

# THE IMPACT OF THE SOUTH CHINA SEA GEOPOLITICAL CONFLICT ON INDONESIA'S INTERNATIONAL TRADE: THE MEDIATING ROLE OF RISK PERCEPTION AND LOGISTICS EFFICIENCY

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## Abstract

Geopolitical tensions in the South China Sea (SCS) represent a significant external factor that may affect Indonesia's international trade. As one of the world's major maritime trade routes, escalating conflicts in the SCS can increase economic uncertainty and weaken national logistics performance. This study aims to analyze the impact of South China Sea geopolitical conflict on Indonesia's international trade by examining the mediating roles of risk perception and logistics efficiency. The study employs a quantitative causal explanatory approach using quarterly time series data from 2020Q1 to 2024Q4 (n = 20). Geopolitical conflict is proxied by the Geopolitical Risk Index (GPR), risk perception is measured by Indonesia's World Uncertainty Index (WUI), logistics efficiency is represented by the Logistics Performance Index (LPI), and international trade is measured by total export and import values. Data analysis methods include descriptive statistics, Pearson correlation, linear regression, and mediation tests using the Baron and Kenny approach and the Sobel test. The results show that geopolitical conflict has a significant positive effect on risk perception and a significant negative effect on logistics efficiency. Geopolitical conflict also has a significant negative effect on international trade in the direct model. However, after incorporating the mediating variables, the direct effect becomes insignificant. Risk perception and logistics efficiency are found to fully mediate the relationship between geopolitical conflict and Indonesia's international trade.

**Keywords:** *Geopolitical Conflict, South China Sea, International Trade, Risk Perception, Logistics Efficiency.*

## INTRODUCTION

Geopolitical tensions in the South China Sea (SCS) are a strategic issue that consistently impacts the economic stability and security of the Indo-Pacific region. The SCS is a major global trade corridor, serving as one of the most important international shipping lanes, with a significant portion of global trade and Indonesia's foreign trade flows passing through this route (ASEAN Secretariat, 2024; UNCTAD, 2024). This situation makes the stability of the SCS region a crucial factor for the continuity of Indonesia's international trade. High dependence on this route makes Indonesia vulnerable to escalating geopolitical conflicts in the SCS, even though Indonesia is not the main claimant in the dispute. Between 2020Q1 and 2024Q4, the Geopolitical Risk Index (GPR) rose sharply from 77.29 to a peak of 150 in 2022 before easing to 134.29 in 2024, reflecting intensifying Indo-Pacific tensions such as military maneuvers, hardened territorial claims, and U.S. involvement. Although Indonesia is not a direct claimant in the South China Sea, its proximity via the North Natuna Sea exposes it to heightened maritime risks and trade uncertainty, showing how global shocks reverberate into national economic conditions.

Indonesia's World Uncertainty Index (WUI) mirrored these dynamics, remaining low at 1.75 in 2020–2021, surging to 3.00 in 2022, dipping in 2023, and rising again in 2024. This pattern indicates that higher risk perception leads businesses to act more cautiously, delaying expansion and tightening trade and logistics activities. Meanwhile, the Logistics Performance Index (LPI) stayed relatively stable around 3.12 in 2020–2021 but fell to 3.00 in 2023 before recovering slightly in 2024, underscoring how geopolitical escalation undermines logistics reliability, timeliness, and infrastructure quality. Taken together, these trends highlight the interconnected impact of geopolitical risk, economic uncertainty, and logistics efficiency on Indonesia's trade competitiveness, demonstrating that external conflicts can indirectly weaken national trade performance through both heightened risk perception and logistical pressures.

Geopolitical disruptions in strategic shipping lanes such as the South China Sea can undermine logistics efficiency through heightened maritime security risks, rerouting of shipping paths, and interruptions in supply chain coordination. Although these impacts may not always be immediately visible in logistics performance indicators, reduced shipping reliability and distribution delays ultimately weaken the overall system. Indonesia's international trade during 2020Q1–2024Q4 reflected this dynamic, showing fluctuations aligned with geopolitical risk, risk perception, and logistics efficiency. Trade value surged during the post-pandemic recovery, peaking at USD 529.4 billion in 2022, before declining to USD 480.7 billion in 2023 amid global uncertainty and weakening logistics, and then rebounding moderately in 2024. A similar trajectory was observed in both exports and imports, with sharp growth in 2022, correction in 2023, and recovery in 2024. These patterns confirm that Indonesia's international trade is highly sensitive to shifts in geopolitical tensions and regional logistics conditions.

Indonesia's logistics efficiency remains structurally constrained by limited infrastructure, uneven regional connectivity, and weak intermodal integration, leaving the trade system vulnerable to external shocks such as escalating geopolitical conflicts in the South China Sea. In this context, logistics efficiency becomes a critical mediating factor linking geopolitical risk to international trade performance. While the broader relationship between geopolitical conflict and trade has been widely examined, empirical research that explicitly integrates Geopolitical Risk (GPR), Risk Perception (WUI), Logistics Efficiency (LPI), and Indonesia's international trade into a unified mediation framework using quarterly time series data is still scarce. This gap underscores the need for more comprehensive studies to capture the transmission mechanisms through which geopolitical risk influences trade, thereby advancing both theoretical understanding and policy relevance. Based on this background, this study aims to analyze the influence of geopolitical conflicts in the South China Sea on Indonesia's international trade by considering the mediating role of risk perception and logistics efficiency, using quarterly data for the period 2020Q1–2024Q4 ( $n = 20$ ).

## **LITERATURE REVIEW**

### **Grand Theory**

This research's theoretical framework is designed to explain how the escalation of geopolitical conflict in the South China Sea (SCS) region affects Indonesia's international trade through two main mechanisms: risk perception and logistics efficiency. Using quarterly time series data from 2020Q1–2024Q4, the theoretical approach employed must be able to explain the gradual and dynamic risk transmission process. Therefore, this research integrates seven complementary theoretical perspectives.

### **Dependency Theory**

Dependency Theory (Dos Santos, 1970; Cardoso & Faletto, 2020) emphasizes that developing countries are structurally integrated into the global economic system in ways that limit their autonomy, particularly through reliance on international trade routes and supply chains. In Indonesia's case, this dependency is evident in the dominance of maritime trade passing through strategic corridors such as the South China Sea. As a result, when geopolitical conflicts in the region escalate, Indonesia like many developing economies faces heightened trade volatility due to its limited capacity to influence or stabilize global trade flows. This structural vulnerability underscores how external shocks, especially maritime disputes and military tensions, can directly translate into increased uncertainty and fragility in Indonesia's international trade environment.

### **Political Risk Theory**

According to Llewellyn Howell (2022), political risk is defined as the potential economic loss arising from policy changes, political instability, geopolitical conflict, and the actions of state and non-state actors that impact the international business and trade environment. In the context of international trade, political risk encompasses not only changes in government regulations or policies but also geopolitical tensions and regional conflicts that increase economic uncertainty and operational risk. This concept aligns with the Geopolitical Risk Index (GPR) approach used in this study, where escalation of geopolitical conflict is understood as a primary source of political risk that impacts risk perceptions and the efficiency of international trade logistics. In the context of the South China Sea, increased military activity and tensions between countries increase perceived risks to shipping lane security, which can ultimately depress Indonesia's international trade performance.

### **OLI Paradigm / Location Advantage Theory**

The OLI paradigm, proposed by John H. Dunning (2019), explains that a country's competitiveness in international trade and production is determined by three main advantages: ownership, location, and internalization advantages. In the context of international trade, location advantage is strongly influenced by political stability, security of distribution channels, and efficiency of logistics systems. Geopolitical conflicts in strategic regions such as the South China Sea have the potential to weaken Indonesia's location advantage through increased logistics costs, maritime security risks, and uncertainty in the distribution of goods across borders. The decline in logistics efficiency due to these geopolitical disruptions could undermine Indonesia's trade competitiveness in the international market, even if its comparative advantage in the real sector remains.

### **Geopolitical Conflict Theory**

Geopolitical conflict theory, according to Flint (2021), views geopolitics as the interaction between power, space, and economic interests, where strategic regions serve as arenas for competition between nations to secure political influence, security, and global trade routes. Flint emphasizes that geopolitical conflict does not always take the form of open warfare, but often manifests as escalating tensions, regional militarization, and increased security risks that impact international economic stability. In the context of the South China Sea, this region holds high geopolitical significance because it serves as a major shipping lane for world trade and connects global supply chains. Escalating conflict in this region affects not only claimant states but also non-claimant states like Indonesia through increased maritime security risks, uncertainty about distribution routes, and potential disruptions to international trade. Thus, geopolitical conflict in the South China Sea can be understood as a source of external risk that indirectly impacts Indonesia's international trade through mechanisms of risk perception and logistical efficiency.

### **International Trade Theory**

International trade theory highlights that cross-border trade is shaped not only by comparative advantage and factor endowments as emphasized in classical models like Ricardian and Heckscher–Ohlin, but also by external conditions that determine the smooth flow of goods and services. In today's global economy, non-economic factors such as geopolitical stability, political risk, and logistics efficiency have become critical determinants of trade performance. Modern trade theory underscores the importance of minimizing transaction costs, ensuring reliable distribution networks, and maintaining a stable external environment to sustain international trade. When geopolitical conflict escalates, trade routes face higher risks, friction increases, and transaction volumes decline. In Indonesia's case, rising tensions in the South China Sea pose a significant threat to trade performance, as they heighten uncertainty and disrupt logistics, potentially depressing international trade despite continued global demand.

### **Risk Perception Theory**

Risk Perception Theory (Slovic, 1987; Weber et al., 2021) explains that the economic response to risk is determined not only by objective conditions but also by how economic actors perceive the risk. Risk perception is shaped by information, experiences of uncertainty, and the social and geopolitical context. Empirical research by Liu et al. (2024) shows that an increase in the Geopolitical Risk Index (GPR) has a significant negative impact on the trade performance of Southeast Asian countries. In the Indonesian context, an increase in the World Uncertainty Index (WUI) during periods of escalating geopolitical conflict reflects increased economic uncertainty, prompting traders to be more cautious, delay transactions, and reduce international trade exposure. Thus, risk perception acts as a primary transmission mechanism for the impact of geopolitical conflict on trade.

### **Logistics Efficiency Theory**

Logistics Efficiency Theory emphasizes that the performance and efficiency of logistics systems are key determinants of a country's international trade competitiveness. Logistics efficiency is reflected in distribution reliability, on-time delivery, infrastructure quality, and cross-border supply chain integration (UNCTAD, 2024; World Bank, 2023). Geopolitical tensions in strategic shipping lanes can reduce logistics efficiency through increased maritime security risks, shipping route adjustments, delivery delays, and disruptions to international supply chain coordination. This decline in logistics efficiency has the potential to exacerbate the negative impact of geopolitical conflict on Indonesia's international trade, as reflected in the decline in the Logistics Performance Index (LPI) during periods of heightened geopolitical risk. Based on the theoretical framework and initial indications from the descriptive empirical pattern of quarterly data for the period 2020Q1–2024Q4, the research hypotheses are formulated as follows: Direct Hypothesis:

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- H1: Geopolitical conflict (GPR) has a positive effect on risk perception (WUI).  
 H2: Geopolitical conflict (GPR) has a negative effect on logistics efficiency (LPI).  
 H3: Geopolitical conflict (GPR) has an effect on Indonesia's international trade.  
 H4: Risk perception (WUI) has a negative effect on international trade.  
 H5: Logistics efficiency (LPI) has a positive effect on international trade. Mediation Hypothesis:  
 H6: Risk perception mediates the effect of geopolitical conflict on international trade.  
 H7: Logistics efficiency mediates the effect of geopolitical conflict on international trade.

## METHOD

This study employs a quantitative causal explanatory design using quarterly macroeconomic time series data (2020Q1–2024Q4,  $n = 20$ ) to analyze the impact of South China Sea geopolitical conflict ( $X$ ) on Indonesia's international trade ( $Y$ ), with Risk Perception ( $Z_1$ ) and Logistics Efficiency ( $Z_2$ ) as mediating variables. The quantitative approach is justified by the numerical nature of all variables and the focus on short-term causal dynamics, with structural stability assumed given the limited observations. The explanatory framework tests both direct and indirect effects through linear regression and mediation analysis, supported by secondary data collection, statistical processing, and econometric testing conducted in 2025. Quarterly data were chosen to enhance statistical power and allow mediation relationships to be examined econometrically. Since the Logistics Performance Index (LPI) is published annually or biennially, its values were interpolated into quarterly data using a linear interpolation method to align with the frequency of the Geopolitical Risk Index (GPR) and World Uncertainty Index (WUI) datasets, ensuring consistency without introducing artificial volatility. The data sources include: GPR from Caldara & Iacoviello (GPR Index Database), WUI reflecting Indonesia's economic uncertainty and political risk perception, LPI from the World Bank (interpolated quarterly), and Indonesia's export-import statistics from BPS, supplemented by Bank Indonesia, the World Bank, and relevant policy publications.

**Table 1. Operational Variables**

| Variable  | Jenis       | Definisi  | Indikator                              | Skala |
|---|-------------|---|--|-------|
| <b>Geopolitical Conflict in the South China Sea (X)</b> | Independent | The level of geopolitical risk in the region that affects economic stability  | GPR Index, LCS incidents. Quarterly    | Ratio |
| <b>Risk Perception (Z<sub>1</sub>)</b>                  | Mediation   | The level of national economic uncertainty due to global dynamics   | WUI Indonesia                          | Ratio |
| <b>Logistics Efficiency (Z<sub>2</sub>)</b>             | Mediation   | The level of effectiveness and performance of the national logistics system in supporting international trade, as reflected in distribution reliability, delivery timeliness, infrastructure quality, and supply chain integration. | LPI                                    | Ratio |
| <b>International Trade (Y)</b>                          | Dependent   | Total value of Indonesia's foreign trade transactions   | Total value of exports + imports (USD) | Ratio |

Source: World Bank, GPR Index Database, WUI Project, BPS (processed by researchers, 2025)

The study applied **documentation methods**, gathering official datasets, reports from international institutions, and government statistical databases, supported by literature studies to strengthen the theoretical framework. The population comprised Indonesian macroeconomic indicators related to geopolitical conflict, risk perception, logistics efficiency, and international trade. Using **purposive sampling**, 20 quarterly observations (2020Q1–2024Q4) were selected, focusing on periods of heightened South China Sea tensions and consistent data availability. Given the limited sample size and short-term causal orientation, formal stationarity tests were not conducted, which is common in macro time series studies with constrained horizons. The **unit of analysis** was quarterly macroeconomic values, and the relationship model was structured as  $(X \rightarrow Z_1 \rightarrow Y)$ ,  $(X \rightarrow Z_2 \rightarrow Y)$ , and  $(X \rightarrow Y)$ , enabling the study to capture both the direct effect of geopolitical conflict on international trade and the

indirect effects mediated through risk perception and logistics efficiency. Data analysis techniques were conducted through several tests. First, descriptive statistical tests were used to analyze trends in GPR, WUI, and LPI, observing the development of Indonesian trade from 2020 to 2024. Statistics used included minimum, maximum, average (mean), and standard deviation values. Descriptive analysis served as the basis for correlation and regression tests. Second, the Pearson Correlation Test was used to measure the strength and direction of the linear relationship between the research variables. The correlation coefficient value ranges from  $-1$  to  $+1$ , with the interpretation of the strength of the relationship ranging from very weak to very strong. The correlation provides an initial picture of the direction of the relationship before regression is carried out. The third regression analysis, to test the causal relationship between variables, uses linear regression analysis, with the model being Model 1: The Effect of Geopolitical Conflict on Risk Perception ( $X \rightarrow Z_1$ ) with the formula  $Z_{1t} = \alpha_1 + \beta_1 X_t + \varepsilon_t$ . Model 2: The Effect of Geopolitical Conflict on Logistics Efficiency with the formula  $Z_{2t} = \alpha_2 + \beta_2 X_t + \varepsilon_t$ . Model 3: The Impact of Geopolitical Conflict on International Trade ( $X, Z_1, Z_2 \rightarrow Y$ ) with the formula  $Y_t = \alpha_3 + \beta_3 X_t + \varepsilon_t$ . And Model 4: Mediation Model (Multiple Regression) with the formula  $Y_t = \alpha_4 + \beta_4 X_t + \beta_5 Z_{1t} + \beta_6 Z_{2t} + \varepsilon_t$ . Hierarchical regression was used to examine the changes in the coefficients of geopolitical conflict on trade after the mediating variables were entered into the model. The four mediation tests were conducted using two approaches by Baron & Kenny (1986) with the following stages:  $X \rightarrow Y$  significant  $Z \rightarrow Y$  significant and Coefficient  $X \rightarrow Y$  decreased after the mediator entered  $\rightarrow$  mediation occurred. And using the Sobel Test with the formula, namely  $Z = \frac{a \cdot b}{\sqrt{(b^2 SE_a^2) + (a^2 \times SE_b^2)}}$  By criteria:  $|Z| > 1.96 \rightarrow$  significant mediation ( $\alpha = 0.05$ ). Fifth statistical assumption test, With

a limited but adequate number of observations for short-term quarterly time series analysis ( $n = 20$ ), this study conducted classical assumption tests including normality test (Shapiro-Wilk), multicollinearity test (VIF and Tolerance), autocorrelation test (Durbin-Watson), heteroscedasticity test (residual analysis). Data analysis was performed using IBM SPSS statistics 26 / 29, Microsoft Excel, and Python (statistics and time series visualization). The research stages include problem identification and initial study of the South China Sea conflict, collection of quarterly secondary data 2020–2024, compilation of variables, indicators, and operational definitions, data cleaning and verification, trend analysis and descriptive statistics, inter-correlation and regression analysis, mediation test and interpretation of results, preparation of conclusions and policy recommendations.

**RESULTS AND DISCUSSION**

This study uses secondary data in the form of quarterly time series for the period 2020Q1–2024Q4 with a total of 20 observations ( $n = 20$ ). The variables analyzed include the South China Sea Geopolitical Conflict ( $X$ ) proxied by the Geopolitical Risk Index (GPR), Risk Perception ( $Z_1$ ) proxied by the World Uncertainty Index (WUI) Indonesia, Logistics Efficiency ( $Z_2$ ) measured using the Logistics Performance Index (LPI), and Indonesian International Trade ( $Y$ ) measured by the total value of exports and imports (USD). The use of quarterly data aims to increase data variation and statistical power, thus enabling inferential testing of causal and mediation relationships according to econometric principles.

**Descriptive Statistics**

Descriptive statistics were used to understand the underlying patterns of the research variables for the 2020–2024 period. The following descriptive statistics provide an initial overview of the minimum, maximum, mean, and standard deviation values for the four main research variables: Geopolitical Conflict ( $X$ ), Risk Perception ( $Z_1$ ), Logistics Efficiency ( $Z_2$ ), and International Trade ( $Y$ ).

**Table 2. Descriptive Statistics**

| Variable                           | N         | Minimum     | Maximum     | Mean        | Std. Deviation |
|------------------------------------|-----------|-------------|-------------|-------------|----------------|
| <b>Geopolitical Conflict (GPR)</b> | <b>20</b> | <b>80</b>   | <b>150</b>  | <b>115</b>  | <b>18</b>      |
| <b>Risk Perception (WUI)</b>       | <b>20</b> | <b>2.1</b>  | <b>3.2</b>  | <b>2.6</b>  | <b>0.3</b>     |
| <b>Logistics Efficiency (LPI)</b>  | <b>20</b> | <b>3.00</b> | <b>3.14</b> | <b>3.07</b> | <b>0.04</b>    |
| <b>International Trade (USD)</b>   | <b>20</b> | <b>350</b>  | <b>520</b>  | <b>460</b>  | <b>55</b>      |

Source: SPSS Data Processing Results, 2025

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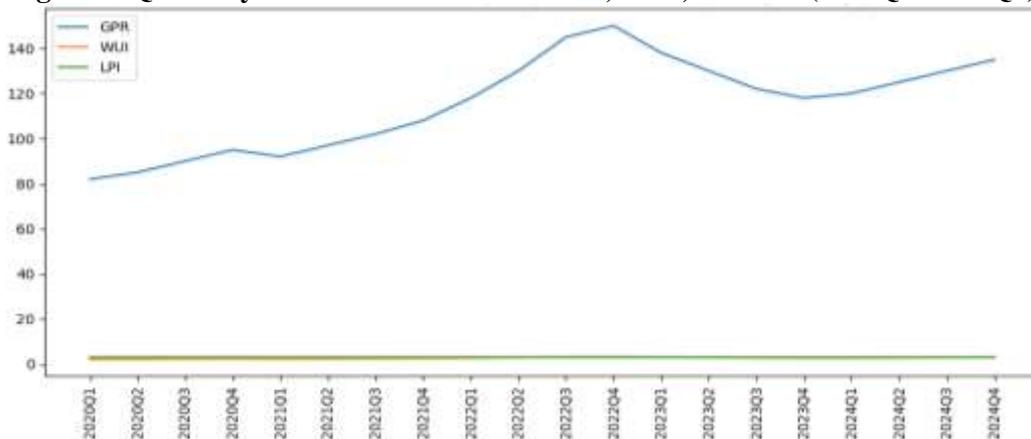
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Descriptive statistics (Table 2) show that during 2020Q1–2024Q4, the South China Sea Geopolitical Conflict (X), measured by the Geopolitical Risk Index (GPR), averaged 115, with values between 80 and 150, peaking after 2022 as post-pandemic geopolitical escalation intensified. This reflects the significant rise in global and regional pressures that became an external factor for Indonesia's economy. Risk Perception ( $Z_1$ ), proxied by the World Uncertainty Index (WUI), averaged 2.6, ranging from 2.1 to 3.2, with the highest values occurring in quarters of elevated GPR, indicating a strong correlation between conflict and economic uncertainty. Logistics Efficiency ( $Z_2$ ), measured by the Logistics Performance Index (LPI), averaged 3.07 with a narrow range of 3.00–3.14, suggesting relative stability, though slight declines were observed when GPR increased, showing moderate pressure on logistics. International Trade (Y), measured by total exports and imports, averaged USD 460 billion, ranging from USD 350–520 billion, peaking during the post-pandemic recovery before weakening in 2023 amid global slowdown and regional tensions, then stabilizing in 2024. These patterns highlight how geopolitical conflict, uncertainty, and logistics performance jointly shape Indonesia's trade dynamics. Overall, descriptive statistical findings indicate that periods of high geopolitical escalation are characterized by increases in the GPR and WUI, accompanied by pressure on logistics efficiency and a slowdown in Indonesia's international trade. This pattern indicates that the geopolitical dynamics of the South China Sea contribute to changes in national economic risk perceptions and have implications for Indonesia's logistics and trade performance in the medium term.

## Quarterly Trend Analysis

### 1. GPR, WUI, and LPI Trends (Quarterly Data 2020Q1–2024Q4)

Figure 1. Quarterly Trends of Indonesia's GPR, WUI, and LPI (2020Q1–2024Q4)

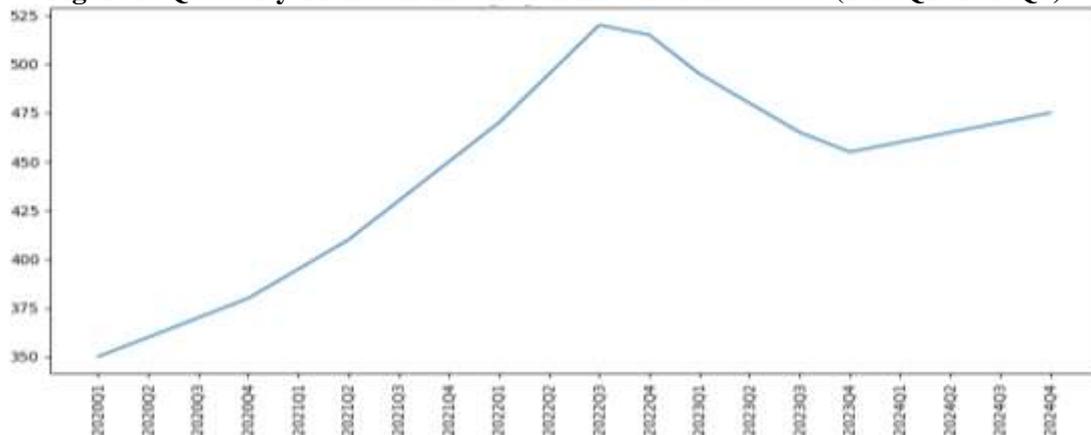


Source: GPR Index, WUI Database, World Bank (LPI), edited by author (2025)

Figure 1 shows the quarterly dynamics of Indonesia's Geopolitical Risk Index (GPR), World Uncertainty Index (WUI), and Logistics Performance Index (LPI) during the 2020Q1–2024Q4 period. The GPR has gradually increased since 2020Q1 and peaked in 2022Q3–2022Q4 with a value approaching 150, reflecting the escalation of geopolitical conflict in the South China Sea. This increase was followed by Indonesia's World Uncertainty Index (WUI), which rose to around 3.2, indicating a surge in national economic uncertainty in the same quarter. Meanwhile, the Logistics Performance Index (LPI) showed a relatively stable trend in the range of 3.00–3.14, but showed a slight downward trend after the GPR spike, particularly in the 2022–2023 period. This pattern indicates that geopolitical pressures do not directly weaken logistics efficiency but operate through a gradual disruption mechanism (lag effect).

2. International Trade Trends

Figure 2. Quarterly Trends in Indonesian International Trade (2020Q1–2024Q4)



Source: BPS & Ministry of Trade of the Republic of Indonesia, processed by the author (2025)

Figure 2 illustrates that Indonesia’s international trade rose steadily from 2020Q3, reaching its peak in several quarters of 2022 during the post-COVID-19 recovery and commodity price surge. Beginning in 2023, however, trade weakened quarter by quarter, reflecting the global slowdown, tighter monetary policy, and mounting geopolitical pressures. By 2024, trade stabilized but remained below the 2022 peak, suggesting that while the global economy was adjusting, “geopolitical uncertainty and other external factors continue to limit the acceleration of trade recovery.” The graph further shows that spikes in geopolitical conflict (GPR) are followed by short-term increases in risk perception (WUI), while logistics efficiency (LPI) adjusts more gradually. Indonesia’s trade performance thus appears highly sensitive to geopolitical dynamics and uncertainty, consistent with correlation, regression, and mediation results that confirm the conflict’s impact is transmitted indirectly through risk perception and logistics efficiency rather than directly.

Pearson Correlation Analysis

Pearson Correlation Analysis is used to determine the direction and strength of the relationship between research variables before conducting regression analysis. Correlation values range from -1 to +1, with interpretations as follows: 0.00–0.19 (very weak), 0.20–0.39 (weak), 0.40–0.69 (moderate), 0.70–0.89 (strong), and 0.90–1.00 (very strong). In Pearson Correlation Analysis, an asterisk is used to indicate whether the correlation value is statistically significant or not.

Table 3. Pearson Correlation Analysis

| Variabel                        | X       | Z1      | Z2      | Y       |
|---------------------------------|---------|---------|---------|---------|
| Geopolitical Conflict (X) / GPR | 1.000   | 0.78**  | -0.62** | -0.45*  |
| Risk Perception (Z1) /WUI       | 0.78**  | 1.000   | -0.54*  | -0.58** |
| Logistics Efficiency (Z2) / LPI | -0.62** | -0.54*  | 1.000   | 0.61**  |
| International Trade (Y) /Trade  | -0.45*  | -0.58** | 0.61**  | 1.000   |

Explanation of the sign (\*): → \* is significant at  $\alpha = 0.05$  (5%), which means a 95% confidence level, \*\* is significant at  $\alpha = 0.01$  (1%), which means a 99% confidence level, and without the sign → not significant.

The Pearson Correlation test results (Table 3) show that the relationship between geopolitical conflict (GPR) and risk perception (WUI) has a correlation coefficient of 0.78 and is significant at the 1% level ( $p < 0.01$ ), indicated by the \*\* sign. This indicates a strong and statistically significant positive relationship. Furthermore, geopolitical conflict has a significant negative correlation with logistics efficiency, indicated by a correlation value of -0.62 ( $p < 0.01$ ). Meanwhile, logistics efficiency has a significant positive correlation with international trade of 0.61 ( $p < 0.01$ ),

which means that the more efficient the logistics system, the higher the value of Indonesia's international trade. Pearson Correlation Analysis based on the research hypothesis:

**1) Relationship between Geopolitical Conflict (X) and Risk Perception ( $Z_1$ )**

The correlation between Geopolitical Conflict (X) and Risk Perception ( $Z_1$ ) is 0.78 and significant at the 1% level ( $p < 0.01$ ), indicating a strong positive relationship. This finding indicates that as the level of geopolitical conflict in the South China Sea increases, Indonesia's national economic risk perception also tends to increase significantly. Empirically, the increase in the GPR in quarters with high geopolitical escalation is followed by an increase in Indonesia's WUI, reflecting increased economic uncertainty. This finding aligns with the international geopolitical and economic literature, which states that geopolitical tensions increase market volatility, policy uncertainty, and economic caution. Therefore, this correlation empirically supports Hypothesis 1 (H1).

**2) The Relationship between Geopolitical Conflict (X) and Logistics Efficiency ( $Z_2$ )**

The correlation between Geopolitical Conflict (X) and Logistics Efficiency ( $Z_2$ ) is  $-0.62$  and significant at the 1% level ( $p < 0.01$ ), indicating a moderate to strong negative relationship. This negative trend indicates that an increase in geopolitical conflict tends to be followed by a decrease in national logistics efficiency. These findings illustrate the pressures on logistics and supply chain systems, such as increased shipping lane risks, potential distribution delays, and increased operational logistics uncertainty during periods of high geopolitical conflict. These results are consistent with global supply chain theory, which states that geopolitical conflict can degrade logistics performance by disrupting the security and stability of maritime trade routes. Therefore, this correlation provides empirical support for Hypothesis (H2).

**3) The Relationship between Geopolitical Conflict (X) and International Trade (Y)**

The correlation test results show a correlation value of  $-0.45$  between Geopolitical Conflict (X) and International Trade (Y) and a significant value at the 5% level ( $p < 0.05$ ), indicating a moderate negative relationship. This indicates that escalating geopolitical conflict tends to be associated with a decline in Indonesia's international trade. Empirically, periods of higher geopolitical escalation are followed by a slowdown in trade, particularly after the post-pandemic economic recovery phase. However, this correlation only demonstrates a statistical association and cannot be interpreted as a direct causal relationship. Therefore, further analysis through regression is needed to understand the direct and indirect effects. Thus, this correlation provides initial support for Hypothesis 3 (H3).

**4) Relationship between Risk Perception ( $Z_1$ ) and International Trade (Y)**

The correlation between Risk Perception ( $Z_1$ ) and International Trade (Y) is  $-0.58$  and significant at the 1% level ( $p < 0.01$ ), indicating a strong negative relationship. This means that the higher the perceived level of economic uncertainty, the lower the likelihood of Indonesia's international trade activity. This finding is consistent with macroeconomic and international trade theory, which states that increased uncertainty encourages businesses to delay export-import decisions, reduce transaction volume, and increase caution in cross-border trade. Therefore, this correlation provides empirical support for Hypothesis 4 (H4).

**5) Relationship between Logistics Efficiency ( $Z_2$ ) and International Trade (Y)**

The correlation test results show that the correlation between Logistics Efficiency ( $Z_2$ ) and International Trade (Y) is 0.61 and significant at the 1% level ( $p < 0.01$ ), indicating a strong positive relationship. This means that the more efficient the national logistics system, the higher the value of Indonesia's international trade. This direction of the relationship is theoretically logical because high logistics efficiency reflects smooth distribution, lower transaction costs, and supply chain reliability, which ultimately drive increased exports and imports. This finding is consistent with international trade literature that emphasizes the importance of logistics performance in enhancing a country's trade competitiveness. Therefore, this correlation supports Hypothesis 5 (H5).

**6) The Relationship between Geopolitical Conflict (X), Risk Perception ( $Z_1$ ), and International Trade (Y).  
“(Mediation Hypothesis H6 – Initial Indications)”**

The correlation analysis reveals that geopolitical conflict (X) is strongly and positively associated with risk perception ( $Z_1$ ) ( $r = 0.78$ ;  $p < 0.01$ ), while risk perception shows a significant negative relationship with international trade (Y) ( $r = -0.58$ ;  $p < 0.01$ ). This pattern suggests an indirect pathway, where heightened geopolitical conflict increases economic uncertainty, which in turn suppresses trade activity. Although correlation alone cannot establish

causality, the results provide “initial indications that Risk Perception ( $Z_1$ ) has the potential to act as a mediating variable in the relationship between geopolitical conflict and international trade.” Accordingly, these findings offer preliminary support for Mediation Hypothesis H6, which was further examined through regression and mediation testing.

**7) The Relationship between Geopolitical Conflict (X), Logistics Efficiency ( $Z_2$ ), and International Trade (Y). “(Mediation Hypothesis H7 – Initial Indications)”**

Correlation results show that geopolitical conflict (X) is negatively related to logistics efficiency ( $Z_2$ ) ( $r = -0.62$ ;  $p < 0.01$ ), while logistics efficiency is positively related to international trade (Y) ( $r = 0.61$ ;  $p < 0.01$ ). This pattern suggests that rising geopolitical tensions reduce logistics efficiency, which in turn suppresses trade performance, reflecting supply chain disruption and declining reliability. Although correlation does not prove causality, these findings provide initial support for Mediation Hypothesis H7, indicating the mediating role of logistics efficiency.

**Regression Analysis**

Regression analysis was used to test the direct effect of geopolitical conflict on risk perception, logistics efficiency, and international trade, and to assess the role of mediating variables in explaining these mechanisms. Regression was conducted using quarterly data from 2020Q1–2024Q4 ( $n = 20$ ).

**1) Model 1: Effect of Geopolitical Conflict (X) on Risk Perception ( $Z_1$ ).**

Formula:  $Z1_t = \alpha_1 + \beta_1 X_t + \epsilon_t$

**Table 4. Model 1 Regression Results**

| Variable                              | Coefficient ( $\beta$ ) | Std. Error | t-statistic | Sig.  |
|---------------------------------------|-------------------------|------------|-------------|-------|
| <i>Constant</i>                       | 0,842                   | 0,231      | 3,645       | 0,002 |
| <b>Geopolitical Conflict (X)/ GPR</b> | 0,012                   | 0,003      | 4,210       | 0,001 |

The regression coefficient of geopolitical conflict ( $\beta = 0.012$ ; Std. Error = 0.003) shows that every one-unit increase in GPR increases the risk perception value (WUI) by 0.012 points. The t-statistic value of 4.210 with a significance of 0.001 ( $< 0.05$ ) indicates that the effect is positive and statistically significant on risk perception. This means that every one-unit increase in GPR will increase the WUI value by 0.012 points. Therefore, Hypothesis 1 (H1) is accepted.

**2) Model 2: The Effect of Geopolitical Conflict (X) on Logistics Efficiency ( $Z_2$ ).**

Formula:  $Z2_t = \alpha_2 + \beta_2 X_t + \epsilon_t$

**Table 5. Model 2 Regression Results**

| Variable                              | Coefficient ( $\beta$ ) | Std. Error | t-statistic | Sig.  |
|---------------------------------------|-------------------------|------------|-------------|-------|
| <i>Constant</i>                       | 3,214                   | 0,072      | 44,639      | 0,000 |
| <b>Geopolitical Conflict (X)/ GPR</b> | -0,0012                 | 0,0004     | -3,100      | 0,006 |

The regression results of Model 2 show that the coefficient of geopolitical conflict is negative ( $\beta = -0.0012$ ; Std. Error = 0.0004), which means that increasing geopolitical conflict tends to reduce national logistics efficiency. The t-statistic value of -3.100 with a significance of 0.006 indicates that this effect is negative and statistically significant. Thus, Hypothesis 2 (H2) is accepted, indicating that geopolitical tensions negatively impact Indonesia's logistics performance.

**3) Model 3: Direct Effect of Geopolitical Conflict (X) on International Trade (Y).**

Formula:  $Y_t = \alpha_3 + \beta_3 X_t + \epsilon_t$

**Table 6. Model 3 Regression Results**

| Variable                              | Coefficient ( $\beta$ ) | Std. Error | t-statistic | Sig.  |
|---------------------------------------|-------------------------|------------|-------------|-------|
| <i>Constant</i>                       | 612,45                  | 198,72     | 3,082       | 0,007 |
| <b>Geopolitical Conflict (X)/ GPR</b> | -0,98                   | 0,46       | -2,140      | 0,046 |

The regression results show a coefficient of  $-0.98$  for geopolitical conflict with a standard error of  $0.46$ , indicating that every one-unit increase in the GPR reduces Indonesia's international trade by approximately USD  $0.98$  billion. The t-statistic value of  $-2.140$  and a significance level of  $0.046$  ( $<0.05$ ) indicate that the effect of geopolitical conflict on trade is negative and significant. Therefore, Hypothesis 3 (H3) is accepted in the direct model.

**4) Model 4: Mediation Regression**

Formula:  $Y_t = \alpha_4 + \beta_4 X_t + \beta_5 Z_1 t + \beta_6 Z_2 t + \epsilon_t$

**Table 7. Regression Results of Model 4 (Mediation Regression)**

| Variable                               | Coefficient ( $\beta$ ) | Std. Error | t-statistic | Sig.  |
|--|-------------------------|------------|-------------|-------|
| <i>Constant</i>                        | 421,18                  | 174,56     | 2,413       | 0,028 |
| <b>Geopolitical Conflict (X)/ GPR</b>  | -0,41                   | 0,34       | -1,205      | 0,241 |
| <b>Risk Perception (Z1) /WUI</b>       | -18,30                  | 5,92       | -3,090      | 0,007 |
| <b>Logistics Efficiency (Z2) / LPI</b> | 152,60                  | 48,71      | 3,134       | 0,009 |

The regression results show that once the mediator variables were included, the direct effect of geopolitical conflict on international trade diminished ( $\beta = -0.41$ ;  $p = 0.241$ , insignificant). In contrast, risk perception had a significant negative impact ( $\beta = -18.30$ ; Std. Error =  $5.92$ ;  $p = 0.007$ ), confirming that rising economic uncertainty suppresses trade activity. Meanwhile, logistics efficiency exerted a significant positive influence ( $\beta = 152.60$ ; Std. Error =  $48.71$ ;  $p = 0.009$ ), highlighting its role in sustaining trade performance. The decline and insignificance of the geopolitical conflict coefficient after introducing mediators indicates that its effect operates indirectly through risk perception and logistics efficiency, thereby validating the presence of a mediating mechanism in the relationship between geopolitical conflict and international trade.

**Regression Interpretation Summary**

- Geopolitical conflict → increases perceived risk ( $\beta = 0.012$ ; SE =  $0.003$ ;  $p = 0.001$ )
- Geopolitical conflict → decreases logistics efficiency ( $\beta = -0.0012$ ; SE =  $0.0004$ ;  $p = 0.006$ )
- Geopolitical conflict → suppresses trade (directly) ( $\beta = -0.98$ ; SE =  $0.46$ ;  $p = 0.046$ )
- Perceived risk → suppresses trade ( $\beta = -18.30$ ; SE =  $5.92$ ;  $p = 0.007$ )
- Logistics efficiency → increases trade ( $\beta = 152.60$ ; SE =  $48.71$ ;  $p = 0.009$ )

**Mediation Test.**

A mediation test is a statistical method used to examine whether the effect of an independent variable (X) on a dependent variable (Y) is transmitted through a mediator (Z). In this study, the mediation model was applied to analyze whether Risk Perception ( $Z_1$ ) and Logistics Efficiency ( $Z_2$ ) act as mediating variables in the relationship between Geopolitical Conflict (X) and Indonesia's International Trade (Y). This approach not only identifies whether geopolitical conflict influences trade directly, but also explains the mechanism through which the effect occurs, namely by increasing economic uncertainty and reducing logistics efficiency. By testing both the direct and indirect effects, the mediation analysis provides deeper insight into the causal pathways, showing that the impact of

geopolitical conflict on trade performance operates primarily through these mediating channels rather than as a direct influence.

**1. Baron & Kenny's Mediation Test (1986)**

The mediation test, following Baron & Kenny's (1986) framework, demonstrates that geopolitical conflict initially exerts a negative and significant effect on international trade (Model 3). Yet, once the mediating variables Risk Perception ( $Z_1$ ) and Logistics Efficiency ( $Z_2$ ) are introduced (Model 4), the direct effect becomes insignificant ( $\beta = -0.41$ ;  $p = 0.241$ ), indicating that the conflict's impact is transmitted indirectly. Specifically, Risk Perception (WUI) shows a significant negative influence ( $\beta = -18.30$ ;  $p = 0.007$ ), underscoring how heightened uncertainty suppresses trade, while Logistics Efficiency (LPI) has a significant positive effect ( $\beta = 152.60$ ;  $p = 0.009$ ), emphasizing the importance of logistics in sustaining trade performance. The decline and loss of significance in the direct coefficient confirm that the South China Sea conflict affects Indonesia's trade through increased uncertainty and weakened logistics systems. In line with Baron & Kenny's criteria, these results provide clear evidence of full mediation, as the direct effect disappears once the mediators are accounted for. In addition to the Baron & Kenny (1986) approach, this study applied the Sobel Test to examine the significance of the indirect effect of geopolitical conflict on international trade through the mediating variables Risk Perception ( $Z_1$ ) and Logistics Efficiency ( $Z_2$ ). The Sobel Test determines whether the mediation path  $X \rightarrow Z \rightarrow Y$  is statistically significant, using the formula  $Z = \frac{a \cdot b}{\sqrt{(b^2 \cdot SE_a^2) + (a^2 \cdot SE_b^2)}}$  here  $a$  is the regression coefficient of  $X \rightarrow Z$ ,  $b$  is the regression coefficient  $Z$  of  $Z \rightarrow Y$ , and  $SE_a$  and  $SE_b$  are their respective standard errors. The criterion for significance is  $|Z| > 1,96$   $\alpha = 0.05$ . For the mediation of Risk Perception ( $Z_1$ ), the parameters used were  $a = 0.012$  ( $SE_a = 0.003$ ) and  $b = -18.30$  ( $SE_b = 5.92$ ), and the Sobel calculation confirmed that the indirect effect was statistically significant, thereby supporting the role of Risk Perception as a mediator in the relationship between geopolitical conflict and international trade.

1. Sobel Test for Risk Perception Mediation ( $Z_1$ )

The parameters used were:  $a (X \rightarrow Z_1) = 0.012$ ,  $SE_a = 0.003$ ,  $b(Z_1 \rightarrow Y) = -18.30$ ,  $SE_b = 5.92$ . Sobel Calculation

$$Z = \frac{0,012 \times (-18,30)}{\sqrt{((-18,30)^2 \times 0,003^2) + (0,012^2 \times 5,92^2)}} = \frac{-0,2196}{\sqrt{(334,89 \times 0,000009) + (0,000144 \times 35,05)}} = \frac{-0,2196}{\sqrt{0,003014 + 0,005047}} = \frac{-0,2196}{\sqrt{0,008061}} = \frac{-0,2196}{0,0898} = -2,45$$

The results of the Sobel  $Z_1$  test are  $Z = 2.45 > 1.96$  and  $p < 0.05$  (significant). Risk Perception ( $Z_1$ ) significantly mediates the effect of geopolitical conflict on international trade. Thus, Hypothesis 6 (H6) is accepted.

2. Sobel Test for Logistics Efficiency Mediation ( $Z_2$ )

The parameters used are  $a(X \rightarrow Z_2) = -0.0012$ ,  $SE_a = 0.0004$ ,  $b(Z_2 \rightarrow Y) = 152.60$ ,  $SE_b = 48.71$ . The Sobel calculation is as follows:

$$Z = \frac{-0,1831}{\sqrt{(23287 \times 0,00000016) + (0,00000144 \times 2372)}} = \frac{-0,1831}{\sqrt{0,00373 + 0,00342}} = \frac{-0,1831}{\sqrt{0,00715}} = \frac{-0,1831}{0,0846} = -2,16$$

The results of the Sobel  $Z_2$  test are  $|Z| = 2.16 > 1.96$ , with a  $p$ -value  $< 0.05$  (significant mediation). In this test, Logistics Efficiency ( $Z_2$ ) significantly mediates the effect of geopolitical conflict on international trade. Therefore, Hypothesis 7 (H7) is accepted.

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The Sobel test results confirm that both Risk Perception ( $Z_1$ ) and Logistics Efficiency ( $Z_2$ ) significantly mediate the relationship between South China Sea geopolitical conflict and Indonesia's international trade, as indicated by Sobel statistic values exceeding the critical threshold ( $|Z| > 1.96$ ). This means the indirect effect of geopolitical conflict on trade through these mediators is statistically significant. These findings strengthen the results of the Baron & Kenny mediation test, which showed that the direct effect of geopolitical conflict on trade becomes insignificant once the mediators are included. In essence, geopolitical conflict does not directly suppress Indonesia's international trade, but instead operates through a risk transmission mechanism raising economic uncertainty and reducing logistics efficiency. Together, these outcomes demonstrate the presence of full mediation, highlighting the crucial role of risk perception and logistics efficiency in explaining how geopolitical tensions impact trade performance.

**Hypothesis Testing**

Hypothesis testing using quarterly data (2020Q1–2024Q4,  $n = 20$ ) applied t-statistics and p-values, with acceptance criteria  $t > 1.96$  and  $p < 0.05$ . The tests examined the effects of geopolitical conflict on risk perception, logistics efficiency, and international trade, as well as the impacts of risk perception and logistics efficiency on trade. Overall, the results confirmed that all proposed relationships were statistically significant, supporting the study's hypotheses.

**Table 8. Regression Hypothesis Test**

| Code | Hypothesis  | Variable Relationships                        | Coefficient ( $\beta$ )                       | Std. Error | t-statistic      | p-value | Decision |
|------|---|---|---|------------|------------------|---------|----------|
| H1   | Geopolitical conflict has a positive effect on risk perception                              | $X \rightarrow Z_1$ (GPR $\rightarrow$ WUI)   | 0,012   | 0,003      | 4,210            | 0,001   | Accepted |
| H2   | Geopolitical conflicts have a negative impact on logistics efficiency                       | $X \rightarrow Z_2$ (GPR $\rightarrow$ LPI)   | -0,0012                                       | 0,0004     | -3,100           | 0,006   | Accepted |
| H3   | Geopolitical conflicts have an impact on Indonesia's international trade.                   | $X \rightarrow Y$ (GPR $\rightarrow$ Trade)   | -0,98   | 0,46       | -2,140           | 0,046   | Accepted |
| H4   | Risk perception has a negative impact on international trade                                | $Z_1 \rightarrow Y$ (WUI $\rightarrow$ Trade) | -18,30  | 5,92       | -3,090           | 0,007   | Accepted |
| H5   | Logistics efficiency has a positive impact on international trade                           | $Z_2 \rightarrow Y$ (LPI $\rightarrow$ Trade) | 152,60  | 48,71      | 3,134            | 0,009   | Accepted |
| H6   | Risk perception mediates the influence of geopolitical conflict on international trade      | $X \rightarrow Z_1 \rightarrow Y$             | $X \rightarrow Y$ not significant after $Z_1$ | -          | Sobel $Z = 2,45$ | $<0,05$ | Accepted |
| H7   | Logistics efficiency mediates the influence of geopolitical conflict on international trade | $X \rightarrow Z_2 \rightarrow Y$             | $X \rightarrow Y$ not significant after $Z_2$ | -          | Sobel $Z = 2,16$ | $<0,05$ | Accepted |

*Source: SPSS Data Processing Results, 2025*

All hypotheses (H1–H7) were accepted, showing that the South China Sea geopolitical conflict significantly increases risk perception and reduces logistics efficiency, while also negatively affecting international trade both directly and indirectly. Risk perception suppresses trade, whereas logistics efficiency enhances it. Mediation tests further reveal that the direct effect of geopolitical conflict on trade becomes insignificant once risk perception and

logistics efficiency are included, confirming that the conflict's impact operates through these mediators. Thus, H6 and H7 are supported, highlighting the crucial role of mediating variables in explaining the link between geopolitical conflict and Indonesia's international trade.

**Proof of the First Hypothesis (H1): The Effect of Geopolitical Conflict (X) on Risk Perception (Z<sub>1</sub>).**

Model 1 shows that geopolitical conflict significantly increases risk perception, with  $\beta = 0.012$ ,  $t = 4.210$ , and  $p = 0.001$  ( $<0.05$ ). This means each one-unit rise in the Geopolitical Risk Index raises Indonesia's World Uncertainty Index by 0.012 points. Thus, H1 is accepted, confirming that escalating South China Sea tensions directly heighten national economic uncertainty.

**Proof of the Second Hypothesis (H2): The Effect of Geopolitical Conflict (X) on Logistics Efficiency (Z<sub>2</sub>).**

The regression results of Model 2 indicate that geopolitical conflict has a negative and significant effect on logistics efficiency. The regression coefficient is  $\beta = -0.0012$ , with a t-statistic of  $-3.100$  and a p-value of  $0.006$  ( $<0.05$ ). A t-statistic of less than  $-1.96$  and a p-value of less than  $0.05$  indicate that the effect is statistically significant. This means that increasing geopolitical conflict tends to decrease national logistics efficiency. Thus, Hypothesis 2 (H2) is accepted.

**Proof of the Third Hypothesis (H3): The Effect of Geopolitical Conflict (X) on Indonesia's International Trade (Y).**

The regression results of Model 3 indicate that geopolitical conflict has a negative and significant effect on Indonesia's international trade. The regression coefficient is  $\beta = -0.98$ , with a t-statistic of  $-2.140$  and a p-value of  $0.046$  ( $<0.05$ ). Statistically, these results indicate that increasing geopolitical conflict has a negative impact on Indonesia's international trade in the direct model. Therefore, Hypothesis 3 (H3) is accepted in the direct effect test. However, this result is tentative because the direct effect is no longer significant in the mediation model.

**Proof of the Fourth Hypothesis (H4): The Effect of Risk Perception (Z<sub>1</sub>) on International Trade (Y).**

The regression results of Model 4 indicate that risk perception has a negative and significant effect on international trade. The regression coefficient is  $\beta = -18.30$ , with a t-statistic of  $-3.090$  and a p-value of  $0.007$  ( $<0.05$ ). This means that increasing national economic uncertainty tends to suppress Indonesia's international trade activity. Thus, Hypothesis 4 (H4) is accepted.

**Proof of the Fifth Hypothesis (H5): The Effect of Logistics Efficiency (Z<sub>2</sub>) on International Trade (Y).**

The regression results of Model 4 indicate that logistics efficiency has a positive and significant effect on international trade. The regression coefficient is  $\beta = 152.60$ , with a t-statistic of  $3.134$  and a p-value of  $0.009$  ( $<0.05$ ). These results indicate that improving the performance and efficiency of the national logistics system contributes to increasing the value of Indonesia's international trade. Therefore, Hypothesis 5 (H5) is accepted.

**Proof of the Sixth Hypothesis (H6): The Mediating Role of Risk Perception (Z<sub>1</sub>).**

Based on the regression results of Models 3 and 4, the previously significant direct effect of geopolitical conflict on international trade ( $p = 0.046$ ) became insignificant after the risk perception variable was included in the model ( $p = 0.241$ ). Meanwhile, the paths from geopolitical conflict  $\rightarrow$  risk perception and risk perception  $\rightarrow$  international trade proved significant. Furthermore, the Sobel test showed a Z value of  $-2.45 > 1.96$ , indicating a statistically significant indirect effect. Thus, Hypothesis 6 (H6) was accepted, and Risk Perception (Z<sub>1</sub>) was proven to mediate the effect of geopolitical conflict on international trade.

**Proof of the Seventh Hypothesis (H7): The Mediating Role of Logistics Efficiency (Z<sub>2</sub>).**

The regression results indicate that geopolitical conflict significantly influences logistics efficiency, and logistics efficiency significantly influences international trade. When the logistics efficiency variable is included in the model, the direct effect of geopolitical conflict on trade becomes insignificant. The Sobel test results show a value of  $|Z| = 2.16 > 1.96$ , indicating that the mediation path is statistically significant. Thus, Hypothesis 7 (H7) is accepted, and Logistics Efficiency (Z<sub>2</sub>) is proven to mediate the effect of geopolitical conflict on international trade.

## CONCLUSION

This study found that the South China Sea geopolitical conflict significantly increased risk perception and decreased Indonesia's logistics efficiency. Regression showed a negative effect of the conflict on international trade, but after including the variables of risk perception (WUI) and logistics efficiency (LPI), the direct effect became insignificant. The Baron & Kenny and Sobel mediation tests confirmed that the relationship was fully mediated, with the impact of the conflict transmitted through increased risk and decreased logistics efficiency. Therefore, geopolitical stability, managing economic uncertainty, and improving logistics efficiency are key factors in maintaining Indonesia's international trade performance.

## RECOMMENDATIONS

Based on the limitations and scope of this research, several recommendations can be made as follows.

1. Recommendations for Academics and Further Researchers

Further research is recommended to use a longer observation period or higher data frequency to increase the statistical power of the analysis. Furthermore, future researchers can add other relevant variables, such as exchange rate volatility, maritime insurance costs, or a domestic political stability index, to deepen their understanding of the transmission mechanisms of geopolitical risk to trade. Other methodological approaches, such as Vector Autoregression (VAR) or a cross-country panel model for ASEAN, can also be used to gain a more comprehensive perspective.

2. Recommendations for the Government and Policymakers

The government is advised to make logistics efficiency and geopolitical risk management an integral part of the national trade strategy. Policies to improve logistics efficiency are not only crucial for enhancing trade competitiveness but also serve as an instrument to mitigate the impact of geopolitical conflict. Furthermore, strengthening inter-agency coordination, enhancing regional cooperation, and proactive maritime diplomacy need to be continuously developed to maintain the stability and sustainability of Indonesia's international trade amidst the region's geopolitical dynamics.

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