

THAI EXPORTS IN THE YEAR 2000: THAILAND'S COMPARATIVE ADVANTAGE ♣

by

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Abstract

Exports play a critical role in the Thai economy and in Thai development efforts, as is typical in developing countries. After an extended period of growth, however, exports declined considerably in the 1990's strongly contributing to the economic problems of the last part of that decade. This article explores both the reasons for this decline and provides partial solutions to the problem. The method used in the study emphasizes the

comparative advantages of Thai exports in relation to other countries.

In the period between 1980 and 1986, export growth in Thailand on average was 10.7 per cent annually. It increased significantly to 26.3 percent on annual average during the boom period 1987-90. However, in the period 1991-96 the export growth declined slightly to 19.1 per cent on annual average. Unexpectedly, the export growth rate abruptly fell to zero in 1996, after which the worst crisis in the

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Thai economic history followed, producing far reaching effects on other countries in Asia and other continents.

Zero export growth posed a big threat on economic stability, and it was a serious national problem among many others. How could it happen all of a sudden? Is it due to a global recession, which results in a declining demand for the world imports? Or, is it due to stronger and more efficient existing and new economies that have taken over the Thai markets? Is it due to internal factors of the Thai economy, such as overvalued baht and bureaucratic red tape in the export procedures? What should be the explanations and solutions to this problem? Little attention has so far been given to the issue of the zero export growth. This paper attempts to study this issue and makes an investigation into the matter. The finding would not only help identify the root cause of the problem at the micro level, but also serve as an answer or an explanation: one of the vital solutions to the export growth problem. It would also be of great value to exporters for their improvements, and to the government sector for their policies and strategies formulation. Thus, it would in part help improve our economy as a whole.

The objective of this paper is to employ *revealed comparative advantage* indices and their development pattern overtime to explain export growth and problems of

the Thai economy in the late 1990's. The paper will first explain the structure, growth of the Thai exports in different periods leading to the problems in the late 1990's. Major markets for the Thai exports are investigated and also some crucial trade theories are brought to light to explain reasons and patterns of trade in these markets. The concept of revealed comparative advantage is discussed next, followed by applying the calculated revealed comparative indices to compare the comparative advantage of the Thai exports in the periods 1988-92 and 1992-96 and to explain it to the rest of the world. Then, the revealed comparative advantage indices of major products in the 9 product groups are examined. Finally, they are used to explain as one of the root causes of the problem and they are proposed to be partial solutions to the export problems.

The Thai Export Structure from the late 1970's to the 1990's

The value of the agricultural and industrial exports in 1979 were 58 billion bahts and 32.6 billion bahts respectively. The percentage share of the agricultural and industrial exports in the Thai total exports in the same year were 54 per cent and 30 per cent respectively. This reflects a more important role of the agricultural exports in terms of the nation's income generation. However, the value of industrial exports increased to 108.1

billion bahts, which was higher than that of the agricultural exports for the first time in 1986. The value of agricultural exports increased to 92.6 billion bahts in the same year. This has a great impact on the composition of the Thai exports. Subsequently, the share of industrial exports increased to 46 per cent in total exports while the share of agricultural exports declined to 40 per cent in 1986. It is the first time in the Thai economy that the percentage share of industrial exports exceeds that of the agricultural exports. The share of industrial exports has been continually increasing, and it increased to 80 per cent of total exports in 1997 while their export value in the same year was 1,450 billion bahts. On the contrary, the percentage share of agricultural exports has been continually declining, and its share in total exports declined to 14 per cent in the same year; the value of agricultural exports in 1997 was only 257.6 billion bahts. This obvious structural change reflects and also indicates the increasing importance and a more crucial role of the industrial exports relative to agricultural exports and others in terms of revenue generation and a pattern of economic development of Thailand.

Major Markets for Thai Exports

Table 1 lists a group of 10 major markets for the Thai exports. The largest country is the U.S. market: Japan and Singapore are the second and

third largest, and each accounts for 21 per cent, 17 per cent and 14 per cent respectively in the total Thai exports in 1994 (see table 2). It is worth noting that Singapore, a small island nation, has become increasingly more important for the Thai exports. Surprisingly, these three important countries also account for around 52 per cent of the Thai exports; while these ten major countries account for around 73 per cent in total exports in the same year. Therefore, these major markets are crucial for the Thai exports in terms of export revenue and export growth. Their change in demand for the Thai exports would trigger a wide fluctuation in the Thai export revenue unless Thailand makes a great effort to find new markets. Obviously, whenever their demand for the Thai exports declines, it would have a direct and indirect effects on the Thai export and the Thai economy as a whole.

The absolute values of the Thai exports in the top ten markets increased every year in the period 1994-98. The export values to the U.S. market increased from 239.1 billion bahts in 1994 to 354.5 billion bahts in 1997. Similarly, the Thai exports to Japan also increased from 194.3 billion bahts in 1994 to 270.8 billion bahts in 1997. However, these numbers may not be sufficient to explain and predict the Thai export situation. Percentage share in the total exports and export growth figures would help explain and assess the situation better. The share of the largest markets – U.S.A., Japan and

Table 1: The Thai Export Value in million baht in the Ten Majors Markets from 1994 to 1998

Country	1994	1995	1996	1997	1997 (Jan-Aug)	1998 (Jan-Aug)
1. USA.	239,099.7	250,684.8	253,799.8	354,539.2	195,674.56	340,865.1
2. Japan	194,276.2	236,099.4	237,523.9	270,769.5	160,198.09	211,781.9
3. Singapore	155,050.2	197,321.1	171,041.1	199,445.5	118,420.28	137,130.7
4. Hongkong	59,990.0	72,776.9	82,121.2	107,538.1	60,790.13	80,668.5
5. UK.	33,818.2	40,337.7	45,490.0	66,439.8	30,854.38	61,893.9
6. Netherlands	31,628.2	44,880.6	45,382.9	58,148.4	30,857.91	58,938.6
7. Malaysian	27,630.9	38,724.2	51,070.5	77,679.8	45,584.50	50,872.3
8. China	23,336.1	40,867.6	47,369.9	55,495.8	30,835.91	48,686.9
9. Taiwan	24,691.1	33,715.1	36,023.5	49,369.5	27,802.93	47,431.8
10. Germany	40,031.7	40,816.1	40,825.4	44,638.6	25,840.37	43,773.6

Source: Department of Business Economics

Table 2: Percentage Share of the Thai Exports in the Ten Major Markets from 1994 to 1998

Country	1994	1995	1996	1997	1997 (Jan-Aug)	1998 (Jan-Aug)
1. USA.	21.0	17.8	18.0	19.6	19.10	22.1
2. Japan	17.1	16.8	16.8	15.0	15.64	13.7
3. Singapore	13.6	14.0	12.1	11.0	11.60	8.9
4. Hongkong	5.3	5.2	5.8	6.0	5.90	5.2
5. UK.	3.0	2.9	3.2	3.7	3.00	4.0
6. Netherlands	2.8	3.2	3.2	3.2	3.00	3.8
7. Malaysian	2.4	2.8	3.6	4.3	4.50	3.3
8. China	2.1	2.9	3.4	3.1	3.00	3.2
9. Taiwan	2.2	2.4	2.6	2.7	2.70	3.1
10. Germany	3.5	2.9	2.9	2.5	2.50	2.8

Source: Calculated from the figures in Table 1

Table 3: Growth Rate of Thai Exports in the Ten Major Markets from 1994 to 1998

Country	1995	1996	1997	1998 (Jan-Aug)
1. USA.	4.8	1.2	39.7	74.2
2. Japan	21.5	0.6	14.0	32.2
3. Singapore	27.3	-13.30	16.6	15.8
4. Hongkong	21.3	12.8	31.0	32.7
5. UK.	19.3	12.8	46.1	100.6
6. Netherlands	41.9	1.1	28.1	91.0
7. Malaysian	40.1	31.9	52.1	11.6
8. China	75.1	15.9	17.2	57.9
9. Taiwan	36.5	6.8	37.0	70.6
10. Germany	2.0	-	9.3	69.4

Source: Calculated from the figures in Table 1

Singapore declines gradually. The share of the U.S. market fell from 21 per cent in the total exports in 1994 to 18 per cent in 1996; while Japan's share fell from 17.1 per cent to 16.8 per cent in the same year. Similarly, Singapore's share was 13.6 per cent in 1994, but it declined slightly to 12.1 per cent in 1996. The other countries in the top ten markets take different patterns, their share increasing marginally in the study period. (Since the change is negligible their share would be constant.)

The declining percentage share in the total Thai exports of the ten major markets is considerable, and the Thai export growth in these markets recorded an abrupt and significant decline in 1996 compared to 1995. The export growth unexpectedly declines in all these major markets. The U.S. and Japan markets recorded a decline from 4.8 per cent and 21.5 per cent in 1995 to an insignificant growth of 1.2 per cent and 0.6 per cent in 1996 respectively. Singapore marked a big decline from 27.3 per cent in 1995 to a negative growth of -13.3 per cent in 1996 (see table 3). A considerable drop in export growth in these markets has a big impact and devastating effect on the Thai economy. It led to a problem of *a zero export* growth in 1996 since they accounted for a big portion of the total Thai exports. They accounted for approximately 73 per cent of the total Thai exports in 1994.

Comparative Advantage as an Explanation for International Trade

Two types of theories of trade are relevant to explain international business. The first type deals with the natural order of trade; that is, it examines and explains trade patterns under laissez-faire conditions. Theories of this type pose questions of which products, how much, and with whom a country will trade in the absence of restrictions among countries. The second type of theory prescribes governmental interference with the free movement of goods and services among countries in order to alter the amount, composition, and direction of trade (Daniels et al., 1998: 194). Here, the paper concentrates on the pure theory of international trade which is constructed first by classical economists, such as, Adam Smith and David Ricardo to explain the basis for trade, gains for trade as well as the patterns of trade.

Comparative advantage and specialization have long been applied by economists to explain reasons and basis for trade between individual countries. Economists since Adam Smith have sought the answers to the questions of what determines which goods are traded and why some countries produce something while others produce different things, in terms of international differences in costs of production and prices of

different products. The relative cost and price differences are basic to the theory of international trade. The principle of comparative advantage, as it is called, asserts that a country will specialize in the export of those products it can produce at the lowest relative cost (Todaro, 1985: 373-4).

The theory of comparative advantage, a classical concept, is introduced by Adam Smith, a leading classical economist. According to Smith, trade between two nations is based on *absolute advantage*. When one nation is more efficient than or has an absolute advantage over another in the production of one commodity but it is less efficient, or has an absolute disadvantage than the other nation in producing a second commodity, then both nations can gain by each specializing in the production of the commodity of its absolute advantage and exchanging part of its output with the other nation for the commodity of its absolute advantage. By this process, resources are utilized in the most efficient way and the output of both commodities will rise. This increase in the output of both commodities measures the gain from specialization in production available to be divided between the two nations through trade.

Absolute advantage, however, can explain only a very small part of world trade today, such as the trade between developed and developing countries. Most of the bulk of world trade, especially trade among developed

countries, could not be explained by the absolute advantage (Salvatore, 1983: 19). This gives room for Ricardo, another classical economist to modify the absolute advantage model to explain better the basis and gains from trade. He comes up with a theory of *comparative advantage*

In 1817 Ricardo published his *Principles of Political Economy*, in which he presented the law of comparative advantage. This is one of the most important and still unchallenged laws of economics, with many practical applications. The theory of comparative advantage states that a country will produce and export products that use the lowest amount of labor time relative to foreign countries and import those products that have the highest amount of labor time in production relative to foreign countries. Furthermore, only relative amount of labor time matters. Hence, according to the law of comparative advantage; even if one nation is less efficient than other nations in the production of both commodities, there is still a basis for mutually beneficial trade. The first nation should specialize in the production and export the commodity in which its absolute disadvantage is smallest and import the commodity in which its absolute disadvantage is greatest.

Ricardo based his law of comparative advantage on a number of simplifying assumptions: only two nations and two commodities, free

trade, perfect mobility of labor within each nation but immobility between the two nations, constant costs of production, no transportation costs, no technical change, and the labor theory of value. Salvatore (1983) argues that all assumptions can be easily relaxed except the labor theory of value which is basically wrong and should not be used in explaining comparative advantage.

The labor theory value states that the value of any product is equal to the value of the labor time required to produce it. Under the labor theory of value, the value or a price of a commodity depends exclusively on the amount of labor time spent on the production of the commodity. This implies that either labor is the only factor of production or that labor is used in the same fixed proportion in the production of all commodities and that labor is homogeneous. Since, neither of these assumptions is true, the labor theory of value must be rejected.

Specifically, labor is neither the only factor of production nor is it homogeneous, and labor is not used in the same proportion in the production of all commodities. There is usually some possibility of substitution between labor, capital and other factors in the production of most commodities. Further, labor is not homogeneous but varies greatly in training, productivity and wages. As such, the law of comparative advantage cannot be explained by the labor theory of value.

The law of comparative advantage would be better explained by the opportunity cost theory which is more acceptable. (Salvatore, 1983: 24).

Haberler (1936) explains the law of comparative advantage by using the opportunity cost theory. According to the opportunity cost theory, the cost of commodity is the amount of a second commodity that must be given up to release just enough resources to produce one additional unit of the first commodity. No assumption is here made that labor is the only one factor of production or that labor is homogeneous. Nor is it assumed that the cost or price of the commodity depends on or can be inferred exclusively from its labor content. Consequently, the nation with the lower opportunity cost in the production of a commodity has a comparative advantage in that commodity.

According to classical economists, comparative advantage was based on the difference in the productivity of labor which is the only one factor of production considered among trading nations, but they provided no explanation for such difference in productivity. The *factor intensity and factor abundance* introduced by Heckscher-Ohlin goes much beyond that by extending and attempting to examine the basis for comparative advantage and the effect that trade has on factor earnings in the two nations (Salvatore, 1983: 93).

Heckscher-Ohlin based the theory on these major assumptions – two nations, two commodities (X and Y) and two factors; both nations use the same technology; X is labor intensive and Y is capital intensive in both countries; constant returns to scale and incomplete specialization in both commodities in two nations; equal taste and perfect competition; perfect mobility of factor within each country but no international factor mobility; no transportation costs and free flow of trade. With the stated assumptions, Heckscher-Ohlin asserts that a nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor. Here factor abundance could be defined as number of physical units, i.e., the overall amount of capital and labor available in a nation; or it could be seen as relative factor prices, i.e., in terms of the rental price of capital and the price of labor in each nation. Hence, the relatively labor-rich country exports the relatively labor-intensive commodity and imports the relatively capital-intensive commodity.

The factor abundance and factor intensity proposed by Heckscher-Ohlin, therefore, explains comparative advantage. The difference in relative factor abundance and prices is the cause of the pretrade difference in relative prices between two countries. The difference in relative factor and relative

commodity prices is translated into a difference in absolute factor and commodity prices between the two nations. It is the difference in absolute commodity prices between the two nations that is the immediate cause of trade. (Salvatore, 1983: 101)

Revealed Comparative Advantage

The concept of *revealed comparative advantage* introduced by Balassa (1965) pertains to the relative trade performances of individual countries in particular commodities. The countries' commodity patterns of trade help reflect inter-country differences in relative costs as well as in non-price factors; they are assumed to *reveal* the comparative advantage of the trading countries.

Data on exports and export-import ratios were used formerly to indicate the revealed comparative advantage of the major industrial countries in manufactured exports; but the export-import ratios were affected by tariffs and other protective measures whose incidence on individual country varies from country to country (Balassa, 1965: 104). Hence, Balassa (1977) suggests that data on relative export performance are more appropriate for the purpose. The exclusive reliance has been on export performance, and revealed comparative advantage indices have been derived from data on relative exports. The indices have been calculated by dividing a country's share

in the exports of a given commodity category by its share in the combined world exports. Hence, it can be formulated in an equation form as Balassa (1977), Chaowagul, et al. (1997), Maita (1999):

$$RCA_{ik} = \frac{X_{ik} / X_i}{X_{wk} / X_w},$$

Where

RCA = revealed comparative advantage index of product k of country i,

X_{ik} = export value of product k of country i,

X_i = total export value of country i,

X_{wk} = export value of product k in the world market,

X_w = total value in the world market.

When the value of RCA_{ik} is greater than 1, it indicates that country i has comparative advantage in the product k. Further, country i would have a greater comparative advantage in the production and export of product k if the value of revealed comparative advantage of product k is larger or higher. Inversely, when RCA_{ik} is smaller than 1, it also implies that country i has a comparative disadvantage in the production of

product k. The smaller the value of RCA_{ik} , the greater the comparative disadvantage of product k in country i relative to other countries. Hence, the calculated revealed comparative index would help identify a country's comparative advantage and disadvantage in some products relative to other countries. The index also helps identify a country's comparative advantage and disadvantage in some products relative to other products in the same country. For this purpose, this study utilizes revealed comparative advantage (RCA) indices for Thai commodity exports during 1988-96 by Noiganan (1999).

Thailand has the edge in Exports

Here, countries of comparison are classified as Asean and non-Asean countries. Four major Asean members such as Indonesia, Philippines, Singapore and Thailand are covered in this investigation. Non-Asean countries are broken down into Africa, Japan, Australia and New Zealand, Middle-East countries, European countries and North America countries. Comparative advantage of the Thai exports in 9 major product groups such as food, beverages, crude materials, mineral fuel, animal and vegetable oil, chemicals, manufactured goods, machinery and transport, miscellaneous manufactures and miscellaneous transactions will be compared to those of Asean neighbours as well as to the non-Asean countries. The comparison

is more rigorous and gains more insight when the two periods are included: 1988-92 and 1992-96.

Food

Thailand has a relatively higher comparative advantage in food production and exports in comparison to Asean countries in both periods; its RCA for food products is 3.7 in the period 1988-92. Malaysia and Philippines are second and third, and their RCA indices for food in the same period are 1.8 and 1.2 respectively. Indonesia and Singapore have the least comparative advantage in food production and export; this is reflected by very small RCA values of 0.5 and 0.4 respectively. RCA indices for food products in all Asean countries recorded a decline in the period 1992-96. Thailand in particular experienced a big decline from 3.7 to 2.8 in 1992-96; while the others marked only a slight decline.

For non-Asean countries, Australia and New Zealand showed the highest comparative advantage in food production and export in the period 1988-92. Their RCA value for food products in this period is 2.6. They are followed by Africa, European countries and North America countries whose RCA figures for food are 1.5, 1.1 and 1 respectively. Among non-Asean countries, Japan and Middle East countries have the least comparative advantage in food exports; their RCA indices for food in the same period are

0.1 and 0.5 respectively. However, there was relatively no change in RCA indices in all non-Asean countries except Australia and New Zealand in the period 1992-96. There is a significant increase in RCA index for Australia and New Zealand; the value increased to 3.2 in the period 1992-96 from 2.6 in the previous period. This is not far behind 2.8 of Thailand's in the same period (see figures 1.1 and 1.1').

This marked increase indicates that Australia and New Zealand have gained a higher comparative advantage in food production and export overtime while Thailand's comparative advantage in food has declined significantly in the late 1990's. Hence, it is not wrong to conjecture that Australia and New Zealand would pose a big potential threat to the Thai exports as far as food products are concerned. They would be Thailand's major competitors and would increase their world market share in food exports in the future.

Beverages

Though Singapore is the smallest country among Asean neighbours, its RCA for beverages is the highest relative to Asean members in both periods. It was 1.3 in the period 1988-92, and it even climbed up marginally to 1.4 in the period 1992-96. Thailand, Philippines, Indonesia and Malaysia have comparative disadvantage in beverage exports; their RCA for beverages is smaller than 0.6 for the

Revealed Comparative Advantages of Asean and non-Asean Countries Between 1988 – 1992 and 1992 – 1996

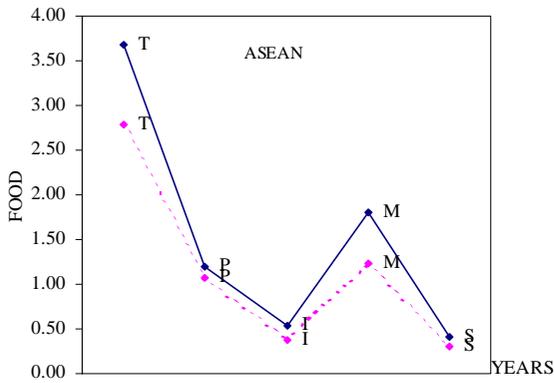


Figure 1.1

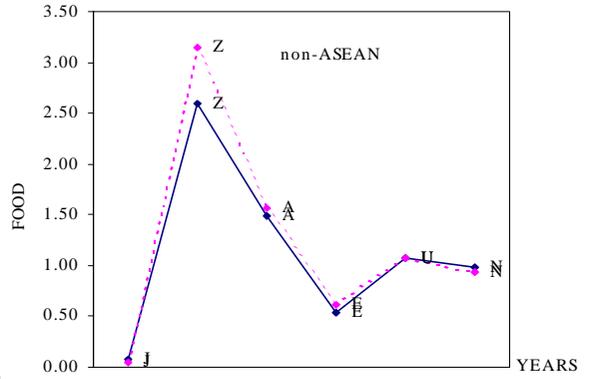
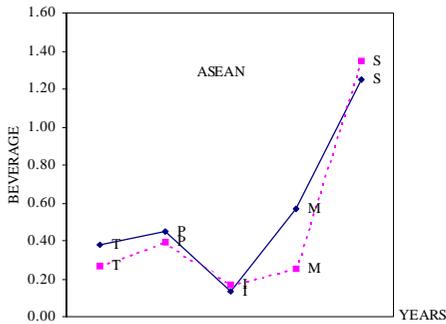
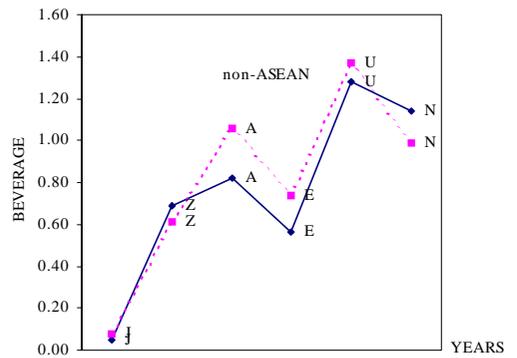


Figure 1.1'



1988/92 1992/96
Figure 1.2

1988/92 1992/96



1988/92 1992/96
Figure 1.2'

1988/92 1992/96

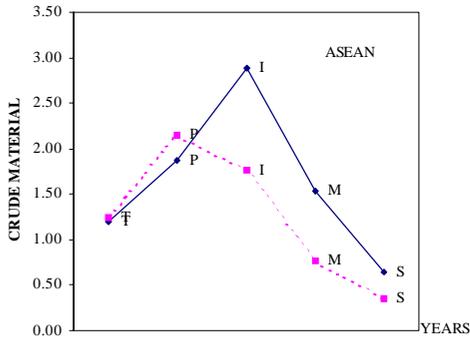


Figure 1.3

1988/92 1992/96

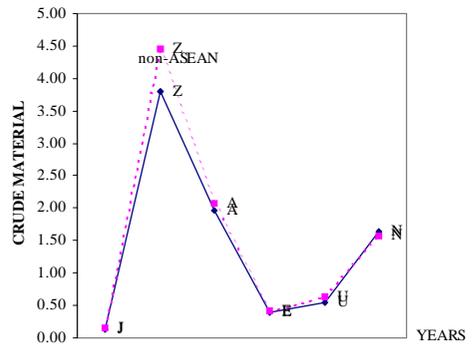


Figure 1.3'

1988/92 1992/96

two periods. Hence, only Singapore in relation to other Asean members has a comparative advantage in the export of beverages. Singapore's comparative advantage is comparable to that of European countries whose RCA for beverages is 1.3, the highest among other countries in the group in both periods. This is followed by North America countries whose RCA for beverages is 1.1 but it declined to 0.9 in the period 1992-96. It is also worth noting that RCA for beverages exports of Africa in the period 1992-96 was greater than 1 compared to only 0.8 in the period 1988-92 (see figures 1.2 and 1.2').

From this study, it is found that European countries and Africa have an increasing comparative advantage in beverage exports while Thailand and Indonesia have the least compared to the others. It even seems worse for Thailand because its RCA for beverages declined to 0.3 in the period 1992-96.

Crude Materials

All Asean countries except Singapore have comparative advantage in crude material exports. Among Asean group, Indonesia is the leader whose RCA for the crude materials was 2.9 in the period 1988-92. This is followed by Philippines, Malaysia and Thailand whose RCA indices in the same period are 1.9, 1.5 and 1.2 respectively. Philippines sees an increase in RCA index overtime while Indonesia and Malaysia have

experienced a significant drop in the late 1990's. Thailand indicates no change.

The study finds that Australia and New Zealand have the highest comparative advantage in crude material exports relative to Asean and non-Asean countries. Its RCA in the period 1988-92 is 3.8, increased considerably to 4.5 in the period 1992-96. It is followed by Africa and North America countries whose RCA indices for these products in the period 1988-92 are 2.0 and 1.6 respectively. On the contrary, Japan, Singapore and European countries have comparative disadvantage relative to others in the crude material exports. Japan has the least; its RCA was only 0.2 in the late 1990's.

Thus, the investigation finds that Australia and New Zealand as well as Africa have a very high potential for the crude material exports in the future. Thailand, Philippines, North America countries also show a potential strength (see figures 1.3 and 1.3').

Mineral Fuel

Thailand has the highest comparative disadvantage relative to the Asean countries in mineral fuel exports. Its RCA for these products is 0.1 in both periods. While Philippines, Indonesia and Singapore have impressive comparative advantage in the mineral fuel exports, their RCA indices being 3.9, 1.6 and 1.6

respectively. However, they declined slightly in the period 1992-96.

As far as mineral fuel exports are concerned, Middle East countries fare better than the rest of the world; they have the highest RCA index which was 7.5 in the period 1988-92. The index increased to 8.8 in the late 1990's. Similarly, Africa, whose RCA index for mineral fuel exports is 4.7, gained to 5.5 in the period 1992-96. Japan, North America and European countries, however, have comparative disadvantage in the mineral fuel exports. Japan has the biggest disadvantage among others in both periods (see figures 1.4 and 1.4').

Animal and Vegetable Oil

Among Asean countries, only Thailand has comparative disadvantage in animal and vegetable oil exports; its RCA index is 0.1 in both periods. However, it would be surprising to find out that Singapore has relatively high comparative advantage in these products because its RCA index was 2 in the early 1990's. Similarly, Indonesia and Malaysia gain very high RCA indices; they were 18.6 and 12.2, respectively in the period 1988-92. In spite of a slight decline the late 1990's, both would continue to lead and maintain their competitive advantage in the future. Among non-Asean countries, only Africa shows some degree of

comparative advantage because its RCA figure is 1.3; others have comparative disadvantage (see figures 1.5 and 1.5').

Chemicals

Figures 1.6 and 1.6' show that only European countries have comparative advantage in chemical exports; their RCA index is 1.3 in both periods. However, the value of North America countries is almost 1. All the others have comparative disadvantage and their RCA indices are very small. Compared to the others, Thailand has the largest comparative disadvantage in chemicals; its RCA indices for the products were 0.2 in the early 1990's and 0.4 in the late 1990's.

Manufactured Goods

Philippines and European countries have some comparative advantage in manufactured exports; their RCA indices are 1.4 and 1.1 respectively. Thailand records only 0.8 which is comparable to those of Japan, Australia and New Zealand, Africa and North America countries (see figures 1.7 and 1.7'). In fact, Thailand should have a relatively higher RCA for these exports because the country has made great efforts for industrialization and export-promotion. These products are crucial for the industrialization purpose.

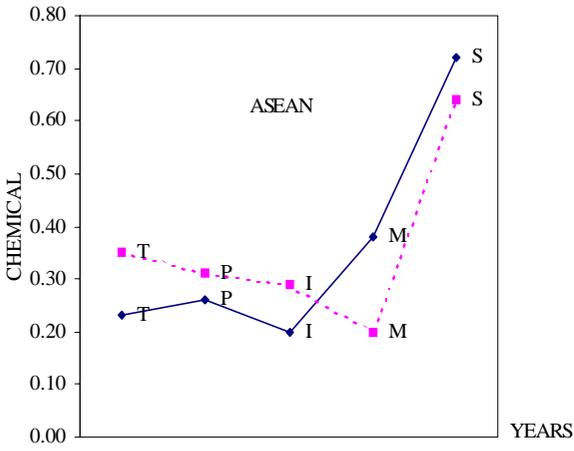


Figure 1.4
1988/92 1992/96

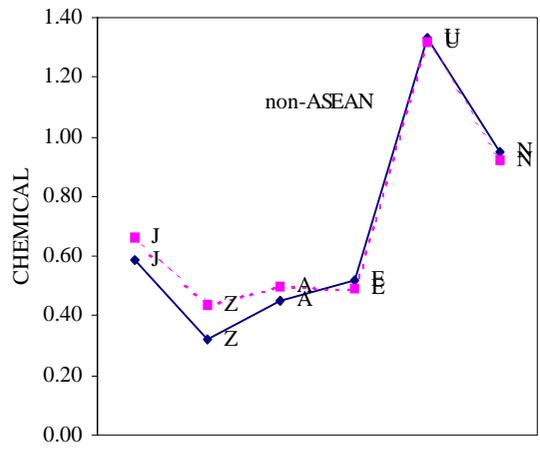


Figure 1.4'
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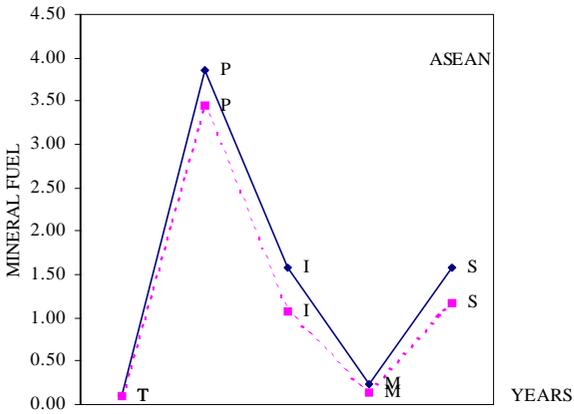


Figure 1.5
1988/92 1992/96

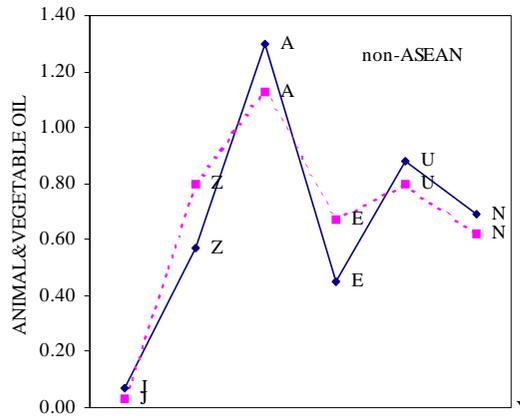


Figure 1.5'
1988/92 1992/96

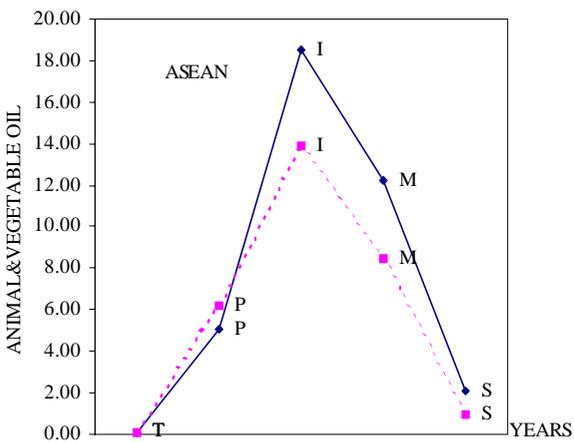


Figure 1.6
1988/92 1992/96

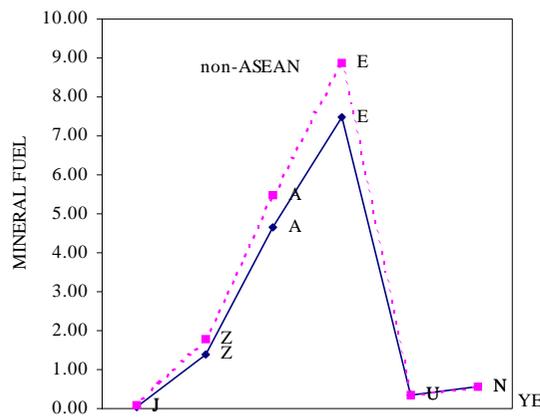


Figure 1.6
1988/92 1992/96

Machinery and Transport Products

Japan is the leader in machinery and transport products; its RCA index was 2 in the early 1990's but it declined slightly to 1.9 in the late 1990's. Singapore and Indonesia have similar degree of comparative advantage in both periods; Singapore records 1.4 and increased to 1.6 in the late 1990's. Though Thailand has a smaller RCA index; increased to 0.8 in the late 1990's. Philippines has advantage in manufactured goods, but has disadvantage in machinery and transport exports (see figures 1.8 and 1.8').

Miscellaneous Manufactures

Figures 1.9 and 1.9' indicate that Asean countries have high comparative advantage in miscellaneous manufactures relative to non-Asean countries. It should be noted here that Thailand has the highest RCA indices compared to all countries in both periods; they were 2.1 in the early 1990's and 1.9 in the late 1990's. It marks a decline in the advantage for Thailand. Philippines and Malaysia seem to be Thailand's major competitors in these products. Philippines significantly improved its RCA index from 1 in the period 1988-92 to 1.4 in the later period. Malaysia has RCA value as high as 1.7 but it fell to 1.3 in the late 1990's.

Miscellaneous Transactions

Malaysia is exceptional in miscellaneous transactions; it has the highest RCA compared to Asean and non-Asean countries. All in Asean countries have disadvantage. The RCA index for Thailand, Philippines, Singapore is around 0.3 in both periods. Australia and New Zealand follow closely behind, and their RCA index was as high as 7.0 in the early 1990's; however, it declined significantly to 3.9 in the late 1990's. Malaysia is expected to maintain its competitive advantage and to be a leader in the future. However, it is obvious that its major competitors would be Australia and New Zealand (see figures 1.10 and 1.10').

Compared to all countries under investigation, Indonesia and Middle East countries have the highest comparative advantage in animal and vegetable oil, and fuel oil respectively. Malaysia had the highest comparative advantage in miscellaneous transactions in the period 1992-96, surpassing Australia and New Zealand. Thailand has the highest comparative advantage in two product groups – food and miscellaneous manufactures. The RCA index for food is 3.7, and it was 2.1 for miscellaneous manufacture exports in the period 1988-92. However, these indices declined considerably to 2.8 and 1.9 respectively in the period 1992-96. The declining RCA indices reflect a falling comparative advantage in these

exports; it could be one of the major root causes of the decreasing exports that led to the zero export growth in 1996.

For other product groups, Thailand has some small comparative advantage in crude materials. However, RCA indices for the other groups are smaller than one, that is, comparative

disadvantage prevails in these product groups. Somehow, their disadvantage remains relatively unchanged in the latter period, except a slight increase in chemicals, machinery equipment and transport in the period 1992-96. Hence, these products would have relatively little impact on the declining and zero export growth in 1996.

Figure 1.7

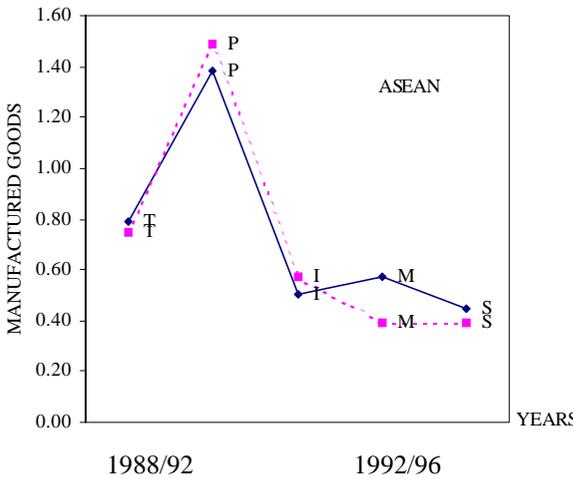


Figure 1.8

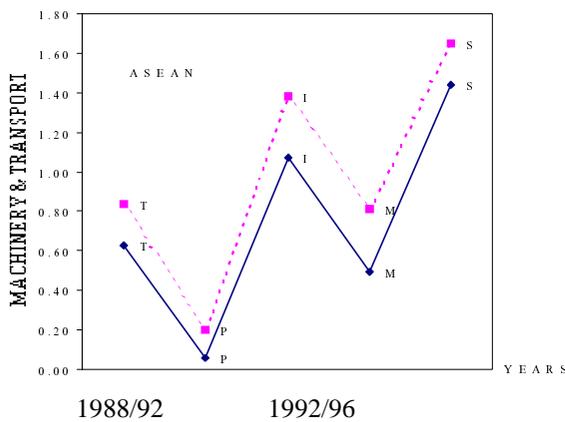


Figure 1.7'

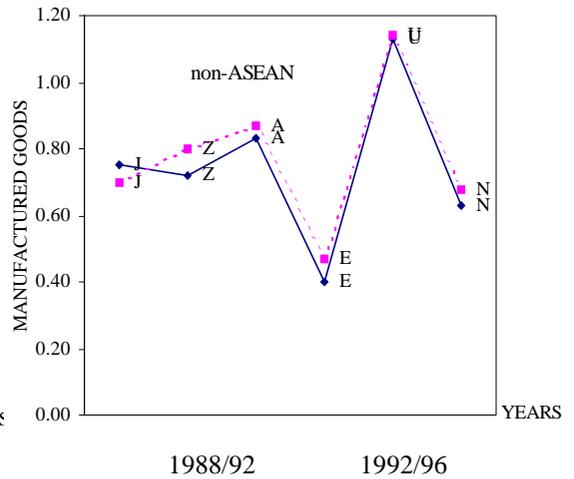


Figure 1.8'

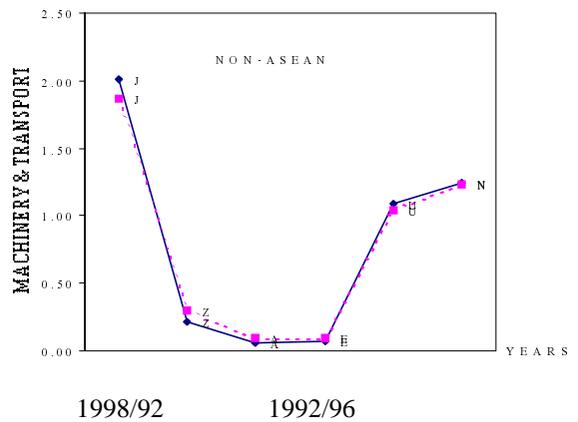


Figure 1.9

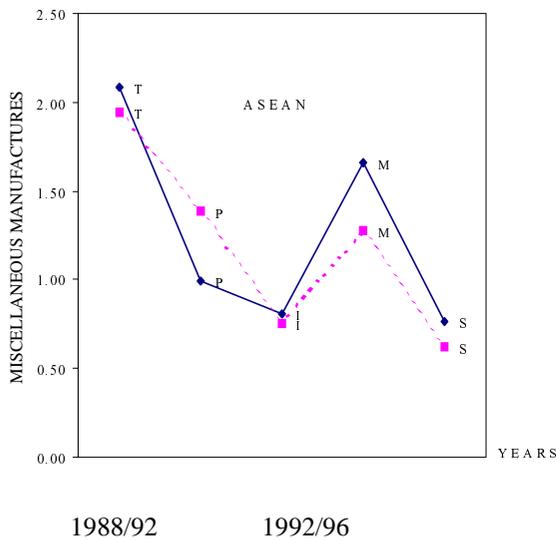


Figure 1.9'

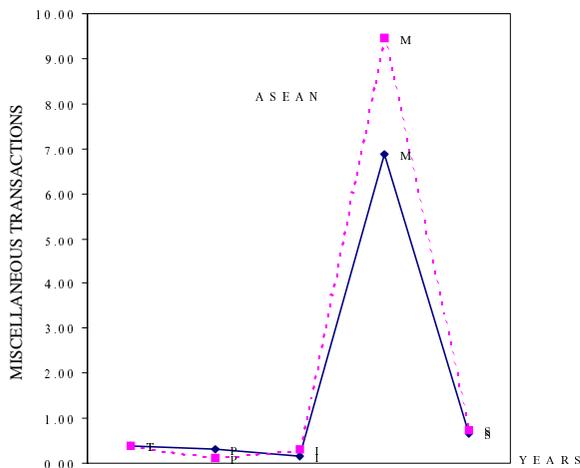
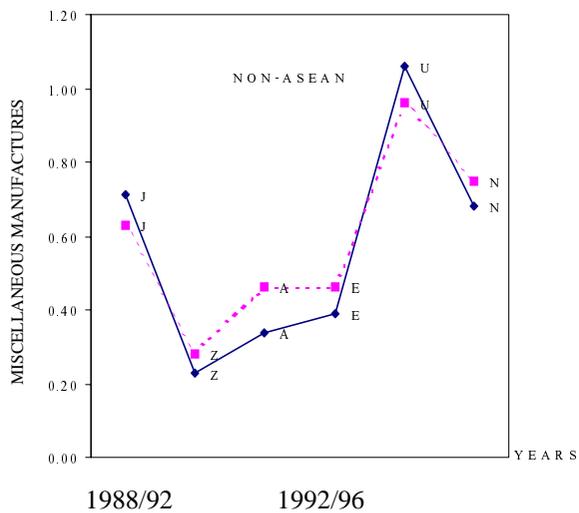


Figure 1.10

1988/92 1992/96

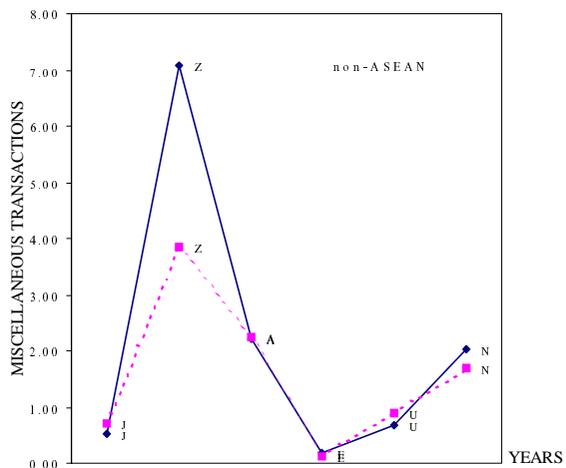


Figure 1.10'

1988/92 1992/96

Source: Original data from Noiganan, M.(1999)

Note: ————— = 1988 - 1992 = 1992 - 1996

T = Thailand A = Africa I = Indonesia Z = Australia and New Zealand
 P = Philippines J = Japan M = Malaysia E = Middle East countries
 S = Singapore U = European countries N = North America countries

Revealed Comparative Advantage of Some Major Thai Exports in the late 1990's

The zero export growth in 1996 coincides with major declining RCA indices of food and miscellaneous manufactured exports in the late 1990's. This established correlation helps identify one of the root cause problems. However, the aggregate measures would be more meaningful and more crucial when they are broken down into products analysis, not product groups. Hence, this study seeks further to spotlight on some major individual exports that would have a greater negative impact on the zero export growth. This investigation also employs RCA indices calculated by Noiganan (1999) for the investigation.

Food

Thailand has the highest comparative advantage in food as mentioned earlier; however, it became second to Australia and New Zealand in the period 1992-96. To investigate further, this study finds a drop in RCA indices of top ten products under food classification; they account for 68 per cent of total revenue from food export, and 14 per cent of total export revenue. The total revenue for food exports was 21 per cent of the total export revenue in the period 1992-96.

Figure 2.1 details RCA indices of these major exports. Rice experiences the biggest drop in comparative

advantage; its RCA index fell from 43 in the period 1988-92 to 25.6 in the period 1992-96. Fish and vegetable exports follow the same pattern; their RCA indices fell from 22.6 and 7.6 to 17.1 and 3.2 respectively with a slight decline in RCA values for the other products. Rice had been the most important export in terms of income generation for the past decades. Though it is taken over by textiles in the 1980's and later on by computer and parts in the 1990's, its RCA index should not drop so rapidly. It is still a major export product of Thailand. To solve the problem and to improve export performance as well as growth, attention should be given to food exports, especially rice, fish and vegetable. Endowed with abundant natural resources, Thailand still has potential to improve and maintain high comparative advantage in food sector.

Miscellaneous Manufactures

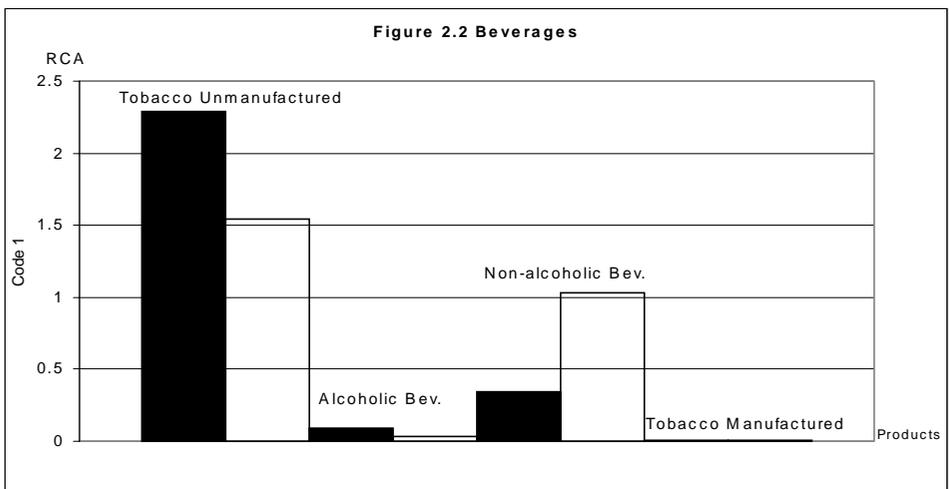
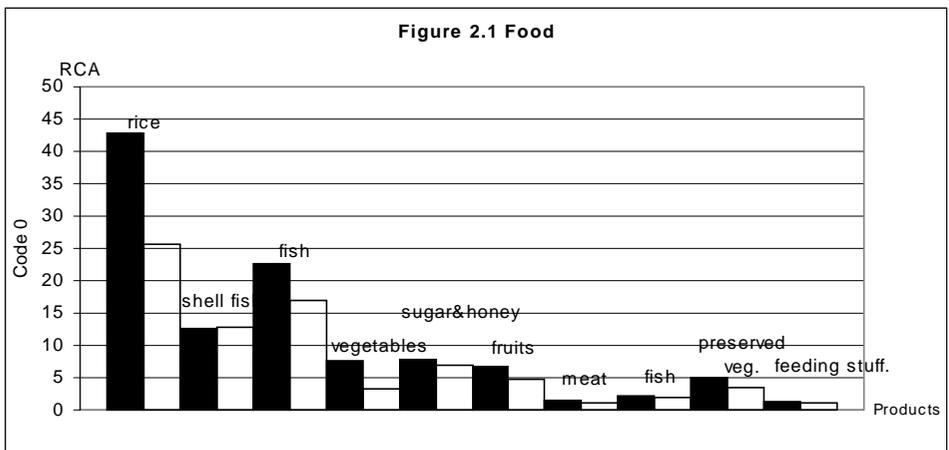
Thailand also has the highest comparative advantage in miscellaneous manufactures in both periods. However, its RCA index declined slightly from 2.1 to 1.9 in the period 1992-96. Malaysia is second, and its RCA declined to 1.3 in the same period.

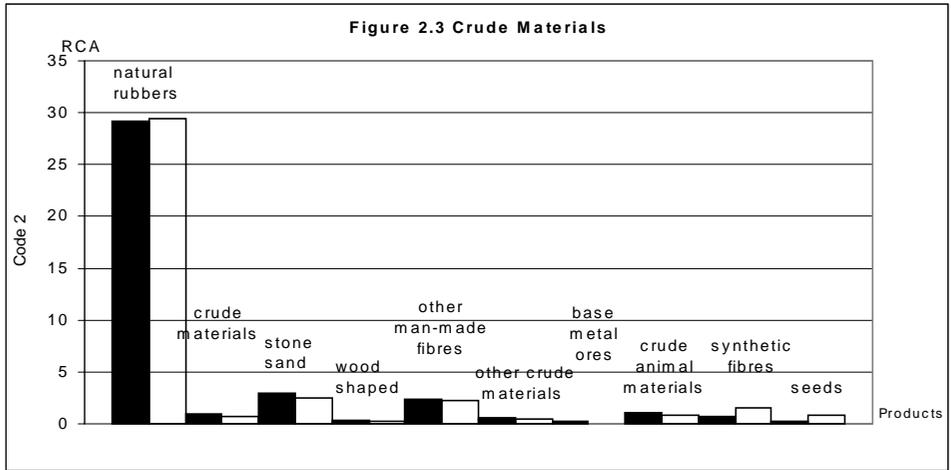
The study continues to examine the top ten products under this classification. They account for 43 per cent in total revenue from this product group, and 11 per cent of total export revenue. The miscellaneous

manufactures account for 25 per cent of total export revenue. The investigation finds that all RCA indices for the top ten products, except footwear and plastics, fell down in the period 1992-96. This, in effect, would cause a declining RCA for this product group. RCA indices for men's and women's outerwear have declined significantly.

To improve export performance and growth, the country should improve comparative advantage of this product group, especially those of the top ten products as shown in figure 2.9. The country should continue to maintain high comparative advantage as it has been in the recent years.

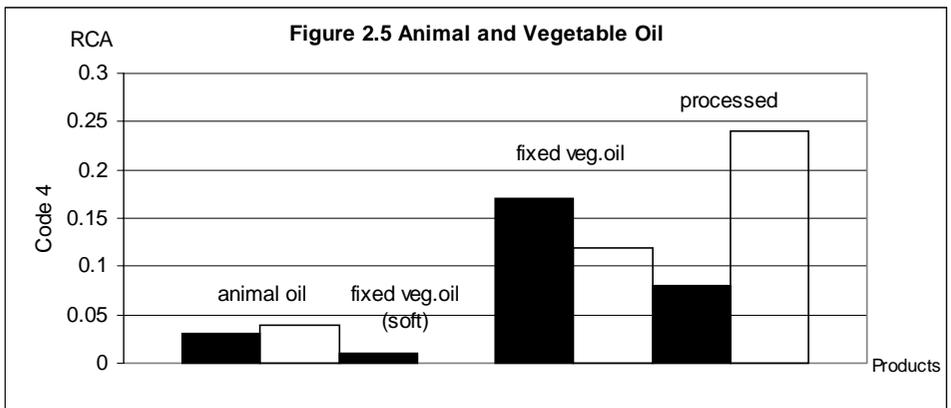
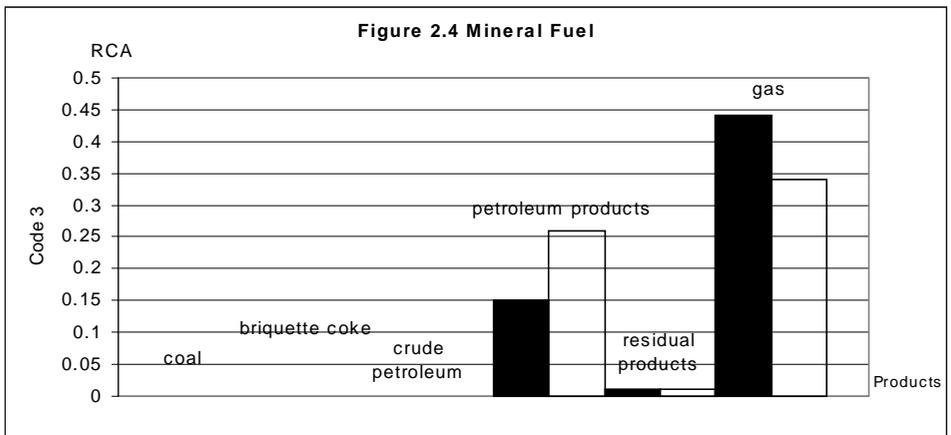
Figure 2: The Major Thai Exports and Their RCA Indices in the Periods: 1988 – 92, 1992 – 96

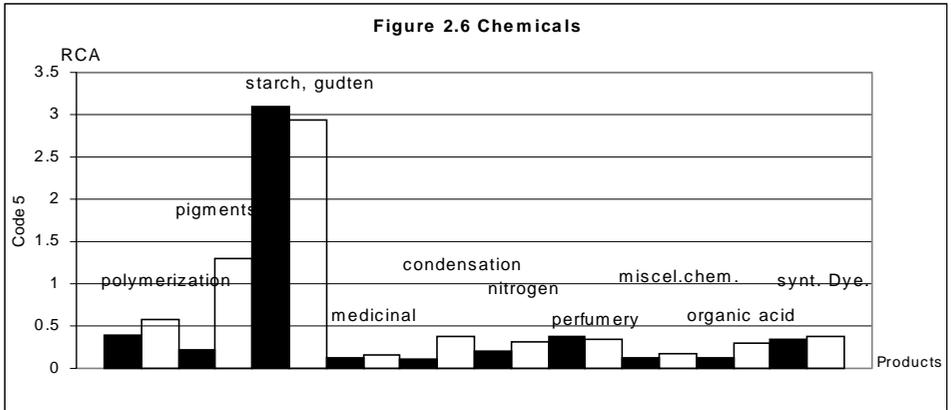




■ 1988-92

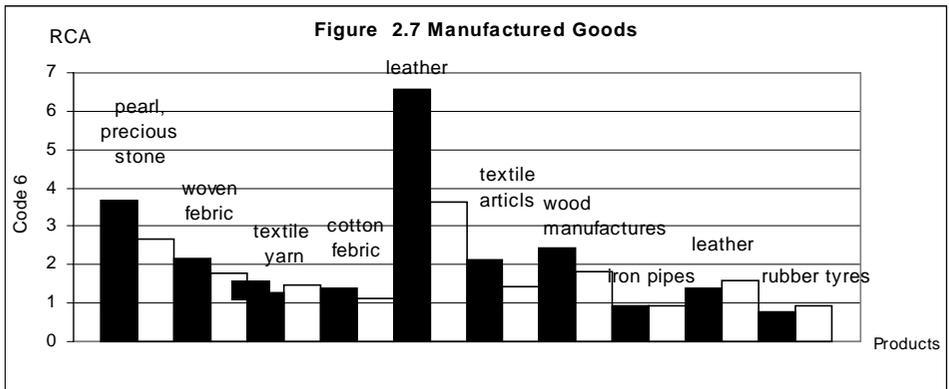
□ 1992-96



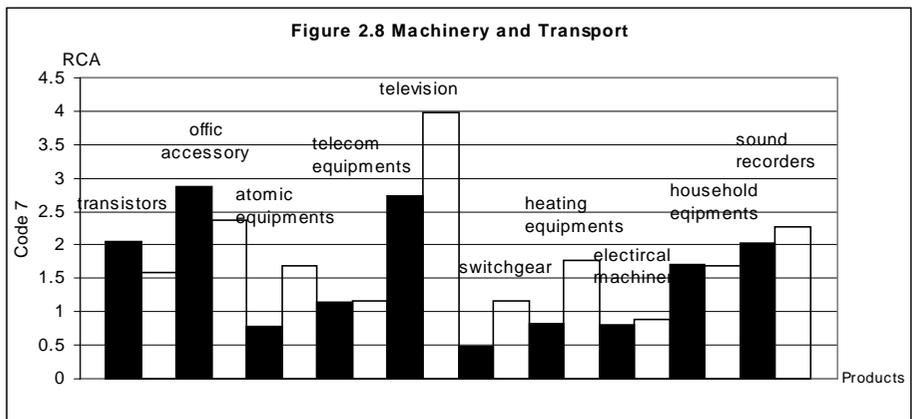


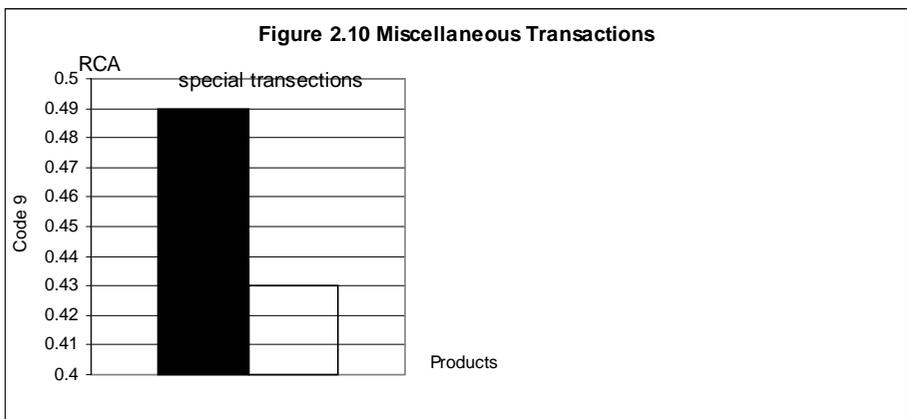
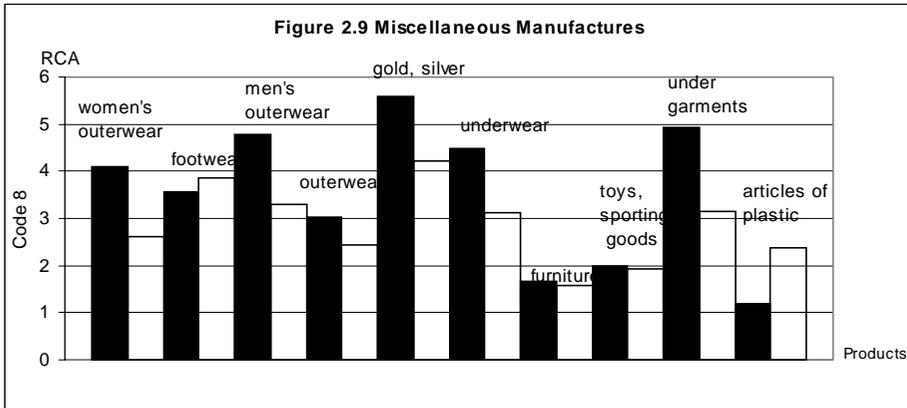
1988-92

1992-96



Source: Original data from Noiganan, M. (1999)





■ 1988-92

□ 1992-96

Manufactured Goods

Manufactured exports are crucial for industrialization, and Thailand has pursued this policy for a few decades. However, it may not be so successful

because the RCA index for this product group is only 0.8, and it slightly declines in the latter period. Figure 2.7 indicates that almost all RCA indices of the top ten major products have dropped; and RCA indices of leather,

wood manufactures, and textile fell significantly in the period 1992-96. The top ten products account for 40 per cent of total export revenue generated by this product group. It was 5 per cent of total export revenue in the period 1992-96. The revenue generated by this product group accounts for 12 per cent of total export revenue generated in the same period. In fact, comparative advantage of these products should be relatively higher. A greater attention and efforts should be directed to these exports to improve export performance and growth of the country.

Conclusion

Exports are an engine of economic growth and development; it is a major source of national income. Japan, Taiwan among others have pursued a rigorous export – oriented policy much earlier, and they have gained economic prosperity and high level of economic development. Thailand, though adopting the policy a little bit later, has achieved a similar success. It has become a richer country and has achieved a higher level of economic development. However, its exports have declined and export growth was zero in 1996. Little attention has been given to this problem, and further investigations are necessary.

This paper attempts to examine the root cause of zero export growth; and it has employed comparative advantage

index as a tool to explain it. This study finds that Thailand has the highest comparative advantage in food and miscellaneous exports, and some comparative advantage in crude materials. However, their RCA indices declined significantly in the period 1992-96.

The study finds further that top ten major products in these categories account to a large degree for the decline in the overall decline in RCA indices. More attention and greater efforts should be directed to products such as rice, fish, vegetable, textile, men's and women's outerwear, leather, wood manufactures, among others in the product groups. The top ten products under manufactured exports also need special focus. Their RCA indices should be raised and maintained to improve long run comparative advantage: Doing so would improve export performance and export growth in the 2000's. Probably, more appropriate and better technology, more capital investment, more fund on R& D, high labor productivity, better management and information technology, better allocation of natural resources and input substitution, among others would contribute to a higher comparative advantage.

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