



---

## **Analysis of Trends and Factors Affecting Indonesian Swallow Nest Exports to China for The 2020–2025 Period**

**Dewi Sinta<sup>1</sup>**

<sup>1</sup> Universitas Pelita Bangsa, Indonesia

email: [dewis1765@gmail.com](mailto:dewis1765@gmail.com)<sup>1</sup>

---

### **Article Info :**

Received:

22-04-2026

Revised:

08-05-2026

Accepted:

14-05-2026

### **Abstract**

*This study analyzes the trends and determinants of Indonesian swallow nest exports to China during the 2020 to 2025 period using an empirical descriptive mixed methods approach. Quantitative evidence was derived from secondary time series data obtained from the Central Bureau of Statistics and the Directorate General of Customs and Excise, covering export volume, export value, and export price indicators. Qualitative evidence was collected from academic literature, policy documents, and international trade studies to explain the underlying drivers of export performance. The findings indicate that Indonesian swallow nest exports experienced a strong upward trajectory after the pandemic period, supported by increasing Chinese demand and expanding market access. Export price dynamics revealed substantial fluctuations, reflecting market adjustment processes, seasonal demand patterns, and changing supply conditions. The average export price remained relatively stable despite temporary corrections, indicating the resilience of swallow nests as a premium export commodity. Internal factors such as production capacity, product quality, processing technology, certification, and logistics efficiency were identified as major determinants of competitiveness. External factors including import regulations, food safety requirements, exchange rate movements, and international competition also significantly influenced export performance. Strategic efforts focused on quality upgrading, digital traceability, certification enhancement, and market diversification are essential for sustaining long term export growth and strengthening Indonesia's position in the Chinese market.*

**Keywords :** Swallow Nest Exports, Export Competitiveness, International Trade, Chinese Market, Export Price.



©2022 Authors.. This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License.  
(<https://creativecommons.org/licenses/by-nc/4.0/>)

---

## **INTRODUCTION**

The contemporary landscape of international trade has increasingly been characterized by the growing importance of high value agricultural and nature based commodities whose competitiveness is determined not only by comparative advantage but also by compliance with increasingly complex market governance systems, quality standards, and consumer preferences. Within this context, edible bird's nest has emerged as one of the most lucrative niche commodities in Asia, driven primarily by strong demand from China where cultural traditions, health related consumption patterns, and premium food markets continue to support sustained import growth. The strategic position of Indonesia as the world's leading producer of swallow nest products places the country at the center of this expanding global value chain. The relevance of this commodity has become even more pronounced during the post pandemic recovery period when export oriented sectors were required to adapt to changing trade regulations, food safety requirements, and supply chain restructuring across international markets. From the perspective of international trade theory, the ability of a country to transform resource endowments into sustainable export performance depends on the interaction between comparative advantage, market access, and institutional capacity (Krugman et al., 2018). At the same time, recent studies on Indonesian resource based commodities indicate that export performance increasingly reflects the effectiveness of governance systems, traceability mechanisms, and adaptation to external regulatory changes rather than production capacity alone (Nash et al., 2026). In the case of swallow nest products, these developments have intensified scholarly interest in understanding how export trends evolve under changing economic

and regulatory conditions, particularly during the period from 2020 to 2025 when global trade experienced substantial disruptions and restructuring.

Previous studies have provided valuable insights into the determinants of swallow nest production, trade performance, and market competitiveness, yet their findings reveal a complex and multidimensional relationship between biological resources, product quality, institutional arrangements, and international demand. Rahmawati et al. (2022) demonstrated that the export performance of Indonesian swallow nest commodities varies significantly across destination markets, suggesting that market specific factors play a critical role in shaping export outcomes. Complementing this perspective, Tamzil (2026) highlighted the biological characteristics, production mechanisms, economic benefits, and commercial potential of swiftlet based industries, emphasizing that product quality and production sustainability are essential foundations for long term market competitiveness. Broader discussions concerning product innovation and the integration of local knowledge into economic development strategies further suggest that value creation in export commodities increasingly depends on the ability of producers to align traditional production systems with evolving market expectations (Sonani et al., 2025). Although research from ecological contexts such as Smith et al. (2023) focuses on nest related biological dynamics in avian species, it indirectly reinforces the importance of environmental and ecological conditions in influencing nesting behavior and productivity, factors that remain relevant for understanding the sustainability of swallow nest production systems. Collectively, these studies indicate that export performance cannot be explained solely through production volume or market demand because it emerges from the interaction of ecological, economic, institutional, and commercial variables.

Despite these contributions, the existing literature remains fragmented and exhibits several conceptual and empirical limitations that restrict a comprehensive understanding of Indonesian swallow nest exports to China. Most studies concentrate either on production and biological dimensions or on aggregate export performance without systematically examining how trade trends respond to changing regulatory environments, market conditions, and macroeconomic shocks over time. Existing analyses also tend to rely on cross sectional observations or relatively short periods of investigation, making it difficult to capture structural changes occurring during periods of exceptional disruption such as the COVID 19 pandemic and the subsequent recovery phase. More importantly, the literature has not sufficiently explored how evolving Chinese regulatory frameworks influence Indonesian export competitiveness. The experience of other Indonesian export commodities demonstrates that revisions to Chinese food safety regulations can significantly reshape market access, compliance costs, and export opportunities, thereby affecting the overall performance of export industries (Pangestu, 2026). Consequently, important questions remain regarding the extent to which fluctuations in Indonesian swallow nest exports reflect changes in demand conditions, regulatory requirements, product quality standards, and broader economic developments during the 2020 to 2025 period.

The existence of these gaps creates both scientific and practical urgency because swallow nest exports represent a strategically important source of foreign exchange earnings and rural economic development for Indonesia. Data reported in national trade statistics indicate that swallow nest products have consistently occupied a significant position within Indonesia's non oil and gas export portfolio, particularly in relation to the Chinese market which absorbs a substantial share of total exports (Badan Pusat Statistik, 2024). The concentration of export dependence on a single dominant destination market increases vulnerability to regulatory changes, demand fluctuations, and external economic shocks. At the same time, rising expectations regarding food safety, traceability systems, and product certification require exporters to continuously adjust their production and distribution strategies. Failure to understand the mechanisms underlying export fluctuations may reduce Indonesia's ability to maintain market leadership and respond effectively to competitive pressures from other exporting countries. A more rigorous investigation is therefore needed to identify the key drivers shaping export dynamics and to generate evidence capable of informing policy interventions, business strategies, and institutional reforms aimed at strengthening international competitiveness.

Positioned within this scholarly context, the present study seeks to bridge the disconnect between descriptive export assessments and broader analytical explanations of export performance by focusing specifically on the trends and determinants of Indonesian swallow nest exports to China during the period from 2020 to 2025. Rather than treating export fluctuations as isolated statistical phenomena, this research conceptualizes export performance as the outcome of interactions among market demand,

regulatory frameworks, product quality requirements, supply chain efficiency, and global economic conditions. This perspective extends existing literature by integrating international trade theory with contemporary discussions concerning governance, traceability, and market adaptation in resource based export sectors. By concentrating on China as the principal destination market, the study also addresses an important empirical setting where regulatory developments, consumer demand, and trade relations exert direct influence on export outcomes. Such positioning allows the research to contribute to a more nuanced understanding of how external and internal factors jointly shape export trajectories within highly specialized commodity markets.

This study aims to analyze the trends and identify the factors affecting Indonesian swallow nest exports to China during the 2020 to 2025 period through a combined quantitative and qualitative approach. The research contributes theoretically by developing a more integrated framework for explaining export performance in premium resource based commodities through the interaction of market, institutional, and regulatory dimensions. Methodologically, it contributes by combining trend analysis of official export statistics with qualitative interpretation of trade related determinants, thereby providing a more comprehensive understanding of export dynamics than approaches relying exclusively on either quantitative or qualitative evidence. The findings are expected to enrich the literature on international trade and export competitiveness while offering practical insights for policymakers, exporters, and industry stakeholders seeking to strengthen Indonesia's position in the Chinese swallow nest market.

## **RESEARCH METHODS**

This study employs an empirical research design using a descriptive mixed methods approach that integrates quantitative and qualitative evidence to examine the trends and determinants of Indonesian swallow nest exports to China during the 2020 to 2025 period. The quantitative component relies on secondary time series data obtained from the Central Bureau of Statistics and customs records published by the Directorate General of Customs and Excise, covering export volume, export value, and export price indicators associated with swallow nest trade flows between Indonesia and China (Badan Pusat Statistik, 2024; Direktorat Jenderal Bea dan Cukai, 2024). The population of the study consists of all Indonesian swallow nest export transactions recorded within the national export database, while the analytical sample comprises annual and monthly export observations available for the study period. Export performance serves as the principal variable and is operationalized through export volume measured in metric tons, export value measured in United States dollars, and average export price measured in dollars per kilogram. To complement the statistical evidence, qualitative data were collected from scholarly publications, policy documents, and international trade literature addressing export competitiveness, trade regulations, market demand, and international trade dynamics relevant to the swallow nest industry (Krugman et al., 2018; Salvatore, 2019; Amir, 2017; Tambunan, 2018; Sugiyono, 2022).

The analytical procedure combines descriptive statistical analysis, trend analysis, growth rate estimation, and qualitative content interpretation to provide a comprehensive assessment of export dynamics. Quantitative measurements include the calculation of annual growth rates, average growth rates, price movements, and trend patterns using time series techniques to identify fluctuations and long term export trajectories. Descriptive statistical indicators including mean values, minimum values, maximum values, and percentage changes are employed to evaluate variations in export performance across the observation period. The qualitative component applies thematic analysis to interpret the influence of market demand conditions, regulatory changes, product quality requirements, logistics efficiency, and broader economic developments on export outcomes. To ensure analytical rigor, the consistency, completeness, and comparability of the statistical data were assessed through data verification and cross referencing procedures between official sources. Since the study is primarily descriptive and exploratory rather than causal econometric modeling, conventional assumptions associated with regression estimation such as multicollinearity, heteroscedasticity, and autocorrelation testing were not required. Instead, methodological robustness was established through source triangulation, longitudinal comparison, and the integration of quantitative trends with qualitative evidence to strengthen the validity and reliability of the findings (Sugiyono, 2022).

## RESULTS AND DISCUSSION

### Export Performance Dynamics of Indonesian Swallow Nest Trade to China During 2020–2025

The empirical results indicate that Indonesian swallow nest exports to China exhibited a fluctuating pattern during the observation period, although the long term trajectory remained positive. Export value and export volume moved in the same direction across most years, suggesting a strong relationship between physical shipments and foreign exchange earnings. Such dynamics are consistent with international trade theory which argues that export expansion depends on the interaction between comparative advantage and market demand conditions (Krugman et al., 2018). The Indonesian swallow nest industry continued to benefit from its dominant production capacity despite facing periodic external shocks.

The decline recorded in 2021 reflected disruptions associated with post pandemic trade adjustments and logistics constraints. Export volume decreased from 263.5 tons in 2020 to 228.8 tons in 2021, while export value contracted from 416.76 million US dollars to 350.85 million US dollars. Similar patterns have been observed in commodity dependent export sectors where international demand recovery tends to occur more slowly than domestic production adjustment (Salvatore, 2019). The temporary contraction demonstrated the sensitivity of premium agricultural exports to changes in global mobility and consumption patterns.

The recovery phase became evident during 2022 and strengthened further in 2023 when export performance reached its highest level. Rising demand from Chinese consumers contributed to increased absorption of Indonesian swallow nest products in both traditional and modern distribution channels. Previous evidence confirms that China remains the primary destination market for Indonesian swallow nest exports because of strong cultural preferences and sustained consumption demand (Rahmawati et al., 2022). Export growth during this period reflected the restoration of market confidence and the normalization of international trade activities.

The positive trajectory also illustrates the strategic role of Indonesia within global premium animal based commodity markets. Comparative advantage emerges not only from production scale but also from resource availability and accumulated industry experience. Studies on export competitiveness suggest that commodities possessing unique biological and cultural value tend to maintain stronger market positions despite temporary fluctuations (Ardiyanti et al., 2025). The swallow nest sector demonstrates these characteristics through its persistent export relevance within Asian markets.

To provide a clearer picture of export performance changes, annual export indicators are summarized in Table 1.

**Table 1. Indonesian Swallow Nest Exports to China, 2020–2024**

Year	Export Volume (Tons)	Export Value (Million US\$)
2020	263.5	416.76
2021	228.8	350.85
2022	290.0	402.31
2023	401.7	479.07
2024	399.2	428.79

Source: Processed from Badan Pusat Statistik (2024) and Direktorat Jenderal Bea dan Cukai (2024).

Table 1 shows that export growth after 2021 was substantial in both physical and monetary terms. The strongest increase occurred between 2022 and 2023 when volume expanded by more than one hundred tons and export earnings reached their historical peak. Such growth patterns indicate that market demand was capable of absorbing larger export supplies without generating immediate market saturation. Similar developments have been identified in high value export commodities where demand elasticity remains relatively favorable within premium consumer segments (Amir, 2017).

Although 2024 recorded a slight decline, export performance remained significantly higher than the levels observed during the early years of the study period. The limited reduction suggests market correction rather than structural deterioration of export competitiveness. Research on Chinese market penetration emphasizes that temporary fluctuations frequently emerge from inventory adjustments and short term policy responses rather than declining consumer demand (Maharani et al., 2024). This interpretation aligns with the observed stability of export volume despite lower export earnings.

The relationship between biological production systems and export performance also deserves attention. Swallow nest production depends on ecological conditions that influence nesting behavior, colony sustainability, and harvesting cycles. Studies on avian population dynamics indicate that environmental characteristics strongly affect nesting continuity and reproductive outcomes, which ultimately influence production availability (Brown & Hannebaum, 2022; Smith et al., 2023). Production resilience therefore constitutes an important foundation for export stability.

Another notable finding concerns the capacity of the industry to maintain export growth despite broader challenges affecting rural production sectors. Similar evidence from natural resource based industries demonstrates that local economic activities often adapt through institutional learning and market adjustment mechanisms when external pressures emerge (Adriani et al., 2023; Nash et al., 2026). The swallow nest sector appears to exhibit comparable adaptive characteristics through sustained export engagement. Such resilience strengthens Indonesia's position within international premium commodity markets.

From a broader development perspective, the observed export trajectory confirms that swallow nest products represent a strategic source of foreign exchange earnings and rural economic value creation. International trade frameworks emphasize that successful export sectors contribute not only to national income but also to industrial upgrading and market diversification (Tambunan, 2018). The upward trend identified during most of the study period signals the continued relevance of this commodity within Indonesia's export portfolio. These findings establish an empirical basis for examining the specific determinants that influenced export performance during the 2020 to 2025 period.

### **Export Price Dynamics and Market Adjustment Mechanisms in the Indonesian Swallow Nest Trade**

The monthly export price series of Indonesian swallow nests between 2022 and 2025 reveals a highly dynamic market structure characterized by substantial fluctuations across observation periods. Price behavior reflects the interaction between changing demand conditions in China and adjustments occurring within the Indonesian supply chain. International trade theory suggests that commodity prices often respond more rapidly than export quantities when markets experience shifts in demand and regulatory conditions (Krugman et al., 2018). The observed pattern indicates that export price movements served as an immediate adjustment mechanism through which market participants responded to evolving commercial conditions.

The descriptive statistics demonstrate that export prices did not follow a linear trajectory throughout the observation period. Instead, prices exhibited repeated cycles of appreciation and correction that reflected the premium nature of swallow nest products in international markets. Such behavior is consistent with the characteristics of high value agricultural commodities whose market valuation is strongly influenced by consumer preferences and quality perceptions (Rahmawati et al., 2022). Similar pricing behavior has been documented in export oriented biological commodities where demand concentration increases market sensitivity to external shocks (Maharani et al., 2024).

The highest recorded export price occurred in January 2022 when the average price reached 710.73 USD per kilogram. This peak was followed by a rapid downward adjustment that continued through subsequent months before reaching substantially lower levels later in the year. According to international market adjustment theory, exceptionally high prices frequently trigger supply responses that subsequently contribute to price corrections as market equilibrium is restored (Salvatore, 2019). The January 2022 price surge therefore appears to represent a temporary demand driven premium rather than a permanent structural shift.

The pronounced decline observed during 2022 provides evidence of market normalization following an exceptional pricing episode. Monthly observations indicate that export prices eventually approached levels that were more consistent with longer term market fundamentals. Studies of commodity trade suggest that periods of excessive appreciation are often followed by corrective phases as buyers adjust purchasing strategies and suppliers expand market availability (Amir, 2017). The Indonesian swallow nest market exhibited characteristics that align with this broader pattern of international commodity adjustment.

**Table 2. Monthly Export Price Statistics of Indonesian Swallow Nests, 2022–2025**

Indicator	Value
Average Price	446.81 USD/Kg
Maximum Price	710.73 USD/Kg
Minimum Price	328.27 USD/Kg
Average Growth Rate	0.18%

Source: Processed from Badan Pusat Statistik (2024) and Directorate General of Customs and Excise (2024).

The statistical indicators presented in Table 2 confirm the existence of substantial price variability during the study period. The difference between the maximum and minimum observations exceeds 380 USD per kilogram, indicating a wide range of market valuation outcomes. At the same time, the average growth rate of only 0.18 percent suggests that long term price expansion remained relatively limited despite significant short term fluctuations. Time series interpretation emphasizes that strong volatility can coexist with minimal long run growth when recurrent correction mechanisms continuously offset temporary price increases (Masrur et al., 2025).

The average export price of 446.81 USD per kilogram highlights the premium position of Indonesian swallow nests within the Chinese market. Premium commodities typically derive value from scarcity, cultural significance, and stringent quality requirements rather than solely from production volume (Tambunan, 2018). Consumer willingness to pay remains closely linked to perceptions of authenticity, safety, and product reputation. Research on Chinese market competitiveness also indicates that quality differentiation remains a major determinant of swallow nest pricing performance (Maharani et al., 2024).

Seasonal demand effects constitute another important factor explaining monthly price variability. Several annual peaks coincide with periods preceding Chinese New Year when consumer demand for swallow nest products traditionally increases. This pattern reflects the cultural and symbolic value attached to swallow nest consumption among Chinese households and gift giving practices. Market demand surges associated with festive periods frequently generate temporary price inflation within premium food product markets (Fu & Wang, 2025).

On the supply side, price corrections often emerged during periods associated with greater product availability. Increased market supply tends to weaken exporters' bargaining positions, particularly when demand growth does not expand at the same pace as production. Industry reviews have identified supply management and production consistency as critical challenges within the edible bird nest sector (Hadi et al., 2022). Similar relationships between market supply expansion and downward price pressure have also been observed across export oriented small and medium enterprise sectors (Mas'ud et al., 2022).

**Table 3. Selected Turning Points in Indonesian Swallow Nest Export Prices**

Period	Price (USD/Kg)	Interpretation
January 2022	710.73	Price Peak
August 2022	328.27	Lowest Adjustment
October 2023	540.40	Recovery Phase
June 2025	330.54	New Correction Phase

Source: Processed from Directorate General of Customs and Excise (2024).

The turning points reported in Table 3 illustrate recurring cycles of expansion and correction within the export price structure. The recovery observed during 2023 suggests renewed purchasing strength and improved market confidence after the sharp adjustment experienced in 2022. Commodity market theory argues that such cyclical behavior reflects continuous interaction between expectations, inventories, and demand conditions rather than random fluctuations (Krugman et al., 2018). The subsequent correction recorded in 2025 indicates that equilibrium remained dynamic and responsive to changing market signals.

Regulatory considerations also contribute to price formation within the Indonesian swallow nest export industry. Compliance requirements imposed by Chinese authorities influence production costs, inspection procedures, and market access conditions. Research examining Chinese food safety regulations demonstrates that stricter standards can alter export competitiveness by increasing compliance expenditures while simultaneously reinforcing consumer confidence (Pangestu, 2026). Export prices therefore incorporate not only supply and demand forces but also institutional and regulatory dimensions that shape international trade performance.

The overall evidence indicates that export price dynamics between 2022 and 2025 were primarily driven by seasonal demand cycles, supply side adjustments, premium commodity characteristics, and regulatory influences. Although monthly volatility remained substantial, the modest average growth rate reveals that market corrections repeatedly constrained long term price escalation. Such findings support the proposition that the Indonesian swallow nest trade operates within a mature export market where equilibrium is continuously redefined through interactions among producers, consumers, and regulatory institutions (Fridayani et al., 2024). Price movements consequently function as an important indicator of market adaptation and competitiveness within the broader framework of Indonesia China trade relations.

### **Determinants of Export Competitiveness and Strategic Implications for the Indonesian Swallow Nest Industry**

The qualitative findings indicate that export competitiveness in the Indonesian swallow nest industry is shaped by a combination of internal capabilities and external market conditions. Export performance is not determined solely by production output but also by the ability of firms to satisfy increasingly stringent international requirements. The competitiveness framework proposed in international trade literature emphasizes that sustained export success depends on productivity, product differentiation, and institutional adaptation (Krugman et al., 2018). Evidence from the Indonesian swallow nest sector demonstrates that these dimensions operate simultaneously and influence market access outcomes.

Production capacity emerged as one of the most important internal determinants affecting export performance. Indonesia possesses one of the largest swallow nest production bases in the world, providing a significant comparative advantage within the international market (Tamzil, 2026). Stable production enables exporters to maintain supply continuity and respond to fluctuations in overseas demand. Studies of agricultural export commodities similarly show that production consistency contributes directly to export competitiveness and market reliability (Muslim et al., 2023).

Product quality constitutes another critical factor influencing access to the Chinese market. Buyers increasingly prioritize hygiene, physical appearance, and compliance with food safety requirements when evaluating imported swallow nests. Research on swallow nest quality assessment demonstrates that quality standardization has become an essential requirement for maintaining export acceptance and premium market positioning (Agus et al., 2025). The relationship between quality assurance and export competitiveness has also been highlighted in studies examining Indonesian swallow nest trade performance (Rahmawati et al., 2022).

Processing technology further strengthens competitiveness by improving consistency and operational efficiency. Modern processing systems reduce contamination risks while increasing conformity with international quality standards. Industrial upgrading contributes to value creation because technologically advanced production systems are better equipped to satisfy increasingly sophisticated consumer expectations (Sonani et al., 2025). Similar observations have been reported within the edible bird nest industry in Southeast Asia where technology adoption supports export market expansion (Hadi et al., 2022).

**Table 4. Key Determinants Affecting Indonesian Swallow Nest Exports to China**

<b>Determinant</b>	<b>Category</b>	<b>Expected Effect</b>
Production Capacity	Internal	Positive
Product Quality	Internal	Positive
Processing Technology	Internal	Positive
Chinese Demand	External	Positive

Import Regulation	External	Positive or Negative
Exchange Rate	External	Conditional
Logistics Efficiency	Internal	Positive

Source: Authors' synthesis based on Badan Pusat Statistik (2024), Directorate General of Customs and Excise (2024), Rahmawati et al. (2022), Maharani et al. (2024), and Hadi et al. (2022).

The determinants summarized in Table 4 illustrate the multidimensional nature of export competitiveness within the swallow nest industry. Internal factors primarily affect production efficiency and product readiness, whereas external factors influence market accessibility and commercial opportunities. International economics theory argues that export competitiveness emerges from interactions between domestic capabilities and external market environments rather than from a single determinant (Salvatore, 2019). The Indonesian case provides empirical support for this perspective because successful exporters must simultaneously manage production quality, regulatory compliance, and market responsiveness.

Chinese market demand remains the most influential external driver of export performance. Strong consumer preference for swallow nest products continues to create substantial commercial opportunities for Indonesian exporters. Demand concentration within a large destination market generates attractive export prospects while also increasing dependence on a single trading partner (Maharani et al., 2024). Similar market concentration dynamics have been observed in international industries that rely heavily on Chinese consumption networks (Fu & Wang, 2025).

Import regulations and food safety standards represent both opportunities and constraints for industry development. Compliance with Chinese regulatory requirements can strengthen consumer confidence and improve market credibility. At the same time, stricter inspection procedures and traceability obligations increase operational costs and administrative burdens for exporters (Pangestu, 2026). International trade studies indicate that non tariff measures increasingly function as decisive determinants of export competitiveness in global food markets (Amir, 2017).

Logistics efficiency and traceability systems have become increasingly important within modern export supply chains. Efficient logistics reduce delivery delays and preserve product quality during international transportation. Traceability mechanisms improve transparency and facilitate compliance with regulatory requirements imposed by importing countries. Research examining global market integration highlights that supply chain modernization has become a prerequisite for sustaining export competitiveness in premium agricultural industries (Fridayani et al., 2024).

**Table 5. Opportunities and Challenges in the Indonesian Swallow Nest Export Industry**

Opportunities	Challenges
Strong Chinese Demand	Strict Food Safety Standards
Premium Product Value	Traceability Requirements
Large Domestic Production Base	International Competition
Expanding Asian Market	Price Volatility

Source: Authors' compilation from qualitative findings based on BPS (2024), Directorate General of Customs and Excise (2024), Maharani et al. (2024), and Pangestu (2026).

Table 5 demonstrates that industry development is characterized by a coexistence of substantial opportunities and persistent challenges. Strong demand and premium product positioning create favorable conditions for export growth. However, compliance obligations, market uncertainty, and increasing competition from neighboring exporting countries continue to constrain industry expansion. Export development strategies therefore require a balance between market exploitation and risk management (Tambunan, 2018).

Competition from Malaysia and Thailand represents an important strategic consideration for Indonesian exporters. Competing producers continue to improve quality assurance systems, certification frameworks, and branding strategies in order to strengthen their positions within Asian markets (Hadi et al., 2022). Competitive advantage can no longer be maintained solely through resource abundance because international buyers increasingly evaluate reliability and product differentiation.

Composite export competitiveness assessments similarly demonstrate that quality based differentiation has become a major determinant of export leadership among primary commodity exporters (Ardiyanti et al., 2025).

The findings suggest that future competitiveness will depend on strategic investments in quality upgrading, digital traceability, certification systems, and supply chain modernization. Institutional support, regulatory alignment, and technological innovation are likely to strengthen industry resilience while enhancing access to premium market segments. Similar development pathways have been identified in studies of export oriented enterprises seeking long term integration into global markets (Mas'ud et al., 2022). Evidence from regional economic sectors also indicates that coordinated stakeholder collaboration contributes significantly to sustainable export development and broader economic benefits (Adriani et al., 2023).

Long term export sustainability requires an integrated strategy that combines production excellence with market adaptation and regulatory readiness. Fiscal and governance mechanisms may also influence industry performance through their effects on investment incentives and business formalization processes (Djamal et al., 2026). International trade theory emphasizes that competitive advantage evolves through continuous innovation and institutional adjustment rather than static resource endowments (Krugman et al., 2018). The Indonesian swallow nest industry possesses strong growth potential, although realizing this potential depends on its capacity to transform structural advantages into enduring competitive capabilities.

## CONCLUSION

The analysis demonstrates that Indonesian swallow nest exports to China exhibited a positive development pattern during the 2020 to 2025 period, characterized by strengthening export performance, dynamic price movements, and increasing integration into a highly regulated international market. Quantitative evidence revealed an overall expansion of export activity accompanied by fluctuations in export prices that reflected market adjustment processes, seasonal demand variations, and changing supply conditions. Qualitative findings identified production capacity, product quality, processing technology, traceability systems, certification compliance, and logistics efficiency as critical internal determinants of competitiveness, while Chinese demand, import regulations, food safety standards, exchange rate movements, and regional competition emerged as influential external factors. The findings support international trade perspectives emphasizing the importance of competitiveness, product differentiation, and regulatory adaptation in sustaining export performance. Future export growth will depend on the ability of industry stakeholders to strengthen quality assurance systems, accelerate digital traceability adoption, expand certification compliance, modernize supply chain management, and diversify export destinations while maintaining strong access to the Chinese market.

## REFERENCES

- Adriani, D., Purbiyanti, E., Huanza, M., & Damayanthi, D. (2023). Discovering the socio-economic migrant performance on illegal logging activities for deforestation problem solving in Banyuwasin Regency, South Sumatera (case study of Sungai Buring traditional village). *Anjoro: International Journal of Agriculture and Business*, 4(1), 10-20.
- Agus, F., Sulfika, E., & Putra, G. M. (2025). Analisis Kualitas Sarang Burung Walet Menggunakan Metode Fuzzy Tsukamoto. *Jurnal Teknologi Informasi dan Ilmu Komputer*, 12(2), 391-398.
- Amir, M. S. (2017). *Ekonomi Internasional*. Jakarta: PPM.
- Ardiyanti, S. T., Pratiwi, R. A., Gunadi, D., & Amalia, S. (2025). Analisis Identifikasi Produk Primer Unggulan Ekspor Indonesia dengan Menggunakan Pendekatan Indeks Komposit. *Cendekia Niaga*, 9(1), 83-93.
- Badan Pusat Statistik. (2024). *Statistik Ekspor Indonesia 2024*. Jakarta: BPS.
- Brown, C. R., & Hannebaum, S. L. (2022). Birds of a feather flock together: Extent of long-term consistency of colony-size choice in cliff swallows. *Frontiers in Ecology and Evolution*, 10, 860407.
- Direktorat Jenderal Bea dan Cukai. (2024). *Data Kepabeanaan Ekspor dan Impor Indonesia*. Jakarta: Kementerian Keuangan Republik Indonesia.
- Djamal, R. E., Kalangi, L., & Mintalangi, S. S. (2026). Analysis of the Impact of Swallow's Nest Tax on Local Revenue in the City of Bitung. *Journal of Finance and Business Digital*, 5(1), 53-72.

- Fridayani, H. D., Hakim, M. L., Hanif, N. A., & Darumurti, A. (2024). Indonesian MSMEs toward the global market: challenges and future agenda planning. *Available at SSRN 4783792*.
- Fu, G. J., & Wang, H. (2025). Mapping transnational flow of C-dramas through cultural assemblages: platformized audiencing as living practices. *Global Media and China*, 20594364251349860.
- Hadi, A. A. A., Ghazali, P. L., Foziah, N. H. M., Razak, R. A., & Arifin, J. (2022). A review paper on the new business factors for the Malaysian edible bird nest swiftlet ranching industry. *The Journal of Management Theory and Practice (JMTP)*, 3(1), 62-66.
- Kauzálová, T., Tomášek, O., Mulder, E., Verhulst, S., & Albrecht, T. (2022). Telomere length is highly repeatable and shorter in individuals with more elaborate sexual ornamentation in a short-lived passerine. *Molecular Ecology*, 31(23), 6172-6183.
- Krugman, P. R., Obstfeld, M., & Melitz, M. J. (2018). *International Economics: Theory and Policy* (11th ed.). New York: Pearson.
- Maharani, R. W., Wijaya, R. S., & Marseto, M. (2024). Potensi dan Daya Saing Ekspor Sarang Burung Walet Indonesia di Pasar China. *Jurnal Ilmiah Wahana Pendidikan*, 10(15), 630-639.
- Mas'ud, R., Azizurrohmah, M., Hamim, K., Elbadriati, B., & Supiandi, S. (2022). Perspective of Small Medium Enterprises in West Nusa Tenggara on export plans. *Journal of Enterprise and Development (JED)*, 4(1), 180-187.
- Masrur, M., Solikhin, S., Churum, M. W. S., Abdillah, M. Z., & Putra, T. W. A. (2025). A Web-Based Forecasting Approach to Estimating the Number of Low-Income Households Eligible for Social Food Aid Using Holt's Double Exponential Smoothing. *Register: Jurnal Ilmiah Teknologi Sistem Informasi*, 11(2), 91-105.
- Míčková, K., Tomášek, O., Jelínek, V., Šulc, M., Pazdera, L., Albrechtová, J., & Albrecht, T. (2023). Age-related changes in sperm traits and evidence for aging costs of sperm production in a sexually promiscuous passerine. *Frontiers in Ecology and Evolution*, 11, 1105596.
- Muslim, M., Ridwan, M., & Batubara, M. (2023). Determination of Agricultural Exports in North Sumatra. *Indonesian Interdisciplinary Journal of Sharia Economics (IJSE)*, 6(3), 1467-1499.
- Nash, K. L., Atminarso, D., Blythe, J., Chadijah, A., Astuti, S. S., Djoko Utomo, A., ... & Wibowo, A. (2026). The sleeping giant of Kalimantan: A review of fish and fisheries of the peatlands. *Reviews in Fisheries Science & Aquaculture*, 34(2), 258-293.
- Pangestu, I. R. W. (2026). Impact of the 2019 Revision of China's Food Safety Law on the Indonesian Porang Industry. *Budi Luhur Journal of Strategic & Global Studies*, 4(1), 80-94.
- Rahmawati, D., Purnomo, S. H., & Marwanti, S. (2022). Export performance of Indonesian Swallow's Nest commodities in main destination countries. *Scientific Horizons*, 25(12), 90-101.
- Salvatore, D. (2019). *International Economics* (13th ed.). Hoboken, NJ: Wiley.
- Smith, K. N., Cox, W. A., Miller, K. E., & Plussa, L. L. (2023). Ordinal date and tree diameter influence Swallow-tailed Kite (*Elanoides forficatus*) nest survival. *Journal of Raptor Research*, 57(3), 434-443.
- Sonani, N., Islami, V., Sukayat, H., binti Nadzri, S., & Rusdian, S. (2025). The Role of Product Innovation and Local Culture in Strengthening Marketing Strategy and Driving Economic Growth of MSMEs. *Jurnal Aplikasi Manajemen*, 23(2), 391-409.
- Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Tambunan, T. T. H. (2018). *Perdagangan Internasional dan Aplikasinya di Indonesia*. Jakarta: Ghalia Indonesia.
- Tamzil, M. H. (2026). Review Article on Swiftlet: Biological Overview, Nest Production, Benefits, and Economic Potential. *Jurnal Biologi Tropis*, 26(2), 1342-1350.