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THE EFFECT OF CENTRAL BANK OF KENYA'S INTEREST RATE FLUCTUATION ON THE HOUSEHOLD DISPOSABLE INCOME IN KENYA

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ABSTRACT

This is a proposal to investigate the relationship between Central Bank of Kenya (CBK) monetary policy decisions, particularly the Central Bank Rate (CBR) fluctuations and the household disposable income in Kenya. CBK has had about ten consecutive rate cuts between August 2024 and February 2026, bringing the CBR from 13% to 8.75%. As such, it is critically important to understand how these unprecedented policy shifts transmit to the household financial wellbeing. While statistics show that aggregate disposable income has risen from Ksh. 14,188 billion in 2013 to Ksh. 15,360 billion in 2024, the main concern about the distributional effect and transmission mechanism affecting the ordinary household in Kenya remains unaddressed. This study will use a mixed method approach that combines time series econometric analysis with household survey data to explore the direct effects (through borrowing cost and interest income) and indirect effects (through employment and inflation) of interest rate changes on the household disposable income across different income strata. The findings of this study will contribute to understanding the retributive consequences of monetary policy and inform a more inclusive policy design.

SECTION ONE
INTRODUCTION
1.1 Background of the Study

Monetary policy is one of the most powerful tools available to macroeconomic managers. It is conducted through adjustments to the Central Bank Rate (CBR). The Monetary Policy Committee (MPC) of the Central Bank of Kenya meets bimonthly to review CBR, which serves as the benchmark for all lending rates in the economy. This in turn affects the cost of credit, savings, and overall economic activity in the country. Over the past three years, between February 2024 and February 2026, Kenyan households have witnessed most dramatic monetary policy cycles. In this period, the CBR rate was pushed to 13% in early 2024, followed by unprecedented easing cycle that led to consecutive rate cuts adjusting the CBR to 8.75% becoming the most aggressive easing cycle in Kenya (Njuguna, 2026). According to Njuguna (2026) analysis, the policy shift was accompanied by a stable inflation of 4.4%, private sector credit growth adjusting to 6.4% and average lending rate reducing to 14.8% down from 18.3% in November 2024.

Economic research has profoundly documented the various pathways through which these interest rate variations are transmitted to households. Changes in the CBR have a direct impact on interest revenue from savings and deposits as well as the cost of variable-rate loans, such as credit card debt, personal loans, and mortgages (Auclert, 2019). On the other hand, changes in interest rates have an indirect effect on household disposable income by influencing employment, company investment, and the overall level of prices (Coibion et al., 2017). Understanding these effects on households is vital in evaluating the complete welfare implications of monetary policy decisions especially in developing economies where household balance sheets and financial market participation differ significantly from those in advanced economies (Hnatkovska, Lahiri, & Végh, 2016).

This analysis is made possible by Kenya's comparatively strong official statistical system. National accounts data, including total household disposable income, are routinely released by the Kenya National Bureau of Statistics (KNBS). The Central Bank of Kenya keeps extensive datasets on credit aggregates, interest rates, monetary policy indicators, and banking industry data. In addition, detailed, disaggregated household-level data on financial inclusion, income sources, and financial behavior are regularly provided by cooperative programs such the FinAccess Household Survey (conducted by CBK, KNBS, and FSD Kenya) (FSD Kenya, 2022). These data sets enable thorough empirical research of the effects of monetary policy on various household types.

Scholarly interest in distributional effects of monetary policy has increased worldwide. Research now looks at how monetary policy affects various demographic segments in a heterogeneous way, going beyond aggregate

results like growth and inflation (Sen & Sensarma, 2025). Sen and Sensarma (2025) point out that because household heterogeneity in income, wealth, employment, and consumption patterns means that policy changes create both winners and losers, the COVID-19 pandemic sparked renewed interest among researchers and policymakers in the distributional consequences of monetary policy. However, the majority of current research has concentrated on wealth disparity and advanced economies, paying little attention to developing nations where income and consumption inequality pose more urgent policy challenges. This gap in literature provides the basis for examining the Kenyan context.

1.2 Statement of the Problem

While aimed at stimulating economic growth and managing inflation, the Central Bank of Kenya's aggressive monetary policy changes has complex and uneven effects for household disposable income. The effect of CBR changes to commercial bank lending and deposit rates is not often straightforward. As such, the impact on household purchasing power is measured through changes in loan repayments, interest earnings, job security, and the prices of goods and services.

Evidence from recent international studies demonstrate that monetary policy has systematic redistributive effect. According to Sen and Sensarma (2025), contractionary monetary policy in India leads to rise in consumption inequality but a decrease in income inequality, with differential impact on capital income earners against wage income earners. Moreover, Punzi (2020) research conducted across eight Asian economies show that expansionary monetary policy generally leads to lower income inequality with distributional effect operating mainly through asset pricing and inflation models. International Monetary Fund (2025) also report that monetary policy in low income countries faces inherent trade-offs since poor households cannot insure against shocks while richer households can tap into their wealth, revealing that fiscal transfers may be more effective for redistribution. This knowledge gap is critical especially regarding how such transmission mechanisms have specifically affected Kenyan households during recent volatile policy cycle. Although cumulative statistics from KNBS show that disposable personal income increased from Ksh. 14,188 billion in 2023 to Ksh. 15,350 billion in 2024 (Trading Economics, 2026), the macro level figures mask underlying distributional effects. The disaggregated data available on platforms such as FinAccess Household Survey (FSD Kenya, 2022) offers an opportunity to conduct a more nuanced analysis of how monetary policy changes affect household incomes. Policymakers do not have empirical evidence on whether policy easing has net relief to the average household or disproportionately benefited specific segments of the population, exacerbating income inequality.

Therefore, this study is required to dichotomize these effects, offering evidence based insights to guide the imminent monetary policy towards more inclusive results in Kenya.

1.3 Objectives of the Study

The main objective of this study is to investigate the effect of Central Bank of Kenya interest rate fluctuations on household disposable income in Kenya. The specific objectives are

i. To quantify the direct impact of CBR changes on household disposable income through the cost of debt and interest income for the period 2016-2026
ii. To examine the indirect impact of CBR changes on household disposable income via employment and inflation channels in the period 2016 to 2026.
iii. To compare the effects of CBR changes on disposable incomes across different household income strata using disaggregated data where possible.
iv. To identify the primary transmission mechanisms that link monetary policy to household financial outcomes and propose policy recommendations for more inclusive monetary policy framework.

1.4 Research Questions

The following research questions will guide this study:

i. What is the direct effect of fluctuations in the Central Bank Rate (CBR) on household disposable income through changes in the cost of household debt and income from interest-bearing assets?
ii. What are the indirect effects of CBR fluctuations on household disposable income transmitted through changes on employment levels and the inflation rate?
iii. How do these direct and indirect effects vary across different household income strata in Kenya?
iv. What are the key transmission mechanisms through which CBR changes most expressively influence household financial wellbeing?

1.5 Hypotheses of the Study

The following null hypotheses will be tested in this study:

H_{01}: There is no significant direct effect of CBR fluctuations on household disposable income through the cost of debt and interest income.
H_{02}: There is no significant indirect effect of CBR fluctuations on household disposable income through employment and inflation channels.
H_{03}: There is no significant difference in the effects of CBR fluctuations on disposable incomes across different household income strata.
H_{04}: There is no identifiable primary transmission mechanism linking monetary policy to household financial outcomes in Kenya.

1.6 Significance of the Study

This study will benefit various stakeholders. First, Central Bank of Kenya and National Treasury, among other policy makers will receive empirical evidence in the redistributive effect of monetary policy in the global south economy, enabling them to design policies that consider household level impact alongside macroeconomic targets. As the International Monetary Fund (2025) suggests, understanding these effects and tradeoffs is essential for effective policy establishment.

For academics and researchers, the study will contribute to the growing literature on monetary policy transmission and inequality in the global south economies. While most existing studies focus on advanced economies or large emerging markets such as India (Sen & Sensarma, 2025), this study will extend that literature to the East African context, particularly Kenya.

For financial institutions, the study will provide insights on how different household segments respond to the changes in the interest rate. This will inform their product development, risk management and responsible lending practices.

Lastly, the study will enhance the households and the public understanding of how CBK decisions translate into personal financial outcomes, potentially improving financial literacy and household financial planning.

1.7 Scope of the Study

This study will focus on the period from 2016 to 2026, capturing the most recent and aggressive monetary policy cycle in Kenya. The ten-year period ensures all data falls within a relevant timeframe and allows for meaningful time-series analysis. Geographically, the study will cover Kenya nationally, using secondary data from CBK and KNBS that provides national-level aggregates as well as disaggregated household survey data.

The study will specifically examine the Central Bank Rate (CBR) as the measure of interest rate fluctuation. Household disposable income will be analyzed both at aggregate level from KNBS national accounts and at disaggregated level from FinAccess Household Surveys and other available survey data. The transmission channels to be examined include direct channels (cost of debt and interest income) and indirect channels (employment and inflation).

1.8 Conceptual Framework of the Study

The conceptual framework demonstrates the relationships that exist between the independent variable (CBR Fluctuations) and the dependent variable (household disposable income), as mediated by various transmission channels.

1.8.1 Independent Variables

The independent variable is the Central Bank Rate (CBR) fluctuation measured by:

i. Changes in the CBR (basis points)
ii. Direction of change (is it increase or decrease)
iii. Magnitude and duration of the policy stance

1.8.2 Dependent variables

The independent variable is household disposable income, measured by:

i. Real disposable income per household
ii. Distribution of disposable income across strata
iii. Consumption capacity and savings rates

1.8.3 Mediating Variables (Transmission Channels)

The mediating variables are the transmission channels through which the CBR affects household disposable income. The channels include:

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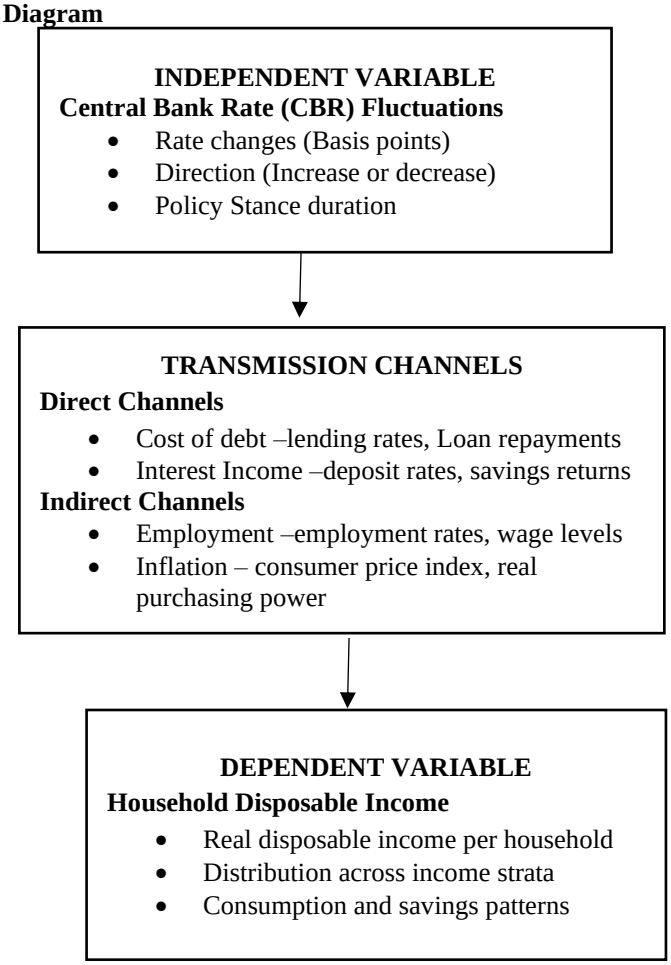
Direct Channels

- Cost of debt (lending rates and loan repayments)
- Interest income (deposit rates and savings returns)

Indirect Channels

- Employment (wage levels and employment rates)
- Inflation (Consumer price index and real purchasing power)

1.8.4 Conceptual Framework Diagram



1.8.5 Description of Variables

Variable	Type	Description	Measurement	Data Source
Central Bank Rate	Independent	Policy interest rate set by MPC	Percentage points, basis point changes	CBK
Cost of Debt	Mediating	Interest rates charged on loans	Average lending rates, loan portfolio composition	CBK
Interest Income	Mediating	Returns on savings and deposits	Average deposit rates, savings composition	CBK
Employment	Mediating	Labor market conditions	Employment rate, wage levels, sectoral employment	KNBS
Inflation	Mediating	General price level	Consumer Price Index (CPI), sectoral inflation	KNBS
Household Disposable Income	Dependent	Income after taxes and transfers	Real income per household, income distribution	KNBS, FinAccess

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SECTION TWO
LITERATURE REVIEW

2.1 Introduction

The chapter review literature relevant to the study of interest rate fluctuations and household disposable income. The review starts with theoretical literature, exploring the foundational theories that describe monetary policy transmission and distributional effects. This is followed by empirical literature that reviews previous studies conducted n the global south, low income nations and particularly, Kenya. The chapter ends with a summary of the literature and identification of the research gap that this study seeks to fill.

2.2 Theory and Concepts of Variables Interplay

Monetary policy affects household welfare through in this manner. First, when the Central Bank of Kenya changes interest rates, it directly impacts what households pay to borrow. Lower rates mean cheaper loans and less spent on debt, leaving more money to spend. Higher rates do the opposite; they squeeze disposable income for those with debt. Then there's the wealth effect: rate changes influence the value of assets like homes and stocks. Lower rates tend to push asset prices up, making households with assets feel richer and spend more. Finally, interest rates affect the exchange rate, which matters for a country like Kenya that imports a lot. A weaker currency makes imports costlier, eating into household purchasing power.

2.3 Theoretical Literature Review

2.3.1 The Redistribution Channel of Monetary Policy

Auclert (2019) provides a foundational framework explaining how monetary policy systematically redistributes resources across the households. This redistribution channel operates through various mechanisms including earnings heterogeneity, where workers in interest sensitive sectors of economy experience different income effects. Portfolio composition describes where households with different asset and liability structures are affected asymmetrically. On other hand, savings revaluation explains changes in real interest rates impact the present value of future income streams.

This theory is relevant for the Kenyan context, where financial inclusion varies significantly across the population. Households with high levels of debt relative to assets encounter interest rate changes differently from those with significant savings. Auclert (2019) theory posits that expansionary monetary policy benefits net borrowers at the expense of the net savers, while contractionary policy has the opposite effect.

2.3.2 Heterogeneous Agents and Transmission in Developing Economies

Hnatkovska, Lahiri, and Végh (2016), present a model specifically calibrated for the global south. The study demonstrates three key channels of monetary transmission in developing economies. These channels are: a liquidity demand where access to formal financial markets varies across households, a fiscal channel where government debt and fiscal policy interact with monetary policy and output channel where production frameworks differ from advanced economies.

According to the authors, monetary policy shocks produce different exchange rate responses in the global south compared to the advanced economies, underscoring the need for country specific analysis. This theory supports the need for this study because it suggests that the effects of monetary policy in Kenya cannot be inferred from the studies conducted in advanced economies.

2.3.3 Dual Sector Models and Structural Transformation

Chakraborty (2016) developed a dual sector model designed for newly industrialized economies. The model's key insights include sector specific effects where monetary policies executed in the urban sector causes waves of adjustments to the rest of the economy. Another insight from the study is trickle-in effects where liquidity shocks to one sector causes appreciable real effects to the other sectors through trading relationships. Third, the research describes asymmetric adjustments where rural sectors lag behind urban sectors during monetary policy adjustments.

This theory is relevant for Kenyan context which has significant rural-urban divide and where agriculture remains a major sector of the economy. The theory posits that the effects of CBR changes may differ substantially between rural and urban households who likely have formal bank accounts, loans and wage employment, and rural households who may be more likely engaged in agriculture and informal economic activities.

2.4 Empirical Literature Review

2.4.1 Evidence from Global South

Sen and Sensarma (2025) provide the most current and complete study of monetary policy's distributional effects in a developing country context. The researchers used monthly data from over 23000 Indian households for 2014-2023 and applied rigorous econometric methods including Sign-Restricted VAR and Local Projection methods. The study found out that contractionary monetary policy leads to rise in consumption inequality but a fall in income inequality. Implicitly, the contractionary policy widens the gap between capital income earners and wage income earners. The study also revealed that restrictive monetary policy reduces both capital income inequality and wage income inequality when measured separately. Researchers also found out that monetary policy exhibits asymmetric effects. This means that expansionary policy and contractionary policy changes do not have mirror-image impacts.

The above findings from Sen and Sensarma (2025) highlight the fact that a central bank cannot concurrently lessen all forms of inequality. Therefore, it must make choices based on which aspects of the inequality are most imperative.

2.4.2 Evidence from Low Income Countries

A 2025 IMF Working Paper explores the external shocks and monetary policy tradeoffs in low income countries using a Dynamic Stochastic General Equilibrium (DSGE) model calibrated for low income countries. The study reveals that external price shocks cause consumption-led recessions, increased inflation and declining real wages. The research also demonstrate that consumption inequality rises because poor households cannot insure against shocks unlike their richer counterparts who may draw from their accumulated wealth. Notably, the 2025 IFM Working Paper also reveal that monetary policy alone is not sufficient for addressing distributional concerns. This highlights the need for coordination with fiscal policy.

Since Kenya faces similar structural characteristics to the low income countries modeled in the study, the outlined theory is particularly relevant for the study.

2.4.3 Evidence from Advanced Economies (methodological Reference)

Although the study is for the global south context, literature on advanced economy may provide methodological guidance that is imperative to the study. Coibion et al. (2017), explore the US monetary policy using Consumer Expenditure Survey Data. Their econometric approach and the identification strategy informs the methodology for this study.

Mumtaz and Theophilopoulou (2020) found that monetary expansion leads to increased wealth inequality through variation in net property values and financial wealth. The researchers' decomposition of wealth effects offers a template for investigating transmission channels.

2.4.4 Evidence from Kenya

Schaner (2018) conducted a study on how interest rates affect household savings behavior in Kenya. The randomized control trial study found out that temporary interest rate subsidies on individual bank accounts led to significantly higher income and assets 2.5 years after the subsidies expired. The effects were motivated by growth in entrepreneurship rather than continued saving behavior. Joint accounts also produced different outcomes, showing that intra-household dynamics are critical for financial behavior. The research demonstrated that interest rate changes may have persistent, long run effects on the household economic outcomes.

This research is valuable to the study because it provides causal evidence from the Kenyan context. The research recommends that interest rate policies have durable effects on household economic welfare, supporting the need for careful investigation of monetary policy's distributional consequences.

2.5 Research Gap

Despite this growing body of evidence, no existing peer-reviewed study that systematically examines the distributional effects of monetary policy on household disposable income in Kenya using rich secondary data sources available from CBK and KNBS. The recent unprecedented monetary policy cycle (2024-2026) offers a natural experiment for analyzing these effects, yet no published academic research has been conducted to date.
The study purposes to fill this gap by applying the theoretical frameworks developed in the literature to the Kenyan context, utilizing econometric methods and using entirely secondary data from official sources in Kenya.

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SECTION THREE
METHODOLOGY

3.1 Introduction
The chapter explains the methodology that the study will employ to achieve the objectives of the study. The chapter covers research design, study area, target population, sample size and sampling techniques, data collection instruments, and methods of data analysis and presentation. The methodology is intended to enable rigorous experimental investigation suing exclusively secondary data from official sources.

3.2 Research Design
The study will utilize quantitative research design based on time-series econometric analysis and cross-sectional household survey analysis. This research design is appropriate for exploring the relationship that exists between CBR fluctuations and household disposable income. The design allows for:

- Identification of causal effects through time-series methods
- Analysis of heterogeneity across different households using survey data
- Assessment of both direct and indirect transmission of channels
- Testing of hypothesis derived from theoretical frameworks.

Notably, the study employs correlational design to assess the relationship between independent variable and the dependent variable. Time-series will be used to approximate the effects of policy changes over time, while pseudo-panel examination will be used to investigate heterogeneity across household income strata.

3.3 The Study Area
The study will cover Kenya Nationally, using secondary data that offers both national level aggregate and disaggregated household-level data. Kenya is located in East Africa with geographical coordinates between latitudes 4°N and 4°S, and longitudes 34°E and 42°E. The country is diverse in economic structure, with a mix of urban and rural areas, formal and informal sectors and varying levels of financial inclusion across different regions.

The choice for Kenya as a study area was influenced by availability of secondary data from CBK and KNBS, recent monetary policy cycle, country's status as a low income country and existence of regular household surveys such as FinAccess.

3.4 Target Population
The target population for the study is Kenya's households as represented in the national surveys and official statistics as follows:

- All households captured in KNBS accounts and surveys
- All households captured in FinAccess Household Surveys
- All households captured in Kenya Integrated Household Budget Surveys

The study limits the data captured between 2016-2026, a ten-year window that captures recent monetary policy cycles.

3.5 Sample Size and Sampling Techniques
The study uses available secondary data from official sources. The techniques used will include:

- Time series data: Data from CBK and KNBS for period 2016-2026, providing observations for CBR, lending rates, deposit rates, and inflation, and GDP and employment.
- Household Survey data: Data from FinAccess surveys for 2016, 2019, 2021, and 2024 covering approximately 20,000 to 30,000 households per wave.
- Kenya Integrated Household Budget Survey covering 20,000 households in 2016 and 2021.

The sample sizes are sufficient for rigorous econometric analysis and provide adequate statistical power for hypothesis testing.

3.6 Data Collection Instruments
3.6.1 Data Extraction Sheets
Structured data extraction sheets will be used to compile data from CBK and KNBS. The data will include CBR history, Commercial bank lending and deposit rates, consumer price index, national accounts data and employment statistics.

3.6.2 Secondary Data Sources
The study will rely on the data extracted from CBK website and publications, KNBS publications, FinAccess survey dataset, and Kenya Integrated Household Budget Survey data.

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3.6.3 Pretesting of Research Instruments

Pretesting comprises verifying the accuracy and the consistency of the extracted data. The activity will involve cross validating data from multiple sources, checking for data entry errors and examining the data to verify consistent with publish reports.

3.6.4 Reliability Tests

Reliability is the consistency and reproducibility of measurements. Reliability in this study will be achieved through test retest reliability where all data, where possible, will be compared across multiple publications to ensure consistency over time. Inter-rater reliability will involve two independent researchers extract data and the discrepancies solved through discussions. Internal consistency will involve checking data whether data from related indicators meet logical consistency.

Since the study uses official government statistics, the sources are generally considered reliable and have been subjected to quality assurance processes by the respective government agencies.

3.6.5 Validity

Validity refers to whether the measurements actually represent what they claim to measure. Validity in this study will be measured through:

- Face validity where the chosen variables are standard measures used in monetary policy research.
- Construct Validity where variables are measured in accordance with established definitions in economic literature
- Content validity where multiple indicators are used to capture each construct where possible.
- Criterion Validity where measures are compared with alternative sources to confirm accuracy.

3.7 Model Specification

In order to achieve the research objectives, the study will employ the following econometric models:

3.7.1 VAR Model for Aggregate Analysis

Following Sen and Sensarma (2025), a Vector Autoregression (VAR) model will be specified as:

$$\mathbf{Yt = c + \Sigma\, Ai\, Yt\text{-}i + \varepsilon t}$$

Where:

- **Yt** is a vector of endogenous variables including CBR, inflation, GDP growth, credit growth, and aggregate household disposable income
- **c** is a vector of constants
- **Ai** are coefficient matrices for each lag i
- **εt** is a vector of error terms
- The summation **Σ** is taken over i = 1 to p, where p is the optimal lag length determined by AIC or BIC criteria

The VAR model will be estimated using monthly data to capture the dynamic relationships between monetary policy and household income. Impulse response functions will be derived from the estimated VAR to trace the effect of a monetary policy shock on household disposable income over time.

3.7.2 Local Projection Model

To examine the dynamic effects of monetary policy changes at different time horizons, local projections will be used as follows:

$$\mathbf{Yt+h = \alpha h + \beta h\, MPt + \gamma h\, Xt + \varepsilon t+h}$$

Where:

- **Yt+h** is the outcome variable at horizon h (household disposable income measures)
- **MPt** is the monetary policy indicator (CBR changes)
- **Xt** is a vector of control variables including lagged values of the outcome variable, inflation, and GDP growth
- **αh** is the constant term at horizon h
- **βh** captures the effect of monetary policy at horizon h
- **γh** captures the effects of control variables at horizon h
- **εt+h** is the error term

Local projections will be estimated separately for each horizon h = 1, 2, 3, ... up to 24 months. This approach allows for flexibility in the shape of impulse responses and is robust to misspecification of the VAR.

3.7.3 Household-Level Model

For household-level analysis using FinAccess and other survey data, a fixed effects model will be specified as:

$$Yit = \alpha + \beta\, MPt + \gamma\, Xit + \delta\, (MPt \times Si) + \mu i + \varepsilon it$$

Where:

- **Yit** is household income or welfare measure for household i at time t
- **MPt** is the monetary policy indicator (CBR) at time t
- **Xit** are household characteristics including size, location, education level, and employment status
- **Si** is income stratum indicator (low, middle, high)
- **δ** captures the differential effect of monetary policy across income strata
- **μi** represents household fixed effects (time-invariant household characteristics)
- **εit** is the error term

Since true panel data may not be available across all survey waves, pseudo-panel techniques will be employed. Cohorts will be constructed based on time-invariant characteristics such as birth year cohort, education level, and region, and these cohorts will be tracked across survey waves.

3.7.4 Transmission Channel Analysis

To identify the primary transmission channels, separate models will be estimated for each proposed channel:

Direct Channel Model:

$*Debt\ Cost it = \alpha + \beta 1\ MPt + \gamma 1\ Xit + \varepsilon it*$

$*Interest\ Income it = \alpha + \beta 2\ MPt + \gamma 2\ Xit + \varepsilon it*$

Indirect Channel Model:

$*Employment it = \alpha + \beta 3\ MPt + \gamma 3\ Xit + \varepsilon it*$

$*Inflation t = \alpha + \beta 4\ MPt + \gamma 4\ Xt + \varepsilon t*$

The estimated coefficients β1 through β4 will indicate the strength of transmission through each channel.

3.8 Methods of Data Analysis and Presentation

3.8.1 Descriptive Analysis

Descriptive statistics will be used to summarize the data, including:

- Means, medians, and standard deviations for continuous variables
- Frequency distributions for categorical variables
- Time-series plots to visualize trends in CBR, inflation, and household income
- Summary tables for key indicators

3.8.2 Stationarity and Unit Root Tests

All time-series variables will be tested for stationarity using the Augmented Dickey-Fuller (ADF) test. The null hypothesis of the ADF test is that the series has a unit root (non-stationary). If the series are found to be non-stationary, appropriate transformations such as first differencing will be applied before estimation.

3.8.3 Cointegration Tests

If variables are found to be integrated of order one, I(1), Johansen cointegration tests will be conducted to examine whether long-run relationships exist between monetary policy and household income variables. If cointegration is present, a Vector Error Correction Model (VECM) will be estimated to capture both short-run dynamics and long-run equilibrium relationships.

3.8.4 Inferential Analysis

Inferential statistics will be used to test the hypotheses:

- Granger causality tests to examine direction of relationships
- Impulse response functions to trace effects of policy shocks over time
- Variance decomposition to assess relative importance of different shocks
- Hypothesis testing at 5 percent significance level

3.8.5 Model Diagnostics

The following diagnostic tests will be conducted to validate the models:

- Residual autocorrelation tests (Lagrange Multiplier test)
- Heteroscedasticity tests (White test)
- Stability tests (CUSUM and CUSUM of squares tests)
- Normality tests (Jarque-Bera test)

3.8.6 Robustness Checks

To ensure the reliability of findings, the following robustness checks will be performed:

- Alternative monetary policy indicators (interbank rate, money market rate)
- Alternative sample periods (excluding crisis periods)
- Alternative estimation methods (Ordinary Least Squares, Generalized Method of Moments)
- Placebo tests using falsified policy shock timing

3.8.7 Data Presentation

Results will be presented using:

- Tables for regression results and descriptive statistics
- Graphs for time-series trends and impulse response functions
- Figures for conceptual frameworks and transmission channels
- Summary tables for hypothesis test results

3.8.8 Software

Data analysis will be conducted using:

- Stata for panel data analysis and econometric estimation
- EViews for time-series analysis including VAR and cointegration
- Microsoft Excel for data compilation and preliminary analysis
- R for advanced statistical analysis where necessary

SECTION FOUR

EXPECTED OUTCOMES AND POLICY IMPLICATIONS

4.1 Expected Outcomes

Based on the theoretical framework and empirical literature reviewed, this study expects to achieve the following outcomes:

4.1.1 Direct Effects of CBR Fluctuations

The study expects to find that changes in the Central Bank Rate have a measurable direct effect on household disposable income through the cost of debt and interest income channels. Specifically, it is anticipated that:

- A 100 basis point reduction in CBR will lead to a corresponding decrease in average lending rates, reducing debt service costs for households with variable-rate loans
- The pass-through to deposit rates is expected to be weaker than to lending rates, meaning that households with savings may experience smaller benefits from rate cuts compared to the relief received by borrowing households
- Households with higher debt-to-income ratios will experience larger direct effects from CBR changes

4.1.2 Indirect Effects through Employment and Inflation

The study expects to find significant indirect effects of CBR fluctuations on household disposable income through employment and inflation channels:

- Expansionary monetary policy (rate cuts) is expected to stimulate economic activity, leading to improved employment outcomes, particularly in interest-sensitive sectors such as manufacturing, construction, and trade
- The inflation channel is expected to operate with a lag, with rate cuts potentially leading to moderate inflation increases that erode real disposable income, especially for households with fixed incomes
- The net effect on household disposable income will depend on the relative strength of employment gains versus inflation erosion

4.1.3 Differential Effects across Income Strata

The study expects to find that the effects of CBR fluctuations vary significantly across different household income strata:

- **Low-income households:** Expected to be more affected by indirect channels (employment and inflation) as they have limited financial buffers and spend a larger share of income on necessities
- **Middle-income households:** Expected to experience both direct effects (through mortgages and consumer loans) and indirect effects, making them potentially the most sensitive to interest rate changes
- **High-income households:** Expected to be more affected by asset price channels and interest income effects, potentially benefiting from rate cuts through higher asset valuations

4.1.4 Identification of Primary Transmission Mechanisms

The study expects to identify the relative importance of different transmission mechanisms in the Kenyan context:

- The cost of debt channel is expected to be the most significant direct mechanism, given the growing household indebtedness in Kenya
- The employment channel is expected to be particularly important for explaining effects on low-income households
- The inflation channel is expected to mediate the real effects of nominal interest rate changes across all income groups

4.2 Contribution to Knowledge

This study is expected to make the following contributions to knowledge:

4.2.1 Theoretical Contribution

The study will extend the application of the redistribution channel theory (Auclert, 2019) to the Kenyan context, providing empirical evidence on how monetary policy affects different segments of the population in a developing economy with unique structural characteristics.

4.2.2 Empirical Contribution

The study will provide the first rigorous empirical analysis of monetary policy distributional effects in Kenya, using the rich secondary data available from CBK and KNBS. This will fill a significant gap in the literature on monetary policy in East Africa.

4.2.3 Methodological Contribution

The study will demonstrate the application of advanced time-series econometric methods (VAR with sign restrictions, local projections) to the analysis of monetary policy effects using Kenyan data, providing a template for future research in similar contexts.

4.3 Policy Implications

The findings of this study will have important implications for various policy areas:

4.3.1 Implications for Monetary Policy Design

The study's findings will inform the Monetary Policy Committee's deliberations by providing evidence on how policy decisions affect different types of households. Specific implications include:

- If the study finds that rate cuts primarily benefit middle and high-income households (through lower debt costs) while providing limited benefits to low-income households, this may suggest the need for complementary policies to ensure more inclusive outcomes
- If asymmetric effects are found (expansionary and contractionary policies having different impacts), this may inform the Committee's approach to policy normalization
- Understanding the transmission lags for different channels can help in timing policy communications and interventions

4.3.2 Implications for Financial Inclusion Policy

The findings will inform financial sector regulators and policymakers on:

- The extent to which formal financial inclusion affects households' exposure to monetary policy
- Whether households without access to formal banking are effectively excluded from the benefits of monetary easing
- The role of alternative financial services (such as mobile money) in transmitting monetary policy effects

These insights can guide the Central Bank of Kenya's financial inclusion strategy and the development of policies that ensure broader access to formal financial services.

4.3.3 Implications for Fiscal-Monetary Coordination

Following the insights from International Monetary Fund (2025) research, this study may reveal that monetary policy alone cannot fully address distributional concerns. If such findings emerge, this would highlight the need for:

- Enhanced coordination between the Central Bank of Kenya and the National Treasury
- Targeted fiscal interventions (such as social protection programs) that can complement monetary policy in supporting vulnerable households
- Integrated policy frameworks that consider both macroeconomic stability and distributional outcomes

4.3.4 Implications for Household Financial Education

The study's findings will inform financial literacy programs by:

- Identifying which household segments are most affected by interest rate changes
- Highlighting the importance of understanding loan terms and interest rate risks
- Emphasizing the relationship between savings behavior and monetary policy

This can help households make more informed financial decisions and better manage their exposure to interest rate fluctuations.

4.3.5 Implications for Data Collection and Monitoring

The study will identify gaps in existing secondary data, leading to recommendations for:

- More frequent collection of disaggregated household income data
- Enhanced data sharing between CBK and KNBS
- Development of new indicators for monitoring monetary policy transmission to households

4.4 Dissemination Plan

The findings of this study will be disseminated through multiple channels to ensure they reach relevant stakeholders:

4.4.1 Academic Dissemination

- Submission of a working paper to the Maseno University research repository
- Submission of a manuscript to a peer-reviewed journal such as the *Journal of African Economies* or *Emerging Markets Review*
- Presentation at academic conferences, including the annual Kenya Economic Association conference

4.4.2 Policy Dissemination

- Preparation of a policy brief for the Central Bank of Kenya
- Presentation of findings to the Monetary Policy Committee
- Submission of a summary report to the National Treasury
- Engagement with the Parliamentary Committee on Finance and Planning

4.4.3 Public Dissemination

- Summary of findings in accessible language for media dissemination
- Public seminar at Maseno University open to the community
- Collaboration with financial literacy organizations to translate findings into educational materials

SECTION FIVE

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SECTION SIX

APPENDIX I: DATA EXTRACTION SHEET

Indicator	Source	Frequency	Period	Values
Central Bank Rate (CBR)	CBK	Monthly	2016-2026	
Average Lending Rate	CBK	Monthly	2016-2026	
Average Deposit Rate	CBK	Monthly	2016-2026	
Private Sector Credit	CBK	Monthly	2016-2026	
Non-Performing Loans	CBK	Monthly	2016-2026	
Consumer Price Index	KNBS	Monthly	2016-2026	
GDP Growth	KNBS	Quarterly	2016-2026	
Employment Rate	KNBS	Quarterly	2016-2026	
Household Disposable Income	KNBS	Annual	2016-2026	

APPENDIX II: LIST OF VARIABLES AND THEIR MEASUREMENT

Variable	Type	Description	Measurement	Expected Sign
Central Bank Rate (CBR)	Independent	Policy interest rate	Percentage points	N/A
Lending Rate	Mediating	Commercial bank lending rate	Percentage points	Positive
Deposit Rate	Mediating	Commercial bank deposit rate	Percentage points	Positive
Employment Rate	Mediating	Proportion of population employed	Percentage	Positive
Inflation (CPI)	Mediating	Consumer price index	Index points	Positive
Household Disposable Income	Dependent	Income after taxes and transfers	Real KSH billions	N/A
Household Debt	Control	Total household borrowing	Real KSH billions	Negative
Savings	Control	Total household deposits	Real KSH billions	Positive

APPENDIX III: PROPOSED TIMELINE

Phase	Activity	Month 1-2	Month 3-4	Month 5-6	Month 7-8	Month 9-10	Month 11-12
1	Literature Review	X	X				
2	Data Collection		X	X			
3	Data Cleaning and Validation			X			
4	Data Analysis				X	X	
5	Report Writing					X	X
6	Review and Revisions						X
7	Final Submission						X

APPENDIX IV: BUDGET ESTIMATE

Item	Description	Estimated Cost (KSH)
Data Acquisition	Fees for accessing restricted datasets from CBK and KNBS	50,000
Software Licenses	Stata, EViews, or R licenses for analysis	80,000
Research Assistance	Assistance with data compilation and extraction	100,000
Printing and Supplies	Printing, binding, stationery	30,000
Dissemination	Conference attendance, publication fees	100,000
Contingency	10 percent of total	36,000
Total		**396,000**

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APPENDIX V: MAP OF KENYA SHOWING STUDY AREA

Kenya is located in East Africa, with geographical coordinates:

- Latitude: 1° North to 4° South
- Longitude: 34° East to 42° East