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Macroeconomic fundamentals and consumer confidence as drivers of Indonesia's output growth: Evidence from 2020–2025

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Abstract

This paper examines how key macroeconomic indicators and consumer sentiment relate to Indonesia's output growth during the post-pandemic period 2020–2025. Using secondary time-series data on inflation, the policy interest rate, money supply growth (M2), trade dynamics (exports and imports), and the Consumer Confidence Index (CCI), we estimate a multivariate linear model to assess which indicators provide incremental explanatory power for growth. The baseline results indicate that consumer confidence is positively and statistically significantly associated with output growth ($\beta = 0.198$, $p = 0.041$), while inflation, the policy rate, M2 growth, exports, and imports are not statistically significant once considered jointly. The model's explanatory power is modest ($R^2 = 0.181$), suggesting that additional drivers and nonlinear/dynamic effects likely matter for short-run growth fluctuations. The findings underscore the practical value of sentiment indicators for monitoring the real economy alongside standard macro-financial variables. However, results should be interpreted as conditional associations rather than causal effects; future research should incorporate time-series diagnostics, dynamic specifications (e.g., ARDL/VAR), and a longer sample to address persistence, endogeneity, and structural breaks.

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Keywords

Indonesia, GDP growth, Inflation, Policy interest rate, Money supply

Introduction

Indonesia's macroeconomic performance in the early 2020s was shaped by overlapping shocks: the COVID-19 downturn, the subsequent recovery, global commodity and supply-chain disruptions, and the tightening cycle of global and domestic monetary policy. For policymakers, investors, and firms, the key question is which indicators most

reliably signal near-term growth dynamics. Conventional macro variables, such as inflation, interest rates, trade flows, and money supply, remain central to stabilisation policy and forecasting. Yet a growing literature also highlights that expectations and confidence can transmit shocks to the real economy through consumption and investment decisions.

This study focuses on the 2020–2025 period and evaluates the joint role of (i) inflation, (ii) the policy interest rate, (iii) money supply growth, (iv) exports and imports, and (v) consumer confidence in explaining Indonesia's output growth. The main contribution is practical and policy-oriented: by placing a standard sentiment measure (the CCI) alongside macro fundamentals within a single empirical framework, the study assesses whether consumer confidence contains incremental information for growth after controlling for conventional indicators.

The remainder of the paper proceeds as follows. Section 2 summarises the theoretical channels and related empirical evidence. Section 3 describes the data and empirical approach. Section 4 reports and discusses the regression results. Section 5 concludes with policy implications and recommendations for methodological extensions.

Literature review and conceptual framework

Macroeconomic theory links output growth to nominal and real conditions through multiple transmission channels. Inflation affects households' purchasing power and firms' pricing decisions; persistent or volatile inflation can increase uncertainty and distort intertemporal choices. Monetary policy affects aggregate demand primarily through the interest-rate channel and broader financial conditions. Higher policy rates raise borrowing costs and can dampen consumption and investment, while changes in liquidity and money supply may influence credit creation and spending.

External sector variables are also important for an open economy such as Indonesia. Exports can stimulate output through aggregate demand and learning-by-exporting, while imports may either support production (via intermediate inputs) or reduce net exports, depending on composition and the business cycle.

Beyond fundamentals, confidence and expectations can independently move the economy. Consumer confidence indices are designed to capture households' assessments of current conditions and expectations regarding income, employment, and the broader economic outlook. The OECD describes the Consumer Confidence Index as a standardised indicator of households' future consumption and saving behaviour, with values above 100 indicating relatively optimistic sentiment. Bank Indonesia constructs the CCI from a monthly household survey using a balanced-score approach (net balance + 100), where values above 100 are interpreted as optimistic.

Empirically, confidence measures have been shown to contain information about future spending and output in many settings, although the strength and stability of this relationship can vary across countries and time. This motivates including consumer

confidence as an additional indicator alongside inflation, interest rates, money, and trade when modelling growth dynamics in the post-pandemic period.

Method

Data and variable definitions the study uses secondary macroeconomic time-series data covering 2020–2025

The dependent variable is Indonesia's output growth (GDP growth rate). Explanatory variables include the inflation rate, the policy interest rate, money supply growth (M2), export growth, import growth, and the Consumer Confidence Index (CCI). Data are compiled from official and widely used statistical sources, including BPS-Statistics Indonesia and Bank Indonesia.

Empirical specification

As a baseline, we estimate an ordinary least squares (OLS) model of the form:

$$Growth_t = \alpha + \beta_1 Inflation_t + \beta_2 InterestRate_t + \beta_3 MoneySupply_t + \beta_4 CCI_t + \beta_5 Import_t + \beta_6 Export_t + \varepsilon_t$$

where $Growth_t$ denotes output growth and ε_t is the error term. The coefficients β capture conditional associations between each indicator and growth, holding other variables constant.

Estimation and reporting

All estimations are performed using SPSS. To improve transparency and reproducibility, the paper reports coefficient estimates, standard errors, t-statistics, and p-values. Given the time-series nature of the data, future revisions should incorporate standard diagnostics (autocorrelation, heteroskedasticity, and stability tests) and, if needed, robust standard errors or dynamic specifications Table 1.

Table 1. Variables, measurement, and data sources (summary)

Variable	Symbol	Measurement (unit)	Primary source (recommended)
Output growth	GDPG	Real GDP growth rate (%, YoY or QoQ annualised; specify)	BPS-Statistics Indonesia
Inflation	INF	Consumer price inflation (%, YoY)	BPS; Bank Indonesia
Policy interest rate	IR	BI 7-Day Reverse Repo Rate (%, end-of-period)	Bank Indonesia
Money supply growth	M2G	Broad money (M2) growth (%, YoY)	Bank Indonesia
Consumer confidence	CCI	Consumer Confidence Index (index; >100 optimistic)	Bank Indonesia Consumer Survey
Export growth	EXP	Exports growth (%, YoY) or log change; specify	BPS; Bank Indonesia
Import growth	IMP	Imports growth (%, YoY) or log change; specify	BPS; Bank Indonesia

Empirical results

Table 2 reports the multivariate regression results. Among the included indicators, consumer confidence is the only variable that is statistically significant at the 5% level. The estimated coefficient suggests a positive association between consumer confidence and output growth in the sample period. Other macroeconomic indicators—including inflation, the policy rate, money supply growth, exports, and imports—are not statistically significant once considered jointly.

Importantly, the overall explanatory power is modest (R^2 = 0.181). This implies that, during 2020–2025, a substantial share of variation in Indonesia's growth is not captured by the included contemporaneous indicators. This is not unexpected: growth dynamics in the post-pandemic period are likely influenced by additional factors such as fiscal policy, global demand, commodity prices, exchange rates, supply-chain constraints, labour-market adjustments, and pandemic-related restrictions. Furthermore, time-series persistence and lagged effects may be important; a static contemporaneous specification can understate the role of monetary policy and trade variables if their effects occur with delays.

Accordingly, the results are best interpreted as indicative evidence that sentiment (CCI) contains incremental information for growth monitoring, rather than as definitive causal estimates.

Table 2. Multivariate OLS results (dependent variable: output growth)

Regressor	B	Std. Error	Beta	t	p-value
Constant	0.921	6.092	–	0.151	0.881
Inflation (INF)	-3.198	5.635	-0.502	-0.568	0.572
Policy interest rate (IR)	0.490	0.594	0.246	0.825	0.413
Money supply growth (M2G)	-0.716	0.506	-0.416	-1.415	0.163
Consumer confidence (CCI)	0.198	0.094	0.347	2.115	0.041
Import growth (IMP)	0.041	0.214	0.091	0.194	0.847
Export growth (EXP)	2.672	2.964	0.706	0.901	0.372

Model fit (reported): R = 0.425; R^2 = 0.181; Adjusted R^2 = 0.083.

Discussion and policy implications

The positive association between consumer confidence and output growth is consistent with the view that expectations and sentiment can amplify or dampen aggregate demand. In practical terms, household confidence may capture information about labour market conditions, income prospects, and perceived macroeconomic stability that is not fully reflected in contemporaneous inflation, interest rates, or monetary aggregates.

From a policy perspective, the result supports monitoring consumer sentiment as a complementary indicator for near-term growth. Maintaining stable inflation and clear policy communication can help anchor expectations and support confidence. However, the non-significance of conventional macro variables in the multivariate model should not be interpreted as evidence that monetary policy or trade are unimportant. Instead,

it may reflect (i) small-sample limitations, (ii) collinearity among regressors, (iii) lagged effects, and (iv) omitted variables.

To strengthen policy relevance and publishability, a revised version should (a) incorporate lag structures and time-series diagnostics, (b) test for structural breaks around major policy and pandemic events, and (c) include additional controls such as exchange rates, commodity prices, fiscal stance, and global demand indicators.

Conclusion

This study evaluates the relationship between selected macroeconomic indicators and Indonesia's output growth in 2020–2025. Within a multivariate framework, consumer confidence emerges as a statistically significant positive correlate of growth, while inflation, the policy rate, money supply growth, exports, and imports are not significant once considered jointly. The model's limited explanatory power suggests that additional determinants, nonlinearities, and dynamic effects are important in this period.

Future work should extend the sample period, clearly document data construction (especially for the growth series and trade measures), apply time-series econometric methods suitable for persistence and endogeneity, and report comprehensive diagnostic tests.

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