



# The Classical and Keynesian Approaches to Interest Rate Determination: A Theoretical Overview

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## ABSTRACT

*Interest rates play a pivotal role in shaping the economic environment. They determine the cost of borrowing and the return on savings and have significant effects on investment, consumption, and overall economic growth. The Classical and Keynesian schools of thought provide distinct approaches to understanding how interest rates are determined. The Classical theory emphasizes the interplay between savings and investment, while the Keynesian theory focuses on the influence of demand for money and supply of money. As a result, the purpose of this research is to compare both theories and analyze them from a theoretical perspective.*

**Keywords:** Classical theory, Interest rate, Keynesian theory.

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## 1. INTRODUCTION

Interest rates play an important role in economic theory and practice. They influence decisions made by individuals, businesses, and governments (Alafif 2023). Interest rates determine the cost of borrowing and the return on savings. For individuals, interest rates influence major purchases like homes and cars. For businesses, they guide investment and expansion decisions. Central banks adjust interest rates to control inflation, stimulate growth, or stabilize the economy (Gorbacheva & Barkova 2021).

The determination of interest rates has been debated among economists for centuries (Mizirak 2009). There are various theories available in the literature, each providing a distinct view, such as the Wicksell Theory, which examines the relationship between the natural interest rate and market interest rate; the Loanable Funds Theory, proposed by neo-classical economists, which argues that interest rates are determined by the supply of savings and the demand for investment funds; and the Modern Theory of Interest Rates, developed by Hicks and Hansen based on the IS-LM model, which explains how interest rates result from the balance between the goods market (IS curve) and the money market (LM curve), and so on. However, among the various theories of interest rates the present research paper compares the Classical and Keynesian theories. It explores their foundations and policy implications. Understanding these theories helps assess how interest rates are determined and the role of government intervention in economic stability.

## 2. CLASSICAL THEORY OF INTEREST RATE

The Classical Theory of Interest Rate explains that interest rates are determined by the interaction of savings (supply of capital) and investment (demand for capital) in a free market. It assumes that the market naturally adjusts to reach equilibrium where the amount of savings equals the amount of investment.

## 2.1 Supply of capital (savings)

The Classical model assumes that individuals save a portion of their income, and these savings are available for investment. The amount of savings depends on the interest rate. Higher interest rates incentivize individuals to save more, as the return on savings increases. The supply of savings is positively correlated with the interest rate. Thus, as the interest rate rises, more people choose to save, increasing the supply of savings. This can be expressed as:

$$S=f(r) \quad 1$$

Where S denotes savings and r represents the interest rate

## 2.2 Demand for capital (Investment)

Businesses and individuals borrow money to finance investments, such as expanding production or purchasing capital goods. The demand for loanable funds, therefore, represents the borrowing requirements for investment projects. The Classical model assumes that demand for investment is inversely related to the interest rate when interest rates raise, the cost of borrowing increases, leading to a decrease in investment. Conversely, when interest rates fall, borrowing becomes cheaper, encouraging more investment. This can be expressed as:

$$I=f(r) \quad 2$$

Where I represents investment and r represent interest rate

## 2.3 Equilibrium Interest Rate

The Classical theory suggests that the interest rate is determined at the point where the supply of savings equals the demand for investment. This equilibrium interest rate is the price that clears the loanable funds market. At this rate, the amount of funds saved equals the amount of funds borrowed. The Classical model assumes that interest rates adjust freely to restore balance between savings and investment, ensuring the economy reaches full employment.

$$S = I \quad 3$$

## 3. KEYNESIAN THEORY OF INTEREST RATE

The Keynesian theory of interest rate determination offers a fundamentally different perspective. Developed by John Maynard Keynes during the Great Depression, it focuses on the role of liquidity preference (the demand for money) and the supply of money.

### 3.1 Liquidity Preference or Demand for Money

In his General Theory, Keynes introduced the concept of liquidity preference to describe the demand for money. He proposed that there are three primary motives driving the demand for money in an economy. These motives, which reflect the different reasons people choose to hold money, are as follows:

#### 3.1.1 The Transaction demand for money

The transactions demand for money arises from the medium of exchange function of money in making regular payments for goods and services. According to Keynes, it relates to “the need of cash for the current transactions of personal and business exchange” It is further divided into income and business motives. The income motive is meant “to bridge the interval between the receipt of income and its disbursement.” Similarly, the business motive is meant “to bridge the interval between the time of incurring business costs and that of the receipt of the sale proceeds.” If the time between the incurring of expenditure and receipt of income is small, less cash will be held by the people for current transactions, and vice versa. There will, however, be changes in the transactions demand for money depending upon the expectations of income recipients and businessmen. Therefore, the transactions demand for money is a direct proportional and positive function of the level of income, and is expressed as:

$$L_T = f(Y) \quad 4$$

Where  $L_T$  is the transactions demand for money,  $f$  is the proportion of income which is kept for transactions purposes, and  $Y$  is the income.

### 3.1.2 The Precautionary Demand for Money

The Precautionary motive relates to “the desire to provide for contingencies requiring sudden expenditures and for unforeseen opportunities of advantageous purchases.” Both individuals and businessmen keep cash in reserve to meet unexpected needs. Individuals hold some cash to provide for illness, accidents, unemployment and other unforeseen contingencies. Similarly, businessmen keep cash in reserve to tide over unfavorable conditions or to gain from unexpected deals. Therefore, “money held under the precautionary motive is rather like water kept in reserve in a water tank.” Keynes held that the precautionary demand for money, like transactions demand, was a function of the level of income. Thus the precautionary demand for money can also be explained as follows:

$$L_p = f(Y) \quad 5$$

Where,  $L_p$  is the precautionary demand for money,  $f$  is the proportion of income which is kept for precautionary purposes and  $Y$  is the income.

### 3.1.3 The Speculative Demand for Money

The speculative demand for money aims to secure profit by anticipating future market conditions better than others. Individuals and businessmen, after setting aside funds for transactions and precautionary purposes, seek to make a speculative gain by investing in bonds. Money held for speculative purposes acts as a store of value, which can be invested in interest-bearing bonds or securities at the right moment. Bond prices and interest rates are inversely related. Low bond prices indicate high interest rates, while high bond prices reflect low interest rates. A bond carries a fixed rate of interest. According to Keynes, expectations about changes in bond prices or the current market rate of interest determine the speculative demand for money. Keynes introduced a normal or critical rate of interest ( $r_c$ ). If the current interest rate ( $r$ ) exceeds the critical rate, businessmen expect it to decrease, and bond prices to rise. They will buy bonds and sell them later when prices increase, thus lowering the speculative demand for money. Conversely, if the current rate is below the critical rate, businessmen expect it to rise and bond prices to fall. In this case, they will sell bonds, increasing the speculative demand for money. Therefore, the speculative demand for money decreases as the interest rate rises and increases as the interest rate falls. This relationship can be expressed algebraically as:

$$L_s = f(r) \quad 6$$

Where,  $L_s$  is the speculative demand for money,  $f$  is the proportion of interest rate which is kept for speculative purpose and  $r$  is the rate of interest.

#### 3.1.3.1 Liquidity Trap

John Maynard Keynes introduced the idea in his book *The General Theory of Employment, Interest, and Money* (1936). He explained that when interest rates are very low, people expect them to rise in the future. This expectation makes bonds unattractive because bond prices fall when interest rates rise. As a result, people hoard money instead of making investments. This situation makes monetary policy ineffective in increasing demand and economic growth.

### 3.2 Supply of Money

Keynes is somewhat unclear on this point, but the common interpretation is that in the *General Theory*, the quantity of money is assumed to be fixed. He makes statements suggesting that the money supply is determined by policy, such as: The quantity of money as determined by the action of the central bank and the quantity of money created by the monetary authority. Similar arguments are made in other sections of his work (Keynes, 1936, pp. 84, 167, 174, 230, and 267).

By integrating the concept of liquidity preference into the theory of money demand, Keynes argued that the money supply, together with liquidity preference, determines the interest rate (Rączkowski, 1948, p. 135; Taylor, 1958, p. 293; Duwendag et al., 1995, p. 188; Schaal, 1996, p. 232). The money supply is set by state policy, and Keynes views it as a discretionary factor.

### 3.3 Equilibrium Interest Rate

The equilibrium interest rate in the Keynesian model is determined by the intersection of the liquidity preference curve and the money supply curve. Unlike the Classical model, which assumes that the economy is always in equilibrium, the Keynesian theory acknowledges that interest rates may fail to adjust quickly enough to restore full employment, particularly in times of economic distress.

$$M^d = M^s$$

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## 4. COMPARATIVE ANALYSIS

The Classical and Keynesian theories offer fundamentally different views on how interest rates are determined and the role of government intervention in the economy. Therefore, a brief theoretical comparison between Classical and Keynesian interest rate theories is outlined in Table 1. This comparison will provide the necessary foundation for understanding the subsequent empirical analysis.

**Table 1: Comparative Analysis of Classical vs. Keynesian Theories of Interest Rates**

Aspect	Classical Theory	Keynesian Theory
<b>Basis of Theory</b>	Demand And Supply of Capital	Monetary Management Involving Demand and Supply of Money
<b>Key Determinants</b>	Savings and Investment	Money Demand and Money Supply
<b>Interest Rate Function</b>	Interest Rate Determined by the Equilibrium between Savings (Supply of Capital) and Investment (Demand For Capital)	Interest Rate Determined by the Equilibrium between Money Supply and Liquidity Preference (Demand For Money)
<b>Savings Behavior</b>	Positive Relationship: Higher Interest Rates Lead to Higher Savings	Income Influences Savings; Not Directly Linked to Interest Rates
<b>Investment Behavior</b>	Negative Relationship: Higher Interest Rates Lead to Lower Investment	Investment is Influenced by Business Expectations and Interest Rates, but also by other Factors
<b>Role of Money</b>	An Increase in the Money Supply Leads to Increase in the Price Level but the Real Income, the Rate of Interest and the Level of Real Economic Activity Remain Unaffected.	Changes in the Supply of Money can Permanently Change the Interest Rate, the Aggregate Demand and the Level of Employment, Output and Income.
<b>Policy Implications</b>	Emphasizes Controlling Capital Supply and Demand through Savings and Investment Incentives	Emphasizes Monetary Policy and Central Bank Interventions to Manage Money Supply and Interest Rates

**Source:** Compiled from multiple research papers

## 5. CONCLUSION

The Classical and Keynesian theories offer distinct frameworks for understanding interest rate determination. The Classical theory views interest rates as set by the interaction of savings and investment. It assumes markets self-correct and interest rates adjust to restore equilibrium. The economy moves toward full employment and interest rate fluctuations are temporary.

In contrast, the Keynesian theory focuses on liquidity preference and the central bank's role in managing the money supply. Keynes argued that in liquidity trap, even very low interest rates fail to stimulate investment because people

prefer to hold cash rather than invest. This theory calls for active government intervention through fiscal policies to manage economic fluctuations and restore economic growth. While the Classical model emphasizes long-term equilibrium, the Keynesian model recognizes short-term disequilibrium and advocates for government action during recessions to stimulate demand.

Both theories provide valuable perspectives on the role of interest rates in the economy, and understanding their differences is essential for developing effective economic policies. In reality, a combination of both approaches may be needed to tackle the complexities of modern economies, especially during periods of economic instability.

### **Limitation of the study**

The present research study attempts to compare these two macroeconomic theories through a theoretical analysis without using real-world data to support its arguments. Therefore, without empirical evidence, it is difficult to assess the practical relevance of these theories in modern economies.

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