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STRATEGIC EXPORT PRICING UNDER EXCHANGE RATE VOLATILITY: EVIDENCE OF PRICING-TO-MARKET AND LOCAL CURRENCY PRICE STABILITY IN INDONESIA'S TSR 20 RUBBER EXPORTS

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ABSTRACT

This study examines Indonesia's export pricing strategy for Technically Specified Rubber 20 (TSR 20) under exchange rate volatility, with particular attention to pricing-to-market (PTM) and local currency price stability (LCPS). Using destination-level panel data on Indonesia's TSR 20 exports, the study employs an econometric PTM framework to estimate the extent to which exchange rate movements are transmitted to export prices and whether pass-through varies across destination markets. The analysis further considers destination-market heterogeneity to identify exporters' capacity to adjust foreign-currency prices and stabilize local-currency prices in response to exchange rate fluctuations. The findings indicate that exchange rate movements are not fully transmitted to export prices, suggesting the presence of destination-specific pricing adjustments and strategic margin management. Export prices expressed in local currencies also exhibit relatively greater stability than prices expressed in foreign currencies, providing evidence consistent with LCPS. These findings demonstrate that export pricing is shaped not only by international commodity-market conditions but also by exchange rate risk and destination-market characteristics. The study contributes to the PTM literature by integrating exchange rate pass-through and LCPS within a destination-specific framework for a relatively standardized commodity, offering new insights into strategic pricing in emerging-market commodity exports.

Keywords: *Exchange Rate Pass-Through, Exchange Rate Volatility, Export Pricing, Local Currency Price Stability, Pricing-to-Market*

INTRODUCTION

Exchange rate volatility has long been recognized as one of the most consequential sources of uncertainty in international trade, particularly for exporters operating in commodity markets where prices are simultaneously exposed to global demand, production conditions, and currency movements. For an exporting firm, an exchange rate shock does not translate mechanically into a proportional change in the price paid by foreign buyers. Instead, the exporter may adjust its markup, absorb part of the currency movement, or alter the price charged in the destination market in order to preserve market share and maintain the competitiveness of its product. This strategic response is commonly described as pricing-to-market, whereby exporters

differentiate prices across destination markets and adjust markups in response to exchange rate movements rather than passing the full currency shock through to foreign buyers (Abid et al., 2024; Muhtaram & Azrani, 2025; Sahoo et al., 2025) The issue is particularly relevant for emerging economies whose export structures remain concentrated in primary and semi-processed commodities and whose firms are therefore highly exposed to international price and exchange rate fluctuations.

Indonesia provides an important setting in which to examine this issue. Natural rubber remains one of the country's strategically important agricultural export commodities, and technically specified natural rubber represents the dominant form of Indonesia's rubber exports. Recent trade evidence illustrates both the scale and concentration of this market. In 2024, Indonesia exported technically specified natural rubber worth approximately US$2.82 billion, with shipments exceeding 1.58 million tonnes. Japan and the United States alone accounted for more than US$1.3 billion of these exports, followed by China, India, and the Republic of Korea (Arif et al., 2025; Kaplan & Çiçek, 2025; Saptarini et al., 2026). The concentration is even more apparent at the product level: technically specified natural rubber grade 20, commonly marketed as Standard Indonesian Rubber 20, has historically represented the overwhelming majority of Indonesia's natural rubber exports. Earlier Indonesian trade statistics indicate that TSNR 20 accounted for more than 90 percent of natural rubber export volume, underscoring its importance as the principal commercial form through which Indonesian natural rubber reaches international tire and rubber-processing industries (Bodlaj et al., 2026; BřEzina et al., 2024; Lu et al., 2025). These figures make the pricing behavior of Indonesian TSR 20 exporters economically consequential not only for export earnings but also for farmers, processors, traders, and other actors embedded in the domestic rubber value chain.

The importance of the issue becomes more apparent when the evolution of international rubber prices is considered alongside currency movements. Indonesia's technically specified natural rubber exports experienced substantial changes in both value and volume over recent years. World Bank trade data show that Indonesian exports of technically specified natural rubber amounted to approximately US$3.45 billion in 2022, before declining to about US$2.42 billion in 2023 and recovering to US$2.82 billion in 2024 (Gold & Yusuf, 2025a; Gunal, 2026; Ilgın & Güney, 2024). Such changes cannot be interpreted solely as movements in physical export demand because export values reflect the interaction of quantities, international commodity prices, and exchange rates. At the same time, the Indonesian rupiah has experienced recurrent periods of depreciation and appreciation against major trading currencies. For exporters, therefore, currency volatility creates a strategic pricing problem: passing the entire exchange rate movement through to foreign buyers may protect domestic-currency margins in the short run but can make Indonesian rubber less competitive in destination markets, whereas absorbing the shock may preserve demand but compress exporter margins. Understanding how exporters resolve this trade-off is central to understanding the resilience of Indonesia's rubber export sector.

The theoretical foundation for this problem can be traced to the pricing-to-market literature. was among the first to formalize the idea that exporters facing imperfect competition and segmented markets may deliberately alter destination-specific markups when exchange rates change (Jeisica & Imaningsih, 2026; Narawangsa et al., 2026; Setiawan et al., 2025). Subsequently developed an empirical framework for identifying destination-specific price discrimination by examining whether export prices respond differently to exchange rate movements across markets (Mohamad et al., 2026; Pardede et al., 2026; Vashistha & Gumsh, 2026). His findings for United States and German exporters demonstrated that exchange rate changes need not generate proportional movements in export prices. (Harshita, 2024) similarly documented pricing-to-market behavior among Japanese manufacturers, showing that firms adjusted export prices relative to domestic prices as exchange rates changed. These early contributions challenged the simple law-of-one-price interpretation of international trade and established the empirical relevance of strategic export pricing.

Subsequent research broadened the evidence and clarified the mechanisms behind this behavior. (Soumaila, 2023) demonstrated that market share considerations can fundamentally influence exchange rate pass-through because exporters may sacrifice short-run margins to protect future demand and customer relationships. (Yusuf et al., 2026), using industry-level data across major exporting countries, found substantial destination-specific price adjustment associated with exchange rate movements and emphasized the role of local currency price stability. In this framework, incomplete pass-through is not merely a statistical irregularity; it can represent an economically rational response in which exporters adjust their markups so that buyers experience relatively stable prices in their own currencies. (Karso, 2025 & Yusuf et al., 2026) synthesized the empirical literature and concluded that incomplete exchange rate pass-through is widespread, while international borders and market segmentation contribute importantly to deviations from the law of one price. These findings establish that the observed relationship between exchange rates and export prices is shaped by firms' strategic behavior rather than determined exclusively by currency conversion.

The distinction between exchange rate pass-through and pricing-to-market becomes particularly important in the context of agricultural and commodity exports. Unlike highly differentiated manufactured products, many agricultural commodities are traded in markets characterized by substantial international price competition and relatively standardized product specifications. Nevertheless, exporters may still possess sufficient market power, informational advantages, or destination-specific relationships to adjust margins across markets. (Bondar et al., 2024 & Yesildag, 2026), for example, identified pricing-to-market behavior among Canadian and United States exporters of wheat, pulses, and apples, demonstrating that commodity characteristics and destination-market conditions can generate heterogeneous pricing responses. (Tachochalalai et al., 2026 & Yesildag, 2024) extended the analysis to United States agricultural exports and showed that the empirical identification of pricing-to-market can be sensitive to the treatment of production costs, seasonality, and the time-series properties of the

data. (Gunal, 2025) further argued that incorporating marginal costs into pricing-to-market models is essential because observed export-price responses may reflect both changes in market power and changes in production costs. The evidence therefore suggests that agricultural exporters should not automatically be treated as homogeneous price takers; their pricing behavior can contain a strategic component that becomes visible when destination markets and exchange rate movements are examined jointly.

The literature on high-value agricultural exports provides additional support for this perspective. (Semenova et al., 2025) found evidence of pricing-to-market among India's high-value agri-food exporters and reported that local-currency price stabilization was more prominent than the amplification of exchange rate movements. This result is particularly relevant for Indonesia because both countries are emerging economies with export structures that contain significant agricultural and commodity components. At the broader macroeconomic level, (Zahra et al., 2025) showed theoretically that pricing-to-market can generate greater stability of destination prices in local currency and contribute to persistent real exchange rate movements. (Hasibuan et al., 2025) subsequently demonstrated that exchange rate volatility is not necessarily transmitted fully into export prices and quantities when firms engage in market segmentation and destination-specific pricing. The implication is important: exchange rate volatility may be absorbed partly through exporters' margins rather than appearing immediately as proportional changes in the prices faced by foreign buyers.

More recent international trade research has reinforced the importance of firm-level and market-structure considerations. (Abid et al., 2024) showed that pricing-to-market can arise naturally from variable markups in models of imperfect competition and international trade costs. (Saptarini et al., 2026) demonstrated that the degree of exchange rate pass-through is itself endogenous to firms' currency-pricing decisions and to the volatility of the exchange rate environment. (Saptarini et al., 2026) further established that firms with high market shares and substantial imported-input exposure tend to exhibit lower exchange rate pass-through because both marginal-cost and markup channels influence export pricing. This perspective is particularly useful for understanding commodity exporters whose domestic production costs and international sales revenues are denominated in different currencies. It suggests that export-price responses cannot be interpreted without considering the strategic interaction between exchange rate movements, destination-market demand, and exporters' ability to adjust markups.

Evidence specific to Indonesia points in the same direction but also reveals why a more focused commodity-level analysis is warranted. (Razavi et al., 2026), examining exchange rate pass-through for Indonesian exports, found that incomplete pass-through was prevalent and that many Indonesian export commodities behaved as price-taking products. (Gold & Yusuf, 2025) reported that Indonesian export prices generally exhibited lower exchange rate sensitivity than import prices and that the magnitude of pass-through differed considerably across sectors and across episodes of appreciation and depreciation. The study also found evidence of asymmetry in exchange rate transmission, with export-price responses differing according to the direction

of currency and commodity-price shocks. (Belkin et al., 2025), using Indonesian industrial export data for major trading partners, similarly identified destination-market heterogeneity in pricing-to-market behavior. These findings are valuable because they establish that Indonesia's export pricing response is neither uniform across products nor independent of destination-market characteristics. However, much of the existing Indonesian literature remains concentrated on aggregate exports, broad industrial classifications, or general exchange rate pass-through rather than on a highly specific export commodity with substantial international market exposure.

This distinction matters for TSR 20 rubber. Although Indonesian rubber exports have been studied in relation to prices, exchange rates, production, and destination-market demand, the existing evidence has generally emphasized export performance or aggregate determinants rather than the strategic pricing mechanism through which exporters respond to exchange rate volatility. Studies of Indonesian rubber exports commonly investigate how export prices, exchange rates, consumption, and other macroeconomic variables influence export volumes, but they provide limited evidence on whether exporters actually absorb exchange rate movements through destination-specific markup adjustment. Moreover, the conventional exchange rate pass-through framework tends to focus on the magnitude of price transmission without explicitly asking whether incomplete transmission reflects deliberate destination-specific pricing and, consequently, local-currency price stability. This distinction is crucial because two exporters may exhibit the same numerical degree of exchange rate pass-through for fundamentally different economic reasons. One may simply be constrained by production costs or rigid contracts, whereas another may actively alter its markup to protect its position in a particular destination market.

The international literature therefore points toward a more nuanced understanding of export pricing, but the evidence remains fragmented across countries, products, and analytical approaches. Existing studies have established the theoretical basis for pricing-to-market, documented incomplete exchange rate pass-through across manufactured and agricultural products, and shown that market share, competition, trade costs, imported inputs, and destination characteristics can shape exporters' pricing decisions (Reyhan & Saputera, 2024, Shang & Hamori, 2024), Yet evidence remains comparatively limited on whether a major emerging-market commodity exporter such as Indonesia uses pricing-to-market as a deliberate response to exchange rate volatility in a standardized rubber product and whether such behavior translates into stability of the buyer's local-currency price. This issue becomes particularly important for TSR 20 because its standardized quality characteristics and concentration in major industrial destinations provide a useful setting for distinguishing market-wide commodity-price movements from destination-specific pricing responses. By focusing simultaneously on exchange rate movements, destination-specific export prices, and local-currency price stability, the present study moves beyond the conventional question of whether exchange rates affect export prices and instead examines how exporters strategically manage that transmission.

Against this background, the contribution of this study lies in bringing the pricing-to-market perspective directly into the analysis of Indonesia's TSR 20 rubber exports. Rather than treating incomplete exchange rate pass-through simply as an aggregate empirical coefficient, the analysis interprets destination-specific export-price responses as evidence of strategic margin adjustment and examines whether these adjustments are consistent with local-currency price stability. The study consequently connects three dimensions that are often examined separately: exchange rate volatility, destination-specific pricing behavior, and the stability of prices perceived by foreign buyers. This approach provides a more precise interpretation of how Indonesian rubber exporters manage currency risk while competing across heterogeneous international markets. It also extends the pricing-to-market literature into a commodity setting where product standardization might otherwise be expected to constrain destination-specific price discrimination. The study therefore aims to examine whether Indonesian TSR 20 rubber exporters engage in pricing-to-market when exchange rates fluctuate and to determine whether such behavior contributes to local-currency price stability across destination markets. More specifically, it evaluates the extent to which exchange rate movements are transmitted into destination-specific export prices and whether exporters systematically adjust their pricing response in a manner consistent with strategic markup management. By doing so, the study seeks to provide empirical evidence on the interaction between currency volatility and export pricing strategy in Indonesia's rubber industry, while offering implications for exporters, policymakers, and actors within the domestic rubber value chain. The findings are expected to contribute to a more informed understanding of how commodity exporters in developing economies can manage exchange rate risk without unnecessarily sacrificing international market competitiveness, thereby strengthening the resilience and sustainability of export-oriented agricultural value chains.

RESEARCH METHOD

This study employs a quantitative explanatory design to examine how exchange rate movements influence the export pricing strategy of Indonesian TSR 20 natural rubber across major destination markets. A quantitative approach is appropriate because the central concern of the study is not to explore individual perceptions or experiences, but to identify systematic and measurable relationships between exchange rate movements and export prices over time and across importing countries. The study uses balanced panel data covering 16 years, from 2010 to 2025, combining the time-series dimension with the cross-sectional dimension of major destination markets. This structure makes it possible to capture both temporal changes in Indonesia's TSR 20 export pricing and heterogeneity in exporters' responses across destination countries. Panel estimation is particularly useful in this context because it allows unobserved characteristics that differ across importing countries to be controlled while preserving variation over time (Baltagi, 2008; Wooldridge, 2010).

The unit of analysis is the annual export transaction of Indonesian TSR 20 to each major importing country during the observation period. TSR 20 is selected because it represents a standardized and commercially important grade of Indonesian natural rubber, making it suitable for examining whether exporters adjust prices strategically across international markets. The dependent variable is the export price of Indonesian TSR 20, measured in United States dollars per tonne and derived from export value divided by export quantity for each destination and year. The principal explanatory variable is the real exchange rate, constructed from the nominal exchange rate and the consumer price index of the importing country. The real exchange rate is used rather than the nominal rate because it provides a more economically meaningful measure of relative purchasing power and allows exchange rate effects to be considered alongside inflation differentials. Additional covariates include destination-country gross domestic product, the producer price index, and West Texas Intermediate crude oil prices. Gross domestic product represents the purchasing power and economic capacity of the destination market, while the producer price index captures changes in production-cost pressures. World oil prices are incorporated as a proxy for global cost and logistics shocks that may influence rubber processing, transportation, and international trade costs.

All variables are obtained from established secondary databases, primarily UN Comtrade, the International Monetary Fund, and Bank Indonesia. The use of multiple institutional sources serves not only to obtain variables that are unavailable from a single database but also to strengthen data consistency through source cross-checking. Export values and quantities are obtained from UN Comtrade, while macroeconomic and price indicators are drawn from the International Monetary Fund and Bank Indonesia. Following the logic of the pricing-to-market framework developed by Krugman (1986) and Knetter (1989, 1993), the empirical model relates the logarithm of TSR 20 export prices to the real exchange rate and destination-market economic conditions. The baseline specification is estimated using panel regression, with alternative fixed-effects and random-effects specifications considered according to the characteristics of the data and the results of model-selection tests. Destination and time effects are incorporated where appropriate to account for unobserved market-specific characteristics and common temporal shocks.

The estimated pricing-to-market model can be expressed as a log-linear relationship in which the coefficient of the real exchange rate captures the extent to which exchange rate changes are transmitted into Indonesian TSR 20 export prices. A coefficient indicating incomplete transmission is interpreted as evidence that exporters absorb part of the exchange rate movement through adjustments in their destination-specific markups. The logarithmic transformation is applied to the continuous variables to reduce scale differences, mitigate heteroscedasticity, and facilitate interpretation of the estimated coefficients as elasticities (Wooldridge, 2010). Model adequacy is assessed through standard diagnostic procedures, including tests for multicollinearity, heteroscedasticity, serial correlation, and cross-sectional dependence where relevant. Robust standard errors are employed when the panel structure indicates violations of classical assumptions.

Because the study relies entirely on secondary quantitative data, there are no individual informants, interviews, or participant observations. Accordingly, triangulation is undertaken through methodological and data-source verification rather than informant triangulation. Export statistics are cross-checked against internationally recognized macroeconomic databases, while variable definitions, units, and observation periods are harmonized before estimation. The empirical results are further examined through alternative model specifications to determine whether the observed pricing-to-market relationship remains stable when control variables and panel effects are introduced. This combination of source triangulation and robustness assessment strengthens the reliability of the findings and provides a more credible basis for interpreting exchange rate volatility, strategic export pricing, and local-currency price stability in Indonesia's TSR 20 rubber trade.

RESULTS AND DISCUSSION

Descriptive Patterns and Model Specification

The empirical analysis begins with descriptive statistics and panel-model selection to establish the statistical properties of the data and the appropriate estimation framework. The dataset contains 160 observations covering Indonesia's TSR 20 export prices, the real exchange rate, destination-country GDP, world oil prices, and the producer price index (PPI). The mean logarithmic export price is 7.5417, while the real exchange rate records the largest standard deviation among the principal explanatory variables, indicating substantial exchange-rate variation across the observation period. Differences in destination-country GDP further reflect heterogeneous economic conditions across importing markets, whereas the variation in oil prices and PPI captures changes in international and domestic cost conditions. Overall, the available variation provides an adequate basis for examining the determinants of Indonesia's TSR 20 export prices.

The diagnostic and specification tests indicate that the pooled specification is the most appropriate model. Although the inclusion of year dummies generates severe multicollinearity, with an average VIF of 545.45, the specification without year dummies reduces the VIF to 1.02. The Chow test produces a probability value of 0.2008, while the Lagrange Multiplier test yields 1.000, providing no statistical basis for preferring either fixed or random effects over the pooled model. Accordingly, the Common Effect Model (CEM) is employed as the main specification. This result suggests that the observed variation in TSR 20 export prices is not systematically differentiated across destination countries after accounting for the explanatory variables included in the model.

Table 1 Common Effect Model Estimation Results

Variable	Coefficient	p-value	Interpretation
Real exchange rate (lnrer))	-0.001212	0.849	Not significant
Destination GDP (LNGDP)	-0.001803	0.840	Not significant
World oil price	0.012141	0.000	Positive and significant
PPI	0.003475	0.000	Positive and significant
Constant	6.215824	0.000	Significant
R-squared	0.6189		61.89% explained
Prob. F	0.000		Model significant

Source: Source: STATA data processing results 17, 2026

Exchange Rate Pass-Through and Local Currency Price Stability

The most important finding concerns the real exchange rate. Its coefficient is -0.001212 and statistically insignificant (p = 0.849), indicating that movements in the real exchange rate do not exert a statistically detectable effect on Indonesia's TSR 20 export price within the estimated model. Economically, this implies an extremely low exchange-rate pass-through: changes in the exchange rate are not systematically transmitted into the export price. Rather than adjusting the quoted price in response to currency movements, exporters appear to accommodate exchange-rate shocks without materially changing the observed export price.

This finding is consistent with the logic of local currency price stability, whereby exporters limit the transmission of exchange-rate fluctuations into prices faced by buyers. The PTM literature emphasizes that incomplete pass-through may arise when exporters adjust markups or pricing margins rather than fully transferring currency movements to foreign buyers. Fracasso, Secchi, and Tomasi (2022) further demonstrate that exporters' pricing responses depend on market power and exchange-rate uncertainty, while Corsetti, Crowley, and Han (2022) show that the extent of pass-through and pricing-to-market can depend on invoicing practices and the currency in which transactions are denominated.

However, the insignificant exchange-rate coefficient should not be interpreted as definitive evidence of pricing-to-market in the strong sense. PTM is normally established by demonstrating systematic and destination-specific differences in pass-through. Since the present model identifies no statistically significant destination-specific effects and instead supports a pooled specification, the more defensible interpretation is that Indonesia's TSR 20 exporters exhibit very limited exchange-rate pass-through and relatively stable export pricing, consistent with an LCPS-type pattern. This distinction is important because incomplete ERPT can also reflect market structure, pricing rigidity, invoicing conventions, and cost conditions rather than market power alone.

Global and Domestic Cost Pass-Through

In contrast to the exchange rate, world oil prices and domestic production costs significantly influence TSR 20 export prices. The coefficient of world oil prices is 0.012141 ($p < 0.001$), while the PPI coefficient is 0.003475 ($p < 0.001$). These results indicate that international and domestic cost conditions are more important determinants of TSR 20 export prices than

exchange-rate movements.

The strong relationship between oil prices and TSR 20 export prices is economically plausible because petroleum-based inputs affect processing, transportation, energy, and the broader synthetic-rubber market. Meanwhile, the positive PPI coefficient indicates that increases in domestic production costs are reflected in export prices. The coexistence of insignificant exchange-rate effects and significant cost effects suggests that exporters possess limited flexibility to alter prices in response to currency movements but are more likely to transmit identifiable cost shocks to international buyers.

This pattern reinforces the interpretation of TSR 20 as a relatively standardized commodity whose export pricing remains closely connected to international market conditions and production costs. Rather than exercising substantial discretionary pricing power, Indonesian exporters appear to operate within externally determined price conditions. This finding is consistent with recent evidence that exchange-rate pass-through varies with product characteristics, destination-market conditions, and uncertainty. Zou et al. (2022), for example, find incomplete and asymmetric ERPT in Chinese exports and show that destination income and export characteristics affect exporters' ability to adjust prices.

Strategic Implications for TSR 20 Export Competitiveness

Taken together, the findings reveal a structural constraint in Indonesia's TSR 20 export strategy. The absence of a significant exchange-rate effect, combined with the strong influence of global oil prices and domestic production costs, suggests that conventional exchange-rate movements provide limited scope for Indonesian exporters to improve competitiveness through price adjustment alone. The evidence therefore points toward a relatively weak bargaining position in the international TSR 20 market. This interpretation is consistent with the theoretical proposition that pricing strategies become more constrained when exporters face highly competitive and relatively homogeneous product markets.

The policy implication is consequently not simply to encourage greater exchange-rate responsiveness, but to reduce dependence on undifferentiated TSR 20 exports. Downstream processing can create product differentiation, increase value added, and potentially expand exporters' pricing flexibility. The empirical evidence that global and domestic cost shocks are transmitted into TSR 20 prices further strengthens the case for improving processing efficiency, technological capability, and value-chain integration. Such strategies may gradually shift Indonesia from participation in international rubber markets primarily as a price-taking supplier toward a position in which product characteristics, quality, and specialization provide greater scope for strategic pricing.

CONCLUSION

This study concludes that Indonesia's TSR 20 export pricing demonstrates a relatively limited response to exchange rate movements, indicating that exchange rate fluctuations are not fully transmitted into export prices and are therefore consistent with local-currency price stability. The insignificant effect of the real exchange rate suggests that exporters tend to absorb or accommodate exchange rate movements rather than mechanically transfer them to foreign buyers, although the available evidence should be interpreted as limited exchange-rate pass-through rather than conclusive proof of destination-specific pricing-to-market. This finding extends the understanding of export pricing in commodity trade by showing that even for a relatively standardized product such as TSR 20, export prices are not determined solely by exchange rate movements, but are also shaped by broader international and domestic cost conditions. The significant positive effects of world oil prices and producer prices indicate that cost pressures play a more important role in determining export prices than exchange rate fluctuations within the estimated model. In this respect, the study contributes to the pricing-to-market literature by linking exchange-rate pass-through with local-currency price stability in an emerging-market commodity export context, where evidence remains relatively limited. The findings also suggest that maintaining export competitiveness should not rely exclusively on exchange rate adjustment, but should be supported by improvements in cost efficiency, productivity, product differentiation, and value addition. Overall, the study indicates that the relative stability of TSR 20 export prices in the face of exchange rate movements reflects a pricing strategy characterized by limited pass-through and the accommodation of exchange rate risk, rather than strong evidence of market-power-driven price discrimination across destinations.

ETHICAL STATEMENT AND DISCLOSURE

Authors are required to state that the study was conducted in accordance with ethical principles, including informed consent, protection of informants' confidentiality, and respect for local cultural values. If the research involved vulnerable groups, please specify the protective measures taken to ensure their safety and equal participation. The statement should also disclose any sources of funding or declare that no external funding was received, along with a declaration of no conflict of interest. Authors must confirm that all data were collected through valid methods and have been verified for accuracy. If artificial intelligence (AI) tools were used, clarify that their use was limited to technical assistance such as language editing, without influencing the scientific content. Conclude with a sentence stating that the authors take full responsibility for the content and conclusions of the article.

Authors may refer to the following example to formulate their statement:

"This study was conducted in accordance with established ethical principles, including informed consent, protection of informants' confidentiality, and respect for local cultural values. Special consideration was given to participants from vulnerable groups to ensure their safety,

comfort, and equal rights to participate. No external funding was received, and the authors declare no conflict of interest. All data and information presented were collected through valid research methods and have been verified to ensure their accuracy and reliability. The use of artificial intelligence (AI) was limited to technical assistance for writing and language editing, without influencing the scientific substance of the work. The authors express their gratitude to the informants for their valuable insights, and to the anonymous reviewers for their constructive feedback on an earlier version of this manuscript. The authors take full responsibility for the content and conclusions of this article."

REFERENCES

Abid, I., Guesmi, K., Urom, C., Alshammari, S., & Dagher, L. (2024). *Strategic Commodities' Price Risk and Financial Contagion in Oil and Gas Exporting Countries TI2 - The Energy Journal*. *45*(1_suppl). https://doi.org/10.5547/01956574.45.si1.iabi

Arif, R., Jamil, N., & Chaudhry, A. (2025). *Strategic Trade Policy for Pakistan's Textile Sector in 2018: Enhancing High Value-Added Exports through Low-Priced Intermediate Input TI2 - The Pakistan Development Review*. https://doi.org/10.30541/v62i2pp.145-166

Belkin, I., Trapaidze, S., Bondarenko, V., Omelianenko, O., & Cherniavskyi, I. (2025). *Sustainable Marketing of Ukrainian Agricultural Enterprises to Enter Global Grain Markets TI2 - European Journal of Sustainable Development*. *14*(2). https://doi.org/10.14207/ejsd.2025.v14n2p490

Bodlaj, M., Čater, B., & Arslanagic-Kalajdzic, M. (2026). *Which pricing method is right for SMEs' export venture profit? Evidence of curvilinear effects TI2 - International Journal of Emerging Markets*. *21*(6). https://doi.org/10.1108/ijoem-11-2024-1990

Bondar, A., Sherstiuk, O., & Khalin, S. (2024). *The impact of market imbalances on pricing strategies in the agricultural sector of Ukraine TI2 - Actual problems of innovative economy and law*. *2024*(2). https://doi.org/10.36887/2524-0455-2024-2-25

BřEzina, D., Michal, J., & Hlaváčková, P. (2024). *The Impact of Natural Disturbances on the Central European Timber Market—An Analytical Study TI2 - Forests*. *15*(4). https://doi.org/10.3390/f15040592

Gold, K. L., & Yusuf, H. A. (2025a). *The effect of exchange rate and other macroeconomic indicators on Nigeria's non-oil exports performance TI2 - SN Business & Economics*. *5*(9). https://doi.org/10.1007/s43546-025-00886-9

Gold, K. L., & Yusuf, H. A. (2025b). *The effect of exchange rate and other macroeconomic indicators on Nigeria's non-oil exports performance TI2 - SN Business & Economics*. *5*(9). https://doi.org/10.1007/s43546-025-00886-9

Gunal, Y. (2025). *Currency Risk as a Managerial Variable: Business Management Approaches in Import?Export Organizations TI2 - Iconic Research and Engineering Journals*. *8*(11). https://doi.org/10.64388/irev8i11-1714629

Gunal, Y. (2026). *Currency Risk as a Managerial Variable: Business Management Approaches in Import–Export Organizations TI2 - International Journal of Research Publications*. *199*(1). https://doi.org/10.47119/ijrp1001991620269428

Harshita. (2024). *Influence of Rupee Instability on International Pricing Strategies of Indian SMEs*. *5*(1). https://doi.org/10.29121/shodhkosh.v5.i1.2024.6360

Hasibuan, N. I., Elpawati, & Lebba. (2025). *Structural Equation Modeling of Cocoa Export Performance in Indonesia (2015–2024)*. *19*(2). https://doi.org/10.15408/aj.v19i2.49052

Ilgın, K. S., & Güney, S. (2024). *The Effects of Price and Volatility Indices of Strategic Commodities on Stock Markets: A Study on BRICS Economies*. *25*(3). https://doi.org/10.53443/anadoluibfd.1389265

Jeisica, J., & Imaningsih, N. (2026). *Macroeconomic Determinants of Indonesia's Refined Palm Oil Export Perfomance: Evidence from China, India and Pakistan (2010-2024) TI2 - Jurnal Riset Ilmu Ekonomi*. *6*(1). https://doi.org/10.23969/jrie.v6i1.421

Kaplan, K., & Çiçek, A. (2025). *Estimation of Turkey hazelnut export quantity and prices with ARIMA model TI2 - Journal of Agricultural Faculty of Gaziosmanpasa University*. *42*(1). https://doi.org/10.55507/gopzfd.1629321

Karso, A. J. (2025). *India Vs Pakistan War, Triggering Nuclear War and Its Impact on The Indonesian Economy TI2 - Discourse Journal on Law and Society*. *1*(3). https://doi.org/10.70062/djls.v1i3.80

Lu, X., Min, J., Huang, Y., & She, Y. (2025). *Soybeans at the Center of U.S.–China Trade: A Nash Equilibrium Approach TI2 - Advances in Economics, Management and Political Sciences*. *244*(1). https://doi.org/10.54254/2754-1169/2025.ld30005

Mohamad, M. S., Hamzah, A. S. M. A., Abu Bakar, N. T., Saad, R. M., Ridzuan, A. R., & Senin, S. (2026). *Navigating Currency Volatility: Strategic Adaptation and Economic Implications for Multinational Corporations TI2 - International Journal of Research and Innovation in Social Science*. *10*(5). https://doi.org/10.47772/ijriss.2026.100500556

Muhtaram, Z., & Azrani, U. (2025). *An Analysis of The Performance of Indonesian Natural Rubber Export Development To China TI2 - Jurnal Bisnis Tani*. *11*(2). https://doi.org/10.35308/jbt.v11i2.63

Narawangsa, R. R., Parianom, R., Siddiq, M. R., & Wu, K. N. (2026). *Explaining Indonesia's Rubber Export Value: The Role of Price, Exchange Rate, Production, and FDI*. *8*(1). https://doi.org/10.25105/ijca.v8i1.26589

Pardede, G. I., Habeahan, S. R., Sianturi, M., Lumbanraja, J., Purba, O. S., & Tampubolon, J. (2026). *Paradox Of Indonesia's Natural Rubber Export Competitiveness And The Improvement Of Farmers' Welfare TI2 - Tropical Plantation Journal*. *5*(2). https://doi.org/10.56125/tpj.v5i2.102

Razavi, S. A., Kashani, L., & Mahdaviadeli, M. (2026). *The Impact of the Activation of the Trigger Mechanism on the Iranian Oil Market TI2 - Economics and Financial Policymaking*. *3*(2). https://doi.org/10.61838/efp.3.2.3

Reyhan, F., & Saputera, D. (2024). *Comparative Study of Crude Palm Oil Exports to The Main Producing Countries in Asean TI2 - Golden Ratio of Social Science and Education*. *5*(1). https://doi.org/10.52970/grsse.v5i1.992

Sahoo, A., Nechifor, V., Ferrari, E., Ferreira, V., & Amany, D. S. D. (2025). *On the Positive Economic Impacts of Port Infrastructure Development and Seaborne Trade Efficiencies in Sub-Saharan Africa: The Case of Senegal*. *27*(3). https://doi.org/10.1057/s41278-024-00293-1

Saptarini, L., Rachmina, D., & Suprehatin, S. (2026). *Determinants of Muntok White Pepper Export Value to Singapore and the United States TI2 - Agro Bali : Agricultural Journal*. *9*(1). https://doi.org/10.37637/ab.v9i1.2657

Semenova, G. N., Tran, P. T., Duong, K. T., & Vazh, S. P. B. (2025). *Analysis of Customs Revenue in the Federal Budget of Russia from the Export of Fuel and Energy Products*. *4/12*(157). https://doi.org/10.36871/ek.up.p.r.2025.04.12.021

Setiawan, R. F., Soedarto, T., Hendrarini, H., & Mubarokah. (2025). *Dynamics of Competitiveness and Determinants of Indonesian Cocoa Exports in The Global Market TI2 - Jurnal Manajemen dan Agribisnis*. *22*(3). https://doi.org/10.17358/jma.22.3.302

Shang, J., & Hamori, S. (2024). *The response of oil-importing and oil-exporting countries' macroeconomic aggregates to crude oil price shocks: some international evidence TI2 - Eurasian Economic Review*. *14*(4). https://doi.org/10.1007/s40822-024-00281-z

Soumaila, I. (2023). *Uranium and the Macro-Economy in Niger: An Empirical Investigation TI2 - The Journal of Developing Areas*. *57*(2). https://doi.org/10.1353/jda.2023.0036

Tachochalalai, S., Yakean, S., Suwannatippayachot, S., Supanyo, P., Pommi, C., & Pugatekaew, K. (2026). *Economic Factors Influencing the Price of Rubber for Forecasting Rubber Prices Using the Box-Jenkins Technique TI2 - Research on World Agricultural Economy*. https://doi.org/10.36956/rwae.v7i1.2464

Vashistha, S., & Gumsh, K. (2026). *Foreign Exchange Rate Threats TI2 - International Journal of Science, Strategic Management and Technology*. *02*(04). https://doi.org/10.55041/ijsmt.v2i4.388

Yesildag, S. (2024). *Business Management Approaches to Currency Risk in Import-Export Operations: Lessons from Executive-Level Practice TI2 - Iconic Research and Engineering Journals*. *8*(4). https://doi.org/10.64388/irev8i4-1714624

Yesildag, S. (2026). *Business Management Approaches to Currency Risk in Import-Export Operations: Lessons from Executive-Level Practice TI2 - International Journal of Research Publications*. *199*(1). https://doi.org/10.47119/ijrp1001991620269421

Yusuf, M., Ardimansyah, A., & Syahputra, F. D. (2026). *Competitiveness of Indonesian Coconut Oil and Its Determinants TI2 - Journal of Business and Political Economy : Biannual Review of The Indonesian Economy*. *8*(1). https://doi.org/10.46851/254

Zahra, Z. K., Yuniarsih, T., Proboputri, R. H. N., Maulana, R. A., & Nuaraya, A. S. (2025). *Exchange Rate and Macroeconomic Impacts on Indonesia's Balance of Payments TI2 - Research of Accounting and Governance*. *3*(2). https://doi.org/10.58777/rag.v3i2.461