

# Assessing the Impact of Sanctions and Central Bank Independence on Inflation Targeting in Iran

Ali Alikhani<sup>1</sup>, Hossein Sharifi Renani<sup>2,\*</sup> and Saeed Daei-Karimzadeh<sup>3</sup>



**Citation:** Alikhani, A., Sharifi Renani, H., & Daei-Karimzadeh, S. (2024). Presentation of a Strategic Management Model for Industrial Cooperatives in the Country with a Future-Oriented Perspective. *Business, Marketing, and Finance Open*, 1(1), 1-11.

Received: 23 October 2023

Revised: 29 November 2023

Accepted: 05 December 2023

Published: 01 January 2024



**Copyright:** © 2024 by the authors. Submitted for possible open access publication under the terms and conditions of Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

<sup>1</sup> PhD Student, Department of Economics, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran; [ORCID](#)

<sup>2</sup> Associate Professor, Department of Economics, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran; [ORCID](#)

<sup>3</sup> Associate Professor, Department of Economics, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran; [ORCID](#)

\* Correspondence: h.sharifi@khuisf.ac.ir

**Abstract:** Price stability has long been a fundamental objective of monetary policy, with inflation targeting emerging as one of the most effective approaches in recent decades. This study examines the determinants of inflation targeting in the Iranian economy from 1979 to 2023. To comprehensively evaluate the effectiveness of inflation targeting in Iran, key factors such as inflation uncertainty, central bank independence, economic sanctions, transparency and accountability, money supply, minimum nominal wages, and exchange rates were analyzed. Central bank independence was first assessed and quantified using the Principal Component Analysis (PCA) method, followed by an examination of the factors influencing the discrepancy between the actual inflation rate and the target inflation rate. The findings indicate that central bank independence, exchange rates, and money supply exert a significant negative impact on the gap between actual and target inflation. In contrast, nominal minimum wages, economic sanctions, and inflation volatility contribute positively to this gap. These results suggest that achieving the target inflation rate necessitates establishing the appropriate conditions for the effective implementation of inflation-targeting policies. The government and the Central Bank of Iran, as well as policymakers in developing economies with similar economic structures, should adopt optimal policy measures to enhance the effectiveness of inflation targeting.

**Keywords:** inflation targeting, economic sanctions, central bank independence, inflation volatility.

## 1. Introduction

Inflation remains one of the most critical macroeconomic variables, with profound implications for economic stability and growth. Throughout history, economists have debated the most effective strategies for controlling inflation, leading to the development of various monetary policy frameworks. Initially, monetary economists advocated for demand-side policies and monetary aggregate control as primary solutions to inflation [1]. However, a paradigm shift in recent decades has introduced inflation targeting as a superior approach, emphasizing the management of inflation expectations rather than strict monetary control. Inflation targeting has been widely adopted by central banks globally, serving as a strategic framework for monetary policy

implementation [2]. The ultimate objective of inflation targeting is to anchor inflation expectations, thereby stabilizing price levels and fostering economic growth. Countries such as Australia, Canada, and the United Kingdom have successfully implemented inflation-targeting frameworks to mitigate inflationary threats and enhance economic stability [3].

Iran's economy, however, presents unique challenges that complicate the adoption and implementation of inflation-targeting policies. Over the past four decades, Iran has experienced persistent inflationary pressures due to a combination of economic and non-economic factors, including monetary mismanagement, oil price fluctuations, and international sanctions [4]. While many economies have successfully integrated inflation targeting into their monetary policy frameworks, Iran's inflationary environment has remained volatile, exacerbated by structural inefficiencies and external constraints. Given the country's long-standing struggles with inflation, exploring the feasibility and effectiveness of inflation targeting within Iran's economic landscape is of paramount importance.

Theoretical debates surrounding inflation control have evolved over time, leading to the development of various economic models and monetary policies. The quantity theory of money, introduced by classical economists, postulates that inflation is primarily a monetary phenomenon. According to this theory, changes in the money supply directly influence price levels, with limited short-term real economic effects [5]. Fisher's equation of exchange and Marshall's Cambridge approach provide foundational insights into the relationship between money supply and inflation, reinforcing the monetarist perspective that controlling inflation requires stringent monetary regulation.

Building upon the classical framework, Friedman's monetarist monetary theory further refines the relationship between money supply and inflation by emphasizing the role of money demand. Friedman argues that in the short run, an increase in money supply impacts real income and velocity, whereas in the long run, it solely affects price levels [6]. The monetarist approach underscores the importance of stable monetary policies in mitigating inflationary pressures. However, new classical economists, such as Lucas and Sargent and Wallace, introduce the concept of rational expectations, suggesting that anticipated changes in money supply render monetary policies ineffective in both the short and long run [7-9].

Conversely, Keynesian and cost-push inflation theories attribute inflation to demand-side and cost-side factors, respectively. The Keynesian demand-pull inflation theory posits that inflation arises when aggregate demand surpasses aggregate supply, particularly under conditions of full employment (Tafazzoli, 2000). This perspective highlights the role of fiscal policies and aggregate expenditure in influencing inflation. In contrast, the cost-push inflation theory argues that inflation results from rising production costs, particularly wages exceeding labor productivity. This leads to a price-wage spiral that perpetuates inflationary pressures (Derakhshani, 2016).

Within this theoretical landscape, inflation targeting emerges as a strategic monetary policy aimed at stabilizing price levels while maintaining economic growth. The effectiveness of inflation targeting is contingent upon several institutional and macroeconomic factors, including central bank independence, monetary policy transparency, and external economic conditions [10]. Empirical evidence suggests that inflation targeting enhances monetary policy credibility, facilitates price stability, and fosters long-term economic growth [11-17]. However, its implementation in developing economies remains subject to debate, as varying economic structures and institutional constraints affect policy outcomes [18].

Inflation targeting has been widely adopted by central banks across both developed and developing economies. Countries such as New Zealand, Canada, and Sweden were early adopters, demonstrating significant success in

stabilizing inflation and anchoring inflation expectations [15]. These economies benefited from robust institutional frameworks, transparent monetary policies, and high levels of central bank credibility.

The implementation of inflation targeting generally follows a structured framework comprising five key elements. First, price stability is explicitly recognized as the primary objective of monetary policy. Second, a nominal inflation target rate is publicly announced. Third, monetary policy strategy is based on inflation forecasts and economic indicators. Fourth, transparency in policymaking enhances public confidence. Fifth, central banks are held accountable for achieving the inflation target [19].

Despite its success in advanced economies, the applicability of inflation targeting in developing countries remains contentious. Some scholars argue that inflation targeting is only effective in economies with stable macroeconomic environments, well-developed financial markets, and independent central banks [15, 20]. Others suggest that inflation targeting can be beneficial even in economies with structural weaknesses, provided that supporting policies and institutional reforms are implemented [3, 21].

Iran's economic conditions present significant challenges to the effective implementation of inflation targeting. Chronic inflation, fiscal dominance, and exchange rate volatility undermine the credibility of monetary policies [22]. Additionally, international sanctions have further constrained the Central Bank of Iran's ability to manage inflation effectively. Studies indicate that inflation in Iran has adversely affected economic growth [23], non-oil exports [24], and stock market stability [25]. Given these constraints, assessing the impact of inflation targeting within Iran's economic framework requires a nuanced approach that considers the country's unique institutional and external conditions.

One of the key determinants of inflation-targeting success is central bank independence. Empirical studies indicate that independent central banks are more effective in maintaining price stability and implementing consistent monetary policies [26, 27]. In economies where central banks operate autonomously, inflation expectations remain well-anchored, reducing the likelihood of inflationary shocks. Conversely, economies with politically influenced central banks often experience higher inflation volatility due to discretionary policymaking [28].

Previous studies have examined various aspects of inflation targeting, particularly in the context of Iran and other economies, highlighting both its potential benefits and limitations. Mousavi and Mastani (2012) applied optimal control theory to Iran's economy and suggested that increasing deposit interest rates during inflation control periods can absorb excess liquidity while directing it toward production sectors to lower investment financing costs, ultimately aligning inflation with targeted levels [29]. Shahmoradi and Sarem (2013), using a dynamic stochastic general equilibrium model, found that changes in the money supply growth rate do not impact the output gap but are entirely reflected in inflation expectations, with oil revenue fluctuations playing a crucial role in inflationary pressures [30]. Yazdani et al. (2017) explored flexible inflation targeting within the New Keynesian framework and emphasized the importance of the real exchange rate gap in determining monetary policy outcomes, with the monetary authority's losses varying depending on its inclusion in policy objectives [31]. Yazdani and Mohammadi (2019) further investigated inflation targeting through the lens of optimal monetary policy rules, comparing scenarios for WPI and CPI inflation in flexible and sticky targeting states, concluding that CPI inflation targeting under sticky price conditions imposes the least loss on Iran's central bank [32]. Beyond Iran, Brito et al. (2018) assessed the relationship between inflation targeting and central bank transparency in G7 countries, concluding that greater transparency reduces the deviation between actual and target inflation rates [33], while Apeti et al. (2023) found that its effectiveness varies between industrialized and developing countries, with

mixed results for the latter [34]. Binder (2024) analyzed inflation targeting in developing nations between 1990 and 2008, revealing significant discrepancies between projected and actual inflation outcomes [35]. While these studies provide valuable insights, they have generally overlooked the role of transparency and non-interference in central bank policymaking. Therefore, this study aims to bridge this gap by evaluating how transparency and central bank independence influence the effectiveness of inflation targeting, alongside previously analyzed variables.

In Iran, central bank independence has been severely constrained by government interventions, fiscal dominance, and economic sanctions. The Iranian government's reliance on oil revenues and deficit financing through central bank borrowing has exacerbated inflationary pressures (Khorsandi & Islamlooian, 2012). Additionally, sanctions have restricted Iran's access to international financial markets, further complicating monetary policy implementation. These challenges have led to significant credibility issues for the Central Bank of Iran, diminishing public confidence in its ability to achieve inflation targets.

Given this context, the effectiveness of inflation targeting in Iran depends on addressing key structural and institutional deficiencies. Strengthening central bank independence, reducing fiscal dominance, and enhancing policy transparency are critical prerequisites for successful inflation targeting. Furthermore, mitigating the impact of external shocks, such as sanctions and exchange rate fluctuations, requires a comprehensive policy framework that integrates both monetary and fiscal measures.

This study aims to examine the impact of central bank independence, economic sanctions, and other key macroeconomic factors on inflation targeting in Iran. By employing a comprehensive analytical framework, this research seeks to provide insights into the feasibility and effectiveness of inflation targeting within Iran's economic context.

## 2. Methodology

The statistical population used in this study consists of Iran's national data from the years 1978 to 2024. The data for this research has been collected from the Central Bank of Iran and the Statistical Center of Iran websites, while the source of data on sanctions is the Global Policy Forum website, which primarily deals with the operations and policies of the United Nations. The equation examined in this study is based on the model by Brito et al. (2018) and Ashrafi et al. (2018).

$$INF - IT = \beta_0 + \beta_{t1}GINF + \beta_{t2}IND + \beta_{t3}EX + \beta_{t4}W + \beta_{t5}POLITY + \beta_{t6}Sanction + \beta_{t7}M + \dots + \varepsilon_t$$

In the above model, the variables are as follows:

- **(INF-IT):** This variable represents the gap between the current inflation rate and the target inflation rate.
- **GINF:** Inflation volatility, estimated using the ARCH and GARCH methods.
- **IND:** The independence index of the central bank, calculated using the principal component method and used in the model.
- **LEX:** The logarithm of the exchange rate in the market.
- **LW:** The logarithm of the minimum nominal wage.
- **POLITY:** Transparency and commitment to accountability, which are key components of good governance, forming the governance index alongside variables such as responsibility, efficiency, effectiveness, and responsiveness to the needs of the people.
- **LM:** The logarithm of the monetary base, which is included in the model after a first-order difference.
- **Sanction:** The sanction index. In this study, the value of this index is based on the type and source of sanctions, divided into three categories:

- A. United Nations sanctions from 2006 to 2016.
- B. European Union sanctions from 2007 to present.
- C. U.S. sanctions from 1995 to the present. When a sanction is imposed in a year, its value is one. If two sanctions occur simultaneously, the value is two, and if all three sanctions are imposed together, the value becomes three.

### 3. Findings and Results

The data used in this research are time series, and the first step in estimating time series models is to present descriptive statistics of the data. Table 1 provides the descriptive statistics of the data.

**Table 1. Descriptive Statistics of the Research Variables**

	SANCTION	LNW	LNPOLITY	LNLM	LNEX	INF_IT	IND	GINF
Mean	1.282	13.077	2.667	11.378	8.698	0.092	0.268	0.011
Median	1	13.142	2.601	10.909	8.994	0.060	0.250	0.005
Maximum	3	17.787	3.143	15.872	13.102	0.383	0.500	0.217
Minimum	0	9.741	2.465	7.855	4.605	-0.074	0.190	-0.252
Standard deviation	1.167	2.563	0.158	2.278	2.133	0.128	0.080	0.087
Skewness	0.281	0.113	1.341	0.435	0.130	1.047	2.224	-0.376
Kurtosis	1.623	1.699	4.486	2.012	2.399	3.094	6.807	4.147

As shown in Table 1, the maximum and minimum values of the dependent variable in this study (the inflation gap from the target) (INF\_IT) are 0.383 and -0.074, respectively, with a standard deviation of 0.128. Furthermore, it can be observed that the variables inflation volatility (GINF), central bank independence (IND), and the transparency index (LNPOLITY) have means of 0.011, 0.268, and 2.667, with standard deviations of 0.087, 0.080, and 0.158, respectively. The mean, standard deviation, and other features of the other variables under study are also presented in the above table. Before conducting tests and estimating the main model, inflation volatility needs to be calculated. To calculate this volatility, the ARCH model will be employed, and then the residuals from the ARCH model will yield the inflation volatility series. Thus, the first step is to estimate the volatility model, and this series of volatility will then be used in the main model. Inflation volatility will also be one of the influencing variables on inflation. To estimate the model, it is necessary to ensure that inflation has a heteroscedastic variance of the ARCH type, and the model will then be estimated. The test results confirm that heteroscedastic variance of the ARCH type exists. Therefore, the estimated model and its corresponding inflation volatility series have been extracted.

In this study, the Lagrange Multiplier (LM) test was used to examine the presence of autocorrelation. The null hypothesis ( $H_0$ ) assumes no autocorrelation ( $\rho = 0$ ), while the alternative hypothesis ( $H_1$ ) suggests the presence of autocorrelation ( $\rho \neq 0$ ). The test results indicated that there is no significant autocorrelation at lags 1, 2, or 3, meaning the null hypothesis cannot be rejected. Therefore, it can be concluded that autocorrelation issues do not exist in the residuals of this model. Regarding the normality assumption, the residuals are expected to follow a normal distribution. The Jarque-Bera test, as presented in Table 2, was used to assess this. Since the p-value of the test was not significant, the null hypothesis (which states that the residuals follow a normal distribution) was not rejected. This means that the residuals are normally distributed, and the normality assumption holds without any issues.

**Table 2. Examination of Autocorrelation and Normality of Errors**

Lag	F-statistic	Degrees of freedom	Probability
1	1.634	(75 and 64)	0.773
2	1.253	(41 and 128)	0.374
Jarque-Bera test result			
2.838		2	0.242

Next, the stationarity of the variables used in the model related to inflation volatility and factors affecting inflation targeting will be examined. To test stationarity, the Augmented Dickey-Fuller (ADF) and Phillips-Perron tests are employed. In both tests, the null hypothesis suggests that the variable is stationary. As presented in Table 3, except for the inflation uncertainty variable (GINF), which is stationary at level, the other variables become stationary after first differencing.

**Table 3. Results of the unit root test for variable stationarity using the ADF and PP methods.**

Variable name	Variable	Level			First-order difference	
		ADF	PP		ADF	PP
Logarithm of money supply	LnM	-1.669	-1.699	***	-6.601	-6.606
Logarithm of exchange rate to market price	LnEX	-2.061	-2.175	***	-6.335	-6.328
Logarithm of nominal minimum wage	LnW	-2.687	-2.628	**	-3.483	-3.421
Logarithm of transparency index	LnPolity	-1.405	-1.918	***	-5.619	-5.648
Iran sanctions index	Sanction	-1.270	-1.589	***	-5.083	-5.062
Inflation gap	INF-IT	-2.604	-2.616	***	-5.905	-7.241
Central bank independence index	IND	-2.354	-2.714	***	-7.284	-5.432
Inflation uncertainty	GINF*	***	-5.895	-8.170	---	---

The variable of inflation uncertainty (volatility), which is estimated using the ARCH, GARCH method, is then entered into the main model as a series of inflation volatility for analyzing the factors affecting inflation targeting. Next, the optimal lag for the VAR model must be determined. Table 4 shows the result of the optimal lag test for the VAR model. Based on the results of this analysis, the optimal lag is determined to be two lags.

**Table 4. Examination of the Optimal Lag for the VAR Model**

Lag	AIC	SC	HQ
0	2.013	2.340	2.134
1	-12.736	-9.787	-11.648
2	-12.906*	-7.335*	-10.852*
3	13.037	-4.845	-10.016

*Note: The asterisk (\*) indicates the optimal lag, which is 2 lags in this case. AIC (Akaike Information Criterion): A criterion used to measure the goodness of fit. SC (Schwarz Criterion): The Schwarz criterion. HQ (Hannan-Quinn Information Criterion): The Hannan-Quinn information criterion.*

The results of the final model of the research are presented in Table 5.

**Table 5. Results of the final VAR model**

Variable	Coefficient	Standard error	t-test statistic	Results
INF_IT(-1)	-1.163	1.036	-1.122	---
INF_IT(-2)	-1.710	1.033	-1.654	significant effect
GINF(-1)	1.721	1.045	1.646	significant effect
GINF(-2)	-0.161	0.174	-0.928	---
IND(-1)	-0.030	0.310	-0.099	---
IND(-2)	-0.426	0.299	1.423	significant effect
LNEX(-1)	-0.048	0.054	-0.901	---
LNEX(-2)	-0.131	0.065	2.007	significant effect
LNLM(-1)	-0.003	0.013	-0.276	---
LNLM(-2)	-0.031	0.014	2.161	significant effect
LNPOLITY(-1)	-0.215	0.172	-1.248	---
LNPOLITY(-2)	-0.223	0.198	-1.127	---
LNW(-1)	0.261	0.154	1.698	significant effect
LNW(-2)	-0.172	0.152	1.127	---
SANCTION(-1)	-0.133	0.051	-2.566	significant effect
SANCTION(-2)	0.145	0.050	2.862	significant effect
C Intercept (or Constant)	-0.046	0.533	-0.087	---
Coefficient of determination (R-squared)	0.820			
Adjusted coefficient of determination (Adjusted R-squared)	0.714			
F-test statistic	7.728			significant

The estimation results of the model indicate that the inflation gap from the target inflation, with a two-period lag, has a positive effect on the inflation gap in the current period. In addition, inflation volatility from the previous period positively influences the inflation gap in the current period. The sanctions index and the minimum wage rate from the previous period also have a positive impact on the inflation gap in the current period. On the other hand, the model results show a negative effect of the logarithm of the exchange rate, with a two-period lag, on the inflation gap from the target inflation rate. Specifically, an increase in the exchange rate results in higher inflation, which leads to a larger divergence from the target inflation rate. Similarly, the logarithm of the money supply with a two-period lag also contributes to higher inflation, widening the gap between actual inflation and the target inflation. Furthermore, it can be observed that the central bank independence index and the sanctions index, both from the previous two periods, have a significant negative effect on the inflation gap from the target inflation rate.

#### 4. Discussion and Conclusion

The findings of this study provide significant insights into the determinants of inflation targeting in Iran, emphasizing the roles of central bank independence, economic sanctions, exchange rates, and other macroeconomic variables. The results reveal that central bank independence, exchange rates, and money supply have a significant negative effect on the gap between actual and target inflation rates, suggesting that greater independence and a stable exchange rate contribute to reducing inflationary deviations. Conversely, nominal minimum wages, economic sanctions, and inflation fluctuations positively impact this gap, indicating that these factors contribute to inflationary pressures and make achieving the target rate more challenging. These findings highlight the complex

interplay between monetary policy, external economic conditions, and inflation control, reinforcing the necessity for a robust institutional framework to support inflation-targeting policies in Iran.

The negative relationship between central bank independence and the deviation from target inflation is consistent with existing research, which emphasizes the importance of an autonomous monetary authority in achieving price stability [26, 27]. Central banks with higher independence are generally more effective in implementing consistent monetary policies, as political interference often leads to short-term decision-making that exacerbates inflationary pressures. Kydland and Prescott (1977) argue that the effectiveness of monetary policy is significantly diminished in the presence of time inconsistency, where governments prioritize short-term economic growth over long-term stability [36]. The findings of this study align with this perspective, indicating that the Iranian economy's inflationary challenges are, in part, a result of limited central bank autonomy. Similar results have been observed in other economies, where inflation targeting has proven more effective in environments with independent monetary institutions [28].

The impact of exchange rates on inflation targeting further supports existing economic theories that emphasize the role of exchange rate stability in maintaining price levels. Exchange rate volatility often leads to inflationary pressures through imported inflation, particularly in economies with high import dependency [37]. This study's findings reinforce previous research showing that stable exchange rates contribute to lower inflation and improved monetary policy effectiveness [38, 39]. In the case of Iran, frequent exchange rate fluctuations, driven by both internal and external economic conditions, have created uncertainty in inflation control efforts. The results are in line with the work of Svensson (1997), who demonstrated that inflation targeting in countries with flexible exchange rates requires additional policy coordination to mitigate inflationary shocks [3].

The negative effect of money supply on the gap between actual and target inflation aligns with the quantity theory of money and monetarist perspectives, which argue that excessive money supply growth contributes to inflationary pressures [5]. This is further supported by Friedman's (1977) argument that changes in money supply initially affect real variables but, in the long run, solely impact price levels [40]. The findings also correspond with those of Shahmoradi and Saremi (2013), who found that the money supply growth rate does not influence the output gap but is fully reflected in inflation expectations [30]. These results suggest that the Iranian economy's inflationary issues are partly a result of excess liquidity, reinforcing the need for tighter monetary policies to achieve inflation targeting objectives.

The positive relationship between nominal minimum wages and deviations from target inflation highlights the cost-push inflationary effects of wage increases. According to Derakhshani (2016), excessive wage growth relative to labor productivity increases production costs, forcing firms to raise prices to maintain profit margins. The findings align with cost-push inflation theories, indicating that wage-driven inflation is a significant challenge for inflation targeting in Iran. Yazdani et al. (2017) demonstrated that inflation targeting becomes less effective when additional macroeconomic variables, such as real exchange rates, are not incorporated into policy frameworks [31]. Similarly, this study suggests that policies focused solely on inflation control without addressing wage and labor market conditions may struggle to achieve their objectives.

The role of economic sanctions in exacerbating inflationary deviations is consistent with previous studies highlighting the negative macroeconomic impacts of trade restrictions and financial constraints (Brito et al., 2018). Sanctions reduce access to foreign exchange reserves, limit international trade, and increase economic uncertainty, all of which contribute to inflationary pressures. The findings of this study align with the work of Binder (2024), who examined inflation targeting in developing economies and found that external economic shocks, including



trade restrictions, often lead to deviations from inflation targets. The Iranian economy's reliance on oil exports further amplifies the effects of sanctions, as fluctuations in oil revenues directly impact government spending and monetary conditions [30].

The positive effect of inflation fluctuations on deviations from target inflation supports the argument that inflation volatility undermines monetary policy effectiveness. High inflation volatility reduces the credibility of inflation-targeting frameworks, as frequent price fluctuations make it difficult for policymakers to anchor inflation expectations [34]. The findings correspond with those of Khan (2021), who found that inflation targeting is more effective in developed economies with stable macroeconomic environments [41]. In Iran, persistent inflationary shocks, driven by both domestic and external factors, have limited the success of inflation-targeting policies. This study reinforces the view that achieving inflation stability requires not only sound monetary policies but also broader economic reforms to reduce inflation volatility.

The findings of this study contribute to the broader literature on inflation targeting by highlighting the specific challenges faced by Iran's economy. While previous research has emphasized the importance of central bank independence and macroeconomic stability, this study extends the analysis by incorporating the effects of economic sanctions, exchange rate volatility, and wage dynamics. The results suggest that inflation targeting in Iran requires a comprehensive policy approach that goes beyond traditional monetary tools. Strengthening central bank independence, implementing exchange rate stabilization mechanisms, and addressing structural wage and labor market issues are crucial for improving the effectiveness of inflation targeting in the country.

Despite the contributions of this study, several limitations should be acknowledged. One limitation is the reliance on available macroeconomic data, which may not fully capture the complexities of inflationary dynamics in Iran. Data availability and potential measurement errors could impact the precision of the estimated relationships between inflation targeting determinants. Additionally, this study focuses primarily on monetary policy variables and does not incorporate broader fiscal policy effects, which play a crucial role in inflationary dynamics. The exclusion of fiscal policies such as government spending and taxation limits the ability to assess their interaction with inflation targeting. Finally, the study's reliance on historical data may not fully account for recent economic policy shifts, particularly in response to changing global economic conditions and sanctions.

Future research should expand the analysis of inflation targeting by incorporating fiscal policy variables to provide a more comprehensive understanding of inflationary dynamics. Investigating the role of government spending, budget deficits, and taxation policies in inflation targeting would enhance the depth of policy recommendations. Additionally, future studies could explore the effects of inflation targeting in different economic sectors, particularly the impact on investment, employment, and income distribution. Examining the role of financial sector development and banking stability in supporting inflation targeting frameworks would also provide valuable insights. Moreover, future research should consider cross-country comparative analyses to identify best practices and lessons from other economies with similar structural conditions.

From a practical perspective, policymakers in Iran should prioritize strengthening central bank independence to enhance the credibility and effectiveness of inflation-targeting policies. Reducing political interference in monetary policy decisions would enable the central bank to implement consistent and long-term inflation control strategies. Implementing exchange rate stabilization mechanisms, such as managed float systems, could mitigate the inflationary impact of currency fluctuations. Additionally, policymakers should address structural labor market issues by ensuring that wage policies align with productivity growth to prevent cost-push inflationary pressures. Finally, improving transparency in monetary policy decision-making and enhancing communication with the

public could strengthen inflation expectations management and improve the overall success of inflation-targeting frameworks.

### Authors' Contributions

Authors equally contributed to this article.

### Ethical Considerations

All procedures performed in this study were under the ethical standards.

### Acknowledgments

Authors thank all participants who participate in this study.

### Conflict of Interest

The authors report no conflict of interest.

### Funding/Financial Support

According to the authors, this article has no financial support.

### References

- [1] E. Ebrahimi, Z. Zarei, and M. Hemmati, "Feasibility of Implementing and Deploying Inflation Targeting Regime in Iran's Economy," *Scientific Quarterly of Islamic Economics and Banking*, no. 46, pp. 95-117, 2024.
- [2] A. Güler, "Does monetary policy credibility help in anchoring inflation expectations? Evidence from six inflation targeting emerging economies," *Journal of Central Banking Theory and Practice*, vol. 10, no. 1, pp. 93-111, 2021, doi: 10.2478/jcbtp-2021-0005.
- [3] L. E. O. Svensson, "Inflation forecast targeting: Implementing and monitoring inflation targets," *Journal of European Economic Review*, vol. 41, no. 6, pp. 1111-1146, 1997, doi: 10.1016/S0014-2921(96)00055-4.
- [4] G. Debelle, "The Case for Inflation Targeting in East Asian Countries," pp. 18-21, 2001.
- [5] A. A. Kazemi Zadeh, D. Hasanvand, S. P. Jalili Kamjou, and T. Farhad, "Evaluating the Impact of Central Bank's Legal and Excess Reserves Volatility Spillovers on Inflation Rate in Iran's Economy Using the MGARCH-BEKK Model," *Quarterly Journal of Political Sociology of Iran*, vol. 2, no. 3, pp. 313-333, 2019.
- [6] M. Mehrara and R. Ghabadzadeh, "Factors Affecting Inflation in Iran Based on Bayesian Mean Averaging (BMA) and Weighted Average Least Squares (WALS) Approaches," *Scientific-Research Journal of Planning and Budget*, vol. 20, no. 1, pp. 57-82, 2016.
- [7] R. E. J. Lucas, "Some International Evidence on Output-Inflation Tradeoffs," *American Economic Review*, vol. 63, no. 3, pp. 326-334, 1973.
- [8] T. Sargent and N. Wallace, "Some Unpleasant Monetarist Arithmetic," *Federal Reserve Bank of Minneapolis Quarterly Review*, 1981.
- [9] T. J. Sargent and N. Wallace, "Rational Expectations, the Optimal Monetary Instrument and the Optimal Money Supply Rule," *Journal of Political Economy*, vol. 83, no. 2, pp. 241-254, 1975, doi: 10.1086/260321.
- [10] O. M. Ardakani, N. Kishor, and S. Suyong Song, "Re-evaluating the Effectiveness of Inflation Targeting," *Journal of Economic Dynamics & Control*, vol. 90, pp. 76-97, 2018, doi: 10.1016/j.jedc.2018.01.045.
- [11] B. S. Bernanke, T. Laubach, F. S. Mishkin, and A. S. Posen, *Inflation Targeting: Lessons from the International Experience*. Princeton University Press, 1999.
- [12] F. S. Mishkin, "Inflation Targeting in Emerging Market Countries," 2000, doi: 10.3386/w7618.
- [13] F. S. Mishkin and M. A. Savastano, "Monetary Policy Strategies for Latin America," 2000, doi: 10.3386/w7617.
- [14] F. S. Mishkin and K. Schmidt-Hebbel, "One Decade of Inflation Targeting in the World: What do we know?," 2001, doi: 10.3386/w8397.

- [15] F. S. Mishkin and K. Schmidt-Hebbel, *One Decade of Inflation Targeting in the World: What do we know and what do we need to know?* (In N. Loayza & R. Soto (Eds.), *Inflation Targeting: Design, Performance, Challenges*). Central Bank of Chile, 2004.
- [16] M. Woodford, "Optimal Monetary Policy Inertia," 1999, doi: 10.3386/w7261.
- [17] M. Woodford, *Imperfect Common Knowledge and the Effects of Monetary Policy*. [Placeholder for publisher details], 2005.
- [18] J. Creel and P. Hubert, "Has inflation targeting changed the conduct of monetary policy?," *Macroeconomic Dynamics*, no. FirstView, pp. 1-21, 2010.
- [19] G. Hammond, "State of the Art of Inflation Targeting," 2012.
- [20] R. Clarida, J. Gali, and M. Gertler, "The science of monetary policy: a new Keynesian perspective," *Journal of Economic Literature*, vol. 37, no. 4, pp. 1661-1707, 1999, doi: 10.1257/jel.37.4.1661.
- [21] V. Corbo, O. Landerretche, and K. Schmidt-Hebbel, "Assessing inflation targeting after a decade of world experience," *International Journal of Finance and Economics*, vol. 6, no. 4, pp. 343-368, 2001, doi: 10.1002/ijfe.165.
- [22] I. Chazani Sharahi, "Central Bank Independence and Its Impacts on Macroeconomic Variables," *Tadbir Journal*, vol. 161, pp. 29-34, 2005.
- [23] M. R. Nazari and M. Borzegar Devine, "Examining the Effect of Inflation on Growth in Iran's Economy," *Business Research Journal*, vol. 19, no. 73, pp. 145-170, 2014.
- [24] S. A. P. Oskouei, E. Shafiee, and R. Ramazani, "Non-Oil Exports Supply in Iran: Applying the Kalman Filter Approach," *Strategic and Macro Policies*, vol. 1, no. 4, pp. 69-86, 2013.
- [25] J. Qanas and M. Sawyer, "Independence of Central Banks and the Political Economy of Monetary Policy," *Review of Political Economy*, pp. 1-16, 2023, doi: 10.1080/09538259.2023.2189006.
- [26] A. M. Christensen and N. L. Hansen, "The monetary policy regime and the development in central macroeconomic variables in the OECD countries 1970-2003," 2005.
- [27] R. J. Barro and D. B. Gordon, "A positive theory of monetary policy in a natural rate model," *Journal of Political Economy*, vol. 91, no. 4, pp. 589-610, 1983, doi: 10.1086/261167.
- [28] B. Paul, "Canadian Inflation Targeting," *Canadian Journal of Economics*, 2017, doi: 10.1111/caje.12307.
- [29] M. H. Mousavi and Z. Mastani, "Inflation Targeting: An Application of Optimal Control Theory," *Quarterly Journal of Economic Modeling*, vol. 6, 2012.
- [30] A. Shahmohammadi and M. Saremi, "Optimal Monetary Policy and Inflation Targeting in Iran," *Economic Research*, vol. 48, no. 2, pp. 25-42, 2013.
- [31] M. Yazdani, H. Dargahi, and R. A. Afrouzi, "Inflation Targeting with Emphasis on Real Exchange Rate in Iran's Macroeconomy," *Iranian Economic Studies Journal*, vol. 22, no. 72, pp. 151-186, 2017.
- [32] M. Yazdani and M. Mohammadi, "The Role of Inflation Targeting in the Optimal Rule of Monetary Policy," *Monetary and Banking Studies*, vol. 12, no. 42, pp. 721-744, 2019.
- [33] S. Brito, Y. Carrière-Swallow, and B. Gruss, "Disagreement about Future Inflation: Understanding the Benefits of Inflation Targeting and Transparency," *IMF Working Papers*, 2018, doi: 10.5089/9781484339718.001.
- [34] A. E. Apeti, J.-L. Combes, and A. Minea, "Inflation targeting and the composition of public expenditure: Evidence from developing countries," *Journal of Macroeconomics*, vol. 76, 2023, doi: 10.1016/j.jmacro.2023.103523.
- [35] C. Binder, "The rise of inflation targeting," *Southern Economic Association*, 2024, doi: 10.1002/soej.12715.
- [36] F. E. Kydland and E. C. Prescott, "Rules rather than discretion: The inconsistency of optimal plans," *Journal of Political Economy*, vol. 85, no. 3, pp. 473-491, 1977, doi: 10.1086/260580.
- [37] M. Khorsandi and K. Eslamlooian, "Monetary Policy: Rule-Based or Discretionary? A Theoretical Analysis of Optimal Strategy Selection," *Strategic Economic Quarterly Journal*, vol. 1, no. 1, pp. 107-124, 2012.
- [38] C. E. Walsh, "Optimal Contracts for Central Bankers," *The American Economic Review*, vol. 85, no. 1, pp. 150-167, 1995.
- [39] C. E. Walsh, *Monetary Theory and Policy*. MIT Press, 2017.
- [40] M. Friedman, "Nobel Lectures: Inflation and Unemployment," *Journal of Political Economy*, vol. 85, pp. 451-472, 1977, doi: 10.1086/260579.
- [41] N. Khan, "Does Inflation Targeting Really Promote Economic Growth?," *Review of Political Economy*, vol. 34, no. 3, pp. 564-584, 2021, doi: 10.1080/09538259.2021.1902165.