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Gross Domestic Product and Household Consumption Affect Gross Savings: A Long-Term Time Series Analysis in Indonesia

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Received: 05th June 2025. Revised: 10th June 2025, Accepted: 14th June 2025.
Available online: 30th June 2025, Published regularly: June 2025.

Abstract

This study aims to analyze the effect of national income, interest rates, and household consumption on the savings in Indonesia. The data used is secondary annual time series data for the period 2004-2023, obtained from the Central Bureau of Statistics and Bank Indonesia. The analysis method used is multiple linear regression with the Ordinary Least Squares (OLS) approach. The results showed that simultaneously the three independent variables had a significant effect on savings. Partially, national income has a positive and significant effect, household consumption has a negative and significant effect, while interest rates have a positive but insignificant effect on the level of savings. These results suggest the importance of macroeconomic strategies that support income growth and consumption efficiency to strengthen the saving capacity of Indonesians.

Keywords: savings, national income, interest rate, household consumption, time series.

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh pendapatan nasional, suku bunga, dan konsumsi rumah tangga terhadap tabungan di Indonesia. Data yang digunakan merupakan data sekunder tahunan periode 2004–2023, diperoleh dari Badan Pusat Statistik dan Bank Indonesia. Metode analisis yang digunakan adalah regresi linear berganda dengan pendekatan Ordinary Least Squares (OLS). Hasil penelitian menunjukkan bahwa secara simultan ketiga variabel independen berpengaruh signifikan terhadap tabungan. Secara parsial, pendapatan nasional berpengaruh positif dan signifikan, konsumsi rumah tangga berpengaruh negatif dan signifikan, sedangkan suku bunga berpengaruh positif namun tidak signifikan terhadap tabungan. Hasil ini menunjukkan pentingnya strategi makroekonomi yang mendukung pertumbuhan pendapatan dan efisiensi konsumsi guna memperkuat kapasitas menabung masyarakat Indonesia.

***Kata Kunci**: tabungan, pendapatan nasional, suku bunga, konsumsi rumah tangga, time series*

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INTRODUCTION

A country's economy relies heavily on the ability of its people to engage in economic activities such as consumption, investment, government spending, and export-import (Badan Pusat Statistik, 2024). National income serves as a key indicator commonly used to describe a country's economic condition (Badan Pusat Statistik, 2024). In Indonesia, national income is measured through Gross Domestic Product (GDP), which reflects the total value of goods and services produced by all economic actors, including households, firms, and the government, within the national territory over a specific period, typically one year. In Figure 1 an increase in GDP reflects the growth of economic activity and the welfare of society (Badan Pusat Statistik, 2024).

Based on data from Statistics Indonesia (BPS) regarding Indonesia's national income at current prices for the period 2004 to 2023, there has been a significant growth trend (Statistics Indonesia, Publication). In 2004, the national income was recorded at IDR 2,295.8262 trillion and continued to increase, reaching IDR 20,892.3485 trillion in 2023.

This indicates an almost tenfold increase within two decades. According to Hilman, A. M. (2018), this trend reflects a relatively strong economic expansion in Indonesia, along with the growth of key sectors such as manufacturing, trade, and information and communication. In general, the growth has been positive; however, there were several years in which the growth rate slowed down. In 2020, the national income growth rate declined compared to previous years, primarily due to the impact of the COVID-19 pandemic, which significantly disrupted economic

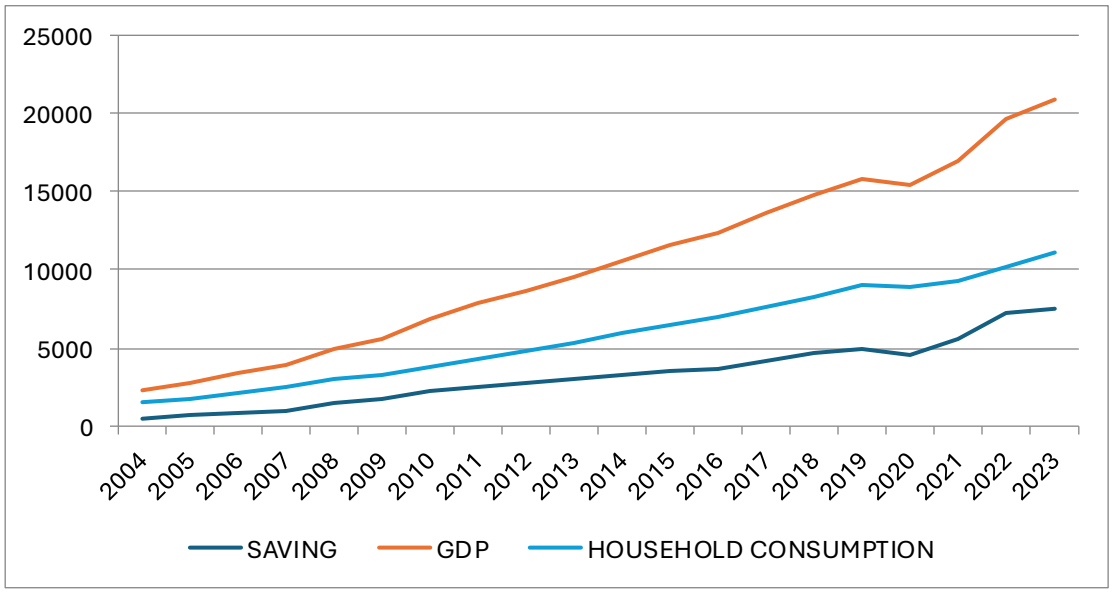

Figure 1. Trends of Gross Savings, GDP, and Household Consumption in Indonesia (in Trillion Rupiah per Year)

Source: Processed by the author, 2025

ISSN: 2089-4309 (print)
2579-4841 (online)

activities nationwide (Batubara, Y. et al., 2022). Decreased production, mobility restrictions, and reduced consumption contributed to the overall economic slowdown. Nevertheless, the data indicate that after 2020, national income experienced a relatively strong recovery, with gradual growth continuing until 2023 (Sufiani, A., 2000). This demonstrates Indonesia's economic resilience in facing external shocks and the effectiveness of its national economic recovery strategies. The increase in national income after 2020 signals the beginning of an economic recovery process, although it has not yet fully returned to the pre-pandemic trend (Asrirawan, A. et al., 2022).

One of the key monetary policy instruments that plays an important role in a country's economy is the interest rate. The benchmark interest rate, previously known as the BI Rate (before 2016) and later changed to the BI 7-Day Reverse Repo Rate (since 2016), serves as a reference in determining both lending and deposit interest rates in the banking sector. Changes in this rate directly or indirectly influence public decisions regarding consumption and saving. According to research conducted by Huda et al. (2020), the interest rate has a significant relationship with the savings rate, as it is closely linked to the incentives received by individuals when placing their funds in deposit instruments.

As shown in Figure 2, Indonesia's interest rates fluctuated considerably between 2004 and 2023 in response to both domestic and global economic dynamics**.** The highest interest rate was recorded in 2005 at 12.75%, followed by a gradual decline to 5.75% in 2012. After a brief rise to 7.75% in 2014, the downward trend continued, reaching its lowest point of 3.50% in 2021 due to stimulus policies implemented during the COVID-19 pandemic. In 2022 and 2023, interest rates rose again to 5.50% and 6.00% respectively, in response to global inflationary pressures. This pattern reflects the strategic role of interest rates as a key instrument in maintaining, macroeconomic stability and influencing public preferences in both consumption and saving decisions. According to the neoclassical economic theory, a long-term increase in interest rates tends to have no significant

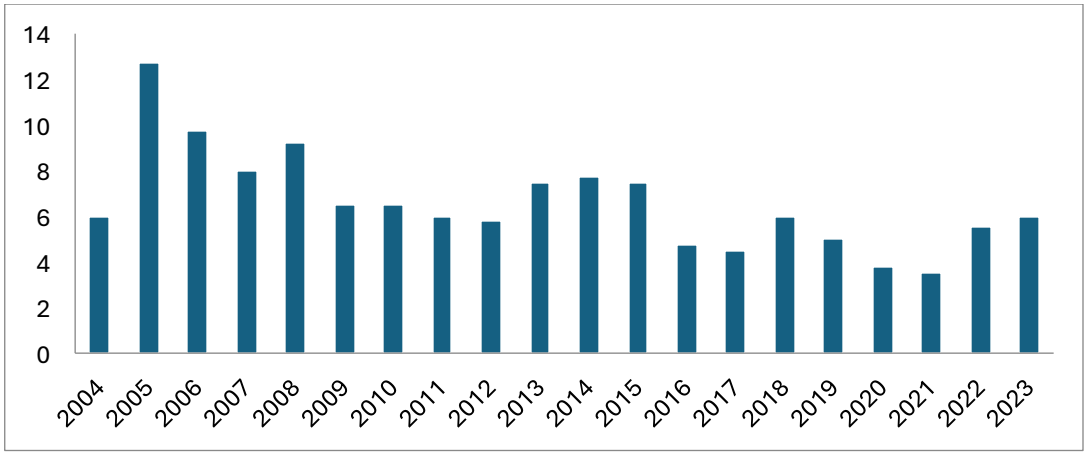

Figure 2. Interest Rate (in Percentage per Year)

Source: Processed by the author, 2025

impact on the overall economy due to the crowding-out effect, a condition in which demand for investment and consumption declines as a result of limited market liquidity (Latifah E. et al., 2024). This indicates that high interest rates may suppress economic activity, including household consumption. In the context of the savings model, interest rates play a crucial role as they directly influence people's preferences between saving and spending their income.

Consumption plays a vital role in the structure of Gross Domestic Product (GDP) as the largest and most stable component over time, contributing more than 50% of the total GDP. Therefore, any changes in household consumption can significantly affect the overall economic performance. Household consumption patterns are also often used as an indicator to assess the dynamics of economic welfare, as they reflect the population's economic capacity and preferences in meeting their needs.

Household consumption expenditure refers to the spending activities undertaken by households to acquire final goods and services for daily needs, such as food, clothing, and other services. The goods produced and directly consumed by households are referred to as consumer goods. When all individual consumption expenditures in a country are aggregated, the total reflects the national consumption level of that country (Parsaulian et al., 2013).

According to Keynesian theory, a nation's economic performance is strongly influenced by the level of aggregate expenditure, which refers to the total spending by society on goods and services. Household consumption decisions play a crucial role in shaping economic dynamics, both in the short and long term. In the short term, changes in consumption can lead to significant economic fluctuations, while in the long term, household consumption patterns influence various macroeconomic variables. In many countries, consumption accounts for approximately 50 to 75 percent of Gross Domestic Product (GDP), making household consumption one of the key factors in determining the direction of economic activity. There is a general tendency for individual consumption to increase in line with rising income levels (Parsaulian et al., 2013).

As shown in Figure 1, household consumption in Indonesia has demonstrated a consistent upward trend throughout the period from 2004 to 2023. In 2004, household consumption was recorded at Rp1,532.888 trillion and continued to grow, reaching Rp11,109.600 trillion in 2023. Overall, the annual increase in household consumption reflects stable economic growth and an improvement in public purchasing power. Certain periods experienced particularly significant surges, such as the increase of over Rp900 trillion from 2021 to 2022, which was likely driven by the post-pandemic economic recovery.

Household consumption experienced a temporary slowdown in 2020, decreasing from Rp8,965.8374 trillion in 2019 to Rp8,899.9176 trillion in 2020. This decline can be directly attributed to the economic impact of the COVID-19 pandemic. It illustrates how external pressures,

such as a global health crisis, can affect consumer behaviour. In general, the long-term upward trend in household consumption highlights its role as an important variable in determining the national savings rate. When consumption consistently increases, the portion of income allocated to savings tends to decline, unless national income grows at a faster rate than consumption.

Savings are a fundamental element of the financial system that play a significant role in economic management, both at the individual and national levels. In general, savings can be defined as the portion of income that is not used for consumption but is set aside to meet future needs. According to Wicksell (as cited in Vieneris, 1977, in Sumastuti, 2008:49), the public's willingness to save is influenced by the level of interest rates. Higher interest rates lead to an increase in the amount of savings due to asset accumulation. When interest rates are high, people tend to reduce current consumption in order to increase their savings. As shown in Figure 1, Indonesia's gross savings consistently increased from 2004 to 2023, indicating rising saving behavior over time in response to macroeconomic conditions.

This study aims to empirically examine the effect of national income (GDP), interest rates, and household consumption on the level of gross savings in Indonesia over the period 2004–2023. The analysis focuses on determining both the simultaneous influence of these macroeconomic variables using a multiple linear regression model. By doing so, the study seeks to identify which factors play the most significant role in shaping saving behavior in Indonesia. Savings are a fundamental element of the financial system that play a significant role in economic management, both at the individual and national levels. In general, savings can be defined as the portion of income that is not used for consumption but is set aside to meet future needs. According to Wicksell (as cited in Vieneris, 1977, in Sumastuti, 2008:49), the public's willingness to save is influenced by the level of interest rates.

Higher interest rates lead to an increase in the amount of savings due to asset accumulation. When interest rates are high, people tend to reduce current consumption in order to increase their savings.This study aims to investigate how interest rates affect individuals' saving decisions, as well as to examine the impact of interest rate fluctuations on the size of savings. In addition, this study is also intended to provide empirical evidence on the function of interest rates as an economic tool capable of encouraging saving habits, both personally and within the framework of broad economic policy.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Banking Sector

According to Law Number 10 of 1998, banking refers to a business entity that collects funds from the public in the form of deposits and redistributes them to the public in the form of credit or other financial instruments in order to improve the standard of living of the general population. The

primary function of the Indonesian banking sector is to mobilize and allocate public funds with the aim of supporting national development, particularly in promoting equity, economic growth, and national stability, ultimately contributing to the improvement of public welfare.

The banking sector plays a highly strategic role in supporting the smooth flow of development funding as well as various financial transactions related to financing activities. In addition, the banking sector contributes significantly to driving a country's economic activity. Through its function as a collector of public funds in the form of deposits, banks provide returns in the form of interest, which are then redistributed to the public through credit. This credit distribution aims to promote broader societal welfare (Ferry, 2013).

Digital transformation has become a crucial element in enhancing the effectiveness of banking functions. Research by Anabel et al. (2025) indicates that digital transformation in the banking sector positively affects banks' financial performance, particularly through the increase of fee-based income. Services such as mobile banking and internet banking improve the efficiency and accessibility of financial services, thereby strengthening non-interest income. This, in turn, indirectly supports economic growth and national income while maintaining financial sector stability to foster sustainable development.

Third-Party Fund

Third-Party Funds (DPK) refer to funds collected by banks from the public at large, including individuals and business entities, and are often referred to as public funds (Ismail, 2010:43). The sources of these funds typically include demand deposits, savings, and time deposits (Kasmir, 2012:34). The funds deposited by the public or customers are gathered by banks based on mutual agreements and contractual arrangements between both parties. Third-Party Funds play several important roles, including serving as a source of financing for investment, working capital, and consumption. When utilized for capital financing, these funds significantly benefit the public through the provision of capital loans. This function also contributes to reducing the unemployment rate in Indonesia. As unemployment decreases, the national economy is indirectly expected to improve.

Commercial Banks play a crucial role in driving the national economy, as more than 95% of the total Third-Party Funds (DPK) in the national banking sector—which includes Commercial Banks, Sharia Banks, and Rural Banks—are held by Commercial Banks (Indonesian Banking Statistics, processed). These DPK funds are subsequently used to stimulate economic growth through credit distribution. According to Dendawijaya (2005), funds collected from the public can account for 80% to 90% of all funds managed by banks. In general, the activity of collecting funds from the public, commonly referred to as third-party funds, is classified into three types: Saving Deposits,

Demand Deposits, and Time Deposits (Soedradjad, 2001:142). The amount of third-party funds tends to increase from year to year, indicating a growing level of public trust in the banking system.

The successful collection of Third-Party Funds (DPK) not only reflects public trust in the banking system but also strengthens banks' capacity to extend credit. According to Adriansyah, A. (2018), DPK serves as a key indicator of a bank's operational performance, as it directly reflects public confidence and acts as a primary source of funds to support lending activities. The growth of DPK is aligned with the increasing capacity of banks to perform their intermediary function for the public.

Saving Rate

A country's savings rate is influenced by various economic factors, one of which is the interest rate. This aligns with the classical economic theory, which states that savings is a function of the interest rate, meaning that the higher the interest rate, the greater the incentive for people to save. To measure the growth rate of savings over time, the following formula is used:

$$\text{Growth of Savingst} = [\ln(\text{Savings}_t) - \ln(\text{Savings}_{t-1})] \times 100\%$$

(Source: Gujarati, 2003)

The higher the interest rate, the greater the tendency for individuals to save. This is driven by the desire to reduce consumption in order to increase savings when the returns on saving rise. Conversely, when interest rates are low, businesses are more likely to invest, as the cost of capital becomes more affordable (Septria, 2022). Van den Berg (2005) stated that a society's savings rate is also influenced by the dependency ratio. When the proportion of the working-age population is higher than that of the non-productive age group, the propensity to save tends to increase. This is based on the assumption that the number of individuals engaged in saving activities exceeds those who engage in dissaving behavior.

National Income

National income (Gross Domestic Product) is often used as a primary indicator to assess a country's economic performance. In simple terms, national income reflects the total income earned by the population over a certain period, including income from abroad (Ainur et al., 2024).

$$\text{Growth of GPD}_t = [\ln(\text{GPD}_t) - \ln(\text{GDP}_{t-1})] \times 100\%$$

(Source: Gujarati, 2003)

In macroeconomic terms, an increase in national income is usually followed by a rise in household income. This can lead to increased consumption; however, not all of the income is spent—some is also set aside as savings. Keynes' consumption theory states that savings are strongly influenced by national income. When national income increases, people tend to allocate more of their income for savings. Conversely, when national income declines, the ability to save also decreases (Lumadya et al., 2015).

In line with this view, a study by Latifah et al. (2024) found that an increase in GDP significantly reduces Indonesia's government debt, as government revenue from taxes rises. This supports the Solow-Swan theory, which posits that GDP growth driven by capital and technology enhances fiscal capacity without the need for additional debt. This condition promotes an increase in national savings, supporting the hypothesis of a positive effect of GDP on savings in Indonesia.

H1: There is a significant positive effect of National Income (GDP) on the Savings Rate in Indonesia for the period 2004–2023.

Interest Rate

The interest rate is often used as an instrument to gauge a country's economic activity, influencing financial flows in the banking sector, investment, inflation, and currency circulation within a nation. Changes in interest rates—whether increases or decreases—should ideally prioritize and serve the welfare of the domestic population (Kurniasari, 2011).

Interest rate refers to the return or cost incurred from the use of money over a specific period, and can be interpreted as the price of exchanging the value of money between the present and the future. Excessively high interest rates can impose an additional burden on businesses, particularly in the form of higher interest expenses on loans. This condition may suppress company financial performance, as a portion of revenues that could have been profits must instead be allocated to meet interest payment obligations. Consequently, corporate profitability may decline, which in the long term can negatively affect investment decisions and business growth (Boediono, 1994).

H2: There is a positive but statistically insignificant effect of interest rates on the savings rate in Indonesia during the 2004–2023 period.

Household Consumption

Household consumption is one of the primary components of a nation's economic structure, reflecting the spending activities of individuals to meet daily living needs (Halimah et al., 2024). Under the expenditure approach, household consumption contributes to more than half of

Indonesia's nominal GDP, making fluctuations in household consumption highly influential on overall economic performance (Asnah et al., 2021). In an open economy, Gross Domestic Product (GDP) can be expressed by the following equation:

$$Y = C + I + G + NX$$

Where:

- Y= National income (GDP),
- C= Consumption,
- I= Investment,
- G= Government expenditure, and
- NX= Net exports.

Household consumption can be defined as the total expenditure made by households to acquire goods and services for the purpose of fulfilling their needs within a certain period (Tondok et al., 2023). However, not all transactions made by households are classified as consumption. For instance, the purchase of a house is categorized as investment, and expenditures such as insurance payments or transfers to family members are not considered consumption, as they do not involve a direct exchange of goods and services within the economy (Alvian, 2016).

$$\text{Growth of Consumption}_t = [\ln(\text{Consumption}_t) - \ln(\text{Consumption}_{t-1})] \times 100\%$$

(Source: Gujarati, 2003)

According to Statistics Indonesia (BPS, 2017), final household consumption expenditure (PK-RT) refers to the spending made by individuals or groups living in a household on goods and services consumed directly. A household is defined as a group of people who share a residence, manage income collectively, and utilize economic resources together, especially in terms of food and shelter.

H3: There is a negative and significant effect of household consumption on the savings rate in Indonesia during the 2004–2023 period.

The research framework illustrating the hypothesized relationship between independent and dependent variables is presented in Figure 3. Note: (+) indicates hypothesized positive influence: (–) indicates hypothesized negative influence.

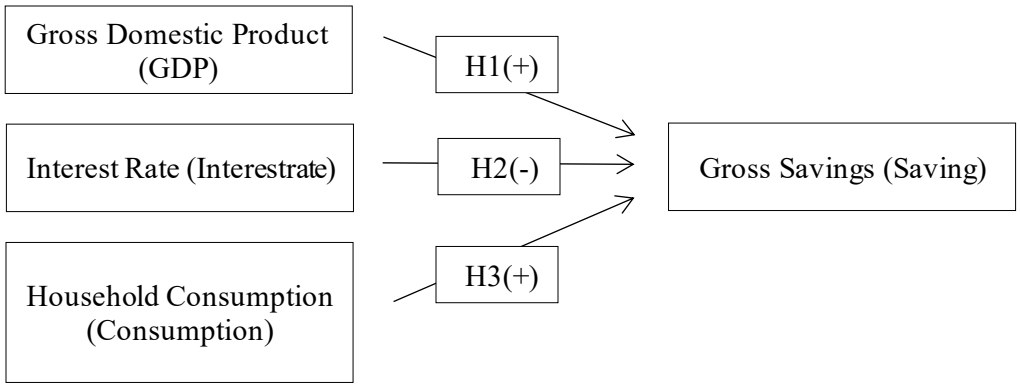

Figure 3. Research framework

Source: Processed by the author, 2025

RESEARCH METHOD

This study employs annual data consisting of the variables: savings rate, national income, interest rate, and household consumption in Indonesia for the period 2004 to 2023. All data were obtained from the official websites of the Central Statistics Agency (BPS) and Bank Indonesia. The sample was selected using purposive sampling, considering the availability and relevance of data throughout the observation period.

This study examines the influence of each independent variable (national income, benchmark interest rate, and household consumption) on the dependent variable (household savings rate) using a quantitative method with a multiple linear regression approach. This approach is applied to determine the relationship and simultaneous effect of these macroeconomic variables within the context of the Indonesian economy.

To assess the significance of the influence of national income, interest rate, and household consumption on the savings rate in Indonesia, this research applies multiple linear regression analysis. The analysis includes classical assumption tests to obtain regression estimates that meet the BLUE (Best Linear Unbiased Estimator) criteria. The classical assumption tests used in this study include tests for normality, heteroskedasticity, multicollinearity, and autocorrelation. The regression model used in this study is formulated as follows:

$$\boldsymbol{SAVING = \alpha + \beta 1 * GDP + \beta 2 * INTERESTRATE + \beta 3 * CONSUMPTION + \epsilon}$$

Where:

- SAVING = Gross Savings
- GDP = Gross Domestic Product
- INTERESTRATE = Interest Rate
- CONSUMPTION = Household Consumption

- α = Constant term
- β_1, β_2, β_3 = Regression coefficients
- ε_t = Error term

RESULT

Before conducting the regression analysis, classical assumption tests were carried out to ensure that the model meets the requirements of the classical linear regression approach. These tests include normality, multicollinearity, heteroskedasticity, and autocorrelation tests. The results are summarized in Table 1.

Based on the results shown in Table 1, it can be concluded that the regression model meets all classical linear regression assumptions. The absence of significant violations in these tests indicates that the estimation results are valid and fulfill the BLUE (Best Linear Unbiased Estimator) criteria.

The multiple linear regression analysis was conducted to evaluate the influence of national income (GDP), interest rate, and household consumption on gross savings in Indonesia from 2004 to 2023. Table 2 summarizes the results of the regression, including the coefficients, t-statistics, p-values, overall model significance (F-test), and adjusted R^2.

Based on the regression output in Table 2, GDP has a positive and statistically significant effect on gross savings, while household consumption shows a negative and significant effect. In contrast, the interest rate has a positive coefficient but is statistically insignificant at the 5% level. The F-statistic confirms that the model is jointly significant, and the adjusted R^2 value of 0.9013 indicates that approximately 90% of the variation in gross savings can be explained by the independent variables. These findings highlight GDP and consumption as the main determinants of saving behavior in Indonesia during the study period.

Table 1. Results of Classical Assumption Testing

Test Type	Method Used	p-Value / Criteria	Condition
Normality Test	Jarque-Bera	0.5788	Data is normally distributed
Multicollinearity Test	Variance Inflation Factor	VIF < 10	No multicollinearity
Heteroskedasticity Test	White Test	0.0792	No heteroskedasticity
Autocorrelation Test	Breusch-Godfrey LM Test	0.4569	No autocorrelation

Source: Output Eviews 12 (processed)

Table 2. Regression Estimation Results

Variable	Coefficient	t-Statistic	p-Value	Significance
Constant	-4.2236	-1.6142	0.1260	Not significant
GDP	2.8659	9.1757	0.0000	Significant
Interestrate	0.9121	1.5513	0.1404	Not significant
Consumption	-1.9575	-4.2438	0.0006	Significant
F-Statistic	58.8088		0.0000	Model is jointly significant
Adjusted R^2	0.9013			High explanatory power

Source: Output Eviews 12 (processed)

$$SAVING = -4.22360210003 + 2.86593935861(GDP) + 0.912115196962(INTERESTRATE) - 1.957502881(\text{CONSUMPTION})$$

DISCUSSION

The Effect of Gross Domestic Product on National Savings

The regression coefficient for the Gross Domestic Product (GDP) variable is 2.865939, indicating that a one-unit increase in GDP leads to an increase in national savings of 2.865939 units, assuming other variables remain constant. The probability value of 0.0000, which is significantly lower than the 5% significance level (α = 0.05), indicates that this effect is statistically significant. This finding supports hypothesis H1, which posits that GDP has a positive and significant effect on the level of national savings.

Theoretically, the relationship between income and savings has been classically explained by Keynes, who argued that as income increases, consumption also increases—but by a lesser proportion—leaving the remainder available for saving. This is further reinforced by the Life Cycle Hypothesis developed by Modigliani and Brumberg (1954), which suggests that individuals tend to save more during the peak income phases of their life cycle.

In the context of Indonesia, national GDP growth over the past two decades has been accompanied by an increase in per capita income and the expansion of the middle class, which tends to allocate a portion of their income to savings. As GDP rises, more income surplus becomes available for savings, whether in the form of bank deposits, term deposits, or other investment instruments. This finding aligns with previous studies by Nopirin (2000) and Boediono (2001), which found that economic growth and increases in national income have a significant positive effect on savings levels. Therefore, GDP growth is considered one of the key drivers in encouraging

the accumulation of domestic savings necessary for financing national investment.

The Effect of Interest Rates on National Savings

The regression coefficient for the interest rate variable (BI Rate) is 0.912115, indicating that, in theory, an increase in interest rates should lead to an increase in savings. However, the probability value of 0.1404, which is greater than the 5% significance level ($\alpha = 0.05$), suggests that the effect of interest rates on savings is not statistically significant. Therefore, this result does not support hypothesis H2, which posits that interest rates have a positive and significant effect on national savings.

This condition can be explained by the fact that Indonesian society does not consistently regard interest rates as a primary consideration in savings decisions. In many cases—particularly during times of economic uncertainty or when purchasing power declines—people tend to hold cash (cash holding) or shift their funds into assets perceived to be safer, such as gold, land, or property. Furthermore, in developing countries such as Indonesia, low levels of financial literacy contribute to a lack of responsiveness to changes in bank interest rates. Saving behavior is often more strongly influenced by cultural norms, habitual practices, and short-term needs rather than interest-based incentives.

This phenomenon is supported by the findings of Harrod and Domar, who argue that in developing countries, interest rates are not always a primary determinant in savings decisions, particularly in contexts where the informal sector is prominent and economic uncertainty is high. This result is also consistent with research by Rachmawati and Anggraeni (2022), which found that interest rates have only a limited influence on savings decisions in Indonesia, as individuals tend to prefer storing wealth in physical goods or non-bank instruments during periods of economic instability. Thus, although interest rates theoretically have the potential to encourage savings, their practical influence in Indonesia is relatively limited, particularly when alternative forms of wealth storage are perceived as more stable or profitable in the long term.

The Effect of Consumption on National Savings

The regression coefficient for the consumption variable is -1.957503, indicating that a one-unit increase in household consumption leads to a decrease in national savings by 1.957503 units. The probability value of 0.0006, which is lower than the 5% significance level ($\alpha = 0.05$), demonstrates that the effect of consumption on savings is statistically significant. Thus, this result supports Hypothesis H3, which posits that consumption has a negative and significant influence on the level of national savings.

From an economic perspective, savings represent the portion of income that is not consumed.

Therefore, the higher the share of income allocated to consumption, the smaller the remainder available for saving. In Indonesia, household consumption accounts for more than 50% of GDP, underscoring the dominant role of consumption in the national economy. Consequently, changes in consumption directly affect the level of savings. Indonesian society generally exhibits a high marginal propensity to consume (MPC), particularly among lower- to middle-income groups, resulting in a greater proportion of income being spent rather than saved as incomes rise. The development of financial technology and digitalization has further reinforced consumerist behavior, with easier access to e-commerce platforms, "buy now, pay later" services, and electronic payment systems driving impulsive spending.

These findings are consistent with the arguments presented by Mankiw (2007), who states that consumption and savings are inversely related. Similarly, research by Dornbusch and Fischer (1993) affirms that high household consumption tends to suppress the capacity to save, particularly in developing economies. Therefore, to enhance national savings, it is essential to implement financial literacy programs and fiscal incentives that promote saving behavior, along with policies aimed at curbing non-productive consumption.

CONCLUSION, SUGGESTION, AND LIMITATIONS

This study provides a comprehensive examination of the macroeconomic determinants of savings in the context of a developing country. The findings indicate that national income has a positive and statistically significant effect on savings. This emphasizes the importance of strengthening income-generating policies through inclusive economic growth, improved labor productivity, and the development of key sectors capable of expanding employment opportunities. Such policies can enhance household capacity to save and contribute to broader financial resilience.

In contrast, the observed negative relationship between consumption and savings reveals a potential risk associated with rising consumption, particularly when driven by credit-fueled or lifestyle-based spending. This condition poses a challenge to long-term financial security, especially for lower-income households. Therefore, there is an urgent need to implement continuous and structured financial education programs that promote responsible spending and long-term financial planning. These programs should be championed by government bodies in collaboration with central financial authorities, with the aim of cultivating prudent financial behavior and raising awareness about the benefits of saving across all demographic groups.

The positive but statistically insignificant relationship between interest rates and savings suggests that households may not be responsive to traditional financial instruments. This could stem from structural issues such as limited financial access, low levels of trust in financial institutions, or a mismatch between existing products and the preferences of the general population. Addressing

this challenge requires greater innovation in the financial sector. Financial institutions, including banks and fintech companies, should develop inclusive and culturally relevant savings products that are easy to access and tailored to the financial behavior of underserved communities. Islamic-compliant savings products, community-based micro-saving platforms, and retail bonds issued by the government represent viable options to attract a broader base of savers.

At the policy level, the government is encouraged to integrate saving promotion into national development strategies. This could include offering fiscal incentives for long-term savings, embedding saving goals into poverty reduction and social protection programs, and aligning macroeconomic objectives with household financial empowerment. Financial authorities such as central banks and regulatory bodies should foster an enabling environment by supporting the development of responsive regulatory frameworks, improving trust in formal financial services, and promoting inclusive finance. Additionally, financial institutions should invest in technology and outreach efforts to deliver affordable, accessible, and reliable savings services, particularly to vulnerable and underserved populations.

In conclusion, this study underscores the need for a holistic, multi-stakeholder approach to enhancing national savings. Savings should be recognized not merely as residual income but as a strategic component of financial security and sustainable development. The synergy between income-enhancing strategies, behavioral interventions, financial product innovation, and institutional support is essential to build a resilient saving culture. By prioritizing savings as a developmental objective, countries can strengthen household welfare and lay the foundation for long-term economic stability and inclusive growth.

This study also has several limitations. One is the limited number of observations, utilizing only 20 annual data points from 2004 to 2023, which necessitates cautious generalization of the results. Additionally, the independent variables analyzed encompass only three main macroeconomic indicators, whereas other factors such as inflation, government expenditure, and sociocultural variables may also influence savings behavior. Moreover, the model uses aggregated national savings data, without differentiating between household, private sector, or government savings.

Future research is recommended to employ data with a longer time span or higher frequency, such as quarterly or monthly data, to yield more robust results. Incorporating additional macroeconomic variables and applying more sophisticated analytical methods may also provide a more comprehensive understanding of the determinants of savings in Indonesia.

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