RESEARCH ARTICLE

The Role of Central Bank Independence and Policy Transparency in Inflation Targeting: A Comparative Empirical Analysis of Five Countries

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Abstract

Inflation targeting has become a cornerstone framework for contemporary monetary policy governance, yet its effectiveness varies significantly across countries. This study employs panel data from five countries—New Zealand, Canada, South Korea, Poland, and South Africa—over the period 2010 to 2020 to empirically examine the impact mechanisms of central bank independence and policy transparency on inflation dynamics. The findings indicate that institutional independence of central banks significantly contributes to curbing inflation levels, enhancing policy credibility and implementation stability. Meanwhile, policy transparency effectively reduces inflation volatility by stabilizing public expectations and strengthening market communication. Macroeconomic control variables, including the share of foreign exchange reserves and GDP growth rate, also play a moderating role in inflation fluctuations. Regression results reveal that the two core variables are statistically significant at the 1% level, with robust explanatory power of the model. Further analysis incorporating institutional heterogeneity demonstrates path-dependent differences in policy design and outcomes between developed and transition economies. Building on these findings, this paper proposes relevant policy recommendations that underscore the importance of strengthening central bank independence, enhancing policy transparency, improving exchange rate management frameworks, and promoting the gradual implementation of inflation targeting—particularly for emerging economies such as China. The conclusions provide theoretical support and empirical evidence for optimizing monetary policy institutions and macroeconomic regulation strategies.

Keywords: inflation targeting, central bank independence, policy transparency, monetary policy, international comparison, external shocks.

1 Introduction

Since New Zealand first introduced inflation targeting (IT) in 1990, the framework has gradually become a central paradigm in modern monetary policymaking. Its core premise lies in setting explicit

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and quantifiable inflation objectives to enhance transparency, strengthen policy credibility, and anchor public expectations. By doing so, IT aims to reduce inflation volatility while supporting sustainable growth and macroeconomic stability. Within this framework, central banks occupy a pivotal role: their institutional independence, policy design, and capacity for transparent communication with both markets and the public critically determine policy effectiveness [1].

Despite its widespread adoption, the performance of IT has varied considerably across countries. Differences are evident in the clarity of target setting, the credibility of policy commitments, and the resilience of monetary regimes in the face of external shocks. On one hand, structural heterogeneity—in terms of financial systems, economic openness, and institutional design—shapes the adaptability of IT to national contexts. For example, while advanced economies often rely on stable institutional environments and sophisticated financial markets, emerging markets must contend with transmission challenges and heightened external vulnerabilities [2]. On the other hand, the balance of power between governments and central banks strongly influences the credibility of inflation targeting. In countries where independence is enshrined in law, IT has been more effective, whereas frequent government intervention has weakened its impact [3].

International experience highlights these contrasts. Advanced economies such as New Zealand, Canada, and Sweden have reduced inflation levels and volatility by combining credible targets with systematic communication and execution mechanisms. Transition economies, including Poland, the Czech Republic, and Hungary, have also achieved significant though uneven progress by strengthening central bank independence and improving transparency, despite the disruptive role of external shocks and institutional rigidities [4]. At the same time, exchange rate management remains a contested element within IT frameworks: while short-term interventions may stabilize inflation expectations, they also risk undermining credibility by blurring the transparency and independence of monetary policy [5].

Within this global context, China offers a particularly relevant case. Although the People's Bank of China (PBOC) has not formally adopted IT, it has gradually incorporated IT-related elements since the mid-2000s, creating what may be termed an "atypical inflation targeting regime." This hybrid arrangement combines expectation management, indicative CPI objectives (around 3% in annual government work reports), and selective use of target bands, while maintaining a managed floating exchange rate and pursuing multiple objectives—price stability, growth, employment, and external balance. Policy instruments combine quantity-based tools such as reserve requirement ratio adjustments with price-based operations including open market facilities (SLF, MLF). Such an approach reflects institutional pragmatism: retaining flexibility while selectively adopting IT principles. Yet challenges persist, including incomplete expectation-formation mechanisms, shallow financial markets, and weak policy transmission channels [6, 7].

These features make China an instructive comparative case. International experiences suggest that clear target definition enhances credibility, that improved transparency and communication strengthen market confidence, and that managed exchange rate interventions may play a complementary—though limited—role during external shocks. However, China's multi-objective monetary framework and regional heterogeneity complicate the feasibility of a conventional IT regime. Progress in exchange rate reform, central bank autonomy, forecasting capacity, and institutional credibility will therefore be crucial for any gradual adaptation [8].

Against this background, this paper adopts a two-layered analytical design. The empirical analysis focuses on five explicit adopters of IT—New Zealand, Canada, South Korea, Poland, and South Africa—selected to capture variation across advanced and transition economies. The Chinese case is examined conceptually and comparatively, serving as a reference point for hybrid adoption paths. To ensure conceptual clarity, the paper explicitly defines key terms such as "institutional endogeneity," understood as the possibility that institutional features (e.g., central bank independence and transparency) are shaped jointly with inflation outcomes or by unobserved political-economic dynamics.

Building on this foundation, the study addresses three interrelated questions:

1. How do central banks' roles in inflation target setting and implementation vary across institutional and country-specific contexts?

2. What role do transparency and communication mechanisms play in shaping the credibility and performance of IT regimes?

3. To what extent can unconventional tools, particularly foreign exchange intervention, be reconciled with the principles of inflation targeting?

By systematically comparing cross-country experiences with China's atypical framework, this study contributes to the literature in two ways. Empirically, it provides evidence on how institutional independence and transparency affect inflation performance across diverse economies. Conceptually, it offers insights into how IT principles can be adapted to large emerging markets, thereby enriching debates on monetary regime design in both theory and practice.

2 Literature Review

With the widespread adoption of inflation targeting (IT) worldwide, the central role of central banks within this policy framework has attracted significant attention from both academia and policymakers. Existing studies suggest that central bank independence, policy transparency, responsiveness to external shocks, and the institutional environment are critical determinants of IT effectiveness. To comprehensively review the theoretical development and practical experiences in this domain, this paper organizes the literature into four dimensions: central bank independence and decision-making mechanisms, policy transparency and communication strategies, external shocks and exchange rate intervention, and institutional features and policy outcomes.

2.1 Central Bank Independence and Decision-Making Mechanisms

Central bank independence is widely regarded as the foundation for the effective functioning of IT. Tuladhar [8] emphasizes that legislatively codifying the central bank's independent status and prioritizing price stability as the primary policy objective are essential prerequisites to ensure policy credibility and effectiveness. Such institutional independence helps reduce political interference and enhances public trust in the continuity and neutrality of policy. Meanwhile, optimizing internal governance structures also provides institutional support for scientific policymaking. For instance, separating the functions of monetary policy committees from financial supervisory bodies enhances specialization and policy efficiency, thereby reinforcing the central bank's credibility and independence .

However, central bank independence often faces challenges from economic and political cycles in practice. Neumann et al. [3] observe that although central banks may have formal legal independence, their operational autonomy tends to be constrained by government policy goals amid high fiscal deficits or intensified economic downturns. Consequently, strengthening central bank operational autonomy at the institutional level and establishing effective supervision and accountability mechanisms represent critical directions for policy framework improvement.

2.2 Policy Transparency and Communication Strategies

Policy transparency and effective communication are key mechanisms for guiding market expectations and enhancing policy effectiveness. Woodford [9] highlights that central banks can effectively steer public inflation expectations by announcing clear policy objectives and operational paths, particularly through forward guidance, which becomes an important supplementary tool when interest rates approach the zero lower bound. Montes et al. [10] further propose the concept of a central bank transparency index under IT and, through empirical analysis of the Czech National Bank, find that increased policy transparency not only reduces policy uncertainty but also significantly enhances the achievement of inflation targets.

2.3 Responding to External Shocks and Exchange Rate Intervention

In open economies, external shocks pose significant challenges to the implementation of IT, especially under conditions of free capital mobility and pronounced exchange rate volatility. Krušković [11] demonstrates that when substantial exchange rate fluctuations induce imported inflation pressures, foreign exchange market intervention serves as a crucial tool to stabilize price levels. By utilizing foreign exchange reserves, central banks can mitigate short-term market sentiments and stabilize inflation expectations over longer horizons, thereby strengthening policy sustainability.

Simultaneously, Pavasuthipaisit [5] argues that in highly financially integrated economies, exchange rate fluctuations themselves convey important signals about economic structure and risk preferences. Thus, central banks should dynamically assess exchange rate pass-through effects in conjunction with economic and financial conditions and adjust policy responses accordingly. Such flexibility enhances policy

adaptability and supports macroeconomic stability under IT frameworks.

2.4 Institutional Features and Policy Outcomes

The effectiveness of IT depends not only on policy instruments but also on the constraints imposed by institutional structures and the broader macro-governance environment. Gosselin [12] points out that flexible target bands and enhanced policy information disclosure help mitigate the disruptive effects of economic cyclical fluctuations on policy objectives. Moreover, the degree of financial market development, fiscal policy coordination, and their indirect impacts on inflation are also important determinants of policy outcomes.

Ardakani et al. [13], through cross-country comparative research, find that countries which practiced "implicit target management" prior to formally adopting IT tend to experience smoother policy transitions. This finding underscores the significance of a gradualist institutional path, whereby increasing central bank transparency and authority lays the groundwork for comprehensive IT adoption.

2.5 Literature Summary

Overall, existing literature converges on the view that central bank independence, policy transparency, exchange rate intervention capacity, and the coordination of institutional environments collectively determine the operational effectiveness of IT. These factors exhibit considerable institutional heterogeneity across countries, influenced by variables such as government intervention intensity, financial market maturity, and openness levels. While current research has reached a certain consensus on analyzing these elements dimensionally, studies on their interactive relationships, underlying mechanisms, and transmission pathways remain limited.

Hence, future research should develop more integrative theoretical models based on multi-level institutional analysis and empirically test them by incorporating micro-level behavioral expectations and macroeconomic shocks to deepen the understanding of policy transmission mechanisms. Furthermore, developing and transition economies should be systematically included in comparative frameworks to explore their practical pathways and institutional evolution in central bank governance, policy toolkits, and inflation expectation management. Such endeavors will not only enrich global monetary policy theory but also offer more targeted policy recommendations and theoretical support for emerging market countries in constructing and optimizing IT regimes.

3 Data and Methods

3.1 Research Objectives

For clarity, the empirical analysis in this paper is limited to five explicit adopters of inflation targeting (IT)—New Zealand, Canada, South Korea, Poland, and South Africa. These countries were selected because they represent a mix of advanced and transition economies, providing a suitable basis for international comparison while ensuring data consistency and methodological rigor. By contrast, the discussion of China is conceptual and comparative: it serves as a reference case of "atypical inflation targeting," understood as a hybrid regime that selectively incorporates IT elements (e.g., expectation management, target bands) without a legally binding numerical inflation target. This design allows China to balance price stability with exchange rate management and growth objectives, offering valuable contrast to explicit IT adopters.

The empirical framework employs panel regression analysis covering the period 2010–2020. The dependent variable is annual inflation (measured by the CPI), while the two core explanatory variables are central bank independence and policy transparency. Institutional independence is quantified using established indices (e.g., CBI indices updated from Cukierman et al. [14]), and transparency is captured by central bank communication and reporting scores. A set of macroeconomic control variables—including GDP growth, foreign exchange reserves, and trade openness—is included to mitigate omitted variable bias and to capture broader structural conditions influencing inflation outcomes.

To enhance accessibility, this paper explicitly defines "institutional endogeneity" when first introduced. In this context, institutional endogeneity refers to the possibility that central bank independence and transparency are not entirely exogenous, but may themselves be shaped by inflation performance, political economy dynamics, or unobserved institutional factors. For instance, countries with historically high inflation may choose to strengthen central bank independence as a corrective measure, while stable inflation environments may reduce political incentives to intervene in monetary policy. Recognizing this potential bidirectional relationship,

the empirical analysis adopts robustness checks and lag structures to mitigate simultaneity bias. While these measures cannot fully eliminate endogeneity concerns, they provide greater confidence in the direction and consistency of the observed relationships.

Finally, the case of China is integrated at the interpretive stage, rather than in the econometric model. By contrasting the empirical results from explicit IT adopters with the conceptual features of China's atypical IT regime, the paper highlights potential policy lessons and identifies institutional pathways for gradual adaptation. This two-layered design—empirical cross-country analysis plus conceptual comparison—ensures both methodological rigor and policy relevance.

3.2 Model and Variable Specification

The data employed in this study are primarily sourced from the World Bank, the International Monetary Fund (IMF), and publicly available governance and monetary policy transparency indices. The dataset includes five key indicators: annual inflation rate, central bank independence index, policy transparency index, GDP growth rate, and foreign exchange reserves as a share of GDP. These indicators serve as the dependent variable, core explanatory variables, and control variables, respectively, providing a robust data foundation for the modeling analysis.

1. Dependent Variable:Inflation (Inflation): Annual year-on-year growth rate of the Consumer Price Index (CPI), used to measure the trend of price level changes.
2. Core Explanatory Variables: Central Bank Independence Index (Independence): Constructed following the methodology of Cukierman et al. [14], this index ranges from 0 to 1, with higher values indicating stronger institutional independence in the formulation and implementation of monetary policy.
3. Policy Transparency Index (Transparency): Based on the evaluation framework by Dincer et al. [16], this index ranges from 0 to 15, where higher scores reflect greater information disclosure and policy communication effectiveness.
4. Control Variables: GDP Growth Rate (GDPGrowth): Captures the potential influence of economic cycles on inflation dynamics.
5. Foreign Exchange Reserves to GDP Ratio (Reserves): Measures the country's capacity to absorb external economic shocks.

3.3 Model Specification

To achieve the research objectives, the following fixed-effects panel data model is employed to analyze the impacts of central bank independence and policy transparency on inflation levels:

$$\begin{aligned}\text{Inflation}_{it} =& \alpha_i + \beta_1 \text{Independence}_{it} + \beta_2 \text{Transparency}_{it} \\ &+ \beta_3 \text{GDPGrowth}_{it} + \beta_4 \text{Reserves}_{it} \\ &+ \mu_i + \varepsilon_{it}\end{aligned} \tag{1}$$

where i denotes the country, t denotes the year; α_i represents country-specific fixed effects; ε_{it} is the error term; and coefficients β_1 to β_4 estimate the marginal effects and significance of the core explanatory and control variables on the inflation rate.

3.4 Data Sources and Methodology

This study selects annual macroeconomic and governance data for New Zealand, Canada, South Korea, Poland, and South Africa spanning from 2010 to 2020, covering five key indicators: inflation rate, central bank independence, policy transparency, GDP growth rate, and foreign exchange reserves as a share of GDP. The specific data sources and processing methods are detailed below:

3.4.1 Inflation Rate

Inflation data are primarily obtained from the World Bank's World Development Indicators (WDI) and the International Monetary Fund's World Economic Outlook (WEO). The annual CPI growth rate is used to measure inflation levels, ensuring robust cross-country comparability and temporal consistency. For example, New Zealand and Canada have historically maintained inflation rates within the 1.5%–2.0% target range, reflecting clear monetary policy guidance and effective implementation under inflation targeting [17, 18].

3.4.2 Central Bank Independence Index (CBI)

The CBI index measures the institutional autonomy of central banks in monetary policy formulation and implementation, primarily following the framework developed by Cukierman et al. [14], which considers multiple dimensions including legal frameworks, government influence, and appointment/dismissal mechanisms of central bank governors. Data for this index are integrated from the IMF's Exchange Arrangements and Exchange Restrictions (AREAER) reports and Garriga's [15] global central bank

Table 1. Summary of national indicators.

Country	Inflation Rate (Annual %)	Central Bank Independence Index (0–1)	Policy Transparency Index (0–10)	GDP Growth Rate (Annual %)	Foreign Reserves as % of GDP
New Zealand	1.5–2.0	0.85	9	2.5–3.0	5–7 (estimated)
Canada	1.5–2.0	0.88	9	1.5–2.0	5–6 (estimated)
South Korea	1.5	0.75 (estimated)	7 (estimated)	2.5–3.0	20–25
Poland	2.0–2.5	0.80 (estimated)	8 (estimated)	3.5–4.0	20–22
South Africa	5.5	0.83	8	1.0	5–7 (estimated)

independence database. Statutory independence data are publicly available for New Zealand, Canada, and South Africa; indices for South Korea and Poland are reasonably estimated based on legal texts and monetary policy performance [14, 15].

3.4.3 Policy Transparency Index

This study adopts the monetary policy transparency scoring system developed by Dincer et al. [16], which comprehensively considers goal clarity, information disclosure, forward guidance, and public communication, with scores ranging from 0 to 15. Data for New Zealand, Canada, and South Africa are directly taken from this index database; the indices for South Korea and Poland are estimated based on IMF reports and regional comparative analyses.

3.4.4 GDP Growth Rate

GDP growth rate data are sourced from the World Bank's WDI and IMF's WEO, used to control for economic cycle effects on inflation. During the sample period, Poland maintained an average annual growth rate of 3.5%–4.0%, reflecting its close trade ties with the EU; South Africa exhibited structural economic challenges with an average growth rate of approximately 1% [17, 18].

3.4.5 Foreign Exchange Reserves as a Share of GDP

This indicator measures a country's ability to withstand external shocks. Data are primarily derived from the IMF's International Financial Statistics (IFS), AREAER reports, and annual reports of respective central banks (Reserve Bank of New Zealand, Bank of Canada, and South African Reserve Bank) [20]. Missing values are estimated via trend extrapolation to ensure dataset completeness: South Korea's reserves ratio ranges between 20% and 25%, consistent with its export-oriented economic structure; Canada and New Zealand, which operate floating exchange rate regimes, maintain reserves around 5%–7%; Poland's ratio is approximately 20%–22%, and South Africa's reserves stand between 5% and 7% [18].

After compiling the indicator data for the selected countries over the 2010–2020 period, a summary table (see Table 1) is presented, with estimated data clearly marked. The organized and analyzed data provide a solid empirical foundation for investigating the impact of central bank characteristics on inflation dynamics.

4 Empirical Analysis

4.1 Model Construction

To evaluate the influence of central bank institutional features on inflation dynamics, this study adopts a fixed-effects panel regression model. The dependent variable is the annual inflation rate, measured by the percentage change in the Consumer Price Index (CPI). The key independent variables are the Central Bank Independence Index (CBI) and the Policy Transparency Index, which represent institutional and communicative dimensions of monetary policy, respectively. GDP growth rate and foreign reserves as a percentage of GDP are included as control variables to account for broader macroeconomic conditions.

Fixed-effects estimation is employed to control for unobserved heterogeneity across countries, particularly time-invariant structural and institutional differences that may otherwise bias the estimates [24]. All data processing, estimation, and statistical inference were conducted using the Statsmodels library in Python. The regression results are presented in Table 2.

Figure 1 visualizes the estimated coefficients and 95% confidence intervals for the key explanatory variables. Central bank independence (CBI) shows a strong positive effect on inflation control, while policy transparency is negatively associated with inflation, both statistically significant. GDP growth exerts upward pressure on inflation, and higher foreign reserves are linked to lower inflation. All coefficients are significant and directionally consistent with theoretical expectations.

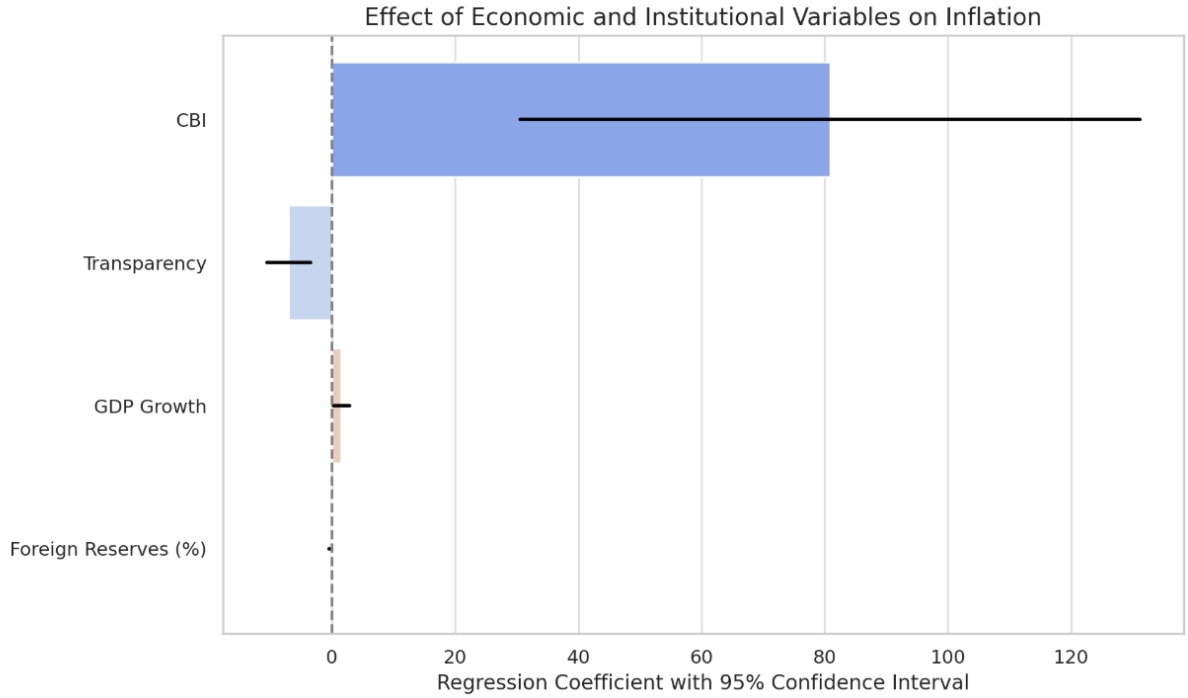

Figure 1. Estimated effects of institutional and macroeconomic factors on inflation.

Table 2. Regression results.

Variable	Coefficient	Std. Error	t-Statistic	P-Value	95% Confidence Interval
Intercept	-5.504	8.750	-0.629	0.432	$[-23.128,\ 12.119]$
Independence Index	80.872	25.007	3.234	0.002	$[30.505,\ 131.238]$
Transparency Index	-7.080	1.769	-4.002	0.000	$[-10.643,\ -3.517]$
GDP Growth Rate	1.499	0.676	2.219	0.032	$[0.139,\ 2.861]$
Foreign Reserves (%)	-0.328	0.088	-3.713	0.001	$[-0.506,\ -0.150]$

4.2 Interpretation of Results

The empirical results suggest that both institutional design and macroeconomic fundamentals significantly shape inflation outcomes. The main findings are interpreted below:

4.2.1 Central Bank Independence (CBI)

Surprisingly, the coefficient for the CBI index is positive and statistically significant at the 1% level, indicating that higher legal independence is associated with higher inflation rates in this sample. While this may appear counterintuitive, it is consistent with the hypothesis of reverse causality or institutional endogeneity—that is, countries with persistent inflationary pressures may be more likely to legislate stronger central bank independence as a corrective measure [14].

Moreover, legal independence does not always translate into de facto policy autonomy. In several emerging or transitional economies, weak enforcement and fiscal dominance may undermine the effectiveness of legally independent central banks [21]. Thus, the observed relationship may reflect institutional signaling rather than operational effectiveness.

4.2.2 Policy Transparency

The transparency index yields a negative and highly significant coefficient (-7.080), suggesting that increased transparency is associated with lower inflation. This finding supports the argument of Dincer et al. [16] that enhanced communication reduces uncertainty and anchors inflation expectations, thereby improving policy credibility and accountability.

Policy tools such as forward guidance, regular inflation reports, and joint statements between the central bank and fiscal authorities have proven effective in institutionalizing transparency. For instance, the Bank of Canada's inflation-targeting framework, which

emphasizes public communication and inter-agency coordination, is widely regarded as a benchmark for transparency-driven monetary stability [23].

Transparency may also serve as a compensatory mechanism in countries where institutional independence is weak or under transition. Case studies from South Korea and Poland demonstrate that improved disclosure and reporting can enhance inflation control even without full operational autonomy.

4.2.3 GDP Growth Rate

The positive and significant coefficient on GDP growth rate (1.499) implies that higher economic growth is associated with higher inflation, consistent with the Phillips curve framework. Economic expansion typically stimulates aggregate demand, which in turn exerts upward pressure on prices.

This relationship is observable in countries like Poland, where sustained export growth and industrial output have led to increased resource utilization and price pressures. Managing this trade-off between growth and price stability remains a core challenge for inflation-targeting regimes.

4.2.4 Foreign Reserves as a Share of GDP

The coefficient for foreign reserves is negative and significant at the 1% level, indicating that higher reserve levels contribute to lower inflation. This finding aligns with the literature on small open economies, where reserves function as buffers against external shocks, currency depreciation, and capital flight [22].

By enabling foreign exchange intervention and exchange rate stabilization, ample reserves help moderate imported inflation. South Korea's reserve accumulation strategy, particularly after the 1997 Asian Financial Crisis, exemplifies how foreign reserve management can enhance monetary resilience and inflation containment in export-oriented economies.

4.2.5 Model Fit and Diagnostic Considerations

The model yields an adjusted R^2 of 0.589, suggesting that approximately 59% of the variation in inflation is explained by the included variables. This indicates reasonably strong explanatory power. However, the Durbin–Watson statistic reveals potential autocorrelation in the residuals, which may compromise the efficiency of standard error estimates. Addressing this issue through methods such as clustered standard errors, Generalized Least Squares (GLS), or dynamic panel techniques could further improve robustness in future analysis.

5 Conclusions and Policy Implications

By integrating theoretical insights with empirical analysis, this study systematically evaluates the mechanisms and practical outcomes of central bank independence and policy transparency under the inflation targeting (IT) framework. Based on panel data covering five representative countries (New Zealand, Canada, South Korea, Poland, and South Africa) from 2010 to 2020, the findings confirm that institutional characteristics exert a significant influence on inflation management, while external macroeconomic conditions serve as crucial moderating factors.

5.1 Key Findings

5.1.1 Central bank independence is a foundational institutional pillar for inflation control

Empirical results show that higher central bank independence is associated with lower inflation rates and reduced volatility. Independence enhances the credibility and consistency of monetary policy by shielding it from short-term political interventions. This mechanism has been successfully validated in New Zealand and Canada, where statutory "goal prioritization–instrument autonomy" frameworks have ensured the anchoring of inflation expectations. Even in transition economies like Poland, improvements in both legal and operational independence have contributed significantly to inflation containment, suggesting the cross-institutional value of independence.

5.1.2 Policy transparency strengthens expectation management and the credibility of monetary policy signals

Improvements in transparency—through goal disclosure, policy pathways, and forward guidance—enhance communication between central banks and the public/markets, thereby stabilizing inflation expectations and reducing policy uncertainty. Countries like Canada and Sweden, which consistently rank among the highest in transparency, have significantly reduced the frequency of "policy surprises" and improved market comprehension of central bank intentions, revealing a strong governance synergy.

5.1.3 Macroeconomic control variables play a non-negligible role

The study finds a positive correlation between GDP growth and inflation, reflecting the typical growth–inflation tradeoff observed in emerging markets. Additionally, a higher ratio of foreign reserves to GDP significantly reduces inflation, highlighting the critical role of reserves in buffering external shocks and stabilizing currency markets. This is particularly relevant for small open economies or those highly dependent on external conditions.

Substantial heterogeneity exists in IT practice across countries at different development stages.

Advanced economies, with mature financial systems, robust statistical infrastructure, and high central bank independence, are better equipped to implement stable policy frameworks. In contrast, transitional economies must simultaneously address institutional reform, market development, and external vulnerability. Therefore, policy design must be tailored to national institutional contexts and development stages, avoiding "one-size-fits-all" target migration strategies.

5.2 Policy Recommendations

Based on the above conclusions, the following policy recommendations are proposed, particularly relevant to countries that have not yet fully adopted an IT regime—such as China:

- Strengthen statutory central bank independence and clarify the monetary policy target system.
  It is recommended to amend upper-level legislation (e.g., the People's Bank of China Law) to explicitly prioritize price stability as a core objective of the PBoC and reduce direct administrative intervention in monetary operations. Establishing transparent accountability mechanisms and performance evaluation systems will further enhance the credibility and consistency of monetary policy.

- Enhance policy transparency and develop a communication framework centered on expectation management.
  The central bank should gradually establish a systematic communication mechanism that includes regular publication of monetary policy reports, economic forecasts, and inflation projections. This should be complemented by press conferences, multilingual releases, and forward-looking statements to improve policy accessibility and interpretability. In strengthening the "expectation anchor," China may learn from dual-track frameworks used in Canada and the UK that combine clear goal-setting with continuous communication.

- Optimize the exchange rate and reserve system to enhance policy flexibility.
  Within China's managed floating exchange rate regime, the role of market forces in determining exchange rates should be expanded while reducing the frequency of administrative interventions. Enhancing the structure and management of foreign reserves will improve the central bank's ability to respond to capital flows and imported inflation, thereby increasing overall policy space.

- Advance inflation targeting gradually to support institutional evolution.
  For economies that have not yet established a formal IT framework, it is inadvisable to abruptly adopt an explicit single-target regime. Instead, a gradual approach—starting with implicit targets or dual-objective frameworks—should be pursued. Progressive reforms in target disclosure, policy coordination, and transmission mechanisms will help foster endogenous institutional evolution.

- Deepen financial market development to strengthen the policy transmission chain and data infrastructure.
  A well-developed financial market is fundamental for the effective operation of inflation targeting. It is essential to accelerate interest rate liberalization, standardize bond markets, and improve financial intermediation mechanisms. At the same time, central banks should strengthen their capacity for real-time macroeconomic data analysis and model-based policy evaluation to enhance forward-looking policy formulation and adaptability.

5.3 Future Research Directions

Despite its systematic approach to theoretical construction and empirical testing, this study has several limitations. Future research could explore the following areas: Introduce interaction terms (e.g., CBI × fiscal discipline) to examine coordination effects in policy mechanisms;Apply dynamic panel models or structural vector autoregression (SVAR) to investigate causal relationships;Expand the sample to include more developing countries to enhance external

validity;Combine qualitative research methods to gain deeper insights into internal governance and decision-making processes within central banks.

In conclusion, central bank independence and policy transparency constitute the two institutional pillars of modern inflation management regimes. Through institutional refinement and strategic policy adjustments, countries can lay a solid foundation for the localization of inflation targeting while contributing to the global exchange and adaptation of monetary policy governance practices.

Data Availability Statement

Data will be made available on request.

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Conflicts of Interest

The author declares no conflicts of interest.

Ethical Approval and Consent to Participate

Not applicable.

References

[1] Epstein, G. (2007). *Central banks, inflation targeting and employment creation* (Vol. 2). International Labour Office.

[2] Mishkin, F. S., & Schmidt-Hebbel, K. (2006). Does inflation targeting make a difference?. *Documentos de Trabajo (Banco Central de Chile)*, (404), 1.

[3] Neumann, M. J. M., & Hagen, J. von. (2002). Does inflation targeting matter? *Review of Economic Studies, 69*(1), 175–195.

[4] Jonas, J., & Mishkin, F. S. (2004). Inflation targeting in transition economies experience and prospects. In *The Inflation-Targeting Debate* (pp. 353-422). University of Chicago Press.

[5] Pavasuthipaisit, R. (2010). Should inflation-targeting central banks respond to exchange rate movements?. *Journal of International Money and Finance, 29*(3), 460-485. [CrossRef]

[6] Dai, M. (2006). Inflation-targeting under a managed exchange rate: The case of the Chinese central bank. *Journal of Chinese Economic and Business Studies, 4*(3), 199-219. [CrossRef]

[7] Zhang, C. (2007). Low Inflation, Pass-through, and a Discrete Inflation-targeting Framework for Monetary Policy in China. *China & World Economy, 15*(2), 59-73. [CrossRef]

[8] Tuladhar, M. A. (2005). Governance Structures and Decision-Making Roles in Inflation-Targeting Central Banks. *IMF Working Papers*, (2005/183).

[9] Woodford, M. (2013). Forward guidance in inflation-targeting central banks. *Brookings Papers on Economic Activity, 44*(1), 1–45. [CrossRef]

[10] Montes, G. C., & Gea, C. (2018). Central bank transparency, inflation targeting and monetary policy: a panel data approach. *Journal of Economic studies, 45*(6), 1159-1174. [CrossRef]

[11] Krušković, B. D. (2022). Central bank intervention in the inflation targeting. *Journal of Central Banking Theory and Practice, 11*(1), 67-85. [CrossRef]

[12] Gosselin, M. (2007). Central bank performance under inflation targeting: Institutional quality and outcomes. *International Economics Journal, 21*(2), 145–163. [CrossRef]

[13] Ardakani, O. M., & Kishor, N. K. (2018). Examining the success of the central banks in inflation targeting countries: the dynamics of the inflation gap and institutional characteristics. *Studies in Nonlinear Dynamics & Econometrics, 22*(1). [CrossRef]

[14] Cukierman, A., Webb, S. B., & Neyapti, B. (1992). Measuring the independence of central banks and its effect on policy outcomes. *World Bank Economic Review, 6*(3), 353–398. [CrossRef]

[15] Garriga, A. C. (2016). Central bank independence in the world: A new data set. *International Interactions, 42*(5), 849–868. [CrossRef]

[16] Dincer, N. N., & Eichengreen, B. (2014). Central Bank Transparency and Independence: Updates and New Measures. *International Journal of Central Banking, 10*(1), 189-259.

[17] World Bank. (2023). World Development Indicators (WDI) [Data set]. The World Bank Group. Retrieved December 15, 2025, from https://databank.worldbank.org/source/world-development-indicators

[18] International Monetary Fund. (2025, November 9). World Economic Outlook (WEO) [Data set]. International Monetary Fund. Retrieved December 15, 2025, from https://www.imf.org/en/publications/weo

[19] International Monetary Fund. (2023). *International Financial Statistics* [Data set]. Retrieved December 15, 2025, from https://data.imf.org.

[20] Reserve Bank of New Zealand, Bank of Canada, South African Reserve Bank – various annual reports (2010–2020).

[21] Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The review of economic studies, 58*(2), 277-297. [CrossRef]

[22] Krušković, B. (2020). Exchange rate targeting versus inflation targeting: Empirical analysis of the impact on

employment and economic growth. *Journal of Central Banking Theory and Practice, 9*(2), 67-85. [CrossRef]

[23] Svensson, L. E. (2009). *Transparency under Flexible Inflation Targeting: Experiences and Challenges* (No. 7213). CEPR Discussion Papers.

[24] Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data* (2nd ed.). MIT Press.

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