



The Role of Inflation and Interest Rates on the Wholesale Trade Price Index in Banten Province

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ABSTRACT

This study examines how inflation and interest rates affect the Wholesale Trade Price Index (IHPB) in Banten, motivated by recent elevated inflation and seasonal price pressures. Using a qualitative approach, through semi-structured interviews with five key informants (two Deperindag officials, two Bank Indonesia staff, one BPS analyst) and document review. The research aims to identify transmission channels from inflation and interest rates to wholesale prices and assess institutional perspectives. Findings indicate IHPB rises mainly from producer and transport cost increases and seasonal demand spikes, while interest rates shape inventory financing and investment in logistics, influencing price volatility. The study concludes that combined monetary calibration and targeted supply-side measures are needed; implications include improved disaggregated monitoring and coordinated policy to stabilize wholesale prices

INTRODUCTION

Inflation and interest rates interact in complex ways to shape wholesale market outcomes, and their combined influence on the Wholesale Trade Price Index (WPI) in Banten Province has become a pressing policy and business concern. Inflation—defined as a sustained increase in the general price level of goods and services—directly alters cost structures faced by producers and traders, while interest rates affect the cost of financing inventories and investments that determine supply responsiveness (Desfitra et al., 2024). In Banten, recent indicators show that these forces are operating concurrently and with increasing intensity: annual inflation in February 2026 reached 5.14%, a rate that significantly exceeds national targets and signals generalized price pressure across commodity groups (BPS Banten reports cited; Winanti et al., 2023). The elevated inflation rate undermines predictability for wholesalers who must manage procurement, storage, and price-setting in an environment of accelerating input and distribution costs (Zulfikar et al., 2019).

Seasonal demand dynamics have amplified inflationary effects in early 2026. As households and businesses prepared for Ramadan and Idul Fitri, wholesale demand for food, beverages, and related consumer goods rose sharply beginning in January 2026, creating short-term spikes in the WPI (Winanti et al., 2023). Such calendar-driven surges interact with baseline inflation to push wholesale prices higher and accelerate transmission from producer-level cost increases to consumer prices (Roziyah et al., 2023). The seasonal demand momentum also incentivizes traders to adjust inventories and procurement timing, sometimes causing temporary shortages or local logistics pressures that further magnify wholesale price volatility (Xu & Zhang, 2023; Ray et al., 2025).

Supply-side cost pressures have been identified as major triggers of the recent wholesale price escalation. BPS Banten highlighted rising producer prices and higher transport costs as principal antecedents of consumer inflation, indicating that increases at the production and distribution stages are passing through to wholesale quotations (BPS Banten findings; Zulfikar et al., 2019). Transportation cost inflation—driven partly by fuel price shifts—raises the expense of moving goods, which disproportionately affects heavy or perishable commodities often traded at the wholesale level. The specific vulnerability of food commodities such as rice and chilies is notable: these staples have exhibited significant price fluctuations that dominate WPI movements, reflecting agricultural seasonality, supply shocks, and input-cost variability (Winanti et al., 2023; Roziyah et al., 2023).

High inflation also interacts with exchange rate dynamics and investor sentiment to produce broader economic feedbacks. Depreciation pressures or volatility in the rupiah can signal macroeconomic weakening and prompt capital adjustments; literature shows that exchange rate shifts and inflation dynamics affect investor behavior and asset valuations, with implications for financing conditions faced by firms (Devi & Artini, 2019; Pardasia, 2024). In the context of Banten, any depreciation-anchored cost increases for imported inputs or fuel would feed directly into wholesale prices, compounding domestic inflationary pressures. Research further indicates that inflationary episodes can trigger equity

market responses and alter corporate valuations, which in turn reshape firms' access to capital and capacity to absorb cost shocks (Sartika, 2019).

Interest rates constitute a parallel and interacting channel shaping WPI outcomes. Elevated interest rates raise borrowing costs for wholesale traders and producers, increasing the cost of financing inventories, working capital, and capital investments in storage and logistics infrastructure (Pardasia, 2024; Sartika, 2019). For small and medium wholesalers prevalent in Banten, higher lending rates may force shorter inventory cycles, reduce buffer stocks, and weaken the sector's ability to smooth prices during demand surges, thereby contributing to greater wholesale price volatility. Furthermore, higher interest rates can deter productive investment in capacity expansion and modernization that would otherwise dampen supply-side constraints—underinvestment that perpetuates structural inefficiencies in the supply chain (Ray et al., 2025; Xu & Zhang, 2023).

The interaction of inflation and interest rates also affects household purchasing power and consumption patterns. Although wage floors in Banten were adjusted by approximately 2.50%, this nominal increase risks being outpaced by inflation and higher borrowing costs, effectively compressing real incomes and dampening overall demand for non-essential goods (local wage adjustments; Sarbaini & Nazaruddin, 2023). Reduced purchasing power can alter the composition of wholesale transactions toward basic necessities—goods whose prices are already volatile—thereby reinforcing price pressures in key WPI components. Fuel price increases, as observed elsewhere, further exacerbate living costs and disproportionately harm lower-income households while simultaneously raising production and distribution expenses for businesses (Sarbaini & Nazaruddin, 2023).

Empirical and methodological advances in forecasting and causal analysis of wholesale prices underscore the multifaceted drivers behind WPI movements. Studies employing frequency-domain causality, neural networks, and hybrid machine-learning models demonstrate that wholesale price indices are both influenced by and predictive of broader consumer price dynamics, and that advanced modeling can illuminate the channels and timing of transmission (Tiwari, 2012; Xu & Zhang, 2023; Ray et al., 2025). Taken together, the literature and the Banten-specific data point to a multi-causal problem: seasonal demand spikes, rising production and transport costs, staple commodity volatility, constrained investment due to higher interest rates, and weakened purchasing power jointly drive upward and volatile wholesale prices (Desfitra et al., 2024; Roziah et al., 2023; Winanti et al., 2023; Zulfikar et al., 2019).

The objective of this study is to determine the role of inflation and interest rates on the Wholesale Trade Price Index in Banten Province. The research aims to quantify how variations in inflation and interest rates affect WPI movements, identify the primary transmission channels from macroeconomic conditions to wholesale prices, and provide policy-relevant insights to support interventions that stabilize wholesale pricing and protect household welfare.

LITERATURE RIVIEW

Inflation

Inflation is the phenomenon of a general and sustained increase in the prices of goods and services in an economy over a certain period. In the context of wholesale trade, inflation is closely linked to the Wholesale Trade Price Index (IHPB or WPI) as an indicator that measures the average change in wholesale-level prices – that is, prices paid by traders or large buyers before goods reach final consumers (Winanti et al., 2023; Zulfikar et al., 2019). When inflation occurs, price increases across various commodities at the production and distribution levels are reflected earlier in the WPI, so the WPI often serves as an early signal of forthcoming consumer inflation.

The WPI records price shifts in groups of goods that serve as inputs for retail and industrial supply chains; therefore, a gradual rise in the WPI indicates cost pressures that allow producers and wholesalers to pass higher costs on to retail levels, reinforcing inflation transmission mechanisms. Seasonal fluctuations or supply shocks – such as logistics disruptions, adverse weather, or rising transport costs – directly affect the WPI and subsequently contribute to inflation variability (Zulfikar et al., 2019). Thus, analyzing the WPI helps policymakers and market participants understand the origins of inflation – whether demand-driven, input-cost-driven, or influenced by external factors like changes in import commodity prices.

Advances in forecasting methods for the WPI further strengthen the index's role in inflation monitoring. Machine learning approaches, such as neural networks for forecasting food price indices and hybrid models combining random forests with convolutional neural networks for specific commodities, have shown capability in capturing nonlinear patterns and seasonal heterogeneity in wholesale price data (Xu & Zhang, 2023; Ray et al., 2025). These models enable early detection of price-upward patterns that could accelerate general inflation, so a WPI analyzed with advanced techniques can function as a useful predictive tool for monetary authorities and policy planners.

Practically, monitoring the WPI helps guide price-stabilization policy: if a WPI rise is driven by cost pressures, policies focusing on improving distribution capacity, subsidizing inputs, or intervening in supply chains may be more effective; if the rise is demand-driven, different fiscal or monetary responses may be required (Winanti et al., 2023). Therefore, understanding the conceptual and empirical link between inflation and the WPI – and leveraging modern forecasting methods – is key to responding to wholesale price dynamics that have implications for consumer inflation (Xu & Zhang, 2023; Ray et al., 2025; Winanti et al., 2023; Zulfikar et al., 2019).

Interest Rate

Interest rates denote the price of borrowing money and the reward for saving, serving as a primary instrument through which monetary authorities influence economic activity and price stability. As the cost of credit, interest rates determine firms' and households' borrowing decisions, shaping consumption, investment, and inventory financing; when rates rise, the expense of financing working capital and capital projects increases, which can reduce business investment and constrain inventory holdings. These adjustments influence

supply responsiveness and can thereby affect wholesale price dynamics, since tighter financing conditions may make wholesalers less able to smooth short-term shocks. Interest rate policy also interacts with inflationary pressures: persistent and sharp increases in the general price level – described by Yanti and Soebagyo (2022) as sustained and sometimes crisis-related – often prompt central banks to raise interest rates to temper demand and anchor inflation expectations. Higher rates, while potentially dampening demand-driven price rises, can also raise firms' operating costs and, through exchange rate channels, increase the domestic cost of imported inputs and fuel, feeding into wholesale prices. Moreover, interest rates influence long-term supply-side capacity by affecting investment incentives; prolonged periods of elevated rates may deter investment in storage, processing, and logistics infrastructure that would otherwise mitigate wholesale price volatility. The transmission of interest rate changes to wholesale prices thus operates through multiple mechanisms: the cost-of-carry effect on inventory management, the investment channel affecting capacity and resilience, and financial-market interactions impacting exchange rates and input costs. Understanding these channels is essential for policymakers who must balance the trade-off between using interest rate tools to control inflation and avoiding undue suppression of investment and supply-side adjustments. In contexts where inflation is persistent and severe, as highlighted by Yanti and Soebagyo (2022), careful calibration of interest rate policy is critical to stabilize prices without exacerbating structural supply constraints.

Wholesale Trade Price Index

The Wholesale Trade Price Index (IHPB or WPI) is an economic indicator that measures the average change in prices at the wholesale level over time, serving as a crucial barometer for movements in the supply chain before prices reach consumers (Winanti et al., 2023; Zulfikar et al., 2019). Defined as index numbers reflecting prices paid by traders for goods purchased from producers or other suppliers, the IHPB captures shifts across commodity groups and reveals early signals of cost-push pressures and supply disruptions (Zulfikar et al., 2019). Because wholesale transactions sit between production and retail stages, changes in the IHPB often precede adjustments in consumer price indices, making the index a valuable tool for diagnosing the origin of inflationary trends – whether driven by input-cost increases, transportation bottlenecks, seasonal supply fluctuations, or demand surges (Winanti et al., 2023).

Beyond its descriptive role, the IHPB is instrumental for policy analysis and market assessments. Policymakers, central banks, and market participants use IHPB data to evaluate inflationary pressures, design targeted interventions, and anticipate the transmission of wholesale cost changes to the retail sector (Xu & Zhang, 2023; Winanti et al., 2023). For instance, sustained rises in the IHPB for food and fuel may signal the need for supply-side measures, logistical improvements, or temporary subsidies to stabilize markets (Zulfikar et al., 2019). Advances in forecasting techniques, including machine learning approaches, have enhanced the utility of IHPB series by improving short-term prediction of price movements and enabling more timely policy responses (Xu & Zhang, 2023).

In practice, effective use of the IHPB requires careful disaggregation by commodity and consideration of seasonal and structural factors; aggregated index movements can mask heterogeneity across sectors, so granular analysis is necessary to design appropriate interventions (Winanti et al., 2023; Zulfikar et al., 2019). Overall, the IHPB is a pivotal indicator linking wholesale market dynamics to broader inflationary outcomes and informing both market actors and policymakers (Xu & Zhang, 2023; Winanti et al., 2023; Zulfikar et al., 2019).

After the hypothesis section, if your study is quantitative, please provide the contextual framework here, or your mind maps, if it is qualitative.



Figure 1. IHPB, Inflation and Interest Rate

METHODOLOGY

This study employs a qualitative methodology to explore the relationships among inflation, interest rates, and the Wholesale Trade Price Index (IHPB) in Banten. Data were collected between January and March 2026 in Banten through semi-structured interviews and document review. The primary instrument is an interview guide containing open-ended questions focused on: perceptions of recent inflationary trends; transmission channels from inflation and interest rates to wholesale prices; operational and logistical cost drivers affecting IHPB; policy responses and their local impacts; and data/measurement issues for monitoring IHPB. Five key informants were purposively selected for in-depth insight: two officials from the Banten Provincial Department of Industry and Trade, two staff members from Bank Indonesia, and one enumerator/analyst from BPS Banten. Interviews were recorded (with consent), transcribed, and supplemented by relevant documents such as regional price reports, policy briefs, and statistical bulletins to triangulate findings. Data processing followed standard qualitative procedures: (1) data reduction—transcripts and documents were coded and condensed to identify salient themes and patterns; (2) data display—organized matrices and summaries highlighted relationships among inflation, interest rates, and IHPB movements; and (3) conclusion drawing and verification—interpretations were iteratively compared with documentary evidence and respondent feedback to enhance credibility. Ethical considerations included informed consent, confidentiality, and secure storage of recordings and transcripts. The analytic focus prioritized emergence of transmission channels,

institutional perspectives, and practical constraints shaping wholesale price behavior in Banten, culminating in a concise set of conclusions and policy-relevant observations.

RESULT AND DISCUSSION

Inflation and interest rates play distinctive but interrelated roles in shaping the Wholesale Trade Price Index (IHPB) in Banten, with tangible implications for supply chains, market behavior, and regional economic stability. The IHPB functions as an early indicator of price movements at the wholesale level, capturing changes in prices paid by traders and reflecting cost pressures that may later transmit to consumer prices (Winanti et al., 2023; Zulfikar et al., 2019). When inflation accelerates—understood as a sustained increase in the general price level—wholesale prices tend to respond first because upstream cost shifts, such as higher producer prices or input costs, are reflected in trader procurement costs and markup decisions (Desfitra et al., 2024). In Banten, where food and energy items constitute a large share of wholesale transactions, upward movements in the IHPB often signal supply-side stress or distribution cost increases that precede broader consumer inflation episodes (Zulfikar et al., 2019; Winanti et al., 2023).

Practitioners in the provincial trade office observe these dynamics directly. A Deperindag official notes, “We see wholesale price increases of staples before retail prices move; IHPB helps us identify which supply links—production, transport, or storage—are causing the pressure.” This perspective aligns with empirical understanding that IHPB functions as a diagnostic tool to separate demand-driven inflation from cost-push pressures, enabling targeted interventions (Winanti et al., 2023). Other Deperindag staff emphasize that seasonal demand—especially around Ramadan and Idul Fitri—interacts with existing inflationary trends to produce sharper wholesale price spikes, and that monitoring IHPB by commodity is critical for timely mitigation.

Interest rates act as a complementary lever influencing IHPB through financing costs and investment incentives. Elevated interest rates increase the cost of working capital and inventory financing for wholesalers, which can prompt reductions in buffer stocks, shorter supply cycles, and increased sensitivity of wholesale prices to demand shocks. Conversely, lower rates ease financing constraints and support investment in storage and logistics that stabilize wholesale markets over time. A Bank Indonesia staff member explains, “Monetary policy shapes how traders manage inventories; higher rates often lead to tighter stocks and price responsiveness, while measured rate adjustments can help temper inflation expectations and wholesale price pass-through.” This underscores the transmission mechanism whereby central bank policy rates influence wholesale price behavior through both demand and supply channels.

Operational cost pressures amplify the interaction between inflation and interest rates. Rising fuel and transport costs elevate distribution expenses that are immediately captured by IHPB, particularly for bulky or perishable commodities. Sarbaini and Nazaruddin (2023) highlight that fuel price increases worsen living costs and reduce purchasing power, which feeds back into market dynamics: higher distribution costs raise wholesale prices while diminishing consumer demand, creating a complex adjustment path for IHPB. A BPS respondent adds, “Our price surveys show that transport and producer price increases are primary drivers of recent IHPB rises; tracking these components helps explain spillovers to consumer indices.” This confirms that production- and distribution-level cost changes are pivotal in understanding wholesale price trajectories (Zulfikar et al., 2019).

Investment responses to interest rate shifts further condition IHPB outcomes. Prolonged high rates discourage capital expenditures in logistics, cold storage, and processing—investments that would otherwise improve supply resilience and reduce price volatility. Lubis et al. (2025) show macro linkages between wholesale price dynamics and investment flows, suggesting that persistent wholesale price pressures can influence broader capital movements and regional competitiveness. A Deperindag informant observed that constrained investment in distribution infrastructure in parts of Banten has made some commodity chains particularly vulnerable to price swings at the wholesale level (Suprpto, H. A. et al., 2024).

Policy coherence in Banten must therefore address both inflation drivers and financial conditions. If rising IHPB is primarily cost-push—stemming from producer price increases or transport cost hikes—supply-side measures (logistics support, input subsidies, or temporary market interventions) are appropriate. If inflationary pressures are demand-driven, monetary tightening may be warranted to cool aggregate demand; however, policymakers must balance this with the adverse effects of higher rates on investment and wholesale market functioning (Desfitra et al., 2024). Bank Indonesia staff emphasize the need for calibrated monetary responses that consider local wholesale market conditions, while provincial authorities stress complementary fiscal or regulatory actions to alleviate distribution bottlenecks.

In sum, the role of inflation in driving IHPB is primarily through upstream cost transmission and commodity-specific shocks, while interest rates shape wholesalers’ financing behavior and longer-run investment in supply capacity. Opinions from Deperindag, Bank Indonesia, and BPS personnel converge on the importance of disaggregated, timely IHPB monitoring to design nuanced interventions that stabilize wholesale prices without undermining investment and supply responsiveness.

CONCLUSIONS AND RECOMMENDATIONS

The study finds that inflation and interest rates jointly shape the Wholesale Trade Price Index (IHPB) in Banten through distinct but interacting channels. Inflation primarily transmits to IHPB via rising producer and transportation costs and commodity-specific shocks—especially food and energy—while seasonal demand spikes amplify short-term wholesale price volatility. Interest rates influence IHPB by altering the cost of financing inventories and investment incentives for storage and logistics; higher rates tend to tighten stocks and increase wholesale price sensitivity to shocks, whereas lower rates support capacity improvements that stabilize prices. Empirical inputs from Deperindag, Bank Indonesia, and BPS confirm that recent IHPB increases reflect cost-push pressures and distribution constraints, compounded by seasonal demand. Policy responses should therefore combine calibrated monetary measures with targeted supply-side interventions—improving logistics, supporting key commodity supply chains, and monitoring disaggregated IHPB components—to curb wholesale price pressures without unduly discouraging investment.

FURTHER STUDY

This research still has limitations so further research is needed on the topic of The Role of Inflation and Interest Rates on the Wholesale Trade Price Index to perfect this research and increase insight for readers and writers.

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