

## **Competitiveness of Malaysia's fruits in the global agricultural and selected export markets: Analyses of Revealed Comparative Advantage (RCA) and Comparative Export Performance (CEP)** (Persaingan buah-buahan Malaysia dalam pasaran pertanian dunia dan pasaran eksport terpilih: Analisis RCA dan CEP)

Chubashini Suntharalingam\*, Tengku Mohd Ariff Tengku Ahmad\*, Abu Kasim Ali\*, Rawaida Rusli\* and Noorlidawati Ab Halim\*

Keywords: competitiveness, comparative advantage, revealed comparative advantage, comparative export performance, tropical fruits

### **Abstract**

The World Trade Organization provided an avenue for Malaysia in seeking greater market access opportunities for its products including tropical fruits. Trade liberalization had shown to increase tropical fruit trade which inevitably led to greater global competition. This study was undertaken to assess the competitive position of Malaysia's fruits against other exporters via the Revealed Comparative Advantage (RCA) and Comparative Export Performance (CEP) analyses. The RCA analysis showed that Malaysia had comparative advantage over Thailand, Indonesia, Philippines, Singapore, China and India in the global watermelon market. Meanwhile, the CEP index revealed that Malaysia was the most competitive nation in exporting watermelon and papaya to Singapore and Hong Kong. Thus, while Malaysia's general fruit exports were not as competitive in comparison to other players in the analyses, exports of Malaysia's watermelon and papaya into various markets proved otherwise. This showed that, policy-wise, Malaysia should pay extra focus in allocating resources to further develop its watermelon and papaya industries to enhance their competitiveness and market resilience.

### **Introduction**

The General Agreement on Tariffs and Trade (GATT) was established in 1947 to reduce trade barriers through multilateral negotiations. Under GATT, there were series of 'negotiating rounds' to create freer global trade in goods and services. The last GATT Round, the Uruguay Round was the most comprehensive, where agricultural trade became the main agenda. In 1995, the UR Agreement was signed, leading to the formation of the World Trade Organization

(WTO), which replaced GATT. The main purpose of the WTO is to continue liberalizing international trade by reducing trade barriers. Malaysia together with 123 other countries signed the UR Agreement and become founding members of the WTO.

Many studies have shown trade liberalization increased demand and consequently the supply of goods and services. The liberalization and globalization of fruit trade together with technological advancements in post harvest, storage and

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\*Economic and Technology Management Research Centre, MARDI Headquarters, Serdang, P.O. Box 12301, 50774 Kuala Lumpur

E-mail: [chuba@mardi.gov.my](mailto:chuba@mardi.gov.my)

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transportation, had enabled fresh produce to be increasingly accessible to longer distance consumers around the world. It provided countries, including Malaysia, an avenue to market its fruits worldwide. Agricultural trade liberalization has direct effects on global competition as the number of multilateral players serving the global tropical fruit market increases due to new market openings.

Malaysia has been in the import and export business of fruits for many decades. However recent data showed that its fruit exports were dwindling from their highs in the 1990s. However, very little research had been directed at examining the actual performance and competitiveness of Malaysia's fruits in its main export markets such as Singapore, China and Hong Kong. This study aimed to contribute in filling this dearth of analyses in addressing this important issue of competitiveness of the Malaysian fruit export in the international market.

### **Objective of study**

This study was undertaken to assess the competitive position of Malaysian fruits against other major tropical fruit exporters, Thailand, Indonesia, Philippines, Singapore, China and India. It also attempted to examine the comparative advantage Malaysia has over its rivals, in selected export markets such as China, Hong Kong and Singapore. Out of the nine countries under study, six were ASEAN member countries. Brunei, Laos and Cambodia, although members of ASEAN, were not included in this study since their fruits exports were minimal and not captured in the global agricultural and export markets trade data. The fruits under study were analysed at two levels, i.e. aggregated (fruit and nut) and disaggregated (watermelon, pineapple, papaya and banana) according to the Harmonized Code System (HS).

### **Methodology**

Several techniques have been used to measure the weak and strong sectors of a country. One of the most widely used methods is the Revealed Comparative Advantage (RCA) developed by Balassa (1965). The concept of RCA pertains to the relative trade performance of individual countries in particular commodities (Batra and Khan 2005). The Balassa index basically measures normalized export shares, with respect to the exports of the same industry in a group of reference countries or to the world. Numerous empirical studies used Balassa index to identify a country's strong sectors (Ariovich 1979; Hillman 1980; Richardson and Zhang 1999; de Benedictis 2005; Civan and Serin 2008). The index is a useful tool in identifying comparative advantages of Malaysia in the fruit sector.

The Comparative Export Performance (CEP) index has also been widely used and it is a modified version of the Balassa index. In this study, both the RCA and CEP were used as indices in evaluating the competitiveness of Malaysian fruits. The RCA was used to determine the competitive position of Malaysian fruits in relation to its rivals in the global market while the CEP was used to examine the competitiveness of selected Malaysian fruits and its rivals in Malaysia's selected export markets, consisting of China, Hong Kong and Singapore.

The RCA index is measured by:

$$RCA = \ln (X_{iB}/X_B)/(X_{iA}/X_A)$$

where:

$X_{iB}$ : Malaysia's exports of produce i to the World

$X_B$ : Malaysia's total agricultural exports to the World

$X_{iA}$ : Rival country's exports of produce i to the World

$X_A$ : Rival country's total agricultural exports to the World

The CEP index is measured by:

$$CEP = \ln (X_{iB}/X_B)/(X_{iA}/X_A)$$

where:

$X_{iB}$ : Country's B exports of produce i to Country A

$X_B$ : Country's B total agricultural exports to Country A

$X_{iA}$ : Country's A exports of produce  $i$   
 $X_A$ : Country's A total agricultural exports

Harmonized System (HS) of classification at the two digit level (aggregate) and the four and six digit levels (disaggregated).

Positive RCA and CEP values indicates Malaysia has a comparative advantage in exporting produce  $i$  against its rival countries in the global agricultural and selected export markets while negative values indicate otherwise. A higher positive value denotes higher competitiveness while a higher negative value indicates lower competitiveness.

Trade data covering period 2000–2008 were gathered from the Global Trade International System (GTIS) following the

### Findings and discussion

#### Global agricultural market

The RCA Balassa index values calculated for fruit and nut, banana, watermelon, papaya and pineapple in the global agricultural market are shown in *Table 1*. The RCA indices showed that, in general, Malaysia is losing its competitive edge to Thailand, Indonesia, Philippines, Singapore, China and India in fruit and nut exports (aggregated level).

Table 1. Revealed Comparative Advantage (RCA) Index of Malaysia and its rivals on fruit exports

	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Edible fruits and nuts</b>									
Malaysia vs Thailand	-0.2	0	-0.3	-0.7	-0.8	-1	-1.1	-1.5	-1.6
Malaysia vs Indonesia	-0.1	-0.1	-0.3	-0.7	-0.7	-0.8	-0.9	-1.2	-1.2
Malaysia vs Philippines	-2.4	-2.5	-2.8	-3.1	-3.2	-3.2	-3.4	-3.8	-4
Malaysia vs China	-0.3	-0.4	-0.7	-1.2	-1.5	-1.5	-1.7	-2.2	-2.7
Malaysia vs India	-1.7	-1.5	-1.8	-2	-2.2	-2.3	-2.3	-2.5	-2.8
<b>Banana</b>									
Malaysia vs Thailand	1.6	1.8	1.5	1	-0.1	0.1	0.3	0	-0.2
Malaysia vs Indonesia	2.8	4.5	1.9	2.3	1.9	1.4	1.7	2.1	2
Malaysia vs Philippines	-29.1	-29.1	-29.5	-30.1	-30.4	-30.6	-30.4	-30.9	-31.3
Malaysia vs China	2.2	1.7	1.3	0.8	0.7	0.6	1	0.8	0.6
Malaysia vs India	0.8	1.1	1	0.9	0.4	0.1	0.4	0.2	-0.6
<b>Watermelon</b>									
Malaysia vs Thailand	5.6	6.4	5.6	6.1	5.6	6.2	5.9	5.1	5.1
Malaysia vs Indonesia	5.8	3.6	3.2	7	3.8	7.2	8.3	4.2	3.3
Malaysia vs Philippines	3.4	3.6	3.9	3	4.3	4	5.5	3.9	3.2
Malaysia vs China	3.1	3.2	2.7	2	1.9	2.2	1.8	1.5	0.8
Malaysia vs India	4.1	4.3	3.1	3	2.9	2.8	2.7	2.2	1.8
<b>Papaya</b>									
Malaysia vs Thailand	5.3	4.9	3.8	3.8	3.9	3.9	3.7	3.2	2.9
Malaysia vs Indonesia	7.2	8.4	8.3	4.5	2.7	5	5.5	6.4	9.8
Malaysia vs Philippines	0.7	0.6	0.3	1.3	0.3	0.1	-0.2	-1.1	-0.9
Malaysia vs China	7.9	7.5	6.2	4.4	4.3	3.8	4	2.3	5.4
Malaysia vs India	1.5	3.7	3.5	3	2.8	2.4	2.1	1.1	0.8
<b>Pineapple</b>									
Malaysia vs Thailand	1	0.9	0.5	-0.1	0.2	0.3	0.2	-0.2	0.4
Malaysia vs Indonesia	0.9	1.1	0	-0.1	1.4	2.6	3.9	2.5	3.9
Malaysia vs Philippines	-3.3	-3.4	-3.6	-4	-4.2	-4	-4	-4.3	-4.3
Malaysia vs China	2.7	2.8	2.5	1.3	1.3	1.9	1.8	1.8	2.1
Malaysia vs India	2.6	2.2	2.1	1.7	1.3	1.3	1.2	1.5	1.6

Note: Grey fields indicate Malaysia's comparative advantage over its rival for the mentioned produce

Meanwhile at the disaggregated level, Malaysia had a high comparative advantage over Indonesia and Singapore in the banana market, a small comparative advantage over China but was non-competitive against Thailand, India and Philippines.

In the watermelon market, Malaysia had high comparative advantage over its four rivals, Thailand, Indonesia, Philippines and Singapore but a relatively smaller comparative advantage over China and India. This indicated that although Malaysia was performing relatively well in the watermelon global market, it needs to be watchful of China and India. The competitive gap between Malaysia and India, and Malaysia and China had been narrowing drastically during the 2000–2008 period.

In the papaya market, although Malaysia had a significant comparative advantage over most of its rivals (Thailand, Indonesia, Singapore, China and India) over the last 9 years, it had lost competitiveness to Philippines in the recent 3 years. The comparative disadvantage gap faced by Malaysia in relation to Philippines between 2006 and 2008 was also growing wider. This implied that Philippines was starting to gain market recognition on its papaya, demonstrating a possible threat to Malaysian papaya should it not take remedial actions to improve its competitiveness position in the papaya trade. Malaysia should also be mindful of India's position on papaya trade as the comparative advantage Malaysia over India is getting smaller, especially over the past 4 years (2004–2008).

Comparatively in the pineapple market, Malaysia has advantage over all its five rivals but continues to lose out to Philippines where the latter persistently dominates the global pineapple market. Although Malaysia regained its comparative advantage over Thailand in 2008, after losing to it in 2007, the index was only marginally higher than Thailand. Malaysia needs to sort out its competitiveness factors to ensure sustainability in the market place.

Overall, the above results showed that Malaysia did not seem to fair too well in the exports of fruit and nut into the global agricultural market in comparison with its rivals. Nevertheless, in the watermelon market, Malaysia had managed to maintain its lead competitive position in the course of the 9 year period, over all the countries analysed.

However, this was not so for the other fruit exports. Philippines had a high comparative advantage over Malaysia in the pineapple and banana markets respectively, and it was beginning to encroach into Malaysia's position as the top exporter in the papaya market. India was another country that Malaysia needed to watch as its exports in the banana and papaya market was gaining momentum. China on the other hand, seemed to be doing fairly well in the watermelon trade as it has been able to narrow the comparative advantage gap that Malaysia had over it previously.

### ***Selected markets***

**Singapore** In fruit and nut exports to Singapore, Philippines was the most competitive followed by China, Indonesia and India (*Figure 1*). In 2000, Malaysia was ranked as the fifth most competitive nation in exporting fruits and nuts to Singapore. However, over the 9 years, Malaysia's ranking dropped and it is now considered as one of the least competitive nation in exporting fruits and nuts to the republic. In 2008, Malaysia was ranked ninth among the 10 countries, demonstrating that we were no longer competitive. The only one country which we have a comparative advantage over was Myanmar.

For the watermelon market in Singapore, only three countries were exporting to Singapore in 2000. The number of countries increased to seven in 2008 (*Figure 2*). Malaysia, Thailand and China were the 'old players' while Indonesia, Vietnam, India and Taiwan were the 'new' ones. Malaysia had consistently dominated the exports to Singapore. It was

number one throughout the 9 year period analysed. Thailand was not competitive from 2000–2006 but it managed to turn around and became the second most competitive nation in exporting watermelon to Singapore in 2008. Indonesia and Taiwan followed very closely with indices of 3.18 and 2.51 respectively, in 2008. Meanwhile, India, Vietnam and China were found to be of lesser competitiveness in exporting watermelon to Singapore. Similarly, for papaya, Malaysia was able to maintain to be the most competitive exporter throughout the 9 year period with the Philippines trailing closely behind followed by Thailand. (*Figure 3*).

The pineapple market in Singapore was also becoming increasingly competitive with only four players in 2000 consisting of Malaysia, Thailand, the Philippines and Vietnam. In 2008, Indonesia, India and Taiwan also exported pineapples to Singapore. All these countries projected positive CEP indices, indicating that they were all competitive in exporting pineapples to Singapore (*Figure 4*). Generally, over the 9 years, the Philippines was found to be leading the pineapple trade in Singapore followed by Thailand and Malaysia respectively.

The Philippines, Malaysia and Thailand were able to sustain their competitive advantages in the Singapore banana market over the 9 year period (*Figure 5*). Philippines maintained its competitive advantage over the 10 countries. Malaysia meanwhile came in second place and Thailand, third. Indonesia and India, the new comers, were only able to project a competitive advantage position in 2008, after experiencing many years of competitive disadvantages. China, also a new comer, on the other hand, was only able to demonstrate a competitive advantage over Myanmar, Hong Kong and Taiwan in 2008. Vietnam's banana exports to Singapore have been minimal, causing its CEP index to be negative, an indication of comparative disadvantage. The 2008 CEP index indicated

that China, India and Indonesia were the upcoming players in the banana exports to Singapore.

**Hong Kong** In general, observations indicate Philippines, Thailand and Vietnam were the three top competitors in the Hong Kong fruit and nut market (*Figure 6*). Malaysia only experienced comparative advantage once, in 2000, in the whole 9 years. Ever since then, Malaysia's CEP indices over the years had been projecting negative values. This indicated that Malaysia was not competitive in exporting fruits and nuts to Hong Kong. In 2008, Thailand, Vietnam and Philippines respectively, demonstrated positive CEP indices, enabling them to be the three most competitive nations in exporting fruits and nuts to Hong Kong.

In the case of watermelon, although the number of players remained the same during the 9 year period but the players differed (*Figure 7*). The CEP index of watermelon in Hong Kong showed that Malaysia was the most competitive, with an index of 5.26 in 2008. This scenario was not the same for 2000–2002, in which Malaysia was at a disadvantage in comparison with Singapore for those 3 years. However, ever since it regained the top most competitive nation in 2004, Malaysia had been able to sustain the lead.

As mentioned earlier, Singapore was the most competitive nation in exporting watermelon to Hong Kong during 2000–2002 period. It fell to second place during the 2003–2005 period and further on to number three in 2006 and 2007. In 2008, its CEP index demonstrated a negative value, a sign that it was no longer competitive in exporting watermelon to Hong Kong.

China trailed behind Singapore and Malaysia for 3 years (2000–2002) and later followed closely behind Singapore from 2003–2005. It maintained its position as the third most competitive nation in exporting watermelon to Hong Kong for 6 years.

In 2006, China became the second most competitive nation and has remained so until 2008. Indonesia came in as number 3 and seemed to be projecting a positive CEP index in the recent 2 years. Thailand, on the other hand was able to sustain its positive CEP until 2008. Although Philippines was one of the competitive nation in exporting watermelon in 2001 and 2002, its CEP positive indices were decreasing.

*Figure 8* showed that in 2000, there were only five countries which exported papaya to Hong Kong while in 2008, the number increased to six. In 2000, Malaysia was the only country out of the five countries that was competitive in exporting papaya, but in 2008, all six nations were competitive in exporting papaya. All six countries depicted positive CEP index in the last 4 years, beginning 2005. Overall, Malaysia was the only country that maintained a positive CEP index throughout the 9 years. Malaysia continued to lead in the Hong Kong papaya market with Philippines and Thailand following closely behind.

Philippines demonstrated an interesting trend over the 9 year period. Its exports were negligible in 2000 but when exports picked up, its CEP turned positive since 2003. Analysis showed that the Philippines had come a long way in its export competitiveness of taking the second most competitive nation in exporting papaya to Hong Kong.

China, Taiwan and Vietnam also seemed to be developing their export path into Hong Kong papaya market. In the recent 3 years, these three countries switched positions among themselves to be in fourth, fifth or sixth place respectively. Singapore had lost its competitive edge, after experiencing its highest CEP index of 2.99 in 1999. At the end of the period, it was the least competitive nation among the top six that had ventured into Hong Kong papaya market.

In 2000, there were six nations that exported pineapple to Hong Kong

(*Figure 9*). In 2008, only Thailand, the Philippines, China and Taiwan remained. Malaysia's CEP index gained momentum in 2004 and 2005 but unfortunately, dropped in 2006, although still depicting a positive CEP value. Since 2007, its export value drastically deteriorated, an indication that Malaysia could not possibly thrive in the Hong Kong pineapple market.

During 2000–2008, the Philippines had persistently sustained its lead in the Hong Kong pineapple market, making it the most competitive nation. Thailand was able to maintain its position as the second most competitive nation for 6 years (2002–2007) before falling behind Taiwan in 2008. Vietnam was the second most competitive nation in 2000 and fell to the third position in 2001. Since then, it faced the same predicament as Malaysia, dropping off the top competitive chart. China secured the second most competitive nation in 2001 and became the third most competitive nation for 2 years in 2002 and 2003 respectively. Since 2004, the second and third most competitive was between China and Taiwan.

Among the 10 countries, only Thailand and the Philippines remained as the two most competitive nations in exporting bananas to Hong Kong during the 2000–2008 (*Figure 10*). In 2008, Philippines had higher competitiveness over all other countries while Thailand had advantages over the remaining six. The CEP indices of Malaysia, Vietnam and Taiwan, demonstrated that it was not apparently viable for these nations to export bananas to Hong Kong.

**China** Generally over the 9 year period, only four countries, i.e. Thailand, Vietnam, Philippines and Myanmar, demonstrated a positive CEP value in exporting fruits and nuts to China (*Figure 11*). Malaysia, Indonesia, Singapore, India, Hong Kong and Taiwan were found not to be competitive in exporting fruits and nuts into China.

Among the 10 countries, only six countries exported watermelon to China

in 2000. Malaysia, Vietnam, Singapore and Taiwan were the only four out of the six that showed positive CEP values in 2000 (*Figure 12*). In 2008, the number of countries which exported watermelon was reduced to three and out of which, only two countries depicted positive CEP values (Vietnam and Myanmar). Vietnam persistently had the highest competitive advantage over the other nations during the 9 year period. Malaysia again had dropped from positive to negative ranks during the period, showing erosion of competitiveness in watermelon trade in the China market.

There were only three most competitive nations exporting papaya to China in 2000 (*Figure 13*). They were Malaysia, Thailand and Philippines with Malaysia leading the group. In 2008, the list grew to four to include Taiwan. Malaysia had competitive advantages over Philippines, Thailand and Taiwan from 2000–2005 but lost its competitiveness position to Philippines in 2006. In 2008, Malaysia's competitiveness further deteriorated with Taiwan in the second competitive position and Malaysia dropping to number three to be least competitive during the period.

There were only three nations at any one time that were found to be competitive in exporting pineapple to China. In 2000, Thailand, Philippines and Myanmar were the major players while in 2008, Taiwan preceded Myanmar. Analysis also showed that Malaysia had negative CEP values in 2003 and 2008 respectively, while in other years, its exports of pineapple was negligible to be accounted in the CEP calculation (*Figure 14*).

The three most competitive nations in exporting banana to China during the 2000–2008 period were Thailand, Vietnam and the Philippines (*Figure 15*). The Philippines was able to sustain its top position as the most competitive nation throughout the 9 year period. Malaysia, on the other hand, experienced comparative disadvantages for 2000 and 2002–2003 respectively. There were no records of

banana exports from Malaysia to China in the other years. Vietnam, which was the second most competitive nation in exporting banana to China from 2000–2006, lost its position in 2007 to Thailand.

### **Summary and conclusion**

The findings indicated that for watermelon, Malaysia had a relatively higher competitive advantage over its rivals such as Thailand, Indonesia, Philippines, China and India in the global watermelon market. Analyses also demonstrated that while Malaysia had competitive advantages over Thailand, Indonesia, China and India in the papaya and pineapple global market, it was less competitive as compared to the Philippines. In the banana market, Malaysia seemed to have competitive advantages over Indonesia and China but was competitively inferior as compared to the Philippines, Thailand and India.

The top three competitive nations in exporting fruits to the selected markets in 2008 are listed in *Table 2*. Malaysia was found to be the most competitive nation in exporting watermelon and papaya to Singapore and Hong Kong. The Philippines was found to be the most competitive nation in exporting pineapple and banana to Singapore, Hong Kong and China. It also dominated fruit and nut exports to Singapore and China and as well as papaya exports to China. Thailand controlled fruit and nut export to Hong Kong while Vietnam had a hold of watermelon exports to China.

Overall, the finding suggested that although Malaysia was losing competitiveness in the total 'edible fruit and nut' market, exports of Malaysia's specific fruit types into global agricultural market had shown otherwise. This clearly points to the fact that while Malaysia was not as strong in exporting fruits and nuts at the aggregate level, there was still great potential to maintain, strengthen and further develop its competitiveness in specific fruit types. The same was also true for specific export markets such

as Singapore, Hong Kong and China. Malaysia might not be competitive in fruit exports to these markets but it had competitive advantages over its rivals for selected fruit types. It was very competitive in exporting watermelon and papaya to Singapore and Hong Kong, respectively, moderately competitive in exporting banana to Singapore and slightly competitive in exporting pineapples to Singapore. These targeted fruits and markets can be further competitively developed and strengthened.

### Recommendations

The findings of this study confirmed the general competitive advantage theory that nations cannot be internationally competitive in all industries. As pointed out by Porter's (1990), many nations were only competitive in certain industries and no nation can be competitive in everything. Given Malaysia's limited resources, specialization would allow us to focus on fewer industry clusters, making it more efficient to concentrate efforts and resources to these clusters to increase productivity and enhance competitiveness (Tengku Ariff and Suntharalingam 2009). Hence, while we might lose in general fruit export competitiveness, Malaysia has the potential to develop its watermelon and papaya into fruits that are consistently and economically resilient and competitive.

This study established the need for Malaysia to formulate a sustainable fruit production and export plan to re-position itself in the tropical fruit markets, especially for watermelon and papaya, the two key fruits that were most competitive. It is crucial for policy makers to focus on programmes to enhance production and exports of these fruits. This may include provision of special incentives, better accessibility to good lands, improving the supply chain to targeted markets and continuous R&D to increase productivity, enhance quality and marketability. Investing in further upstream, such as seed production, may also be beneficial in 'grounding'

these critical 'industry-components' inside Malaysia. This would require enticing the most competitive of global seed producers to extend their existence or even relocate to Malaysia. These, coupled with better marketing programmes should enable Malaysia to achieve sustainability and enhancement of its competitiveness for watermelon and papaya in the global market.

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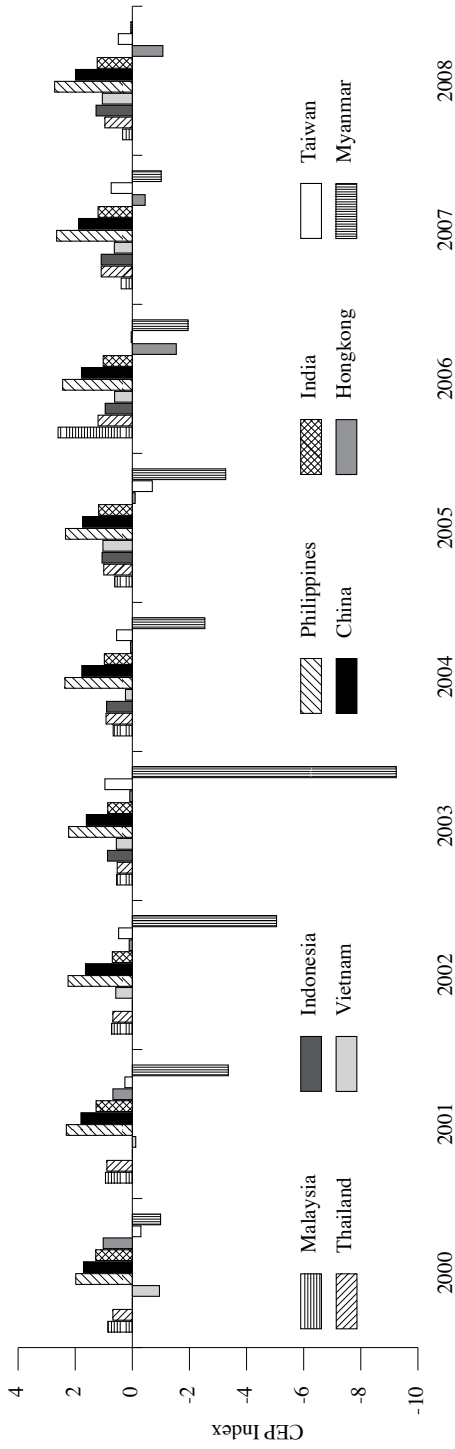


Figure 1. The CEP Index of Edible Fruits and Nuts among Several Asian Countries in Singapore

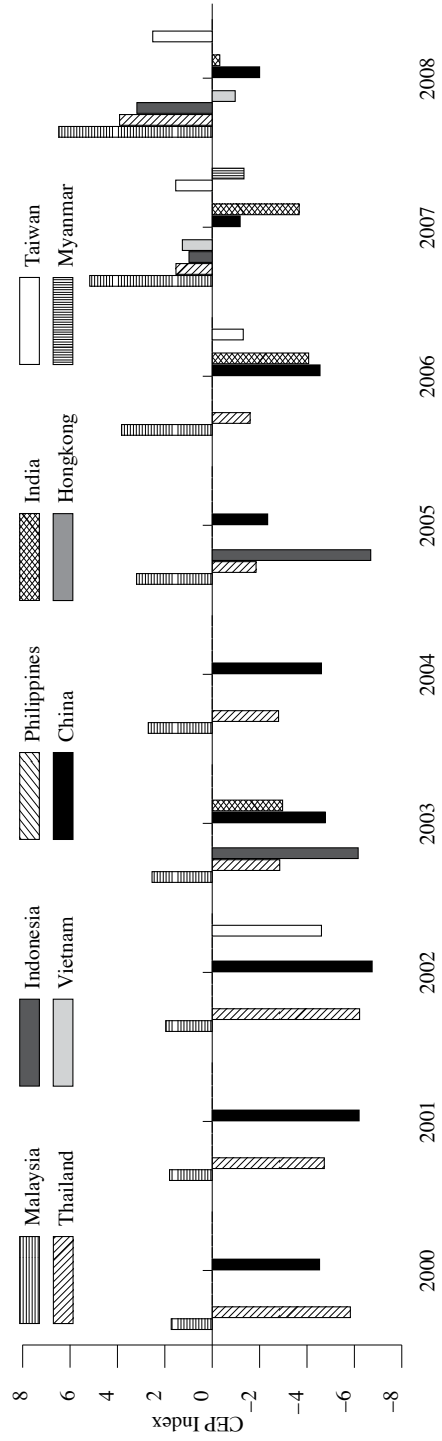


Figure 2. The CEP Index of Watermelon among Several Asian Countries in Singapore

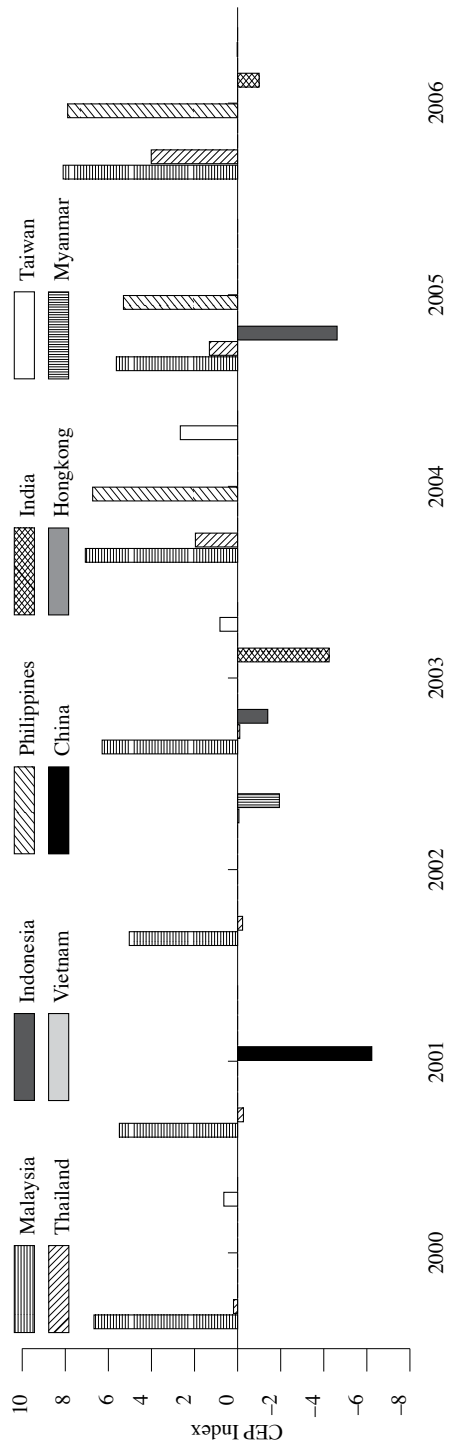


Figure 3. The CEP Index of Papaya among Several Asian Countries in Singapore

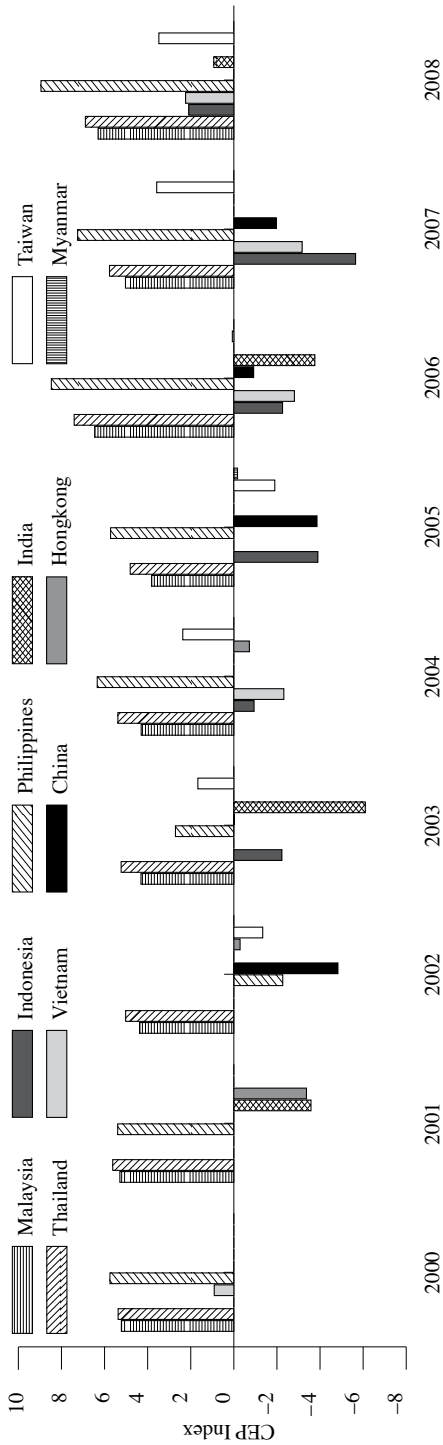


Figure 4. The CEP Index of Pineapple among Several Asian Countries in Singapore

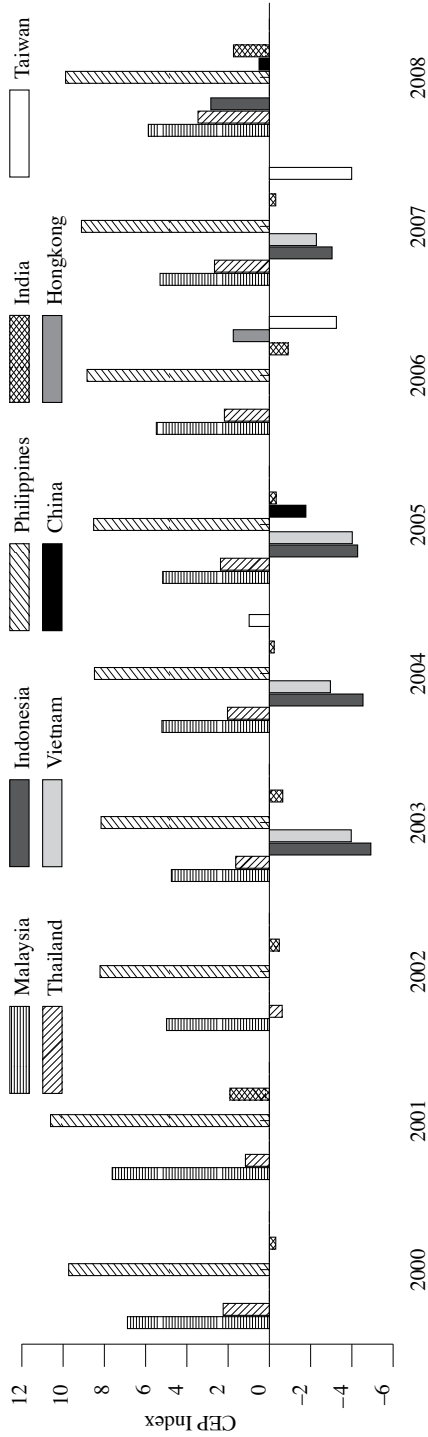


Figure 5. The CEP Index of Banana among Several Asian Countries in Singapore

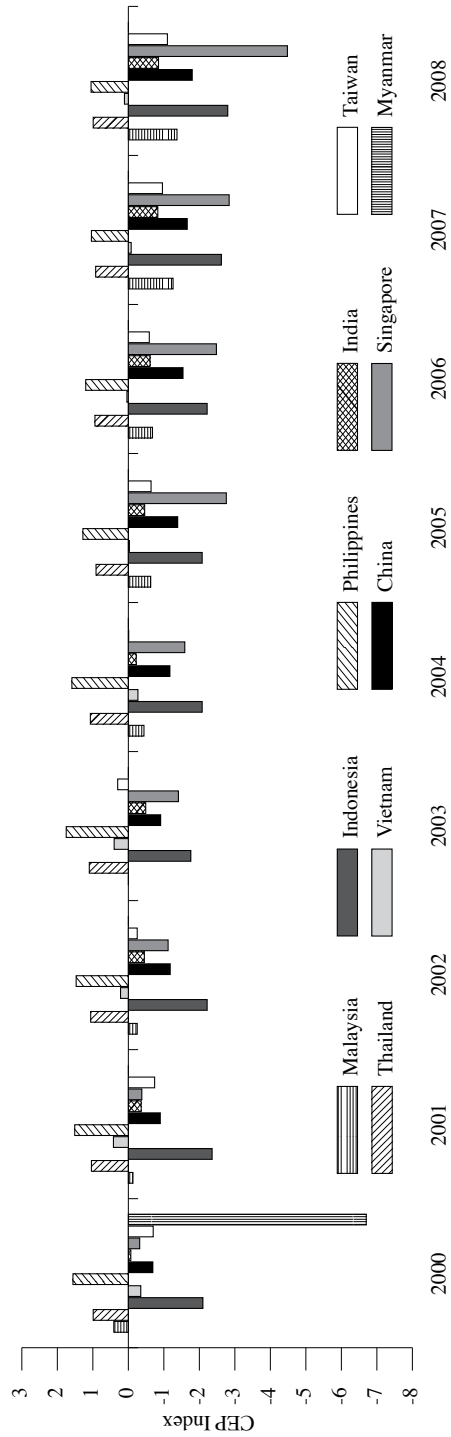


Figure 6. The CEP Index of Edible Fruit and Nuts among Several Asian Countries in Hong Kong

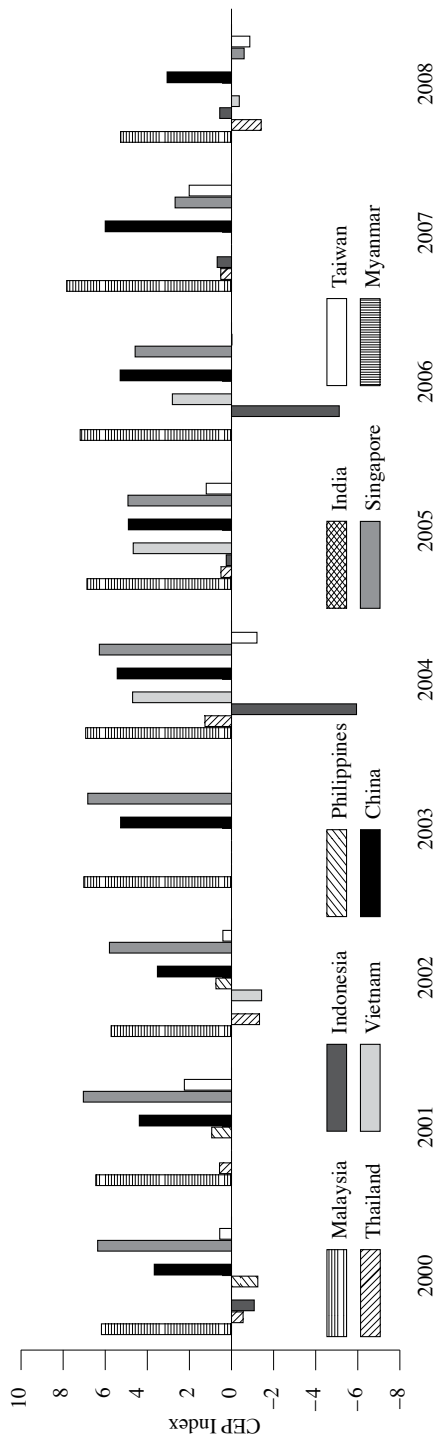


Figure 7. The CEP Index of Watermelon among Several Asian Countries in Hong Kong

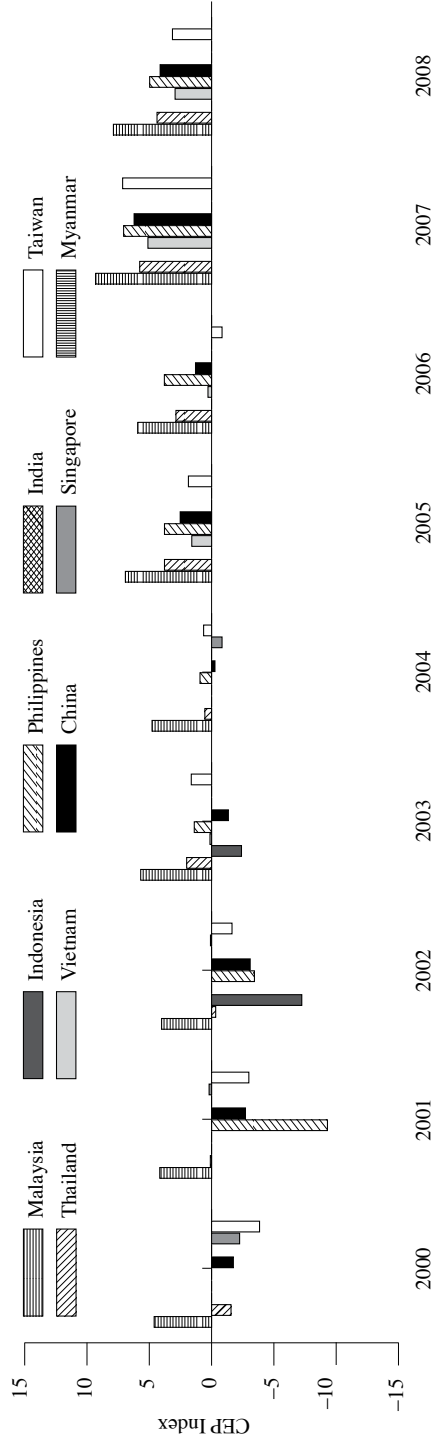


Figure 8. The CEP Index of Papaya among Several Asian Countries in Hong Kong

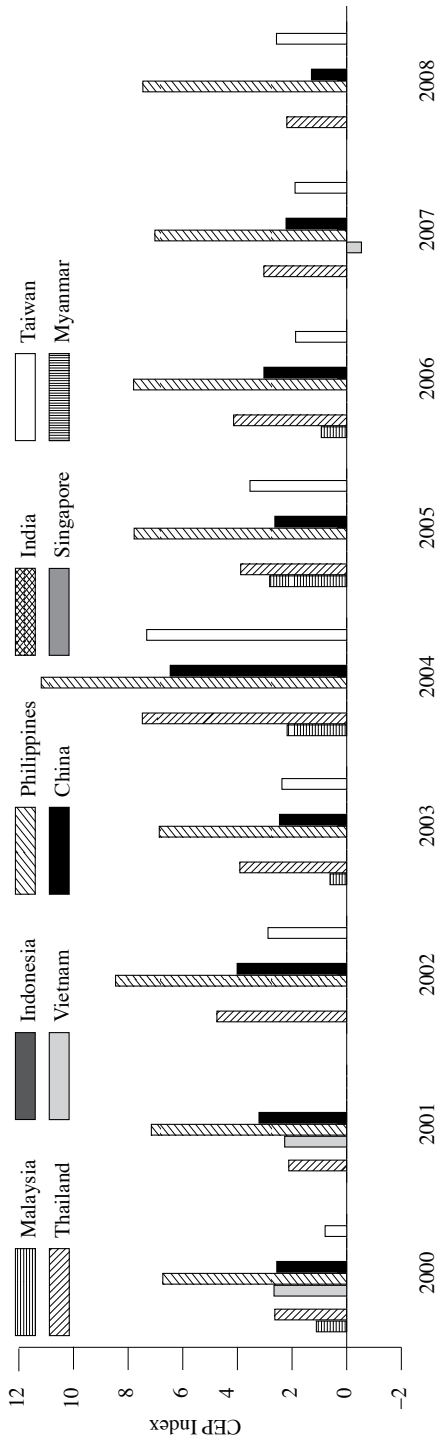


Figure 9. The CEP Index of Pineapple among Several Asian Countries in Hong Kong

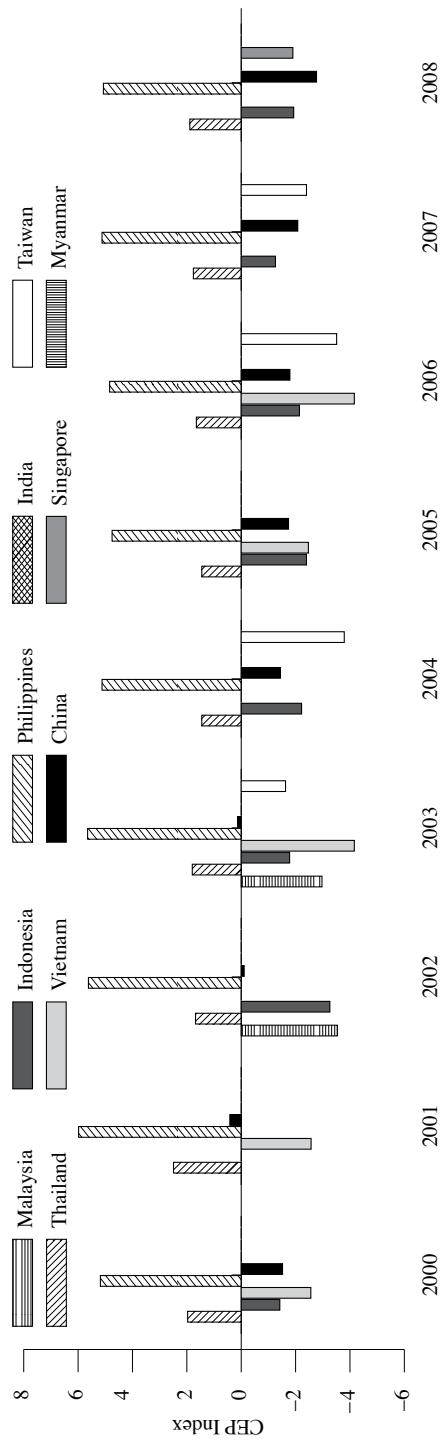


Figure 10. The CEP Index of Banana among Several Asian Countries in Hong Kong

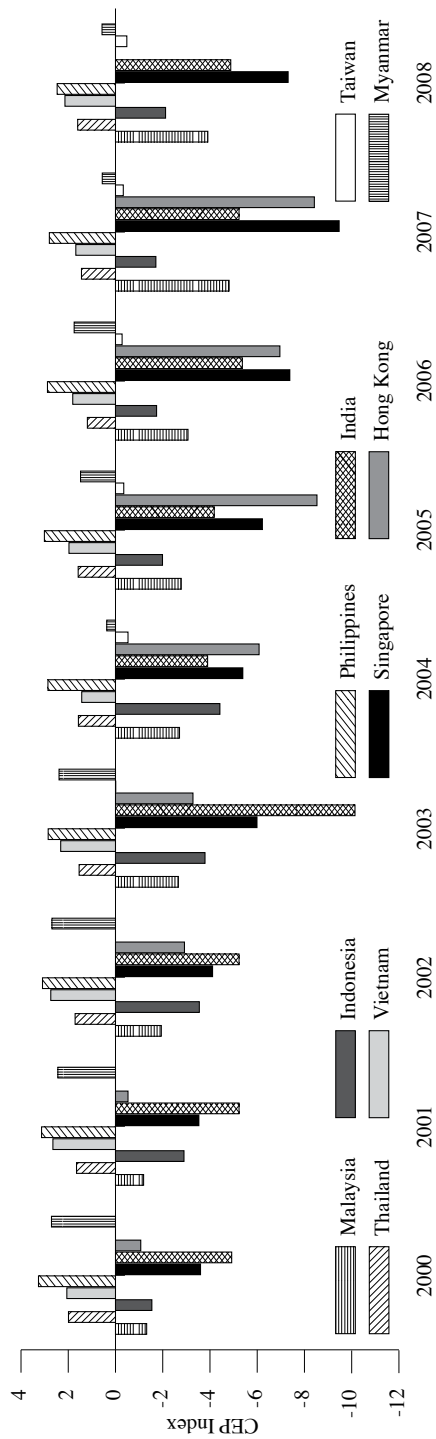


Figure 11. The CEP Index of Edible Fruit and Nuts among Several Asian Countries in China

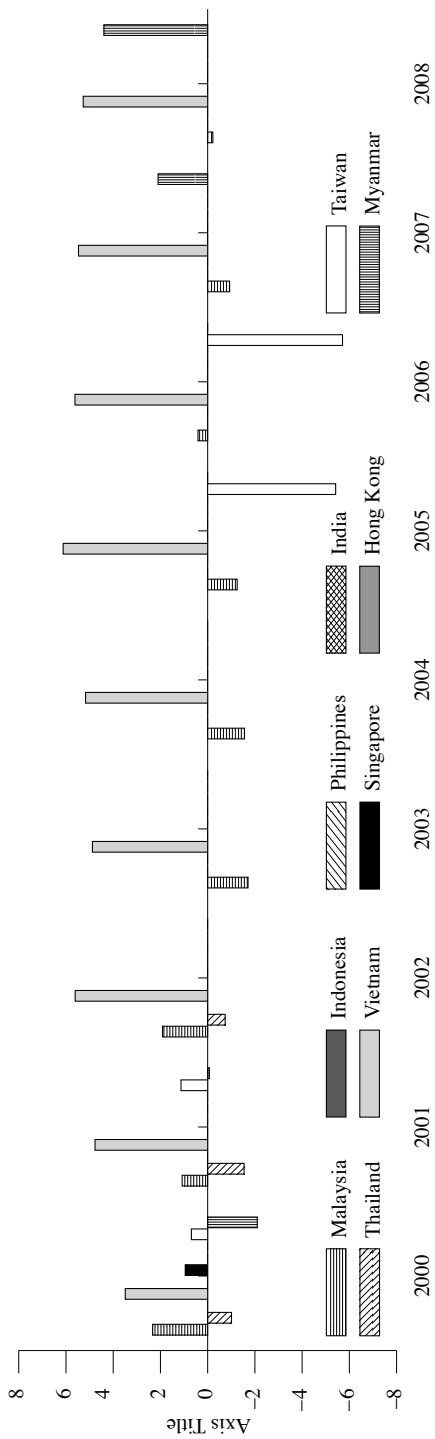


Figure 12. The CEP Index of Watermelon among Several Asian Countries in China

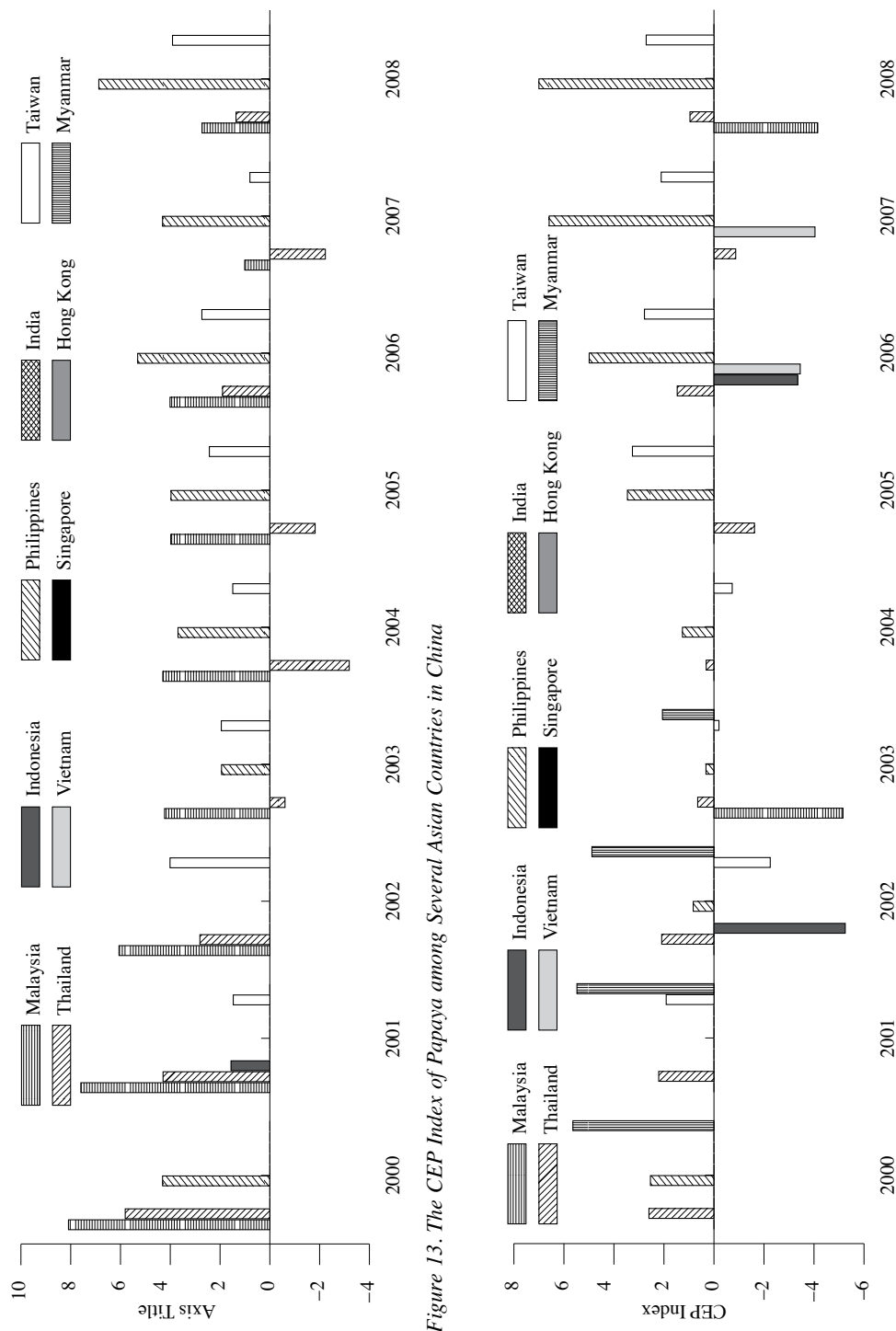


Figure 13. The CEP Index of Pineapple among Several Asian Countries in China

Figure 14. The CEP Index of Pineapple among Several Asian Countries in China

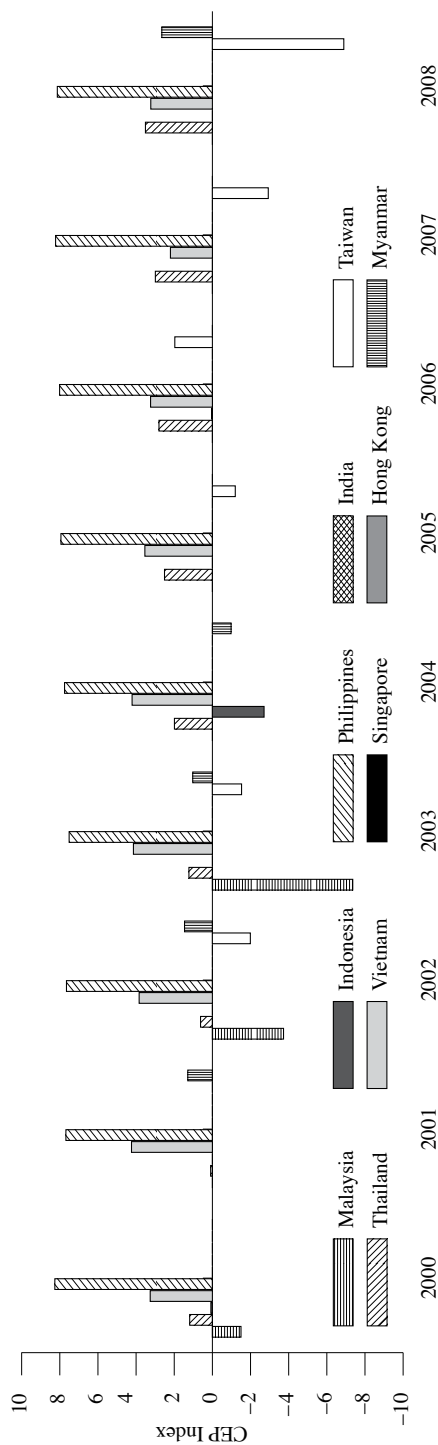


Figure 15. The CEP Index of Banana among Several Asian Countries in China

Table 2. The Top Three Competitive Nations Exporting Fruits to Selected Malaysia's Traditional Markets (2008)

Market/Fruit type	Fruit and nut	Watermelon	Papaya	Pineapple	Banana
Singapore					
First	Philippines	Malaysia	Malaysia	Philippines	Philippines
Second	China	Thailand	Philippines	Thailand	Malaysia
Third	Indonesia	Indonesia	Thailand	Malaysia	Thailand
Hong Kong					
First	Thailand	Malaysia	Malaysia	Philippines	Philippines
Second	Philippines	China	Philippines	Taiwan	Thailand
Third			Thailand	Thailand	
China					
First	Philippines	Vietnam	Philippines	Philippines	Philippines
Second	Vietnam	Myanmar	Taiwan	Taiwan	Thailand
Third	Thailand		Thailand	Thailand	Vietnam



**Abstrak**

Organisasi Perdagangan Dunia (WTO) membuka ruang kepada Malaysia bagi mencari peluang pasaran baru termasuk pasaran untuk buah-buahan tropika. Liberalisasi perdagangan telah membantu dalam peningkatan perdagangan buah-buahan tropika yang secara langsung mendedah negara kepada persaingan global. Kajian ini dijalankan untuk menilai daya saing buah-buahan Malaysia dengan pesaingnya, dengan menggunakan kaedah analisis RCA dan CEP. Analisis RCA menunjukkan Malaysia mempunyai faedah bandingan terhadap Thailand, Indonesia, Filipina, Singapura, China dan India bagi pasaran tembikai di peringkat global. Indeks CEP pula menunjukkan Malaysia ialah negara paling bersaing dalam pengeksportan betik dan tembikai terutamanya di pasaran Hong Kong dan Singapura. Walaupun Malaysia tidak begitu bersaing berbanding dengan beberapa pengeksport buah-buahan lain secara agregat, Malaysia sangat bersaing untuk buah-buahan tertentu seperti tembikai dan betik dalam pasaran yang spesifik. Oleh itu, Malaysia harus memberi penumpuan yang mendalam untuk membangunkan industri betik dan tembikai agar ia lebih berdaya tahan dan berdaya saing.