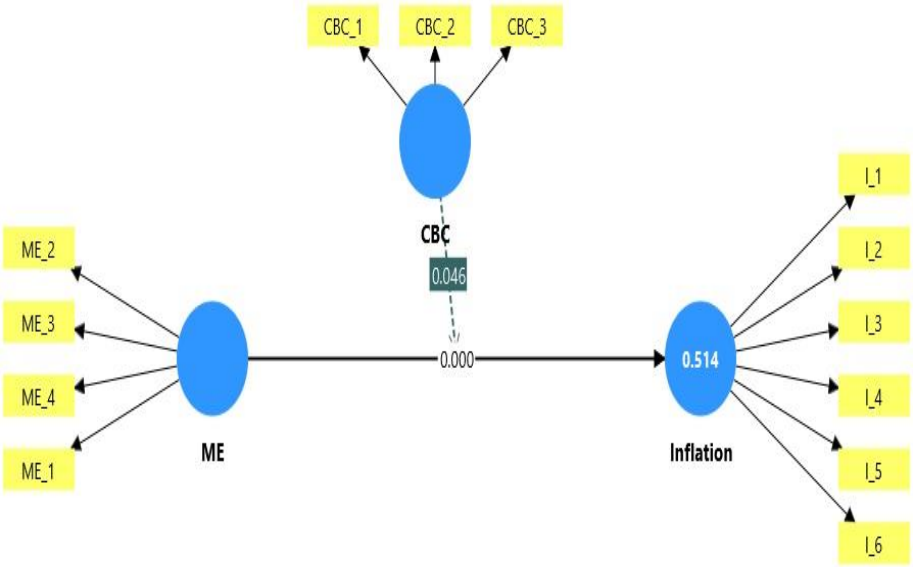
Table 06: Testing the Hypotheses for the Study (H_1, H_2)

Hypothesis	Paths	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values	Decision
H_1	ME -> Inflation	0.560	0.568	0.132	4.250	0.000	Hypo. Accepted
H_2	CBC x ME -> Inflation	-0.136	-0.136	0.068	1.996	0.046	Hypo. Accepted

Source: Compiled by researchers based on the outputs of Smart PLS4.

The results presented in Table 5 provide strong empirical support for both hypotheses of the study. For H1, the path coefficient from Monetary Expansion to Inflation is 0.560, with a high T-statistic of 4.250 and a p-value of 0.000, indicating a statistically significant and positive relationship. This confirms that increases in monetary expansion lead to higher inflation, aligning with classical monetary theory and supporting the hypothesised direct effect. For H2, the interaction term between Central Bank Credibility and Monetary Expansion has a coefficient of –0.136, a T-statistic of 1.996, and a p-value of 0.046, demonstrating significance at the 5% level. The negative coefficient indicates that higher central bank credibility weakens the inflationary impact of monetary expansion, confirming the moderating role of credibility. Collectively, these findings validate the structural model and highlight that while monetary expansion raises inflation, central bank credibility plays a crucial role in dampening this effect.

Figure 3: Results of path coefficients



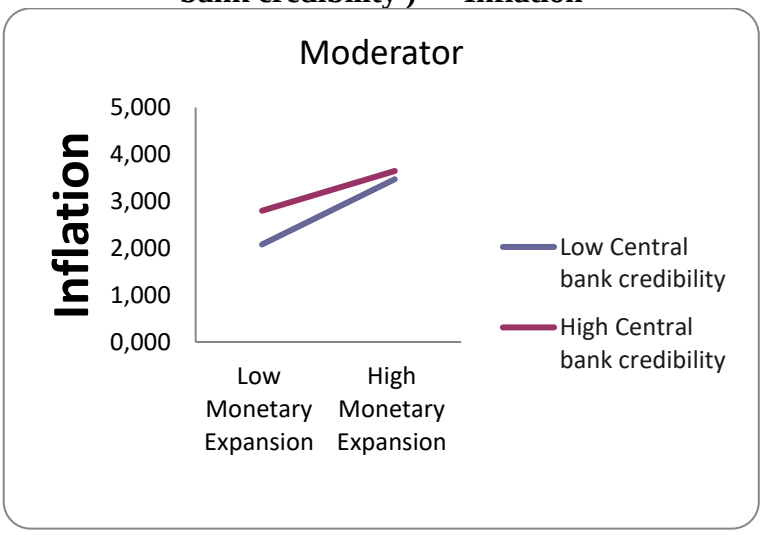
Source: Compiled by researchers based on the outputs of Smart PLS4.

Table 07: Testing the effectiveness of the moderating variable (Central bank credibility) in reducing the effect of Monetary Expansion **on Inflation**

Relationship	Path Coefficient	P Values
ME -> Inflation	0.560	0.000
CBC -> Inflation	0.224	0.066
The Interaction (Monetary Expansion * Central bank credibility)--> Inflation	-0.136	0.046

Source: Compiled by researchers based on the outputs of Smart PLS4.

Figure 4: Path coefficients of The Interaction (Monetary Expansion * Central bank credibility)--> Inflation



Source: Compiled by researchers based on the outputs of Microsoft Excel.

The interaction plot illustrates how Central Bank Credibility moderates the relationship between Monetary Expansion and Inflation. As monetary expansion increases from low to high, inflation rises under both low-credibility and high-credibility conditions. However, the slope for low central bank credibility is noticeably steeper, indicating that inflation responds more strongly to monetary expansion when credibility is weak. In contrast, the slope for high central bank credibility is flatter, showing that credible central banks are better able to contain inflationary pressures even when monetary expansion increases. This visual evidence aligns with the statistical results ($\beta = -0.136$, $p = 0.046$), confirming that central bank credibility dampens the inflationary impact of monetary expansion. Ultimately, the graph demonstrates that credibility acts as a stabilising force, reducing the sensitivity of inflation to changes in money supply growth.

V. Discussion:

1. Interpretation of Findings:

The empirical findings confirm that monetary expansion exerts a significant and positive effect on inflation, reinforcing the central role of monetary factors in shaping price dynamics. However, the magnitude of this effect varies across different economic contexts within the MENA region. In countries characterised by relatively stronger institutional frameworks and higher central bank credibility, such as Saudi Arabia and Qatar, inflationary pressures tend to remain more contained despite increases in monetary aggregates. This reflects the ability of credible monetary authorities to anchor expectations and maintain confidence in policy commitments.

In contrast, in economies where institutional credibility is relatively weaker or subject to political and economic instability, such as Iraq and Syria, the same level of monetary expansion may generate stronger inflationary responses. In such contexts, limited trust in monetary authorities can amplify uncertainty, leading economic agents to adjust prices more aggressively in anticipation of future instability.

For intermediate cases, including Algeria, Egypt, and Tunisia, the inflationary impact of monetary expansion appears to depend on the evolving credibility of monetary institutions and the broader macroeconomic environment. Structural reforms, transparency measures, and communication strategies adopted by central banks in these countries play a critical role in shaping inflation expectations and moderating policy outcomes.

These findings highlight that inflation dynamics cannot be fully understood through monetary aggregates alone. Rather, the effectiveness of monetary policy is significantly conditioned by institutional credibility, which acts as a stabilising mechanism capable of mitigating inflationary pressures even in the presence of monetary expansion.

2. Comparison with Prior Research:

The findings align closely with the established monetary theory and the results of several empirical studies. Consistent with the quantity theory of money, the study supports the assertion that increases in money supply are associated with

significant inflationary pressures, echoing the conclusions of Borio et al. (2024) and Benati (2021), who found a stable long-run relationship between money growth and inflation across various economic contexts. The results also reinforce the observation that the impact of monetary expansion remains strong in environments where inflation sensitivity is elevated.

Furthermore, the moderating role of central bank credibility confirms the arguments presented in earlier research. Studies such as Güler (2021) and Lima & Moreira (2022) have demonstrated that credibility enhances the effectiveness of monetary policy by anchoring expectations and reducing the need for aggressive interest rate adjustments. The current study extends this literature by empirically validating that central bank credibility not only influences inflation directly but also shapes how inflation responds to changes in money supply. This supports the findings of Cepeda et al. (2025) and Levieuge et al. (2015), who emphasised the importance of credibility in stabilising monetary environments and reducing policy volatility.

However, this study also addresses a previously underexplored gap in the literature: the interactive effect between credibility and monetary expansion. Many previous studies treated credibility as an independent predictor, whereas the current analysis shows that credibility significantly conditions the monetary transmission mechanism. This aligns with emerging theoretical perspectives that highlight the interplay between institutional trust, policy transparency, and inflation outcomes.

Overall, the findings contribute to a more nuanced understanding of inflation dynamics by demonstrating that monetary expansion alone does not determine inflationary outcomes; rather, the institutional context—particularly the credibility of the central bank—plays a vital role in influencing the strength of this relationship.

Conclusion:

This study set out to examine the impact of monetary expansion on inflation and to assess whether central bank credibility moderates this relationship. The empirical findings provide robust evidence that monetary expansion exerts a strong and statistically significant positive effect on inflation, confirming its central role in shaping price dynamics. The model's explanatory power ($R^2 = 0.514$) indicates that more than half of the variation in inflation can be explained by monetary expansion and central bank credibility, demonstrating the importance of these variables in understanding inflationary outcomes.

A major contribution of the study is the verification of the moderating role of central bank credibility. The results show that credibility significantly weakens the inflationary effect of monetary expansion, as indicated by the negative and statistically significant interaction term. This finding highlights that when credibility is high, economic agents place greater trust in the central bank's commitment to price stability, leading to more anchored inflation expectations and a reduced sensitivity of inflation to money supply growth. Conversely, in environments where credibility is low, the same level of monetary expansion triggers a more pronounced increase in

inflation, revealing the importance of institutional trust in shaping monetary transmission.

Overall, the study demonstrates that inflation is not solely determined by changes in the money supply; rather, its magnitude depends critically on the institutional context in which monetary policy is conducted. Monetary expansion (IV) plays a fundamental role in driving inflation (DV), but central bank credibility (Moderator) serves as a stabilising mechanism that can either amplify or mitigate this effect. These findings underscore the importance of strengthening credibility—through transparency, policy consistency, and effective communication—to enhance macroeconomic stability and reduce inflationary risks associated with monetary growth.

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Appendix:

1. Appendix A: Distribution of Survey Responses

Statistiques

country

N	Valide	85
	Manquant	0

country

		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	Algeria	25	29,4	29,4	29,4
	Tunisia	13	15,3	15,3	44,7
	Libya	2	2,4	2,4	47,1
	Egypt	19	22,4	22,4	69,4
	Jordan	3	3,5	3,5	72,9
	Saudi Arabia	11	12,9	12,9	85,9
	Qatar	5	5,9	5,9	91,8
	Iraq	1	1,2	1,2	92,9
	Syria	1	1,2	1,2	94,1
	Oman	3	3,5	3,5	97,6
	Kuwait	2	2,4	2,4	100,0
	Total	85	100,0	100,0	

Source: Compiled by the authors based on survey data.