



UDC 338.4

DOI: 10.48077/scihor.25(12).2022.90-101

## Export performance of Indonesian Swallow's Nest commodities in main destination countries

Dyah Rahmawati<sup>\*</sup>, Sutrisno Hadi Purnomo, Sri Marwanti

Sebelas Maret University  
57126, 36A Ir. Sutami Str., Surakarta, Indonesia

### Article's History:

Received: 08/20/2022

Revised: 11/08/2022

Accepted: 12/14/2022

### Suggested Citation:

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.

**Abstract.** The trend of increasing exports of Indonesian swallow's nests and the high market potential shown by increased consumption requires Indonesia as one of the main producers of swallow's nests to be able to seize the existing market opportunities. This study aims to determine the export performance of Indonesian swiftlet nests in the main destination countries. The method used in this research is Constant Market Share. The secondary data used is time series data collected from 2011 to 2020. Based on Constant Market Share analysis, it was stated that the commodity of swallow's nest tended to be in demand in the international market compared to other types of commodities. Export quantity is sufficient to meet market demand and market requirements in export destination countries. The results show that Indonesia has been able to market the swallow's nest commodity in countries with high demand, namely China, which is indeed the largest importer of swallow's nest in the world. The swallow's nest commodity has great potential to increase exports and Indonesia is a strong competitor as an exporter in three countries, China, the United States and Vietnam. This research material has practical value for the Indonesian government to increase trade cooperation in the context of market expansion to maintain Indonesia's position as a major exporter and the need for cooperation with domestic producers through efforts to expand market access, training and production assistance, increasing innovation and technology

**Keywords:** constant market share, product composition, distribution, competitiveness, agricultural sector



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

<sup>\*</sup>Corresponding author

## INTRODUCTION

Divergences in the geographical conditions of a country result in those in the natural resources owned, so it has an impact on differences in the leading commodities cultivated in each country. International trade encourages opportunities for each country to carry out export and import activities by removing various existing barriers. Increased exports can provide a stimulus to domestic demand which has an impact on the growth of large industries in a country. It is important to know the performance of export activities that have been carried out by a country to find out what obstacles and opportunities exist and can then be used as an effort to expand the export market.

The agricultural sector is one sector that can survive the impact of the COVID-19 pandemic. The Central Statistics Agency recorded an increase in exports of Indonesian agricultural commodities amid the COVID-19 pandemic by 14.02% in 2020. This figure was recorded as the largest increase in the period 2011 to 2020. Meanwhile, commodities that experienced a large increase in exports during the pandemic included swallow nests, medicinal plants, aromatics and spices, tobacco, and cloves (Central Bureau of Statistics, 2021). Harapuspa and Fitriani (2018) and Ali (2017) note that swallow's nest is the result of swallow saliva, which currently has a high economic value and is therefore cultivated. Swallow's nest is a commodity from the livestock sub-sector that is starting to become a new priority in Indonesia's export goals. Chok *et al.* (2021) states that swallow's nest is rich in protein, essential amino acids, important trace elements and basic sugars necessary for human biological functions. Swallow's nest also has anti-inflammatory effects and antioxidant properties, which may serve as a new alternative treatment for neurodegenerative diseases caused by oxidative stress, such as Alzheimer's and Parkinson's diseases.

In the observation period from 2011 to 2020 (Tai *et al.*, 2020), swallow's nest still ranks with the highest export value in livestock export commodities. Indonesia is the largest exporter of swallow's nest products in the world. According to UN Comtrade (2022), the total value of world exports in 2020 is 982.2 million USD. At the same time, Indonesia accounts for 540.7 million USD, which is about 55% of the total value of world exports. The upward trend of Indonesian swallow nest exports and the high market potential shown by increasing consumption requires Indonesia, as one of the major swallow nest producers, to be able to take advantage of existing market opportunities. Kamaruddin *et al.* (2019) indicate that the high price of swallow nest and the increasingly limited resources of swallow nest collected from the wild have prompted the community to increase swallow nest production by developing swallow rearing using swallow houses.

According to the signed protocol (The Ministry of Commerce, 2012), Indonesia can directly export swallow

nests to China without transit through a third party. The export of swallow nests to China may increase from 50% to 100%. With the signed protocol, swallow nest has the opportunity to become one of Indonesia's top 10 non-oil and gas export products. The Ministry of Commerce (2012) predicts that China will benefit from lower prices in the domestic market as there are no third party fees, which will increase market demand. Challenges in the form of changes in the international environment, especially in the trading system with the liberalization of the economy, have led to increased competition, including in the "swallow's nest" market. Sukhri (2018) proved that in a free trade environment, countries with higher comparative advantage and competitive advantage will have a greater ability to exist, even to penetrate and dominate the international market. A country will benefit from international trade if it specializes in production and exports goods that it produces more productively and imports goods that the country produces relatively less or that are not productive.

Taj & Wani (2019) and Crespo & Fontoura (2018) point out that export performance reflects the specific behavior of an economy in using its resources and capabilities in the international context at a given point in time. Improving export performance is currently a priority for companies competing in the economic environment and an integral factor in the country's economic growth. Therefore, this study aims to analyze the export performance of Indonesian swallow nests in the main destination countries. The novelty of this study is to define the object of study where Indonesia is the largest producer of swallow nests in the world with increasing exports in the last few years, and in 2021, the Ministry of Trade together with the Ministry of Agriculture promotes the export of swallow nests to the main destination countries. For this reason, it is necessary to analyze Indonesia's export performance to make this swallow's nest a great Indonesian product that can contribute more to the country's foreign exchange.

## MATERIALS AND METHODS

The basic method used in this research is the descriptive analytical method which is a research method by collecting data according to the truth, then the data is compiled, processed, and analyzed to be able to provide an overview of the existing problems. Analytical descriptive research takes problems or focuses on problems as they are when the research is carried out, the research results are then processed and analyzed to conclude (Sugiyono, 2014). The data used in this study are included in the type of secondary data. The form of secondary data is used in the form of time series data or time series with the period 2011-2020. Data were obtained from the United Nations Commodity Trade Statistics Division (UN COMTRADE), the Food and Agriculture Organization (FAO), the Central Statistics Agency (BPS),

the Ministry of Trade, the International Trade Center (ITC), and several other supporting literatures.

**Data analysis method.** Constant Market Share analysis is a decomposition method that was applied for the first time in international trade flows (Simonis, 2009). The use of the CMS model is motivated by the possibility that a country's exports during a certain period experience changes to the world as standard growth (Permatasari and Rustariyuni, 2015). The CMS model explains the performance of export growth into several components, including standard growth, the effect of product composition, the effect of market distribution, and the effect of competitiveness (Kaur and Nanda, 2017). Based on the above terminology, the formulation used in the CMS analysis is described as follows.

**Standard growth.**

$$g = \frac{W(t) - W(t-1)}{W(t-1)} \quad (1)$$

$$gi = \frac{W(t)i - W(t-1)i}{W(t-1)i} \quad (2)$$

$$gij = \frac{W(t)ij - W(t-1)ij}{W(t-1)ij} \quad (3)$$

Where  $g$  = Growth in export standards of all world commodities;  $gi$  = The growth of the world's swiftlet nest commodity export standards;  $gij$  = Standard growth of swiftlet nest commodity exports to country  $j$ ;  $W(t)$  = Total export value of all world commodities in year  $t$  (US\$);  $W(t)i$  = Total export value of the world swallow nest commodity in year  $t$  (US\$);  $W(t)ij$  = The total value of the world swallow nest commodity exports to country  $j$  in year  $t$  (US\$).

The standard growth parameter shows the export growth standard of the products of countries in the world. Exports of Indonesia's competitor countries can be seen through this growth analysis. If the standard of export growth is higher, Indonesia's export performance will be better (Suhana, et al. 2016). Vice versa, if standard export growth is lower than Indonesia's export growth, importing countries show Indonesia's export performance is worse.

**Product composition effect.**

$$\frac{\sum i(gi-g)E(t-1)i}{E(t-1)i} \quad (4)$$

Where  $gi$  = Standard growth of global swiftlet nest commodity exports;  $g$  = Growth in export standards of all world commodities;  $E(t-1)i$  = The total value of a country's exports of bird's nest commodities to the world in year  $t-1$  (US\$);  $E(t-1)$  = The total value of exports of all commodities of a country to the world in year  $t-1$  (US\$).

The product composition effect indicates whether a country has concentrated on a rapidly growing commodity market. The effect parameter of this product composition can be positive or negative. The positive

parameter in the product composition explains that Indonesia is able to take advantage of the export opportunities for swallow nest commodities (Jamilah et al., 2022). If the export growth of Indonesian swallow's nest products to the importing country is higher than the growth of imports of all products by the importing country, it means that the effect of the composition of Indonesian swallow's nest products in the importing country will be positive. Likewise, if the opposite occurs, then the composition effect is negative.

**Market distribution effect.**

$$\frac{\sum i \sum j (gij - gi) E(t-1)ij}{E(t-1)} \quad (5)$$

Where  $gij$  = Standard growth of swiftlet's nest commodity exports to country  $j$ ;  $gi$  = The growth of the world's swiftlet nest commodity export standards;  $E(t-1)ij$  = The total value of exports of bird's nest commodities from a country to country  $j$  in year  $t-1$  (US\$);  $E(t-1)$  = The total value of exports of all commodities of a country to the world in year  $t-1$  (US\$).

The market distribution effect measures export performance by analyzing the gain or loss in the country's exports of concern as a result of changes in the relative size of the export market. The market distribution effect parameter can be positive or negative. The parameter is positive if the exporting country distributes its market to the center of demand growth. If the export of Indonesian swallow's nests to countries with higher import growth from Indonesia, the market distribution effect will be positive. Otherwise, the market distribution effect will be negative.

**Competitiveness effect.**

$$\frac{\sum i \sum j (E(t-1)ij - E(t-1)ij) - gij E(t-1)ij}{E(t-1)} \quad (6)$$

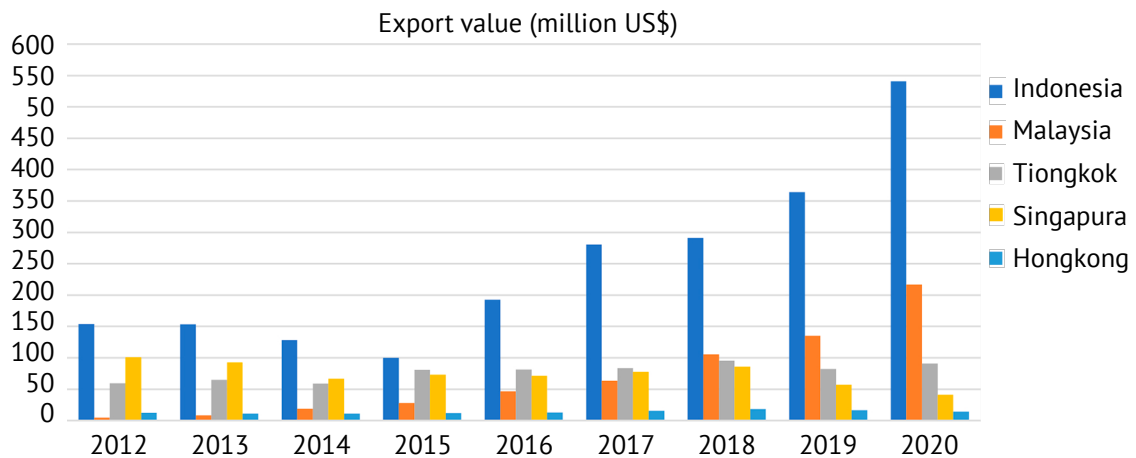
Where  $E(t)ij$  = The total value of exports of bird's nest commodities from a country to country  $j$  in year  $t$  (US\$);  $E(t-1)ij$  = The total value of exports of bird's nest commodities from a country to country  $j$  in year  $t-1$  (US\$);  $gij$  = Standard growth of swiftlet nest commodity exports to country  $j$ ;  $E(t-1)$  = The total value of exports of all commodities of a country to the world in year  $t-1$  (US\$).

The positive sign of competitiveness effect means that Indonesia's exports have increased, assuming the observed commodity contributes to the increase in exports and the country is a strong competitor. While the competitiveness effect is negative, it means that Indonesia's exports have decreased, assuming the observed commodities contributed to the decline in exports and the country is a weak competitor.

## RESULTS AND DISCUSSION

**World swallow's nest exporting countries.** The highest exporting countries for swallow's nests in the world which are in the top five based on export value are

Indonesia, Malaysia, China, Singapore and Hong Kong. These five countries have different export markets. The graphs of changes in export values for the five countries are presented below (Fig. 1).



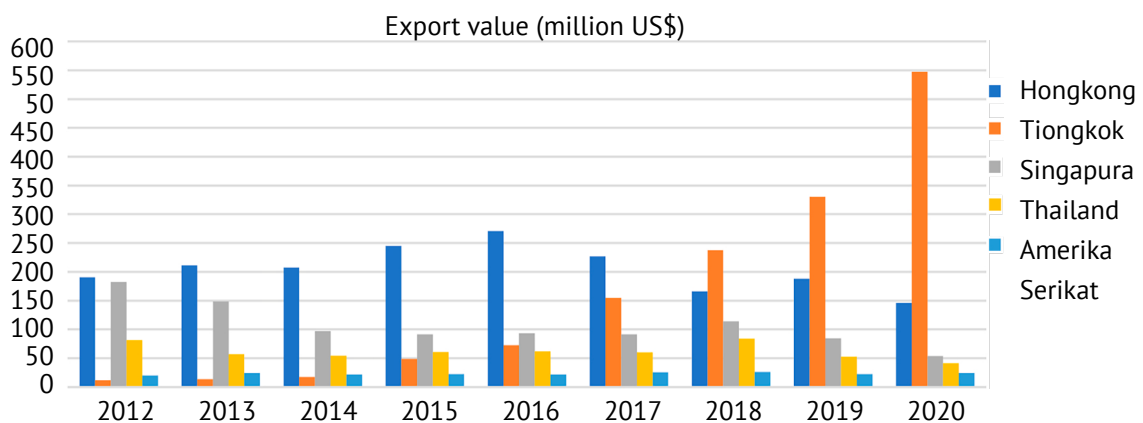
**Figure 1.** Export value of world swallow's nest exporting countries

**Source:** compiled by the authors

The graph above illustrates that the export value of Indonesian swiftlet nests in the period 2012 to 2020 still leads with a considerable difference with other exporting countries, namely Malaysia, China, Singapore and Hong Kong. Among the four other swallow nest exporting countries, only Malaysia has shown an increasing trend, although its position is still far below the export value of Indonesian swallow nests. The export value of China's swallow nests can be said to be the most constant among other countries because it is always in the range of an export value of 50-100 million

US\$. The Chinese and Indonesians both hold the same view of the business side of swallow nest farming that it is a good and lucrative business (Leonardo *et al.*, 2019).

**World swallow's nest importing countries.** The highest importing countries for swallow's nest in the world which are in the top five based on import value are Hong Kong, China, Singapore, Thailand and the United States. These five countries have different export markets (Fig. 2). The graphs of changes in import values for the five countries are presented below. Import values are presented in million US\$.



**Figure 2.** Import value of world swallow's nest importing countries

**Source:** compiled by the authors

The main importing countries of the world's swiftlet nests are China, Hong Kong, Singapore, the United States and Vietnam. Countries that have the potential to become world swallow nest importers are Thailand, Canada and Australia. In the period 2012-2017, Hong Kong was the largest importer of swallow's nests in the world, but since 2018 this position has been replaced

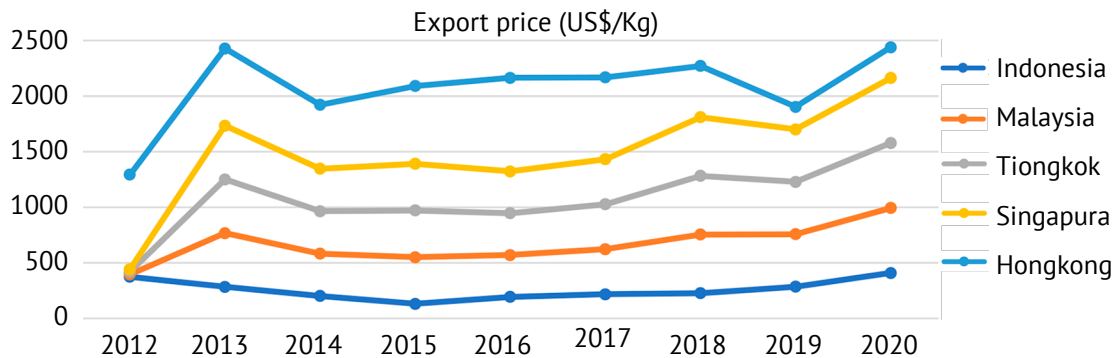
by China. The world's second largest importer of swallow's nest from 2012 to 2016 was Singapore, but since 2017 this position has been replaced by China and Hong Kong.

Swallow's nest is very popular for the people of Hong Kong and China because according to their tradition this commodity can be used as an ingredient for

longevity. This is related to the content in the swallow's nest in the form of nutrients such as carbohydrates, fats, and proteins which are very good for the regeneration of body cells (Dewi, 2020; Roh *et al.*, 2011). Generally, the people of Hong Kong and China consume swallow's nest in the form of soup. Swallow's nest soup contains much higher antioxidant activity compared with chicken and fish soup when served in the same way (Lee, 2014). Swallow's nest is also widely processed into drinks and incorporated into cosmetic mixtures as well as the main ingredients in skin care products. Traditional Chinese

medicine claims that the edible bird's nest serves as a remedy for ailments such as tuberculosis, asthma, skin problems, and stomach ailments (Golden Nest Inc, 2022; Ma and Liu, 2012; Careena *et al.*, 2018).

Indonesian Swallow's Nest Export Price. Each exporting country sells swallow's nests at different prices. This is because the exported product must undergo many processes and many costs that will affect the selling price. The graph of changes in the export price of swallow's nests by major exporting countries in the international market is presented below (Fig. 3).



**Figure 3.** Graph of changes in export price of swallow's nest in the international market, 2012-2020

**Source:** compiled by the authors

Product prices can be related to export performance. Studies show that product prices will have a negative relationship with export performance. When product prices rise, export performance will depreciate. However, if there is a decrease in product prices, export performance will increase (Tangjitmanngamkul, 2019). The export price of Indonesian swallow's nest commodities is in the lowest position when compared to its four competing countries. In this case, the amount of production has not been proportional to the demand figure or the supply and demand are not yet on a balance. So that the price of swallow's nest is always stable, never experiencing a drastic price decline. This is also influenced by the low yields, while the production and maintenance costs are so high. So that it helps raise the price of swallow nests, both raw and processed food (Risaad, 2021; Efendi *et al.*, 2022). The chart of export prices for the five main exporters of swallow's nests has almost the same trend. Hong Kong, Singapore and China have high export prices because they also import from Indonesia at lower prices and then re-export with the implementation of SPS (Sanitary and Phytosanitary), TBT (Technical Barriers to Trade), and PSI (Preshipment Inspection) which is more structured. Export prices for Indonesian swallow's nests began to increase in 2015. This was due to a reciprocal agreement between Indonesia and China which provided an opportunity for Indonesia to export directly without going through third parties, so that profits were no longer shared with countries that acted as third party in matters of trade in the swallow's nest (Ministry of Trade, 2012).

There are two options if Indonesia exports through a third party. First, selling its swallow's nest to Malaysia which has the consequence of decreasing prices because Malaysia is also one of the swallow's nest players in China. Second, sell it to Hong Kong, which applies a re-export tax fee. China is forcing Indonesia to switch exports through Hong Kong by playing up health issues which can reduce prices to become much cheaper.

The China government also devalued the currency which resulted in a two-way win for China. First, the purchase transaction of raw swallow's nest in Hong Kong requires the use of the renminbi currency so that the price paid will be much cheaper. Second, when the China government can re-export the swallow's nest it imports, both aiming to be sold in the domestic market and the international market through a reduction in this currency, taxes and tariffs from the importing country will not affect the selling price so that it has better competitiveness (Ali, 2017).

The chart shows a decline in export prices from 2012 to 2015 because at that time Indonesia was being hit by the issue of an outbreak of bird flu (H5N1), even in 2013 China had rejected swallow nests from Indonesia because they were considered to not meet standards. Indonesia always makes efforts to improve export competitiveness by carrying out a lot of inspections on the production process of swallow's nests. The production process aims to maximize the amount of output using a certain number of inputs. The government is also trying to control the quality of the swallow's nest produced so

that it can meet the requirements according to the protocol signed with China as the main importer. Production activities are not only limited to the manufacturing process, but to the process of storage, distribution, transportation, packaging and finally the marketing process (Sari and Sudiana, 2022). Packaging also affects price setting, luxurious swallow nest packaging causes the price to be more expensive than ordinary packaging. Some manufacturers invest in packaging for a reason. The purpose of packaging is not only to protect the product but also to promote it (Shukri *et al.*, 2018).

**Constant market shares analysis.** The CMS method was chosen to measure competitiveness because this CMS method can determine the most significant aspects that

affect the export growth of each product. CMS can display assessments on the composition of export products, market distribution, and competitiveness. In addition, CMS can compare national export growth relative to world average growth (Trade Analysis and Development Agency, 2013).

The export growth of swallow's nest in the period 2011 to 2020 is strongly influenced by the growth of demand in the importing country (Table 1). A positive export growth value can be obtained if the percentage value of the total increase in the world's swallow's nest exports in each period is positive or it can be said that the total export value of the world's swallow's nest in the second year must be greater than the export value of the world's swallow's nest in the first year.

**Table 1.** Swallow's nest export standard growth

Year	Global commodity export standard growth	Global swallow's nest export standard growth	Indonesian swallow's nest export standard growth
2011	0.201	0.320	0.200
2012	-0.003	-0.185	-0.175
2013	0.040	-0.006	-0.001
2014	-0.005	-0.095	-0.163
2015	-0.126	0.013	-0.219
2016	-0.028	0.311	0.921
2017	0.102	0.321	0.456
2018	0.098	0.138	0.039
2019	-0.035	0.059	0.250
2020	-0.069	0.302	0.484
Mean	0.018	0.118	0.179

**Source:** compiled by the authors

The export growth value of Indonesian swallow's nests in 2011-2020 fluctuated where the average was still above the world's average export growth of swallow's nests with an average export growth of Indonesian swallow's nests of 0.179 while the average export growth the world's swallow's nest is 0.118. So it can be said that the increase in the export value of Indonesian swallow's nests in the world market is higher than the increase in the total export value of the world's swallow's nests. On the other hand, the export growth of swiftlet nests both worldwide and in Indonesia was particularly higher than the export growth value of all world commodities. This illustrates that the bird's nest commodity is an export commodity that is highly considered in the international market.

The issue of a bird flu (H5N1) outbreak that was intense in 2012-2015 greatly affected the demand for Indonesian swallow nest exports, even in 2013 China had rejected swallow nests from Indonesia because they were deemed to not meet standards and had to re-standardize. This greatly impacted export growth in those years considering that China is one of the main export markets for Indonesia's swiftlet nest

commodities. This fact is in line with the decline in export prices which also occurred in the period 2012 to 2015. Although China has a high demand for swallow's nests, China provides a quota limit for each Indonesian swallow's nest exporter company, which is the largest swallow's nest producer in the world (Saputra *et al.*, 2022).

In addition, the negative value of Indonesia's swallow nest export growth in 2012 to 2015 was also influenced by policies issued by the government related to export duties which affected the export growth of swallow's nests in that period (Table 2). These policies include the Regulation of the Minister of Finance No. 128/PMK.011/2011 concerning the determination of export goods subject to export duties and export duty rates replacing the Regulation of the Minister of Finance No. 67/PMK.011/2010 (Ulfah *et al.*, 2019). In its development, the existence of this regulation is considered by many to be ineffective in increasing the added value and competitiveness of domestic swiftlet nests because in the future it is hoped that Indonesia will not only export raw swiftlet nests, but also its derivative products that have added value.

**Table 2.** World swallow's nest export growth in main destination countries, 2011-2020

Year	World swallow's nest export growth in destination countries				
	Hong Kong	China	Singapore	USA	Vietnam
2011	0.215	0.490	0.164	-0.122	-0.837
2012	-0.103	-0.726	-0.295	0.210	8.630
2013	0.245	0.089	-0.141	0.049	3.309
2014	-0.033	0.724	-0.352	-0.042	0.508
2015	-0.245	1.290	-0.432	0.080	-0.129
2016	1.132	0.772	-0.069	0.206	0.290
2017	0.120	1.108	-0.390	0.116	0.971
2018	-0.313	0.474	1.109	0.062	0.669
2019	0.040	0.450	0.264	-0.201	-0.550
2020	0.468	0.697	-0.411	0.315	-0.829
Mean	0.153	0.537	-0.055	0.067	1.203

**Source:** compiled by the authors

Based on the results of the analysis, it can be seen that the export growth of the world's swallow's nests in the main destination countries in the period 2011-2020 is very volatile (Table 3). This is influenced by the policies and demands of the importing country. Among the five main export destinations for swallow's nests, China has the most stable export growth value and only once was negative in 2012. Meanwhile, Vietnam is the main destination country with the highest

average export growth with a value of 1,203. Finicelli *et al.* (2012) examined the evolution of emerging market economies at disaggregated level and found out that among the emerging economies, China has a strong export growth, increasing its market shares across sectors and destinations due to its competitiveness, while industrial countries benefited from specialization in fast-growing sectors (high-tech) or destinations (Asia).

**Table 3.** Export growth of Indonesian swallow's nest in main destination countries, 2011-2020

Year	Export growth of Indonesian swallow's nest in main destination countries				
	Hong Kong	China	Singapore	USA	Vietnam
2011	0.261	1.610	0.098	0.114	-1.000
2012	0.086	-0.964	-0.271	-0.017	0.000
2013	0.145	-0.673	-0.159	0.115	1159.828
2014	-0.026	-1.000	-0.384	-0.086	0.898
2015	-0.343	0.000	-0.479	0.011	-0.131
2016	1.710	1.175	-0.115	0.309	0.102
2017	0.127	1.882	-0.550	0.268	1.948
2018	-0.333	0.366	1.448	-0.037	0.345
2019	-0.021	0.559	0.520	0.012	-0.585
2020	-0.082	0.902	-0.402	0.241	-0.886
Mean	0.152	0.386	-0.029	0.093	116.052

**Source:** compiled by the authors

The table above illustrates the growth value of Indonesian swallow nest exports in the main destination countries where the value is also very volatile (Table 4). There is a very striking difference in value for the destination country of Vietnam in 2013 where the value of export growth reached 1159,828. This is because in 2011 Indonesia did not export to Vietnam at all, but

then in 2012 was only able to export with a small nominal as the beginning of entering a new market and then in 2013 was able to export with a fairly high nominal of more than 1000 times compared to the previous year, so of course Vietnam has the highest average growth as an export destination country with swallow nest commodities from Indonesia. The increasing growth of

swallow's nest exports indicates that Indonesia is still able to take advantage of the world's export growth of

swallow's nests so that it is considered a strong competitor by its competitor countries (Ulfah *et al.*, 2019).

**Table 4.** Effects of Indonesian swallow's nest product composition, 2011-2020

Year	Product composition effect
2011	0.00012
2012	-0.00017
2013	-0.00004
2014	-0.00008
2015	0.00010
2016	0.00023
2017	0.00029
2018	0.00007
2019	0.00015
2020	0.00081
Mean	0.00015

**Source:** compiled by the authors

The effect of product composition measures the change in exports as a result of changes in the composition of Indonesian swallow nest export products in total imports in the importing country. The effect of product composition is positive in 2011, and from 2015 to 2020, it can be said that Indonesia's exports are distributed to all types of goods whose demand grows relatively faster in importing countries. The average value of the composition effect of swallow nest products for the period 2011 to 2020 based on CMS analysis is positive at 0.00015, indicating that swallow nest commodities tend to be in demand in the international market compared to other types of commodities and the export value tends to increase compared to the total exports of a country. Based on these results, it can also be concluded that the export quantity

of swallow's nests is sufficient to meet market demands and market requirements in the export destination countries (Sa'idy, 2013).

The positive effect of product composition can increase exports of Indonesian swallow nests (Table 5). This is in line with the main point of the theory of comparative advantage, that specialization in producing a certain product that has an advantage will encourage the country to export that product. Thus, specialization in a product will provide benefits and advantages for countries that carry out international trade (Ramadhani and Santoso, 2019). The positive effect of product composition can also mean that Indonesia specializes in exported products, in this case the exported swallow's nest can be accepted by the people of the importing country (Simangunsong and Wulandari, 2016).

**Table 5.** Market distribution effect of Indonesian swallow's nest commodity in main destination countries, 2011-2020

Year	Market distribution effect				
	Hong Kong	China	Singapore	USA	Vietnam
2011	-0.00003	0.00001	-0.00009	-0.00002	0.00000
2012	0.00002	-0.00003	-0.00006	0.00002	0.00000
2013	0.00008	0.00000	-0.00006	0.00000	0.00000
2014	0.00002	0.00000	-0.00009	0.00000	0.00001
2015	-0.00010	0.00000	-0.00010	0.00000	-0.00001
2016	0.00024	0.00005	-0.00005	-0.00001	0.00000
2017	-0.00016	0.00019	-0.00009	-0.00001	0.00003
2018	-0.00035	0.00020	0.00005	-0.00001	0.00006
2019	-0.00001	0.00030	0.00002	-0.00002	-0.00009
2020	0.00009	0.00052	-0.00013	0.00000	-0.00007
Mean	-0.000020	0.000124	-0.000060	-0.000005	-0.000007

**Source:** compiled by the authors

A positive distribution effect value illustrates that a country has marketed certain commodities in countries that have high demand for these commodities. Meanwhile, if the value of the distribution effect is negative, then a country is considered not to have marketed the commodity to countries with high demand (Fitriana *et al.*, 2014). The average distribution effect of the Indonesian swallow's nest market in the period 2011 to 2020 is only positive for China's destination countries. This is because Indonesia is the largest exporter in China for swallow nest commodities. Based on these results, Indonesia is deemed to have been able to market swallow

nest commodities in a country that has a high demand for this commodity, namely China (Sa'idy, 2013).

The market distribution effect also illustrates Indonesia's ability to increase swallow nest exports in markets that are always growing or in markets that are stagnant. The majority of the average market distribution effect values for Indonesian swallow nest commodities in the main destination countries are negative (Table 6). So that it can be interpreted that Indonesia does not concentrate its exports in markets that are experiencing fast growth but is only concentrated in more stagnant areas (Satryana and Karmini, 2016).

**Table 6.** Competitiveness effect of Indonesian swallow's nest commodities in main destination countries, 2011-2020

Year	Competitiveness effect				
	Hong Kong	China	Singapore	USA	Vietnam
2011	0.00001	0.00003	-0.00004	0.00001	0.00000
2012	0.00005	-0.00001	0.00001	-0.00001	0.00000
2013	-0.00003	0.00000	-0.00001	0.00000	0.00002
2014	0.00000	0.00000	-0.00001	0.00000	0.00001
2015	-0.00004	0.00009	-0.00001	0.00000	0.00000
2016	0.00017	0.00004	-0.00001	0.00001	-0.00001
2017	0.00001	0.00019	-0.00002	0.00001	0.00004
2018	-0.00002	-0.00007	0.00002	-0.00001	-0.00004
2019	-0.00003	0.00008	0.00003	0.00002	-0.00001
2020	-0.00028	0.00027	0.00000	-0.00001	0.00000
Mean	-0.000016	0.000062	-0.000004	0.000002	0.000001

**Source:** compiled by the authors

China, the United States, and Vietnam have an average value of the competitiveness effect that is positive. This means that swallow's nest commodities have great potential to increase exports and Indonesia is a strong competitor as an exporter in the three countries. A positive competitive effect can indicate a decrease in the price of an Indonesian commodity, namely swallow's nest, against world prices (from other exporting countries) for the same commodity. This could mean that the price of Indonesian swallow's nest fell, while the world price of swallow's nest remained or in other words the rate of increase in world prices was higher than the rate of increase in Indonesia's exports.

This competitiveness effect can be influenced by changes in price factors and non-price factors (such as improving quality, product development, improving marketing systems, changing consumer preferences and tastes, increasing exporters' ability to meet export demand quickly, and so on) (Dyadkova & Momchilov, 2014). The average competitive effect of Indonesian swallow's nest commodities in China, the United States, and Vietnam is positive, so it can be said that exports in these three countries occur because of superior quality or better prices, while the average effect of competitiveness

in Hong Kong and Singapore have negative values, so that it can indicate that the competitiveness of swallow's nests is weak when compared from the aspect of quality and price (Aji *et al.*, 2017). This negative value reflects a failure to maintain market share associated with an increase in relative prices (Kellman *et al.*, 2003). This is relevant to research from Katepan *et al.* (2012) which identified the factors affecting okra exports using the Porter's Diamond model. This study identified 84 factors that could affect okra exports from Thailand to Japan. One of the most powerful factors is the price of the product itself. This study shows that product price can be an important factor that makes buyers make decisions.

Export performance can be said to be successful when the export activities carried out are able to take advantage of existing opportunities and are able to overcome threats and obstacles properly. Indonesia already holds a great opportunity in dominating the export market for swallow's nests, this is due to the potential of supporting resources and the price offered is still far ahead compared to other exporters. The obstacle that is still felt by Indonesia in the export of swallow's nests is the lack of standardization applied by Indonesia, which is a major consideration for importing countries.

Standardization is a very important aspect because it relates to consumer safety and health. Against the backdrop of the rapid development of the swiftlet nest industry, relevant departments in many countries have taken active measures. This is in line with the statement of Ya'acob *et al.* (2021) in his research which describes that Malaysia issued a national standard MS 2334:2011 "Edible Bird Nest (EBN) Specification" in 2011 (Department of Standards Malaysia, 2011) and Thailand issued a national standard TAS 6705-2014 "Bird's Nest" in 2014 (National Bureau of Agricultural Commodity and Food Standards, 2014). Indonesia does not have a specific national standard for swallow's nests, Indonesia only has documents regarding procedures for good manufacturing practices of edible bird nests and animal quarantine measures for importing or exporting bird nests into or outside the territory of the Republic of Indonesia. This obstacle can be a threat to Indonesia in developing its potential swallow nest market. According to Wellner & Lakotta (2020), business threats can limit an industry's earning potential. High returns in business attract new companies with new capabilities and increased capacity that are competing for market share, putting pressure on prices and costs. General variables that become the main obstacles for swallow nest exporters are government policies, economies of scale and capital.

The potential possessed by the Indonesian swallow's nest can be optimally utilized as an effort to maintain its superior position as the largest exporter by increasing the competitiveness of the swallow's nest in the form of increasing production accompanied by improving product quality and food safety, while still paying attention to production cost efficiency. Indonesian producers of swallow's nests need to improve hygiene and make the best use of land so they can continue to produce export quality swallow's nests that meet the requirements for importing products from each importing country so that Indonesia is able to export as much as possible without going through other countries as a third party. The Indonesian government needs to increase trade

cooperation with other countries than the main importers of swallow's nests in the hope of market expansion in order to maintain Indonesia's position as the main exporter of swallow's nest needs in the world. The government also needs to increase cooperation with swallow's nest producers by expanding market access, training and production assistance, increasing innovation and technology, as well as promoting efforts to export markets.

## CONCLUSIONS

The average value of the composition effect of the swallow's nest commodity for the period 2011 to 2020 based on Constant Market Share analysis is positive at 0.00015, indicating that the swallow's nest commodity tends to be in demand in the international market compared to other types of commodities and the quantity of exports is sufficient to meet market demand (market demand) and market requirements (market requirements) in the export destination country.

The average value of the distribution effect of the Indonesian swallow's nest market in the period 2011 to 2020 is only positive for the destination country of China, this means that Indonesia has been able to market the swallow's nest commodity in countries that have high demand for this commodity, namely China which is indeed the largest importer of swallow's nests in the world. China, the United States, and Vietnam have an average value of the competitiveness effect that is positive. This means that the swallow's nest commodity has great potential for increasing exports and Indonesia is a strong competitor as an exporter in these three countries.

There is a need to increase trade cooperation with other countries than importers to expand markets and increase cooperation with domestic producers through efforts to expand market access, assist production, increase innovation and technology. For further research, it is expected to be able to analyze what factors affect the export of swallow's nests to the global market so that the results obtained are more comprehensive.

## REFERENCES

- [1] Aji, R.V., Ishak, Z., & Mukhlis. (2017). Comparative analysis of cocoa bean export competitiveness between Indonesia, Ivory Coast and Ghana: RCA and CMS approaches. *Jurnal Ekonomi Pembangunan*, 15(2), 69-84. doi: 10.29259/jep.v15i2.8832.
- [2] Ali, H. (2017). Non-tariff barrier Tiongkok terhadap perdagangan sarang burung walet 2012-2015. *Jurnal Analisis Hubungan Internasional*, 6(1), 278-284.
- [3] Careena, S., Sani, D., Tan, S.N., Lim, C.W., Hassan, S., Norhafizah, M., Kirby, B.P., Ideris, A., Stanslas, J., Basri, H.B., & Lim, C.T.S. (2018). Effect of edible bird's nest extract on lipopolysaccharide-induced impairment of learning and memory in wistar rats. *Evidence-Based Complementary and Alternative Medicine*, 2018, article number 9318789. doi: 10.1155/2018/9318789.
- [4] Central Bureau of Statistics. (2021). *Analysis of export commodities 2013-2020 for the agricultural, industrial and mining sectors*. Jakarta: BPS.
- [5] Chok, K.C., Ng, M.G., Ng, K.Y., Koh, R.Y., Tiong, Y.L., & Chye, S.M. (2021). Edible bird's nest: recent updates and industry insights based on laboratory findings. *Frontiers in Pharmacology*, 12(1), article number 746656. doi: 10.3389/fphar.2021.746656.

- [6] Crespo, N., & Fontoura, M.P. (2018). *What determines the export performance? a comparative analysis at the world level*. Lisbon: School of Economics and Management.
- [7] Department of Standards Malaysia. (2011). *MS2334:2011: Edible-Bird Nest (EBN) specification*. Cyberjaya: Department of Standards Malaysia
- [8] Dewi, M.E. (2020). Benefits of edible bird nest consumption. *Jurnal Kedokteran Ibnu Nafis*, 8(2), 26-34.
- [9] Dyadkova, M., & Momchilov, G. (2014). *Constant market shares analysis beyond the intensive margin of external trade*. Bulgaria: Bulgarian National Bank.
- [10] Efendi, E., Sitompul, D.R.H., Sinurat, S.H., Ruben, R., Situmorang, A., Ziegel, D.J., Rahmad, J., & Indra, E. (2022). *Implementation of greedy algorithm for profit and cost analysis of swallow's nest processing dirty to finished products*. *INFOKUM*, 10(02), 849-858.
- [11] Ulfah, M., Ismono, R.H., & Murniati, K. (2019). The export performance of indonesia's palm oil in international market. *Jurnal Manajemen & Agribisnis*, 16(2), 140-150. doi: 10.17358/jma.16.2.140.
- [12] Finicelli, A., Sbracia, M., & Zhagini, A. (2012). A disaggregated analysis of the export performance of some industrial and emerging countries. *International Economics and Economic Policy Heidelberg*, 8(1), 23-24. doi: 10.1007/s10368-010-0174-8.
- [13] Fitriana, N., Tarumun, S., & Tety, E.E. (2014). Competitiveness analysis of indonesian cocoa beans in the international market. *Jurnal Online Mahasiswa*, 1(2), 2-12.
- [14] Golden Nest Inc. (2022). Bird's nest benefits: Nutrition facts of edible bird's nest. Retrieved from <https://goldennest.com/blogs/news>.
- [15] Harapuspa, A., & Fitriani, D. (2018). Analysis of factors affecting bird's nest exports in indonesia. *Jurnal Fokus Manajemen Bisnis*, 8(2), 150-162. doi: 10.12928/fokus.v8i2.1587.
- [16] Jamilah, J., Zahara, H., Kembaren, E.T., Budi, S., & Nurmala, N. (2022). Market share analysis and export performance of Indonesian crude palm oil in the EU market. *International Journal of Energy Economics and Policy*, 12(2), 218-225. doi: 10.32479/ijee.v12i2.12690.
- [17] Kamaruddin, R., Ismail, E., & Ahmad, S.A. (2019). *Key factors for the sustainable production of swiftlet birds' nest industry in Malaysia: A case study in Northern Peninsular Malaysia*. *Supply Chain Management*, 33(1), 724-733.
- [18] Katepan, P., Makhora, T., & Mankeb, P. (2012). *Factors affecting success for exporting Thai okra (Abelmoschus esculentus L. Moench) in the world market*. *King Mongkut's Agricultural Journal*, 30(3), 1- 12.
- [19] Kaur, A., & Nanda, P. (2017). *Competitiveness of India's manufactured exports: A constant market share analysis*. *Indian Journal of Economic & Business*, 2(2), 267-280.
- [20] Kellman, M., Roxo, T., & Shachmurove, Y. (2003). *South Africa's international competitiveness: A product level analysis. PIER Working Paper Archive 03-020*. University of Pennsylvania: Department of Economics.
- [21] Lee, K.S. (2014). *Effects of particle size and double boiling time on the antioxidant activities of bird nest soup (Collocalia fuciphaga)*. (Doctoral thesis, Universiti Kebangsaan Malaysia, Selangor, Malaysia).
- [22] Leonardo, C., Efferin, S., & Darmasetiawan, N.K. (2019). *An exploration of the cultural beliefs of the Indonesian and Chinese people in relation to the business of swallow farming*. *Calyptra*, 7(2). Retrieved from <https://journal.ubaya.ac.id/index.php/jimus/article/view/3420>.
- [23] Ma, F., & Liu, D. (2012). Sketch of the edible bird's nest and its important bioactivities. *Food Research International*, 48(2), 559-567. doi: 10.1016/j.foodres.2012.06.001.
- [24] *Ministry of Trade of the Republic of Indonesia*. (2012). *Export news xxii: 6. edible products of animal origin, Nesoi*. Jakarta: Ministry of Trade.
- [25] *National Bureau of Agricultural Commodity and Food Standards*. (2014). *TAS 6705-2014: bird's nest*. Bangkok: National Bureau of Agricultural Commodity and Food Standards.
- [26] Permatasari, I.G.A.I., & Rustariyuni, S.D. (2015). *Analysis of Indonesian cocoa bean export competitiveness in the ASEAN region 2003-2012*. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, 4(7), 855-870.
- [27] Ramadhani, T.N., & Santoso, R.P. (2019). Competitiveness analyses of Indonesian and Malaysian palm oil exports. *Economic Journal of Emerging Markets*, 11(1), 46-58. doi: 10.20885/ejem.vol11.iss1.art5.
- [28] Risaad, M., Syafari, R., Sompaa, A.T., Budhi, S., & Yunani, A. (2021). Community empowerment strategy in management of swallow's nest cultivation to increase regional original income in Kotabaru District. *International Journal of Politic, Public Policy and Environmental Issues*, 1(2), 70-79. doi: 10.53622/ij3pei.v1i02.23.
- [29] Roh, K.B., Lee, J., Kim, Y.S., Park, J., Kim J.H., Lee, J., & Park, D. (2011). Mechanisms of edible bird's nest extract-induced proliferation of human adipose-derived stem cells. *Evidence-Based Complementary and Alternative Medicine*, 2012, article number 797520. doi: 10.1155/2012/797520.
- [30] Sa'idy, I.B. (2013). Decomposition of growth in exports of textiles and textile products to the USA. *Journal of Economics and Policy*, 6(1), 10-16.

- [31] Saputra, D., Asihatka, P.F., & Sutanto, E.P. (2022). *Analysis of swallow nest export strategies from Indonesia to China with export restriction regulations*. In *Proceedings of the international conference on industrial engineering and operations management* (pp. 2658-2665). Istanbul: Istanbul Technical University.
- [32] Sari, P.D.J., & Sudiana, I.K. (2022). Analysis of competitiveness and factors affecting the export of Indonesian swallow's nests in the Hong Kong market. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, 11(1), 325.
- [33] Satryana, M.H., & Karmini, N.L. (2016). *Analysis of the export competitiveness of Indonesian tea to the ASEAN market for the period 2004-2013*. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, 5(5), 598-611.
- [34] Simangunsong, B.C.H., & Wulandari, R.A. (2016). Competitiveness analysis of Indonesia's pulp and paper products in a global market. *Jurnal Ilmu Teknologi Kayu Tropis*, 14(1), 88-98. doi: 10.51850/jitkt.v14i1.399.
- [35] Simonis, D. (2009). *Belgium export performance, a constant market share analysis*. Working paper 2-00, economic analysis and freedom. Brussels: Federal Planning Bureau.
- [36] Sugiyono. (2014). *Quantitative, qualitative and R&D research methods*. Bandung: Alfabeta.
- [37] Suhana, N., Kusumastanto, T., Adrianto, L., & Fahrudin, A. (2016). *Tuna industries competitiveness in the international market*. *AACL Bioflux*, 9(6), 1251-1258.
- [38] Sukhri, N.N.H.M., Nawati, N.M., Abdullah, A.M., & Man, N. (2018). *Consumer's perception on the quality of controversial contents in edible bird's nest products*. *Pertanika Journal of Scholarly Research Reviews*, 4(1), 1-9.
- [39] Tai, S.K., Hamzah, Z., Ng, Q.H., & Tan, C.S. (2020). Surface morphology study on unclean, commercial and bromelain treated edible bird nest (ebn) using scanning electron microscope. *IOP Conference Series: Materials Science and Engineering*, 932(012013), 1-3. doi: 10.1088/1757-899X/932/1/012013.
- [40] Taj, Z., & Wani, N.U.H. (2019). Evaluation of Afghanistan export performance: A constant-market-share analysis approach. *Kardan Journal of Economics and Management Sciences*, 2(2), 18-19. doi: 10.31841/KJEMS.2021.55.
- [41] Tangjitmanngamkul, J. (2019). A comparative analysis of Thai bird's nest export to Chinese Market. *European Journal of Business and Management*, 11(13), 70-71. doi: 10.7176/EJBM.
- [42] Trade Analysis and Development Agency. (2013). *Potpourri of coffee commodity info*. Jakarta: Ministry of Trade of the Republic of Indonesia.
- [43] UN COMTRADE. (2022). *United nations commodity trade statistics database*. Retrieved from <https://comtrade.un.org/data/>.
- [44] Wellner, S., & Lakotta, J. (2020). Porter's five forces in the German railway industry. *Journal of Rail Transport Planning & Management*, 14, article number 100181. doi: 10.1016/j.jrtpm.2020.100181.

## Показники експорту індонезійських товарів «Ластівчине гніздо» до основних країн призначення

Дьях Рахмаваті, Сутрісно Хаді Пурномо, Шрі Марванті

Університет Себелас Марет  
57126, 36A Ip. Sutami Str., Суракарта, Індонезія

**Анотація.** Тенденція до збільшення експорту індонезійських ластівчиних гнізд і високий ринковий потенціал, який демонструє збільшення споживання, вимагають від Індонезії як одного з основних виробників ластівчиних гнізд можливості скористатися наявними ринковими можливостями. Це дослідження має на меті визначити показники експорту гнізд індонезійського стрижа в основні країни призначення. У цьому дослідженні використовується метод постійної частки ринку. Використані вторинні дані – це дані часових рядів, зібрані з 2011 по 2020 рік. На основі аналізу постійної частки ринку було зазначено, що товар ластівчиного гнізда, як правило, користується попитом на міжнародному ринку порівняно з іншими видами товарів. Обсяг експорту є достатнім для задоволення ринкового попиту та вимог ринку в країнах призначення експорту. Результати показують, що Індонезія змогла продати товар із ластівчиного гнізда в країни з високим попитом, а саме в Тіонгкок, який справді є найбільшим імпортером ластівчиного гнізда у світі. Товар «ластівчине гніздо» має великий потенціал для збільшення експорту, і Індонезія є сильним конкурентом як експортер у трьох країнах: Китаї, США та В'єтнамі. Цей дослідницький матеріал має практичну цінність для уряду Індонезії, щоб збільшити торговельне співробітництво в контексті розширення ринку, щоб зберегти позицію Індонезії як великого експортера та потребу у співпраці з вітчизняними виробниками шляхом зусиль щодо розширення доступу на ринок, навчання та допомоги у виробництві, збільшення інновацій і технології

**Ключові слова:** постійна частка ринку, склад продукту, розподіл, гонкурентоспроможність, аграрний сектор