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Suppressed Inflation and Exchange Rate Pass-through: Evidence from Iran

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Highlights

- **Demonstrates the asymmetric effect of exchange rate on Inflation rate.**
- **Presents how exchange rate control fails in high regime in Iranian economy.**
- **Distortion of the relationship between money and inflation by exchange rate dynamics in short run.**

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Abstract

Based on empirical evidence backed by quantity theory of money, there is a proportionate reaction of the price level to an exogenous increase in the nominal money stock and it could cause a persistent inflation. However, governments control the relation between liquidity growth and inflation in the short run by managing exchange rate. Inflation control through government intervention using exchange rate in Iran, as an oil exporting country took place in last decades. Bearing sanctions in mind, exchange rate had significant overshoots causing two states in Iranian monetary environment. To capture the dynamics, this study using TAR estimation for liquidity, exchange rate and price levels over the period 2001-2025, detected exchange rate growth as the threshold variable at the value of 11% dividing economy into two states. In the low regime liquidity has a positive impact, indicating that monetary expansion is a key driver of inflation in this regime. Also, inflationary backward-looking expectations is positive implying substantial inflation persistence; In the high exchange rate presents a strong effect, indicating that depreciation exerts a strong inflationary effect once a critical threshold is exceeded. This reflects a regime in which exchange rate pass-through intensifies, likely due to heightened expectations. Liquidity with a larger coefficient than in the lower regime, suggesting that monetary expansion has an even stronger inflationary impact under high exchange rate volatility which could not be suppressed.

1. Introduction

Inflation has constituted one of the most critical and persistent macroeconomic challenges in the Iranian economy over the past two decades, exerting profound effects on economic stability, income distribution, and long-term growth. Sustained high inflation often reaching double-digit and, at times, very high levels have eroded household purchasing power, disproportionately affecting lower-income groups and thereby exacerbating inequality and social welfare concerns (Mokeddem,2025). From a macroeconomic perspective, chronic inflation has

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increased uncertainty, discouraged domestic and foreign investment, and distorted price signals, leading to inefficient resource allocation and reduced productivity (Madsen, 2003). Furthermore, the persistence of inflation has undermined confidence in the national currency, contributing to capital flight, currency substitution, and heightened exchange rate volatility (Cooper, 2019). Such entrenched inflationary environments weaken the effectiveness of monetary policy and complicate macroeconomic stability, particularly in the presence of fiscal imbalances and external shocks (Orphanides, 2004). Consequently, inflation in Iran is not merely a symptom of macroeconomic disequilibrium but a structural constraint that has significantly hindered sustainable economic development over the last two decades.

Since inflation is linked to liquidity growth (Huang et al., 2010), governments tend to use other factors to control inflation (Huang et al., 2010). Inflation control through government intervention, particularly via exchange rate management, constitutes a central topic in the theoretical tradition established by Mundell and Fleming (1960) which discussed the interaction between exchange rate regimes and domestic price stability. Government could suppress inflation by fixing or tightly managing the nominal exchange rate, thereby constraining fluctuations in the domestic price level through external anchoring (Ito, 2007). Specifically, by pegging the domestic currency to that of a low-inflation country, the domestic economy effectively imports price stability, as tradable goods prices become tied to international price levels rather than domestic monetary conditions. However, tight management and pegged system was widely applied before imposing sanctions upon economy, which caused serious welfare loss and after that due to exchange rate overshoots, inflation entered higher channels (Kaltenbrunner and Painceira, 2017).

Based on that inflation is affected by liquidity in the long run and the government uses the exchange rate as a factor to control inflation, this research attempts to examine the pattern of asymmetric effects on inflation by the two variables of liquidity growth and exchange rate growth using the threshold regression method with two regimes resulting from exchange rate growth, based on quarterly data from 1380:1 to 1404:2. In the continuation of this research, the second chapter reviews the literature, in the third chapter, the data are collected and the threshold regression method is introduced, in the fourth chapter the data are fitted to the model and the regimes are determined and the patterns in each regime are analyzed, and finally in the fifth chapter, a summary and conclusion will be drawn.

2. Literature Review

When it comes to relation between monetary aggregates and inflation, quantity theory of money is one important explanation in all corner stones. The quantity theory centers on the prediction that there will be a long-run proportionate reaction of the price level to an exogenous increase in the nominal money stock. The

nominal homogeneity conditions that deliver the quantity theory result are the same as those that deliver monetary neutrality. This means that if a monetary authority increases the nominal money supply, the long-term outcome will be a proportional rise in the overall price level and other nominal variables, while real variables such as output, employment, or real income remain unaffected. In fact, the idea of monetary neutrality is defined precisely to reflect this outcome. Therefore, the theory essentially claims that real-world economies behave in ways consistent with long-run neutrality of money (McCallum & Nelson, 2010).

Inflation is not merely a matter of temporary or one-time increases in prices (Kale et al., 2024); rather, it is a persistent and long-term rise in the general price level, the roots of which should be sought in macroeconomic variables, particularly monetary factors. The most significant long-term driver of inflation is excessive liquidity growth relative to production growth. As noted by Mirzaie (2024), this represents a fundamental imbalance in which the money supply expands faster than the economy's capacity to produce goods and services. Over extended periods, such excess liquidity persistently exerts upward pressure on prices. The relationship between money supply and inflation is well established: when central banks continuously increase the money supply without corresponding real economic growth, inflation becomes structurally embedded in the economy (Friedman and Schwartz, 1965). In this context, accommodative monetary policy may become self-reinforcing, as inflation cannot be effectively contained without deliberate constraints on money stock growth.

Alongside liquidity, other factors also contribute to the persistence of inflation. For instance, past inflation may become embedded in future inflation expectations, thereby generating structural persistence (Knicker et al., 2023). A critical structural source of long-term inflation is the macroeconomic imbalance between income and expenditure. When national spending consistently exceeds the growth of national income, persistent upward pressure on prices emerges. This imbalance implies that government expenditures outpace tax revenues, household consumption grows faster than income, and aggregate demand continuously exceeds aggregate supply (Mirzaie, 2024). As a result, a structural inflationary problem arises that cannot be addressed through short-term policy interventions alone. Furthermore, long-term inflation is often rooted in persistent budget deficits financed through monetary expansion. When governments systematically spend more than they collect in revenues, they tend to finance this gap through central bank credit creation and rising public debt. Such deficit financing ultimately translates into sustained inflation, as the money supply expands to accommodate fiscal imbalances.

As national economies, particularly those characterized by expanding foreign trade, dependence on imported intermediate and capital goods, and integration into international financial and commodity markets are inevitably influenced by changes in the global price level. When prices rise persistently at the global level, these inflationary pressures are transmitted to domestic economies through multiple channels, including higher import prices, increased costs of raw materials, rising transportation and insurance expenses, and the growing cost of securing essential

production inputs. In this context, fluctuations and sustained upward trends in commodity prices, such as oil, gas, base metals, grains, and other primary goods, are of particular importance. These commodities not only enter directly into consumption and production baskets but also serve as fundamental inputs throughout the production chain, thereby generating broad-based cost increases across multiple sectors of the economy. In other words, sustained increases in commodity prices can give rise to a form of internationally transmitted cost-push inflation that is eventually passed on to importing economies. Moreover, in countries whose production structures are heavily dependent on imported raw materials, equipment, and intermediate goods, the magnitude of this transmission is likely to be even greater, as rising global prices are rapidly reflected in production costs, domestic prices, and ultimately the overall inflation rate.

Lyubich and Khokhych (2024) demonstrate that the degree of exchange rate pass-through in emerging markets is generally higher than in developed economies. A key finding in this literature is that exchange rate depreciation and appreciation exert asymmetric effects on inflation (Abdulrahman and Albahouth, 2025). Specifically, when a currency depreciates, imported goods become more expensive in domestic currency terms, directly increasing the cost of imported consumption goods and intermediate inputs (Parizal et al., 2025). This mechanism strengthens the transmission of external shocks into domestic inflation dynamics.

Inflation in Iran, characterized by relatively shallow financial markets, is influenced by a variety of factors. In particular, increases in the money supply play a significant role in driving inflation. Empirical evidence indicates that money supply growth has substantial positive effects on inflation in both the short and long run (Hemmati et al., 2023), which is consistent with monetarist theory. In addition to monetary factors, economic sanctions—especially those targeting oil exports and the banking sector—have emerged as major non-monetary determinants of inflation in Iran. Studies based on dynamic stochastic general equilibrium models show that intensified sanctions lead to higher inflation rates and may even result in stagflationary conditions (Nakhli and Rafei, 2025). The impact of sanctions operates through multiple channels, including exchange rate depreciation and declining oil revenues (Mahmoudinia, 2021). Fiscal policy also plays a critical role in determining the success of inflation suppression strategies. Persistent fiscal deficits, particularly when financed through monetary expansion, undermine exchange rate stability and generate inflationary pressures. The ‘’Fiscal Theory of the Price Level’’ emphasizes that price stability ultimately depends on the intertemporal solvency of the government. Thus, credible exchange rate regimes require fiscal discipline to prevent imbalances that could trigger devaluation expectations and inflationary spirals (Omidpour et al., 2024).

Another crucial determinant of inflation in Iran is the exchange rate. The role of exchange rate regimes in influencing the price level and inflation has been widely examined in the literature and remains a central focus of scholarly inquiry. There is broad agreement that currency depreciation can lead to significant macroeconomic consequences, including budget deficits, inflationary pressures, and imbalances in

the balance of payments, particularly in the presence of weak economic management (Frankel et al., 2005). Taiebnia and Rahimi (2007) argue that exchange rate shocks account for a substantial share of price variability in Iran and are key drivers of CPI inflation. Similarly, Mehrara and Behzadi Soufiani (2015) highlight that macroeconomic variables affect inflation in a regime-dependent manner and emphasize the importance of accounting for nonlinearities and potential structural breaks. Ullah and Haitham (2025) further demonstrate that exchange rates maintain long-run equilibrium relationships with inflation in most emerging markets. In recent years, exchange rate depreciation and the weakening of the domestic currency in Iran have exerted significant upward pressure on inflation. Moreover, the exchange rate plays a crucial role in transmitting global commodity price movements into the domestic economy, thereby serving as a key channel through which international inflationary pressures are absorbed. Consequently, exchange rate fluctuations represent one of the most critical determinants of inflation in Iran.

Importantly, the relationship between exchange rate movements and inflation is asymmetric, meaning that currency depreciation tends to have stronger and more persistent effects on inflation than appreciation (Naghdi and Kaghazian, 2015; Tahsili, 2022). Empirical evidence for Iran confirms that both exchange rate devaluation and nominal exchange rate movements are major drivers of inflation, with particularly pronounced long-run effects (Hemmati et al., 2023). In addition, fiscal imbalances—especially budget deficits—contribute positively to inflation, as expansionary fiscal policies increase aggregate demand (Hemmati et al., 2023). Global oil price fluctuations also influence inflation in Iran, particularly through their impact on food prices. Evidence suggests that oil prices have significant positive effects on food inflation (Mahmoudinia, 2021), which constitutes a substantial component of the consumer price index due to the high weight of food in Iran's consumption basket. Furthermore, the effectiveness of inflation-targeting policies in Iran is constrained by limited central bank independence and the influence of external shocks such as sanctions (Alikhani et al., 2024; Svensson, 1994). Finally, exchange rates, money supply, nominal wages, and economic sanctions jointly influence the gap between actual and target inflation rates. Currency crises also exhibit asymmetric effects, with depreciation shocks generating stronger inflationary impacts than appreciation shocks (Mahmoudiniam, 2021), thereby posing additional challenges for inflation control in periods of exchange rate volatility.

A key transmission mechanism underlying this process happened in Iran is the concept of exchange rate pass-through, whereby changes in the nominal exchange rate affect domestic prices of imported goods and intermediate inputs (Amini et al., 2026). When a government maintains a stable or overvalued exchange rate, it limits the increase in import prices that would otherwise result from currency depreciation. This dampening effect on import price inflation subsequently reduces overall consumer price inflation, particularly in economies with a high import share. In this sense, the exchange rate functions as a nominal anchor, aligning domestic

inflation expectations with those prevailing in the anchor currency economy. The credibility of such an anchor is crucial; if economic agents believe the peg will be maintained, inflation expectations adjust downward, reinforcing price stability. However, during last decade due to sanctions and persistent fiscal deficits, several overshoots occurred in exchange rate (Tavakoli et al., 2015).

In practice, governments frequently complement exchange rate controls with capital account restrictions and financial regulation to sustain the anti-inflationary regime. Capital controls reduce speculative pressures on the currency and allow authorities to maintain a fixed or managed exchange rate without excessive reserve depletion (Tavakoli et al., 2015). Simultaneously, policies of financial repression in Iran, such as regulated interest rates and directed credit could limit domestic demand and reduce inflationary pressures. These measures, while often effective in the short to medium term, introduce allocative inefficiencies and may distort financial markets, raising concerns regarding long-term economic performance (Akbari et al., 2025).

3. The Model

To demonstrating how exchange pass-through affects inflation in Iran, this study uses seasonal data starting 1380:1-1404:4 (2001-2025) for growth of liquidity, growth of exchange rate and growth of CPI. Table 1 shows the variables.

Table 1. Defining Variables

Variables	description	reference
LIQ	Liquidity (broad money)	Central Bank of Iran
ER	Exchange rate	Central Bank of Iran
CPI	Consumer Price index	Central Bank of Iran
GLIQ	Growth of liquidity	Central Bank of Iran
GER	Growth of exchange rate	Central Bank of Iran
INF	Growth of CPI	Central Bank of Iran

***Source**: Research findings*

Over the past two decades, high and persistent inflation in Iran has been closely linked to sustained monetary expansion driven by structural fiscal imbalances and institutional constraints. Table 2 explains the behavior of these three nominal variables.

Table 2. Descriptive statistics

Variable	Mean	Median	Max.	Min.	Std. Dev.	Skewness	Kurtosis
GLIQ	0.0634	0.0601	0.1216	-0.0104	0.0239	-0.0118	3.1102
GER	0.052	0.0104	0.6827	-0.3894	0.1310	1.3535	8.7456
INF	0.0552	0.0440	0.1740	0.002	0.0348	1.2115	4.2683

***Source**: Research findings*

Figure 1 demonstrates that money supply growth has been a key long-run determinant of inflation, particularly when combined with currency depreciation and fiscal deficits. The government has frequently financed chronic budget deficits,

stemming from volatile oil revenues and expansive subsidy obligations, through direct and indirect monetary expansion. Liquidity expansion has been identified as a major contributor to inflation, with estimates suggesting that it accounts for a substantial share of price level increases. In line with the quantity theory of money, persistent growth in monetary aggregates without corresponding increases in real output leads to excess aggregate demand, thereby exerting upward pressure on prices.

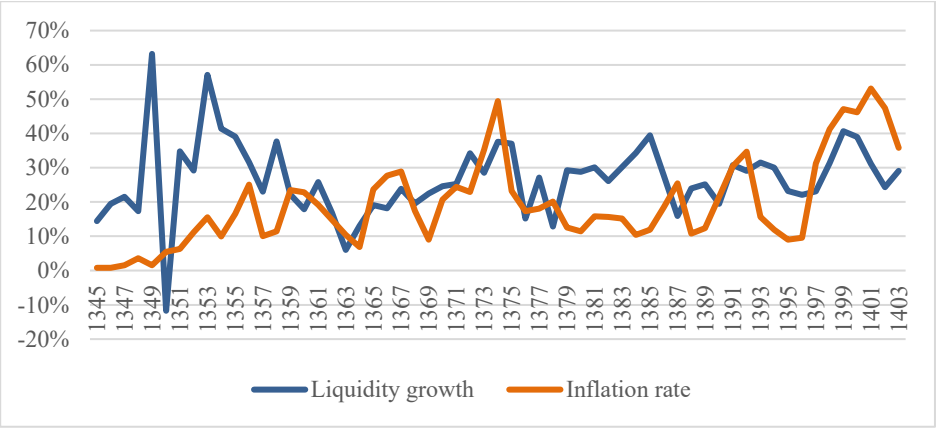

Figure 1. Trends of Liquidity Growth and Inflation rate
***Source**: Central Bank of Iran*

As noted in empirical and policy analyses, the Iranian economy has experienced sustained high growth in liquidity, which is strongly correlated as this study presents in next section with inflation in the long run. Moreover, number of studies mentioned in last section highlights that monetary expansion has continued to fuel inflationary pressures, especially in the context of sanctions and fiscal constraints. These factors have also contributed to currency depreciation, such as inflation rises and using pegged system, creates a rent to those who can receive funds in foreign currencies and therefore there is always s persistent demand for imports. Overshoots in exchange rates leads to higher inflation expectations realized, creating a self-reinforcing cycle in which anticipated price increases further stimulate demand and liquidity growth. In this picture, there is also government as the largest consumer and facing constraints, must again finance through monetary system. Consequently, the fiscal dominance would shape monetary condition, and losing exchange rate as one crucial tool to control price levels in some corners due to sanctions, has entrenched a regime of chronically high inflation in Iran.

Figure 2 illustrates how exchange rate dynamics distort the long-run relationship between liquidity growth and inflation. In line with the Quantity Theory of Money, the ratio of liquidity growth to inflation is expected to converge to unity in the long run. However, figure 2 shows a clear structural break around

2018 (1397), corresponding to the reimposition of sanctions and a sharp decline in oil revenues. Prior to this period, the ratio remains consistently above one, indicating that liquidity expansion did not fully translate into inflation, largely due to exchange rate stabilization policies.

The divergence between liquidity growth and inflation in figure 2 highlights periods that may be interpreted as episodes of temporary inflation suppression. In several intervals, for instance early years (around 1349–1355) and again in the mid-to-late sample (approximately 1375–1385), liquidity growth substantially exceeds the inflation rate, indicating that expansions in monetary conditions are not immediately transmitted into consumer prices. This gap suggests the presence of frictions or transmission lags, whereby increased liquidity may be absorbed through savings, financial intermediation, or asset markets rather than goods and services. Conversely, periods such as 1371–1373 and 1395–1401, where inflation rises sharply and converges toward or exceeds liquidity growth, can be interpreted as phases of delayed adjustment in which previously accumulated liquidity begins to exert upward pressure on prices. Cyclical widening and narrowing of the spread underscores the non-linear and lagged relationship between liquidity expansion and inflation dynamics.

Persistent exchange rate overshooting and the breakdown of the pegging mechanism coincide with a marked decline in the ratio below unity, suggesting an intensified transmission of liquidity growth into inflation. This regime shift highlights the nonlinear interaction between exchange rate dynamics and monetary expansion, where the exchange rate acts as a distortionary channel in the short run. The pattern remains robust whether contemporaneous or lagged liquidity growth is considered, further supporting the presence of a negative relationship between exchange rate growth and the liquidity–inflation ratio.

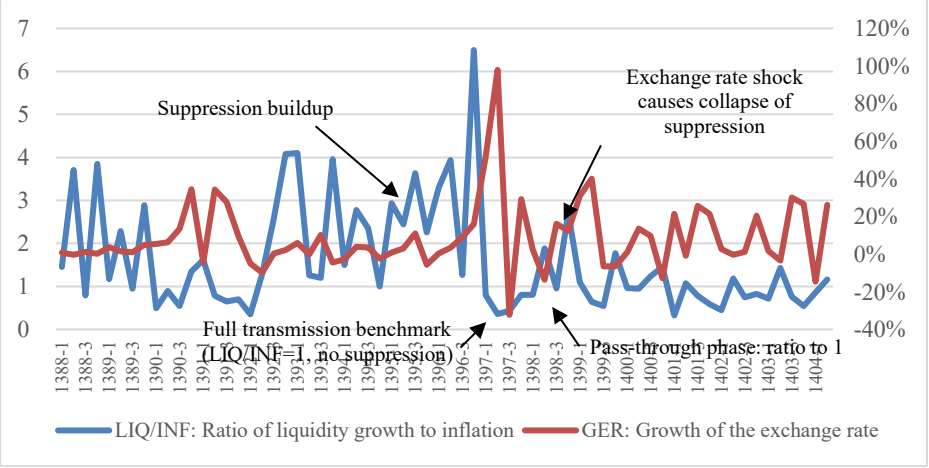

Figure 2. Exchange Rate Dynamics Distort the Long-Run Relationship Between Liquidity Growth and Inflation

***Source**: Central Bank of Iran/Research Findings*

The ratio of liquidity growth to inflation (LIQ/INF) is interpreted as an indicator of the extent to which monetary expansion is transmitted into consumer prices. Under standard monetary conditions, this ratio is expected to converge toward unity over time. Persistent deviations above one reflect incomplete transmission, potentially due to frictions such as exchange rate controls, price rigidities, or financial intermediation constraints. Episodes of elevated exchange rate growth (GER) may weaken these frictions by increasing imported inflation and accelerating price adjustment, thereby reducing the LIQ/INF ratio and signaling a release of previously suppressed inflation.

As figure 2 presents, there is a state-dependent procedure on how liquidity affects inflation based on how the pegged system is performing. Such dynamics could be presented using non-linear approaches such as TAR. Threshold Autoregressive (TAR) models, represent a class of nonlinear time series models designed to capture regime-dependent dynamics in economic variables. Unlike linear autoregressive models, TAR specifications allow parameters to change when an observed variable crosses a certain threshold, thereby partitioning the data into distinct regimes. This framework is particularly useful where structural breaks such as policy shifts or market frictions often generate asymmetric responses over the business cycle. TAR models have become widely used to analyze nonlinear adjustment processes, including exchange rate pass-through, inflation dynamics, and monetary transmission mechanisms. The flexibility of TAR frameworks makes them particularly valuable in environments characterized by instability or policy-induced nonlinearities, as they allow to distinguish between low- and high-volatility regimes and to assess how economic relationships evolve across different states of the economy (Tong, 1983; Hansen, 1999).

4. Empirical Results

As presented in the last part of previous section on how inflation suppression and exchange rate overshoots could shape regimes on how monetary environment perform, this study benefits from time series analysis. It is expected to see there are two regimes on how dynamics of exchange rate growth would cause an inflationary suppression or it would channel the impact of liquidity growth onto inflation. In order to avoid serious concerns with non-stationary series, firs ADF test would be carried out. Table 3 show the results of ADF test.

Table 3.ADF Test

Variable	T-statistic	Critical Value (5%)	decision
GLIQ	-2.9149	-2.8929	Non-stationary
GER	-9.5886	-2.8916	Non-stationary
INF	-4.1839	-2.8912	Non-stationary

***Source**: Research findings*

According to ADF tests, all the variables which are presented in seasonal frequency and in a growth form, are stationary. However, bearing in mind that

levels of the variables could form a long-term relation, using Logarithms of the variables, Johansen cointegration test would be tested.

Table 4. Cointegration Test

Trace			Max-eigenvalue		
Hypothesis	Statistic	Critical Value (5%)	Hypothesis	Statistic	Critical Value (5%)
$\boldsymbol{r = 0}$	52.1004	29.7971	$r = 0$	29.1360	21.1316
$\boldsymbol{r = 1}$	0.1573	3.8417	$r = 1$	0.1573	3.8415

***Source**: Research findings*

The Johansen cointegration test results, based on both the Trace and Max Eigen statistics, provide consistent evidence of the presence of one long run equilibrium relationships among the variables. Findings confirm that the variables share one statistically significant cointegrating equations, implying that the appropriate empirical framework for modeling their joint dynamics is available. Table 5 presents cointegration equation which presents up to 0.85 percent of CPI would be explained by liquidity levels in the long run in Iranian economy consistent with both theoretical and empirical evidence.

Table 5. Cointegration Equation

cointegration equation		
CPI	LIQ	ER
1	0.8546	0.14
	(0.0236)	(0.0031)
$\boldsymbol{CPI = 0.85LIQ + 0.14ER}$		

***Source**: Research findings*

This output presents the results for the one cointegrating equation[1] derived a VECM approach reflecting long run relationships among the variables. Cointegration equation elucidate the dynamic adjustments among the variables, highlighting their long-term interdependencies.

As mentioned, and as highlighted in figure 2, it seems to be a state dependent relation between monetary environment and exchange rate. First, the breakpoint test would be carried out to detect the threshold variable and its value. Threshold specification is presented in table 6.

Table 6. Threshold Specification

Threshold Test	F-statistic	Critical Value
0 vs. 1	8.1897	13.98
1 vs.2	2.2947	15.72

***Source**: Research findings*

[1] Engle and Granger, 1987

The sequential threshold test results indicate the presence of one statistically significant threshold in the relationship between the exchange rate (GER) and inflation (INF). Specifically, the null hypothesis of no threshold (0 vs. 1) is rejected at the 5% significance level, as the scaled F-statistic (24.569) exceeds the corresponding critical value (13.98), following the critical values proposed. This implies that introducing a single threshold significantly improves the model, confirming the existence of a nonlinear regime-switching behavior in the inflation process. In contrast, the test for an additional threshold (1 vs. 2) is not statistically significant, as the scaled F-statistic (6.884) falls below the critical value (15.72), indicating that a second threshold does not provide additional explanatory power. This result supports the hypothesis that inflation dynamics in the economy are characterized by regime dependence rather than linearity. In practical terms, it suggests that the transmission of exchange rate movements to inflation changes structurally once the exchange rate crosses a critical level, but does not exhibit further structural breaks beyond this point. Such behavior is consistent with nonlinear adjustment mechanisms and threshold effects. Table 7 presents the estimated threshold value for exchange rate growth that cause two regimes of the state-dependent pattern of liquidity growth and exchange rate growth impact on inflation.

Table 7. State-Dependent Patterns in two GER Regimes

Variable	Coefficient	Prob.	
	$\boldsymbol{GER < 0.1174}$		
$\boldsymbol{GER}$	-0.0676	0.1116	
GLIQ	0.2592	0.0002	
INF(-1)	0.6139	0.00	
	$\boldsymbol{GER \geq 0.1174}$		
$\boldsymbol{GER}$	0.1891	0.00	
GLIQ	0.7139	0.0034	
INF(-1)	0.1355	0.3494	
	Criteria		
R-squared	0.5897	Mean dependent var	0.0559
Adjusted R-squared	0.5671	S.D. dependent Var	0.0349
S.E. of regression	0.0229	Akaike info criterion	-4.6522
Sum squared resi.	0.0479	Schwartz criterion	-4.4929
Log likelihood	231.6302	Hannan-Quinn criterion	-4.5878
Durbin-Watson stat.	2.1622		

***Source**: Research findings*

The estimated discrete threshold regression results indicate that the impact of the exchange rate on inflation in Iran is nonlinear and depends critically on whether the exchange rate lies below or above the estimated threshold value of 0.1174.

In the low exchange rate regime (GER < 0.1174), the coefficient of GER is negative (−0.0676) but statistically insignificant, suggesting that exchange rate changes do not exert a meaningful influence on inflation when exchange rate growth is relatively moderate. In contrast, liquidity has a positive and highly

significant coefficient, indicating that monetary expansion is a key driver of inflation in this regime. Additionally, the lagged inflation term, known as inflationary expectations, is positive and significant, implying substantial inflation persistence; past inflation strongly influences current inflation, consistent with adaptive expectations and structural rigidities in the economy.

In the high exchange rate regime (GER $\geq$ 0.1174), the role of the exchange rate becomes both positive and highly significant, indicating that depreciation exerts a strong inflationary effect once a critical threshold is exceeded. This reflects a regime in which exchange rate pass-through intensifies, likely due to heightened expectations, import dependence, and reduced policy credibility. Liquidity remains positive and statistically significant, with a larger coefficient than in the lower regime, suggesting that monetary expansion has an even stronger inflationary impact under high exchange rate volatility. However, the lagged inflation term becomes statistically insignificant, implying that inflation persistence weakens in this regime, and current inflation is driven more by contemporaneous macroeconomic shocks, particularly exchange rate movements and liquidity growth, rather than past inflation dynamics and there is a good possibility that forward-looking expectations is a determinant.

Overall, these results suggest that inflation dynamics in Iran are regime-dependent: in stable exchange rate conditions, inflation is primarily driven by monetary factors and inertia, whereas in periods of significant exchange rate depreciation, both exchange rate fluctuations and liquidity expansion become dominant drivers of inflation, with stronger and more immediate effects.

5. Concluding Remarks

In standard macroeconomic theory, particularly within the Quantity Theory of Money and its modern reinterpretations in monetarist and New Classical frameworks, sustained growth in liquidity meaning broad money supply is regarded as the primary determinant of inflation in the long run. Under the assumption of long-run monetary neutrality, monetary expansion more than real output growth translates proportionally into higher price levels, a relationship also supported by empirical studies in Iran mentioned in second section, where excess money supply has been shown to significantly raise inflation. Persistent fiscal imbalances always provide an expansionary monetary environment as presented in section three in Iran. Policymaker have intermittently attempted to mitigate these inflationary pressures through exchange rate management, including the provision of subsidized foreign currency and interventions in parallel markets, aiming to stabilize import prices and anchor inflation expectations. However, macroeconomic evidence suggests that such exchange rate policies have, at best, short-run and limited effects, as the exchange rate itself is ultimately driven by underlying monetary expansion and price levels in the long run. In order to present these dynamics, present study using seasonal data shows how exchange rate pass through could lead to some suppression impact of money growth on inflation.

As quantity theory of money states and its empirical relevance, the evidence suggests a proportional long-run relationship between liquidity growth and inflation, whereby expansions in the nominal money supply translate into higher price levels. Persistent inflation indicates that such interventions have been only partially effective, especially under conditions of fiscal imbalances and external sanctions that have triggered exchange rate overshooting. To capture these dynamics, this study employs a Threshold Autoregressive (TAR) framework over the period 2001–2025, identifying exchange rate growth as the threshold variable with a critical value of approximately 11 percent, effectively dividing the economy into two distinct regimes.

The empirical results reveal clear regime-dependent inflation dynamics. In the low exchange rate growth regime (below the threshold), exchange rate movements have no statistically significant effect on inflation, while liquidity growth remains positive and highly significant, confirming that monetary expansion is the primary driver of inflation. Additionally, lagged inflation is significant, indicating strong inflation persistence consistent with backward-looking (adaptive) expectations. In contrast, in the high exchange rate regime (above the threshold), exchange rate depreciation becomes a strong and statistically significant determinant of inflation, reflecting intensified exchange rate pass-through driven by heightened expectations and structural vulnerabilities. Money growth continues to exert a positive and even stronger effect compared to the low regime, suggesting that monetary expansion amplifies inflationary pressures under conditions of exchange rate instability. Meanwhile, the insignificance of lagged inflation implies reduced persistence, with current inflation increasingly driven by contemporaneous shocks, particularly exchange rate movements and liquidity growth, potentially signaling a shift toward more forward-looking expectations. Overall, the findings highlight that while exchange rate policies may temporarily suppress inflation, they cannot offset the fundamental influence of liquidity growth, especially in periods of macroeconomic instability. Consequently, while exchange rate control may temporarily suppress observable inflation, it could not offset the fundamental monetary drivers, and often lead instead to currency depreciation and renewed inflationary pressures over time.

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References

Albahouth, A. A. (2025). Inflation rate determinants in Saudi Arabia: A non-linear ARDLapproach.Sustainability,17(3),1036.https://doi.org/10.3390/su1703106

Akbari,M. R., Zeynalzadeh,R. and Jalaee Esfandabadi,S. A. (2025). Investigating the Impact of Temporary and Permanent Exchange Rate Shocks on Stock Returns of Export Companies in Iran's Stock Markets. The Journal of EconomicStudiesandPolicies,11(1),171199.https://doi.org/10.22096/esp.2024.2005624.1725

Alikhani, A., Renani, H. S., & Daei-Karimzadeh, S. (2024). Assessing the Impact of Sanctions and Central Bank Independence on Inflation Targeting in Iran. Business,Marketing,andFinanceOpen,1(1),111.https://doi.org/10.61838/bmfopen.1.1.1

Amini, M., Hatamerad, S., & Adrangi, B. (2026). The Impact of the Exchange Rate Regime on Inflation in Iran: A Bayesian Approach Using a Dirichlet Process Mixture Regression Model. Journal of Economic Research, 60(4), 1490-1520. https://doi.org/10.22059/jte.2026.398371.1009017

Cooper, R. N. (2019). Currency devaluation in developing countries. In The international monetary system (pp. 183-211). Routledge.

Engle, Robert F., and C. W. J. Granger. “Co-Integration and Error Correction: Representation, Estimation, and Testing.” Econometrica, vol. 55, no. 2, 1987, pp. 251–276, https://doi.org/10.2307/1913236

Friedman, M., & Schwartz, A. J. (1965). Money and business cycles. In The state of monetary economics (pp. 32-78). NBER.

Frankel et al. (2005). Slow Pass-Through around the World: A New Import for Developing Countries”, NBER Working Paper, 11199

Hansen, B. E. (1999). Threshold effects in non-dynamic panels: Estimation, testing, and inference. Journal of econometrics, 93(2), 345-368. https://doi.org/10.1016/S0304-4076(99)00025-1

Hemmati, M., Tabrizy, S. S., & Tarverdi, Y. (2023). Inflation in Iran: an empirical assessment of the key determinants. Journal of Economic Studies, 50(8), 1710-1729. doi: 10.1108/JES-07-2022-037

Huang, Y., Wang, X., & Hua, X. (2010). What determines China's inflation?. China Economic Journal, 3(1), 69-86. doi:10.1080/17538963.2010.487352

Ito, T. (2007). The role of exchange rate in inflation targeting. In Challenges to inflation targeting in emerging market countries, proceedings of an international symposium organized by the Bank of Thailand, 13-14 November 2006 (pp. 243-275).

Kale S, Vatkar A, Mehta N, Das S. (2024). How to Beat Inflation with Smart Investments by Orthopods. Journal of Clinical Orthopaedics 2024; January-June: 9(1):01-03. https://doi.org/10.13107/jcorth.2024.v09i01.618

Kaltenbrunner, A., & Painceira, J. P. (2017). The impossible trinity: inflation targeting, exchange rate management and open capital accounts in emerging economies. Development and Change, 48(3), 452-480. https://doi.org/10.1111/dech.12304

Knicker, M. S., Naumann-Woleske, K., Bouchaud, J. P., & Zamponi, F. (2023). Post-COVID inflation and the monetary policy dilemma: an agent-based scenario analysis: MS Knicker et al. Journal of Economic Interaction and Coordination, 20(1), 141-195. https://doi.org/10.1007/s11403-024-00413-3

Lyubich, O., & Khokhych, D. (2024). The impact of exchange rate volatility on achieving the inflation target of monetary policy. Finance of Ukraine, (1), 44-68. https://doi.org/10.33763/finukr2024.01.044

Madsen, J. B. (2003). Inflation and investment. Scottish Journal of Political Economy, 50(4), 375-397. https://doi.org/10.1111/1467-9485.5004002

Mahmoudinia, D. (2026). The asymmetric effects of monetary policy, currency crises and oil price on food inflation in Iran: an application of quantile regression. Macroeconomics and Finance in Emerging Market Economies, 19(1), 176-198. doi:10.1080/17520843.2021.2005926

McCallum, B. T., & Nelson, E. (2010). Money and inflation: Some critical issues. In Handbook of monetary economics (Vol. 3, pp. 97-153). Elsevier. https://doi.org/10.1016/B978-0-444-53238-1.00003-X

Mehrara, M., & Behzadi Soufiani, M. (2015). The threshold impact of fiscal and monetary policies on inflation: Threshold Model Approach. Journal of Monetary and Banking Research, 10(4), 1-27. http://jme.mbri.ac.ir/article-1-210-en.html

Mirzaie, R. (2024). Structural inflation and its exit policies. International Journal of applied Research in Management, Economics and Accounting, 1(3), 10-15. https://doi.org/10.63053/ijmea.20

Mokeddem, I. (2025). The impact of inflation on household purchasing power in Europe (2020–2025).

Naghdi, Y., & Kaghazian, S. (2015). The effects of asymmetric transmission of exchange rate on inflation in Iran: Application of threshold models. Studies in Business and Economics, 10(2), 99-113. https://doi.org/10.1515/sbe-2015-0023

Nakhli, S. R., & Rafei, M. (2025). How can optimal monetary policies reduce oil sanctions' impacts? Evidence from Iran. Economic and Political Studies, 13(2), 144-173. doi:10.1080/20954816.2024.2312759

Omidpour S, Mehregan N, Souri A. (2024). The Nonlinear Effect of Inflationary Expectations and Budget Deficit on Inflation in Iran. Journal of Economic Modeling Research, 15(55), 89-121. url: http://jemr.khu.ac.ir/article-1-2396-en.html

Orphanides, A. (2004). Monetary policy rules, macroeconomic stability, and inflation: A view from the trenches. Journal of Money, Credit and Banking, 151-175. doi:10.1353/mcb.2004.0013

Svensson, L. E. (1994). Fixed exchange rates as a means to price stability: What have we learned?. European Economic Review, 38(3-4), 447-468. ssrn: https://ssrn.com/abstract=254886

Tahsili, H. (2022). The Impact of Exchange Rate Shock on Inflation in Iran's Economy: Application of the Threshold Vector Autoregression Model. Iranian Journal of Economic Research, 27 (91), 257- 285. http://dx.doi.org/10.22054/ijer.2022.56063.912

Taiebnia, A. and Rahimi, A. (2008). Exchange Rate Pass-Through to Domestic Prices in Iran (1990-2006). Iranian Economic Review, 13(20), 85-108. doi: 10.22059/ier.2007.32652

Tavakoli, A., Firouzeh, N., Karimi, F. (2015). The effect of exchange rate fluctuations on economic growth and inflation, 1340-1388. Bi-quarterly Journal of development economics and planning, 4(1), 1-36.

Tong, H. (1983). Threshold models. In Threshold models in non-linear time series analysis (pp. 59-121). New York, NY: Springer New York.

Ullah, S., Haitham N. (2025). Decoding Exchange Rate in Emerging Economy: Financial and Energy Dynamics. *Heliyon*, vol. 11, no. 2, p. e41995, www.cell.com/heliyon/fulltext/S2405-8440(25)00375-5, https://doi.org/10.1016/j.heliyon.2025.e41995.