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Original Research Article

Transmission Channels of Monetary Policy Effects on Household Consumption in Iran: A TSVAR Approach

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This study employs a Threshold Structural Vector Autoregression (TSVAR) model and monthly data from 2006 to 2023 to examine the transmission mechanisms of monetary policy to household consumption in Iran. The empirical findings reveal that the magnitude, direction, and symmetry of monetary policy effects are strongly dependent on the prevailing liquidity regime. During low liquidity periods, monetary expansion stimulates household consumption primarily through stronger bank credit flows and greater exchange rate stability, generating sizable and persistent effects. In contrast, under high liquidity conditions, the effectiveness of these channels diminishes; their impacts become short lived, unstable, and in some cases asymmetric, while the stock market channel plays a more limited and volatile role. Impulse response analysis further confirms the presence of regime dependent, nonlinear, and heterogeneous responses across transmission channels following monetary shocks. Overall, the results underscore the need for liquidity contingent and channel specific monetary policy strategies to support household welfare and enhance macroeconomic stability in Iran.

Keywords: Monetary Policy, Household Consumption, TSVAR, Inflation, Iran
JEL Classification*:* E2, E31, E52

1 Introduction

Household consumption is one of the most fundamental and important components of every country's economy, playing a decisive role in economic balance and growth. The share of consumption in Gross Domestic Product

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(GDP) typically constitutes more than half of most economies, and fluctuations in consumption can have extensive effects on various markets, from goods and services to financial markets and employment (Mankiw, 2021). The consumption pattern and level of household expenditures not only indicate the economic welfare and living standards of society but also serve as a critical index for measuring the sustainability of economic growth patterns and determining monetary and fiscal policies (Deaton & Muellbauer, 1980). Accurate knowledge of household consumption helps policymakers forecast changes in aggregate demand and implement policies that ensure stability and sustainable growth.

In Iran, household consumption accounts for a substantial portion of economic activity, with official statistics from the Statistical Center of Iran indicating that urban and rural household consumption expenditures comprise over 50% of GDP. However, this share has been influenced by numerous economic fluctuations. The Iranian economy has faced various challenges in recent years, including rising inflation rates, depreciation of the national currency, limited access to financial resources, and international sanctions (Statistical Center of Iran, 2023; Central Bank of Iran, 2023). These factors have led to a marked decrease in household purchasing power and transformations in consumption patterns. Official reports have indicated that the growth rate of urban household consumption expenditures in 2023 exceeded 37%, primarily due to significant increases in the prices of essential goods and services.

Household consumption behavior is influenced by a range of economic and social factors, the most important of which include household income and wealth, interest rates and access to credit, inflation expectations, and the overall economic conditions of the country (Hall, 1978; Flavin, 1981). In particular, monetary policies play a crucial role as a key tool in the hands of monetary authorities and the central bank in determining purchasing power and collective consumption behavior. In Iran, fluctuations in interest rates, the central bank's control policies over liquidity, and exchange rate changes generally have direct effects on household expenditures through purchasing power channels and access to credit.

Monetary policy, which refers to the actions taken by the central bank to control the money supply, interest rates, and price stability (Mishkin, 2019), is a vital tool for managing the macroeconomy. The Central Bank of the Islamic Republic of Iran strives to maintain economic stability by adjusting liquidity and controlling inflation through instruments such as changes in the official interest rate, legal reserve rate, open market operations, and credit

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regulations (Keshavarz Haddad & Mahdavi, 2005). However, the implementation of these policies in Iran has its own unique complexities due to the specific economic structure, sanctions, and domestic market conditions.

Numerous domestic and international studies have provided evidence that monetary policies, whether expansionary or contractionary, can have different significant impacts on household consumption. Among the prominent international studies, research by Bernanke and Gertler (1995) has shown that contractionary monetary policies lead to increased interest rates, reduced credit, and consequently lower consumption. Internal studies have also demonstrated that monetary policy shocks can rapidly change household consumption patterns and affect social welfare (Khandan, 2020; Molaei & Adi, 2018). In this context, the relationship between inflation rates and purchasing power is one of the key factors determining how monetary policy affects consumption.

In Iran, rapid changes in monetary indicators such as liquidity growth and banking interest rates directly impact the consumption expenditures of urban and rural households. This impact often operates with a time lag and through complex mechanisms that can be observed via various channels such as changes in access to credit, inflation expectations, and shifts in asset values like housing and stocks. For example, recent observations indicate that increasing interest rates have significantly decreased the utilization of consumer loans, resulting in a reduction in household expenditures (Khezri et al., 2014). Various statistical charts that will be presented later in the article will illustrate changes in consumption patterns during periods of both expansionary and contractionary policies.

Understanding the depth of these transmission processes from monetary policy to household consumption is highly significant for both economic analysts and policymakers; this knowledge can facilitate the design of better policy tools. Channels of monetary policy transmission have been extensively studied in modern economic literature, with channels including interest rates, credit, wealth, and inflation expectations all playing a vital role in determining the intensity and direction of the effects of these policies (Mishra & Montiel, 2012; Bernanke & Gertler, 1995). In particular, accurately identifying these channels in Iran can lead to the design of more optimal policies for controlling inflation and supporting low-income consumers.

Given the importance of the subject, this study employs a Structural TSVAR model to examine the effects of monetary policies on household consumption in Iran's economy. This model comprehensively and precisely analyzes the dynamic relationships among variables and clarifies the various

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paths through which monetary policy effects are transmitted. The time series data for this study covers the period from 2006 to 2023, providing insights not only into past trends but also future policy directions.

Despite the crucial role of household consumption in the Iranian economy and the broad literature on the monetary transmission mechanism globally, a significant gap remains in understanding the asymmetric and regime-dependent effects of monetary policy on household consumption under varying macroeconomic conditions in Iran. Previous studies have predominantly focused on aggregated impacts or isolated channels, often overlooking how structural fluctuations, such as persistent high inflation and financial market instability, may alter the effectiveness and direction of monetary transmission channels. Moreover, the intricate interplay between monetary shocks, credit access, exchange rates, and financial asset values in a sanction-prone economy and bank-dominated economy like Iran remains underexplored particularly regarding how these channels operate differently in low versus high inflation regimes. Addressing these complexities is essential for the design of targeted and resilient monetary policies able to safeguard household welfare under evolving economic environments.

The rest of the article is structured as follows: A review of the internal and external literature on monetary policies and household consumption will first be presented. Next, the data and research methodology will be introduced, along with a description of the TSVAR model. In the subsequent section, the modeling results will be presented and analyzed, and ultimately, policy recommendations for improving the effectiveness of monetary policies and supporting Iranian consumers will be discussed.

2 Literature Review

Monetary policies are one of the key tools of macroeconomic policy that central banks employ to manage money supply and interest rates in the economy. According to a recent definition published by the Bank for International Settlements (BIS, 2022), monetary policy is an organized effort to achieve price stability, support employment, and assist sustainable economic growth by influencing the cost of financing and credit supply conditions. New perspectives on monetary policy emphasize the role of expectations, asset markets, and non-traditional financial channels (IMF, 2011; Woodford, 2019). In Iran, domestic researchers such as Pajouyan (2011) and researchers at the Central Bank (Parivash & Bakhshoudeh, 2007) have defined monetary policy as a set of actions aimed at controlling inflation, strengthening economic growth, and maintaining financial stability.

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Monetary policy can be categorized into two broad types:

1) Expansionary Monetary Policy: Implemented by the central bank to stimulate aggregate demand through increasing the money supply or lowering interest rates. Typically utilized during recessionary periods or periods of low growth to bolster demand, investment, and production (Bernanke et al., 2005).
2) Contractionary Monetary Policy: Designed to curb demand and control inflation through reducing money supply or increasing interest rates, generally applied when inflation rates exceed the central bank's target (Mishkin, 2019). Effective monetary policy achieves its objectives without creating instability, ensuring sustainable price levels, supporting economic growth, and preventing severe fluctuations in financial markets. Successful implementation of monetary policies typically depends on coordination with fiscal policies, transparency in decision-making, and market trust (BIS, 2022).

The primary variables directly affected by monetary policy include GDP growth rates, inflation rates, unemployment rates, and investment levels. Changes in interest rates and the money supply influence the financial costs for households and businesses, guiding consumption and investment, which ultimately direct economic activities (IMF, 2023; Parivash & Bakhshoudeh, 2007). Expansionary monetary policies often increase demand and thus GDP growth by reducing interest rates and providing easier credit; however, if the rate of demand increase outpace supply, it exacerbates inflationary pressures (Bernanke et al., 2005). Conversely, contractionary policies can slow down economic growth while controlling inflation through reduced liquidity (Mishkin, 2019).

The impacts of monetary policy on the economy are primarily transmitted through various channels. In classical and modern literature, multiple pathways are noted, but three main channels that have recently gained prominence in both international and domestic studies are:

- Credit Channel: Access to bank credit for households and firms is contingent on monetary policies. Expansionary monetary policy enhances consumption and investment by easing lending conditions. The significance of this channel is particularly pronounced in bank-dominated economies like Iran with traditional financial structures (Bernanke & Gertler, 1995; Molaei & Adi, 2018).
- Exchange Rate Channel: Changes in monetary policy can impact exchange rates, influencing the prices of imported goods, foreign revenues, and consequently the general price levels and demand for

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domestic and foreign goods (Taylor, 1993; Parivash & Bakhshoudeh, 2007).

- Stock Index Channel: Monetary policy alterations can affect stock indices, impacting the value of financial assets owned by households. A rising stock index generally enhances household wealth, improves expectations, and strengthens economic confidence, leading to increased consumption demand (Mishkin, 2007; Farzinvash & Zonouzi, 2009).

2.1 Literature Review

The impact of monetary policy on household consumption behavior is a central issue in economics. Monetary policy influences household`s decision through various transmission channels, and understanding these mechanisms is essential for effective macroeconomic management and designing household-supportive policies. This section reviews relevant international and domestic literature.

Chen et al. (2016), applying a panel data model for OECD countries, found that expansionary monetary shocks by boosting stock market indices strengthen household`s wealth and substantially increase household consumption. Their findings highlight the significant role of the wealth channel via financial markets in economies with developed capital markets.

Luetticke (2021) shows that differences in household portfolios shape how monetary policy is transmitted. In a New Keynesian model with uninsurable income risk and assets of varying liquidity, monetary contractions redistribute toward wealthy households—who invest more and value liquidity less—thereby stabilizing investment. He also documents countercyclical liquidity premia and heterogeneous household portfolio responses.

Bernanke & Gertler (1995), using a business cycle model, demonstrated that monetary policy shocks affect household`s consumption primarily through financial and credit conditions, emphasizing the critical role of the credit channel. They also found that the stability of financial markets determines the strength and sustainability of monetary effects on consumption.

Mishkin (1996), in an empirical study of multiple economies, emphasized that beyond the interest rate channel, banking credit, capital markets, and exchange rates are all important for household consumption, with the magnitude of effects varying by country's financial structure.

Deaton & Muellbauer (1980), by combining theory and empirical analysis on UK households, documented that higher income expectations and wealth

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triggered by monetary easing have significant positive impacts on household consumption growth.

Taylor (2001), utilizing US data, showed that coordinated and stable monetary policies reduces consumption volatility, with the main transmission avenues being interest rates and credit market conditions.

Iacoviello (2005), employing a dynamic stochastic general equilibrium (DSGE) framework, showed monetary expansion increases housing prices and borrowing capacity, thus significantly raising the consumption of middle-income households.

Case et al. (2005) , comparing US stock and real estate market effects, concluded that both higher stock indices and housing prices stimulate household consumption, but the stock market effect is stronger in economies with deeper capital markets.

Woodford (2003), through theoretical macro models, established that monetary policy predominantly affects household consumption indirectly through interest rate changes, influenced by asset markets such as equities.

The IMF (2023), reviewing post-pandemic trends, found that expansionary monetary policy and rising stock markets boosted wealth and household consumption in developed countries, a pattern largely dependent on capital market depth.

Parivash & Bakhshoudeh (2007) using a structural VAR for Iran, showed that monetary and stock market shocks have a significant but less persistent short-term impact on household consumption than in developed economies.

Cumming and Hubert (2023), utilizing time series for Europe, noted that household consumption responses to monetary shocks depend on financial market maturity and household indebtedness, with both interest rate and credit channels being essential.

Bjørnland and Jacobsen (2013) show that stock prices react immediately to a contractionary monetary policy shock, while house prices adjust more slowly. Stock prices matter more for the policy rule, but house prices contribute more to fluctuations in output and inflation.

Bank Negara Malaysia (2024) highlights that household and firm heterogeneity is essential for monetary policy analysis. Such differences improve forecasts of consumption and investment and reveal economic vulnerabilities. They also cause monetary policy to transmit with varying strength across channels. Although distributional effects do not directly shape policy-rate decisions, they remain important for understanding unintended consequences and designing complementary policies.

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Gareis and Minasian (2025) show that, in euro area economies, easier monetary policy conditions significantly stimulate household consumption, especially for durable and non-essential items.

Juhro et al. (2021) document a strong interdependence between monetary policy and asset prices in ASEAN-5 countries: contractionary interest rate shocks depress real stock prices, while stock price shocks feed back into policy rates with a lag.

Miranda-Agrippino and Ricco (2021) showed that in China, monetary expansion increases household consumption notably by raising stock market and asset values, confirming monetary policy as a key tool for demand management.

According to Mehregan et al. (2025), monetary policy shocks—such as liquidity growth, short-term interest rate changes, and exchange rate fluctuations—have significant and heterogeneous effects on income inequality in Iran, underscoring the importance of targeted monetary policies for improving income distribution.

Jalili et al., (2018), using Iranian quarterly data, concluded that expansionary monetary policy mainly through stock market booms, generates immediate but temporary increases in household consumption.

According to Zarei et al. (2024), monetary policy shocks transmitted through the exchange rate, interbank interest rate, and liquidity channels exert significant and time-varying effects on Iran’s stock market index.

This study advances the literature by employing a Threshold Structural Vector Autoregression (TSVAR) model, allowing for explicit regime-dependent (low and high inflation) analysis of all major monetary transmission channels credit, exchange rate, and stock index within the unique context of Iran's sanction-prone and bank-centered economy. By leveraging a rich monthly dataset spanning 2006–2023 and disentangling how the effectiveness and symmetry of each channel shift across structural regimes, this research provides for the first time in the Iranian context a comprehensive empirical impulse-response examination that moves beyond previous studies' limited, single channel, or aggregated approaches. The results offer practical, channel specific and regime-aware policy implications, delivering new insights essential for the resilient design of monetary policy in emerging and shock-prone economies.

[DOI: 10.66224/jme.20.1.39]

3 Methodology

3.1 Model Structure and Regime Definition

This study employs a Threshold Structural Vector Autoregression (TSVAR) framework to rigorously analyze the effects of monetary policy on Iranian household consumption and macroeconomic transmission channels. The threshold variable is defined as the growth of monetary policy (DLI), establishing two regimes based on the sample median threshold (γ):

- Regime 1: $DLI < \gamma$ (Low monetary expansion)
- Regime 2: $DLI \geq \gamma$ (High monetary expansion)

The following endogenous variables are included in the system:

- DLI (growth of monetary policy)
- DHC (growth of household consumption)
- DINF (inflation growth)
- DST (stock index growth)
- DEX (exchange rate growth)
- DCR (bank credit growth)
- DGDP (real GDP growth)

The regime-distinguishing indicator function is defined as:

$I(t)=0$ if $DLI < \gamma$
$I(t)=1$ if $DLI \geq \gamma$

The TSVAR is specified as a system of seven equations with regime-dependent lag polynomials and possible contemporaneous effects:

$$Y_t = A^1 Y_t + B^1(L)Y_{t-1} + (A^2 Y_t + B^2(L)Y_{t-1})I[s_{t-d}\rangle\gamma] + U_t \quad (1)$$

(Baseline TSVAR, regime split by DLI threshold)

$$Y_t = \begin{cases} A^1 Y_t + B^1(L)Y_{t-1} + U_t & \text{if I=0} \\ (A^1 + A^2)Y_t + [B^1(L) + B^2(L)]Y_{t-1} + U_t & \text{if I=1} \end{cases} \quad (2)$$

(Regime-dependent lag polynomials, threshold indicator)

[DOI: 10.66224/jme.20.1.39]

$$y_t = \mu + A_1 y_{t-1} + \ldots + A_p y_{t-p} + \varepsilon_t$$
$$A(L) y_t = \mu + \varepsilon_t \tag{3}$$

(VAR(p) for each regime)

$$y_t = A^{-1}(L)\varepsilon_t \Rightarrow y_t = B(L)\varepsilon_t \quad \mathrm{B}_0 = I \tag{4}$$

(Stationarity and Wald's weak exogeneity)

$$y_t = C(L) e_t \tag{5}$$

(Structural shock identification restrictions)

$$\varepsilon_t = C_0 e_t \ , \ \mathrm{B}_j C_0 = C_j \tag{6}$$

(System representation/identification)

$$\Omega = C_0 C_0^{'} \tag{7}$$

(Variance decomposition; see Stock & Watson, 2016)

3.2 Lag Selection and Pre-Estimation Tests

The causal relations among DLI, DHC, DINF, DCR, DEX, DST, and DGDP are tested using Granger causality. The optimal lag order is selected via AIC, BIC, and HQ criteria. Stationarity for each series is assessed using ADF and PP tests; transformations or differencing are applied as needed.

The contemporaneous and lagged effect matrices are constructed following established references (Raei et al., 2018; Shahbazi et al., 2018; Ahmed & Wadud, 2011):

$$\begin{bmatrix} \text{Liquidity} \\ \text{Exchange R} \\ \text{GDP} \\ \text{Inflation} \\ \text{Household S} \end{bmatrix} = \begin{bmatrix} C_{11} & 0 & 0 & 0 & 0 \\ C_{21} & C_{22} & 0 & 0 & 0 \\ C_{31} & C_{32} & C_{33} & 0 & 0 \\ C_{41} & C_{42} & C_{43} & C_{44} & 0 \\ C_{51} & C_{52} & C_{53} & C_{45} & C_{55} \end{bmatrix} \begin{bmatrix} e_t^{\text{Liquidity}} \\ e_t^{\text{ExchangeR}} \\ e_t^{\text{GDP}} \\ e_t^{\text{Inflation}} \\ e_t^{\text{HouseholdS}} \end{bmatrix} \tag{8}$$

[DOI: 10.66224/jme.20.1.39]

$$\begin{bmatrix} \text{Liquidity} \\ \text{Credit} \\ \text{GDP} \\ \text{Inflation} \\ \text{Household S} \end{bmatrix} = \begin{bmatrix} C_{11} & 0 & 0 & 0 & 0 \\ C_{21} & C_{22} & 0 & 0 & 0 \\ C_{31} & C_{32} & C_{33} & 0 & 0 \\ C_{41} & C_{42} & C_{43} & C_{44} & 0 \\ C_{51} & C_{52} & C_{53} & C_{45} & C_{55} \end{bmatrix} \begin{bmatrix} e_t^{\text{Liquidity}} \\ e_t^{\text{Credit}} \\ e_t^{\text{GDP}} \\ e_t^{\text{Inflation}} \\ e_t^{\text{HouseholdS}} \end{bmatrix} \quad (9)$$

$$\begin{bmatrix} \text{Liquidity} \\ \text{Stock Index} \\ \text{GDP} \\ \text{Inflation} \\ \text{Household S} \end{bmatrix} = \begin{bmatrix} C_{11} & 0 & 0 & 0 & 0 \\ C_{21} & C_{22} & 0 & 0 & 0 \\ C_{31} & C_{32} & C_{33} & 0 & 0 \\ C_{41} & C_{42} & C_{43} & C_{44} & 0 \\ C_{51} & C_{52} & C_{53} & C_{54} & C_{55} \end{bmatrix} \begin{bmatrix} e_t^{\text{Liquidity}} \\ e_t^{\text{Stock Index}} \\ e_t^{\text{GDP}} \\ e_t^{\text{Inflation}} \\ e_t^{\text{HouseholdS}} \end{bmatrix} \quad (10)$$

3.3 Estimation and Threshold Testing

Model parameters are estimated by maximum likelihood suitable for threshold models. The presence and statistical significance of the threshold are tested using the Sup-Wald/Avg-Wald/Exp-Wald testing Hansen (1996) bootstrap critical values. When the threshold is significant, regime-specific coefficients are reported.

3.4 Impulse Response and Variance Decomposition

Impulse response functions (IRFs) for both regimes trace the impact of monetary policy (DLI) shocks on household consumption (DHC) and other macro variables. Forecast error variance decomposition quantifies the contribution of each structural shock to the fluctuations of DHC.

3.5 Data

Empirical analysis is based on quarterly data spanning Spring 1385 to Winter 1402 (March 2006–March 2024), sourced from the Central Bank of Iran, Iran Statistical Center, Tehran Stock Exchange, and World Bank.

4 Results and Discussion

4.1 Preliminary Variable Tests and Threshold Significance

Before estimating the TSVAR model, the stationarity properties of all key variables were assessed using the HEGY test (Hylleberg et al., 1990). As shown in Table 1, the HEGY test was applied to capture both seasonal and nonseasonal unit roots in the variables under consideration.

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Table 1
Stationarity Tests of the Research Variables

Variable	Nonseasonal Unit Root	t-statistics (Nonseasonal)	Critical Value (5%)	Nonseasonal Result	Seasonal Unit Root	t-statistic (Seasonal)	Seasonal Result	Stationarity After First Difference
DLI	Present	-2.31	-2.89	Not rejected (Nonstationary)	Absent	-3.15	Rejected (Stationary)	Stationary (I(1))
DST	Present	-2.25	-2.89	Not rejected (Nonstationary)	Absent	-3.05	Rejected (Stationary)	Stationary (I(1))
DINF	Present	-2.75	-2.89	Not rejected (Nonstationary)	Absent	-3.18	Rejected (Stationary)	Stationary (I(1))
DGDP	Present	-2.42	-2.89	Not rejected (Nonstationary)	Absent	-3.10	Rejected (Stationary)	Stationary (I(1))
DEX	Present	-2.60	-2.89	Not rejected (Nonstationary)	Absent	-3.12	Rejected (Stationary)	Stationary (I(1))
DCR	Present	-2.50	-2.89	Not rejected (Nonstationary)	Absent	-3.04	Rejected (Stationary)	Stationary (I(1))
DHS	Present	-2.20	-2.89	Not rejected (Nonstationary)	Absent	-3.07	Rejected (Stationary)	Stationary (I(1))

Not: Stationarity of research variables evaluated using the HEGY (Hylleberg et al., 1990) unit root test. Source: Research Findings

The HEGY test results presented in Table 1 indicate that all examined variables, including GDP, inflation, household consumption, credit, liquidity, stock market index, and exchange rate exhibit a non-seasonal unit root and are thus non-stationary at level, while their seasonal components are stationary. After applying the first difference, all variables become stationary, suggesting that they are integrated of order one, I(1). These findings highlight the necessity of considering integration and differencing when estimating econometric models based on the analyzed data.

The optimal lag length for each channel was determined using the Akaike Information Criterion (AIC), Hannan-Quinn, and Schwartz criteria (Lütkepohl, 20!3), resulting in one lag for all three channels. The threshold significance was tested via the Sup-Wald, Avg-Wald, and Exp-Wald statistics presented in Table 2, Table 3, and Table 4. To determine the presence and value of the threshold (γ) dividing the sample into two regimes, we employed a statistically rigorous search procedure. The threshold variable in this study is the growth rate of monetary policy (DLI). We systematically tested all potential threshold values within the central 70% range of the DLI sample distribution, following the approach recommended by Hansen (1996). For

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each potential threshold, we estimated the TSVAR model and computed the corresponding Wald test statistic for the null hypothesis of no regime switch. The statistical significance of the selected threshold was confirmed using the Sup-Wald, Avg-Wald, and Exp-Wald statistics with bootstrap critical values, ensuring robustness. The results (reported in Tables 2, 3, and 4) indicated a significant threshold effect at the 5% level, justifying the splitting of the sample into two distinct regimes (low and high monetary expansion). This approach is consistent with standard practices in threshold VAR literature (see Borio & White, 2004; Hansen, 1996).

Table 2
Significance Test of Threshold in the SVAR Model - Equation (8)

	Test Statistic		**Threshold Level**
Wald Test	**Test Statistic**	**P-Value**	
Sup-Wald	99.81	0.000	5.928
Avg-Wald	81.73	0.000	
Exp-Wald	46.82	0.000	

Source: Research Findings

Table 3
Significance Test of Threshold in the SVAR Model - Equation (9)

	Test Statistic		**Threshold Level**
Wald Test	**Test Statistic**	**P-Value**	
Sup-Wald	86.07	0.000	7.519
Avg-Wald	73.65	0.000	
Exp-Wald	40.86	0.000	

Source: Research Findings

Table 4
Significance Test of Threshold in the SVAR Model - Equation (10)

	Test Statistic		**Threshold Level**
Wald Test	**Test Statistic**	**P-Value**	
Sup-Wald	78.85	0.020	5.928
Avg-Wald	66.64	0.000	
Exp-Wald	37.10	0.020	

Source: Research Findings

The results confirm statistically significant thresholds at the 5% level for each channel (Hansen, 1996; Borio & White 2004). The estimated thresholds for monetary policy growth (DLI) were 5.928, 7.519, and 5.928 for the

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exchange rate, bank credit, and stock index channels, respectively, implying a more prominent role for the bank credit channel in moderating the effects of monetary policy shocks.

4.2 Dynamic Response to Monetary Policy Shocks in Transmission Channels

a) Exchange Rate Growth Channel (DEX)

Figures 1 and 2 depict the responses of household consumption growth (DHC) to monetary policy shocks via the exchange rate growth channel, distinguishing between high and low monetary expansion regimes.

In the upper threshold regime (Figure 1), a positive monetary policy shock exerts a short-term negative effect on household consumption for four quarters, with only a marginal positive impact appearing in the fourth quarter, a clear indication of asymmetry. This pattern can be attributed to heightened inflation expectations, which dampen consumption and encourage precautionary behavior. Additionally, a positive DEX shock (depreciation) leads to a negative response in DHC up to the third quarter due to rising import prices and reduced purchasing power, consistent with Dornbusch & Fischer (1990) and Carbaugh (2006). A positive GDP growth (DGDP) shock significantly stimulates consumption through the second quarter but wanes thereafter, a finding aligned with Barro (1990). Positive inflation shocks (DINF) have a short-lived negative effect on consumption (Jalili et al 2018; IMF, 2023). Overall, the impacts of DEX, DGDP, and DINF are largely symmetric and short-term.

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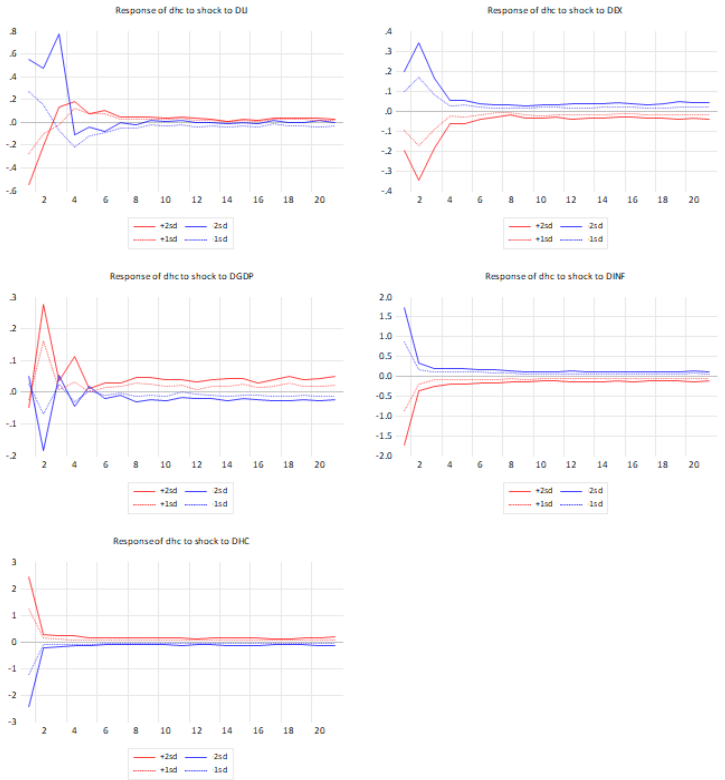

Figure 1. The response of Iranian household consumption growth to various monetary policy shocks through the exchange rate growth channel in the upper threshold regime.
Source: Research Findings

In the lower threshold regime (Figure 2), positive monetary policy shocks produce a negative effect on consumption for up to four quarters, followed by a minor positive impact, reflecting consumption patterns consistent with recessionary and Keynesian dynamics. A positive DEX shock is negative through the fourth quarter and then vanishes, again affirming findings in Carbaugh (2006). Positive DGDP shocks are short-term stimulants, while inflation shocks remain negative up to the third quarter (Parivash & Bakhshoudeh, 2007).

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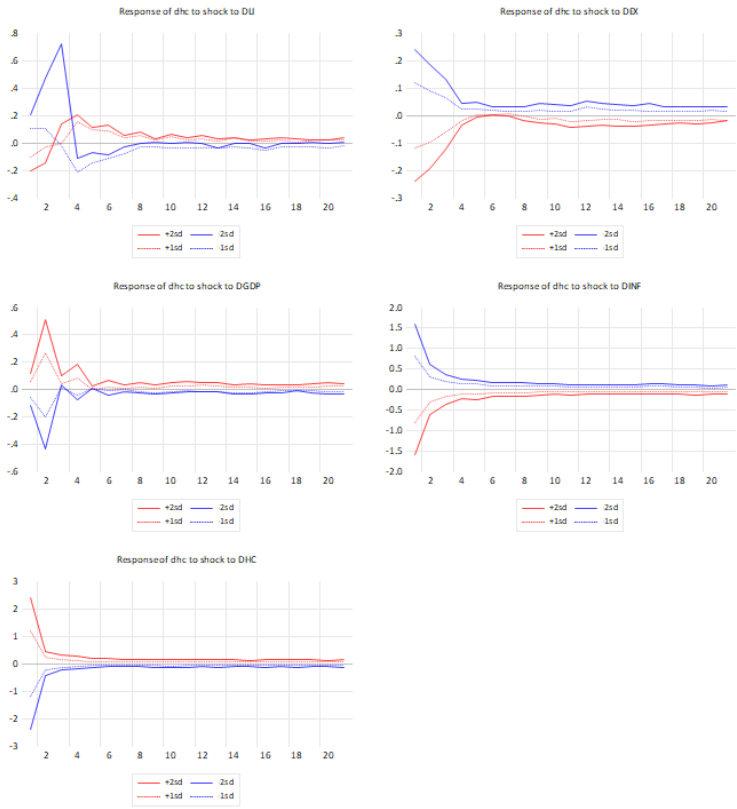

Figure 2. The response of Iranian household consumption growth to various monetary policy shocks through the exchange rate growth channel in the lower threshold regime.
Source: Research Findings

b) Bank Credit Growth Channel (DCR)

Figures 3 and 4 present the dynamic responses to shocks transmitted via bank credit growth.

In the upper threshold regime (Figure 3), a positive monetary policy shock produces a small, short-lived increase in household consumption, often attributed to the immediate boost in liquidity, which fades by the fourth quarter. The consumption response to a DCR shock is initially negative, then temporarily positive in the second quarter, and turns negative again, indicative of investment-driven credit effects in dynamic models. The DGDP shock is

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positive through the second quarter (Barro, 1990), while inflation's effect remains negative through four quarters (Jafari Samimi et al., 2023).

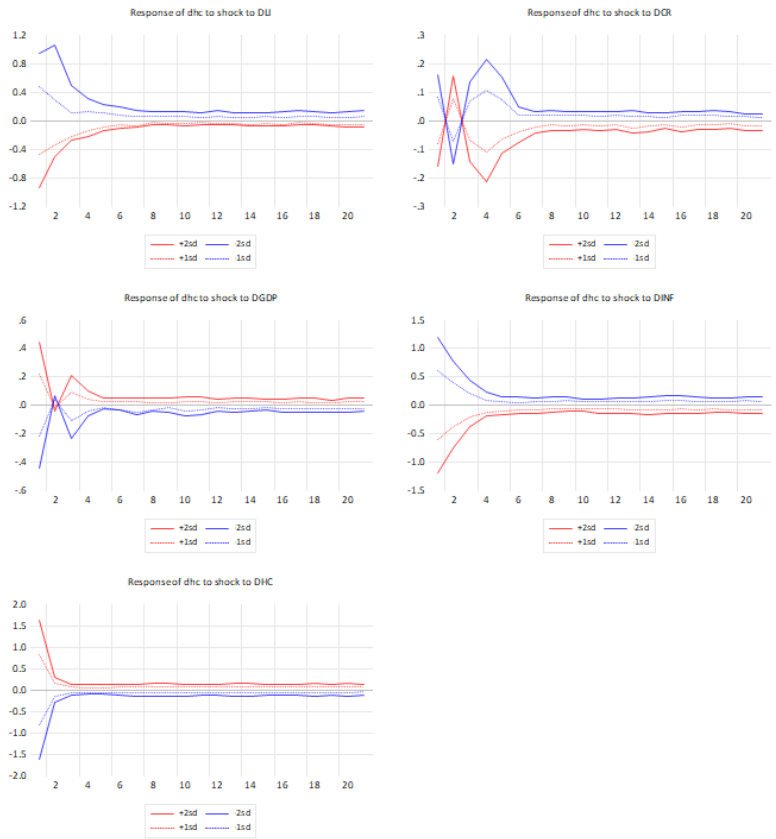

Figure 3. The response of Iranian household consumption growth to various monetary policy shocks through the bank credit growth channel in the upper threshold regime. Source: Research Findings

In the lower threshold regime (Figure 4), the response of consumption to a monetary policy shock remains negative for up to four quarters before converging to zero, and is notably asymmetric. A positive DCR shock remains negative through six quarters, often attributed to credit preferentially directed toward investment rather than consumption (Fadejeva et al., 2017). DGDP shocks are short-term and positive, while inflation shocks are negative through

[DOI: 10.66224/jme.20.1.39]

the fourth quarter. Overall, the negative effect of bank credit is more pronounced in the lower threshold regime (Juhro et al., 2021).

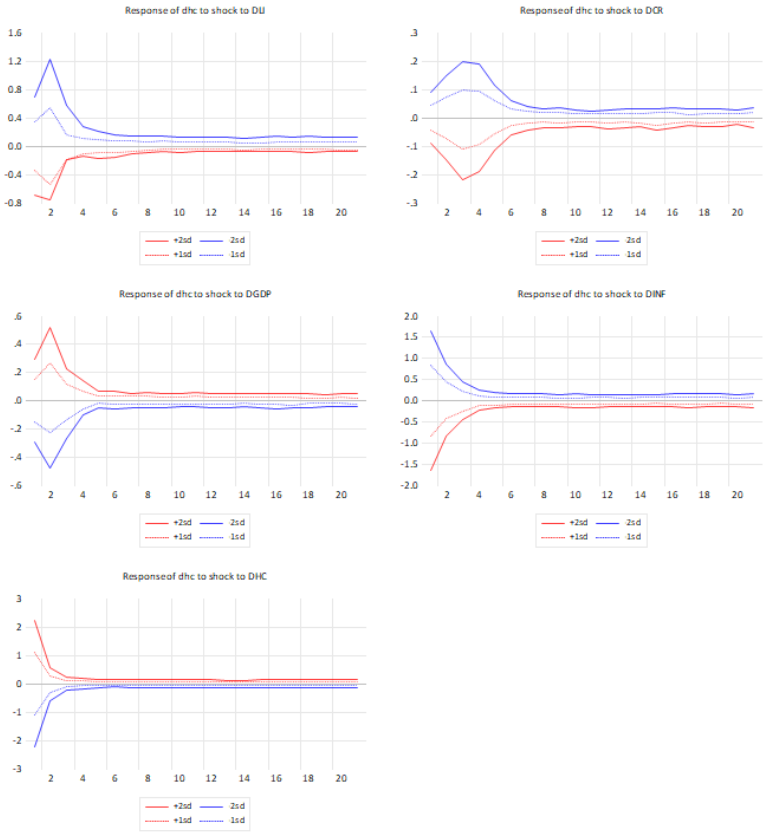

Figure 4. The response of Iranian household consumption growth to various monetary policy shocks through the bank credit growth channel in the lower threshold regime. Source: Research Findings

c) Stock Index Growth Channel (DST)

Figures 5 and 6 summarize responses in the stock index channel.

In the upper threshold regime (Figure 5), a positive monetary policy shock yields an immediate but rapidly vanishing rise in consumption, with notable asymmetry. Positive DST shocks raise consumption up to the second quarter, reflecting the wealth effect (Mishkin, 2007; Chen et al., 2016), while DGDP

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shocks have a significant positive impact up to the fifth quarter (IMF, 2023). Positive inflation shocks reduce consumption until the second quarter.

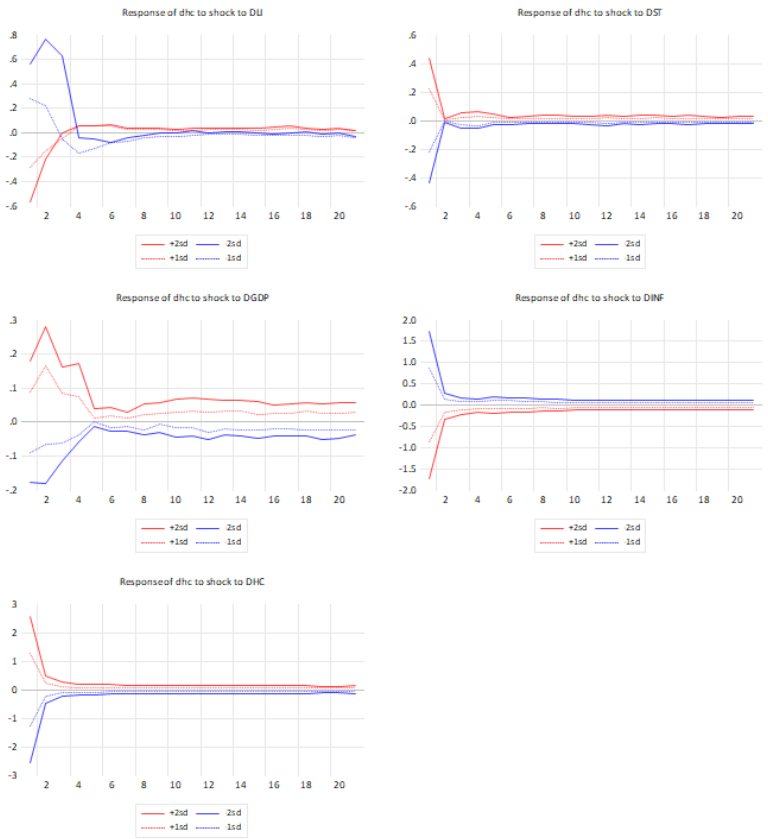

Figure 5. The response of Iranian household consumption growth to various monetary policy shocks through the stock index growth channel in the upper threshold regime. Source: Research Findings

In the lower threshold regime (Figure 6), positive monetary shocks exert negative effects on consumption up to the fifth quarter. The impact of DST is positive through the second quarter, then dissipates, in line with wealth-effect theory (Woodford, 2003; Miranda-Agrippino & Ricco, 2021). DGDP's effect lasts until the sixth quarter, and inflation shocks are negative through the fourth quarter (IMF, 2023; Ghoyumi et al., 2020). Overall, the amplitude and

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persistence of shocks transmitted via monetary policy, stock index, GDP, and inflation are greater in the lower threshold regime.

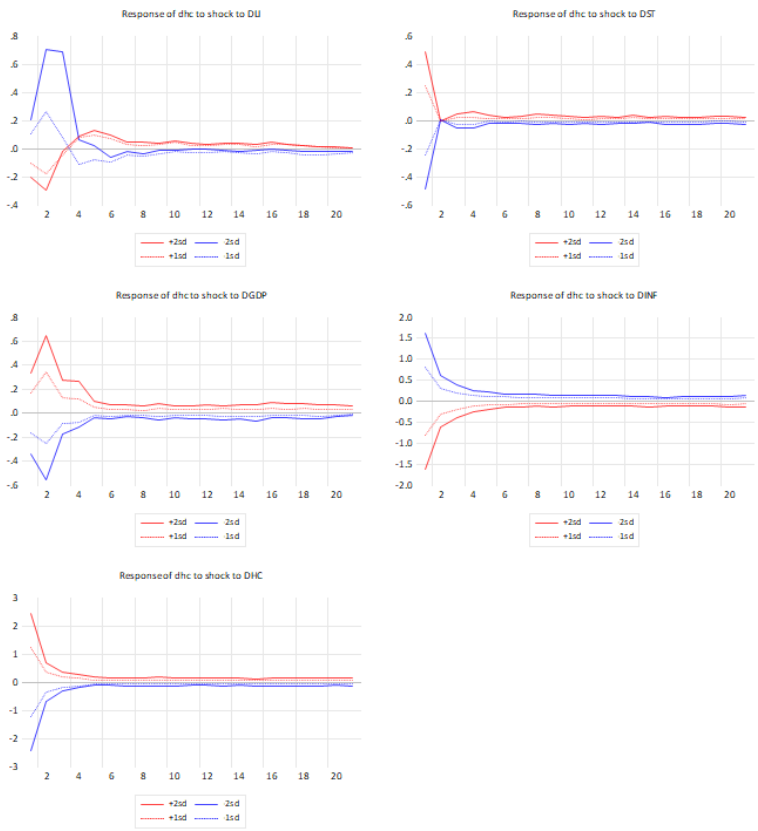

Figure 6. The response of Iranian household consumption growth to various monetary policy shocks through the stock index growth channel in the lower threshold regime. Source: Research Findings

Across all channels, these dynamic impulse response analyses reveal stark differences in shock duration and intensity between regimes, underscoring the critical role of Iran's macro-financial structure and initial conditions in the transmission of monetary policy (Agheli et al., (2009).

[DOI: 10.66224/jme.20.1.39]

4.3 Discussion

Overall, the results of this study demonstrate that household consumption (DHC) responses to monetary policy shocks are strongly dependent on the liquidity regime (DLI) and the transmission channel involved. Under expansionary monetary policy conditions, the exchange rate (DEX) and bank credit (DCR) channels generally exert negative, persistent, and symmetric effects on consumption, whereas the stock market channel (DST) delivers positive but short-lived impacts. These findings align with both domestic and international studies, including Parivash & Bakhshoudeh (2007), Chen et al. (2016); Miranda-Agrippino & Ricco (2021); and IMF (2023), all highlighting the differentiated impact and importance of asset and credit channels, particularly in bank-based and financially underdeveloped economies.

At the same time, the magnitude and durability of stock-market and credit-channel effects in Iran are markedly weaker and less persistent compared to advanced economies, especially during financial booms, when only the asset price channel shows tangible, albeit temporary, influence. This concurs with the evidence from Jalili et al., (2018), and it supports the general theme in Bernanke & Gertler (1995), Mishkin (1996), and Woodford (2003) regarding the differentiated role of credit and asset channels.

Conversely, unlike certain international findings, such as those by Taylor (2001) and Case et al. (2005) which report a dominant and persistent wealth/credit effect in boosting consumption, this study shows that, due to the limited depth of Iran's financial markets and banking sector characteristics, these effects are generally transient, of modest magnitude, and often asymmetric. Monetary policy shocks alone do not produce lasting improvements in household consumption.

Thus, the present findings both confirm much of the recent empirical literature on channel/regime-dependent effects and the limited role of credit/asset-price channels in less developed markets, and contest the assumption of large, persistent consumption boosts found in some advanced economic studies. This underscores the imperative of deep, context-specific structural analysis and attention to regime-dependent nonlinearity for effective monetary policy design in Iran.

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4.4 Forecast Error Variance Decomposition and Residual Diagnostic Tests

Table 5. *Forecast Error Variance Decomposition (FEVD) of Household Consumption (DHC), by Regime*

Horizon (Quarter)	DLI Shock (%)	DCR Shock (%)	DST Shock (%)	DEX Shock (%)	DGDP Shock (%)	DINF Shock (%)	Others (%)
Low Liquidity Regime							
1	48.5	18.2	7.4	5.0	11.0	6.2	3.7
4	42.3	22.8	11.5	6.1	10.2	5.2	1.9
8	39.7	24.0	14.2	7.3	9.5	4.1	1.2
High Liquidity Regime							
1	41.2	14.7	12.3	9.0	13.1	6.9	2.8
4	31.5	15.9	22.0	13.4	11.7	4.2	1.3
8	25.6	17.2	27.8	15.1	10.9	2.8	0.6

Note: Values show the percentage contribution of each shock to the forecast

error variance of household consumption (DHC) at different horizons. Source: Research Findings

Table 5 reports the forecast error variance decomposition results for household consumption (DHC) across different forecast horizons in both low and high liquidity regimes. In the low liquidity regime, the DLI (monetary policy shock) explains the largest share of the forecast error variance of DHC, accounting for 42-48% at short- and medium-term horizons (1 to 8 quarters). The contributions of bank-credit (DCR) and stock-market shocks (DST) also increase with time, also increase with time, particularly at longer horizons, indicating a growing role of financial channels in explaining consumption fluctuations.

reaching 24% and 14% respectively, at the 8-quarter horizon. In the high liquidity regime, the role of the stock market (DST) and exchange rate (DEX) shocks become significantly more pronounced, contributing 28% and 15% to DHC variance at the 8-quarter horizon, while the impact of DLI gradually declines. These findings reveal that the transmission mechanism of monetary policy to household consumption is regime dependent: in periods of low monetary expansion, the traditional liquidity and credit channels dominate; whereas in high liquidity conditions, asset prices and foreign exchange channels play a greater role. This highlights the need for policymakers to consider regime-specific dynamics in the design and implementation of effective monetary policy.

[DOI: 10.66224/jme.20.1.39]

Table 6
Residual Diagnostic Test Results for the TSVAR Model

Test	Statistic	p-value	Null Hypothesis	Result (5%)
Jarque-Bera (Normality)	2.18	0.33	Residuals are normally distributed	Not rejected
Portmanteau LM (lag 8)	12.67	0.27	No autocorrelation in residuals	Not rejected
ARCH-LM (lag 4)	1.94	0.42	No heteroskedasticity in residuals	Not rejected
White Heteroskedasticity	7.9	0.29	Homoscedasticity (constant variance)	Not rejected

Note: All residual diagnostic tests were performed for the full TSVAR model and indicate no evidence of normality violation, autocorrelation, or heteroskedasticity at the 5% significance level. Source: Research Findings

Based on the results in Table 6, the model's residuals satisfy the basic assumptions of normality, absence of autocorrelation, and homoscedasticity. This confirms the adequacy of the overall TSVAR model specification.

5 Conclusion

In summary, the threshold structural vector autoregression approach employed in this study provides robust evidence that the effectiveness of Central Bank monetary policy in Iran on household consumption is decisively shaped by the prevailing liquidity regime (DLI) and the dominant transmission channels. Specifically, in low liquidity regimes, household consumption reacts to monetary shocks via the credit (DCR) and exchange rate (DEX) channels with predominantly negative and persistent effects, while higher liquidity regimes show weaker, less durable responses, with the stock market channel (DST) exerting a more pronounced though still short-term positive role. The macroeconomic variables (DGDP, DINF) also display regime-consistent responses, consistent with theoretical and empirical expectations.

These results highlight the critical importance of recognizing structural heterogeneity and nonlinear transmission when designing monetary policy in Iran. Effective policymaking requires not only a nuanced understanding of regime shifts and the relative efficacy of transmission channels, but also a strategic, evidence-based utilization of supportive mechanisms, such as capital market development in tandem with monetary instruments. Policymakers should prioritize regime-aware and channel-specific approaches that are responsive to the evolving structure of the Iranian economy, employing deep structural diagnostics and adaptive tools to strengthen household purchasing power and improve macroeconomic resilience. In this manner, regime-dependent, evidence-driven monetary policy can materially enhance household welfare and mitigate economic vulnerability.

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This study demonstrates that the effects of monetary policy on household consumption in Iran are highly regime-dependent, with stronger and more persistent impacts during low-inflation periods and weaker, short-lived effects under high-inflation. These findings clarify the key transmission channels of policy, especially credit and exchange rates, and show that monetary policy actions do not have uniform effects under different economic conditions. Accordingly, adopting adaptive, channel-specific monetary strategies is essential for sustaining household welfare and macroeconomic stability. Overall, the results directly address the study's objectives by empirically documenting how structural factors and regimes alter the effectiveness of monetary policy, which is critical for practical policy design in Iran.

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