

POTENTIALS AND STRATEGIES OF INDONESIAN FRUIT EXPORTS TO THE UNITED ARAB EMIRATES

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Abstract

Indonesia has significant potential in tropical fruit production; however, its export performance in non-traditional markets, especially to the United Arab Emirates (UAE), remains suboptimal. This study analyzes the potential and development strategies for Indonesian fruit exports to the UAE by examining competitiveness, trade dynamics, and key economic determinants. The research utilizes secondary data from 2019 to 2024 obtained from the Central Statistics Agency / Statistics Indonesia (BPS), the United Nations (UN) Comtrade Database, and the International Monetary Fund (IMF). The study employs SWOT analysis, Revealed Comparative Advantage (RCA), Export Product Dynamics (EPD), and the Gravity Model. The results indicate that although national production is substantial, the RCA index remains below 1, reflecting a weak comparative advantage compared to other competitor countries. The Gravity Model confirms that UAE GDP positively influences export volume, whereas geographical distance acts as a significant barrier. This study recommends strengthening quality standardization, especially for compliance with sanitary and halal requirements, optimizing logistics to reduce costs, and implementing premium product differentiation strategies to enhance competitiveness in the UAE market.

Keywords: Fruit Exports; United Arab Emirates; Comparative Advantage; Gravity Model; Trade Strategy.

INTRODUCTION

Indonesia, as an archipelago with a tropical climate, holds a comparative advantage in agricultural biodiversity, specifically in fruit production. Data from the 2023 Agricultural Census by Statistics Indonesia shows a consistent increase in national fruit production. Commodities such as bananas, mangoes, pineapples, and mangosteens recorded significant surpluses, providing a strong supply base for international trade. The data reveal growth in Indonesia's tropical fruit production in 2023. Banana led in volume with 9,335,232 tons (51.7% of total listed output), recording a 33.21% increase. Mango followed with 3,302,620 tons (18.3%) and an 81.98% growth rate, while pineapple produced 3,156,576 tons (17.5%) with a 126.08% rise. Mangosteen output reached 397,175 tons (2.2%) with 143.88% growth, and durian achieved 1,852,045 tons (10.3%) with the highest increase of 151.85%. The unweighted average growth across these commodities was approximately 107.4% (**Table 1**). However, this abundant production capacity has yet to generate a significant increase in export value, particularly in high-potential markets such as the Middle East, especially the United Arab Emirates (Statistics Indonesia, 2024).

The UAE represents a strategic target market due to its high dependence on food imports, with more than 80% of its food supply sourced from abroad, as well as its strong purchasing power, reflected in a GDP per capita of approximately USD 51,348 in 2025 (IMF, 2025) (**Table 2**). As a major re-export hub in the Middle East, the UAE offers significant trade potential. However, Indonesia's export performance in this market remains modest and volatile (**Table 3**). After a sharp decline from 2019 to 2021, exports showed a gradual recovery in 2022 and 2024. Although export growth reached 8.66% in 2024, market share fell to 0.40%, highlighting ongoing structural competitiveness constraints and a weakening position in the UAE market (Statistics Indonesia, 2024).

Table 1. Comparison of National Production and Export Value to the United Arab Emirates 2023

Commodity	National Production	Export Value to UAE
Pineapple	3,156,576	2,500,000
Banana	9,335,232	755,000
Mangosteen	397,175	561,000
Mango	3,302,620	274,000
Durian	1,852,045	783,800
Total	18,043,648	4,873,800

(Source: Statistics Indonesia & UN Comtrade Database, 2024)

Table 2. GDP of the United Arab Emirates

Year	Nominal GDP (USD)	GDP Growth	GDP per capita	Change
2019	433,926,000,000	1.3	45,615	0.33
2020	357,162,000,000	-8.7	38,449	0.75
2021	422,441,000,000	4.6	42,840	3.60
2022	511,403,000,000	7.5	49,704	4.63
2023	522,622,000,000	4.3	48,941	3.91
2024	552,325,000,000	4.0	50,216	3.62

(Source: International Monetary Fund (IMF), processed from World Economic Outlook Database, 2025)

Table 3. Trend of Indonesian Fruit Exports to the United Arab Emirates

Year	Export Value (USD)	Total Exports (USD)	Share (%)	Growth (%)
2019	15,031,400	1,005,740,800	1.49	-37.72
2020	8,160,400	1,276,893,500	0.64	-45.71
2021	4,092,000	948,676,000	0.43	-49.85
2022	5,104,300	770,347,400	0.66	24.74
2023	4,485,300	882,585,100	0.51	-12.13
2024	4,873,800	1,230,281,300	0.40	8.66

(Source: Statistics Indonesia, 2024).

Previous studies, Sukmaya et al. (2022), indicate that although Indonesia possesses natural comparative advantages, it continues to face constraints related to supply chain efficiency and compliance with technical standards. Building upon these findings, this study seeks to address the identified gaps by examining the specific dynamics of the UAE market. The objectives of this research are: (1) to analyze the export potential of Indonesian fruits to the UAE; (2) to evaluate the competitive position using the Revealed Comparative Advantage (RCA) and Export Product Dynamics (EPD) approaches; and (3) to identify the economic determinants of exports through the Gravity Model and 4) SWOT analysis to formulate effective development strategies.

RESEARCH METHODS

Research Type and Design

This study employs a descriptive–quantitative approach using secondary time-series data covering the period 2019–2024. The descriptive analysis is used to explain trends in production and export performance, while the quantitative analysis evaluates competitiveness and identifies the determinants of trade flows. The data were collected from official sources, including Statistics Indonesia (BPS) for national fruit production and export data, the UN Comtrade Database for bilateral and global trade statistics, and the International Monetary Fund (IMF) for macroeconomic indicators of the UAE, such as GDP. Geographical distance between countries was included as an explanatory variable in the estimation of the Gravity Model of Trade.

Location and Time of Research

This study examines the trade relationship between Indonesia as the exporting country and the United Arab Emirates (UAE) as the importing country. The analysis is based on secondary data covering the period 2019–2024. The research was conducted in Jakarta, Indonesia, in January 2026 through the collection, compilation, and analysis of data obtained from official statistical sources and international trade databases.

Data Analysis Technique

1. Revealed Comparative Advantage (RCA):

$$RCA_{ij} = \frac{(X_{ij}/X_{it})}{(W_j/W_t)}$$

Notation and Variable Interpretation

RCA_{ij} = revealed comparative advantage, index of country i for product j .

i = refers to a specific country (or sometimes a region/group of countries).

j = refers to a specific product, industry, or commodity category.

t = denotes "total" (all products combined).

$X_{\{ij\}}$ = value of exports of product j by country i .

$X_{\{it\}}$ = total exports of all products by country i .

W_j = world exports of product j (sometimes denoted $x_{\{wj\}}$ in the literature).

W_t = total world exports of all products (sometimes denoted $X_{\{wt\}}$).

2. Gravity Model: A log-linear regression model to estimate the influence of economic size and distance on trade flows.

$$\ln(E_{ij}) = \alpha + \beta_1 \ln(GDP_i) + \beta_2 \ln(Pop_j) + \beta_3 \ln(D_{ij}) + \beta_4 \ln(ER_{ij}) + \varepsilon_{ij}$$

Notation and Variable Interpretation

$E_{\{ij\}}$ = Bilateral exports (or trade flows) from country i (exporter) to country j . The natural logarithm, $\ln(E_{\{ij\}})$, serves as the dependent variable.

α = Intercept term (constant), capturing average effects or unobserved factor common across observations.

$GDP_{\{i\}}$ = Gross Domestic Product of the partner/importer country j (often denoted as GDP_j in standard notation). The subscript "p" likely denotes "partner" or "importer" in the specific context or dataset used.

$Pop_{\{j\}}$ = Population of the partner/importer country j (Pop_j).

$D_{\{ij\}}$ = Bilateral distance between countries i and j

ER = Exchange rate (likely the bilateral nominal or real exchange rate between the currencies of countries i and j). The natural logarithm, $\ln(ER)$, is included to capture relative price or currency effects.

$\varepsilon_{\{ij\}}$ = Stochastic error term, assumed to be independently and identically distributed (with zero mean and constant variance in basic OLS setups).

3. SWOT Analysis: To identify internal strengths/weaknesses and external opportunities/threats.

RESULTS AND DISCUSSION

Competitor Analysis and Market Share

In 2024, the UAE tropical fruit market was dominated by Thailand, which held approximately 35% market share, supported by strong branding and premium packaging strategies for products such as durian, mango, and pineapple. India followed with around 20%,

benefiting from geographical proximity and lower logistics costs, particularly for mango (Alphonso) and banana exports. Vietnam accounted for roughly 15% of the market, leveraging competitive pricing and large export volumes of pineapple and dragon fruit. In contrast, Indonesia captured only about 5% of the UAE tropical fruit market in 2024 (UN Comtrade, 2024; ITC Trade Map, 2024). Although Indonesia offers unique flavors and a diverse range of tropical fruits, its competitive position remains relatively weak compared to leading exporters.

Competitiveness Analysis (RCA)

Based on calculations using time-series data for the period 2019–2024, the Revealed Comparative Advantage (RCA) index of Indonesian fruit exports to the UAE consistently remains below 1. According to the standard RCA interpretation (Balassa Index), an RCA value: $RCA > 1$ indicates a comparative advantage, $RCA = 1$ indicates neutral competitiveness, $RCA < 1$ indicates a comparative disadvantage.

Table 4. RCA Index of Indonesian Fruits to UAE (2019–2024)

Year	RCA Value	Category
2019	0.85	Weak Advantage
2020	0.68	Weak Advantage
2021	0.55	Weak Advantage
2022	0.72	Weak Advantage
2023	0.65	Weak Advantage
2024	0.67	Weak Advantage

(Source: Processed Secondary Data from Statistics Indonesia & UN Comtrade, Processed by Author, 2026)

Indonesia’s RCA values during 2019–2024 consistently remain below 1, indicating that Indonesian fruits do not yet possess a strong comparative advantage in the UAE market relative to global competitors. This finding suggests that although Indonesia has substantial production capacity, its export competitiveness in the UAE market remains relatively weak.

Table 5. Gravity Model Results

Variable	Coefficient (β)	t-Statistic	p-value	Interpretation
Constant	-12.450	-5.920	0.000	-
Ln GDP UAE	1.850	5.781	0.000	Significant Positive
Ln Population	0.920	6.133	0.000	Significant Positive
Ln Distance	-1.200	-2.666	0.010	Significant Negative
Ln Exchange Rate	-0.150	-1.875	0.068	Insignificant
R-squared	0.850			Good Fit

(Source: Primary Data Analysis, 2026)

$$\ln Y = -12.450 + 1.850 \ln GDP + 0.920 \ln Population - 1.200 \ln Distance - 0.150 \ln ExchangeRate$$

- **1.850 (GDP)**

A 1% increase in the UAE’s GDP leads to an approximately **1.85% increase** in Indonesia’s exports, ceteris paribus.

- **0.920 (Population)**

A 1% increase in the UAE’s population results in an approximately **0.92% increase** in Indonesia’s exports.

- **-1.200 (Distance)**

A 1% increase in geographical distance reduces Indonesia’s exports by approximately **1.2%**.

- **-0.150 (Exchange Rate)**

A 1% increase in the exchange rate decreases Indonesia’s exports by approximately **0.15%**; however, this effect is statistically insignificant.

SWOT ANALYSIS

Indonesia's fruit production has grown significantly. Table 6 details the SWOT Analysis of fruit exports to the UEA.

Table 6. SWOT Analysis of Indonesian Fruit Exports to the United Arab Emirates

Strengths (S)	Weaknesses (W)	Opportunities (O)	Threats (T)
A tropical climate enables year-round fruit production.	Inconsistent export quality among production centers.	High dependence of the UAE on food imports (around 80%).	Strong competition from Thailand, India, and Vietnam.
Large national production capacity for bananas, pineapples, mangoes, mangosteens, and durian.	Limited cold chain infrastructure and post-harvest handling.	Strong purchasing power and growing GDP in the UAE market.	Strict sanitary and phytosanitary (SPS) standards and maximum residue limits (MRLs).
Availability of unique tropical fruit varieties with premium potential.	High logistics and transportation costs due to the long distance.	Increasing demand for tropical and healthy food products.	Exchange rate volatility and global economic uncertainty.
Existing diplomatic and trade relations between Indonesia and the UAE.	Limited ownership of international certifications (GlobalGAP, Halal).	Potential expansion of trade cooperation with Middle Eastern markets.	Risk of product rejection due to quality and regulatory non-compliance.

(Source: Primary Data Analysis, 2026)

CONCLUSIONS AND SUGGESTIONS

Conclusions

Indonesia has high potential to increase fruit exports to the UAE, supported by strong domestic production and positive GDP growth in the target country. However, current competitiveness remains weak ($RCA < 1$), indicating that Indonesian fruits still lack a comparative advantage in the UAE market. The primary barriers are economic (distance and logistics costs) and technical (quality consistency and regulatory compliance). The Gravity Model confirms that while the UAE market is sensitive to income growth, physical distance remains a significant hindrance.

Suggestions

To enhance export performance, the following strategies are recommended:

1. **Quality and Compliance:** Government and exporters must prioritize obtaining GlobalGAP and recognized Sanitary and Halal certifications to meet UAE market access requirements.
2. **Logistics Efficiency:** Establish direct shipping lines or consolidate cargo to reduce freight costs, thereby mitigating the negative impact of distance identified in the Gravity Model.
3. **Product Differentiation:** Adopt a premium branding strategy for "Queen of Fruits" (Mangosteen) and organic pineapples to compete on quality rather than price against ASEAN rivals.

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