Market potential and competitiveness assessment of Malaysian coconut-based products

(Potensi pasaran dan penilaian daya saing produk berasaskan kelapa di Malaysia)

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Keywords: coconut, market competitiveness, coconut-based products, comparative export performance

Abstract

Coconut is the fourth most important agricultural commodity in Malaysia after palm oil, rubber and paddy. It is the oldest industrial crop in Malaysia which contributed RM70.1 million, equivalent to 0.06% of Malaysia's agricultural export revenue in 2018 (DOA 2019). Other than fresh coconut, there are downstream products such as coconut milk, desiccated coconut, charcoal, activated carbon, coconut oil, fibre, and cocopeat. All these products are widely sold at domestic and international markets. There are three primary sources of coconut-based products, namely coconut kernel, coconut fibre, and coconut shell. Like other industries, coconut products from Malaysia also face various challenge and competition, especially from other coconut producing countries in Asia. The potential market assessment uses time series secondary data obtained from the COMTRADE database. In addition, the Comparative Export Performance (CEP) method was used to measure level of the country's competitiveness. The study revealed that the top five most potential products based on export values are coconut oil, coconut milk, activated carbon, coconut charcoal, and processed coconut water. Five countries are vital trading partners for coconut products, namely Singapore, the United States, Indonesia, Japan and China. The exponential smoothing algorithm (ETS) forecasting showed that coconut oil exports are likely to decline slowly by 2030 while exports for other coconut products predicted to increase. The results of the CEP method revealed that Malaysia has high competitiveness for coconut oil and coconut milk in Singapore with a positive indicator value of CEP. The findings of this study can be used as a basic information to formulate strategies in developing the coconut industry in Malaysia and strengthen the implementation of national coconut industry programs.

Introduction

International trade refers to interactions between countries through buying and selling goods and services based on a mutual agreement. International cooperation via trade is not something new and has been in existence since the Middle Ages. The practice of international trade will undoubtedly increase the Gross Domestic Product (GDP) or total value of production of goods and services in a country within a certain period. The impact of international trade can be seen on social, political and economical sectors while assisting domestic industries like transportation, globalisation, and establishment of multinational companies.

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As a developing country, Malaysia is not left behind in the trade industry as it contributes to the economic development. Internationally, Malaysia is known as a country that is relatively an open market for international trade. Foreign trade represented 123.1% of the country's GDP in 2019 (World Bank 2020), making the country vulnerable to external demand. Malaysia exports integrated and microelectronic circuits (18.8% of total exports), crude oil and petroleum products (10.8%), semiconductors (3.7%) and palm oil (3.5%) (Comtrade 2020). The International Monetary Fund (IMF) is forecasting a rebound of more than 9.7% in the volume of exported goods and services from the country in 2021, after a fall of 11.1% in 2020 due to the COVID-19 pandemic, and an increase of more than 8.3% of its imports, after a fall of 8.6% in 2020.

Malaysia's global trade in the agricultural sector reached RM180 billion in 2019 with exports of RM104 billion and imports of RM76 billion (Trade Data Monitor, 2020). Palm oil dominates exports and major markets in recent years. India, the European Union, China, Pakistan, and the United States are the main export targets of the country's agricultural products and agro-based industries. Thailand, Indonesia, and China are the leading suppliers of agricultural products to Malaysia. Despite a RM28 billion agricultural trade surplus, Malaysia still depends on importing agrifood products such as wheat, rice, protein foods, dairy products, beef, citrus fruits and lemons.

The demand for coconut products increases annually. On an average, from 2016 to 2020, Malaysia imported 217 thousand MT of fresh coconut per year. The oldest industrial crop in Malaysia contributed RM72.8 million or 0.06% to Malaysia's agricultural export revenue in 2020 (DOA 2021). In 2017, the export value of coconut products was worth RM995 million, increased by 12% compared to RM873 million in 2015, while the import value of coconut products also increased from RM948 million (2015) to RM1.07 billion in 2017 (DOA 2019). This increasing trend is in line with the increase in import of matured coconut seeds, used as the primary source of producing these products. Demand for imported matured coconuts has increased due to the insufficient local supply of coconuts to meet industrial demand. Therefore, this study identifies the market potential of coconut products globally and evaluates the market competition of the coconut industry among ASEAN countries in selected national markets.

The scenario of coconut industry

The coconut tree (Cocos nucifera L.) is a tree that is described with numerous use. The existence of this tree correlates with the social and cultural aspects of local communities. At the same time, it provides employment and income opportunities for communities worldwide. The coconut industry span across 86 countries worldwide, covering a cultivation area of over 12.3 million ha, and the world coconut production exceeds 62 billion nuts annually. Indonesia, Philippines and India have been the top three coconut producing nations since 2010, where in 2019 production dominance for those countries were about 27%, 23% and 22%, respectively. Currently, 80% of the global coconut supply comes from Asia, an important source of income for many countries. Malaysia ranked 12th in 2018, climbing to the 10th position in 2019 with a production size of 0.8% of the world production after Thailand and Vietnam (FAO 2020). The top 15 coconut producing countries worldwide are shown in Table 1.

Various coconut based products can stimulate a high demand for value-added products and household needs such as food ingredients, toiletries, fuel and furniture. Therefore, value-added coconut-based products are in high demand at the domestic and international markets. The export value of fresh coconut from 2014 to 2019 decreased by 4.46%, while imports in the

Rank	Country	Production (tonnes)	Hectares
1	Indonesia	17,128,595	2,800,000
2	Philippines	14,765,057	3,651,873
3	India	14,682,000	2,151,000
4	Sri Lanka	2,468,800	503,452
5	Brazil	2,330,949	186,950
6	Viet Nam	1,677,044	158,959
7	Mexico	1,287,957	204,133
8	Papua New Guinea	1,192,816	188,841
9	Thailand	806,026	124,374
10	Malaysia	536,606	86,466
11	Myanmar	530,832	48,902
12	Bangladesh	431,596	36,483
13	United Republic of Tanzania	428,595	657,658
14	Dominican Republic	421,559	52,031
15	Others	4,186,784	1,005,306
	Total	62,875,216	11,856,428

Table 1. Top 15 coconut producing countries worldwide

same period increased by 31.1% (FAO 2020). The increase was due to insufficient supply of local coconuts and increasing demand in the local market. Therefore, the countries had to import fresh coconuts from Indonesia to meet the local demand. Following the increase in imports, the export rate of coconut-based products also increased. In 2015, exports of coconut-based products was worth RM746.22 million and increased to RM766.87 million in 2016 (Comtrade 2020).

According to a report by the Sri Lankan Export Development Board (EDB 2012), the trade of coconut-based products globally is categorised based on three main types of source, namely (1) coconut kernel, (2) coconut fibre and (3) coconut shell. Based on *Table 2*, global trade activities involving coconuts are based on the international Harmonised System (HS) index code. The main coconut products traded in Malaysia are activated carbon, coconut milk powder, coconut oil, copra, copra meat (patik coconut) and fibre.

Methodology

This study used secondary data that were obtained through statistical reports from the Department of Statistics Malaysia (DOSM), Department of Agriculture Malaysia (DOA) and Ministry of Agriculture and Food Industries (MAFI). In addition, international and local statistical databases such as International Trade Statistics Database (Comtrade), Food and Agriculture Organisation Statistical Database (FAOSTAT), Malaysia External Trade Statistics Online (METS Online) and Supply Demand Virtual Information System (SDVI FAMA) were referred to obtain information on the current trade, production and productivity of coconut products. Secondary data were collected to identify the potential of the coconut products industry by using the trend graph method, annual average growth, export value, export market channel and market size calculation from 2015 to the current year according to data availability.

In addition, the data forecast approach using the exponential smoothing algorithm (ETS) function was used to predict the market potential of coconut products in the future. The ETS method is an

Product classification	HS code	Type of product	
Coconut meat products	080111	Desiccated	
	200819	Coconut milk powder	
	200819	Coconut milk UHT	
	200819	Coconut milk cream	
	080111	Copra	
	151311	Crude coconut oil	
	080119	Fresh coconut	
Fibre products	530500	Coconut fibre (wool/fiber, mattress and mixed)	
	140490	Fragments of fibre	
	530511	Cocopeat	
	500790	Fibre wraps	
	530810	Yarn fibre	
	560310	Brooms and brushes	
	530519	Form product fibres	
	531100	Geotextile	
	570220	Mats and rugs	
Shell products	380210	Activated carbon	
	440290	Shell charcoal	
	140490	Flakes and shell powder	

Table 2. Types of Coconut Based Products Based on Main Sources

Source: EDB 2012

approach method for forecasting time series univariate. This ETS model focuses on trend and seasonal components (Sindhanuru 2016). The flexibility of the ETS model lies in its ability to model trend and seasonal components of different traits. The forecast value from the ETS of this model will predict future potential markets from 2020 to 2030 based on historical data from 2011 to 2019. The ETS forecasting was executed by an algorithm function in Microsoft Excel.

The concept of comparative advantage and competitiveness were used in this study to compare the ASEAN coconut producing countries. The method has been widely used in many economic studies to assess trade patterns and countries' specialisation in commodities for which they are competitive (Erkan and Saricoban 2014). Export activity is usually one of the methods to measure the competitiveness of a country. In theory, an increase in export performance indicates an increase in the competitiveness of a country. However, this measure of competitiveness cannot be assessed easily, and it must be seen from the micro and macroeconomic aspects, as well as regulations and institutions that affect the productivity of a country. Therefore, the Comparative Export Performance (CEP) analysis was used to measure the level of competitiveness of countries. The CEP index is a modified version of the Balassa formula of Revealed Comparative Advantage (RCA) (Chubashini et al. 2011). This index was used to assess the competitive position between countries in selected markets. A positive index value $(\geq+1)$ indicates that the country has a high competitiveness value, while a negative value (\leq -1) indicates low competitiveness. Higher positive values indicate higher competitiveness, while lower negative values indicate lower competitiveness (Suhana 2017). Based on Bobirca and Miclaus (2011), the CEP formula is as follows:

$$CEP: \operatorname{In} \frac{\left(\frac{X_{iB}}{X_B}\right)}{\left(\frac{X_{iA}}{X_A}\right)}$$

where:

- X_{iB}: Country B exports for production i to country A
- X_B: Country B exports of total agricultural production to country A
- X_i Country A exports for production i
- X_A: Country A exports for total production agriculture

Results and discussions

Market potential of coconut products globally

In 2020, Malaysia exported coconut-based products such as coconut oil, coconut milk, activated carbon, coconut charcoal, processed coconut water, desiccated coconut, coconut fibre and fresh coconut. The total export value of these products amounted to RM1.36 billion, with 60% of them being coconut oil products, followed by coconut milk (11.5%) and activated carbon (10.7%) (Comtrade 2021). *Table 3* shows the export value in detail for seven types of coconut-

Table 3. Export value in detail of coconut-based products (2020)

Coconut based products	Value (RM million)
Coconut oil	3,395.81
Coconut milk	655.12
Activated carbon	609.63
Coconut charcoal	503.11
Processed coconut water	234.69
Desiccated coconut	173.75
Coconut fibre	77.46
Fresh coconut	49.16
Total	5,698.75

Sumber: Comtrade 2020

based products, while *Figure 1* shows the percentage of export dominance based on product.

The concept of target market must be closely related to entrepreneurial marketing. Therefore, the target market is understood as the profile of a potential buyer. Similarly, in determining the trade target of a product, some countries are the focus of product targets, such as coconut-based products. This analysis focused on a total of six coconut products, namely coconut oil, coconut milk, desiccated coconut, processed coconut water, activated carbon and coconut



Figure 1. Percentage of export coconut product value Source: Comtrade 2020

charcoal. These products were chosen to be analysed because of the availability of trade data history. However, fibre and cocopeat products were not included in the analysis because the data for coconut fibre were mixed with fibres other than coconut sources. Similarly, the export data for cocopeats were not available because there was no export activity for this product.

Five countries are vital trading partners for coconut products, namely Singapore, the United States, Indonesia, Japan and China. In 2020, Malaysia exported more coconut oil to the United States, while Singapore was the primary market for coconut milk and desiccated coconut. Japan was the leading country that imported activated carbon and coconut charcoal from Malaysia. China was the primary market for Malaysian processed coconut water, which is processed mature coconut water packed in cans or tetra-pack boxes. *Table 4* shows the list of Malaysia's trading partners for coconut products according to the top five export rankings for 2020.

One of the techniques to anticipate future market potential is to make data forecasts using the exponential smoothing algorithm (ETS) function. Thus, forecasts are made using historical data according to time series data trends. As a result, the total exports of six selected types of coconutbased products are seen to increase linearly until 2030. *Figure 2* shows the projected total exports for six types of Malaysian coconut-based products, as mentioned in *Table 4*.

Table 4. Malaysian coconut products market channel in 2020	Table 4. Mala	ysian coconut	sian c	products	market	channel	in	2020
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Products	Top five cou	Total of export				
	1	2	3	4	5	(RM million)
Coconut oil	USA	Italy	Netherlands	China	Turkey	798
Coconut milk	Singapore	China	Hong Kong	UAE	Indonesia	151.2
Desiccated coconut	Singapore	Pakistan	Turkey	United Kingdom	Bangladesh	40.74
Processed coconut water	China	USA	Singapore	Australia	Hong Kong	55.02
Activated carbor	n Japan	China	Other Asian Countries	Italy	USA	142.8
Coconut charcoal	Japan	China	Turkey	South Korea	Saudi Arabia	118.44

Source: Comtrade 2020



Figure 2. Projected exports of coconut-based products

Based on the projected forecast, the total export value of the selected six coconut-based products is expected to continue to increase in a two-year cycle until 2030. The details of the export forecast are explicitly described for each product, as shown below.

Due to competition from palm oil exports, coconut oil exports are likely to decline slowly. In addition, the projections show a three-year cycle of drastic increase and decrease in coconut oil exports based on the current data pattern. *Figure 3* above shows the projected exports of coconut oil until 2030. The export rate of remaining products such as coconut milk, desiccated coconut, processed coconut water, activated carbon, and coconut charcoal is expected to increase significantly by 2030. *Figure 4* shows a graph of improvement for some types of products forecasted.

The results of the export value forecasted indicate that the export market potential for these five types of products is expected to continue to grow rapidly until 2030. Therefore, industry players must continue to actively seek opportunities to create new markets while increasing exports in existing markets.

Market competition for coconut-based products in selected countries

The assessment of the competitiveness index of Malaysia and the competing countries was analysed using Comparative Export Performance (CEP). Export trade data for six types of coconut products were evaluated from Comtrade database sources for 2015 to 2019 according to the six-digit Harmonised System code as shown in *Table 2*. The CEP assessment was made to look at Malaysia's competition with four other countries in three primary target markets for coconutbased products, namely Singapore, China, and Japan. A positive value indicates a good level of competitiveness in the target market country.

Table 5 shows the CEP values for Malaysia and the competitors in exporting coconut products to Singapore. Overall, in 2019, only Malaysia and Indonesia showed positive CEP index values for the coconut oil market in Singapore. Malaysia still maintains a record of positive CEP values since 2015, the highest compared to four other countries in 2019. However, the CEP value for coconut oil in 2019 experienced a slight decrease compared to the previous year, which was 2.3. This scenario is also faced by Malaysia's competitors, such as Indonesia. This situation is due to the emergence of several competing countries



Figure 3. Projected exports of coconut oil



Figure 4. Projected exports of coconut milk, desiccated coconut, processed coconut water, activated coconut and coconut charcoal

such as India and Sri Lanka, which also export their coconut oil products to Singapore. Similarly, coconut milk products are among the highest, with a CEP value of 2.3 compared to other countries in the Singapore market. This situation clearly shows that Malaysia dominates the coconut milk export market in Singapore compared to the four competing countries.

On the other hand, the value of Malaysia's CEP index for desiccated coconut is quite challenging, with the latest index value of -0.92. All countries showed a negative value with the possibility that the desiccated coconut market in Singapore was dominated by countries other than the five countries mentioned above. Even though the Malaysian desiccated coconut market is not competitive in Singapore, this destination is the highest export of this product. Therefore, it needs to be maintained with improved marketing strategies so that the competition rate can be increased from time to time.

China is the main target market for Malaysia to market processed coconut water products, as shown in *Table 6*. Although most processed coconut water production is sold to China, it is still powerless to match Vietnam's dominance in China with a CEP index value of 0.63 compared to four other countries at negative CEP magnitudes. The previous CEP in 2018 showed the

Product	Indonesia	Malaysia	Philippines	Thailand	Vietnam				
Coconut oil									
2015	2.4	2.8	0.4	-2.7	-1.6				
2016	2.6	3.0	3.0	-2.7	0.4				
2017	1.6	2.1	1.2	-3.0	-1.1				
2018	2.1	2.3	2.4	-3.3	-1.1				
2019	1.6	1.8	-4.4	-2.7	-4.9				
Coconut mi	lk								
2015	-6.6	-1.1	-6.0	-3.4	-3.1				
2016	-7.1	-1.7	-4.2	-3.9	-2.2				
2017	-7.7	-1.3	-3.5	-4.3	-3.7				
2018	-6.6	-0.5	-3.0	-4.0	-1.6				
2019	-3.0	2.3	-1.0	-0.8	1.5				
Desiccated	coconut								
2015	-0.13	-0.49	0.83	-5.57	-1.02				
2016	0.32	-0.20	-1.85	-5.88	-1.26				
2017	1.24	0.23	-3.84	-9.69	-0.70				
2018	0.39	-0.52	-1.92	-6.20	-1.35				
2019	-0.04	-0.92	-0.85	-5.74	-1.87				

Table 5. The value of Malaysia's CEP and competitor countries for the export of coconut products in selected national markets in Singapore

Table 6. The value of Malaysia's CEP and competitor countries for the export of coconut products in China

Product	Indonesia	Malaysia	Philippines	Thailand	Vietnam
Processed of	coconut water				
2015	-7.52	-0.95	NA	-1.04	-3.01
2016	-5.62	-1.57	NA	-0.30	-1.72
2017	-6.97	-0.39	-4.17	-0.50	-0.40
2018	-5.17	0.65	-4.76	-0.46	-0.62
2019	-12.94	-0.05	-0.85	-0.44	0.63

index as 0.65, indicating Malaysia led competitiveness among the countries. However, in 2019 the index changed to -0.05. Therefore, the causes of the decline in competitiveness in 2019 need to be identified and the appropriate action taken to ensure that Malaysia remains competitive for processed coconut water again.

For non-food based coconut products such as coconut shell charcoal and activated carbon, Japan is the main target for Malaysia to market these products. All five countries that market activated-carbon products in Japan show negative index values that indicate a lack of competitiveness, as shown in *Table 7*. Even though magnitude of the index is negative, its value increases from 2015 with an index value of -1.59 to -0.87 in 2018. This index indicates that Malaysia's competitiveness has rebounded and is predicted to achieve a positive value in 2022 or 2023. Malaysia's activated carbon has the highest CEP value in Japan compared to the other five countries. For coconut charcoal, all five countries have high competitiveness with a positive magnitude for the CEP index

Product	Indonesia	Malaysia	Philippines	Thailand	Vietnam				
Coconut activated carbon									
2015	-2.39	-1.59	-1.74	-2.51	-1.76				
2016	-2.13	-1.57	-1.39	-2.36	-1.81				
2017	-1.70	-1.11	-1.33	-1.42	-1.80				
2018	-1.76	-0.87	-1.39	-1.84	-1.62				
2019	NA	NA	NA	NA	NA				
Coconut sh	Coconut shell charcoal								
2015	2.98	2.69	NA	2.14	2.29				
2016	2.91	2.85	NA	2.60	2.72				
2017	0.99	0.97	-0.16	0.48	0.89				
2018	1.04	1.02	0.29	0.57	1.00				
2019	1.96	1.84	1.45	1.43	1.86				

Table 7. The value of Malaysia's CEP and competitor countries for the export of coconut products in Japan

values in Japan. Malaysia's CEP index value is 1.84, ranking third after Indonesia (1.96) and Vietnam (1.86).

Recommendations

Based on the study results discussed, several recommendations are proposed as guidelines and actions of the parties involved, especially industry players, including entrepreneurs, policymakers, researchers, government agencies and the private sector. Firstly, Malaysia's position climbed from 12th to 10th place in the list of coconut producing countries in the world which shows the seriousness of the implementing agencies both upstream and downstream in ensuring the country's coconut industry continues to grow.

Secondly, based on the top five countries in the Malaysian Market Channel for coconut products, three major countries need to be retained as primary target markets, namely Singapore, China and Japan, as the market in these countries is enormous and contributes to the growth of the Malaysian economy. However, maintaining an existing market is more complex than finding a new market because several product indicators need to be met, such as product availability, maintaining quality, and meeting customers' everchanging needs.

Thirdly, Malaysia's coconut oil export market, which is expected to decline by 2030, needs to be considered by entrepreneurs. They may be looking for new ideas in marketing the product with the support of research reports that explain the advantages of coconut oil over other oil products where the demand for this product can compete with substitute products. Due to the competitive advantages of other products such as coconut milk and coconut shell charcoal in Singapore and Japan, these products have an advantage and a place in those countries. Therefore, the market potential of this product needs to be further expanded to other countries, thereby increasing the inflow of money into the country with the advantage of these exports implemented.

Fourthly, coconut-based product manufacturers in Malaysia need to play an active role together with MATRADE in promoting advantages of Malaysian products compared to other countries. The dominance of products such as coconut oil and coconut milk in Singapore needs to be maintained while studying the marketing model of coconut products by Vietnam, which is so drastic that it can dominate the market in some countries, especially for processed coconut water products. Finally, entrepreneurs should diversify to find new market while maintaining good relations with existing coconut export countries.

Conclusion

The coconut industry has long been established in Malaysia and is a primary daily use source for the local and global community. This study shows that there are three main countries as the target market for coconut products, namely Singapore, China and Japan. Trade cooperation with these countries must be maintained to ensure sustainability of the country's market and economic resources. At the same time, expansion of the market to other countries needs to be further enhanced, especially to the Middle Eastern countries, which are now beginning to increase the volume of imports of coconut products from Malaysia. Demand for coconut products is projected to increase by 2030 except for coconut oil. Coconut oil, coconut milk and coconut shell charcoal products are competitive in the Singapore and Japanese markets. Desiccated coconut, processed coconut water and coconut activated carbon are less competitive products in Singapore, China and Japan, but the level of competition is now improving compared to the past five years.

The cooperation of all parties, industry players and government agencies is essential for upstream and downstream industry levels in further enhancing the potential of the coconut industry. This effort is vital in boosting the coconut industry as a source of economic generation in line with the government's New Source of Wealth Initiative (SKB). As a fresh coconut and coconut-based products producing country, Malaysia should actively export the products worldwide. This activity will give the country an economic advantage with the inflow of money from exporting goods abroad. Coconut prices are starting to soar (2016 - 2019), and demand has never declined from household consumers and industry players. The increase in exports of coconut products year by

year indicates the growing potential of this industry. Furthermore, innovation in the diversification of coconut products implies the potential for broad open market segmentation in the future. Thus, the findings of this study can be used as a basis of information to formulate strategies in developing the coconut industry in Malaysia and further strengthen the implementation of national coconut industry programs.

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Abstrak

Kelapa merupakan komoditi pertanian keempat terpenting di Malaysia selepas kelapa sawit, getah dan padi. Tanaman ini merupakan tanaman industri tertua di Malaysia yang menyumbang RM70.1 juta atau 0.06% kepada hasil eksport pertanian Malaysia pada 2018 (DOA 2019). Selain kelapa segar, terdapat produk hiliran seperti santan, kelapa kering, arang, karbon teraktif, minyak kelapa, serat dan cocopeat. Kesemua produk ini dipasarkan secara meluas di pasaran domestik dan antarabangsa. Terdapat tiga sumber utama produk berasaskan kelapa, iaitu isi kelapa, sabut kelapa, dan tempurung kelapa. Seperti produk lain, produk kelapa dari Malaysia juga menghadapi pelbagai cabaran dan persaingan terutama dalam kalangan negara pengeluar kelapa di Asia. Penilaian pasaran berpotensi menggunakan data sekunder siri masa yang diperoleh daripada pangkalan data COMTRADE. Selain itu, kaedah Comparative Export Performance (CEP) digunakan untuk mengukur tahap daya saing negara. Kajian ini mendedahkan lima produk paling berpotensi berdasarkan nilai eksport iaitu minyak kelapa, santan, karbon teraktif, arang kelapa dan air kelapa yang diproses. Lima negara merupakan rakan dagangan penting Malaysia bagi produk kelapa, iaitu Singapura, Amerika Syarikat, Indonesia, Jepun dan China. Ramalan algoritma pelicinan eksponen (ETS) menunjukkan eksport minyak kelapa berkemungkinan merosot secara perlahan menjelang 2030 manakala eksport untuk produk kelapa lain pula dijangka meningkat. Keputusan kaedah CEP mendedahkan bahawa Malaysia mempunyai daya saing yang tinggi untuk minyak kelapa dan santan di Singapura dengan nilai penunjuk positif CEP. Dapatan kajian ini boleh digunakan sebagai maklumat asas untuk merangka strategi dalam membangunkan industri kelapa di Malaysia dan memantapkan lagi pelaksanaan program industri kelapa negara.