

# DETERMINANTS OF INDONESIA'S EXPORT PERFORMANCE: THE ROLE OF THE GENERALIZED SYSTEM OF PREFERENCES (GSP), GROSS DOMESTIC PRODUCT, AND EXPORT COMPETITIVENESS

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**Abstract.** The decline in the effectiveness of the Generalized System of Preferences (GSP) tariff preference scheme and the dynamics of export product competitiveness raise questions about the factors that influence Indonesia's export performance. This study aims to analyze the influence of GSP tariff preferences, Gross Domestic Product (GDP), and export competitiveness as measured by the Revealed Comparative Advantage (RCA) index on Indonesia's Crude Palm Oil (CPO, HS 1511.10) export performance to India during the 2010–2024 period. The study uses a quantitative associative-causal approach with the Moderated Regression Analysis (MRA) method based on secondary data obtained from UNCTAD, the World Bank, and the ITC Trade Map. The results show that GSP tariff preferences have no significant effect on export performance, while GDP and RCA have a positive and significant effect. Simultaneously, the three variables are able to explain 72.1% of the variation in export performance. In addition, RCA does not moderate the relationship between GSP and export performance, but significantly strengthens the influence of GDP on export performance. These findings indicate that Indonesia's improved export performance is more determined by strengthening economic capacity and product competitiveness than by solely utilizing preferential trade facilities. The research's implications emphasize the importance of enhancing industrial competitiveness and refining export policy strategies.

**Keywords:** Export Performance, Generalized System of Preferences (GSP), Gross Domestic Product (GDP), Revealed Comparative Advantage (RCA), Moderated Regression Analysis (MRA), Crude Palm Oil.

**Abstrak.** Penurunan efektivitas skema preferensi tarif *Generalized System of Preferences* (GSP) serta dinamika daya saing produk ekspor menimbulkan pertanyaan mengenai faktor-faktor yang memengaruhi kinerja ekspor Indonesia. Penelitian ini bertujuan menganalisis pengaruh preferensi tarif GSP, Produk Domestik Bruto (PDB), dan daya saing ekspor yang diukur menggunakan indeks *Revealed Comparative Advantage* (RCA) terhadap kinerja ekspor *Crude Palm Oil* (CPO, HS 1511.10) Indonesia ke India selama periode 2010–2024. Penelitian menggunakan pendekatan kuantitatif asosiatif-kausal dengan metode *Moderated Regression Analysis* (MRA) berdasarkan data sekunder yang diperoleh dari UNCTAD, Bank Dunia, dan *ITC Trade Map*. Hasil penelitian menunjukkan bahwa preferensi tarif GSP tidak berpengaruh signifikan terhadap kinerja ekspor, sedangkan PDB dan RCA berpengaruh positif dan signifikan. Secara simultan, ketiga variabel mampu menjelaskan 72,1% variasi kinerja ekspor. Selain itu, RCA tidak memoderasi hubungan antara GSP dan kinerja ekspor, tetapi secara signifikan memperkuat pengaruh PDB terhadap kinerja ekspor. Temuan ini menunjukkan bahwa peningkatan kinerja ekspor Indonesia lebih ditentukan oleh penguatan kapasitas ekonomi dan daya saing produk dibandingkan pemanfaatan fasilitas perdagangan preferensial semata. Implikasi penelitian menekankan pentingnya peningkatan daya saing industri dan penyempurnaan strategi kebijakan ekspor.

**Kata Kunci:** Kinerja Ekspor, Generalized System of Preferences (GSP), Produk Domestik Bruto (PDB), Revealed Comparative Advantage (RCA), Moderated Regression Analysis (MRA), Minyak Kelapa Sawit Mentah.

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## INTRODUCTION

International trade is one of the main pillars of the global economic system, enabling the exchange of goods and services between countries. Through international trade, countries can leverage their comparative advantages, improve production efficiency, and expand access to global markets and resources (Salvatore, 2020). In an increasingly integrated modern economy, international trade serves not only as a means of economic exchange but also as a vital instrument in driving economic growth, improving welfare, and fostering economic integration among nations (Krugman et al., 2018). International trade plays a highly strategic role in driving a country's economic growth, particularly for developing nations such as Indonesia. Through export activities, a country can generate foreign exchange earnings, expand markets for domestic products, increase production capacity, and strengthen economic resilience. Export performance is closely associated with national economic development because international market access encourages industrial growth and contributes to macroeconomic stability (World Bank, 2024).

Indonesia's macroeconomic trajectory from 2018 to 2024 has been characterized by significant fluctuations due to global economic uncertainty, the COVID-19 pandemic, and commodity market dynamics. Following the economic slowdown during the pandemic period, Indonesia experienced recovery supported by increasing commodity demand and industrial downstreaming policies. These policies have encouraged structural transformation from dependence on raw commodity exports toward higher value-added products, particularly in strategic sectors such as mineral processing and agricultural commodities (OECD, 2024).

In response to trade challenges, Indonesia has utilized various international trade policies, including the *Generalized System of Preferences (GSP)*. As a unilateral trade preference scheme, *GSP* provides tariff reductions or exemptions granted by developed countries to developing countries to improve market access and encourage export growth (United Nations Conference on Trade and Development [UNCTAD], 2024). However, the effectiveness of *GSP* remains debated because preferential tariffs do not always translate directly into higher export performance. The utilization of trade preferences can be affected by administrative requirements, compliance costs, and exporters' ability to fulfill *rules of origin* requirements (UNCTAD, 2024). Indonesia's declining *GSP* utilization rate indicates that the availability of preferential access alone may not be sufficient to enhance export performance.

Alongside trade policy, domestic economic capacity and export competitiveness are critical determinants of international trade performance. Indonesia's *Crude Palm Oil (CPO, HS 1511.10)* represents one of the country's leading export commodities with strong

competitiveness in the global market. Previous studies have demonstrated that Indonesian CPO maintains a high comparative advantage based on the *Revealed Comparative Advantage (RCA)* index. Yanita et al. (2020) found that Indonesian CPO competitiveness is influenced by production capacity, international market conditions, and supporting economic factors. Similarly, Ramadhani and Santoso (2019) confirmed that Indonesian palm oil exports possess strong competitiveness compared with other major exporting countries.

Previous studies have examined export competitiveness and its determinants from different perspectives. Ramadhani and Santoso (2019) analyzed Indonesian palm oil competitiveness using *RCA*, *Revealed Symmetric Comparative Advantage (RSCA)*, and *Constant Market Share (CMS)* approaches, but the study focused primarily on competitiveness measurement without incorporating trade preferences and macroeconomic variables. Yanita et al. (2020) examined factors affecting CPO competitiveness but did not evaluate whether competitiveness strengthens the effect of economic variables on export performance. Rifin et al. (2019) investigated the impact of export taxation policies on palm oil competitiveness, yet the analysis did not integrate domestic economic capacity indicators such as GDP. More recent research by Anggit et al. (2025) confirmed the continued competitiveness of Indonesian CPO exports but primarily emphasized market competitiveness rather than the interaction between trade policies, economic conditions, and export outcomes.

Based on previous studies, several research gaps can be identified. First, most existing research analyzes trade preferences, GDP, and export competitiveness separately rather than within an integrated econometric framework. Second, limited studies examine how unilateral trade preferences interact with domestic economic capacity and commodity-specific competitiveness simultaneously. Third, export competitiveness is generally positioned as an independent explanatory variable, while its potential role as a moderating variable that strengthens the relationship between trade policy, economic conditions, and export performance remains underexplored.

Therefore, the novelty of this study lies in developing an integrated model that examines the influence of *GSP*, GDP, and export competitiveness simultaneously while positioning *Revealed Comparative Advantage (RCA)* as a moderating variable. This approach provides a deeper understanding of whether strong commodity competitiveness can enhance the effectiveness of trade preferences and domestic economic capacity in improving export performance. Using Indonesian CPO exports (HS 1511.10) to India during 2010–2024 as the research context, this study contributes empirical evidence regarding the interaction between trade policy, economic conditions, and commodity competitiveness.

This study therefore aims to: (1) determine the individual effects of *GSP*, *GDP*, and export competitiveness on Indonesia's export performance; (2) test whether export competitiveness moderates the relationship between *GSP* and export performance as well as between *GDP* and export performance; and (3) examine the simultaneous effect of these variables on export performance. The findings are expected to provide theoretical contributions to international trade literature and practical implications for Indonesian trade policymakers.

## METHOD

This study employs a quantitative associative-causal research design. According to Sugiyono (2019), quantitative research is grounded in the positivist paradigm and aims to examine hypotheses through the analysis of numerical data using statistical procedures. The associative-causal approach is applied to investigate the relationships among variables and to examine both direct effects and moderating effects among the variables studied. This study utilizes secondary data obtained from reliable international databases. The Generalized System of Preferences (*GSP*) utilization rate for Indonesia was obtained from the UNCTAD *GSP* Hub database, Indonesia's Gross Domestic Product (*GDP*) at current prices and export performance data were collected from the World Bank database, while bilateral export data of Indonesian Crude Palm Oil (*CPO*, HS 1511.10) to India were obtained from ITC Trade Map to calculate the Revealed Comparative Advantage (*RCA*) index. The observation period covers 2010–2024, resulting in 15 annual observations. This period was selected because it represents a significant phase in Indonesia's trade development, covering structural changes in export composition, fluctuations in global economic conditions, the impact of the COVID-19 pandemic, and the subsequent economic recovery period. In addition, this period captures the dynamics of Indonesia's utilization of *GSP* preferences and the strengthening of export competitiveness in strategic commodities, particularly *CPO*.

Although the number of observations ( $N = 15$ ) is relatively limited compared with the general recommendation for large-sample statistical analysis, this study remains methodologically acceptable for time-series analysis with a limited observation period. Ghazali (2018) explains that the reliability of regression analysis depends not only on sample size but also on the fulfillment of classical assumption tests. Therefore, before conducting hypothesis testing, this study performs classical assumption tests to ensure that the regression model meets the required statistical criteria.

## Variables and Measurements

**Table 1.** Research variables and data sources

| Variable                   | Role        | Operational Definition                                                                                                                                                                                | Indicator                                                                            | Source         |
|----------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------|
| Export Performance (Y)     | Dependent   | The ability of Indonesia to generate export value through international trade activities, reflecting the country's performance in accessing and expanding global markets.                             | Export of Goods and Services (billion USD)                                           | World Bank     |
| GSP Tariff Preference (X1) | Independent | The extent to which Indonesia utilizes tariff preference facilities provided by preference-giving countries under the <i>Generalized System of Preferences</i> (GSP) scheme to improve market access. | GSP Utilization Rate (%) – All Preference-Giving Countries (PGC)                     | UNCTAD GSP Hub |
| GDP (X2)                   | Independent | The total monetary value of goods and services produced within Indonesia's economy, representing domestic economic capacity and production capability that may influence export performance.          | GDP at Current Prices (billion USD)                                                  | World Bank     |
| Competitiveness (Z)        | Moderating  | The comparative advantage level of Indonesian CPO exports in the international market, indicating the relative competitiveness of CPO compared with other exporting countries.                        | <i>Revealed Comparative Advantage</i> (RCA) Index of CPO HS 1511.10 exports to India | ITC Trade Map  |

## Analytical Methods

### *Classical Assumption Tests*

Prior to regression analysis, four classical assumption tests were conducted using SPSS 27.0: (1) Normality Test—using the one-sample Kolmogorov-Smirnov (K-S) test; a significance level  $> 0.05$  confirms normality. (2) Multicollinearity Test—using Tolerance and Variance Inflation Factor (VIF); Tolerance  $> 0.10$  and VIF  $< 10$  indicate absence of multicollinearity. (3) Heteroscedasticity Test—using a scatterplot of standardized predicted values (ZPRED) against studentized residuals (SRESID); no systematic pattern indicates homoscedasticity. (4) Autocorrelation Test—using the Runs Test; Asymp. Sig.  $> 0.05$  indicates no autocorrelation.

### *Moderated Regression Analysis (MRA)*

Moderated Regression Analysis (MRA) was employed to test whether export competitiveness (Z) moderates the relationship between the independent variables (X1, X2) and export performance (Y). Following Baron & Kenny (1986) and Ghazali (2021), two interaction terms were constructed: X1·Z (GSP × Competitiveness) and X2·Z (GDP × Competitiveness). The MRA model is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 (X_1 Z) + \beta_5 (X_2 Z) + \varepsilon$$

A significant  $\beta_4$  or  $\beta_5$  coefficient confirms the moderating role of Z. A positive coefficient indicates that Z strengthens the relationship, while a negative coefficient indicates that Z weakens it.

### *RCA Calculation*

The RCA index was computed using the Balassa (1965) formula:

$$RCA = (X_{ij} / X_{it}) / (X_{nj} / X_{nt})$$

Where: X<sub>ij</sub> = value of Indonesia's CPO exports to India; X<sub>it</sub> = total value of all Indonesia's exports to the world; X<sub>nj</sub> = total global CPO exports to India; X<sub>nt</sub> = total value of all global exports. An RCA > 1 confirms Indonesia's comparative advantage in CPO

## **RESULTS**

### **Descriptive Statistics**

**Table 2.** Descriptive Statistics

| Variable                                | Minimum | Maximum  | Mean     | Std. Deviation |
|-----------------------------------------|---------|----------|----------|----------------|
| GSP Tariff Preference (X <sub>1</sub> ) | 19.66   | 36.74    | 29.94    | 5.78           |
| GDP in Billion USD (X <sub>2</sub> )    | 755.09  | 1,400.00 | 1,045.33 | 213.48         |
| Competitiveness / RCA (Z)               | 45.32   | 78.65    | 60.90    | 11.57          |
| Export Performance in Bil. USD (Y)      | 166.64  | 315.75   | 224.08   | 52.98          |
| <b>Valid N (listwise) = 15</b>          |         |          |          |                |

The GSP Utilization Rate ranges between 19.66% and 36.74% with a mean of 29.94%, reflecting a declining trend over the observation period. Indonesia's GDP ranges from 755.09 billion to 1,400 billion USD, with a standard deviation of 213.48 billion, indicating substantial economic growth over 2010–2024. The RCA index for CPO ranges from 45.32 to 78.65, with all values far exceeding the threshold of 1, confirming consistently strong comparative advantage. Export performance ranges from 166.64 to 315.75 billion USD, reflecting the overall expansion of Indonesia's trade.

### RCA Index Results (2010–2024)

**Table 3.** RCA Calculation for Indonesia's CPO (HS 1511.10) Exports to India | Source: ITC Trade Map, processed (2026)

| Year | X <sub>ij</sub> (USD 000) | X <sub>it</sub> (USD 000) | X <sub>nj</sub> (USD 000) | X <sub>nt</sub> (USD 000) | RCA   |
|------|---------------------------|---------------------------|---------------------------|---------------------------|-------|
| 2010 | 3,629,076                 | 157,779,103               | 7,649,966                 | 15,101,101,585            | 45.40 |
| 2011 | 4,465,022                 | 203,496,619               | 8,777,016                 | 18,128,011,327            | 45.32 |
| 2012 | 3,308,546                 | 190,031,839               | 6,676,504                 | 18,398,479,074            | 47.98 |
| 2013 | 2,331,772                 | 182,551,754               | 4,978,533                 | 18,856,400,725            | 48.38 |
| 2014 | 2,101,736                 | 176,036,194               | 4,206,741                 | 18,828,143,951            | 53.44 |
| 2015 | 2,112,621                 | 150,282,258               | 4,388,094                 | 16,408,751,454            | 52.57 |
| 2016 | 1,868,494                 | 144,494,206               | 3,305,575                 | 15,923,124,139            | 62.29 |
| 2017 | 3,068,293                 | 168,810,637               | 4,698,225                 | 17,558,522,192            | 67.93 |
| 2018 | 2,174,876                 | 180,215,036               | 3,576,825                 | 19,319,688,288            | 65.18 |
| 2019 | 1,943,963                 | 167,682,996               | 3,641,687                 | 18,762,316,694            | 59.73 |
| 2020 | 2,870,996                 | 163,306,490               | 4,743,567                 | 17,494,281,875            | 64.84 |
| 2021 | 2,078,939                 | 231,587,887               | 2,737,923                 | 22,147,064,464            | 72.61 |
| 2022 | 2,851,528                 | 291,979,103               | 3,410,127                 | 24,686,362,569            | 70.70 |
| 2023 | 2,630,255                 | 258,797,196               | 3,055,134                 | 23,641,647,000            | 78.65 |
| 2024 | 2,352,862                 | 264,703,354               | 2,710,402                 | 23,926,424,736            | 78.47 |

Throughout the 2010–2024 observation period, Indonesia's CPO RCA index consistently remained well above 1, empirically confirming a very strong comparative advantage in the international market. The RCA index increased from 45.40 in 2010 to a peak of 78.65 in 2023, before slightly declining to 78.47 in 2024. In the RCA interpretation, a value greater than 1 indicates that a commodity has a comparative advantage, while a value substantially above 1 reflects a higher level of export specialization and competitiveness compared with the global average. Therefore, Indonesia's RCA values, which remained above 45 throughout the period, indicate that CPO is a highly competitive strategic export commodity with a strong position in international trade. The most significant increase occurred during 2020–2021, when the index rose from 64.84 to 72.61, driven by post-pandemic demand recovery and disruptions in the supply of alternative vegetable oils due to global geopolitical conflicts (Tambunan, 2021). The sustained high RCA value until 2024 reflects Indonesia's strong production capacity, established palm oil industry structure, and production efficiency, although it also indicates a high level of export dependence on palm oil as a primary commodity.

### Classical Assumption Test Results

All four classical assumptions were satisfied:

- Normality: Kolmogorov-Smirnov Asymp. Sig. = 0.200 > 0.05, confirming normal distribution.

- Multicollinearity: All VIF values < 10 (GSP: VIF = 1.263; GDP: VIF = 1.601; Competitiveness: VIF = 1.303) and all Tolerance values > 0.10, indicating no multicollinearity.
- Heteroscedasticity: The scatterplot of ZPRED vs. SRESID shows no systematic pattern, confirming homoscedasticity.
- Autocorrelation: Runs Test Asymp. Sig. = 0.789 > 0.05, confirming no autocorrelation among residuals.

**Table 4.** Multiple linear regression results

| Variable                                                                          | B       | t-value | Sig.   | Result                                            |
|-----------------------------------------------------------------------------------|---------|---------|--------|---------------------------------------------------|
| Constant                                                                          | -25.873 | -0.001  | 0.999  | —                                                 |
| GSP Tariff Preference (X <sub>1</sub> )                                           | -14.199 | -0.351  | 0.732  | H <sub>1</sub> Rejected (H <sub>0</sub> Accepted) |
| GDP (X <sub>2</sub> )                                                             | 0.031   | 2.583   | 0.026* | H <sub>2</sub> Accepted                           |
| Competitiveness / RCA (Z)                                                         | 5.477   | 2.693   | 0.021* | H <sub>3</sub> Accepted                           |
| R <sup>2</sup> = 0.721   Adj. R <sup>2</sup> = 0.649   F = 10.024   Sig. = 0.002* |         |         |        | H <sub>6</sub> Accepted                           |
| <b>t-table = 2.201 (df = 11, α = 0.05, two-tailed)</b>                            |         |         |        |                                                   |

\*significant at p < 0.05. Table 4. Multiple Linear Regression Results | Source: SPSS (2026)

The regression equation derived from these results is:

$$Y = -25.873 - 14.199X_1 + 0.031X_2 + 5.477Z$$

The constant of -25.873 is mathematical in nature and cannot be directly interpreted economically. The negative coefficient for X<sub>1</sub> (-14.199) indicates an inverse relationship between GSP Tariff Preference and Export Performance, which is not statistically significant. The positive coefficient for X<sub>2</sub> (0.031) indicates that each billion USD increase in GDP raises export performance by 0.031 billion USD. The positive coefficient for Z (5.477) indicates that each unit increase in the RCA index raises export performance by 5.477 billion USD.

**Table 5.** Moderated Regression Analysis (MRA) Results

| Variable                                                 | B       | t-value | Sig.   | Result                                        |
|----------------------------------------------------------|---------|---------|--------|-----------------------------------------------|
| Constant                                                 | -31.540 | 0.001   | 0.999  | —                                             |
| GSP Tariff Preference (X <sub>1</sub> )                  | -15.003 | -0.351  | 0.734  | —                                             |
| GDP (X <sub>2</sub> )                                    | 0.029   | 2.583   | 0.069  | —                                             |
| Competitiveness / RCA (Z)                                | 5.312   | 2.693   | 0.554  | —                                             |
| X <sub>1</sub> ·Z (GSP × Competitiveness)                | -0.088  | -0.407  | 0.693  | H <sub>4</sub> Rejected — No moderation       |
| X <sub>2</sub> ·Z (GDP × Competitiveness)                | 0.004   | 2.381   | 0.044* | H <sub>5</sub> Accepted — Positive moderation |
| <b>R<sup>2</sup> = 0.740   F = 5.120   Sig. = 0.017*</b> |         |         |        |                                               |
| <b>t-table = 2.262 (df = 9, α = 0.05, two-tailed)</b>    |         |         |        |                                               |

\*significant at p < 0.05. Table 5. Moderated Regression Analysis Results | Source: SPSS (2026)

## DISCUSSION

### Effect of GSP Tariff Preferences on Export Performance

The findings indicate that GSP tariff preferences do not significantly contribute to Indonesia's export performance during the observation period. This result suggests that the availability of preferential tariff access alone is insufficient to guarantee higher export outcomes, as exporters must also consider the practical costs associated with utilizing such facilities. This phenomenon can be explained through Transaction Cost Theory (Williamson, 1985), which emphasizes that economic decisions are influenced not only by potential benefits but also by the costs required to obtain those benefits. In the context of GSP utilization, administrative procedures, documentation requirements, and compliance with rules of origin may reduce the attractiveness of preferential schemes when the associated costs exceed the tariff advantages obtained.

This interpretation is consistent with UNCTAD (2024), which highlights that declining utilization of trade preferences among developing countries is often related to procedural complexity and limited capacity to comply with preference requirements. Cipollina and Salvatici (2020) also found that non-tariff barriers and administrative constraints remain important factors limiting the effectiveness of preferential trade agreements. Similarly, Hakobyan (2015) demonstrated that a significant proportion of eligible exports do not utilize GSP facilities due to difficulties in meeting administrative requirements. Therefore, the effectiveness of GSP as an export promotion instrument depends not only on tariff reductions but also on the accessibility and simplicity of its implementation mechanisms.

### Effect of GDP on Export Performance

The findings demonstrate that domestic economic capacity plays an important role in supporting Indonesia's export performance. Economic growth provides greater production capacity, improves industrial capability, and strengthens the ability of domestic producers to participate in international markets. This finding is consistent with the Gravity Model of Trade (Tinbergen, 1962), which explains that economic size influences trade flows because countries with stronger economic capacity generally possess greater production potential and market connectivity. From a macroeconomic perspective, GDP represents the productive capacity of an economy and its ability to generate exportable goods and services. Growth in domestic economic activity can stimulate industrial expansion, improve infrastructure capacity, and encourage firms to increase production for international markets. This interpretation is supported by Sjafrizal (2022), who emphasizes that economic growth strengthens structural

capacity and supports industrial competitiveness. Previous empirical studies by Anggraini et al. (2023) and Andriantoni et al. (2020) also confirm that improvements in domestic economic conditions are associated with stronger export performance, highlighting the importance of internal economic capacity in sustaining international trade activities.

### **Effect of Export Competitiveness on Export Performance**

The findings show that export competitiveness is an important determinant of Indonesia's export performance. This indicates that countries with stronger comparative advantages in specific commodities are more capable of maintaining and expanding their position in international markets. The result supports Ricardo's (1817) theory of comparative advantage, which argues that specialization in products with relative production advantages enables countries to achieve greater efficiency and trade benefits.

In the case of Indonesian CPO exports, the consistently high RCA value reflects the strong specialization and competitive position of the commodity in global markets. This advantage is supported by Indonesia's large production capacity, established supply chains, and relatively efficient production structure. Furthermore, Porter's (1990) Diamond Model explains that competitive advantage is not solely determined by natural resources but also by industrial capability, supporting infrastructure, and the ability of firms to adapt to global market conditions. Previous studies by Itamary and Hendrati (2022) and Reyhan and Saputera (2025) reinforce that stronger export competitiveness contributes to improved international trade performance. Tambunan (2021) further emphasizes that a high comparative advantage index reflects the ability of a country to transform resource advantages into actual market performance.

### **Simultaneous Effects of All Three Variables**

The findings indicate that export performance is influenced by the combined interaction of trade policy, domestic economic capacity, and export competitiveness. This suggests that Indonesia's export performance cannot be explained by a single determinant, as trade outcomes are shaped by the interaction between external market access, internal economic strength, and the ability of exported products to compete internationally. This finding supports the argument of Krugman and Obstfeld (2018) that international trade performance is determined by the combination of policy frameworks, economic conditions, and comparative advantages.

Although GSP tariff preferences do not demonstrate a strong individual contribution, their inclusion within the integrated model provides a broader understanding of export performance dynamics. Trade preferences function as supporting instruments whose effectiveness depends on the interaction with domestic production capacity and the competitiveness of exported commodities. As Hastiadi (2021) emphasizes, evaluating trade performance requires a comprehensive approach that considers both policy-based factors and structural economic capabilities. Therefore, improving export outcomes requires not only expanding market access but also strengthening the internal capacity of industries to compete globally.

### **Moderating Effect of Competitiveness on the GSP–Export Performance Relationship**

The findings indicate that export competitiveness does not strengthen the relationship between GSP tariff preferences and export performance. This suggests that competitiveness and tariff preferences operate through different mechanisms. While competitiveness reflects the ability of exported products to compete in international markets, GSP utilization depends heavily on exporters' ability to fulfill administrative requirements, documentation procedures, and rules of origin provisions. This finding is consistent with Transaction Cost Theory, which explains that the benefits of economic incentives may be reduced when the costs of accessing those incentives become relatively high (Williamson, 1985). In the case of GSP, strong product competitiveness alone may not be sufficient if exporters face difficulties in utilizing preferential facilities. Andiani and Gupta (2024) confirm that restrictive rules of origin and administrative complexity remain major barriers affecting GSP utilization. Therefore, improving the effectiveness of trade preferences requires policy interventions that simplify procedures and increase exporters' capacity to access available facilities.

### **Moderating Effect of Competitiveness on the GDP–Export Performance Relationship**

The findings demonstrate that export competitiveness strengthens the relationship between economic growth and export performance. This indicates that GDP growth generates greater export benefits when supported by products that possess strong competitive advantages in international markets. Economic expansion provides production capacity and industrial resources, but these advantages need to be transformed into internationally competitive products to create sustainable export growth. This result supports the perspective of comparative advantage theory (Ricardo, 1817) and Porter's (1990) Diamond Model, which emphasize that economic strength alone is insufficient without the ability to develop competitive industries. In the context of Indonesia's CPO exports, strong competitiveness

enables domestic economic improvements to be translated into greater international market performance. Tambunan (2021) highlights that export competitiveness serves as a mechanism that converts domestic economic potential into actual trade performance, while Hastiadi (2021) emphasizes the importance of strengthening industrial competitiveness to maximize the benefits of economic growth.

From a policy perspective, this finding reinforces the importance of Indonesia's downstream strategy in increasing the value added of export commodities. Strengthening processing industries, improving technological capability, and developing higher-value CPO derivatives such as biodiesel, oleochemicals, and refined palm oil products can enhance competitiveness and allow economic growth to generate stronger export outcomes. This is consistent with Reyhan and Saputera (2025), who found that countries with stronger export competitiveness are better able to utilize domestic economic potential to achieve sustainable export expansion.

## CONCLUSION

This study examined the determinants of Indonesia's export performance during the 2010–2024 period, with particular focus on the roles of GSP tariff preferences (X1), GDP (X2), and CPO export competitiveness as measured by the RCA index (Z). Using Moderated Regression Analysis on 15 annual observations, the following conclusions are drawn:

- GSP tariff preferences do not significantly affect Indonesia's export performance ( $\beta = -14.199$ ,  $p = 0.732$ ). The declining GSP Utilization Rate (from 36.74% in 2019 to 19.66% in 2023) and high administrative compliance costs explain this result, consistent with Transaction Cost Theory.
- GDP has a positive and significant effect on export performance ( $\beta = 0.031$ ,  $p = 0.026$ ). Every 1 billion USD increase in GDP raises export performance by 0.031 billion USD, consistent with the Gravity Model of Trade.
- Export competitiveness (RCA) has a positive and significant effect on export performance ( $\beta = 5.477$ ,  $p = 0.021$ ). Every unit increase in the RCA index raises export performance by 5.477 billion USD, consistent with comparative advantage theory.
- All three variables simultaneously and significantly explain 72.1% of the variation in export performance ( $F = 10.024$ ,  $p = 0.002$ ), confirming the multivariate nature of export determinants.
- Export competitiveness does not moderate the GSP–export performance relationship ( $\beta = -0.088$ ,  $p = 0.693$ ), as the two variables operate through independent mechanisms.

- Export competitiveness significantly and positively moderates the GDP–export performance relationship ( $\beta = 0.004$ ,  $p = 0.044$ ), acting as an accelerator of GDP's positive impact on export performance

## RECOMMENDATIONS

Based on these findings, the following policy recommendations are proposed:

- Government should simplify GSP administrative procedures, increase outreach to exporters—particularly SMEs—and provide technical assistance for compliance with rules of origin requirements. Improving the GSP Utilization Rate from its current ~19% toward the ~78% ceiling observed in EU markets (UNCTAD, 2024) would substantially increase the real-world impact of existing preferential arrangements.
- Trade diplomacy should strategically target countries with high GDP levels and stable economic growth—including the United States, China, the European Union, and India—through economic diplomacy and strategic trade agreements, to maximize the GDP-driven demand for Indonesian exports.
- Industrial downstreaming policies for CPO and other strategic commodities should be accelerated and deepened, transforming Indonesia's export structure from raw materials to high-value-added processed products. This will sustain and increase the RCA index, thereby amplifying the moderating effect of competitiveness on GDP's impact on export performance.

Future research should incorporate additional determinants such as exchange rates, logistics costs, political stability, and institutional quality. Expanding the time scope and employing panel data methods across multiple partner countries would yield more robust and generalizable findings.

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