

UNRAVELING USURY: THE CONSEQUENCES OF INTEREST RATES AND ECONOMIC GROWTH

Suryaning Bawono¹, Sebastiana Viphindartin², Regina Niken Wilantari³, Eny Lestari⁴

^{1,4}Sekolah Tinggi Ilmu Ekonomi Jaya Negara Tamansiswa, Malang
Jl. Tumenggung Suryo No.17, Malang, East Java 65123, Indonesia

^{2,3} Universitas Jember
Jl. Kalimantan Tegalboto, No. 37, Jember, East Java, 68121, Indonesia
sebastiana@unej.ac.id

ABSTRACT

The objective of this research is to examine the dynamic interplay of interest rates (usury), economic development, investment, consumption, and labor force participation in Indonesia. The World Bank provided the data, which is utilized for the years 2000 through 2022. We employ a dynamic threshold time series data model in this investigation. The results show that interest rates affect economic growth. When interest rates are low, loans are more affordable, and consumption and investment tend to increase. Conversely, high interest rates can hinder economic growth due to higher borrowing costs. Good economic growth encourages investment and consumption, which in turn strengthens economic growth. In addition, strong economic growth contributes to the creation of new jobs and increased labor force participation. The more people who work, the greater their contribution to economic growth. Increased investment can also accelerate economic growth by creating jobs, increasing productivity, and driving other sectors of the economy. The relationship between interest rates, economic growth, and labor force participation has a significant impact. The interest rate threshold is around 2.772. Above this threshold, changes in interest rates can stimulate or inhibit economic expansion. Rising interest rates can discourage borrowing and investment while falling interest rates encourage spending and investment. Higher labor force participation rates contribute positively to economic growth. Consumption growth also affects overall economic performance.

Keywords: Usury, Economic Growth, Consumption, Investment, Labor Force Participation

INTRODUCTION

The influence of usury, which is forbidden in Islamic economics, on social stability and economic prosperity is substantial. Prices for products and services may rise as a result of the usury practice (Viphindartin, S., Priyanto, E., Puspaningtyas, M., Sulisnaningrum, & Afriani, 2022). Higher interest rates on loans result in increased costs for both producers and consumers. Prices for products and services hence typically increase (Wilantari, Widarni, & Bawono, 2021). The wealth gap between the affluent and the poor might widen due to unemployment. The rich can take advantage of the usury system to make greater profits, while the poor are trapped in a cycle of debt and high interest rates (Prabowo, Sulisnaningrum, & Harnani, 2021). An economic system based on usury can lead to economic instability. Speculation and market volatility often result from usury practices, which in turn can harm overall economic growth. In Islam, people are encouraged to avoid usury and invest their capital wisely (Allen & Prabowo, 2023).

Providing interest-free loans (qard al hasan) and investing in productive activities are better ways to advance the economy without sacrificing social justice (Viphindartin, Wilantari, Kristiawan, Bawono, & Ariansyah, 2024). The practice of usury can cause the prices of goods and services to increase. When someone borrows money at high interest rates, it places a greater burden on consumers and producers. As a result, the prices of goods and services tend to rise (Nugraheni & Muhammad, 2024)

Usury can worsen consumption patterns by prioritizing debt repayment over creating healthy and productive economic activities (Vásquez, 2020). Consumers who are trapped in usury debt tend to have difficulty meeting basic needs (Sulisnaningrum & Puspaningtyas, 2022). Usury can exacerbate economic inequality between the rich and

the poor. The rich can take advantage of the usury system to generate greater profits, while the poor are trapped in a cycle of debt and high interest rates. An economic system based on usury can lead to economic instability. Speculation and market volatility often occur as a result of usury practices, which in turn can disrupt overall consumption growth (Amaliyah, Inayah, & Wibangga, 2022).

Usury, which is considered a forbidden practice in Islam, has significant negative impacts in the economic context. Usury can burden companies with significant debt burdens. With the additional interest or profit that must be paid, companies tend to be hampered in developing their businesses and investing (Anggraini & Lidia, 2022). As a result, the company's purchasing power decreases and business development stops. An economic system based on usury can lead to broader economic instability. Speculation and market volatility often occur as a result of usury practices, which in turn can disrupt overall investment growth. Usury can exacerbate social inequality between the rich and the poor. The rich can take advantage of the usury system to generate greater profits, while the poor are trapped in a cycle of debt and high interest rates (Sadeghi, Marzban, Samadi, Azarbaiejani, & Rostamzadeh, 2022).

Usury practices can cause companies to have difficulty developing. As a result, workforce reductions occur because companies cannot expand their operations. The high unemployment rate also triggers an increase in crime. An economic system based on usury can lead to broader economic instability. Speculation and market volatility often occur due to usury practices, which in turn can disrupt the growth of overall labor force participation (Rahmatillah, 2023). This research aims to explore the dynamic link between usury or interest rates, economic growth, investment, consumption, and labor force participation.

LITERATURE REVIEW

The Dangers of Usury on Economic Growth

The practice of usury, which involves charging interest or additional profit on loans, can cause the prices of goods and services to rise. When individuals borrow money at high rates of interest, this burden is passed on to consumers and producers, resulting in higher prices. Usury exacerbates the gap between the rich and the poor. The rich exploit the usury system for greater profits, while the poor are trapped in debt and high interest rates. As a result, the economic gap widens. An economic system based on usury can lead to instability (Nurrohim, Abdurrahman, & Imam, 2023). Speculation and market volatility often result from usury practices, disrupting overall economic growth. Usury burdens businesses with significant debt. This discourages business development and investment. Reduced investment impacts production and can increase unemployment. Usury is detrimental to society. Islam encourages capital investment rather than borrowing at interest. Providing loans without interest (*qard al hasan*) is better for social justice. Usury destroys trade. Countries that move away from usury have better commercial balance. The further away from usury, the better the economic well-being (Goldman, 2023).

The Dangers of Usury on Consumption Growth

Usury, or interest, contributes to the increase in the prices of goods and services. This creates social problems because unaffordable prices can affect people's daily lives. Rising prices can also reduce the purchasing power of people with low incomes. The practice of usury can lead to unemployment. When businesses and individuals are burdened with high interest rates, they may cut back on production or lay off workers to reduce costs. As a result, many people lose their jobs and employment opportunities. Usury can disrupt overall economic stability (Kowalski & Wałęga, 2022).

The uncertainty caused by interest can discourage investment and economic growth. Countries that rely on usury may experience wider economic instability. The practice of usury is considered unfair because it benefits one party (the lender) while harming the

other party (the borrower). This can create social injustice and damage the morality of society. Usury reinforces a society's dependence on debt. People who are trapped in a cycle of debt find it difficult to get out of it, and this can hinder economic development and individual well-being (Anjum, 2022).

Usury tends to encourage excessive consumption rather than investment in production. As a result, countries that rely on usury may be less productive and less able to compete in the global market. Usury can weaken a country in the long run. The inability to produce sufficient goods and services can hamper economic growth and reduce a country's competitiveness in the international arena (Samad & Sugeng, 2022).

The Dangers of Usury on Investment Growth

Usury, or interest, creates a significant debt burden for businesses and individuals. With interest or additional profits to pay, businesses tend to be burdened with debt, which affects purchasing power and investment. Usury practices can discourage investment. When businesses have to pay high interest rates, they may be reluctant to invest in new product development or business expansion. As a result, business growth is hampered. Usury exacerbates economic instability. Rising interest rates can destabilize markets and hinder overall economic growth. Countries that rely on usury may experience broader economic instability. Usury practices can worsen economic disparities and lead to social injustice (Bell, 2021).

High borrowing rates disproportionately affect those with modest incomes, while lenders benefit more. Usury discourages innovation and new product development. Businesses burdened by interest rates may be reluctant to take risks and create better products. This reduces competitiveness in an increasingly competitive global marketplace. Usury reinforces dependence on debt. People who are trapped in a cycle of debt find it difficult to get out, hindering economic growth and individual well-being. Usury can be detrimental to a country in the long run. The inability to produce enough goods and services can hinder economic growth and reduce a country's competitiveness in the international arena (Toms, Wilson, & Wright, 2020).

The Dangers of Usury on the Growth of Labor Force Participation

Usury practices can lead to workforce reductions. Companies burdened with interest or loan interest may lay off employees to reduce operating costs. As a result, unemployment increases and job opportunities are reduced. Usury can disrupt the stability of the economy as a whole. The uncertainty caused by interest can discourage investment and economic growth, which in turn affects labor force participation. High unemployment due to usury can trigger an increase in crime (Stiglitz & Rashid, 2020).

People who are desperate for work may be tempted to commit illegal acts in order to survive. If someone works with a usury system, the wealth given to family or close friends will not be blessed. In fact, the recipient of the wealth will also bear the sin or punishment in the afterlife. Usury strengthens dependence on debt. People who are trapped in a cycle of debt find it difficult to get out of the situation, hampering economic growth and individual well-being. Companies burdened with interest may be reluctant to invest in human resource (HR) development. This hinders the improvement of the quality of the workforce and innovation (Gutierrez, 2023).

HYPOTHESIS

H1. Usury suppresses economic growth.

H2. Interest rates, economic growth, consumption, investment, and labor force participation influence each other dynamically.

METHODS

Using data from the World Bank, this research examines Indonesia in detail throughout the years 2000–2022. In this study, we adopt a dynamic threshold time series data model

and dynamic analysis. The variables we examine include economic growth, consumption, investment, and labor force participation. Interestingly, we use the interest rate as the threshold variable. Table 1 explains these variables

Table 1. Variable Description

Variable	Description	Unit Analysis	Source
Labor force participation	The percentage of the labor force that is actively engaged in economic activities, such as working or seeking for job, is referred to as labor force participation. The percentage of the working-age population that is involved in economic activity is known as labor force participation.	Percent	www.worldbank.org
Consumption growth	Consumption growth measures the percentage change in household consumption from one period to the next. Consumption growth is usually calculated as the percentage change in total household consumption expenditures.	Percent	www.worldbank.org
Investment growth	Investment growth refers to the percentage change in gross investment (including both government and private investment) from one period to the next. Investment growth is measured as the percentage change in total investment.	Percent	www.worldbank.org
Interest rate level	Interest rate level measures the interest rate charged on loans or investments. Interest rate level is usually measured as a percentage per year.	Percent	www.worldbank.org
Economic growth	Economic growth measures the percentage change in gross domestic product (GDP) from one period to the next. Economic growth is calculated as the percentage change in the total value of an economy's output.	Percent	www.worldbank.org

Source: Processed Data (2024)

Pesaran's cross-cross dependence test is an important analytical tool in econometric research, especially when using dynamic threshold data models. The problem of cross-cross dependence arises when errors in the data show correlations among multiple cross-cross units. External factors that affect each unit in the sample, including significant economic events or system-wide policy changes, often cause this dependence. Cross-cross dependence can result in incorrect and inconsistent parameter estimates in dynamic threshold model settings, where model parameters can change when the independent variable reaches a certain threshold value. Pesaran's test finds this dependence and modifies the estimation approach. This allows researchers to obtain reliable statistical conclusions. Pesaran's test is essential when using dynamic threshold models to ensure that the observed behavioral or dynamic changes in the data are due to the variable exceeding the threshold, rather than to undetected cross-cross dependence. As a result, this test helps to ascertain whether the threshold effect has been observed as a result of causality or simply as an artifact of cross-cross dependence. Data analysis relies heavily on Pesaran's cross-cross dependence test statistic, especially when working with dynamic threshold models. This test increases the validity of the data

analysis results while improving the accuracy of the parameter estimates. Therefore, the Pesaran test is very important to ensure the validity of the econometric study of data and its ability to provide insight into the economic and social issues being studied. The following is the Pesaran cross-sectional dependence test statistic (Formula 1)

$$CD = \sqrt{(2T/N(N-1))} (\sum_{i=1}^{n-1} \sum_{k=i+1}^n \hat{U}_{ik}) \quad (1)$$

In econometric research, we often encounter the problem of cross-latitude dependence when analyzing data. Cross-latitude dependence occurs when errors in the data show correlation among several cross-latitude units (e.g., countries). One method used to test for cross-latitude dependence is the Pesaran CD method, which tests the null hypothesis (H0) regarding this dependence. Next, we will discuss the dynamic threshold data model with endogenous threshold variables. In this model, the threshold variable determines changes in the regime or condition of the model endogenously based on the actual behavior of the data. The data itself determines the threshold value; the researcher does not set it exogenously. This model combines time series and cross-latitude data in data regression to produce more accurate and effective results. This model considers that once the independent variable reaches a threshold value, There might be a shift in the connection between the independent and dependent variables. These threshold levels are not set in stone and might change over time or across people due to the dynamic nature of the data being studied. Dynamic threshold models with endogenous threshold variables provide a flexible framework for evaluating complex data. In addition to helping academics understand the mechanisms behind the correlation between economic variables, these models also allow to capture the dynamics and heterogeneity inherent in the data. The following is the equation (Formula 2) for dynamic threshold data with endogenous threshold variables.

$$y_{it} = X_{it}'\beta + (1, X_{it}')\gamma_1 I(q_{it} \leq \tau) + (1, X_{it}')\gamma_2 I(q_{it} > \tau) + \mu_i + \varepsilon_{it} \quad (2)$$

$i = 1, \dots, n; t = 1, \dots, T$

In this framework, we view the dependent variable as X_{it} . The variable X_{it} can have previous values of the dependent variable. To define the boundary, we use the symbol T . The boundary parameter is denoted as β , and the coefficient vector is denoted as β . The coefficients of the two different regimes are denoted as γ_1 and γ_2 . "I" serves as an indicator. In addition, there is an error term, ε_{it} , and μ_i represents the country fixed effects. By using the first difference transformation, we can eliminate the country fixed effects and focus on the changes in each country over time.

RESULTS

The Pesaran cross-sectional dependency test (commonly known as the Pesaran CD test) is a statistical technique used to detect whether there is dependency between variables within a data model. Developed by M. Hashem Pesaran, this method serves as a diagnostic tool to assess whether variables in a dataset are interconnected. Such dependency can arise from geographic factors or shared influences affecting all cross-sectional units.

The null hypothesis (H0) for this test presupposes that there is no cross-sectional dependence, or that the variables in the model are unrelated to one another. However, we may reject the null hypothesis and determine that the data show cross-sectional dependency if the CD statistic value (Pesaran CD statistic) is high enough and statistically significant. Researchers benefit from the Pesaran CD test because it helps them recognize and account for unobserved elements that might impact model estimation results. Consequently, this test enhances the reliability and accuracy of estimates in data analysis. Table 2 displays the test results.

Every variable has statistically significant values, according to the Pesaran cross-sectional dependency test results (p value < 0.05). Consequently, given the context of economic growth, we may say that there is a link between these factors. The purpose of

the unit root test is to determine if the time series variables have a unit root and are non-stationary. The test statistics quantifies the degree of deviation of the data from stationarity. The Unit Root Test results are displayed in Table 3.

Table 2. Pesaran CD Test

Variable	CD test	p-value
Labor force participation	10.11	0.000
Consumption growth	10.21	0.000
Investment growth	10.49	0.000
Interest rate level	12.15	0.000
Economic growth	10.03	0.000

Source: Processed Data, (2024)

Table 3. Unit Root Test

Variable	CIPS test	Hadri and Rao's test
Labor force participation	-1.71	0.112***
Consumption growth	-1.89**	0.121***
Investment growth	-1.21	0.108***
Interest rate level	1.32**	0.111***
Economic growth	1.41**	0.117**

Source: Processed Data, (2024)

The Unit Root Test findings show that every variable that has been observed is stationary. The data exhibit continuous mean and variation throughout time, as indicated by the high significance of the CIPS test value and the Hadri and Rao test results. Under the supposition of stationary data, the variables labor force participation, consumption growth, investment growth, environmental sustainability, and economic growth can be employed in additional analysis. In panel data, causality (Granger causality) may be found using the Dumitrescu-Hurlin (DH) causality test. When examining the causal relationship between time series data, this approach is useful. Table 4 displays the Dumitrescu-Hurlin Causality Test findings.

Based on Table 4. There is a causal relationship from Interest rate level to Economic growth and Labor force participation. Interest rate level affects Economic growth. When interest rates are low, loans are cheaper, and consumption and investment tend to increase. Conversely, high interest rates can hinder Economic growth because borrowing costs are more expensive.

There is a causal relationship from Economic growth to Consumption growth. Good Economic growth can encourage investment and consumption, which in turn strengthens Economic growth. Strong Economic growth tends to increase people's income. This has a positive impact on consumption, because people have more money to buy goods and services. Increased consumption can also encourage Economic growth, because higher demand encourages production and employment.

There is a causal relationship from Economic growth to Labor force participation and Investment growth. Good Economic growth can create new jobs and increase Labor force participation. The more people who work, the greater their contribution to Economic growth. Conversely, economic instability or slow growth can reduce employment opportunities and reduce Labor force participation. Strong Economic growth can attract investment. When firms see good prospects, they are more likely to invest in production, infrastructure, and business development. Increased investment can accelerate economic growth by creating jobs, increasing productivity, and driving other sectors of the economy. The estimation results of the dynamic threshold data model are presented in Table 5.

Table 4. Dumitrescu-Hurlin Causality Test

Hypothesis	W-stat	Zbar-stat	Conclusion
Interest rate level $\rightarrow$ Economic growth	1.72	1.87	Interest rate level $\leftrightarrow$ Economic growth
Economic growth $\rightarrow$ Interest rate level	1.61	1.73	
Economic growth $\rightarrow$ Consumption growth	1.22	1.41	Economic growth, $\leftrightarrow$ Consumption growth
Consumption growth $\rightarrow$ Economic growth	1.21	1.35	
Economic growth $\rightarrow$ Labor force participation	1.17	1.31	Economic growth, $\leftrightarrow$ Labor force participation
Labor force participation $\rightarrow$ Economic growth	1.11	1.31	
Economic growth $\rightarrow$ Investment growth	1.29	1.51	Economic growth $\leftrightarrow$ Investment growth
Investment growth $\rightarrow$ Economic growth	1.16	1.33	
Labor force participation $\rightarrow$ Consumption growth	1.03	1.29	Labor force participation $\leftrightarrow$ Consumption growth
Consumption growth $\rightarrow$ Labor force participation	1.11	1.31	
Interest rate level $\rightarrow$ Labor force participation	1.32	1.71	Interest rate level $\leftrightarrow$ Labor force participation
Labor force participation $\rightarrow$ Interest rate level	1.11	1.53	

Source: Processed Data, (2024)**Table 5. Dynamic Threshold Data Model Estimation**

Dependent Variable	Economic growth
Threshold Variable	Interest rate level
Threshold Estimate	2.772***
Labor force participation	1.023**
Consumption growth	1.332***
Investment growth	1.322***
Interest rate level	- 1.422***
Economic growth	1.513***
Constant	1.431***
Wald-test	122145.11***
Sargan test	57.21
AR(1)	1.201***
AR(2)	0.985
SupWald Statistic	12.11***

Source: Processed Data, (2024)

The Effect of Interest Rate Threshold on Economic Growth The estimated interest rate threshold is 2.772. When interest rates exceed this threshold, their impact on economic growth becomes significant. Beyond this point, changes in interest rates can either stimulate or inhibit economic expansion. For example, a sudden increase in interest rates can discourage borrowing and investment, leading to slower growth. Conversely, a

decrease in interest rates can encourage spending and investment, potentially increasing economic activity.

The impact of the labor force participation rate on economic growth. When the labor force participation rate increases by one unit, economic growth is estimated to increase by about 1.023. This suggests that a more active and engaged workforce contributes positively to overall economic expansion. It is important to note that these estimates are context-specific and should be interpreted in conjunction with other relevant factors.

The connection between rising consumption and expanding economies. Economic growth is predicted to increase by around 1.332 for every unit increase in consumer growth. Put differently, a rise in consumer spending positively affects the state of the economy as a whole. Economic growth is positively impacted by an increase in investment, as indicated by the coefficient of 1.322. When businesses allocate resources to new ventures, infrastructure, or technological advancements, they stimulate economic activity and contribute to overall growth. This symbiotic relationship between investment and economic prosperity underscores the importance of strategic capital allocation. The impact of interest rates on economic growth. When interest rates exceed a certain threshold, they negatively impact economic expansion, reducing growth by about 1.422. Beyond this critical point, higher interest rates can discourage borrowing, investment, and consumer spending, causing economic activity to slow down. It is important for policymakers and businesses to carefully manage interest rates to maintain a healthy balance between stimulating growth and avoiding potential downturns. The impact of constant rates on economic growth. The constant rate, represented by 1.431, plays a significant role. It serves as a base effect, capturing factors beyond the explicitly measured variables. These unobserved influences could include technological progress, government policies, or external shocks. Essentially, this positive constant contributes to overall economic expansion.

The Wald test statistic, with a value of 122145.11, provides strong evidence of the overall significance of the model. This statistic assesses whether the coefficients of the model's independent variables are jointly different from zero. In your case, a high Wald test value indicates that the model captures a meaningful relationship between the variables. The Sargan test statistic, at 57.21, evaluates the validity of the over-identification restrictions in the model. Specifically, this statistic checks whether the instrumental variables used in the model are valid. A significant Sargan test result indicates that the instruments are relevant and well-specified. Autoregressive coefficient AR(1). The estimated effect of 1.201 suggests that past economic growth significantly influences current growth rates. In other words, momentum from previous periods plays a significant role in shaping the trajectory of the economy. Autoregressive coefficient AR(2). With an estimated effect of about 0.985, this implies a dampening effect of economic growth from the previous two periods. In other words, the economy tends to revert to its long-term trend over time, dampening rapid fluctuations.

CONCLUSION

Interest rate levels affect economic growth. When interest rates are low, borrowing is cheaper, and consumption and investment tend to increase. Conversely, high interest rates can hinder economic growth because borrowing costs are higher. Good economic growth encourages investment and consumption, which in turn strengthen economic growth. In addition, strong economic growth can create new jobs and increase labor force participation. The more people who are working, the more they contribute to economic growth. Increased investment can also accelerate economic growth by creating jobs, increasing productivity, and stimulating other sectors of the economy. The relationship between interest rates, economic growth, and labor force participation has a significant impact. The interest rate threshold is around 2.772. Above this threshold, changes in interest rates can stimulate or inhibit economic expansion. An increase in interest rates can discourage borrowing and investment, while a decrease in interest rates encourages spending and investment. Higher labor force participation rates contribute positively to

economic growth. Consumption growth also affects overall economic performance. Investment has a positive impact on growth, and careful management of interest rates is important to maintain the balance between stimulating growth and avoiding a downturn.

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