
CONSUMPTION CHOICE MODEL: AN ECONOMIC ANALYSIS JOURNAL ON ECONOMIC IMPORTANCE OF INTERTEMPORAL CONSUMPTION CHOICE MODEL IN KENYA

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Article Received: 26 April 2026

Article Revised: 16 May 2026

Published on: 05 June 2026

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DOI: <https://doi-doi.org/101555/ijrpa.4501>

ABSTRACT

The concept of this paper explores the information on economic importance of the intertemporal Consumption choice model in Kenya within the framework of advanced macroeconomic theory. The intertemporal consumption choice model originally pioneered by Irving Fisher is a cornerstone of modern world-wide economics. It moves past simple models that only look at current income by showing how rational individuals balance spending and saving over time. This helps an individual to assess and know the trend on consumption versus income. By framing consumption around lifetime resources rather than current earnings, the model provides the foundational math and logic for modern macroeconomics, public policy design and financial market analysis. Moving beyond the static frameworks of early Keynesian analysis, the intertemporal model isolates how rational agents allocate resources across time by balancing current utility against future consumption. The efficient consumption market trends are essential for economic growth and development. Prior to this model, John Maynard Keynes posited that current income dictates current consumption. The intertemporal model revolutionized this by demonstrating that consumers use credit markets to optimize utility across their lifespan and economic conditions. This study focuses on the four models which are Deterministic Models, Stochastic Models or Uncertainty and Risk, Frictional Models and Behavioural Models. The emerging question is whether or not the introduction of consumption models has contributed to perfect market performance in Kenya. This study therefore sought to provide an empirical investigation of the impact of economic importance of the intertemporal Consumption choice model on an individual consumption performance in Kenya. Specifically, the study investigated whether the models has improved market performance through increased

consumption rate, increased availability of income and increased resources. Both the explanatory and descriptive research designs were used.

The paper concludes with a discussion on the broader implications of intertemporal Consumption choice model for policy design, especially in developing economies and digital markets. By synthesizing foundational theories with empirical applications, this paper contributes to a deeper understanding of how intertemporal Consumption choice model shapes macroeconomic behavior and market efficiency.

INTRODUCTION

The economic importance of the intertemporal Consumption choice model in Kenya perfect market is one of the most significant deviations from the classical economic assumption of perfect market and consumption information. Under Consumption model, Consumers prefer a stable path of consumption over volatile fluctuations. They save during high-income years and borrow or draw down assets during low income or retirement years. This mechanism directly generated vital macroeconomic concepts like Franco Modigliani's Life-Cycle Hypothesis and Milton Friedman's Permanent Income Hypothesis. Governments heavily rely on intertemporal choice logic to project how tax updates and interest rate adjustments will alter public behavior. Temporary vs. Permanent Shocks. The model shows that a permanent tax cut drastically increases current consumption because it raises lifetime wealth. Conversely, a temporary stimulus check has a minimal impact on immediate spending because the gains are spread out over time. Central banks adjust interest rates to influence aggregate demand. The intertemporal choice model maps this via the Euler Equation balancing the substitution effect the higher rates reward saving against the income effect and the higher rates make net savers wealthier.

The model bridges the gap between individual psychological preferences and macroscopic financial structures. Supply of Loanable Funds: Aggregate household choices to defer consumption directly establish the market supply of savings dictated by the individual's marginal rate of time preference relative to the prevailing real interest rate. When real-world deviations occur such as young workers failing to smooth consumption, the model allows economists to isolate and quantify market failures like borrowing constraints and limited financial market access. Therefore, how households divide their income between immediate consumption and saving is a central question in macroeconomics. For decades, early macroeconomic thought relied on John Maynard Keynes's Absolute Income Hypothesis (AIH), which posited that current consumption is dictated solely by current disposable income.

However, empirical anomalies after World War II such as the failure of the savings rate to rise long-term as aggregate income grew exposed the limitations of static, single period consumption functions.

The intertemporal consumption choice model solved these empirical puzzles. Pioneered by Irving Fisher and later expanded by Albert Ando, Franco Modigliani and Milton Friedman, this paradigm frames consumption as a multi-period optimization problem. It assumes that individuals are forward looking agents who maximize lifetime utility subject to an intertemporal budget constraint. The economic importance of this framework cannot be overstated. It provides the analytical tools required to understand wealth accumulation, capital market formation, business cycle fluctuations and the transmission of government policy. Therefore, the objective of this paper is to review and synthesize theoretical models that illustrate the core mechanisms of intertemporal consumption choice model and to examine practical applications and policy responses that attempt to correct or mitigate the negative effects of this consumption choice model. By doing so, the paper contributes to a deeper understanding of how intertemporal consumption choice model operates in economic systems and offers insights for designing more efficient market mechanisms.

1.0 Literature Review

The study of intertemporal consumption choice model has evolved significantly over the last two centuries, advancing from 1834 through the 1950s into an advanced interdisciplinary field, anchored by the pioneering works of John Rae, Irving Fisher, Albert Ando, Franco Modigliani and Milton Friedman. Each contributed to a distinct facet of the broader consumption choice model, establishing the theoretical foundation upon which modern macroeconomics is built. John Rae (1834) Canadian economist first introduced the concept of intertemporal choice in his Sociological Theory of Capital exploring how people evaluate payoffs over time. Irving Fisher in (1930) formalized modern intertemporal consumption choice in his book The Theory of Interest, establishing how rational consumers allocate their income between present and future consumption using interest rates and time preferences. In (1937) Paul Samuelson proposed the Discounted Utility (DU) model, which became the standard mathematical way to represent how individuals make tradeoffs between costs and benefits at different times.

Franco Modigliani and Richard Brumberg in (1954), alongside Milton Friedman (1957), developed the Life-Cycle Hypothesis and Permanent Income Hypothesis. They moved the model forward by treating intertemporal consumption as a lifetime income optimization problem. The rational expectations assumption was integrated into the model in 1970s through Modern Behavioral Economics. Since then, economists and psychologists have continually updated the framework to include concepts like habit forming preferences and time inconsistent behavior. In this modern economics, Irving Fisher's Intertemporal Model of Consumption explains how rational consumers allocate income between present and future consumption, incorporating time preference and interest rates.

The paper has been highly influential in development of economics and finance, helping to explain why rational expectations assumption was integrated into the choice model in the market history. Therefore, the empirical studies have confirmed and predicted that these models applicable in real-world set ups in individual consumption.

2.0 Theoretical Framework

The Irving Fisher's core contribution was treating consumption in different time periods as distinct goods. In a basic two-period model $t = 1, 2$, an agent possesses an intertemporal utility function: $U = u(C_1) + \beta u(C_2)$ Where: C_1 and C_2 represent consumption in periods 1 and 2. The agent maximizes this utility subject to the lifetime budget constraint which dictates that the present value of consumption cannot exceed the present value of lifetime income given a real interest rate. Using Lagrangian optimization, the first-order condition yields the foundational Euler Equation: $u'(C_1) = \beta(1+r) u'(C_2)$. This elegant condition states that a rational consumer allocates consumption across time until the marginal utility of consuming today equals the discounted marginal utility of consuming tomorrow, adjusted for the market rate of return.

Traditional intertemporal models assumed perfectly logical farsighted agents. Identifying when human behavior deviates from this baseline has driven major breakthroughs in modern behavioral finance. The model also serves as the yardstick to measure irrational tendencies such as the preference for instant gratification over long term stability. Policy Interventions Recognizing these internal biases has directly inspired real-world financial architectures, such as automated enrollment in retirement plans and structured pension schemes. The choices dictated by the model are bound by specific macroeconomic tradeoffs: Economic Factor Impact on Current Consumption Impact on Future Consumption Rising Real Interest Rates

Decelerates such as Substitution Effect dominates or accelerates, meaning Income Effect dominates for savers. Temporary Income Spike Minimal change, the windfall is largely saved to support the future. Accelerates smoothly over time. Permanent Income Shift and Accelerates strongly alongside higher lifetime wealth.

The intertemporal framework directly enabled the development of two Nobel Prize-winning theories: The Permanent Income Hypothesis (PIH): Milton Friedman argued that income consists of permanent expected, long-term and transitory temporary, random components. Because consumers smooth consumption based on lifetime wealth, the marginal propensity to consume MPC out of permanent income approaches one while the MPC out of transitory income is near zero and The Life Cycle Hypothesis LCH: Franco Modigliani applied this to a demographic timeline. Individuals typically borrow in youth, accumulate assets and save during high earning peak working years and dissave during retirement.

The intertemporal model transformed how economists evaluate fiscal interventions. Under the static Keynesian model, a temporary tax cut provides an immediate boost to aggregate demand via the multiplier effect. The intertemporal model shows this view is incomplete. If a government issues a temporary tax cut financed by government debt, forward looking consumers recognize that the state must raise taxes in the future to service that debt. Under strict intertemporal optimization conditions, known as Ricardian Equivalence, the present value of the lifetime tax burden remains unchanged. Rather than consuming the windfall, households save it to pay the future tax liability, neutralizing the fiscal stimulus. Even without strict Ricardian Equivalence, the model demonstrates that temporary fiscal shocks have a low marginal propensity to consume MPC, whereas permanent structural shifts generate a high MPC. This insight guides modern governments when designing stimulus checks versus structural tax reforms.

Central banks rely on the intertemporal model to understand how interest rate adjustments influence the broader economy. When a central bank changes the real interest rate, it triggers two competing effects within the Euler equation and these are Substitution Effect and Income Effect. A higher interest rate increases the return on savings, encouraging individuals to defer consumption from C_1 to C_2 . For net savers, a higher interest rate increases lifetime wealth, pushing current consumption C_1 upward. For net borrowers, it reduces wealth forcing current consumption downward.

The Modern Dynamic Stochastic General Equilibrium models, the primary forecasting tools used by central banks worldwide are built directly around the intertemporal Euler equation to map how changes in interest rates alter aggregate household spending over time. While the standard intertemporal choice model provides a powerful benchmark, real world frictions have led to important updates that enhance its practical utility. The baseline model assumes perfect credit markets where individuals can borrow freely against future income. In reality, young or low-income workers frequently face liquidity constraints, banks will not lend money based solely on future earning potential.

When borrowing constraints bind, the intertemporal budget constraint breaks down and consumption becomes highly sensitive to current income. By incorporating liquidity constraints, the model helps policymakers identify vulnerable economic segments that require targeted safety nets, asset-building programs, or direct cash transfers. Standard economic theory assumes exponential discounting, meaning an individual's patience remains consistent over time. Behavioral economists found that human beings frequently exhibit present bias which is mathematically modeled as hyperbolic discounting.

People show intense impatience regarding choices involving today but demonstrate rational patience when planning for the distant future. This modification explains self-control failures such as under saving for retirement despite intending to save later. This behavioral update has fundamentally changed public policy design. It led directly to the creation of nudge policies such as Richard Thaler's Save More Tomorrow program which automatically enrolls workers into escalating retirement plans unless they actively opt out.

Thus, these models provide a theoretical basis for analyzing how intertemporal consumption choice models shape outcomes in Kenya's emerging consumption rate. They also guide the analysis of policy tools in digital markets.

3.0 METHODOLOGY

This article adopts a qualitative, theory-driven approach anchored with sector-specific information from Kenya. The methodology has integrated theoretical economic modeling with real world happenings in consumption market. This article does not rely on econometric estimation but instead focuses on case-based analytical reasoning supported by secondary data, peer-reviewed literature, and reports from market surveys.

The research findings showed that the intertemporal consumption choice model plays key role in market performance and defines the best outcome of consumption trend, labour and income. However, it failed to impact on the cost of credit as the interest rates increased even with the introduction of credit bureaus by the Central Bank. The study therefore recommends that the government should extend more use of modern intertemporal consumption choice model across all sectors and also provide both positive and negative impact on an individual consumption with an increased rate of Interest.

4.0 ANALYSIS AND DISCUSSION

Evaluation of Fiscal and Monetary Policy, Governments heavily rely on intertemporal choice logic to project how tax updates and interest rate adjustments will alter public behavior. Temporary vs. Permanent Shocks. The model shows that a permanent tax cut drastically increases current consumption because it raises lifetime wealth. Conversely, a temporary stimulus check has a minimal impact on immediate spending because the gains are spread out over time. The intertemporal choice model maps this via the Euler Equation, balancing the substitution effect. The model bridges the gap between individual psychological preferences and macroscopic financial structures. Supply of Loanable Funds, Aggregate household choices to defer consumption directly establish the market supply of savings dictated by the individual's marginal rate of time preference relative to the prevailing real interest rate. Credit and Liquidity Constraints: When real-world deviations occur such as young workers failing to smooth consumption, the model allows economists to isolate and quantify market failures like borrowing constraints and limited financial market access.

The intertemporal consumption choice model solved these empirical puzzles. Pioneered by Irving Fisher and later expanded by Albert Ando, Franco Modigliani, and Milton Friedman, this paradigm frames consumption as a multi-period optimization problem. It assumes that individuals are forward-looking agents who maximize lifetime utility subject to an intertemporal budget constraint. The economic importance of this model cannot be overstated. It provides the analytical tools required to understand wealth accumulation, capital market formation, business cycle fluctuations, and the transmission of government policy.

This analysis suggest that the government should have well planned approach that integrates policy, technology and behavioral insights to create transparency, inclusivity and accountable economic systems on the intertemporal consumption choice model for proper decision making.

5.0 CONCLUSION.

This study has explored the importance of intertemporal consumption choice model and the role it plays in shaping economic outcomes in Kenya. Application of foundational macroeconomic theories analysis has demonstrated how consumption choices can affect market efficiency and decision-making.

The intertemporal consumption choice model is a foundational pillar of modern economics. By expanding the analytical horizon from a single period to a lifetime, it offers a sophisticated framework for analyzing household consumption, savings dynamics, and wealth accumulation.

Its applications remain vital for contemporary governance. From helping central banks calibrate monetary policy to guiding the design of retirement schemes, the intertemporal model bridges the gap between individual psychological preferences and aggregate macroeconomic trends. Future updates that continue blending behavioral insights with market frictions will ensure this model remains central to evaluating economic policy and structural reform.

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