Research paper / Оригинальная статья
https://doi.org/10.51176/1997-9967-2026-1-21-38
МРНТИ 06.73.15
JEL: E52, I32, G01



# Monetary Policy and Its Impact on Consumer Spending and Poverty in Kazakhstan

**Aliya B. Mukhamediyeva[a], Azimzhan A. Khitakhunov[b], Zhansaya S. Temerbulatova[a], Assem Ye. Kaliyeva[c]***

*[a] Almaty Management University, 227 Rozybakiyev str., Almaty, Kazakhstan; [b] Central Asian Policy Studies, 111a Zheltoksan str., Almaty, Kazakhstan; [c] Al-Farabi Kazakh National University, 71 Al-Farabi ave., Almaty, Kazakhstan*

**For citation:** Mukhamediyeva, A.B., Khitakhunov, A.A., Temerbulatova, Zh.S. & Kaliyeva, A.Ye. (2026). Monetary Policy and Its Impact on Consumer Spending and Poverty in Kazakhstan. Economy: strategy and practi ce, 21(1), 21-38. htt ps://doi.org/10.51176/1997-9967-2026-1-21-38

**ABSTRACT**

Given the high external volatility and structural vulnerability of the Kazakh economy, there is an increasing need to assess the macroeconomic and social effects of monetary policy. The purpose of this study is to study the relationship between monetary policy, consumer demand, poverty and income inequality in Kazakhstan during the crisis and post-crisis periods. The empirical analysis is based on quarterly macroeconomic data for 2006-2023 and annual social indicators for 2001-2023. Time series models with lag structures and multiple linear regression were used to evaluate transmission mechanisms. The results show that an increase in the base rate has a statistically significant disinflationary effect with a lag of two quarters (coefficient -0.059; $p < 0.01$) and reduces economic growth with a lag of three quarters (coefficient -0.030; $p < 0.01$). Economic growth has a positive effect on consumption (coefficient 1,093; $p < 0.05$), while inflation has a restraining effect (coefficient -0.871; $p < 0.10$). The results obtained indicate that the influence of monetary policy on social indicators is mainly indirect and is implemented through the channels of inflation, economic growth and income dynamics, which justifies the need for coordination of monetary and fiscal instruments to achieve the goals of inclusive development. The findings of this study provide policy makers with valuable information for developing a balanced monetary policy that simultaneously ensures macroeconomic stability and promotes inclusive social development.

**KEYWORDS:** Consumer Demand, Base Rate, Economic Growth, Inflation, Poverty, Income Inequality, Macroeconomic Stability, Financial Strategy

**CONFLICT OF INTEREST:** the authors declare that there is no conflict of interest

**FINANCIAL SUPPORT.** This study was funded by the National Bank of the Republic of Kazakhstan (a scientific project on the topic “Consumer demand in the post-crisis period (international and Kazakhstani experience)”.

**Article history:**
Received 25 September 2025
Accepted 14 February 2026
Published 30 March 2026

*** Corresponding author: Kaliyeva A.Ye.** - PhD, Associate Research Professor, Al-Farabi Kazakh National University, 71 Al-Farabi ave., Almaty, Kazakhstan, 87019889668, email: assemkalieva@gmail.com

# Денежно-кредитная политика и её влияние на потребительские расходы и бедность в Казахстане

**Мухамедиева А.Б.[a], Хитахунов А.А.[b], Темербулатова Ж.С.[a], Калиева А.Е.[c]***

*[a] Алматы Менеджмент Университет, ул. Розыбакиева 227, Алматы, Казахстан; [b] Central Asian Policy Studies, ул. Желтоксан 111а, Алматы, Казахстан; [c] Казахский национальный университет им. аль-Фараби, пр. аль-Фараби 71, Алматы, Казахстан*

**Для цитирования:** Мухамедиева А.Б., Хитахунов А.А., Темербулатова Ж.С., Калиева А.Е. (2026). Денежно-кредитная политика и её влияние на потребительские расходы и бедность в Казахстане. Экономика: стратегия и практика, 21(1), 21-38. https://doi.org/10.51176/1997-9967-2026-1-21-38

**АННОТАЦИЯ**

В условиях высокой внешней волатильности и структурной уязвимости экономики Казахстана возрастает необходимость оценки макроэкономических и социальных эффектов денежно-кредитной политики. Целью данного исследования является изучение взаимосвязи между денежно-кредитной политикой, потребительским спросом, бедностью и неравенством доходов в Казахстане в кризисный и посткризисный периоды. Эмпирический анализ основан на квартальных макроэкономических данных за 2006–2023 гг. и годовых социальных показателях за 2001–2023 гг. Для оценки трансмиссионных механизмов использованы модели временных рядов с лаговыми структурами и множественная линейная регрессия. Результаты показывают, что рост базовой ставки оказывает статистически значимое дезинфляционное воздействие с лагом два квартала (коэффициент −0,059; $p < 0,01$) и снижает темпы экономического роста с лагом три квартала (коэффициент −0,030; $p < 0,01$). Экономический рост положительно влияет на потребление (коэффициент 1,093; $p < 0,05$), тогда как инфляция оказывает сдерживающее воздействие (коэффициент −0,871; $p < 0,10$). Полученные результаты свидетельствуют о том, что влияние денежно-кредитной политики на социальные показатели носит преимущественно косвенный характер и реализуется через каналы инфляции, экономического роста и доходной динамики, что обосновывает необходимость координации монетарных и фискальных инструментов для достижения целей инклюзивного развития. Выводы данного исследования предоставляют политикам ценную информацию для разработки сбалансированной денежно-кредитной политики, которая одновременно обеспечивает макроэкономическую стабильность и способствует инклюзивному социальному развитию.

**КЛЮЧЕВЫЕ СЛОВА:** потребительский спрос, базовая ставка, экономический рост, инфляция, бедность, неравенство доходов, макроэкономическая стабильность, финансовая стратегия

**КОНФЛИКТ ИНТЕРЕСОВ:** авторы заявляют об отсутствии конфликта интересов

**ФИНАНСИРОВАНИЕ.** Исследование было профинансировано Национальным банком Республики Казахстан (научный проект на тему «Потребительский спрос в посткризисный период (международный и казахстанский опыт)»).

**История статьи:**
Получено 25 сентября 2025
Принято 14 февраля 2026
Опубликовано 30 марта 2026

*** Корреспондирующий автор: Калиева А.Е.** – PhD, доцент-исследователь, Казахский национальный университет им. аль-Фараби, пр. аль-Фараби 71, Алматы, Казахстан, 87019889668, email: assemkalieva@gmail.com

## INTRODUCTION

During periods of economic instability, monetary policy plays a central role in macroeconomic regulation by influencing inflation, economic activity, and financial conditions. Changes in the base rate affect aggregate demand through transmission channels such as credit availability, investment activity, and household consumption. As a result, monetary policy decisions have important implications for macroeconomic stabilization.

Kazakhstan represents a relevant case for studying these mechanisms. As an emerging, commodity-dependent economy, it is highly exposed to external shocks, including global financial crises, oil price fluctuations, and pandemic-related disruptions. Over the past two decades, the country has experienced several major crisis episodes – notably the global financial crisis of 2008–2009, the oil price shock of 2014–2016, and the COVID-19 pandemic of 2019–2021 – which have significantly affected inflation dynamics, economic growth, consumer demand, and household incomes.

Despite a broad international literature on monetary policy transmission, existing studies predominantly focus on developed economies and emphasize macroeconomic outcomes such as inflation and output. Far less attention has been paid to the social dimension of monetary policy, particularly in emerging economies, where poverty and income inequality persist. Moreover, the indirect nature of monetary transmission complicates the identification of the channels through which changes in the policy rate ultimately affect household welfare.

The objective of this study is to examine the relationship between monetary policy, consumer demand, poverty, and income inequality in Kazakhstan during the crisis and post-crisis periods. The analysis focuses on the impact of the base rate on inflation, economic growth, household income dynamics, and distributional outcomes, with particular attention to indirect transmission channels.

This study contributes to the existing literature by providing a comprehensive empirical assessment of the social effects of monetary policy in Kazakhstan. Unlike previous research focused on inflation or output, this paper explicitly links changes in interest rates to poverty and inequality indicators. The analysis employs a combined-frequency data approach, integrating quarterly macroeconomic variables with annual social indicators, allowing for the identification of lagged monetary transmission effects and longer-term social impacts.

To address these objectives, the following research questions are examined:

*RQ1*. How does monetary policy, reflected in changes in the base rate, affect inflation, economic growth, and consumer spending in Kazakhstan during crisis and post-crisis periods?

*RQ2*. Is the effect of monetary policy on consumer demand primarily direct or mediated through macroeconomic variables?

*RQ3*. To what extent do changes in the base rate influence poverty and income inequality through indirect transmission mechanisms?

## LITERATURE REVIEW

International experience indicates that crises have different effects on demand dynamics. Global financial crises have a negative impact on key macroeconomic indicators such as GDP, employment, and inflation, which in turn have a direct impact on consumer demand. Lee et al. (2010) argued that household consumption in the US fell sharply in late 2008 amid the deepening financial crisis. Personal consumption expenditure, which exceeded 95% of disposable personal income in 2005, fell below 92% by the second quarter of 2009. Consistent with these findings, Konstantinou & Corsetti (2009) showed that consumption in the US responds only to permanent shocks. In contrast, temporary fluctuations are fully smoothed out, including through external borrowing and lending.

These studies are also supported by the work of Gerlach-Kristen et al. (2013), who found that during a financial crisis, household consumption declines due to reduced permanent income, credit constraints, and liquidity constraints. Consumption growth slows during banking crises and post-credit boom crises. High interest rates on debt depress consumption growth in both normal and crisis periods. Building on this theme, Gerlach-Kristen and Merola (2019) estimated a DSGE model, showing that highly indebted households smooth their consumption less during a crisis.

The impact of crises also extends to the labor market. Financial crises have a significant negative impact on employment and income levels, which, in turn, has a noticeable effect on consumer demand.

In this context, Ganong and Noel (2019) used bank account data to find that consumer demand is highly dependent on the level of unemployment benefits and falls sharply when they are reduced. Job search also appears to be sensitive to the level of social support. An important finding of this study is that households do not increase their debt levels during periods of unemployment, thereby reinforcing the role of fiscal stabilisers. The role of public policy is particularly evident during a pandemic. Santacreu et al. (2022) analyzed the role of fiscal policy during a pandemic, emphasizing that stimulus measures can create an imbalance between demand and supply. In turn, Vavra and Berger (2014) demonstrated that stimulus measures have an uneven impact on consumption across the business cycle, with the response of spending to stimulus significantly weaker during recessions.

Chen et al. (2021) demonstrated that offline consumption in China declined by more than RMB 1.2 trillion within three months of the pandemic's onset. As Watanabe (2020) noted, unlike natural disasters, the pandemic has a greater impact on demand than on supply, making consumption-stimulating policies particularly relevant. At the macro level, Farhi & Rezza Baqaee (2020) showed that aggregate demand shocks during the pandemic exert deflationary pressure and reduce both real and nominal GDP. Cerrato and Gitti (2023) found that approximately a quarter of the post-pandemic inflation increase was attributable to demand rather than supply factors.

Continuing with the behavioural aspects, Pistaferri and Jappelli (2010) emphasised that consumption responds more strongly to permanent than to temporary income changes, and that perceptions of the nature of fiscal policy significantly affect its effectiveness. The importance of targeted fiscal stimulus in a liquidity-constrained environment is confirmed by Corsetti et al. (2015) and Surico & Andreolli (2019). Their studies show that temporary transfers are more effective when targeted at groups with limited savings and a high propensity to consume.

Another important channel is changes in asset prices. Aruoba et al. (2022) and De Nardi et al. (2011) highlighted the importance of asset price changes (including housing and stocks) for consumption. They show that a fall in asset prices directly reduces household spending, especially under fiscal constraints.

The effects of crises also alter the distribution of consumption across population segments. Meyer and Sullivan (2013) showed that income inequality increased throughout the period from 2000 to 2011, while consumption inequality decreased in the second half of this period. This suggests a significant redistribution of spending across income groups. In terms of behavioral responses to shocks, Hodbod et al. (2021) highlighted that changes in preferences and saving behavior have driven the persistent decline in spending. In support of this, Christelis et al. (2020) and Muellbauer (2020) highlighted the impact of employment instability and limited access to credit as key drivers of the short-term decline in consumption.

An interesting contribution to the literature is made by Kaplan et al. (2014), who reconsidered the role of the "wealthy hand-to-mouth poor". These households, despite having assets, live paycheck to paycheck and exhibit high income sensitivity in consumption. Their response to shocks is similar to that of poor households, making them an important target group for demand-side policies.

The National Bank of Kazakhstan conducted a study to identify the impact of macroeconomic indicators on consumer demand. It was found that a long-term relationship exists between consumer demand and all significant macroeconomic variables, except for the economically active population. Factor regression and VAR models were used to estimate the parameters (Zhuzbayev & Seidakhmetova, 2019).

Empirically, monetary transmission is often studied using VAR-based impulse responses; however, alternative approaches, such as local projections, can provide greater robustness to model misspecification and are increasingly used in cross-country EMDE settings. Recent evidence from emerging markets indicates that monetary tightening reduces output growth and inflation once exchange-rate responses are properly accounted for, and highlights that institutional frameworks may matter more than financial depth for the strength of transmission (Jordà, 2005; Mishra et al., 2012; Aleem, 2010).

Thus, international experience confirms that changes in monetary policy via the base rate affect consumption dynamics, particularly during crisis and post-crisis periods. A standard framework for understanding monetary policy transmission emphasizes that the interest-rate channel is often rein-

forced by financial frictions operating through the credit channel. In particular, informational frictions in credit markets amplify the real effects of policy tightening through changes in the external finance premium and borrowers' net worth, thereby strengthening the balance-sheet and bank-lending channels. These mechanisms are central to the "credit channel" interpretation and the financial accelerator framework widely used in modern macro-finance (Bernanke & Gertler, 1995; Bernanke et al., 1999).

Recent empirical literature increasingly emphasizes the heterogeneous and distributional effects of monetary policy, particularly in emerging and developing economies. Furceri et al. (2018) provided cross-country evidence that contractionary monetary policy shocks tend to increase income inequality in both advanced and emerging economies, primarily through labour income and employment channels. Their findings suggest that tighter monetary conditions disproportionately affect lower-income households. At the microeconomic level, Coibion et al. (2017) demonstrated that monetary tightening reduces earnings and employment opportunities for lower-skilled workers more strongly than for high-income groups, reinforcing income dispersion. These results highlight the indirect welfare consequences of interest rate adjustments through labor market transmission.

Financial and institutional conditions further shape the strength of monetary transmission. Aastveit et al. (2017) showed that the effects of monetary policy on output and consumption are amplified during periods of heightened economic uncertainty, a feature particularly relevant for crisis-prone emerging economies. Complementing this perspective, Harjes et al. (2020) document that monetary policy transmission in EMDEs is influenced more by institutional credibility and financial frictions than by financial depth alone, with weaker frameworks leading to stronger real contractions following policy tightening. Synthesizing recent empirical evidence, Xiang (2023) concludes that monetary policy shocks systematically affect income inequality, with contractionary measures generally increasing inequality in the short to medium term, especially in economies with limited social protection and high labor income dependence. Overall, these studies indicate that monetary policy influences household welfare primarily through indirect macroeconomic channels – including employment, income dynamics, and financial constraints – rather than through direct consumption responses. This evidence underscores the importance of incorporating distributional outcomes into analyses of monetary transmission, particularly in emerging market contexts.

Despite the wide range of international studies on the macroeconomic and social effects of financial crises, the literature still lacks a comprehensive empirical analysis of the transmission mechanisms through which monetary policy, especially changes in the base rate, affects consumer demand, poverty, and income inequality in emerging economies. Evidence for emerging and developing economies suggests that institutional constraints, dollarization, limited financial depth, and low credibility of monetary authorities may weaken monetary transmission. These features can distort conventional channels and shift the relative importance toward the exchange-rate and bank-lending mechanisms. Therefore, empirical identification in EMDE settings should explicitly account for such structural characteristics when interpreting estimated policy effects (Mishkin, 2004; Harjes et al., 2020)

Most prior research focuses either on developed countries or isolates individual channels, such as inflation or unemployment, without integrating their indirect social implications. For Kazakhstan, in particular, there is a notable gap in understanding how monetary policy interacts with structural vulnerabilities – such as commodity dependence and weak social safety nets – to shape both economic and social outcomes during crisis and recovery periods. This study seeks to bridge this gap by providing a detailed empirical assessment of how monetary policy influences consumer behaviour and social inequality in Kazakhstan over an extended period spanning multiple crisis episodes.

## METHODOLOGY

To analyze the impact of monetary policy on consumer demand, poverty and inequality in Kazakhstan, data from official statistical sources were used. Data availability constitutes an important constraint of the empirical analysis. Official statistics on poverty and income inequality in Kazakhstan have been available only since 2001 and are reported annually. As a result, the analysis of social indicators is necessarily limited to the period 2001–2023, while macroeconomic variables are examined using quarterly data for the period 2006–2023.

Despite this limitation, the available time span is sufficient to meet the study's objectives and the applied econometric framework. The sample includes multiple economic cycles and major crisis episodes, including the global financial crisis, the oil price shock, and the COVID-19 pandemic, thereby allowing the capture of both short- and medium-term transmission effects of monetary policy. Moreover, the use of parsimonious regression models mitigates potential issues related to sample size and degrees of freedom, ensuring the robustness and interpretability of the estimated relationships.

The main data were obtained from the National Bank of Kazakhstan, the Bureau of National Statistics of Kazakhstan and international financial organizations such as the International Monetary Fund and the World Bank. The variables used to assess the impact of the base rate on inflation, GDP, and consumer spending are shown in Table 1.

**Table 1.** Variables used in assessing the impact of the base rate on inflation, GDP and consumer spending

| Variable | Designation | Description |
|---|---|---|
| Base Rate, Log | LINTBASE | Base Rate of the National Bank of Kazakhstan (policy interest rate) – the main monetary policy instrument of the National Bank of Kazakhstan used to regulate credit conditions and influence inflation. |
| Gross Domestic Product, Log | LGDP | An indicator of economic activity that reflects the volume of goods and services produced. |
| Consumer Spending, Log | LCONSH | The total volume of household expenditure is an important indicator of well-being. |
| Consumer Price Index, Log | LCPI | Measures the level of inflation |
| Investment, Log | LINVEST | The volume of capital investment in the economy |
| World Oil Price, Log | LPOIL | The price of oil on the world market |
| Savings, Log | LSAVE | Funds set aside by households for future expenses |

Note: compiled by the authors

The analysis covers the period from 2006 to 2023 at quarterly frequency, allowing for the short-term effects of monetary policy changes and seasonal fluctuations. The study examined the impact of consumer spending on poverty and income inequality using annual data from 2001 to 2023, as quarterly data were not available. The variables used in the analysis are presented in Table 2.

**Table 2.** Variables used in the study of the impact of consumer spending on poverty and income inequality

| Variable | Designation | Description |
|---|---|---|
| Household final consumption expenditure, logarithm | LCONSH | Total household expenditure is an important indicator of living standards |
| Real gross domestic product, logarithm | LRGDP | Total output of goods and services in real terms |
| Real gross capital formation, logarithm | LRSAVE | Amount of accumulated savings adjusted for inflation |
| Share of population with incomes below the subsistence minimum | BELOWSL | Share of population living below the poverty line |
| Real income used for consumption on average per capita per month, logarithm | LRINCOMEPCPC | Average real income per capita |
| Gini index by decile groups | GINI10 | Measure of economic inequality in income distribution |
| Poverty depth | POVDEPTH | Measure of the extent of poverty in a society |
| Poverty severity | POVSEVERITY | Measure of extreme poverty among the most vulnerable groups of the population |

Note: compiled by the authors

Before building econometric models, the data were tested for stationarity using the Dickey-Fuller (ADF) test to identify unit roots. To stabilize variance and eliminate long-term trends, the variables were logarithmized, and for integrated variables, their first differences were used. All continuous variables are transformed to the log scale to stabilise variance and reduce the influence of extreme values. For non-stationary variables, first differences of logarithms (Δlog) are used in the estimations. This transformation allows the coefficients to be interpreted as approximate growth rates, which is particularly suitable for analyzing macroeconomic dynamics and policy transmission mechanisms. In addition, using Δlog variables mitigates the risk of spurious regression and ensures consistency of the estimated relationships over time.

Although vector autoregression (VAR) and vector error-correction (VECM) frameworks are widely used in the literature to analyze monetary policy transmission, their application in this study is constrained by several data-related considerations. First, the analysis combines quarterly macroeconomic variables with annual social indicators (poverty and inequality measures), thereby significantly reducing the effective sample size and rendering joint estimation of multivariate dynamic systems unreliable. Second, unit root and cointegration tests indicate heterogeneous integration properties across variables and do not provide robust evidence in favor of a stable cointegration rank for the full set of variables required for a VECM specification. Third, the relatively short time dimension for social indicators reduces the degrees of freedom and increases the risk of overparameterization in VAR-type models. Given these limitations, the study employs parsimonious multiple linear regression (MLR) models with lagged explanatory variables, which enable transparent identification of direct and indirect transmission channels of monetary policy while ensuring statistical robustness and interpretability of the estimated coefficients.

To build econometric models, data preprocessing was also performed, including the elimination of outliers, the assessment of autocorrelation and heteroscedasticity, and the use of robust standard errors to improve the reliability of the estimates. Data on income and consumer spending were also examined for seasonal effects that could distort the analysis results.

The study employed time-series models with log-transformed variables, including autoregressive models. In the models with quarterly data, the dependent variables were ΔLCPI – the inflation rate, ΔLGDP – the growth rate of gross domestic product, and Δ LCONSH – the growth rate of consumer spending, while in the models with annual data, BELOWSL – the share of the population with incomes below the subsistence minimum, GINI10 – the Gini index by decile groups, POVDEPTH – the depth of poverty, and POVSEVERITY – the severity of poverty. As independent variables, we tested different sets of the variables listed in Tables 1 and 2, as well as their values with lags from one to three.

Overall, the chosen specification balances methodological rigor with data constraints and allows for a clear interpretation of monetary policy effects on macroeconomic and social indicators.

## RESULTS

This section presents the empirical findings on the transmission of monetary policy to macroeconomic and social outcomes in Kazakhstan. The analysis proceeds in three stages. First, the dynamic relationship between the base rate and key macroeconomic indicators – namely inflation, economic growth, and consumer spending – is examined using quarterly time-series regressions with lagged effects. Second, the indirect influence of monetary policy on household welfare is assessed by examining the relationships among consumer spending, income dynamics, poverty, and income inequality, using annual data. Finally, the results are interpreted in the context of crisis and post-crisis periods to highlight the temporal structure of monetary transmission. Together, these estimates provide evidence on both the effectiveness of interest-rate policy in stabilizing macroeconomic conditions and its predominantly indirect role in shaping social outcomes.

The dynamics of the base rate in Kazakhstan for 2015-2024 are presented in Figure 1.

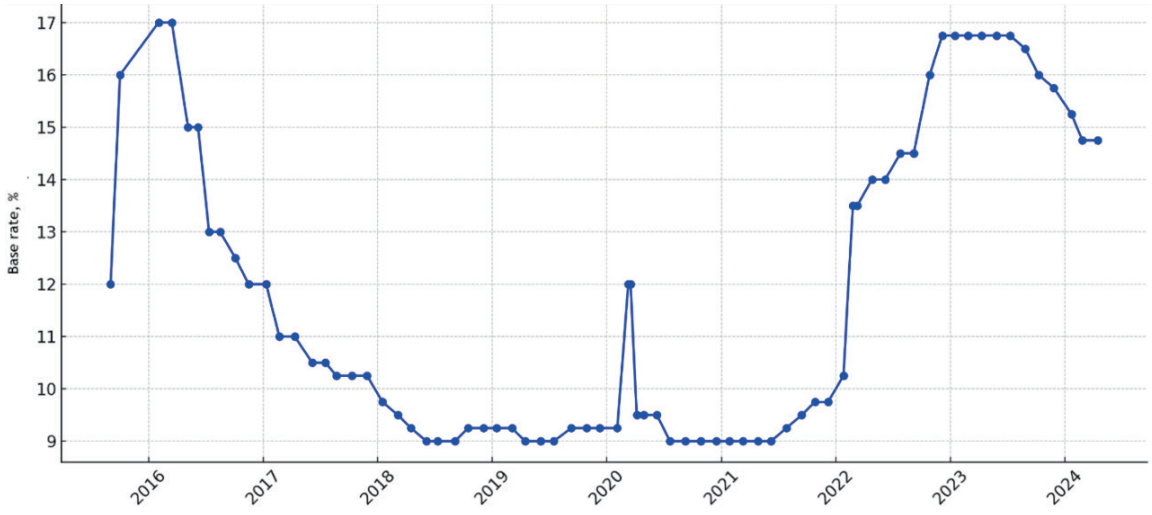


**Figure 1.** Schedule of decisions on the base rate 2015–2024

This period encompasses two major crises: the decline in global oil prices and the COVID-19 pandemic. Kazakhstan, a country heavily dependent on oil exports, experienced a sharp decline in global oil prices beginning in 2014. This decline threatened budget revenues and overall economic stability. In response to economic shocks and falling oil revenues, the Kazakhstani tenge experienced a significant depreciation. In order to stabilize the national currency and contain inflation expectations, the National Bank increased the base rate. As shown in Figure 1, the base rate increased from 12% in 2015 to 16% in 2016 and then to 17%. The devaluation of the national currency led to higher domestic prices, particularly for imported goods, thereby contributing to inflation. The increase in the rate during this period was intended to control inflation and limit the loss of purchasing power among the population.

Following the transition to a floating exchange rate in 2015, the tenge remained under pressure, necessitating stronger monetary policy to protect the national currency and combat inflation. The ongoing devaluation of the tenge has fueled inflation expectations, necessitating a policy tightening by the central bank to prevent price increases and maintain price stability. In the context of economic instability and declining investment activity, it became important to maintain a balance between stabilization measures and the need to stimulate economic growth. In early 2016, the rate was raised to 17% and maintained at this level to contain inflation and stabilize the currency. By mid-2016, as strong pressure gave way to stabilization, the bank cut the rate to 15%. This was done to ease pressure on the economy, reduce borrowing costs, and stimulate business activity and consumption. The rate cut in the second half of the year increased the availability of lending for businesses and individuals, which is important for the recovery of economic activity and consumer demand.

From 2017 to 2019, the National Bank of Kazakhstan continued its policy of gradually reducing interest rates, which was part of the strategy to restore economic growth and stimulate investment activity in the post-crisis period. Following significant declines in oil prices in previous years, prices gradually recovered beginning in 2017, which had a positive impact on Kazakhstan's economy, increasing government revenues and improving the trade balance. With improvements in foreign trade terms and the measures taken, the tenge has become more stable. This reduced inflationary pressures, allowing the National Bank to lower interest rates without incurring a significant risk of destabilising the foreign exchange market. The country was gradually emerging from economic stagnation, which also encouraged the central bank to ease monetary policy to support further growth. The base rate was gradually reduced to 9% during this period.

Improved access to credit stimulated consumer spending, thereby supporting domestic demand and contributing to economic growth. The increase in the base rate to 12% in March 2020 was a comprehensive response to several challenges facing

the Kazakh economy at the onset of the pandemic. This decision aimed to minimize the adverse effects of the pandemic's economic and financial shocks. However, already in April 2020, the National Bank reduced the base rate to support businesses, especially small and medium-sized ones, and stimulate consumer spending. Additionally, during crises, economic liquidity becomes a crucial factor. Reducing interest rates increases the money supply in circulation, thereby providing businesses and the population with the necessary resources.

From July 2020 to July 2021, the base rate was kept at 9%. For many companies and households, the pandemic has increased the debt burden. Keeping the base rate low has helped reduce the cost of servicing existing debt, reducing the risk of defaults and bankruptcies.

After significantly cutting interest rates in previous years to support the economy during the COVID-19 pandemic, many countries have seen a sharp increase in inflation. Several factors caused this:

(1) As economies began to recover from pandemic restrictions, increased demand met with limited supply, which contributed to rising prices.

(2) The pandemic has severely disrupted global supply chains, leading to shortages of many goods and services and, as a result, higher prices.

(3) Rising prices for oil and other commodities have also fueled inflation.

The increase in the base rate from mid-2021 to mid-2023 was part of efforts to contain inflation and maintain economic stability amid a gradual post-pandemic recovery. Since August 2023, the base rate has been gradually declining, reaching 14.75% in April 2024. Reducing inflationary pressures reduces the need to maintain high interest rates to control it. Also, lower interest rates stimulate investment in the economy and the restoration of consumer demand. It is interesting to assess the impact of base rate fluctuations on poverty and inequality. A change in the base rate affects the economy through various channels, and its effects on inequality and poverty can vary significantly depending on current economic conditions, the labor market structure, and the availability of social programs.

Figure 2 illustrates the dynamics of the average annual base rate and the Gini coefficient in Kazakhstan from 2015 to 2023, enabling a visual assessment of changes in income inequality in relation to the monetary policy stance.

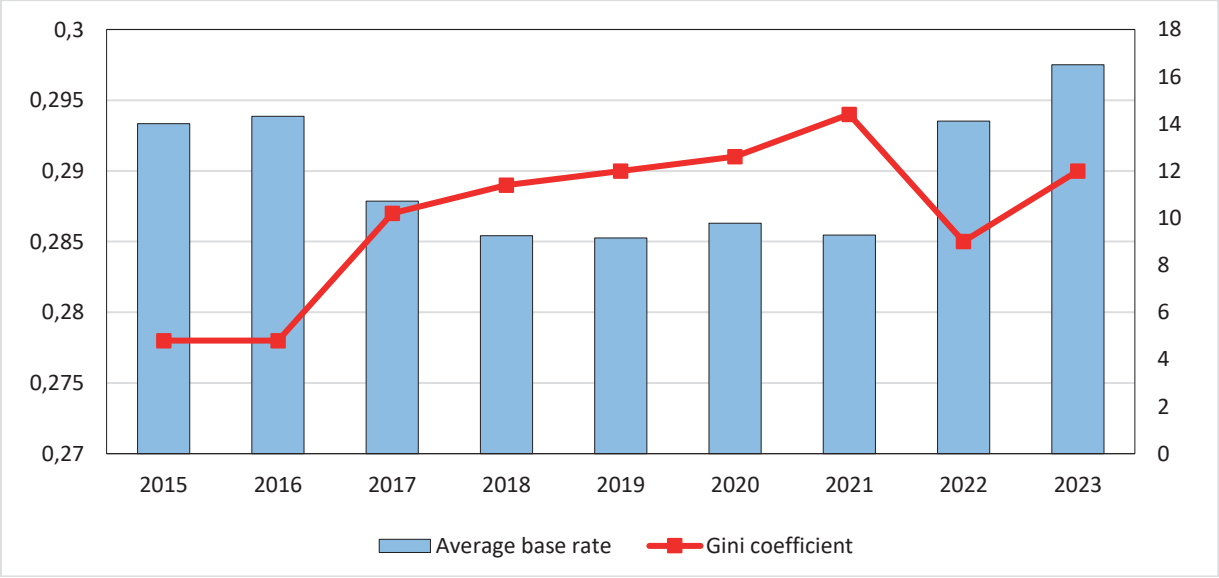


**Figure 2.** Dynamics of the average base rate and Gini coefficient in Kazakhstan

The Gini coefficient, which measures the level of economic inequality, remains relatively stable over the analyzed period, with a slight increase in 2020–2021. This increase coincided with the period after the COVID-19 pandemic, when the economy experienced significant shocks and the base rate fluctuated between 9.75% and 9%. In 2022 and 2023, when the base rate increased sharply to a maximum of

16.75%, the Gini coefficient initially declined and then returned to its previous level. This may indicate that the sharp increase in rates may have initially reduced inflation expectations and temporarily stabilized incomes at lower levels, but then inequality recovered as higher rates began to put pressure on economically vulnerable segments of the population.

Figure 3 presents the evolution of the average annual base rate and the poverty rate in Kazakhstan from 2015 to 2023, highlighting trends in poverty dynamics alongside fluctuations in the policy interest rate.

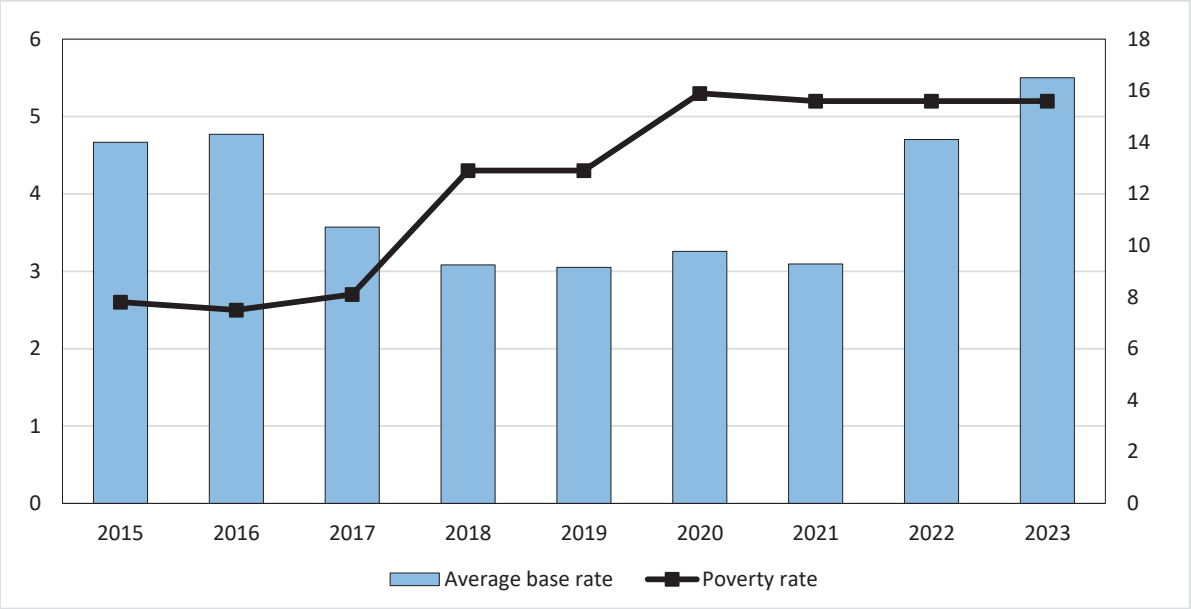


**Figure 3.** Dynamics of the average base rate and poverty rate in Kazakhstan

The poverty rate has been increasing noticeably since 2018, when the base rate was relatively low (9.25% and 9%). This may be because low rates did not generate sufficient economic growth or were unable to offset other economic problems, such as rising unemployment or declining income. From 2020 to 2023, despite an increase in the base rate, the poverty rate continued to rise, reaching 5.2% in 2023. This increase in the rate was intended to control inflation. Still, it could also increase economic pressure on people experiencing poverty by raising the cost of borrowing and reducing access to financial resources. Increasing the base rate is typically aimed at curbing inflation, which can quickly exacerbate the economic situation of low-income groups and exacerbate inequality. However, high rates can also slow economic growth and increase the cost of living, thereby raising the poverty rate.

At the same time, rate cuts aim to stimulate economic activity by making loans more affordable. Still, unless accompanied by appropriate fiscal stimulus or social programs, they may not yield the expected reductions in poverty or inequality. This highlights the complexity of the relationship between monetary policy and socioeconomic indicators such as inequality and poverty. The effectiveness of monetary policy in achieving social goals depends not only on the choice of instruments but also on the broader policy context and on the economy's structural factors. Therefore, quantitative assessments are necessary to determine the actual impact of monetary policy, as reflected in changes to the base rate, on inequality and poverty.

Figure 4, which shows the behavior of real values of household consumer spending, the base rate, gross domestic product, and the consumer price index during 2006–2023 in logarithmic terms, does not provide grounds for concluding the influence of the base rate on the remaining indicators.

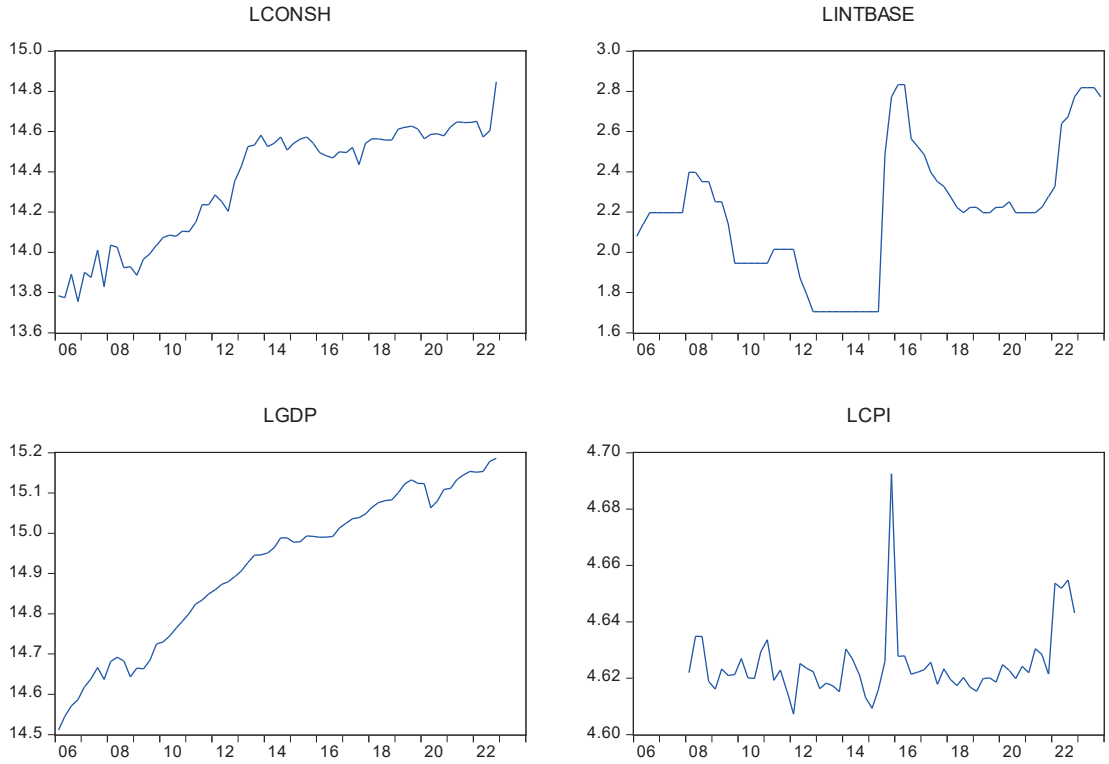


**Figure 4.** Logarithmic dynamics of key macroeconomic indicators

Therefore, econometric calculations were performed to draw conclusions based on quantitative estimates that accounted for all indicators. Their primary objective was to assess the impact of monetary policy on the macroeconomic indicators, particularly household consumption. The study of dependencies among indicators employed the least-squares method for multiple linear regression, based on quarterly data for Kazakhstan from 2006 to 2023. Since all indicators considered are integrated I(1), their first differences are used in the calculations (Table 3).

**Table 3.** Dependent variable Δ LCPI – the growth rate of the consumer price index

| **Independent variable** | **Specifications** | | |
|---|---|---|---|
| | **(1)** | **(2)** | **(3)** |
| ΔLCPI(-1) | | -0.3691***<br>(0.0968) | -0.3122***<br>(0.0545) |
| ΔLINTBASE | 0.0110**<br>(0.0048) | 0.0164***<br>(0.0060) | 0.0166***<br>(0.0053) |
| ΔLINTBASE(-1) | 0.0554***<br>(0.0177) | 0.0575***<br>(0.0206) | 0.0567***<br>(0.0204) |
| ΔLINTBASE(-2) | -0.0699***<br>(0.0238) | -0.0541**<br>(0.0204) | -0.0593***<br>(0.0185) |
| ΔLINTBASE(-3) | | -0.0098<br>(0.0111) | |
| ΔLINVEST(-1) | | 0.0098<br>(0.0116) | |
| Constant | 0.00037<br>(0.00079) | 0.00018<br>(0.00095) | |
| Number of observations | 59 | 58 | 58 |

| | | | |
|---|---|---|---|
| R-squared | 0.50 | 0.58 | 0.57 |
| DW | 2.75 | 2.23 | 2.35 |
| The last column of the table shows the robust standard errors of the coefficients.<br>*** p < 0.01; ** p < 0.05. | | | |

Note: compiled by the authors

The consequences of potential heteroscedasticity are accounted for. According to the estimates in all specifications of Table 3, the coefficients of the first difference of the base rate in the current quarter, as well as with a lag of 1 and 2 quarters, are statistically significant. Moreover, the coefficients of it in the current and previous quarters are positive, and the coefficient of the increment of the base rate with a lag of two quarters is negative. The impact of a change in the base rate, with a 3-quarter lag, on the inflation rate is insignificant. The result appears counterintuitive and can be explained by the fact that the base rate appears to be higher in the current quarter, when inflation growth is already observed, or in the previous quarter, when inflation growth is expected. However, the downward effect of the base rate on the inflation rate is effective only if its increase occurs two quarters prior to the current quarter.

This contemporaneous and short-term positive association reflects the endogenous response of monetary policy to inflationary pressures rather than a causal effect of interest rate changes on inflation. In other words, the base rate reacts to observed or anticipated inflation dynamics, which gives rise to reverse causality in the current and previous quarters. The causal transmission of monetary policy operates with a delay, as captured by the statistically significant disinflationary effect of the base rate with a two-quarter lag. Accordingly, the lagged coefficients provide a more appropriate basis for assessing the effectiveness of monetary policy in controlling inflation.

Specifications (2) and (3) of Table 3 take into account the influence of lags of the dependent variable – the growth rate of the consumer price index (the inflation rate). Their coefficients with a 1-quarter lag are negative. That is, the faster the inflation rate rose in the previous quarter, the greater the contribution to the slowdown in the current quarter. A higher growth rate of investments in the current quarter also reduced the inflation rate.

Table 4 presents regression estimates of the lagged effects of the base rate on GDP growth in Kazakhstan, controlling for world oil prices and investment dynamics to capture the delayed transmission of monetary policy to real economic activity.

**Table 4.** Dependent variable ΔLGDP – the growth rate of gross domestic product

| **Independent variable** | **Specifications** | | |
|---|---|---|---|
| | **(1)** | **(2)** | **(3)** |
| ΔLPOIL | 0.0427***<br>(0.0145) | 0.0457***<br>(0.0130) | 0.0412***<br>(0.0138) |
| ΔLINTBASE(-2) | -0.0118*<br>(0.0065) | | -0.0013<br>(0.0055) |
| ΔLINTBASE(-3) | | -0.0350***<br>(0.0069) | -0.0297***<br>(0.0062) |
| ΔLINVEST(-1) | -0.0163<br>(0.0195) | -0.0231<br>(0.0188) | |
| Constant | 0.0092***<br>(0.0015) | 0.0094***<br>(0.0014) | 0.0092***<br>(0.0015) |
| Number of observations | 58 | 58 | 64 |
| R-squared | 0.28 | 0.36 | 0.24 |
| DW | 2.08 | 1.99 | 2.37 |
| The last column of the table shows the robust standard errors of the coefficients.<br>*** p < 0.01; ** p < 0.05. | | | |

Note: compiled by the authors

According to Table 4, economic growth was significantly influenced by the growth rates of oil prices and the base rate, with a 3-quarter lag. A faster rise in global oil prices and an accelerated inflow of investment into Kazakhstan's economy contributed to an increase in the country's economic growth rate. Rising oil prices increase export revenues, which is especially important for Kazakhstan, an oil exporter, as it raises government revenues and stimulates economic activity. Although investment growth should contribute to economic growth by increasing production capacity and efficiency through investments in production, infrastructure, and other sectors of the economy, this effect is not observed after a one-quarter lag. The increase in investment was included in the equation with a one-quarter lag to avoid simultaneity. At the same time, the change in the oil price was included without a lag, as the world oil price is clearly an exogenous factor influencing the rate of economic growth in Kazakhstan.

An increase in the base rate makes it difficult for businesses to obtain loans and reduces business activity in the country's economy. Its significant impact on the rate of economic growth is manifested with a lag. Note that in specifications (2) and (3) of Table 4, the coefficient for the base rate with a lag of 3 quarters is negative and significant at the 1-per cent level. It turns out that the rate of growth in the base rate has a negative effect on the rate of economic growth, with a lag of 3 quarters.

As noted above, Figure 4 does not illustrate the presence of any relationship between the base rate and consumer spending. Cointegration relationships were examined using the Johansen cointegration test, however, the results did not provide robust evidence of a stable long-run equilibrium among the variables.

Table 5 presents four specifications of the equation with the dependent variable of the growth rate of consumer spending.

**Table 5.** Dependent variable ΔLCONSH – growth rate of consumer spending

| **Independent variable** | **Specifications** | | | |
|---|---|---|---|---|
| | **(1)** | **(2)** | **(3)** | **(4)** |
| ΔLGDP | 1.336***<br>(0.414) | - | - | - |
| ΔLGDP(-1) | - | 0.812*<br>(0.435) | 1.093**<br>(0.476) | - |
| ΔLSAVE | -0.186***<br>(0.053) | - | - | |
| ΔLSAVE(-1) | | 0.099*<br>(0.057) | | 0.208***<br>(0.064) |
| ΔLINTBASE | 0.017<br>(0.052) | | -- | |
| ΔLINTBASE(-1) | | -0.037<br>(0.055) | | -0.065**<br>(0.032) |
| ΔCPI | 0.026<br>(0.483) | - | -0.825*<br>(0.448) | - |
| ΔCPI(-1) | - | -0.871*<br>(0.504) | - | - |
| constant | - | - | - | 0.014**<br>(0.007) |
| Number of observations | 59 | 58 | 58 | 66 |
| R-squared | 0.19 | 0.14 | 0.09 | 0.25 |
| DW | 1.88 | 1.55 | 1.73 | 2.05 |
| The last column of the table shows the robust standard errors of the coefficients.<br>*** p < 0.01; ** p < 0.05. | | | | |

Note: compiled by the authors

The first of them is unsatisfactory, since it has a simultaneity problem, especially since the coefficient of the base rate is insignificant. To address the simultaneity problem, all independent variables in the second regression are lagged by 1 quarter. But in it, too, the coefficient of the growth rate of consumer spending is not significant. According to the results presented in Tables 3 and 4, the growth rate of consumer spending depends on the inflation rate and the economic growth rate, with some lags. As a result, multicollinearity occurs, as evidenced by insignificant coefficients in the estimated regression. In particular, the coefficient of the growth rate of the base rate is insignificant.

Therefore, the third regression includes only two indicators: the economic growth rate and the inflation rate, lagged by 1 quarter. They convey the impact of changes in the base rate on the growth rate of consumer spending. The coefficient in the first is significant at the 5% level and positive, whereas the second is significant only at the 10% level and negative. Let us consider the downward effect of the base rate on the economic growth rate and the varying effects of the base rate on the inflation rate across different lags. It remains unclear what the total impact of the base rate on the growth rate of consumer spending is.

GDP growth leads to an increase in income and, accordingly, to a rise in household spending. It is typically accompanied by increased economic activity, which contributes to job creation and higher wages. An increase in workers' incomes enhances their ability to consume, thereby stimulating demand for goods and services. The growth of consumer spending, in turn, enhances economic growth through the multiplier effect, as increased demand stimulates production and investment in various sectors of the economy. Additionally, an increase in GDP leads to higher tax revenues, enabling the government to enhance social benefits, subsidies, and infrastructure investments. These measures can further support household income and their consumer spending.

In the fourth regression, all estimated coefficients are significant at the 5 per cent level or higher. Note that the coefficient for the savings growth rate is positive. People tend to save more when they have sufficient funds to cover their current expenses. The coefficient in the base rate growth rate is negative. This means that an increase in the base rate growth rate in the previous quarter reduces the growth rate of consumer spending in the current quarter.

The study examined the impact of consumer spending on poverty levels and income inequality, using annual data because quarterly data was unavailable. The results of testing the data for the presence of a unit root are presented in Table 6.

**Table 6.** Results of testing the hypothesis for the presence of a unit root for annual data for 2001–2023

| No. | Indicator | Designation | Integration |
|---|---|---|---|
| 1 | Household final consumption expenditure, logarithm | LCONSH | I(1) |
| | - First difference | ΔLCONSH | I(0) |
| 2 | Real gross domestic product, logarithm | LRGDP | I(1) |
| | - First difference | ΔLRGDP | I(0) |
| 3 | Real gross capital formation, logarithm | LRSAVE | I(1) |
| | - First difference | ΔLRSAVE | I(0) |
| 5 | Share of population with incomes below the subsistence minimum | BELOWSL | I(0) |
| | - First difference | ΔBELOWSL | I(1) |
| | - Second difference | $\Delta^2$BELOWSL | I(0) |
| 7 | Real income used for consumption on average per capita per month, logarithm | LRINCOMEPCPC | I(1) |
| | - First difference | ΔLRINCOMEPCPC | I(0) |
| 8 | Gini index by decile groups | GINI10 | I(0) |
| 9 | Poverty depth | POVDEPTH | I(0) |
| 10 | Poverty severity | POVSEVERITY | I(0) |

Note: compiled by the authors

All attempts to identify the relationship between per capita consumer spending and poverty and inequality indicators have yielded almost no significant results. The only significant linear dependence is established for the pair of indicators: $\Delta^2$BELOWSL and $^{\Delta}$LRINCOMEPCP. The robust estimate of the coefficient for the second of them is significant at the 5 percent level, the value of DW = 2.38 indicates the absence of first-order autocorrelation. The negative value of the coefficient -92.05 can be interpreted as follows. A higher growth rate of real income used for consumption on average per capita reduces the increase (or accelerates the decrease) in the share of the population with incomes below the subsistence minimum.

The remaining regressions constructed, including those given in Table 7, do not meet the requirements of statistical significance. In this table, for all regressions except the second, the DW statistics indicate the presence of first-order autocorrelation of the residuals.

**Table 7.** Dependent variable ΔLCONSH – growth rate of consumer spending

| Independent variable | Dependent variables | | | | |
|---|---|---|---|---|---|
| | BELOWSL | $^{2}$BELOWSL | GINI10 | POVDEPTH | POVSEVERITY |
| ΔLRINCOMEPC | 147.1<br>(149.3) | -92.05**<br>(38.41) | 0.20<br>(0.13) | 3.93<br>(37.2) | 3.71<br>(14.9) |
| ΔLRGDP | | | 0.60***<br>(0.17) | 152.9***<br>(48.7 | 57.6***<br>(19.5) |
| Constant | 10.80**<br>(4.39) | | 0.28***<br>(0.004) | -0.88<br>(1.25) | -0.42<br>(0.50) |
| Number of observations | 22 | 21 | 22 | 22 | 22 |
| R-squared | 0.048 | 0.24 | 0.51 | 0.37 | 0.35 |
| DW | 0.24 | 2.38 | 0.69 | 0.75 | 0.70 |
| The last column of the table shows the robust standard errors of the coefficients.<br>*** p < 0.01; ** p < 0.05. | | | | | |

Note: compiled by the authors

The results indicate that the coefficients associated with the base rate are generally small in magnitude and statistically insignificant across specifications for the poverty rate, poverty depth, poverty severity, and the Gini coefficient. This suggests that there is no strong direct short-term relationship between changes in the base rate and social inequality measures in Kazakhstan. At the same time, these findings should not be interpreted as evidence of the absence of monetary policy effects on poverty and inequality. Rather, they point to the predominantly indirect nature of such effects. As demonstrated in the CPI and GDP regressions, changes in the base rate significantly affect inflation with a lag of two quarters and economic growth with a lag of three quarters. Social indicators respond to these macroeconomic adjustments only with longer and more heterogeneous delays, which reduces the likelihood of detecting statistically significant direct effects in reduced-form regressions. In addition, the limited variation of official poverty and inequality indicators over time, as well as the prominent role of fiscal transfers and social policies in Kazakhstan, further weakens the immediate statistical link between monetary policy instruments and social outcomes.

The empirical results do not reveal a statistically significant direct relationship between changes in the base rate and indicators of poverty and income inequality in Kazakhstan. Across all specifications, the coefficients of the base rate remain small and insignificant for poverty and inequality measures. This indicates that monetary policy does not exert an immediate measurable effect on social outcomes within the current empirical framework. While the base rate significantly affects inflation and economic growth with time lags, the present analysis does not provide robust statistical evidence to quantify indirect effects on poverty and inequality. Therefore, any potential social impacts should be interpreted with caution.

Thus, calculations were performed on time series models to identify how monetary policy affects consumer demand. It was found that the base rate had a significant impact on the behavior of household con-

sumer spending in Kazakhstan through its impact on the rate of economic growth and the rate of inflation with some lags in the studied interval. In general, an increase in the growth rate of the base rate reduced the growth rate of household consumer spending. An increase in the growth rate of consumer spending led to a decrease in the share of the population with incomes below the subsistence level. Its impact on changes in income inequality was not revealed.

## CONCLUSION

The results of this study indicate that monetary policy has a significant impact on key macroeconomic indicators, including inflation, gross domestic product, and consumer spending, in Kazakhstan. The base rate, as the main instrument of monetary policy, exhibits significant effects with a time lag. Changes in the base rate affect economic growth with a lag, reflecting the delayed transmission of monetary policy to real economic activity. The impact of the base rate on consumer spending is relatively weak, indicating that household consumption in Kazakhstan is driven primarily by income, employment, and social transfers.

The results indicate that the relationship between monetary policy and poverty and income inequality is predominantly indirect. Changes in the base rate have a limited direct impact on social indicators, highlighting the need for complementary policy measures.

The findings of this study have important practical implications for economic policy in Kazakhstan. First, given the time lags in the transmission of monetary policy to inflation and economic growth, policy decisions should be forward-looking and based on medium-term macroeconomic forecasts rather than on short-term fluctuations.

Second, the limited direct impact of monetary policy on poverty and income inequality suggests that interest rate instruments alone are insufficient to achieve inclusive growth objectives. Effective coordination between monetary and fiscal policies is required, where monetary policy ensures macroeconomic stability, while fiscal and social policies target income distribution, employment support, and poverty reduction.

Third, during crisis and post-crisis periods, a balanced policy mix is needed to avoid excessive tightening that may slow economic recovery and disproportionately affect vulnerable households. Integrating social indicators into macroeconomic monitoring frameworks may improve policy effectiveness and support sustainable and inclusive growth.

Overall, the study highlights the importance of a flexible and coordinated policy framework that takes into account both macroeconomic stabilization and social development objectives. This is particularly relevant for Kazakhstan, given its dependence on global commodity markets and exposure to external shocks.

## AUTHOR CONTRIBUTIONS

Conceptualization and theory: ZT; research design: AM, AAK, ZT and AYE; data collection: AM and AEK; analysis and interpretation: AAK and ZT; writing draft preparation: AM, AAK, ZT and AYE; supervision: AM and ZT; correction of article: AM, AAK, ZT and AYE; proofread and final approval of article: AM, AAK, ZT and AYE. All authors have read and agreed to the published version of the manuscript.

## REFERENCES

Aastveit, K. A., Natvik, G. J., & Sola, S. (2017). Economic uncertainty and the influence of monetary policy. *Journal of International Money and Finance, 76*, 50–67. https://doi.org/10.1016/j.jimonfin.2017.05.003

Aleem, A. (2010). Transmission mechanism of monetary policy in India. *Journal of Asian Economics, 21*(2), 186–197. https://doi.org/10.1016/j.asieco.2009.10.001

Aruoba, S. B., Elul, R., & Kalemli-Özcan, Ş. (2022). *Housing wealth and consumption: The role of heterogeneous credit constraints* (NBER Working Paper No. 30591). National Bureau of Economic Research. https://doi.org/10.3386/w30591

Bernanke, B. S., & Gertler, M. (1995). Inside the black box: The credit channel of monetary policy transmission. *Journal of Economic Perspectives, 9*(4), 27–48. https://doi.org/10.1257/jep.9.4.27

Bernanke, B. S., Gertler, M., & Gilchrist, S. (1999). The financial accelerator in a quantitative business cycle framework. In J. B. Taylor & M. Woodford (Eds.), *Handbook of Macroeconomics* (Vol. 1, pp. 1341–1393). Elsevier. https://doi.org/10.1016/S1574-0048(99)10034-X

Bureau of National Statistics of the Republic of Kazakhstan. (n.d.). *Official statistics database*. Retrieved December 15, 2025, from https://stat.gov.kz

Cerrato, A., & Gitti, G. (2023). Inflation since COVID: Supply versus demand. *VoxEU CEPR Policy Portal*. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/inflation-covid-demand-or-supply

Chen, H., Qian, W., & Qiang, W. (2021). The impact of the COVID-19 pandemic on consumption: Learning from high-frequency transaction data. *AEA Papers and Proceedings, 111*, 307–311. https://doi.org/10.1257/pandp.20211003

Christelis, D., Georgarakos, D., Jappelli, T., & Kenny, G. (2020). *The COVID-19 crisis and consumption: Survey evidence from six EU countries* (ECB Working Paper No. 2507). European Central Bank.

Coibion, O., Gorodnichenko, Y., Kueng, L., & Silvia, J. (2017). Innocent bystanders? Monetary policy and inequality. *Journal of Monetary Economics, 88*, 70–89. https://doi.org/10.1016/j.jmoneco.2017.05.005

Corsetti, G., Simonelli, S., & Acconcia, A. (2015). *Consumption responds to liquidity-enhancing transfers: Micro evidence from Italian earthquakes.* VoxEU CEPR Policy Portal. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/consumption-responds-liquidity-enhancing-transfers-micro-evidence-italian-earthquakes

De Nardi, M., French, E., & Benson, D. (2011). *Consumption and the Great Recession* (NBER Working Paper No. 17688). National Bureau of Economic Research. https://doi.org/10.3386/w17688

Farhi, E., & Baqaee, D. R. (2020). *Supply versus demand: Unemployment and inflation in the COVID-19 recession*. VoxEU CEPR Policy Portal. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/supply-versus-demand-unemployment-and-inflation-covid-19-recession

Furceri, D., Loungani, P., & Zdzienicka, A. (2018). The effects of monetary policy shocks on inequality. *Journal of International Money and Finance, 85*, 168–186. https://doi.org/10.1016/j.jimonfin.2017.11.004

Ganong, P., & Noel, P. (2019). Consumer spending during unemployment: Positive and normative implications. *American Economic Review, 109*(7), 2383–2424. https://doi.org/10.1257/aer.20170537

Gerlach-Kristen, P., & Merola, R. (2019). Consumption and credit constraints: A model and evidence from Ireland. *Empirical Economics, 57*, 475–503. https://doi.org/10.1007/s00181-018-1461-4

Gerlach-Kristen, P., O'Connell, B., & O'Toole, C. (2013). *How do banking crises affect aggregate consumption? Evidence from international crisis episodes* (ESRI Working Paper No. 464). Economic and Social Research Institute. Retrieved December 15, 2025, from https://www.econstor.eu/bitstream/10419/100200/1/771051042.pdf

Harjes, T., Sahay, R., & Xue, Y. (2020). *Monetary policy transmission in emerging markets and developing economies* (IMF Working Paper No. WP/20/35). International Monetary Fund. https://doi.org/10.5089/9781513529738.001

Hodbod, A., Hommes, C., Huber, S. J., & Salle, I. (2021). *The COVID-19 consumption game-changer: Evidence from a large-scale multi-country survey* (ECB Working Paper No. 2599). European Central Bank.

International Monetary Fund. (n.d.). *IMF data*. Retrieved December 15, 2025, from https://www.imf.org/en/Data

Jordà, Ò. (2005). Estimation and inference of impulse responses by local projections. *American Economic Review, 95*(1), 161–182. https://doi.org/10.1257/0002828053828518

Kaplan, G., Violante, G. L., & Weidner, J. (2014). The wealthy hand-to-mouth. *Brookings Papers on Economic Activity*. Retrieved December 15, 2025, from https://www.brookings.edu/wp-content/uploads/2016/07/2014a_Kaplan.pdf

Konstantinou, P., & Corsetti, G. (2009). *The $2 trillion dollar question: How about U.S. demand and output?* VoxEU CEPR Policy Portal. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/2-trillion-dollar-question-how-about-us-demand-and-output

Lee, J., Rabanal, P., & Sandri, D. (2010). *U.S. consumption after the 2008 crisis*. International Monetary Fund. Retrieved December 15, 2025, from https://www.imf.org/external/pubs/ft/spn/2010/spn1001.pdf

Meyer, B. D., & Sullivan, J. X. (2013). Consumption and income inequality and the Great Recession. *American Economic Review: Papers & Proceedings, 103*(3), 178–183. https://doi.org/10.1257/aer.103.3.178

Mishkin, F. S. (2004). *Can inflation targeting work in emerging market countries?* (NBER Working Paper No. 10646). National Bureau of Economic Research. https://doi.org/10.3386/w10646

Mishra, P., Montiel, P. J., & Spilimbergo, A. (2012). Monetary transmission in low-income countries. *IMF Economic Review, 60*(2), 270–302. https://doi.org/10.1057/imfer.2012.7

Muellbauer, J. (2020). *The coronavirus pandemic and U.S. consumption*. VoxEU CEPR Policy Portal. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/coronavirus-pandemic-and-us-consumption

National Bank of Kazakhstan. (n.d.). *Statistical data*. Retrieved December 15, 2025, from https://www.nationalbank.kz

Pistaferri, L., & Jappelli, T. (2010). *The consumption response to income changes*. VoxEU CEPR Policy Portal. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/consumption-response-income-changes

Santacreu, A., Young, H., & de Soyres, F. (2022). *Demand–supply imbalance during the COVID-19 pandemic: The role of fiscal policy.* VoxEU CEPR Policy Portal. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/demand-supply-imbalance-during-covid-19-pandemic-role-fiscal-policy

Surico, P., & Andreolli, M. (2019). *Smaller economic stimulus payments could boost consumer spending more.* VoxEU CEPR Policy Portal. Retrieved December 15,

2025, from https://cepr.org/voxeu/columns/smaller-economic-stimulus-payments-could-boost-consumer-spending-more

Vavra, J., & Berger, D. (2014). *Durable consumption during recessions*. VoxEU CEPR Policy Portal. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/durable-consumption-during-recessions

Watanabe, T. (2020). *The responses of consumption and prices in Japan to the COVID-19 crisis and the Tohoku earthquake*. VoxEU CEPR Policy Portal. Retrieved December 15, 2025, from https://cepr.org/voxeu/columns/responses-consumption-and-prices-japan-covid-19-crisis-and-tohoku-earthquake

World Bank. (n.d.). *World Development Indicators*. Retrieved December 15, 2025, from https://data.worldbank.org

Xiang, L., Wang, W., Ren, J., & Zhao, Y. (2023). The impact of monetary policy shocks on income inequality: A tale of two countries. *Economic Research–Ekonomska Istraživanja, 36*(1), 1-22. https://doi.org/10.1080/1331677X.2022.2106269

Zhuzbayev, A., & Seidakhmetova, B. (2019). *The impact of factors on consumer demand in Kazakhstan: An empirical assessment* (NBRK Working Paper No. 2). National Bank of Kazakhstan.

## Information about the authors

**Aliya B. Mukhamediyeva** – Cand. Sc. (Econ.), Associate Professor, Almaty Management University, Almaty, Kazakhstan, email: aliya.mukhamediyeva@gmail.com, ORCID ID: https://orcid.org/0000-0002-0359-6052

**Azimzhan A. Khitakhunov** – PhD, Senior Research Fellow, Central Asian Policy Studies, Almaty, Kazakhstan, email: azimkhun@gmail.com, ORCID ID: https://orcid.org/0000-0003-3455-563X

**Zhansaya S. Temerbulatova** – PhD, Research Professor, Almaty Management University, Almaty, Kazakhstan, email: t.zhansaya.s@mail.ru,ORCID ID: https://orcid.org/0000-0002-3205-0948

***Assem Ye. Kaliyeva** – PhD, Associate Research Professor, Al-Farabi Kazakh National University, Almaty, Kazakhstan, email: assemkalieva@gmail.com, ORCID ID: https://orcid.org/0000-0002-1154-4287

## Авторлар туралы мәліметтер

**Мухамедиева А.Б.** – э.ғ.к., қауымдастырылған профессор, Алматы Менеджмент Университет, Алматы, Қазақстан, email: aliya.mukhamediyeva@gmail.com, ORCID ID: https://orcid.org/0000-0002-0359-6052

**Хитахунов А.А.** – PhD, аға ғылыми қызметкер, Central Asian Policy Studies, Алматы, Қазақстан, email: azimkhun@gmail.com, ORCID ID: https://orcid.org/0000-0003-3455-563X

**Темербулатова Ж.С.** – PhD, зерттеуші профессор, Алматы Менеджмент Университет, Алматы, Қазақстан, email: t.zhansaya.s@mail.ru, ORCID ID: https://orcid.org/0000-0002-3205-0948

***Калиева А.Е.** – PhD, доцент-зерттеуші, әл-Фараби атындағы Қазақ ұлттық университеті, Алматы, Қазақстан, email: assemkalieva@gmail.com, ORCID ID: https://orcid.org/0000-0002-1154-4287

## Сведения об авторах

**Мухамедиева А.Б.** – к.э.н., ассоциированный профессор, Алматы Менеджмент Университет, Алматы, Казахстан, email: aliya.mukhamediyeva@gmail.com, ORCID ID: https://orcid.org/0000-0002-0359-6052

**Хитахунов А.А.** – PhD, старший научный сотрудник, Central Asian Policy Studies, Алматы, Казахстан, email: azimkhun@gmail.com, ORCID ID: https://orcid.org/0000-0003-3455-563X

**Темербулатова Ж.С.** – PhD, профессор исследователь, Алматы Менеджмент Университет, Алматы, Казахстан, e-mail: t.zhansaya.s@ mail.ru, ORCID ID: https://orcid.org/0000-0002-3205-0948

***Калиева А.Е.** – PhD, доцент-исследователь, Казахский национальный университет им. аль-Фараби, Алматы, Казахстан, email: assemkalieva@gmail.com, ORCID ID: https://orcid.org/0000-0002-1154-4287