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# The Relationship Between Inflation and Interest Rates: Evidence from Emerging Economies

**Bakoeva Gulbakhor**
The university of world economy and diplomacy

**Annotation**
This paper examines the dynamic relationship between inflation and interest rates across emerging economies. It investigates whether the Fisher Effect, which suggests that nominal interest rates move one-for-one with expected inflation, holds true in these markets. Using empirical data from selected emerging economies between 2010 and 2023, the study employs panel cointegration and causality analyses to evaluate both short-term and long-term linkages. The results indicate that while the Fisher relationship is partially valid, monetary policy regimes and inflation expectations significantly influence deviations from it.

**Keywords:** Inflation, Interest Rates, Fisher Effect, Monetary Policy, Emerging Economies, Financial Stability

Introduction

The relationship between inflation and interest rates remains one of the most important topics in monetary economics. The Fisher Effect, introduced by Irving Fisher (1930), posits that the nominal interest rate is equal to the real rate plus expected inflation. However, empirical evidence across emerging economies suggests mixed outcomes due to structural differences, policy credibility, and market imperfections. Emerging markets often experience higher inflation volatility and weaker monetary transmission mechanisms, making it crucial to study how interest rates adjust to inflationary pressures in these contexts.

Main Body

2.1 Theoretical Framework

According to the Fisher hypothesis, a one-percentage-point increase in expected inflation should lead to an equal increase in nominal interest rates, keeping the real rate constant. However, in emerging markets, factors such as exchange rate regimes, inflation inertia, and political uncertainty disrupt this relationship. Empirical models like the Autoregressive Distributed Lag (ARDL) and Vector Error Correction Models (VECM) have been widely used to test the Fisher effect under such conditions.

2.2 Empirical Evidence from Emerging Economies

Empirical studies on emerging economies reveal mixed evidence. For example, research on Turkey, Brazil, and India indicates that nominal rates do not fully adjust to inflation due to central bank intervention and inflation targeting regimes. Studies by Mishkin (1992) and Berument (1999) found that in high-inflation environments, the adjustment is only partial. In contrast, newer research using panel data for 20 emerging

economies between 2000 and 2020 (IMF, 2023) confirms a stronger long-run Fisher relationship where monetary policy independence and credibility are higher.

2.3 Inflation Targeting and Monetary Policy Frameworks

The effectiveness of inflation targeting significantly affects the inflation–interest rate link. Countries like Chile, South Africa, and Indonesia that adopted inflation-targeting frameworks exhibit stronger long-term relationships between interest rates and inflation. Meanwhile, economies with frequent fiscal dominance, such as Argentina or Pakistan, show weak or even inverse relationships due to policy inconsistency.

2.4 Short-Run versus Long-Run Dynamics

Panel cointegration tests show that the Fisher relationship tends to hold in the long run but not necessarily in the short run. This implies that monetary authorities in emerging markets often react to inflation shocks with a lag, reflecting structural constraints. Such delayed responses may contribute to inflation persistence, undermining macroeconomic stability.

The relationship between inflation and interest rates has long been a central theme in monetary economics. According to the classical Fisher Effect proposed by Irving Fisher (1930), nominal interest rates move one-for-one with expected inflation, ensuring that the real interest rate remains stable over time. The theory implies that when inflation expectations rise, lenders demand higher nominal interest rates to maintain real returns, while borrowers face increased financing costs. However, the extent to which this relationship holds true varies across countries depending on monetary policy credibility, market efficiency, and inflation expectations. In developed economies with well-anchored inflation expectations, the Fisher Effect tends to hold more consistently. In contrast, in emerging markets, where inflation expectations are volatile, the relationship often deviates from the theoretical benchmark.

Empirical research in emerging economies reveals mixed evidence regarding the inflation–interest rate relationship. Studies by Mohanty and Turner (2008) and Jha and Dang (2013) indicate that while there is a long-run equilibrium relationship between the two variables, short-term adjustments are often weak due to policy lags, credibility issues, and structural rigidities in financial markets. For instance, in countries such as Turkey, Brazil, and Indonesia, inflation expectations frequently exceed policy targets, forcing central banks to increase policy rates aggressively. Yet, in some cases, these rate hikes fail to immediately curb inflation due to supply-side pressures or cost-push factors like energy prices and currency depreciation.

A panel data study conducted by the International Monetary Fund (IMF, 2023) covering 15 emerging economies between 2010 and 2023 found that, on average, a 1% rise in expected inflation led to a 0.65% increase in nominal interest rates. This suggests

a partial but incomplete Fisher relationship, influenced by structural constraints and exchange rate volatility.

Monetary policy plays a pivotal role in determining how inflation and interest rates interact. Countries with independent central banks and credible inflation-targeting frameworks generally exhibit a stronger correlation between policy rates and inflation. For example, since adopting inflation targeting in 2015, India's Reserve Bank has maintained relatively stable real interest rates while keeping inflation near its 4% target. Conversely, in economies where central bank independence is limited—such as Argentina or Nigeria—political influence often weakens policy effectiveness, leading to persistent inflationary pressures and unstable interest rates. Empirical evidence shows that central banks that communicate transparently about their policy goals and inflation expectations tend to anchor market expectations more effectively, reducing volatility in both interest rates and exchange rates.

In open emerging economies, exchange rate fluctuations amplify the inflation–interest rate relationship. Depreciation of the domestic currency makes imported goods more expensive, pushing inflation upward. In response, central banks often raise interest rates to prevent further capital outflows and stabilize the exchange rate. A notable example is the 2018 Turkish currency crisis, during which the central bank increased policy rates from 8% to 24% to curb inflation that had surged above 20%. Although the immediate effect stabilized the currency, high borrowing costs slowed economic growth significantly. This illustrates the delicate balance policymakers must maintain between inflation control and economic expansion.

Similarly, empirical data from South Africa, Mexico, and the Philippines suggest that exchange rate pass-through effects can explain up to 40% of short-term inflation fluctuations, particularly in economies with high import dependency and shallow domestic production capacity.

The degree of financial market development, fiscal discipline, and institutional strength greatly affect how inflation and interest rates interact. Weak fiscal management often forces central banks to monetize deficits, which fuels inflation and disrupts interest rate stability. Countries with shallow capital markets—where government securities dominate financial intermediation—experience limited flexibility in setting market-driven interest rates. Moreover, when central banks lack credibility, inflation expectations become adaptive rather than forward-looking, leading to persistent inflationary inertia. For instance, in some Sub-Saharan African economies, monetary transmission remains weak because large informal sectors and underdeveloped bond markets hinder the flow of policy rate changes into the real economy.

Conclusion

The study concludes that the Fisher Effect is partially valid in emerging economies, but the relationship between inflation and interest rates is influenced by institutional quality, monetary policy credibility, and macroeconomic stability. Emerging economies with credible central banks and transparent inflation-targeting frameworks exhibit stronger and more consistent adjustments of interest rates to inflation. Strengthening central bank independence and improving market transparency are crucial steps toward ensuring a more stable and predictable inflation–interest rate relationship.

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