ISSN: 2181-3906 2025

International scientific journal
«MODERN SCIENCE AND RESEARCH»
VOLUME 4 / ISSUE 5 / UIF:8.2 / MODERNSCIENCE.UZ

AN EMPIRICAL ANALYSIS OF FINANCIAL BEHAVIOR IN POST-SOVIET ECONOMIES DURING PERIODS OF INFLATION

Sodikov Elmurod Shomurod ugli
Master's student in International Business Management at Westminster International University.
+9989(90)936-99-69. elmurod.sadikov@econfun.org
https://doi.org/10.5281/zenodo.15405319

Abstract. *This study examines how inflation affects household consumption behavior across nine post-Soviet economies - Armenia, Belarus, Estonia, Lithuania, Latvia, Moldova, Russia, Ukraine, and Uzbekistan - from 2011 to 2021. Using panel data regression techniques, the research evaluates the impact of inflation and other macroeconomic factors such as gross domestic savings, credit to the private sector, consumer price index, and population growth on consumption expenditure. The analysis reveals significant heterogeneity across countries and highlights the mediating role of credit access and institutional strength. The findings offer valuable policy insights for enhancing financial resilience and managing inflationary impacts in transition economies.*

Introduction

Inflation - defined as the sustained rise in the general price level - remains a central macroeconomic challenge, especially for transitional post-Soviet economies. Following the collapse of the USSR, these countries shifted from centrally planned to market-driven systems, leading to economic volatility, institutional instability, and inflationary surges. Such volatility has deeply affected household consumption behavior, with inflation eroding purchasing power and reshaping spending priorities.

Despite a well-established body of research on inflation in advanced economies, studies focusing on its behavioral effects in transitional contexts remain limited. The unique characteristics of post-Soviet states - including weak financial systems, political instability, and low financial literacy - demand context-specific inquiry. These factors amplify the impact of inflation, leaving households particularly vulnerable and policy responses often inadequate.

This study addresses this gap by empirically analyzing the relationship between inflation and household consumption expenditure in nine post-Soviet countries - Armenia, Belarus, Estonia, Latvia, Lithuania, Moldova, Russia, Ukraine, and Uzbekistan - between 2011 and 2021.

It also incorporates macroeconomic variables such as private sector credit, gross domestic savings, consumer price index, and population growth to explore broader determinants of consumption behavior.

Research Questions

1. How does inflation influence household consumption expenditure in post-Soviet countries?
2. What roles do macroeconomic variables like savings, private sector lending, CPI, and population growth play during inflation?
3. Is there a divergence in financial behavior among these countries?
4. What policy interventions can help mitigate inflation's adverse effects?

Literature Review

Theoretical Background. Classical economic theory, particularly the Quantity Theory of Money (Friedman, 1963), views inflation as a monetary phenomenon that erodes purchasing power, prompting changes in consumption and savings behavior. In contrast, Keynesian theory (Keynes, 1936) emphasizes short-run price rigidities and aggregate demand, positing that expectations about future income and prices mediate consumption decisions. Long-term income expectations, as outlined in the Permanent Income Hypothesis (Friedman, 1957) and Life-Cycle Hypothesis (Modigliani & Brumberg, 1954), also shape consumption behavior during inflation.

Behavioral economics contributes further by highlighting money illusion and other cognitive biases (Shafir et al., 1997), which often lead to suboptimal decisions in inflationary contexts. In transition economies, low financial literacy, institutional weakness, and informal markets exacerbate these effects. Post-Soviet economies, characterized by unstable monetary regimes and underdeveloped financial systems, require adjustments to conventional models (Kornai, 1992).

Empirical Evidence. Empirical research confirms that inflation reduces real purchasing power and shifts spending toward essential goods (Deaton, 1992; Duesenberry, 1949). Inflation expectations further influence consumption, as households anticipating higher inflation often increase precautionary savings (Mankiw & Reis, 2002). Studies in post-Soviet contexts underline the role of institutional deficiencies (Kornai, 1992; Havrylyshyn & Odling-Smee, 2000), financial underdevelopment, and credit constraints in amplifying inflation’s adverse effects.

Additionally, inflation is found to worsen income inequality, disproportionately affecting low-income groups (Gurvich & Kolotilin, 2014). Monetary policy effectiveness in stabilizing consumption under inflationary pressures has also been documented (Kattai & Kukk, 2015; Romer, 1993).

Research Gap. Despite a robust literature base, limited research specifically examines post-Soviet economies over time, using household-level data. Existing studies often focus on advanced economies and short-term effects. This study addresses the gap by analyzing nine post-Soviet countries from 2011 to 2021, assessing how macroeconomic variables such as gross domestic savings, credit access, and population growth influence household consumption during inflation. The aim is to provide context-specific insights and policy recommendations to improve financial resilience in transitional economies.

Methodology

The study employs a quantitative approach using panel data regression (OLS, Fixed Effects, and Random Effects) based on macroeconomic indicators sourced from the World Bank and IMF. The dependent variable is log-transformed household consumption expenditure. Independent variables include:

- Inflation Rate (IR)
- Gross Domestic Savings (GDS)
- Credit to Private Sector (CPS)
- Consumer Price Index (CPI)
- Population Growth (PG)

Log transformations were applied to normalized data. A Hausman test was conducted to determine the most suitable model between fixed and random effects, with fixed effects ultimately selected.

Model Specification

The estimated econometric model is:

$\ln(\text{Consumption Expenditure}) = \beta_0 + \beta_1\ln(IR) + \beta_2\ln(GDS) + \beta_3\ln(CPS) + \beta_4\ln(CPI) + \beta_5\ln(PG) + \varepsilon$

Diagnostic tests ensured robustness through VIF (for multicollinearity), Durbin-Watson (for autocorrelation), and Breusch-Pagan (for heteroskedasticity).

Results

The fixed effects model showed that:

- Inflation had a significant negative impact on household consumption ($\beta = -0.0243$, $p = 0.042$).
- Population growth consistently had a positive effect on consumption ($\beta = 0.0412$, $p = 0.026$).
- Credit to the private sector had a positive and significant effect ($\beta = 0.1205$, $p < 0.001$).
- Gross domestic savings and CPI effects varied and were not significant across all models.

The Hausman test confirmed fixed effects as the more appropriate model ($p = 0.0096$).

Findings

The findings validate that inflation erodes household purchasing power, confirming classical economic theory. The positive influence of credit access indicates its buffering role against inflation shocks. While OLS suggested a negative correlation between credit and consumption, the panel models revealed the longer-term positive effect, highlighting the importance of robust financial systems. Population growth increased aggregate demand, driving up consumption, whereas gross savings did not significantly moderate inflation's impact.

The variation in results across countries emphasizes the role of institutional quality and policy environment. The study indirectly supports the notion that institutional weaknesses—common in post-Soviet economies - amplify inflation's adverse effects. Although not directly measured, inequality appears exacerbated by inflation, disproportionately affecting low-income households with limited access to credit and savings mechanisms.

Contributions and Policy Implications

This study contributes to the limited empirical literature on financial behavior under inflation in post-Soviet economies. It offers both theoretical validation and policy-relevant insights:

- Access to credit markets can cushion inflation's effect on households.
- Demographic trends, particularly population growth, must be factored into consumption forecasts.
- Institutional development and financial literacy improvements are critical to mitigating inflation's impact.

Policymakers should promote financial inclusion, stabilize credit systems, and tailor responses to country-specific economic and institutional contexts.

Discussion

This study contributes to the growing body of literature on the relationship between inflation and private consumption expenditure in the post-Soviet economies. Employing regression analysis, the study examines the main effects of inflation on consumption and elucidates the crucial mediating variables such as credit, institutional quality, population dynamics, and macroeconomic stability.

The findings have pragmatic implications for policymakers and economists, particularly for economies undergoing grand structural changes, as in post-Soviet economies. Implications and Contribution The result of this research has broader implications for accounting for household economic behavior in transition economies and informing policy intervention against inflationary pressures. More generally, the work emphasizes the fundamental role of credit systems and financial markets in neutralizing the anti-consumption effects of inflation. The inverse relationship between inflation and consumption spending documented in the present study agrees with mainstream economics theory (Friedman, 1963), which suggests that inflation has the effect of lowering real purchasing power and curbing consumer demand. But the research also shows that access to credit can counteract such effects, providing evidence for the mediating role played by financial markets in influencing consumption, especially in high and volatile inflation economies. This evidence corroborates that of Romer (1993), who argued that the availability of credit reduces the negative impact of inflation on consumption.

The heterogeneity of the inflationary impact between post-Soviet countries also has significant policy implications. Empirical evidence to support this research sustains the contention that inflation is not always an equal source of concern in household consumption between countries due to differences in economics, politics, and institutions shaping the reactions of households to inflationary circumstances. Institutional and economic heterogeneity among regions can lead to inflation disparities as noted strongly by Havrylyshyn and Odling-Smee (2000). These results reinforce the importance of considering country-specific factors when developing economic policies and interventions to stabilize consumption during periods of inflation. This is particularly pertinent in the post-Soviet environment, where political and economic transformation processes continue and institutions are being built in the process.

Furthermore, the study has important implications with respect to broader socio-economic consequences of inflation, with emphasis placed on its contribution to increasing income inequalities. The finding that inflation disproportionately affects poor families is in line with the contribution of Gurvich and Kolotilin (2014), who assumed that inflation has the effect of raising income inequality by reducing the real incomes of members of low-income groups, thereby reducing their ability to consume. This evidence highlights the 31 importance of social protection policies that are specifically tailored to capture the peculiar risks of low-income families in periods of inflation.

REFERENCES

1. Alvarez, F., & Lippi, F. (2014). Price Setting with Menu Cost for Multi-Product Firms. Econometrica, 82(1), 89-135.

2. Bachmann, R., Berg, T. O., & Sims, E. R. (2015). Expectations and Readiness to Spend: Cross-Sectional Evidence. American Economic Journal: Economic Policy, 7(1), 1-35.
3. Baker, S. R., & Yannelis, C. (2017). Income Changes and Consumption: Evidence from the 2013 Federal Government Shutdown. Review of Economic Dynamics, 23, 99-124.
4. Basu, S., & Bundick, B. (2017). Uncertainty Shocks in a Model of Effective Demand. Econometrica, 85(3), 937-958.
5. Bernanke, B. S. (1983). Irreversibility, Uncertainty, and Cyclical Investment. The Quarterly Journal of Economics, 98(1), 85-106.
6. Coibion, O., & Gorodnichenko, Y. (2015). Information Rigidity and the Expectations Formation Process: A Simple Framework and New Facts. American Economic Review, 105(8), 2644-2678.
7. Hansen, L. P., & Singleton, K. J. (1983). Stochastic Consumption, Risk Aversion, and the Temporal Behavior of Asset Returns. Journal of Political Economy, 91(2), 249-265.
8. Parker, J. A. (1999). The Reaction of Household Consumption to Predictable Changes in Social Security Taxes. American Economic Review, 89(4), 959-973.