

Interest Rates and Household Consumption in China: A Keynesian Analysis of Long-Run Effects and Heterogeneity

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Abstract. This study examines the relationship between interest rates and household consumption in China from 1993 to 2023 within a Keynesian Consumption Framework. Using time-series OLS regressions, the study distinguishes between short-term and long-term interest rates to capture liquidity and intertemporal effects, while controlling for GDP growth rate, inflation, and ageing demographics. Separate models for rural and urban households are examined to assess regional heterogeneity. The results reveal a negative overall relationship between interest rates and household consumption, consistent with the Keynesian transmission mechanism. However, only long-term interest rates exhibit a statistically significant effect for rural households, where limited credit access amplifies sensitivity to borrowing costs. In contrast, urban consumption appears largely unaffected by monetary changes, reflecting stronger financial stability and wealth buffers. Among the control variables, the ageing population ratio exerts a robust and positive influence, absorbing the significance for interest rate variables. This suggests that demographic structure moderates the impact of interest rate fluctuations. The findings highlight that monetary policy alone is insufficient to stimulate household consumption in China. Strengthening financial inclusion, social safety systems, and demographic coordination is essential to enhance monetary transmission and support China further towards a more consumption-driven and regionally balanced economy.

Keywords: interest rates, Chinese households, consumption

1. Introduction

Since officially becoming the world's second-largest economy in 2011 [1], China's unique economic structure and consumption behaviour have attracted growing scholarly attention. As the country undergoes financial development while rebalancing its economy towards domestic consumption, understanding household consumption dynamics has become increasingly critical. One key factor influencing household consumption during this economic shift is interest rate, as it directly impacts household decisions on saving, borrowing, and long-term financial planning. In this context, although conventional economic theory predicts an inverse relationship between interest rates and household consumption, China's unique institutional environment suggests the need to verify both the magnitude and channels of this effect.

Meng, Xue and Xue argued that precautionary saving motives could be the major reason why China has such an unusually high household saving rate [2]. Furthermore, Du and Wang mentioned that population ageing in China occurred far earlier compared to the industrialized economies. Unlike the West, limited social safety nets and an underdeveloped pension system have resulted in lower consumption among elderly [3]. Consequently, the relationship between interest rates and household consumption in China takes on new complexity, as conventional economic models that are primarily developed for Western economies with fully established social safety nets and household saving habits that differ from China. Unless the country's distinctive characteristics are explicitly accounted for, standard models risk providing inadequate explanations of China's household consumption dynamics.

Unlike previous research, this paper aims to provide a comprehensive investigation of the relationship between Chinese interest rates and household consumption, with thorough analyses and highly robust results. In particular, the result of this research is intended to build upon Keynesian Consumption Theory and prior empirical works by explicitly incorporating China's unique economic context. This approach serves two purposes: providing empirical verification of how interest rates affect household consumption through liquidity constraint channel and generating targeted insights for policymakers.

2. Literature review

Several studies have examined the relationship between interest rates and household consumption, yet the results remain diverse. Most point to a negative relationship, indicating that higher borrowing costs suppress spending. For instance, Koivu reports a weak negative effect of policy rates on consumption through credit demand, as higher policy rates reduce credit demand but only marginally affect household consumption [4]. Zhang and Wan identify a stronger post-reform negative relationship and that households under tighter liquidity constraints react more vigorously towards changes in interest rates [5]. Similarly, Gu, Jiang and Liang find a significant negative association, where high interest rates reduce consumption through precautionary saving channels [6]. In contrast, classical intertemporal substitution frameworks suggested the opposite: Hall provides evidence of a positive link between expected real interest rates and consumption growth, consistent with households deferring current spending in response to higher returns [7]. Campbell and Mankiw, meanwhile show insignificant responsiveness that consumption is largely uncorrelated with interest rates and more closely tied to current income [8]. While these two studies are not based on Chinese data, they are important in terms of empirical and theoretical comparison. Taken together, the empirical literature presents an ambiguous picture, with evidence of negative, positive and insignificant effects.

Beyond direct interest rate effects, existing literature on household consumption in China emphasized the roles of demographic shifts, institutional constraints, and economic uncertainty. Curtis, Lugauer, and Mark demonstrated that population ageing and shrinking family size due to one-child policy significantly contributed to high household saving rate [9]. Similarly, Du and Wang argued that weak pension and social safety systems suppress consumption among elderly [3]. Modigliani and Cao attributed China's abnormally high saving rates to both demographic and institutional factors, including limited credit markets and cultural preferences for precautionary savings [10]. Several studies also revealed strong regional heterogeneity in urban consumption and highlighted the sensitivity of households to liquidity constraints following economic reforms [5,11]. Kraay and others further showed how precautionary motives and policy uncertainty affects savings through multiple channels [11,6]. From a monetary perspective, Koivu found limited responsiveness

of credit demand to policy rates, consistent with Campbell and Mankiw's dual-agent framework [4,8]. Overall, these literatures underscore the importance of accounting for regional disparities, demographic ageing, liquidity constraints, and precautionary saving motives when assessing how Chinese household consumption reacts to changes in interest rates.

Despite these insights, few studies systemically examined how demographic structure (particularly ageing populations) interacts with interest rates to shape household consumption in China. Existing work often focuses on individual factors in isolation but fall short of capturing how borrowing constraints and short-run disposable income jointly determine household consumption. Building on earlier contributions, including Zhang and Wan's Keynesian analysis on liquidity constraint analysis, Campbell and Mankiw's identification of "rule-of-thumb" consumers, this study argues that the Keynesian Consumption Hypothesis remains highly relevant in the Chinese context [5,8]. Specifically, the framework provides a valuable explanatory power in an economy characterized by liquidity constraints, incomplete social safety nets, and high precautionary savings. Thus, this study adopts Keynesian Consumption Theory as its theoretical foundation to empirically examine how interest rates shape household consumption within China's unique demographic and institutional context.

3. Theoretical analysis

3.1. Environment

The theoretical foundation of this study relies on Keynesian Consumption Theory, first constructed by John Maynard Keynes in *The General Theory of Employment, Interest and Money* (1936). The primary agents are households who aim to maximise utility from consumption over time subject to income, wealth, and borrowing constraints. In the original Keynesian setting, consumption decisions are made in a world where uncertainty, psychological motives, and institutional frictions prevent perfect foresight [12]. This means that current income, rather than permanent income becomes the key determinant of household consumption decisions. In the context of China, considering the underdeveloped social safety nets, incomplete financial markets, and restricted credit channels further reinforces the role of current income and liquidity in shaping household consumption.

3.2. Assumptions

Households have standard preferences characterized by strictly concave utility functions reflecting diminishing marginal utility of consumption. Consumption is modelled as a positive function of current disposable income, with positive MPC bounded between zero and one ($0 < \text{MPC} < 1$) remaining consistent with Keynesian theory. The credit market is imperfect, meaning that households cannot fully optimize consumption across periods, leading to a partial dependence on current income. While interest rates influence consumption through both intertemporal substitution effects and wealth effects, the magnitude of these channels is contingent on the degree of borrowing constraints. Specifically, households facing binding liquidity restrictions exhibit weaker substitution effects and higher sensitivity to contemporaneous income shocks. Inspired by previous literature on regional disparities, consider rural areas that face limited access to formal borrowing due to collateral requirements that exclude low-income households and that pension and healthcare systems offer uneven coverage which often involve substantial costs. Under these conditions, households are more likely to adjust their consumption directly in response to changes in current income; consistent with the Keynesian view on liquidity constraints dominating consumption decisions.

3.3. Model

Keynes proposed that household consumption is primarily a stable function of current disposable income, expressed in its simplest form as:

$$C_t = a + bY_t \quad (1)$$

Where C_t is current consumption, a being autonomous consumption, b is the marginal propensity to consume (MPC), and Y_t is current income [13]. Keynesian MPC is positive but less than one, implying that increases in income lead to proportionally smaller increases in consumption. This also means households adjust spending in response to changes in current income and credit conditions [12]. Mathematically, a lower b suggests stronger saving motives or binding credit constraints while a higher b signals stronger consumption motives or looser credit constraints.

Figure 1 illustrates the Keynesian consumption function. Changes in autonomous consumption or the MPC will shift the consumption curve, typically driven by changes in interest rates, credit availability, or household expectations. In the unique context of China, liquidity constraints and high precautionary savings are common, shifts in interest rates alter both a and b by change in borrowing costs (interest rates), thereby moving the entire consumption function up or down. This framework emphasizes how the short-run determinants of consumption, such as liquidity availability and income fluctuations differ from forward-looking optimization under perfect capital markets.

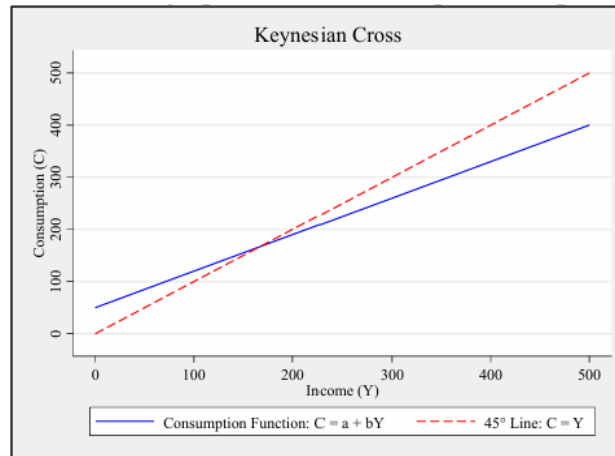


Figure 1. Keynesian cross

The vertical intercept being autonomous consumption (expenditure when income is zero) and the slope of the function being MPC. The forty-five degrees line represents points where consumption equals income; equilibrium in the goods market occur when the consumption function intersects this line.

4. Data

This study uses time series dataset for China covering the period 1993 to 2023. The choice of this time frame is motivated by both data availability and the aim to capture the impact of major structural reforms, financial market developments, and demographic changes in China over the past three decades. Missing observations within certain series were corrected using interpolation methods automatically handled by statistical software, ensuring consistency in estimation.

4.1. Data source and collection

The dataset is constructed from multiple authoritative institutions. Both urban and rural household consumption expenditure is sourced from the National Bureau of Statistics of China (NBSC). Population data (total population and population aged 65 and above) are sourced from both the NBSC and World Bank, are used together to construct the ageing population ratio (APR). Macroeconomic indicators such as GDP growth rates and final household consumption expenditure (FHC) are collected from the World Bank World Development Indicators. Consumer Price Index (CPI), and regional price indices are all provided by the NBSC. Short-term (3-year) and long-term (5-year) interest rates are drawn from the People's Bank of China (PBoC).

4.2. Variable overview and construction

The dependent variable in this study is final household consumption expenditure (FHC), expressed as a percentage of GDP. To account for heterogeneity in consumption behaviour, rural and urban household expenditures are also considered as dependent variables, allowing the analysis to identify differences across household types.

The key independent variables are short-term and long-term interest rates (ST and LTIR), which represent the core monetary policy tools influencing borrowing costs. These are separated rather than aggregated into a single measure to capture potentially distinct effects: short-term rates reflect immediate liquidity conditions and policy adjustments, while long-term rates embody broader credit market expectations and intertemporal substitution motives. Inspired by existing literature, this distinction is critical to test whether Chinese households respond differently to short-run constraints or to long-run expectations.

Given the relatively small sample size, the baseline model is specified parsimoniously to avoid overfitting. A set of control variables are included to account for broader macroeconomic, demographic, and institutional influences identified by previous literature. GDP growth rate (GDP GR) serves as a macroeconomic control, reflecting the link between consumption sensitivity and growth expectations highlighted by Gu, Jiang, and Liang [6]. Consumer price Index (CPI) data is used to deflate nominal series into real terms, ensuring that observed changes are not driven by inflationary pressures; regional CPI measures are also considered to better capture heterogeneity in consumption dynamics. Demographic structure is represented by the ageing population ratio (APR), calculated using the below formula:

$$APR = \frac{\text{Population aged 65+}}{\text{Total Population}} \quad (2)$$

This variable captures the demographic pressures that are strongly associated with precautionary savings in China [3,9].

4.3. Data limitations

Some early year series contain missing values (refer to appendix), although these values are corrected using interpolation methods within the software, it may smooth short-run fluctuations. Household survey data may suffer from underreporting of income and expenditure, particularly in rural areas, and CPI may not fully reflect regional differences in consumption baskets. Furthermore, while demographic and labour market variables provide important context, the aggregation may cover heterogeneity. Finally, separating interest rates into short and long-term series helps capture

distinct effects, but also risks overlooking interactions between policy horizons. Nonetheless, the dataset is comprehensive, consistent, and well-suited to test how interest rates shape consumption under China's unique demographic and institutional conditions.

5. Empirical results

5.1. Baseline model

To distinguish between short-run liquidity effects and long-term credit market expectations, the relationship between household consumption and interest rates is estimated using two separate specifications, one for short-term and one for long-term interest rates. The models are defined as follows:

$$FHC_t = \alpha + \beta_1 STIR_t + \beta_2 CPI_t + \beta_3 GDPGR_t + \beta_4 APR_t + \varepsilon_t \quad (3)$$

$$FHC_t = \alpha + \beta_1 LTIR_t + \beta_2 CPI_t + \beta_3 GDPGR_t + \beta_4 APR_t + \varepsilon_t \quad (4)$$

FHC_t denotes household consumption at time t , proxied by final household consumption expenditure as a share of GDP. $STIR_t$ and $LTIR_t$ represent short-term and long-term interest rates respectively. Control variables include CPI_t , $GDPGR_t$, and APR_t , representing consumer price index (CPI), GDP growth rate and ageing population ratio.

5.2. Main findings on baseline model

Table 1 presents the baseline regression results for the relationship between interest rates and final household consumption expenditure (FHC). The analysis is divided into Panel A, which examines the effect of STIR and Panel B, which focuses on LTIR.

Table 1. Baseline regression results (coefficients)

	(1)	(2)	(3)	(4)
Panel A: STIR vs. FCE				
STIR	0.572***	0.937***	-0.032	-1.582*
GDP GR	0	-0.485*	-1.392***	-0.009
CPI	0	0	-0.224***	-0.031
APR	0	0	0	0.365
Observations	31	31	31	19
R ²	0.095	0.169	0.600	0.668
Panel B: LTIR vs. FCE				
LTIR	0.398***	0.679***	0.056	-1.526*
GDP GR	0	-0.500*	-1.402***	0.117
CPI	0	0	-0.022***	-0.046
APR	0	0	0	0.605
Observations	31	31	31	19
R ²	0.088	0.164	0.601	0.642

Panel A shows that the estimated coefficient for STIR is positive and statistically significant in columns (1) and (2), suggesting a weak positive relationship between interest rate and household consumption in the short run. However, as additional control variables (GDP GR, CPI, and APR) are introduced, the direction of influence for STIR became negative and significant.

This shift implies that the initial positive relationship captures cyclical co-movements between consumption and monetary tightening during economic expansions. Once macroeconomic and demographic factors are controlled for, the underlying relationship becomes negative. This is consistent with the Keynesian Consumption theory, emphasizing that higher borrowing costs reduces disposable income and liquidity, hence discouraging consumption. In other words, STIR increases are likely to tighten liquidity conditions and reduce immediate spending, especially in the Chinese economy where liquidity constraints and precautionary saving motives are strong [3,10].

The coefficient of determination (R^2) for the four models of STIR ranges from 0.095 to 0.668, indicating a clear improvement in explanatory power as more control variables are included. This suggests that much of the variation in consumption can be explained by macroeconomic and demographic dynamics rather than monetary factors alone. Figure 2 shows a significant negative relationship between STIR and FCE as a downward sloping line. In terms of strength of relationship, the data points show a weak negative correlation.

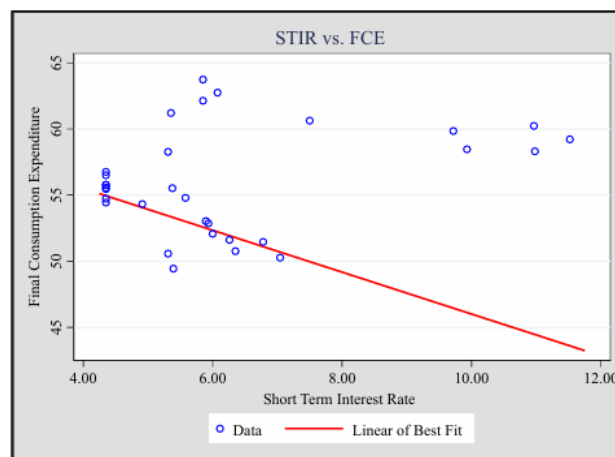


Figure 2. STIR vs. FCE

LTIR shown in panel B presented a positive and significant relationship with consumption in columns (1) and (2). This suggests that higher long-term rates are associated with higher consumption levels in simple models. However, as controls are added, this relationship turns negative and significant as shown in column 4.

This finding reflects two offsetting effects. In the short run, higher long-term interest rates may signal economic optimism or higher expected returns. Such effects will encourage consumption temporarily. Over time, under China's undeveloped financial markets and ageing demographics, elevated long-term rates increase borrowing costs, reduce credit availability, and strengthen precautionary saving motives.

These results support Koivu, Zhang, and Wan who found that Chinese household consumption is weakly responsive to policy rates and more sensitive to liquidity constraints and future income expectations [4,5]. Conversely, they contrast with Hall, Campbell and Mankiw, who observed neutral or positive responses in advanced economies where forward-looking consumption smoothing is stronger.

The coefficient of determination (R^2) for the four models of LTIR ranges from 0.088 to 0.642, show a similar improvement pattern as the short-term models, indicating that including demographic and inflation variables substantially improves model fit. Figure 3 shows a significant negative relationship between LTIR and FCE as a downward sloping line. In terms of strength of relationship, the data points shown a weak negative correlation.

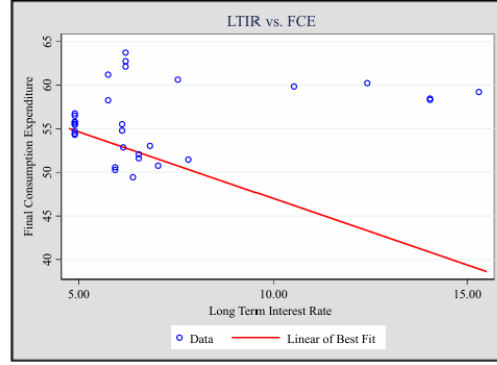


Figure 3. LTIR vs. FCE

Across both the short-term and long-term interest rate models, the control variables play a crucial role in explaining the dynamics of Chinese household consumption. GDP growth rate consistently shows a negative association with final consumption expenditure, suggesting that periods of rapid output growth do not translate directly into higher household spending. This pattern is consistent with previous findings that reflects China's long-observed investment-driven growth model, where rising incomes are often saved rather than consumed [6,13]. CPI carries a generally negative and occasionally significant coefficient, indicating that higher prices reduce real purchasing power and suppress consumption. This is a trend similar to what is identified by Koivu, who noted that inflation amplifies precautionary saving motives [4]. The Ageing Population Ratio (APR), although statistically significant in the final models, tends to absorb part of the explanatory power of both interest rate and other control variables in later model specifications. This suggests that demographic ageing is a structural factor shaping consumption behaviour. This demographic effect agrees with past literature which shown that the ageing population in China contributes to persistently high saving rates and muted responsiveness of consumption to policy changes. Together, these results highlight that macroeconomic and demographic controls substantially shape consumption outcomes, and their effects may differ across household types. Hence providing a basis for examining regional heterogeneity.

6. Heterogeneity

6.1. Regional heterogeneity model

To capture potential variations in the transmission of monetary policy across China, the analysis introduces regional heterogeneity by estimating separate models for rural and urban households. This approach builds upon the baseline model but allows the coefficient to differ across regions, thereby revealing how structural, demographic, and financial factors influence the sensitivity of household consumption to interest rate changes. The empirical models can be specified as following:

$$UHE_t = \alpha + \beta_1 TIR_t + \beta_2 UrbanCPI_t + \beta_3 GDPGR_t + \beta_4 APR_t + \varepsilon_t \quad (5)$$

$$RHE_t = \alpha + \beta_1 TIR_t + \beta_2 RuralCPI_t + \beta_3 GDPGR_t + \beta_4 APR_t + \varepsilon_t \quad (6)$$

UHE_t denotes urban household consumption at time t , proxied by urban household expenditures in per capita terms. Similarly, RHE_t denotes rural household consumption at time t , proxied by rural household expenditures in per capita terms. TIR_t is replaced by $STIR_t$ and $LTIR_t$, representing short-term and long-term interest rates respectively. Control variables include Urban CPI_t and Rural CPI_t representing consumer price index (CPI) in both rural and urban areas. $GDPGR_t$ and APR_t are GDP growth rate and ageing population ratio.

This setup allows comparison of short-run liquidity effects (through FTIR) and long-run credit market expectation (through LTIR) between rural and urban households. Rural and urban China differ substantially in credit access, employment security, and precautionary saving motives. Rural areas typically face stronger liquidity constraints and limited financial inclusion, while urban households benefit from more stable incomes and access to formal credit. Therefore, different interest rate elasticities are expected, reflecting asymmetric monetary policy transmission across regions.

6.2. Main findings on regional heterogeneity

The heterogeneity regressions presented in Table 3 reveal pronounced differences between rural and urban households in how interest rates influence consumption behaviour.

Table 3. Regional heterogeneity regression results (coefficients)

	(1)	(2)	(3)	(4)
Panel C: STIR vs. Rural HE				
STIR	-4168.4***	-2402.2**	-2629.3**	-180.7
GDP GR	0	-816.3**	-794.2*	-47.4
Rural CPI	0	0	144.4	-15.7
APR	0	0	0	1872.9***
Observations	19	19	19	19
R ²	0.6452	0.7734	0.7750	0.9905
Panel D: LTIR vs. Rural HE				
LTIR	-4136.9***	-2108.2	-686.4	-329.6**
GDP GR	0	-820.2*	370.0*	163.6*
Rural CPI	0	0	65.5***	20.7***
APR	0	0	0	1401.7***
Observations	19	19	19	19
R ²	0.6287	0.7239	0.9565	0.9975
Panel E: STIR vs. Urban HE				
STIR	-6793.1***	-3730.9**	-4707.1**	-1285.7
GDP GR	0	-1415.4**	-1301.5*	-331.9
Urban CPI	0	0	717.4	353.5
APR	0	0	0	2494.7***
Observations	19	19	19	19
R ²	0.6541	0.8013	0.8130	0.9573
Panel F: LTIR vs. Urban HE				
LTIR	-6816.9***	-3343.9	-3336.5	-1114.0
GDP GR	0	-1404.0*	-1405.0*	-232.6
Urban CPI	0	0	-6.384	220.9
APR	0	0	0	2623.7***
Observations	19	19	19	19
R ²	0.6517	0.7582	0.7582	0.9565

Shown in panel D for rural households, LTIR along with all other variables emerge to be a significant determinant of Rural Household Expenditure (Rural HE). The estimated coefficient on LTIR is negative and statistically significant (shown in Figure 4 as a downward sloping line), indicating that higher long-term borrowing costs significantly suppress rural expenditure. This finding suggests that in rural areas, consumption is closely tied to expectations about long-term financing and credit access, consistent with the intertemporal substitution framework and the argument that rural households depend more heavily on borrowing for durable and investment related spending. Figure 4 shown a significant negative relationship between LTIR and Rural HE as a downward sloping line. In terms of strength of relationship, the data points show a weak negative correlation.

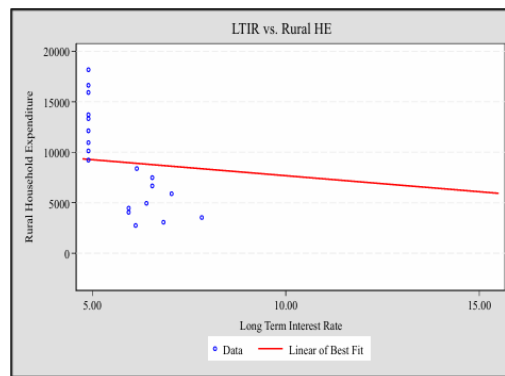


Figure 4. LTIR vs. Rural HE

Shown in panel C, STIR has a different result to LTIR. It loses statistical significance once demographic and macroeconomic controls are introduced. This implies that short-run monetary adjustments exert limited influence on rural consumption, possibly due to the dominance of informal lending channels and prevalence of precautionary savings. Figure 5 shown a significant negative relationship between STIR and Rural HE as a downward sloping line. In terms of strength of relationship, the data points shown a weak negative correlation.

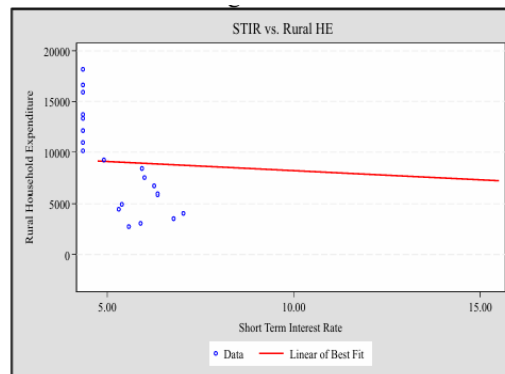


Figure 5. STIR vs. Rural HE

Among the controlled variables, the ageing population ratio (APR) consistently exhibits a positive and highly significant coefficient, suggesting that demographic structure plays a crucial role in rural consumption. It can be observed that APR absorbed the significance of STIR and GDP GR once it was added. This aligns with findings by Du, Wang, Curtis, Lugauer, and Mark, who emphasized that an ageing population may dampen saving motives through stable pension income or intergenerational support system [3,9]. Meanwhile, GDP growth initially has a negative and significant effect that implies rural consumption does not immediately expand with economic growth. This is likely to be reflecting lagged income transmission and structural inequality in rural income distribution. Rural CPI also shows a positive and significant impact once introduced, indicating that inflationary adjustments are closely associated with rising nominal consumption levels in rural households.

Shown in Panels E and F, for urban households, both short and long-term interest rates are negative but statistically insignificant in the fully specified models. While the initial estimates show negative signs, the effects weaken substantially once Urban CPI and APR are added, implying that urban consumption is largely insulated from interest rate fluctuations. This can be attributed to

greater financial diversification, higher savings buffers, and access to formal credit markets, which mitigate the transmission of monetary policy shocks. Figure 6 and 7 show a significant negative relationship between both types of interest rates and Urban HE as a downward sloping line. In terms of strength of relationship, the data points shown a weak negative correlation.

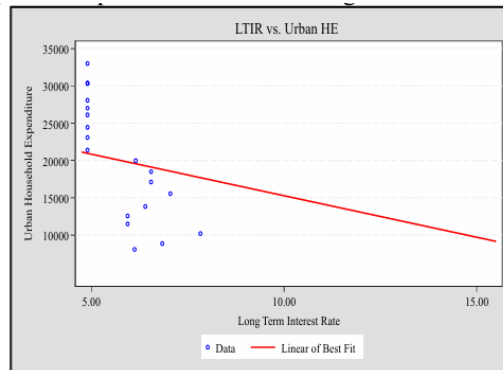


Figure 6. LTIR vs. Urban HE

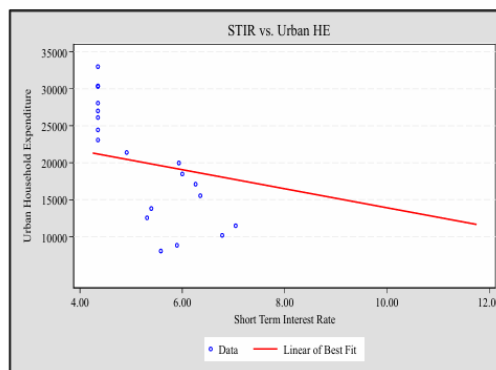


Figure 7. STIR vs. Urban HE

APR remains positive and highly significant, reinforcing the importance of demographic factors in sustaining consumption in ageing urban populations. The stabilizing influence of older and asset-equipped households reflects consistency with the life-cycle consumption theory proposed by Modigliani and Cao [10]. Conversely, CPI and GDP GR display no strong or consistent effects, suggesting that urban consumption is less sensitive to short-term macroeconomic or price fluctuations and more reliant on structural and demographic determinants.

Taken together, the results reveal a clear regional asymmetry in the interest rate and consumption relationship. While urban consumption appears relatively immune to monetary tightening, rural consumption responds strongly to long-term interest rate changes, emphasizing the critical role of financial access and intertemporal expectations in less developed regions. The significance of demographic controls across both samples highlights that population ageing absorbs part of the interest rate effect, particularly in rural areas, underscoring the necessity of incorporating demographic structure into models of consumption behaviour in China. These findings collectively suggest that monetary policy transmission in China is regionally uneven, with long-term credit conditions exerting a much stronger influence on rural households.

7. Policy implications

First, the significant long-term effect of interest rates on rural consumption highlights the regional asymmetry of monetary transmission. Monetary tightening may disproportionately suppress rural demand, where credit constraints are binding and savings motives are stronger. Thus, the People's Bank of China (PBoC) may consider a regionally differentiated monetary strategy that strengthens credit availability and reduce borrowing frictions for rural households to ensure equitable policy impact. Second, the muted responsiveness of urban households suggest that monetary policy alone may not effectively boost consumption in high-income regions. Complementary fiscal measures such as progressive tax adjustments and public service expansion are essential to strengthen aggregate demand.

Considering the dominant influence of population ageing implies that monetary and demographic policies must be coordinated. Expanding pension and healthcare coverage, improving social safety nets, and reducing income uncertainty can mitigate precautionary saving behaviour, enhancing the overall effectiveness of monetary policy. These structural reforms are vital for sustaining China's transition from an investment-led to a consumption-driven economy. In this sense, interest rate policy should be viewed as one component of a broader macroeconomic framework that integrates fiscal, financial, and demographic policy instruments.

8. Conclusion

The empirical findings reveal a negative relationship between interest rates and Chinese household consumption from 1993 to 2023, though the effect differs in magnitude across time horizons and regions. Only LTIR exhibits a statistically significant effect for rural households. This indicates that monetary policy influences consumption primarily through expectations about long-term credit conditions rather than short-term liquidity adjustments, suggesting that rural households, often constrained by limited access to formal financial institutions, are more vulnerable to borrowing cost changes. On the other hand, urban households have greater access to diversified savings and stable incomes and remain relatively insulated. Among the controlled variables, APR consistently exerts a strong and positive influence on household consumption, absorbing part of the interest rate's explanatory power. This highlights the structural role of demographics in shaping consumption behaviour, aligning with the observations of previous literature [3,4]. Meanwhile, GDP GR and CPI display weaker and inconsistent effects, indicating that cyclical fluctuations in output and prices play a secondary role compared with demographic and institutional drivers.

Overall, this study concludes that while interest rates remain a key tool of macroeconomic management, their direct influence on household consumption in China is limited and uneven. Structural factors including financial segmentation and demographic ageing continue to dampen the responsiveness of household consumption to monetary policy changes. Strengthening financial inclusion, expanding rural credit markets, and deepening social protection systems would therefore not only enhance monetary transmission but also support sustainable growth.

Finally, several limitations and space for future research are acknowledged. The analysis relies on aggregate time-series data, which may obscure micro-level behavioural differences among households with varying income, wealth, or credit access. Further studies could utilise household-level or regional panel data to capture heterogeneity in consumption response more precisely. Moreover, the influence of asset prices, household wealth, and expectations warrants further exploration, as these channels are likely to interact with interest rates to shape spending decisions.

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Appendix

Table 4. Data detail

Variable Name	Obs.	Mean.	SD.	Min.	Max.	Detail:
Rural Household Expenditure	20	9536.15	5278.414517	2749	19280	2005 – 2024 Unit in Yuan Per capita Annual
Urban Household Expenditure	20	20722.35	8355.204544	8068	34557	2005 – 2024 Unit in Yuan Per capita Annual
Population	20	137222.3	3737.117241	130756	141260	2005 – 2024 Unit in ten-thousand people Annual
Population Aged 65 +	20	15062.05	3995.785865	1055	21969	2005 – 2024 Unit in ten-thousand people Annual
Final Household Consumption Expenditure	64	61.49958	7.333471	49.44085	84.88881	1960 – 2023 Expressed as percentage of GDP Annual
GDP Growth Rate	64	7.920939	6.631977	-27.7	19.3	1961 – 2024 Index 2015 = 100 Annual
Short Term Interest Rates	31	6.10	2.130996	4.25	11.52	1993 – 2023 Unit is percentage Annual
Long Term Interest Rates	13446	7.81	3.62044517	4.90	19.26	01/09/1988 – 24/06/2025 Unit is percentage Monthly
CPI	39	87.92104	31.66621	26.04832	132.5176	1986 – 2024 Base year 2010 = 100
Urban CPI	20	102.21	1.598650747	99.1	105.6	2005 - 2024 Estimated based on labour force survey and national census
Rural CPI	20	102.385	1.835117951	99.7	106.5	2005 - 2024 Estimated based on labour force survey and national census